SARASOTA BRADENTON INTERNATIONAL AIRPORT

Master Plan Update

Prepared for:
Sarasota Manatee Airport Authority

May 2009

RICONDO & ASSOCIATES

in association with:

The LPA Group, Incorporated
Quest Corporation of America, Inc.

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Bradenton International Airport

Master Plan Update

Prepared for:
Sarasota Manatee Airport Authority

Prepared by:
Ricondo & Associates, Inc.

In Association with:
The LPA Group, Incorporated
Quest Corporation of America, Inc.

May 2009

Table of Contents

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

List of Appendices

List of Tables

List of Tables (continued)

List of Tables (continued)

List of Tables (continued)

List of Tables (continued)

List of Exhibits

List of Exhibits (continued)

List of Exhibits (continued)

I. Overview

In March 2007, the Sarasota Manatee Airport Authority (SMAA or the Airport Authority) initiated the Master Plan Update for Sarasota Bradenton International Airport (SRQ or the Airport). The purpose of this update is to assess growth patterns, demand characteristics, and facility requirements necessary to accommodate existing and future demand at the Airport, taking into consideration trends in the aviation industry and local socioeconomic factors. Consistent with the cost restructuring being implemented by most of the major airlines and the new business planning initiatives being undertaken at many airports throughout the country that drive what today defines a "cost-competitive airport", the Master Plan Update for SRQ serves to redefine, in a financially viable and cost-effective manner, the demand-driven development priorities reflected in the Airport's Capital Improvement Program (CIP).

The 1993 Airport Master Plan Update included a set of findings and development recommendations based on forecast demand growth and service patterns at the Airport that were developed using the historical data available at the time. Since completion of the 1993 Master Plan Update, the aviation industry and the U.S. economy have undergone some extensive changes resulting from some significant events and circumstances. More importantly, many of these factors are irreversible and several of the resulting changes are representative of the greatest transformation the aviation industry has experienced since deregulation. Based on these occurrences, the SMAA recognized the need to reassess regional growth factors, changes in the aviation industry, and the near-term and long-term Airport needs.

1.1 Key Planning Focus Areas

A primary consideration for this Master Plan Update was the need to develop recommendations based on a comprehensive and integrated facility and financial/business assessment of the Airport and the industry. The post-September 11, 2001, operating environment and current economic challenges mandate this type of approach. An approach to this Master Plan Update that did not balance these considerations would be deficient and would result in considerable risks regarding the feasibility or affordability of implementing the recommendations for facility expansion or enhancements resulting from the analyses.

In the early phases of the Master Plan Update definition, the Airport Authority provided clear direction that the focus of the analyses should be primarily on the terminal and landside (i.e., public parking, rental car, and roadway access) facilities and infrastructure. It was important to the SMAA to preserve and enhance the Airport's customer level of service and convenience standards, while seeking to maximize the use of existing Airport assets. Maximizing the use of existing facilities is expected to provide incremental capacity or operational benefits. Specific objectives identified by the SMAA for each of the study focus areas are presented below.

1.1.1 Terminal Facilities

The terminal planning analysis was specifically focused on the following objectives in assessing the need for and characteristics of future terminal enhancements:

- Determining the capacity of the existing facility and the various passenger processing functions (i.e., ticketing, passenger security screening, baggage processing, etc.).

- Developing design day schedules that reflect the operational profile of the terminal and passenger flows consistent with future demand to provide a tool for evaluating terminal capacities and testing potential improvement concepts.
- Identifying demand triggers that would determine the timing of additional facilities and/or expansion of the terminal.

1.1.2 Public Parking

Determining the need for airport parking facilities is not a one-size-fits-all endeavor. The type of analysis needed varies based on the airport's market profile, existing facilities, and pricing structure. To ensure that public parking needs at the Airport are accommodated, the following were addressed:

- Public parking and facility utilization characteristics.
- Existing and future public parking facility requirements.
- Public parking revenue and pricing
- Recommended concepts for potential expansion of public parking facilities, including the feasibility of constructing a new parking garage within the terminal area.

1.1.3 Rental Car Facilities

A recent trend at airports has been the development of consolidated rental car facilities. The consolidation of these facilities may result in better land utilization, improved customer service and access, and cost savings for the rental car companies.

At SRQ, the flexibility existed to evaluate multiple scenarios for relocation of the existing rental car facilities. These scenarios included a consolidated rental car facility located within the terminal area; a consolidated rental car facility on the Airport, but not within the terminal area; a joint public parking/rental car facility; and segmenting the rental car ready/return and quick turnaround (QTA) areas and locating them within the terminal area, with the rental car maintenance/storage areas located at remote sites.

Evaluating each of these scenarios required a thorough understanding of the functional and operating characteristics of the rental car companies at the Airport, customer service expectations at SRQ, opportunity costs or losses based on the site selected for relocation of the rental car facilities (as well as those associated with the sites where the rental car facilities are presently located), and other financial factors. A consideration and evaluation of a combined parking garage/consolidated rental car facility was also in the scope of this Master Plan Update.

1.2 Management Tools for Monitoring and Implementation

Given the inherent uncertainties at any airport, the dynamic nature of the aviation industry, and challenging economic times, it was necessary to supplement the Master Plan Update recommendations with management tools that the Airport Authority could easily apply to the recommended development plan to alter or amend the plan as conditions change. These tools included the identification of demand triggers and formulation of a financial plan to assist the SMAA in adjusting the scope or timing of its development and enhancement plans as changing condition emerge and to provide a roadmap for implementation of the Master Plan Update recommendations.

1.2.1 Demand Triggers

It is likely that the actual rate and character of growth over the planning period will differ from that projected under the Baseline Forecasts. Timing for implementation of individual projects at the Airport should be based on demand. Thus, the Master Plan Update links various development projects to demand-related triggers to assist the Airport Authority in making decisions regarding the timing for implementing facilities at the Airport. Through regular monitoring and analysis of available statistics and understanding of emerging growth trends, the SMAA can respond in a strategic manner to meet actual demand, planning for and developing facilities when needed.

1.2.2 Financial Plan and Comprehensive Capital Improvement Program

This Master Plan Update includes an assessment of the Airport's debt capacity to establish the borrowing capacity of the Airport enterprise, and the borrowing limits acceptable to the Airport Authority. As the Master Plan Update process progressed and development plans and facility improvement initiatives were identified, cost estimates were prepared. The financial analysis encompassed the formulation of a funding strategy incorporating federal Airport Improvement Program (AIP) and Florida Department of Transportation (FDOT) grants and a financial plan for the capacity and facility enhancements proposed in the resulting CIP. The financial plan and the CIP took into consideration realistic funding levels from federal and State of Florida sources, and targets for financial performance established in close coordination with SMAA staff.

1.3 Report Organization

This Master Plan Update is organized in six main chapters. Chapter II provides an inventory of existing (2006) facilities and operating conditions at the Airport. Chapter III presents the FAA approved Baseline Forecasts prepared for the master planning analyses. The inventory of existing facilities and the aviation activity forecasts formed the basis for the demand/capacity analyses and facility requirements presented in Chapter IV. Chapter V presents recommended strategies for proposed facility development at the Airport. Chapter VI provides a reduced-scale format of the entire Airport Layout Plan (ALP) set, which incorporates existing facilities and proposed development at the Airport. Chapter VII presents the financial analysis, which includes a funding strategy and financial plan for the recommended capacity and facility enhancements. Several appendices providing more detailed information are provided at the end of this report.

II. Existing Facilities Inventory

The data presented in this chapter of the Master Plan Update were collected through on-site inspections and interviews and the review of previously prepared documents. Data were also obtained from secondary sources at the federal, State, regional, and local levels. The inventory of existing facilities is a critical phase of any master planning effort. All subsequent analyses, evaluations, and findings are based upon current conditions at SRQ. For this reason, the following sections document general information, major Airport facilities, and the local community characteristics relevant to this Master Plan Update. Various tables and exhibits are also presented to facilitate a comprehensive understanding of the many integral components to be studied at SRQ.

The Master Plan Update requires the collection and evaluation of a variety of Airport-related information. As such, the following categories of information were collected to help identify unique attributes that define the Airport:

- Airport Location Characteristics
- Airfield and Landside Facilities
- General Aviation Facilities
- Terminal Facilities
- Support Facilities
- Parking and Roadway Infrastructure
- Airspace and Air Traffic Control
- Environmental Considerations

To obtain an accurate depiction of SRQ and the surrounding community, a variety of interviews and research were conducted:

- Interviews with SRQ Management and Staff
- Interviews with SRQ Users and Tenants
- Correspondence with Local, State, and Federal Agencies
- Research and Review of Previous Airport Planning Analyses and Studies
- Review of Aerial Photography, Mapping, and Airport and Terminal Plans
- Review of Facility Directories, Approach Plates, Sectional Charts, etc.
- Reference Materials Gathered from FAA Advisory Circulars, Orders, and Applicable Regulations

2.1 FAA Certification and Classification

Although SRQ is owned and operated by the Sarasota Manatee Airport Authority, the power to do so is granted to SMAA by the State of Florida and the FAA. Many of the parameters that dictate future developmental needs at SRQ are based on FAA guidelines for facilities planning and operational capacities. Adherence to these parameters is a requirement for the continued operation of the Airport. The following sections present a brief review of the operating certification requirements and FAA classifications of SRQ.

2.1.1 FAR Part 139 Certification

The FAA certifies airports for commercial operations under Federal Aviation Regulations (FAR) Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*. This regulation was revised in early 2004 to include an expanded number of airports required to obtain FAR Part 139 certification. This certification is required for any airport having activity by air carrier aircraft

capable of transporting nine or more passengers. Charter and/or air taxi operators are included. The updated FAR Part 139 certification categorizes airports into four classes based on the type of air carrier operations at the facility. This classification system is shown in **Table II-1**. FAR Part 139 requires that every airport seeking certification prepare an Airport Certification Manual in compliance with FAA design standards and establish appropriate safety and security procedures based on its respective class (see the table below). SRQ is categorized as a Class I airport and is required to undergo annual inspections by the FAA to retain its FAR Part 139 Airport Operating Certificate.

Table II-1

FAR Part 139 Airport Classification System

Type of Air Carrier Operations	Class I	Class II	Class III	Class IV
Scheduled Large Air Carrier Aircraft (30+ seats)	Yes	No	No	No
Unscheduled Large Air Carrier Aircraft (30+ seats)	Yes	Yes	No	Yes
Scheduled Small Air Carrier Aircraft (10-30 seats)	Yes	Yes	Yes	No

Source: Federal Aviation Administration, Federal Aviation Regulations Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers,* 2007.
Prepared by: The LPA Group Incorporated, July 2007.

2.1.2 FAA Service Level Classification

The Airport operates as a publicly owned, public-use facility offering scheduled commercial airline service. SRQ also serves the needs of general aviation users, including business and corporate users. The Airport is included within the National Plan of Integrated Airport Systems (NPIAS), which is published by the U.S. Department of Transportation. In the NPIAS, the FAA establishes the role of those public airports defined as essential to meet the needs of civil aviation. Additionally, the role for each airport is defined in the NPIAS by one of four basic service levels. These levels describe the type of service that the airport is expected to provide for the community by the end of the 5-year NPIAS planning period. Airports listed in the NPIAS become eligible for federal funding under the AIP to assist in airport development. SRQ is designated as a primary commercial service airport in the NPIAS. **Table II-2** summarizes these classifications.

Table II-2

FAA NPIAS Airport Service Level Classification

Classification	Definition
Commercial Service – Primary	Public-use commercial airport enplaning at least 10,000 passengers annually
Commercial Service – Non-Primary	Public-use commercial airport enplaning between 2,500 and 10,000 passengers annually
General Aviation – Reliever	A general aviation airport that serves to relieve operational congestion at a nearby commercial service airport. Must have at least 100 based aircraft or 25,000 itinerant operations.
General Aviation	Other airports with fewer than 2,500 annual enplanements or that do not receive scheduled service

Source: FAA, *Report to Congress – NPIAS 2007*
Prepared by: The LPA Group Incorporated, July 2007.

The FAA further classifies primary commercial service airports by the total numbers of passengers enplaned at the airport compared with the total volume of national annual enplaned passengers. Based on the criteria outlined in **Table II-3**, the FAA designates each airport as a large-, medium-, small-, or non-hub facility. The FAA uses the term "hub" to describe different service levels. This term differs from the airline use of the word in the context of a "hub-and-spoke" system. In 2006, SRQ's enplanements accounted for less than 0.25 percent of total national enplanements but more than 0.05 percent of the total; hence, SRQ is considered a small-hub airport.

Table II-3

Classification of Primary Commercial Service Airports

Classification	Definition
Large Hub	At least 1.0 percent of total U.S. passenger enplanements
Medium Hub	Between 0.25 and 1.0 percent of total U.S. passenger enplanements
Small Hub	Between 0.05 and 0.25 percent of total U.S. passenger enplanements
Non-Hub	Less than 0.05 percent of U.S. passenger enplanements, but more than 10,000 annual enplanements

Source: FAA, *Aviation Capacity Enhancement Plan*, 2006.
Prepared by: The LPA Group Incorporated, July 2007.

2.2 Airfield Environment

This section presents an overview of existing airfield facilities at SRQ. The following catalog of facilities provides a basis for determining airfield demand/capacity and the identification of facility requirements. The term "airfield" generally refers to those facilities necessary to support the movement and operation of aircraft, including: runways, taxiways, instrumentation/navigational aids, airfield lighting, pavement markings, visual aids, and airfield signage. A graphic illustrating the existing airfield facilities at the Airport, including taxiway and taxilane designations, is presented on **Exhibit II-1**.

2.2.1 Runways

The airfield at SRQ has two intersecting runways that are situated in a cross configuration. **Table II-4** summarizes the dimensional and physical characteristics of each runway. Subsequent sections provide information specific to each runway's characteristics and operational capabilities.

The utilization of runways at SRQ is dependent upon a number of factors, including aircraft operational requirements, weather conditions, and air traffic controller scheduling, as well as factors that may result in runway closures, such as Airport construction. Based on discussions with the Airport Traffic Control Tower (ATCT) chief, it was noted that the Airport is closed approximately 2 percent of the time due to poor weather conditions that exceed the Airport's instrument flight rule (IFR) capabilities. In addition, it was noted that the Airport experiences visual flight rule (VFR) conditions approximately 93 percent of the time and IFR conditions approximately 5 percent of the time. Furthermore, the interview revealed that primary Runway 14-32 is used more frequently (80 percent of the time) than crosswind Runway 4-22, which accounts for the remaining 20 percent of operational activity. **Table II-5** illustrates the use of each runway during both VFR and IFR conditions.

Sources: Aerial Source: Manatee County - February, 2006 FAA Airport Diagram - May, 2007
Prepared by: The LPA Group Incorporated
Note: Letters and letter-numeric references shown above represent the existing taxiway, runway, and taxilane designations.

Exhibit II-1

0 1200 ft.

north

Existing Airside Facilities

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-1 Airside facilities.dwg_Layout: 8.5x11P - Updated Date_Apr 24, 2009, 10:40am

Table II-4

Runway Dimensional and Physical Characteristics Summary

Characteristic	Runway	
	14-32	4-22
Runway Category (NPIAS)	Medium Haul	Basic Transport
Length (feet)	9,503	5,009
Width (feet)	150	150
Shoulder Width (feet)	50	-
Blast Pad Length (feet)	200	200
Load Bearing Capacity		
Single Wheel (pounds)	110,000	62,000
Double Wheel (pounds)	150,000	110,000
Double Tandem (pounds)	270,000	190,000
Effective Gradient (percent)	0.07	0.04
Surface Composition	Asphalt	Asphalt
Surface Markings	Precision	Non-Precision
Airport Reference Code	D-IV	B-II
Critical Aircraft	McDonnell Douglas MD-11	Dassault Falcon 900

Source: *Airport Facility Directory*, April 2007.
Prepared by: The LPA Group Incorporated, July 2007.

Table II-5

Runway Utilization Percentages

Runway End	Utilization %	VFR Conditions	IFR Conditions	Total
Runway 14	36.00%	33.48%	1.8%	35.28%
Runway 32	44.00%	40.92%	2.2%	43.12%
Runway 4	8.00%	7.44%	0.4%	7.84%
Runway 22	12.00%	11.16%	0.6%	11.76%
Total		93.00%	5.0%	98.00%[1/]

Note:
1/ The Airport is closed the remaining 2 percent of the time

Source: Discussions with the ATCT Chief, January 2006, the LPA Group Incorporated, April 2007.
Prepared by: The LPA Group Incorporated, July 2007.

2.2.1.1 Runway Wind Coverage Analysis

The area's wind patterns have a significant effect on runway use. Aircraft typically take off and land into the wind to minimize the required runway length. The FAA recommends that sufficient runways be provided to achieve 95 percent wind coverage. FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, Change 11, specifies that a period of at least 10 consecutive years be examined for determining wind coverage. Wind information for SRQ was obtained from the weather station located on Airport property. Data for SRQ were recorded by the National Climatic Data Center (NCDC) between 1997 and 2006. To determine the wind coverage at SRQ, Runways 4-22 and 14-32 were evaluated together and independently. After reviewing the NCDC wind data, it was determined

that the primary runway (14-32) alone does not meet the FAA wind coverage requirement of 95 percent for 10.5 knot crosswinds during all-weather conditions and also does not meet coverage requirements for 10.5 knot or 13 knot crosswinds during IFR conditions. The resulting analysis revealed that the crosswind runway (4-22) is necessary to achieve the FAA-required wind coverage. **Exhibit II-2** illustrates the wind roses generated for the Airport. The data tables located in the exhibit summarize the percent of wind coverage for both IFR and all weather wind conditions for 10.5-, 13-, 16-, and 20-knot crosswind components.

2.2.1.2 Runway 14-32

Runway 14-32 is the primary runway at SRQ with a published length of 9,500 feet and a width of 150 feet. The runway is constructed of asphalt and is grooved for increased traction during wet conditions. In 2001, the Airport Authority extended the ends of Runway 14 and Runway 32 an additional 1,350 and 1,150 feet, respectively, to the current runway length of 9,500 feet. More recently (2007), the original portion of the runway was rehabilitated with an asphalt overlay. For these reasons and based on visual inspection, the condition of the primary runway is classified as very good. Both ends of the runway are marked with precision markings, which are also in good condition. The runway is currently rated at a strength to accommodate aircraft with a single wheel bearing capacity of 110,000 pounds, dual wheel capacity of 150,000 pounds, and dual tandem wheel capacity of 270,000 pounds. Runway 14 is presently marked with a displaced threshold of 1,350 feet and Runway 32 is marked with a displaced threshold of 1,150 feet. **Table II-6** shows published pavement lengths available for aircraft operations.

Table II-6

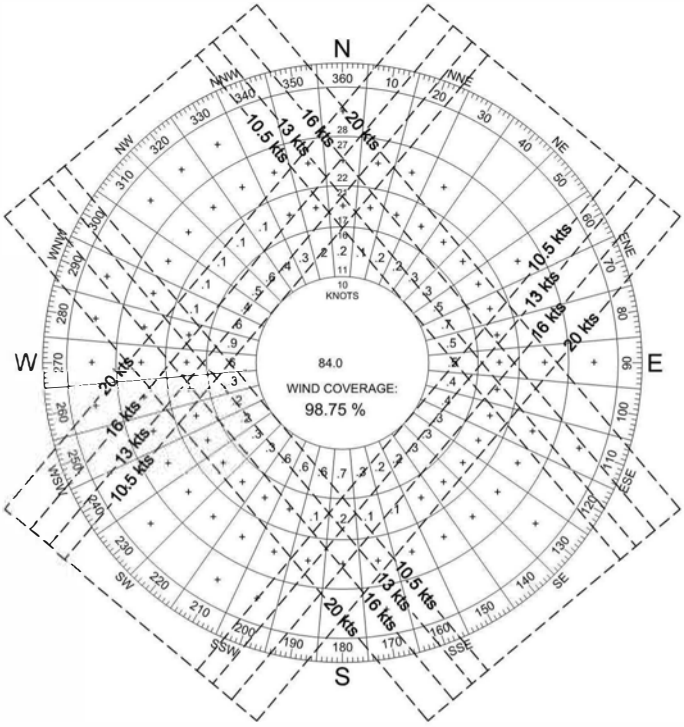
Runway 14-32 Declared Distance Standards

Runway End	Take-off Run Available (TORA)	Take-off Distance Available (TODA)	Accelerate-Stop Distance Available (ASDA)	Landing Distance Available (LDA)
14	8,350 feet	9,500 feet	8,890 feet	7,540 feet
32	8,150 feet	9,500 feet	8,700 feet	7,550 feet

Source: *Airport Facility Directory*, July 2008.
Prepared by: The LPA Group Incorporated, March 2009.

To achieve adequate clearance for runways with precision instrument approach capabilities, a 50:1 surface must be provided 200 feet from each landing threshold. The approach surfaces must remain clear of any structures, trees, and other obstacles that may negatively affect the safety of approaching aircraft. As the Airport is currently surrounded by development and other natural features near both runway ends, it was necessary to displace the thresholds to provide the required clearances. Both runway ends and displaced threshold coordinates were calculated using the information presented in **Table II-7**.

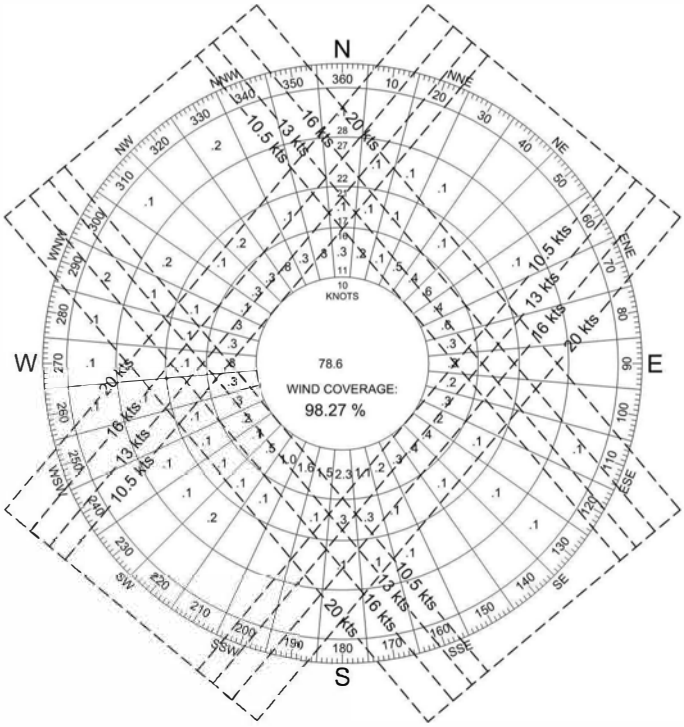
The most recent FAA-approved ALP for SRQ, dated November 2003, denotes an Airport Reference Code (ARC) of D-IV and identifies the MD-11 as the critical aircraft. Design parameters for an ARC of this designation require a runway width of 150 feet.



All Weather Windrose

	Wind Coverage %		
Crosswind Component (kts)	Runway 4–22	Runway 14–32	Combined
10.5	92.33	93.39	98.75
13	95.96	96.98	99.82
16	98.95	99.58	99.97
20	99.71	99.92	99.99

Wind Data Source:
National Climatic Data Center
Station 72211 – Sarasota, Florida
78,650 Observations
Period Of Record: (1997 – 2006)



IFR Windrose

	Wind Coverage %		
Crosswind Component (kts)	Runway 4–22	Runway 14–32	Combined
10.5	91.99	89.93	98.27
13	95.40	94.73	99.25
16	97.99	98.30	99.56
20	98.74	99.15	99.82

Wind Data Source:
National Climatic Data Center
Station 72211 – Sarasota, Florida
19,480 Observations
Period Of Record: (1997 – 2006)

Source: National Climatic Data Center
Prepared by: The LPA Group Incorporated

Exhibit II-2

IFR and All Weather Windroses

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-2 Windroses.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:39am

Table II-7

Runway 14-32 End Point Coordinates and Elevations

Runway End	Runway 14		Runway 32	
	Latitude	Longitude	Latitude	Longitude
Runway End Coordinates	27° 24' 16.64"	82° 33' 56.32"	27° 23' 10.82"	82° 32' 40.97"
Displaced Threshold Coordinates	27° 24' 07.29"	82° 33' 45.61"	27° 23' 18.81"	82° 32' 50.01"
Runway End Elevation (feet above Mean Sea Level)	27.11		30.90	
Displaced Threshold Elevation (feet above Mean Sea Level)	23.93		27.70	

Source: SMAA Airport Drawings, 2007.
Prepared by: The LPA Group Incorporated, April 2007.

2.2.1.3 Runway 4-22

Runway 4-22 is a crosswind, nonprecision visual runway with a published length of 5,009 feet and a width of 150 feet. The surface of the runway is asphalt and is reported to be in fair condition. However, based on visual inspection during the inventory phase of this Master Plan Update, it appears as though a runway overlay will be required within the next few years. Runway 4-22 is primarily used for general aviation aircraft operations because of its length and easy access to the various fixed base operators (FBOs) and hangar facilities; however, commercial aircraft also operate on the runway during favorable wind conditions. The runway is currently rated to accommodate aircraft with a single wheel bearing capacity of 62,000 pounds, dual wheel capacity of 110,000 pounds, and a dual tandem wheel capacity of 190,000 pounds.

Runway 4-22 is designed to meet ARC design criteria for B-II aircraft; this category is representative of aircraft with approach speeds between 91 and 121 knots and wingspans between 49 and 79 feet. The critical aircraft designated for this runway is the Dassault Falcon 900 series. Air traffic for Runway 4-22 generally follows a left hand pattern; however, traffic is subject to instruction from the ATCT. No declared distances are published for Runway 4-22; therefore, the full length of the runway is available for departures and arrivals. **Table II-8** illustrates the runway end coordinates and respective elevations.

Table II-8

Runway 14-32 End Point Coordinates and Elevations

Runway End	Runway 4		Runway 22	
	Latitude	Longitude	Latitude	Longitude
Runway End Coordinates	27° 23' 23.94642"	82° 33' 27.54671"	27° 24' 02.93713"	82° 32' 53.29487"
Runway End Elevation (feet above Mean Sea Level)	23.0		25.0	

Source: SMAA Airport Drawings, 2007.
Prepred by: Prepared by: The LPA Group Incorporated, April 2007.

2.2.2 Taxiways

The taxiway system supports the Airport's runway system for safe and efficient aircraft operations. Eight taxiways serve the two runways at SRQ. The following sections describe the active portions of each taxiway.

2.2.2.1 Taxiway A

Taxiway A is a full-length parallel taxiway located to the south and west of Runway 14-32. It is the principal taxiway designed to accommodate large commercial aircraft at the Airport. There is a runway to taxiway centerline to centerline separation of 400 feet and the taxiway has a width of 75 feet in compliance with design standards for Airplane Design Group (ADG) IV. Ten connector taxiways link Taxiway A with Runway 14-32, all of which are designed to accommodate ADG IV aircraft. Taxiway A is directly accessible from several areas of the Airport, including the commercial passenger apron area and Dolphin Aviation (refer to Section 4.8.2 of this report), and from Taxiways B and D and Runway 4-22. In compliance with ADG IV, taxiway shoulders of 25 feet are provided along the taxiway's entire length. During a visual inspection conducted as part of this Master Plan Update, the pavement of Taxiway A was noted to be in fair condition; however, this taxiway is expected to receive an overlay within the next year.

2.2.2.2 Taxiway B

Taxiway B is a full-length parallel taxiway to the south and east of Runway 4-22. This taxiway varies in width between 60 feet and 80 feet. According to taxiway dimensional standards stipulated in FAA AC 150/5300-13, *Airport Design,* Taxiway B meets design criteria for ADG III aircraft with a wheelbase equal to or greater than 60 feet. Due to its narrower width, Taxiway B serves small general aviation aircraft and corporate jets. The runway centerline to taxiway centerline separation is 350 feet. This taxiway will eventually serve as a principal route connecting Runway 4-22 with the proposed Rectrix North hangar and apron complex currently under construction on the east side of the airfield, adjacent to 15th Street East. The Taxiway B pavements are noted to be in good condition based on visual inspection during the inventory portion of this Master Plan Update process.

2.2.2.3 Taxiway C

Taxiway C is a full-length parallel taxiway located on the north and east sides of Runway 14-32. This taxiway was constructed in 2003 with a width of 60 feet. Four connector taxiways link the taxiway to Runway 14-32. This taxiway provides aircraft circulation between hangars and apron areas near Volo Aviation and also provides a future link between the Rectrix complexes and Runway 14-32. Varying degrees of separation exist between Taxiway C and Runway 14-32 due to glideslope critical area requirements. However, a minimum taxiway-to-runway separation of 400 feet is maintained throughout the length of the taxiway. Taxiway C is in good condition.

2.2.2.4 Taxiway D

Taxiway D is a full-length parallel taxiway located to the north and west of Runway 4-22. This taxiway has a width of 60 feet and a separation distance of 300 feet from the runway in conformance with ADG III standards (aircraft with wingspans up to 118 feet). Taxiway D bisects Taxiway H and connects Taxiway F near the Volo Aviation apron. The southern portion of the taxiway was constructed in 2001 and the northern half was constructed in 2004. As such, this taxiway is reported to be in good condition.

2.2.2.5 Taxiway E

Taxiway E is located on the eastern portion of the airfield and provides access to newly constructed hangar facilities. The taxiway is approximately 880 feet long and 60 feet wide. Although it is relatively short, this taxiway provides ingress and egress between the east side of the airfield and Taxiway B. Taxiway E is also connected to Taxiway C via Taxiway J. Upon completion of the Coastal Atlantic Hangar just north of the Rectrix South complex, Taxiway E will serve a critical role in providing access to the entire airfield. Taxiway E was completed in 2005 and is in very good condition.

2.2.2.6 Taxiway F

Taxiway F currently extends approximately 3,780 feet from Runway 14-32 to Taxiway D, and to the end of Runway 22. This taxiway has an existing width of 50 feet and meets published criteria for ADG III design standards. Taxiway F serves as the principal taxiway providing access to the Volo Aviation ramp as well as to taxilanes adjacent to the SMAA hangars on the north side of the airfield. Taxiway F is limited to aircraft weighing no more than 70,000 pounds gross weight, as described in the 2007 *Southeast U.S. Airport Facility Directory*. During visual inspection of the pavement during the inventory portion of this Master Plan Update process, portions of Taxiway F were noted to be in fair to poor condition. Those sections of Taxiway F that are expected to remain usable will require rehabilitation and/or an overlay within the next 5 years.

2.2.2.7 Taxiway H

Taxiway H provides access between the T-hangar facilities located on the north side of the airfield and Taxiway D. Taxiway H is approximately 1,180 feet long and 50 feet wide and meets ADG III design standards. Infrastructure has been installed for a new T-hangar development area alongside Taxiway H. Once constructed, increased aircraft activity is expected to occur on Taxiway H. The Taxiway H pavement is reported to be in good condition.

2.2.2.8 Taxiway J

Taxiway J is located on the easternmost side of the airfield and connects Taxiways C and E. Taxiway J is approximately 1,173 feet long and has a width of 60 feet in accordance with ADG III design standards. Upon completion of the Rectrix South ramp construction, Taxiway J will serve as an access route to Runway 14-32 via Taxiway C. Taxiway J was constructed in 2005 and is in very good condition.

2.2.2.9 Taxiway Connectors from Runway 14-32

Runway 14-32 is served by several taxiways and taxiway connectors that provide principal taxiing routes into the passenger terminal apron and FBO aprons. All taxiway connectors are have proper signage, including taxiway location signs; directional, destination, and boundary signs; and instrument landing system (ILS) critical area and other holding instruction signage. **Table II-9** identifies the various taxiway connectors and their respective distance to the nearest threshold of Runway 14-32.

Table II-9

Taxiway and Taxiway Connectors to/from Runway 14-32

Taxiway or Connector	Taxiway or Connector Width (feet)	Distance from Runway 14 Threshold (feet)	Distance from Runway 32 Threshold (feet)	Pavement Condition [1/]
A	75	-	-	Fair
A1	140	-	7,736	Good
A2	90	42	6,937	Good
A3	80	953	5,688	Good
A4	90	2,431	4,570	Good
A5	70	3,541	3,310	Good
A6	90	4,009	2,828	Good
A7	90	5,171	1,795	Good
A8	90	6,637	348	Good
A9	90	6,939	42	Good
A10	140	7,711	-	Good
C	60	-	-	Good
C1	80	-	7,736	Good
C2	100	2,431	4,570	Good
C3	100	5,171	1,795	Good
C4	80	7,591	-	Good
B	80	4,360	2,604	Good
D	60	3,680	3,308	Good
F	50	1,220	5,570	Fair/Poor [2/]
J	60	-	-	Very Good

Notes:

1/ All pavement conditions noted are based on visual observations.

2/ Conditions noted apply to a portion of the taxiway rather than the taxiway as a whole.

Source: The LPA Group Incorporated, July 2007.
Prepared by: The LPA Group Incorporated, July 2007.

2.2.2.10 Taxiway Connectors from Runway 4-22

Several taxiways and a single connector taxiway intersect Runway 4-22 at various locations. **Table II-10** identifies the various taxiways and associated connectors that provide ingress and egress to and from Runway 4-22.

Table II-10

Taxiway and Taxiway Connectors to/from Runway 4-22

Taxiway or Connector	Taxiway or Connector Width (feet)	Distance from Runway 4 Threshold (feet)	Distance from Runway 22 Threshold (feet)	Pavement Condition
B	60-80	-	-	Good
B1	50	3,328	1,667	Good
C	60	2,388	2,612	Good
D	60	-	-	Good
E	60	-	-	Very Good
H	50	3,328	1,667	Good

Source: The LPA Group Incorporated, July 2007.
Prepared by: The LPA Group Incorporated, July 2007.

2.2.3 Instrument Approaches

During inclement weather, instrument approaches allow pilots to safely navigate and land at an airport. A number of different types of instrument approaches are available, each with specific limitations. As the height of clouds decreases and visibility deteriorates, the necessity for instrument approach capability increases. When the cloud ceiling is equal to or greater than 1,000 feet above ground level (AGL) and visibility is greater than 3 statute miles, conditions are considered visual. During these times, pilots can operate under VFR. In VFR conditions, no published approaches are required for an aircraft to safely land at an airport. However, once the cloud ceiling is less than 1,000 feet AGL and/or visibility is less than 3 statute miles, pilots must operate IFR. There are two basic categories of instrument approaches: precision and nonprecision.

Both precision and nonprecision approaches provide course guidance to runway ends. The precision component, or horizontal guidance, increases with the sophistication of the instrument approach aid. The primary difference between precision and nonprecision approaches is that, in addition to horizontal guidance, a precision approach provides vertical guidance to a specific runway end, which allows an aircraft to descend safely on a fixed glide slope signal, even though no visual reference to the runway environment can be confirmed. Runways 14 and 32 at SRQ are designated as precision runways. Runways 4 and 22 are visual (nonprecision) runways.

2.2.3.1 Instrument Landing System

SRQ currently has two published instrument landing system approaches, one at each end of Runway 14-32. The purpose of the ILS is to provide a method of precision instrument navigation to a point at the approach end of the runway. Since the ILS provides both course and glideslope information, much lower visibility minimums are possible than those provided by nonprecision instrument approaches. The ILS is composed of a localizer antenna, glideslope antenna, marker beacons, and the runway approach lighting system. **Table II-11** summarizes the ILS approaches and minimums published for SRQ.

Table II-11

Runway 14 and 32 ILS Approach Minimums

Instrument Procedure	Decision Height for Straight-in Approach (feet)	Visibility (miles)
Runway 14 ILS	224	0.5 (A, B, C, D)
Runway 32 ILS or localizer	227	0.5 (A, B, C, D)

Notes: Minimums are based on local altimeter settings for a straight-in approach. Visibility letters refer to aircraft approach categories as defined by the FAA.

Source: FAA, *Southeast U.S. Terminal Procedures*, March 15, 2007.
Prepared by: The LPA Group Incorporated, July 2007.

2.2.3.2 VOR/GPS – Nonprecision Instrument Approaches

Nonprecision instrument approaches can be provided at airports through the use of a number of different navigational aids. As discussed above, the localizer portion of an ILS can be used for course guidance to the runway on which it is installed to provide nonprecision approach capability, as is the case with Runway 14-32. In addition, two other navigational systems offer nonprecision approaches to SRQ: a very high frequency omnidirectional range station (VOR) and the use of a global positioning system (GPS). A VOR is a ground-based electronic navigation aid that transmits

signals, 360 degrees in azimuth, called radials. The VOR facility at SRQ was relocated in 2008 from the center of the airfield, approximately 700 feet north of the Taxiway C and Taxiway D intersection, to the northwest corner of the Airport. This relocation opened up approximately 60 acres of land available for future development. Unlike the VOR, GPS is a satellite-based navigation system that does not require the installation of any on-field equipment. Rather, a constellation of satellites provides celestial reference to aircraft to determine the position of any point on or above the Earth's surface. **Table II-12** summarizes the various nonprecision approaches and the minimums associated with these approaches at SRQ.

Table II-12

Non-Precision Instrument Approach Minimums (VOR/GPS)

Instrument Procedure	Minimum Descent Altitude (MDA) (feet)	Visibility (statute miles)
Runway 14 VOR	500	1.0 (A, B); 1.25 (C); 1.5 (D)
Runway 32 VOR	900	0.5 (A); 0.75 (B); 2.0 (C); 2.25 (D)
Runway 22 VOR	460	1.0 (A, B); 1.25 (C); 1.5 (D)
Runway 14 GPS	440	1.0 (A, B, C, D)
Runway 32 GPS	440	1.0 (A, B, C, D)
Runway 4 GPS	460	1.0 (A, B); 1.25 (C); 1.5 (D)
Runway 22 GPS	400	1.0 (A, B, C); 1.25 (D)

Notes: Minimums are based on local altimeter settings. Visibility letters refer to aircraft approach categories as defined by the FAA.

Source: FAA, *Southeast U.S. Terminal Procedures*, March 15, 2007.
Prepared by: The LPA Group Incorporated, July 2007.

2.2.4 Airfield Lighting

Airfield lighting is necessary at all airports that accommodate operational activity during nighttime hours or during inclement weather conditions. It allows pilots to identify the airport from the air and also helps them maneuver safely on the ground during lowered visibility conditions. All airfield lighting electrical requirements at SRQ are provided from the main electrical vault located on the west side of the airfield near the aircraft rescue and fire fighting (ARFF) station and the Dolphin Aviation FBO area. This section discusses the various airfield lighting components at SRQ.

2.2.4.1 Identification Lighting

An airport's beacon universally indicates the location and presence of the airport at night or during low visibility conditions. The rotating beacon at SRQ is located on the west side of the airfield adjacent to the ARFF facility and electrical vault on the south and west sides of the airfield. This lighting aid is equipped with an optical rotating beacon system that projects two beams of sequenced flashing lights, one green and one white, 180 degrees apart. The beacon, which is in good condition, is continuously operated during nighttime hours and when the airfield is operating under instrument conditions.

2.2.4.2 Runway Lighting

Runway lights allow pilots to identify the edges of the runway and assist pilots in determining the runway length remaining during periods of darkness and restricted visibility. These lighting systems

are classified according to their intensity, or brightness. Runways 14-32 and 4-22 are both equipped with high intensity runway lights (HIRL). These lighting systems are operated through the Common Traffic Advisory Frequency (CTAF) 120.1 MHz when the ATCT is closed.

As part of the runway lighting system, the identification of runway ends and thresholds is of major importance to a pilot during takeoff and landing. Therefore, runways are equipped with special lighting that visually aids pilots during approaches and departures. Runway ends 4 and 22 are both identified with four standard inboard threshold lights on each side of the runway centerline. These lights are equipped with a two-color lens (red and green) placed across the edge of the runway pavement. The green lenses face aircraft on approach to indicate the beginning portion of usable runway for landing, whereas the red lenses face aircraft in a takeoff configuration to indicate the end of usable runway. In the case of Runway 14-32, the thresholds are displaced from the runway ends; therefore, two sets of lights are present on each end rather than one set of lights with dual lenses. The first set of lights reside at the runway end with red lenses facing toward the runway to alert departing or arriving traffic of the end of usable runway. The second set is located at the thresholds with green lenses that face approaching traffic to notify pilots of usable runway length for landings.

2.2.4.3 Runway End Identifier Lights

Runway end identifier lights (REIL) are installed at many airports to provide positive identification of the approach end of a runway. The system consists of a synchronized pair of flashing lights that are situated laterally about the runway centerline on each side of the threshold. One REIL system is installed at SRQ at the approach end of Runway 22. These lights are functional and are considered to be in good condition.

2.2.4.4 Taxiway and Taxilane Lighting

All of the major taxiways at SRQ are equipped with medium intensity taxiway lights (MITL). Similar to runway lighting, the taxiway lighting systems have all been constructed with light cans and conduit and are considered to be in good condition. Although none of the existing taxilanes have edge lighting systems, these areas have overhead lighting fixtures situated on the rooftop of existing T-hangar facilities that assist in visual guidance during nighttime operations. The Airport Authority has no plans to install taxilane lighting in areas that are adequately lit by rooftop and overhead lighting fixtures. No taxiway centerline lighting is currently installed at SRQ.

2.2.4.5 Apron Lighting

Apron lighting is used to illuminate apron and ramp areas for safety and security.

Clusters of two and three high wattage sodium and/or metal halide lamps are currently situated atop light poles to provide lighting for the commercial terminal apron. Similar lamps also exist on the perimeter of the Volo Aviation apron. On other areas of the airfield, apron lighting is provided by flood lamps that are affixed to hangars and buildings.

2.2.5 Navigational and Approach Aids

2.2.5.1 Windsock

The most basic navigational aid available at the Airport is the windsock, which provides pilots with existing wind conditions and direction. Currently, there are four internally illuminated windsocks at SRQ. Each runway has a windsock mounted near its approach end for pilot reference on arrival and departure. Windsocks are also located on top of some corporate hangar structures adjacent to

Dolphin Aviation. However, they are considered to be supplemental to the officially designated windsocks in the airfield operations area.

2.2.5.2 Localizer and Glideslope Antenna (ILS)

As mentioned earlier, Runway 14-32 is equipped with an ILS. The primary components of an ILS consist of electronic azimuth steering information for the pilot indicating aircraft position relative to the runway centerline. As Runway 14-32 has two ILS approaches, two localizer antennae are sited on the extended runway centerlines outside of the runway safety area, approximately 600 feet beyond the ends of each runway. In addition to the localizer antennae, the ILS is equipped with glideslope antennae intended to provide vertical course signals. It should be noted that, while the glideslope system is within the runway safety area boundaries, this arrangement is accepted by the FAA for this type of equipment.

2.2.5.3 Precision Approach Path Indicator

A precision approach path indicator (PAPI) lighting system provides pilots with a visual descent reference during aircraft approach. These lights are typically visible from 5 miles during the day and up to 20 miles or more at night. PAPIs use a light bar unit that contains white and red lights installed in a single row perpendicular to the runway edge. Depending on the aircraft angle in relation to these lights, the pilot will receive a combination that indicates the position of the aircraft relative to the desired glideslope. A white indication notifies pilots that their approach is too high; a red light indication alerts pilots that their approach is too low. An indication of two white and two red lights confirms to pilots that they are on the correct approach slope. All runway ends at SRQ are currently served by four-box PAPI systems, which are installed to the left side of the approach runway, approximately 1,000 feet past the landing threshold.

2.2.5.4 Automated Surface Observation System

The Airport has an automated surface observation system (ASOS), which is used to measure and record weather conditions by using a suite of sensors. ASOS units are implemented cooperatively with the National Weather Service (NWS) and the FAA, which distributes the information to pilots. Specifically, the ASOS at SRQ records temperature, visibility, precipitation types and amounts, wind direction and speed, cloud ceiling, and barometric pressure, among other information. The ASOS is situated on the airfield near the intersection of Taxiways C and F to the north and east of Runway 14-32.

2.2.6 Airport Approach Surfaces

FAR Part 77, *Objects Affecting Navigable Airspace*, defines imaginary surfaces surrounding an airport. These surfaces must be kept clear of natural and man-made obstructions that may compromise the safety of approaching or departing aircraft. **Table II-13** provides a summary of existing surfaces and related dimensional requirements at SRQ as stipulated by the FAA.

According to the most recent FAA-approved ALP (November 2003), SRQ currently has five modifications to airport design standards. Most of these adaptations or modifications to standards are waivers regarding FAR Part 77 obstruction penetrations. Prior to the extensions at both ends of Runway 14-32, localizer antennae were situated within the runway safety areas. The FAA identified these antennae as obstructions that are not fixed by function. As a result, the localizer antennae were relocated along with the runway extensions. such that adequate safety area could be captured.

Table II-13

FAR Part 77 Imaginary Surfaces Inventory

	Runway Approach End			
	Runway 14	Runway 32	Runway 4	Runway 22
Approach Type	Precision	Precision	Nonprecision	Nonprecision
Primary Surface Width (feet)	1,000	1,000	500	500
Horizontal Surface Radius (feet)	10,000	10,000	10,000	10,000
Approach Surface Width (feet)	16,000	16,000	3,500	3,500
Approach Surface Length (feet)	50,000	50,000	10,000	10,000
Approach Slope	50:1[1/]	50:1[1/]	20:1	34:1

Note:
1/ During the first 10,000 feet, the slope is 50:1, during the remaining 40,000 feet, the slope is 40:1.

Sources: Federal Aviation Administration, Federal Aviation Regulations Part 77; FAA *Airport Facility Directory*, Southeast U.S., 2007.
Prepared by: The LPA Group Incorporated, April 2007.

2.2.6.1 Runway Protection Zones

The function of runway protection zones (RPZs) as stipulated in AC 150/5300-13, *Airport Design*, Change 11, is to enhance the protection of people and property on the ground. Typically, the RPZ begins at a point 200 feet beyond the runway end centerline and extends outward in a trapezoidal shape. The inner and outer widths are dependent upon the aircraft approach category and associated approach visibility minimums for each respective runway end. The RPZ may or may not be located entirely within the airport's property boundary, although it is highly desirable for the airport sponsor to have fee simple ownership of the land within the RPZ and have it cleared of all incompatible objects. However, because of the individual circumstances of each airport, limitations may exist. Each RPZ consists of two areas, a runway object free area (OFA) and a controlled activity area. The object free area is established by extending the existing Runway Object Free Area (ROFA) until it intersects the far (wide) portion of the RPZ. The object free area is not compatible for development; the controlled activity area is compatible for specific types of development as long as it does not promote large gatherings of people.

RPZ dimensions for Runway 14-32 are based on Aircraft Approach Category D. However, Runway 4-22 is classified as Aircraft Approach Category B, which requires a substantially smaller RPZ. The departure RPZs for Runway 14-32 are clear of residential or commercial obstructions, although the approach RPZs of Runway 4-22 extend into developed areas. **Table II-14** lists the existing RPZ dimensional requirements at SRQ for each runway.

Table II-14

Runway Protection Zone Dimensions

	Existing RPZ Dimensional Characteristics			
Runway	Approach Visibility Minimums	Length (feet)	Inner Width (feet)	Outer Width (feet)
Runway 14	0.5 statute mile	2,500	1,000	1,750
Runway 32	0.5 statute mile	2,500	1,000	1,750
Runway 4	1.0 statute mile	1,000	500	700
Runway 22	1.0 statute mile	1,000	500	700

Source: FAA AC 150/5300-13, *Airport Design*, Change 11.
Prepared by: The LPA Group Incorporated, April 2007.

2.2.7 Airfield Signage

SRQ has a number of illuminated airfield signs to display instruction and guidance information to aircraft, as stipulated in FAA AC 150/5340-18D, *Standards for Airport Sign Systems*. Standard airfield signage is used to indicate an intersection of or an entrance to a runway, taxiway, or other critical movement area. In addition to standard signage, Runway 14-32 is also equipped with eight runway distance remaining signs, which are characterized by single, double-sided white numerical inscriptions used by pilots to be aware of the remaining available runway in thousands of feet. Other signage includes mandatory instruction signs, which are identified by a red background and white inscription, and directional signage indicated by a yellow background and black inscription. Most of these signs are taxiway directional signs with arrows to an exit or entry to a taxiway. These signs are typically multi-modular with an accompanying location sign identified by a black background and yellow inscription of the taxiway designator.

2.2.8 Aircraft Circulation Patterns

The geometry of an airfield dictates the circulation patterns of aircraft maneuvering between runways, taxiways, aprons, and other movement areas. Facilities situated on all sides of the airfield act as originating and terminating points for aircraft. Likewise, runways and taxiways serve as transitioning points between these areas and flight. Not all areas on the airfield are designated for use by all aircraft. For example, in addition to restrictions on the type of aircraft permitted to use Taxiway F, general aviation aircraft are not permitted to use the commercial terminal apron. **Exhibit II-3** depicts typical aircraft arrival circulation patterns and **Exhibit II-4** depicts typical departure circulation patterns.

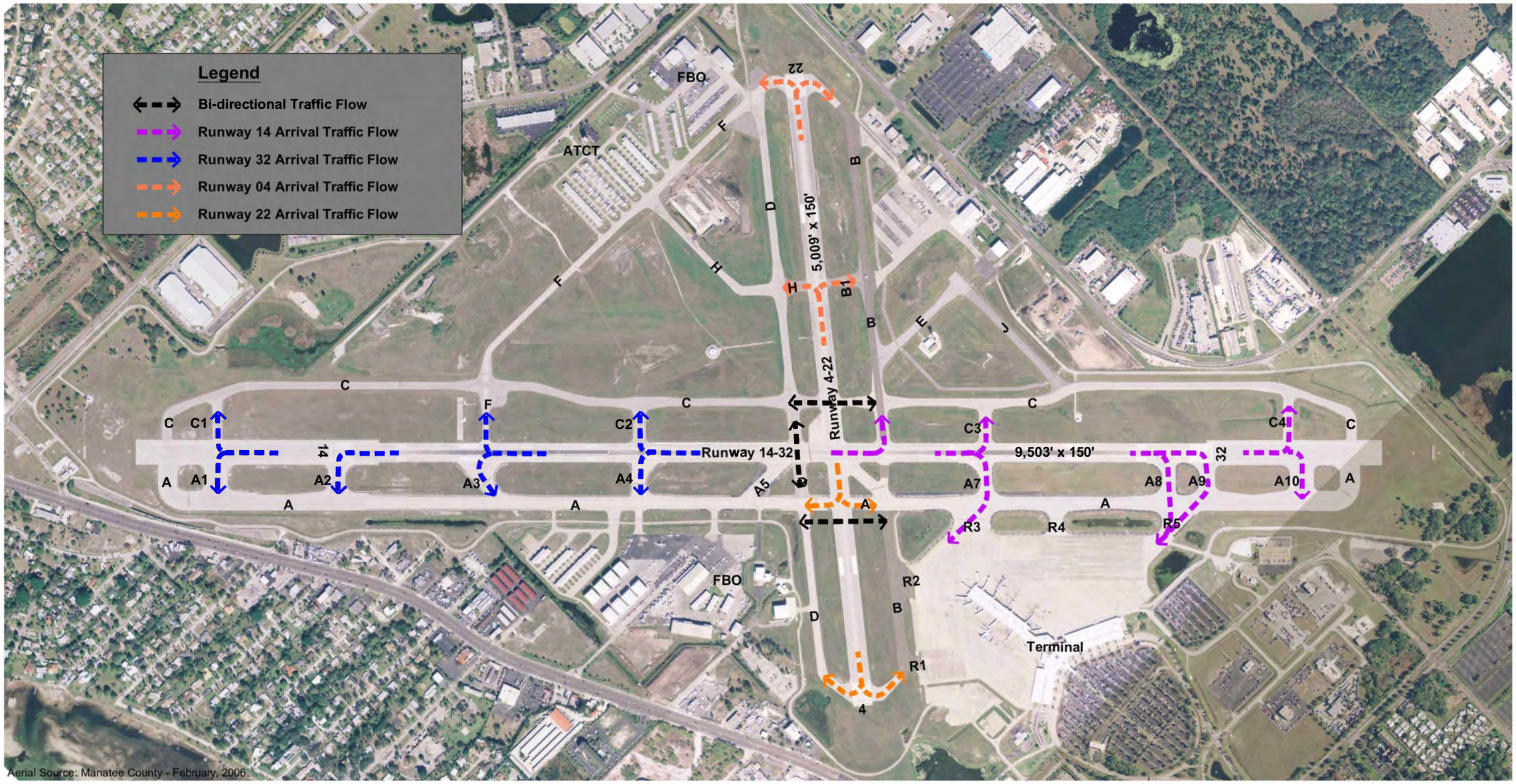
2.2.9 Airport Airside Security

The Airport airside includes all movement areas, adjacent terrain, and buildings or portions thereof to which access is controlled. Secure areas on the airside of the Airport include Air Operations Area (AOA), Security Identification Display Areas (SIDA), and sterile areas.

The AOA at SRQ includes all runways, taxiways, and apron areas, which are enclosed by an 8-foot chain link airfield perimeter fence topped by three strands of barbed wire. Based on a visual inspection conducted as part of this inventory task, the fence is in good condition and provides clear zones on either side. The AOA access control also includes 17 vehicle gates equipped with swipe card and keypad access for highly utilized areas of vehicular ingress and egress. Private use gates to FBO areas and associated hangars are also controlled by a combination of key locks and card readers. All access cards are authorized and distributed by the Airport Authority.

The SIDA is located within the AOA and is defined as those areas requiring controlled access related to a specific function, such as FBO facilities, fuel facilities, commercial passenger service, and maintenance areas. The SIDA are identified by either physical or operational boundaries. All persons within the SIDA must visibly display their security badges at all times, unless otherwise escorted by authorized personnel.

Sterile areas are the portion of an Airport that provide passengers access to the aircraft boarding area. Access to this area at SRQ is controlled by the Transportation Security Administration (TSA), which is federally authorized by the Department of Homeland Security to conduct screening. TSA security personnel use specific resources necessary to screen passengers and property to prevent or deter the carriage of weapons, explosives, or other prohibited items onto aircraft. To access the sterile areas, ticketed passengers, employees, and their property are subject to search before entering.



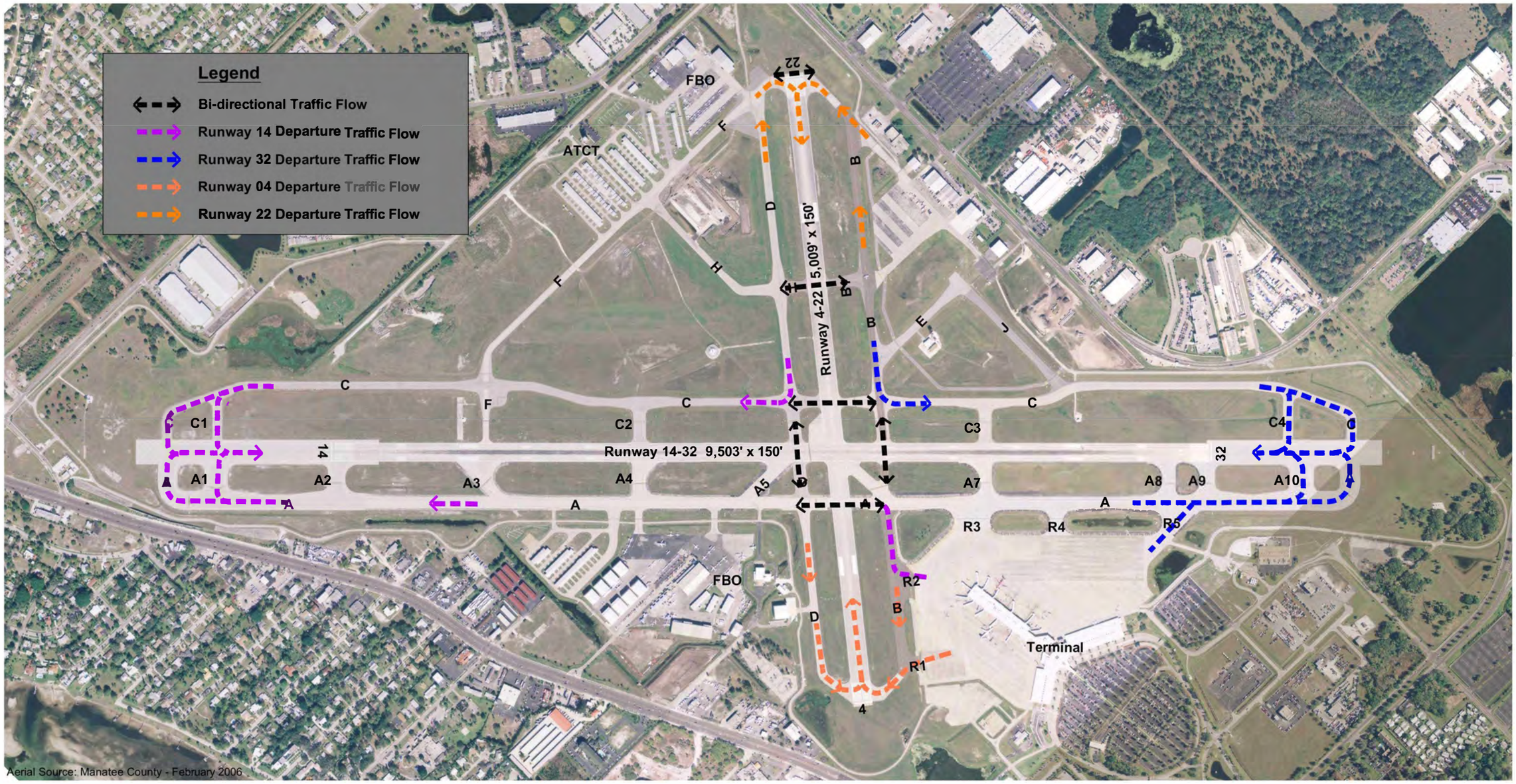
Source: SRQ Air Traffic Control Tower - April, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-3

0 800 ft. north

Airfield Arrival Circulation Patterns

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-3 Arrival patt.dwg_Layout: 11x17 landscape_Apr 24, 2009, 10:38am



Source: SRQ Air Traffic Control Tower - April, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-4

0 800 ft.

north

Airfield Departure Circulation Patterns

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-4 departure patt.dwg_Layout: 11x17 landscape_Apr 24, 2009, 10:35am

SRQ is currently equipped with electronic monitoring equipment around the passenger terminal area. These surveillance cameras monitor activity near the curbside and access roadways and are monitored 24 hours per day through a dispatch center. **Exhibit II-5** illustrates various access gate locations and identifies the SIDA and AOA portions of the airfield.

2.3 Terminal Area – Airside Components

The terminal area is the major interface between the airfield and landside components of the Airport. The terminal area apron at SRQ, located on the south side of the airfield and south of the intersection of Runways 14-32 and 4-22, encompasses approximately 190,000 square yards of pavement. The apron has direct airfield access to the runways via Taxiway A and Taxiway B, which also serve as ingress and egress points to the apron from any one of five connector taxiways, two of which connect with Taxiway B and three of which connect with Taxiway A. Aircraft circulate the terminal area along designated taxilanes and lead-in lanes to each gate area. In addition, the entire apron and adjoining storage areas are enclosed by perimeter fencing and are secured as part of the AOA.

The terminal building configuration at SRQ is a pier or "finger" design. The objective of this design is to provide an interface with aircraft along the pier that extends from the main terminal area. In this arrangement, aircraft are positioned around the axis of the pier in a parallel or nose-in parking alignment. Each side of the building has a row of aircraft gate positions, with a passenger concourse along the axis serving as the departure lounge and circulation space for both enplaning and deplaning passengers. There are 13 loading bridges or contact gates along the concourse. Each of these gates was designed to accommodate a large narrowbody B-757, which has a wingspan of 124 feet and is an ADG IV aircraft. As of April 2007, the largest scheduled aircraft serving SRQ in terms of wingspan was the B-737-700/800, which is classified as an ADG III aircraft. However, on occasion, a charter or seasonal airline operating widebody aircraft may visit the Airport. In these instances, Gate 14 or 11 is used unless the airline is foreign-flag. In that case, Gate 8 would be used for access to U.S. Customs and immigration services.

Three spaces are specifically designated for remain overnight (RON) aircraft parking located along the perimeter of the apron, between taxiway connectors R4 and R5. These positions are designed to accommodate B-757 aircraft and are used when the gates are all being used or are unavailable because of flight schedules or other reasons.

Aircraft fueling for commercial passenger flights is provided by Aircraft Services International Group (ASIG), with which the SMAA has a general ground lease contract. ASIG owns and operates the fuel farm on land leased from the SMAA. The fuel farm is situated near the air cargo building on the southeast side of the airfield and consists of 30,000 gallon tanks that store airline fuel. ASIG operates four refueling trucks—three 5,000-gallon trucks and one 7,000-gallon truck—to meet fueling needs. These trucks are parked near the fuel farm when not in use.

Aircraft ground service equipment (GSE) storage is located near the baggage pickup and drop-off area of the airside as well as in alcoves near the gates for airline-owned equipment. Additional storage is provided in the air cargo staging area.

Sources: Manatee County - February, 2006 : Sarasota-Manatee Airport Authority
Prepared by: The LPA Group Incorporated

Exhibit II-5

0 1000 ft.

north

Access Gates, AOA and SIDA Areas

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-5 SIDA.dwg_Layout: 11x17 landscape_Apr 24, 2009, 10:32am

2.4 Terminal Area – Landside Components

The landside components of the terminal area at SRQ consist of the various elements essential for commercial air service, including: concessions, rental car counters, baggage claim and baggage makeup, ticket counters, airline offices, holdrooms, public restrooms, circulation areas, SMAA offices, and utility areas, such as mechanical/electrical/communications areas. This section presents an inventory of these areas and identifies potential constraints and opportunities, which are further discussed in subsequent chapters of this Master Plan Update.

2.4.1 Terminal Building

The passenger terminal building at SRQ was constructed in 1989. The entire three-story facility contains approximately 276,000 square feet of space. The majority of public activity at SRQ occurs on the ground level and second level of the terminal building, which houses ticketing, concessions, a food court, security screening, departure gates, baggage claim, and ground transportation provider functions. The third level is occupied solely by the Airport Authority for administrative and support functions. **Table II-15** illustrates the total amount of terminal building space by level.

Table II-15

Terminal Space Breakdown By Level

Level	Total Area (square feet)
Level 1	157,543
Level 2	102,345
Level 3	16,772
Total	276,660

Source: Lease Drawings, Sarasota Manatee Airport Authority, May 2007.
Prepared by: The LPA Group Incorporated, May 2007.

2.4.2 Terminal Curbside / Vestibules

Because of the linear terminal design, passengers enter the terminal from the curbside and the short-term and long-term parking lots through one of 12 entry vestibules located along the south face of the building. The total curb length measures 860 linear feet, an outer curb of equal length serves commercial vehicles. Six vestibules access the ticketing lobby, two vestibules access the central vertical circulation core, and four vestibules access the baggage claim area.

2.4.3 Departure Sequence

Signage assists with directions to the major areas of the terminal. Once inside the terminal building, passengers either proceed to ticketing or go directly to the passenger security screening area, depending on whether they must check baggage, obtain boarding passes, or coordinate with an airline representative.

2.4.3.1 Ticket Lobby and Ticket Counters

The ticketing area is located at the east end of the terminal and has continuous curbside access with 20 curbside check-in positions serving passengers along the entire length. The ticketing area includes the ticketing lobby, ticket counter area, and airline ticket offices (ATOs). Of the 57

ticketing positions at the Airport, 20 are self-service check-in positions. **Table II-16** summarizes the airline ticketing positions and self-service kiosks at SRQ by airline.

Table II-16

Ticketing Positions and Self-Service Kiosks by Airline

Airline	Staffed Ticketing Positions	Self-Service Kiosks	Curbside Ticketing Positions	Total per Airline
AirTran Airways	6	4	2	12
Continental Airlines	8	4	2	14
Delta Air Lines	8	6	2	16
JetBlue Airways	2	4	2	8
US Airways	8	2	2	12
Vacant / Common Use	25	-	10	35
Total	57	20	20	97

Sources: Sarasota Manatee Airport Authority, 2007.
Prepared by: The LPA Group Incorporated, May 2007.

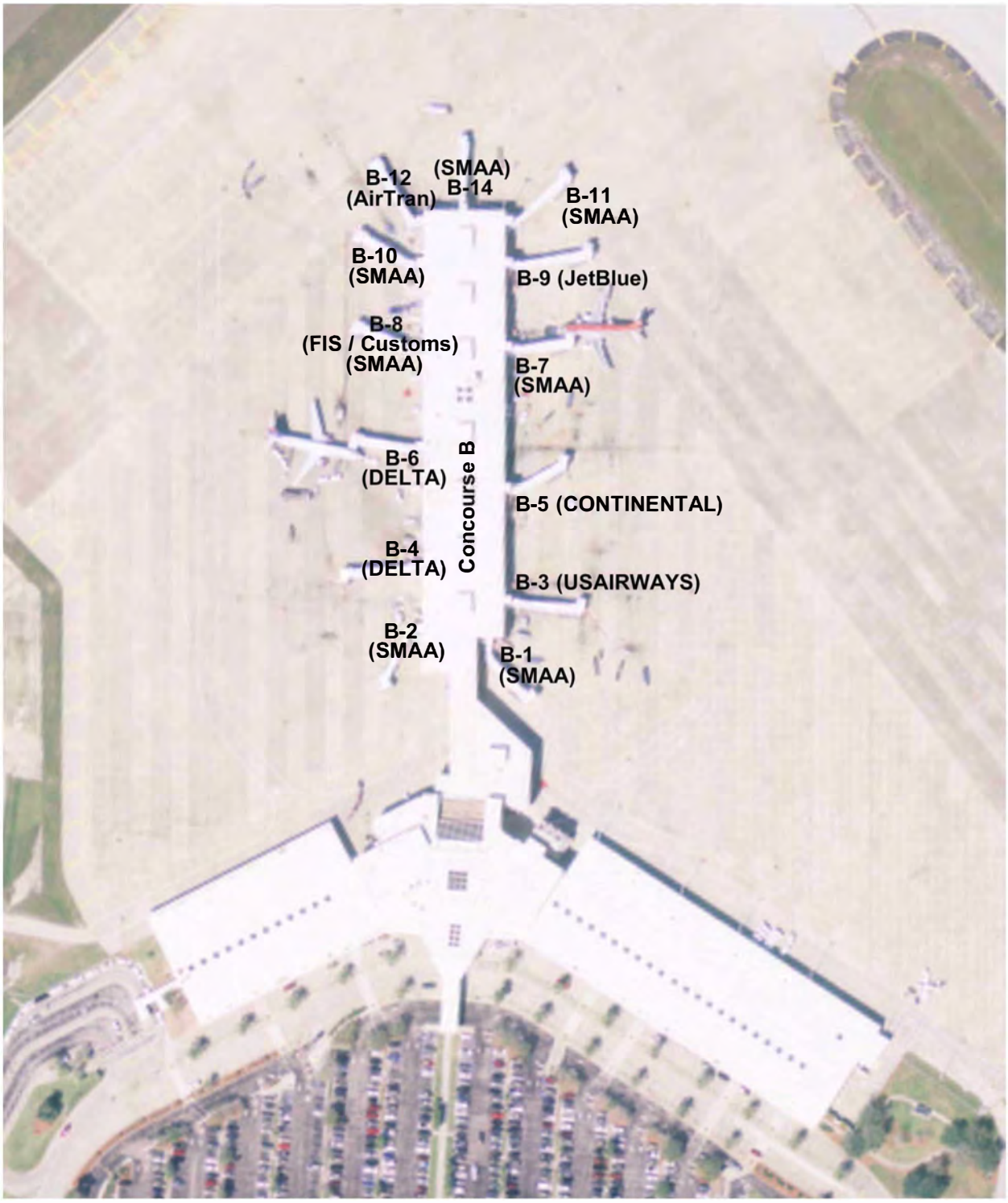
2.4.3.2 Security Screening

After enplaning passengers have checked their bags and received the proper boarding documentation at the ticket counters, they proceed to a security screening area that includes six screening stations located on the second floor departure level. This recently expanded security screening area is adjacent to a north-south corridor, which directly connects the secure concourse to the nonsecure vertical central circulation core. This nonsecure area is primarily occupied by recently revamped concessions, which include gift shops and a selection of food and beverage type concessions, including a restaurant.

Based on data provided by TSA representatives at SRQ, during the peak hour of an average day of the peak month (March 13, 2007), approximately 439 departing passengers passed through the security screening checkpoint. Although six screening stations are available, TSA usually operates only three stations simultaneously at any given time. Typically, TSA recommends that an average processing rate of 180 passengers per hour per lane be used at airports nationwide because it is the performance parameter that TSA aims to maintain. The actual passenger-processing rates at SRQ for March 13, 2007, averaged 137 passengers per hour per lane based on data provided by TSA representatives at SRQ.

2.4.3.3 Concourse B – Level 2

Once passengers have cleared the security screening checkpoint, they enter Concourse B, located on the north side of the terminal building. The second level of Concourse B consists of holdrooms (gates); concessions; restrooms; miscellaneous support spaces, including electrical, mechanical, and storage closets; and the concourse circulation corridors. Currently, 13 boarding bridges are used to facilitate passenger enplaning and deplaning functions. A stand-alone gate, located on the easternmost side of the lower terminal level, can also be converted to use as a 14th gate. This gate is specifically designed for commuter flights (i.e., for Cape Air, an affiliate of Continental Airlines). **Exhibit II-6** depicts the airline gate assignments located on Concourse B and the commuter gate. **Exhibit II-7** illustrates the layout of the second level of Concourse B.



Sources: Manatee County - February, 2006 : Sarasota-Manatee Airport Authority
Prepared by: The LPA Group Incorporated

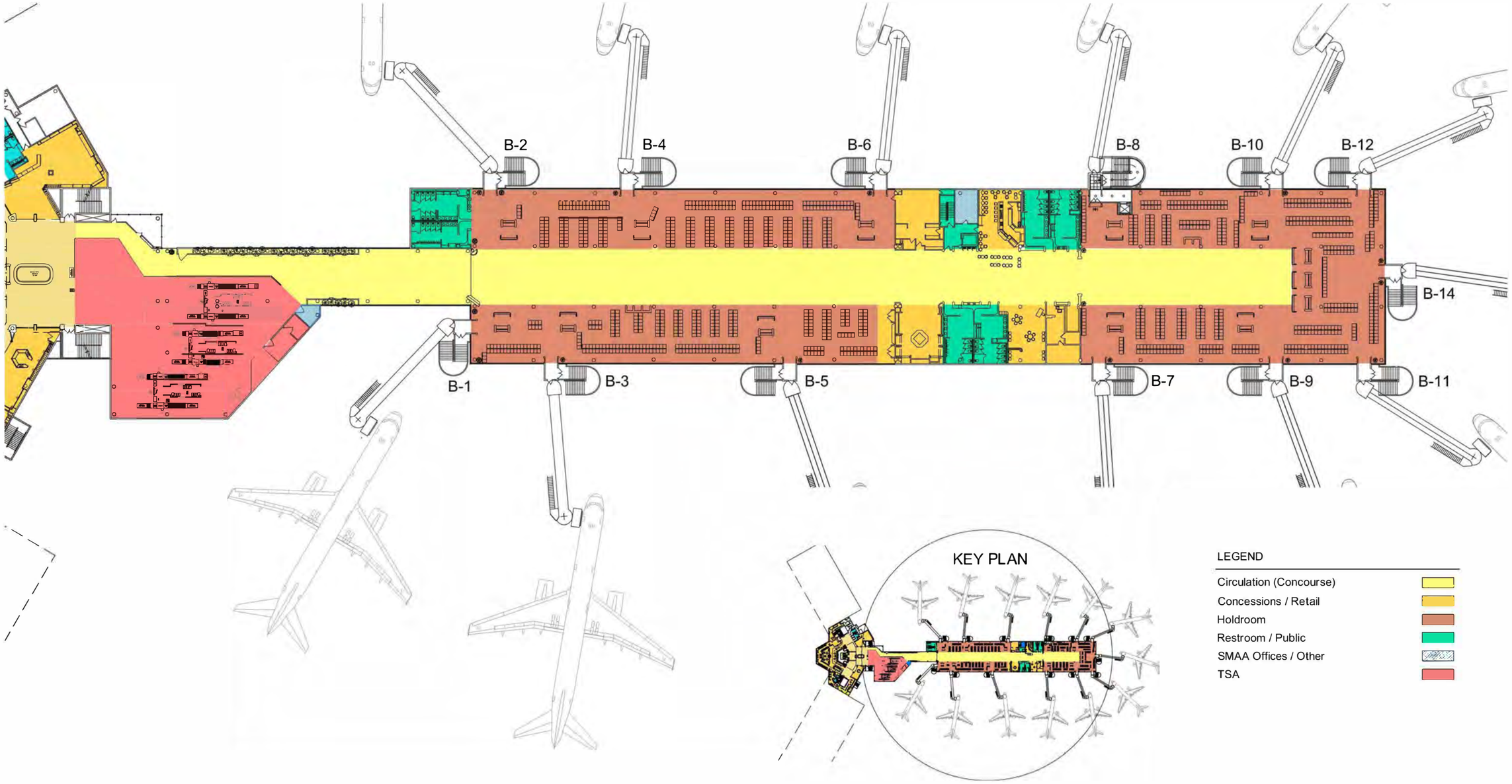
Exhibit II-6

0 200 ft.

north

Concourse B Airline Gate Assignment

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-6 concourse B gates.dwg_Layout: 8.5X11_Apr 24, 2009, 10:01am



Source: Sarasota Manatee Airport Authority - May, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-7

0 60 ft.
north

Concourse B - Second Floor Plan

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-7 conc B lev2.DWG_Layout: Layout1_Apr 24, 2009, 10:28am

2.4.3.4 Baggage Screening

New security regulations developed by the TSA require that all checked baggage be screened prior to loading onto a commercial aircraft. The outgoing baggage makeup area for each airline is ideally located directly behind the ATOs. Outbound baggage is transported from the ticket counter conveyors on the ramp level to the outgoing baggage makeup area, and then delivered to the respective aircraft by tugs and carts.

At SRQ three L-3 explosives detection systems (EDS) are in use. As part of the Ticket Wing and Baggage Makeup Renovation project, two of these systems were relocated from the ticket lobby to the baggage makeup area in late 2007 and early 2008. The third system is still located in the ticket lobby (as of April 2009). However, this EDS machine is anticipated to be relocated in the baggage makeup area by the end of calendar year 2009. For the purposes of the Master Plan Update, it was assumed for the existing conditions for outbound baggage screening that all three EDS machines are located in the baggage makeup area.

2.4.4 Arriving Passenger Sequence

Arriving passengers enter the concourse from their respective aircraft and proceed to the federal inspection services (FIS) facility (international passengers) or past the security checkpoint (domestic passengers) on the deplaning side.

2.4.4.1 Federal Inspection Services Facilities

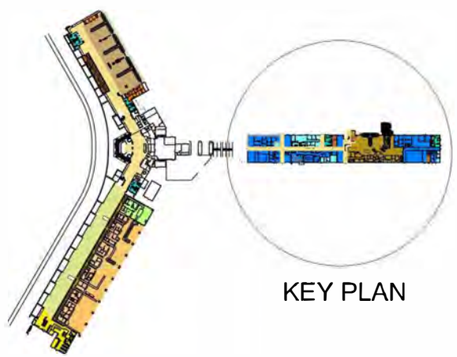
Although SRQ does not have regularly scheduled daily flights from international destinations, the Airport does have seasonal international service from airlines such as Air Canada. Arriving passengers from these international flights are processed through an FIS facility located on the ramp level adjacent to Gate B-8. Arriving passengers disembark through a short sterile corridor through an elevator or a stairway that leads passengers to immigration for processing. Four immigration booths are used to process passengers through to a single flat plate baggage claim device. After passengers have claimed their baggage, they proceed to Customs. Three Customs tables facilitate the inspection process. In total, approximately 10,283 square feet are designated for the FIS operation. Within this area, 3,508 square feet are designated for immigration and 6,775 square feet are designated for Customs. **Exhibit II-8** depicts the layout of the FIS facility on the concourse lower level.

2.4.4.2 Baggage Claim / Baggage Makeup

Inbound baggage operations areas are located on the apron level of the terminal building, along with Airport storage, a delivery area, and airline operations space. The majority of the major mechanical spaces is also located on this level. Incoming bags are delivered by baggage tugs from the aircraft to the inbound operations area located directly behind the baggage claim devices area on the ramp level. Three recirculating flat plate conveyor devices display baggage from inbound aircraft. Baggage is fed to the claim devices directly onto the flat plate conveyors, which loop through the inbound baggage operations area located airside immediately north of the baggage claim area. For passenger convenience, baggage claim offices are located on both sides (east and west) of the baggage carousels. In total, the baggage claim lobby contains 13,768 square feet of space and the claim devices provide 463 linear feet of frontage for passengers to pick up their baggage. **Exhibit II-9** illustrates the baggage and other areas on the first level of the terminal.

LEGEND

- Airline Operations
- Circulation (Public)
- FIS
- Mechanical / Electrical / Utility
- Restroom (Public)
- SMAA Offices



KEY PLAN

Source: Sarasota Manatee Airport Authority - May, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-8

0 40 ft.

north

Concourse B - First Floor Plan

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-8 conc B lev1.DWG_Layout: Layout1_Apr 24, 2009, 10:27am

Source: Sarasota Manatee Airport Authority - May, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-9

0 70 ft.

north

Main Terminal First Floor Plan

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-9 Term lev1.DWG_Layout: Layout1_Apr 24, 2009, 2:36pm

2.4.4.3 Rental Car Company Space / Ready and Return Parking

Rental car counters are located adjacent to the baggage claim areas for arriving passenger convenience. Currently, six rental car companies serve SRQ: Alamo/National, Avis, Budget, Dollar/Thrifty, Enterprise, and Hertz. The on-Airport rental car companies have ready and return parking conveniently located in a portion of the short-term parking lot adjacent to the west side of the terminal. This area encompasses approximately 251 parking spaces (51,000 square feet). **Table II-17** summarizes the cumulative counter and office space along with the number of ready/return parking spaces occupied by each rental car company.

Table II-17

Rental Car Counter and Office Space and Ready / Return Parking – Level 1 (as of April 2007)

Operator	Total Area (square feet)	Ready / Return Spaces
Alamo/ National	638	61
Avis	519	39
Budget	506	30
Dollar / Thrifty	649	46
Enterprise	519	29
Hertz	649	46
Total	3,480	251

Source: Sarasota Manatee Airport Authority, April 2007.
Prepared by: The LPA Group Incorporated, May 2007.

2.4.5 Airline Operations Area – Concourse B, Level 1

Airlines often lease space on the concourse ramp for a number of purposes, including administrative offices, flight planning, equipment storage, and for ground personnel break rooms and pilot lounges. Although a majority of space on the ramp level of Concourse B is currently allocated to SMAA or to the U.S. Customs function, Continental, Delta, and Servisair all rent space for the support of their operations. The lower concourse level contains approximately 40,300 square feet of space.

2.4.6 Concessions

At SRQ, 80 percent of the concession areas are located on the unsecured (pre-security) side of the terminal (21,193 square feet). The remaining 20 percent are located on the secured (post-security) side (5,077 square feet) of the terminal, at Concourse B. Recent concessions expansion and renovation were completed in 2008, providing better aesthetics, functionality, and level of customer service.

The concessions located at Concourse B consist of 4,103 square feet of food and beverage space and 974 square feet of retail and news and gifts space. In early 2008, retail, food, and beverage upgrades at SRQ resulted in the opening of Starbucks and CNBC shops.

The unsecured landside consists of 12,474 square feet of space for food and beverage providers; 6,611 square feet are being used for retail vendors. The remaining 2,108 square feet are allocated to other uses, which include service vendors, storage, and concession access. In late 2008, full upgrades of the restaurant and two retail shops on the second level of the main terminal resulted in boosting the Airport's main concession area (i.e. addition of Dunkin Donuts).

Traditionally, at airports with similar levels of enplanements as SRQ, concessions are located on both sides of security. Often, a greater percentage of concessions, including restaurants and gift shops, are located on the unsecured side. TSA regulations have caused the security screening process to be more time intensive and stressful for passengers; therefore, airport operators must consider the balance of secure side versus unsecured side concessions. Since the trend is now for passengers to clear security as soon as possible and arrive at their assigned gate holdrooms, they are more likely to patronize concessions in the secure areas. In total, approximately 26,270 square feet of area is designated for concession use within the terminal. **Exhibit II-10** depicts all areas on the second level of the terminal, including the various concession areas.

2.4.7 Holdrooms and Gates

As mentioned earlier, a total of 13 gates and associated holdrooms are available at SRQ. The sizes of the holdrooms vary according to location. Gates with larger holdrooms are located near the base of the concourse, while smaller holdrooms are located near the end of the concourse. The holdrooms are currently designed to accommodate B-757 aircraft (large narrow-body aircraft); however, should the airside be redesigned, the existing holdrooms could be reconfigured to accommodate one or two widebody aircraft gates. Of the 13 available gates, 6 are leased under a preferential use arrangement with the signatory airlines (those that have executed Airport use and lease agreements with the Airport Authority), whereas the remaining 7 gates are common use gates under the management and control of the SMAA. The preferential arrangement allows the Airport Authority to use gates at its discretion during times of airline inactivity. Concourse B has a total of 39,233 square feet of holdroom space. In addition to the 13 gates located at Concourse B, a holdroom located on the easternmost side of the lower terminal level could be converted to a commuter gate (no loading bridge). The holdroom associated with this gate contains 2,056 square feet of space for passenger seating. Level 2 of Concourse B is depicted on Exhibit II-6 and a detailed breakdown of airline space within the concourse is provided in **Table II-18**.

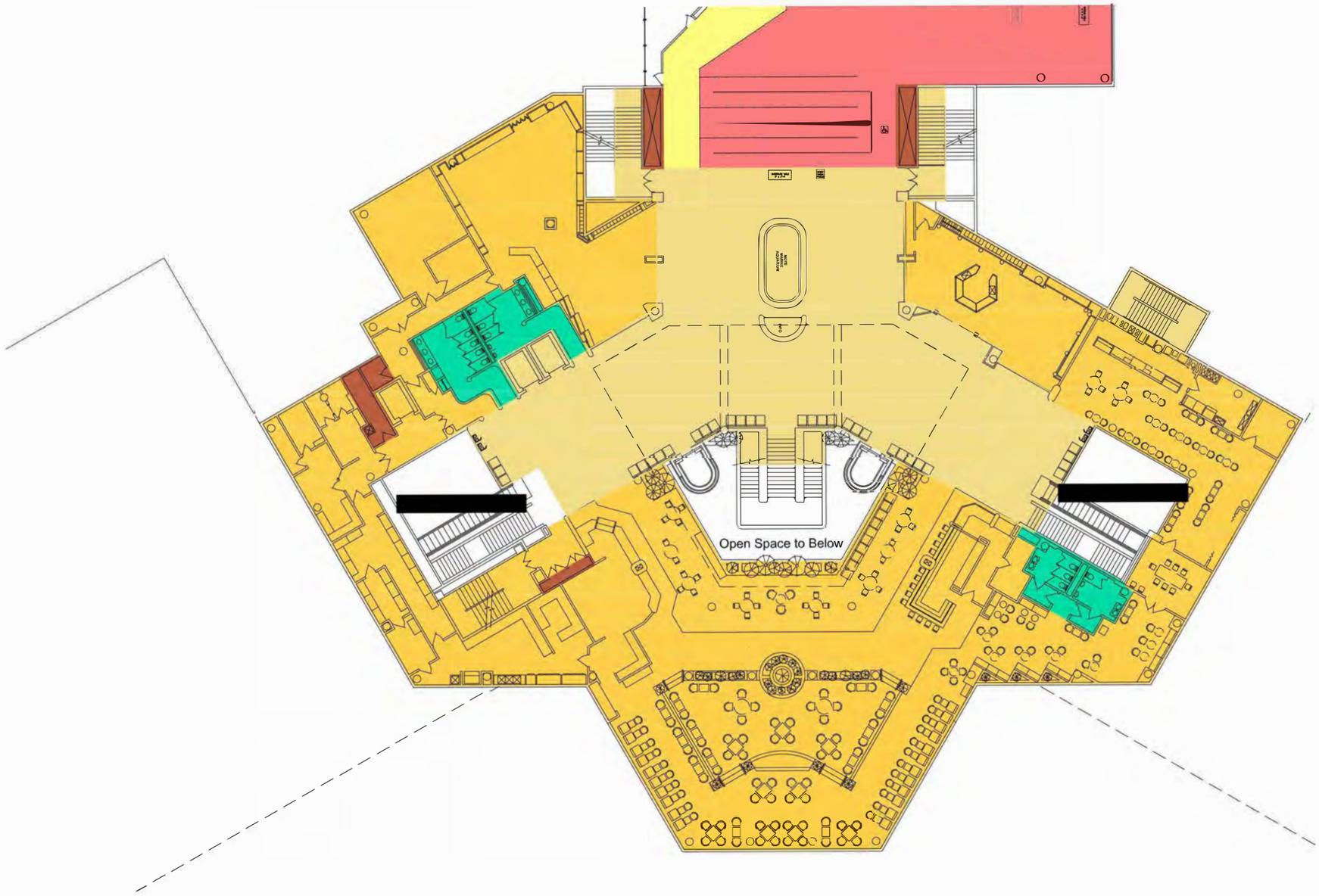
Table II-18

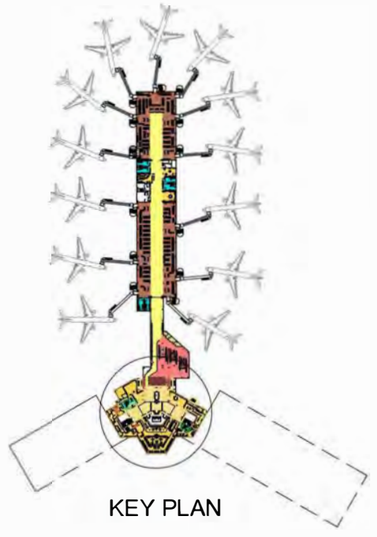
Aircraft Loading Bridge and Gate Assignment Space on Concourse B

Gates	Leased to	Gate Also Used by	Apron (linear feet)	Holdroom (square feet)
B-1	SMAA	US Airways	111.0	3,418.0
B-2	SMAA	Delta Air Lines	111.0	3,418.0
B-3	US Airways	N.A.	185.5	3,418.0
B-4	Delta Air Lines	N.A.	210.0	3,418.0
B-5	Continental Airlines	N.A.	148.5	3,418.0
B-6	Delta Air Lines	N.A.	136.0	3,418.0
B-7	SMAA	Northwest Airlines, Continental Airlines, Air Canada	161.0	2,675.0
B-8	SMAA	U.S. Customs	136.0	2,675.0
B-9	JetBlue Airways	N.A.	124.0	2,675.0
B-10	SMAA	AirTran Airways	124.0	2,675.0
B-11	SMAA	Northwest Airlines, JetBlue Airways	111.0	2,675.0
B-12	AirTran Airways	N.A.	111.0	2,675.0
B-14	SMAA	Continental Airlines	161.0	2,675.0
		Total	1,830.0	41,289.0

Note:
N.A. = Not applicable

Source: Sarasota Manatee Airport Authority. May 2007.
Prepared by: The LPA Group Incorporated, May 2007.





KEY PLAN

LEGEND

- Circulation (Public)
- Concessions / Retail
- Mechanical / Electrical / Utility
- Restroom (Public)
- TSA

Source: Sarasota Manatee Airport Authority - May, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-10

0 30 ft.

north

Main Terminal - Second Floor Plan

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-10 Term lev2.DWG_Layout: Layout1_Apr 24, 2009, 10:26am

2.4.8 Deliveries

Authorized delivery trucks arrive at the terminal apron level where they undergo a screening procedure. Afterwards, they proceed onto the ramp adjacent to a commercial elevator, which is accessed from the airside just west of the central vertical circulation core. A service elevator is located adjacent to the dock area to transport deliveries to the upper levels of the terminal building.

2.4.9 Airport Administration

The Sarasota Manatee Airport Authority was created as a public agency of the State of Florida to operate and manage the Airport. It is granted the power to acquire, construct, improve, enhance, operate, and maintain the Airport facilities for the primary purpose of meeting the air transportation needs of Sarasota and Manatee counties. SMAA has several office areas throughout the terminal building and concourse; however, the majority of SMAA administrative functions are located on the third level of the terminal. This area encompasses approximately 13,369 square feet of space and can be accessed via the unsecured central vertical circulation core, which connects the ticketing and baggage claim areas to the secure passenger holding concourse. **Exhibit II-11** illustrates the third floor offices occupied by SMAA. As shown, a large open atrium on the upper level floor allows for a open view to the ground floor below.

2.4.10 Utility Areas

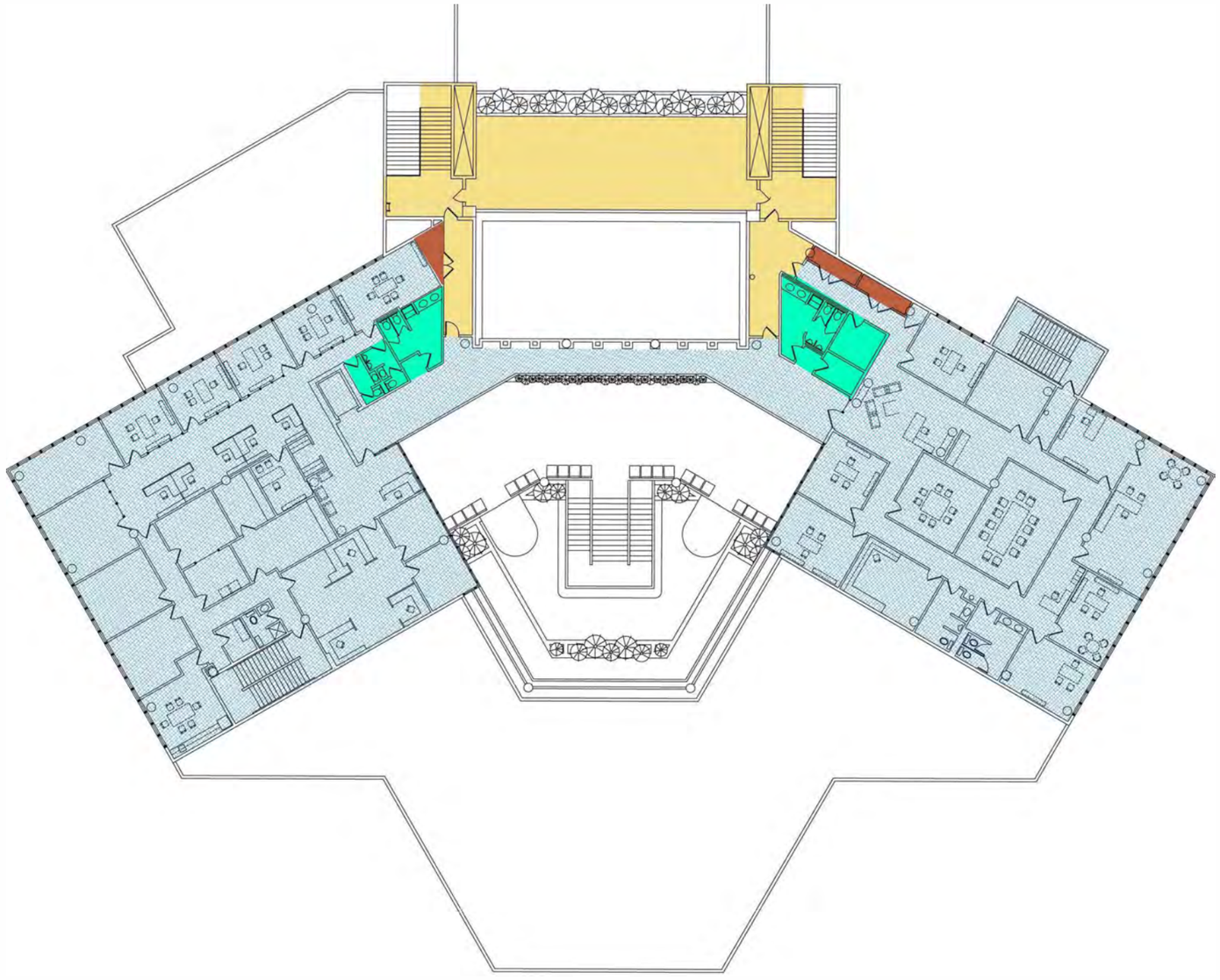
Various utility areas scattered throughout the terminal are inaccessible to the public or to tenants; however, they are important to the functionality of the building. These utility areas contain chillers, communications equipment, electrical panels, mechanical devices, and other equipment necessary to provide services to the terminal. In total, approximately 8,902 square feet of utility space are located within the terminal at SRQ.

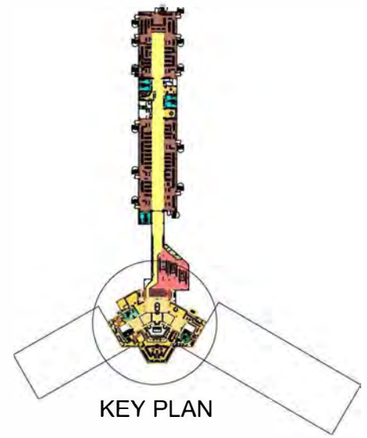
2.4.11 Public Areas

The public areas within the terminal include those areas designated for circulation, public seating, restrooms, corridors, stairs, and walkways, including other open space areas that are not specifically leased to an airline, concessionaire, or other Airport tenant. The largest concentration of public area exists on the lower level of the terminal to accommodate the required ticket counter circulation corridor and also the aesthetic water feature in the middle of the terminal. Another large concentration of public space exists in the main concourse circulation corridor. In total, airside and landside public circulation areas consist of 67,425 square feet of space within the various terminal and concourse levels. The public and concession areas on Level 2 of the main terminal building are depicted on Exhibit II-10.

2.4.12 Future Terminal Improvement Plans

Concurrent with the Master Plan Update, SMAA has been conducting two projects to improve the terminal configuration. The first project is a study of the existing ticketing and baggage make-up areas to investigate the possibility of a reconfiguration to relocate the EDS machines from their existing location within the passenger circulation area into the baggage make-up area. Three L-3 explosives detection systems (EDS) are currently in use at the Airport. Two of these systems were relocated from the ticket lobby to the baggage makeup area in late 2007 and early 2008. The third system is still located in the ticket lobby (as of April 2009). However, this EDS machine is anticipated to be relocated in the baggage makeup area by the end of calendar year 2009.





KEY PLAN

LEGEND

- Circulation (Public)
- Mechanical / Electrical / Utility
- Restroom (Public)
- SMAA Offices

Source: Sarasota Manatee Airport Authority - May, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-11

0 30 ft.

north

Main Terminal - Third Floor Plan

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\Exhibit 2-11 Term lev 3.DWG_Layout: 30x42 Full Bond Plot_Apr 24, 2009, 10:25am

In a separate and unrelated project, the concessionaires are reconfiguring their respective lease areas located on Level 2. Both of these projects are addressed in subsequent sections of this Master Plan Update; however, as neither of project involves the creation of additional terminal space, future consideration will be limited to functional relationships.

2.4.13 Terminal Summary

Facilities inventory information gathered and presented in this chapter provides the basis for determining deficiencies with the existing terminal building and terminal area for later review in the Master Plan Update. **Table II-19** provides a breakdown of space within the terminal along with associated uses.

Table II-19

Summary of Terminal Areas

Description	Level 1 (Terminal) (square feet)	Level 1 (Concourse) (square feet)	Level 2 (Terminal) (square feet)	Level 2 (Concourse) (square feet)	Level 3 (square feet)	Total (square feet)
Airline Ticket Offices	8,340	-	-	-	-	8,340
Airline Operations	-	4,845	-	-	-	4,845
Airline Ticketing/ Queuing	8,837	-	-	-	-	8,837
Baggage Claim	13,768	-	-	-	-	13,768
Baggage Makeup	24,134	-	-	-	-	24,134
Baggage Offices (Airline)	1,694	-	-	-	-	1,694
Circulation (Concourse)	-	-	-	21,822	-	21,822
Circulation (Public)	32,936	3,963	8,704	-		45,603
Concessions						
Retail	-	-	6,611	974	-	7,585
Food & Beverage	-	-	12,474	1,741	-	14,215
Vacant	-	-	-	2,362	-	2,362
Other	2,108	-	-	-	-	2,108
FIS	-	10,283	-	-	-	10,283
Holdroom	2,056	-	-	39,233		41,289
Mechanical/ Electrical/Utility	7,738	739	217	-	163	8,857
Other (Public, Nonleasable)	3,181	-	-	-	3,240	6,421
Rental Car	3,480	-	-	-	-	3,480
Restrooms (Public)	3,394	1,626	1,149	3,859	-	10,028
SMAA	3,437	18,844	-	1,940	13,369	37,590
TSA	2,095	-	-	9,849	-	11,944
Totals	117,198	40,300	29,155	81,780	16,772	
					Grand Total	285,205

FIS = Federal inspection services
SMAA = Sarasota Manatee Airport Authority
TSA = Transportation Security Administration

Source: Sarasota Manatee Airport Authority, May 2007.
Prepared by: The LPA Group Incorporated, May 2007.

2.5 Terminal Area Facilities – Access, Transportation, Parking, Rental Car Services

This section presents an inventory of the ground transportation network, ground transportation service providers, automobile parking facilities, and rental car companies that serve the commercial passenger terminal area. Visual inspection and field observations were supported by information collected from SRQ management records.

2.5.1 Ground Access Roadway Network

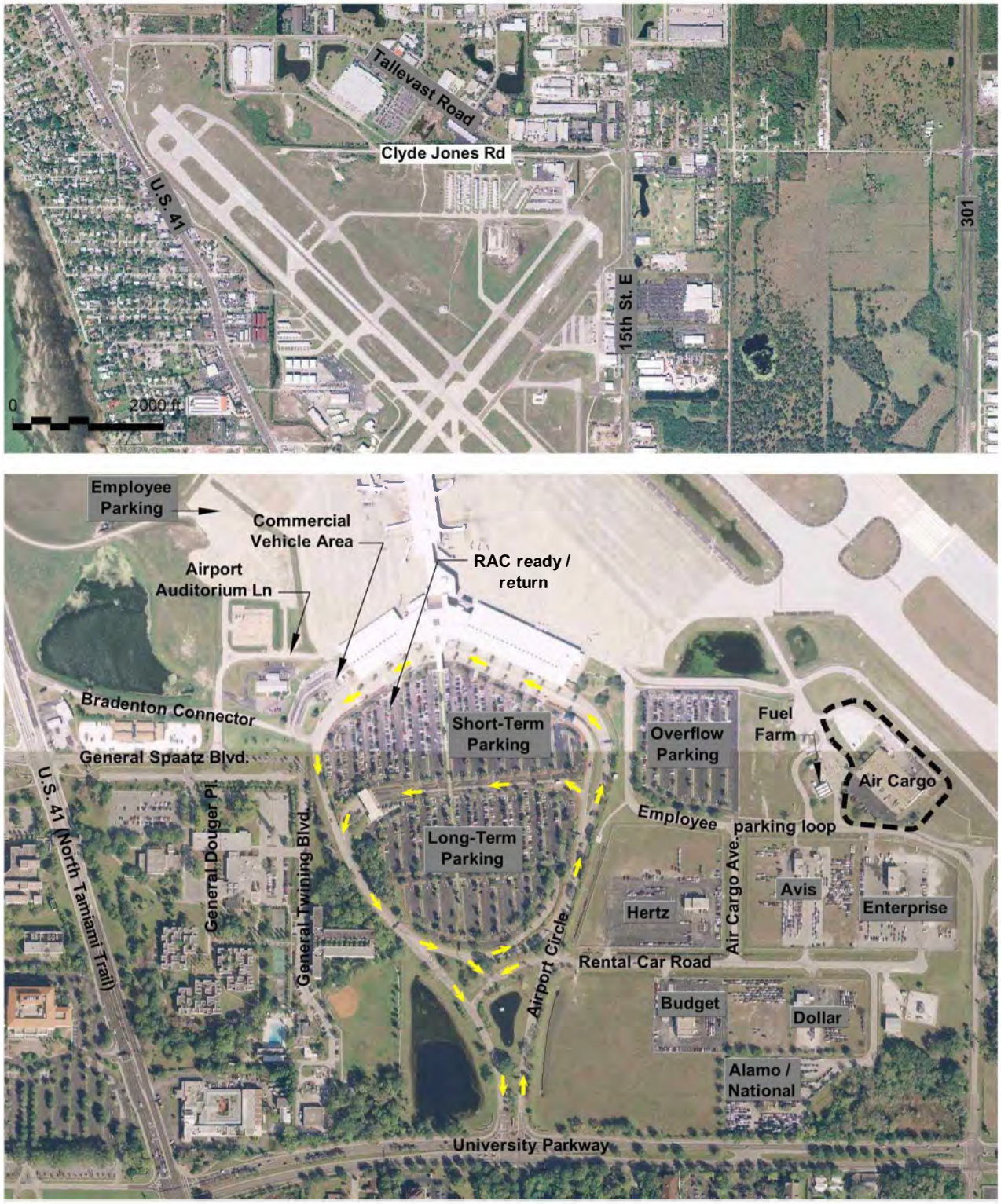
The primary north/south transportation corridor to Sarasota and throughout Southwest Florida is Interstate 75 (I-75). I-75 is a major interstate highway that runs north through Florida into Georgia and also runs south past Sarasota to Naples, then east to Miami. Depending on the traveler's origin, I-75 can be taken north or south to exit 213 (University Parkway) at the Sarasota/Manatee county line. Travelers can then take University Parkway to the west for approximately 3 miles to the Airport entrance (Airport Circle). Airport Circle forms a passenger drop-off and pickup loop adjacent to the passenger terminal, whereby vehicular traffic circulates to parking areas and then back to University Parkway. Travelers also have the option to connect directly to U.S. Route 41 via the Bradenton Connector, which connects Airport Circle to U.S. 41.

Dolphin Aviation is accessed directly from U.S. 41 on the west side of the Airport. Volo Aviation is accessed from Tallevast Road, which links U.S. 41 and U.S. 301. Clyde Jones Road provides direct access to Volo Aviation and connects to Tallevast Road. The Rectrix Aerodrome Center is accessed via West University Parkway, which becomes 15th Street East. Local surface access roadways to the Airport is shown on **Exhibit II-12**.

2.5.2 Terminal Curbside

The terminal curbside consists of three lanes, including two travel lanes and a single passenger loading and unloading lane. The three lanes are separated by a concrete curb that is landscaped and accommodates decorative light poles. Although all lanes of the terminal curbside provide 860 linear feet of space, some of these areas are marked for pedestrian crossings and for emergency vehicles and are therefore unusable for passenger loading and unloading purposes. The innermost lane is used primarily for vehicular traffic picking up and dropping off passengers. The outermost lane is used as a circulation lane by through traffic, returning rental car traffic, and commercial delivery vehicles. The innermost lane has two primary segments—an arrivals curb and a departures curb. The departures curb is on the eastern side of the terminal near the ticket counters and provides 430 linear feet of space for temporary drop-off parking. The arrivals curb is located near the western side of the terminal adjacent to the baggage claim areas and provides 260 linear feet of space for passenger pickup traffic. A small area east of the central core entrance is designated for Airport police use.

The outer curbside median is located between the inner curbside and the short-term parking lot. This curbside is not typically used for passenger pickup or drop-off and is reserved for authorized commercial deliveries only. The outer curbside roadway provides commercial vehicle access to the intermodal curbside, and access for rental car returns to the drop-off area adjacent to the short-term parking lot. During holiday peak passenger activity, portions of the outer curbside are used for passenger drop-off and pickup.



Aerial Source: Manatee County, February, 2006
Prepared by: The LPA Group Incorporated

Exhibit II-12

0 600 ft.

north

Terminal Area Ground Access, Parking and Rental Car Facilities

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-12 loc surface access.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:22am

2.5.3 Commercial Transportation Services

Limousines, taxicabs, hotel shuttles, and bus services provided by the Sarasota County Area Transit (SCAT) and Manatee County Area Transit (MCAT) are the various ground transportation services available at the Airport. County transit buses provide service 12 hours per day except on Sundays and holidays. Taxicab services are provided by Diplomat Taxi under an exclusive concession agreement with the SMAA. Off-Airport taxicab service providers are also available for curbside pickup; however, prior arrangements must be made directly with the provider. The designated area for ground transportation providers is located in the commercial vehicle area due west of the terminal baggage claim area. In addition to regular services, courtesy transportation services are provided by several local area hotels and resorts, including:

- Best Western Golden Host
- Hilton Garden Inn
- Holiday Inn Lido
- Hyatt Sarasota
- Ritz Carlton Sarasota
- Sandcastle Hotel
- Sarasota Cay Club
- Sleep Inn
- Timberwoods Vacation Villas

Similar to other transportation services, the courtesy transportation providers also pick up and drop off passengers in the commercial vehicle area located due west of the terminal.

A redesign of the Bradenton Connector that connects Airport Circle to U.S. 41 allows private vehicles to exit the Airport and access U.S. 41. However, only ground transportation vehicles have access to the queuing area from the Bradenton Connector. Development of this area includes providing SCAT bus access via General Spaatz Boulevard rather than at curbside. This development will improve circulation of ground transportation vehicles and relieve traffic congestion near the queuing area and Airport Circle.

2.5.4 Intermodal Transportation Improvements

Concurrent with the Master Plan Update, the SMAA undertook a project to improve intermodal transportation at the Airport. The project consisted of three separate phases. The first phase included conversion of the Bradenton Connector into a one-way road extending from Airport Circle to U.S. 41. It also included reconfiguration of the ground transportation queuing area into a divided two-lane queue. The inner lane, adjacent to the terminal building, serves buses and larger vehicles. The outer lane accommodates taxicab and limousine traffic. The second phase involved roadway improvements due west of the parking toll booths. A new connector was created from General Spaatz Boulevard to Airport Circle and the toll booth exit connector at Airport Circle was reconfigured. The final phase involved construction of a waiting shelter in the ground transportation queuing area. The intermodal transportation improvements, also referred to as the intermodal curbside in this Master Plan Update, are located at the western end of the terminal building.

2.5.5 Automobile Parking

Two public parking lots provide a total of 1,410 spaces for travelers and users of the Airport. The short-term lot, located just south of the terminal, contains 594 spaces. The long-term lot is located due south of the short-term lot and has 816 parking spaces. Two entrance lanes with ticket spitters

provide access to each lot. Both areas are operated by Republic Parking Systems under a management contract with the Airport Authority. Republic Parking Systems also provides and maintains revenue control equipment. However, the Airport Authority is responsible for maintaining the parking areas. Five exit lanes provide egress from the short- and long-term lots through exit booths. Two of these booths are automated with self-service credit card machines and are clearly identified by overhead signage reading "credit card only" and eye level signage reading "self-service."

Short-term parking is available free of charge for the first 30 minutes to allow for convenient pickup of arriving passengers. After 30 minutes, a $2 charge is applied up to the first full hour and each half hour thereafter is an additional $1, up to a maximum of $13 per day. Similarly, long-term parking is free of charge for the first 30 minutes, $2 for the first hour, $2 for an additional 2 hours, up to a maximum of $11 per 24-hour period. A flat weekly rate of $70 is charged for long-term parking. There is no flat weekly rate for short-term parking. Bus shelters located in the long-term parking areas are provided as waiting areas for free shuttle transportation to the terminal building. **Table II-20** summarizes automobile parking rates at the Airport.

Table II-20

Automobile Parking Rates (as of April 2007)

Type	Charge		Type	Charge	
	0-30 minutes:	No Charge		0-30 minutes:	No Charge
	31-60 minutes:	$2.00		31-60 minutes:	$2.00
	61-90 minutes:	$3.00		1-2 hours:	$4.00
	91-120 minutes:	$4.00	Long-term	2-4 hours:	$6.00
Short-term	2-3 hours:	$6.00		4-6 hours:	$8.00
	3-4 hours:	$8.00		6-8 hours:	$10.00
	4-5 hours:	$10.00		8-24 hours:	$11.00
	5-6 hours:	$12.00			
	6-24 hours:	$13.00	Weekly Rate		$70 weekly flat rate

Source: Sarasota Manatee Airport Authority, October 2007.
Prepared by: The LPA Group Incorporated, May 2009.

An overflow parking lot with approximately 447 spaces is situated south and east of the passenger terminal. The purpose of the overflow lot is to accommodate additional parking demands that are typically experienced during peak holiday travel times such as Thanksgiving and Christmas. The long-term lot typically reaches capacity before the short-term lot because of the lower daily parking costs. In such cases, the overflow lot acts as a long-term overflow lot with similar rates; however, should the short-term lot reach capacity before the long-term lot, the overflow lot would act as short-term overflow parking with similar parking rates.

A dedicated employee parking lot is located to the west of the passenger terminal just north of the existing Dan P. McClure Auditorium. This lot accommodates parking for the various employees working at SRQ, including the airlines, the SMAA, and other companies that support operations at SRQ. This lot is situated in an area previously designated as an aircraft ramp and contains approximately 250 spaces. **Table II-21** summarizes the public parking facilities at SRQ.

Table II-21

Automobile Parking Facilities

Type	Capacity	Location	Surface Type
Long-term	816	Passenger Terminal	Asphalt
Short-term	594	Passenger Terminal	Asphalt
Total	1,410		
Overflow Lot	447	East of Passenger Terminal	Asphalt
Employee Lot	250	Passenger Terminal	Concrete

Source: Sarasota Manatee Airport Authority records, April 2007.
Prepared by: The LPA Group Incorporated, April 2007.

In addition to the short- and long-term public parking facilities located south of the main terminal, each FBO at SRQ provides parking facilities adjacent to its facilities for use by its patrons, employees, and service personnel. Similarly, the construction of additional parking facilities is planned for the newly constructed Rectrix FBO facilities.

2.5.6 Rental Car Facilities

Six rental car service providers currently operate at SRQ. All of these providers have passenger-accessible counter space in the terminal and have storage/maintenance facilities situated south of the employee parking lot and east of the long-term parking lot. All rental car concessionaires have on-Airport, ready and return facilities and provide free shuttle service between the terminal building and the rental car lots. **Table II-22** summarizes the rental car providers' on-Airport facilities. Exhibit II-12 depicts the location of the ready and return lots.

Table II-22

Rental Car Facilities

Rental Car Provider	Ground Lease Area (acres)	Airport Ticket Counter Space (square feet)	Ready Car Spaces (number)	Ready Lot Area (square feet)	Return Lot Area (square feet)
Alamo/National	3.25	638	61	12,200	15,000
Avis	4.50	519	39	7,800	29,000
Budget	3.68	506	30	6,000	24,000
Dollar/Thrifty	2.00	649	46	9,200	7,000
Enterprise	2.67	519	29	5,800	27,000
Hertz	5.50	649	46	10,000	34,000
Total	21.60	3,480	251	51,000	136,000

Source: Sarasota Manatee Airport Authority *Tenant Rental Car Concession & Lease Agreement* as of November 2005.
Prepared by: The LPA Group Incorporated, April 2007.

2.6 FBO and General Aviation Facilities

Three full-service FBOs currently serve the demand for general aviation services at the Airport: Dolphin Aviation, Volo Aviation, and the Rectrix Aerodrome Centers.

2.6.1 Dolphin Aviation

Dolphin Aviation, the largest FBO at SRQ, is located on the west side of the airfield on approximately 17 acres. Various administrative functions and small businesses operate within Dolphin's 34,000-square-foot FBO terminal/maintenance building, which serves as the focal point of the complex. Approximately 11,000 square feet of space is dedicated to the FBO terminal, administrative office space, and hangar space, while the remaining 23,000 square feet of space is dedicated to maintenance hangar space. In addition to line and fueling services, Dolphin provides aircraft sales, flight instruction, maintenance services, and hangar and tiedown leasing. A variety of hangar sizes are available for lease, including corporate hangars, T-hangars, and smaller portable hangars. Eight new corporate/commercial hangars were recently constructed north of the FBO terminal building and offer 9,000 square feet of hangar and office space each. In addition, four recently 9,000-square-foot corporate hangars are just south of the FBO access road. Future plans include the construction of three additional hangars of equal size within the same area. Approximately 7,000 square feet of administration and flight training classroom space is available at Dolphin Aviation. A list of hangar facilities at Dolphin Aviation and the other FBOs at the Airport is provided in **Table II-23** and a graphical depiction of the location and lease areas of Dolphin and the other FBOs is provided on **Exhibit II-13.**

Aircraft parking is provided on a 37,000-square-yard apron that offers 60 based and transient aircraft tiedown spaces. In addition to aircraft parking, approximately 100 vehicular parking spaces are provided within a lot adjacent and west of the FBO building. Additional parking is available alongside the corporate hangar facilities to the north. **Table II-24** delineates transient and based aircraft space at Dolphin Aviation and the other FBOs.

The FBO terminal building at Dolphin Aviation offers various amenities and services for passengers and flight crews, including conference room facilities, a weather briefing room with Internet connection, private telephone booths, and a fax and message center, as well as a facility serving a variety of beverages, sandwiches, and pastries. The building is also equipped with wireless Internet connectivity for laptop computers and is served by onsite rental car providers Avis, Enterprise, and Hertz.

Dolphin Aviation has seven fuel trucks that are used to transport fuel from the main storage tanks to its customers' aircraft. The capacities of the five Jet-A fuel trucks are 1,900, 2,200, 3,000, 3,200, and 4,900 gallons. The two 100 low lead (LL) fuel trucks contain 1,150 gallons and 1,200 gallons. Two main storage tanks house fuel deliveries from their supplier (Phillips 66). Each storage tank can hold 12,000 gallons of fuel; one is dedicated to 100LL fuel and the other to Jet-A fuel.

2.6.2 Volo Aviation

Volo Aviation is located on the northernmost portion of the Airport property adjacent to Clyde Jones Road and is easily accessed via Tallevast Road from U.S. 301 or U.S. 41. The FBO terminal provides approximately 11,000 square feet of space for charter services, flight instruction, hangar storage, maintenance, and fueling services for general aviation and corporate users. Approximately 3,000 square feet is dedicated to the FBO terminal and the remaining 8,000 square feet is used as the maintenance hangar. Although 43 automobile parking spaces are located adjacent to the FBO facility, the current lack of space requires that patrons park their vehicles on the grass across the street from the FBO facility.

Table II-23

FBO Facilities

FBO	Hangar/ Building Size (square feet)	Type	Quantity
Dolphin Aviation	3,000	FBO Terminal[1/]	1
	8,000	FBO Hangar[1/]	1
	27,000	Maintenance	1
	9,000	Corporate	8
	6,000	Corporate	1
	800	Port-a-Port	10
	6,000-8,000	Shade Hangar	3
Volo Aviation	15,000	Conventional	1
	13,000	Conventional	1
	3,000	FBO Terminal	1
	8,000	Maintenance	1
	3,000	Corporate	2
	2,000	T-hangar Unit	1
	9,000-10,000	T-hangar	2
Rectrix (North)[2/]	20,000	Conventional	3
	12,500	Conventional	1
	13,800	Conventional	1
	6,000	Corporate	1
	8,000	Corporate	1
	12,000	Conventional	1
Rectrix (South)[2/]	2,600	FBO	1
	5,800	Corporate	1
	15,000	Conventional	1
	20,000	Conventional	1
	8,000	Corporate	1

Notes:

1/ The FBO terminal building is an 11,000-square-foot building that includes 3,000 square feet of terminal and 8,000 square feet of hangar space.

2/ The Rectrix Aerodrome Centers is separated into Rectrix North and Rectrix South for ease of reference in the Master Plan Update.

Sources: Tenant Interviews, The LPA Group Incorporated, April 2007.
Prepared by: The LPA Group Incorporated, April 2007.

Table II-24

FBO Based and Transient Parking Areas

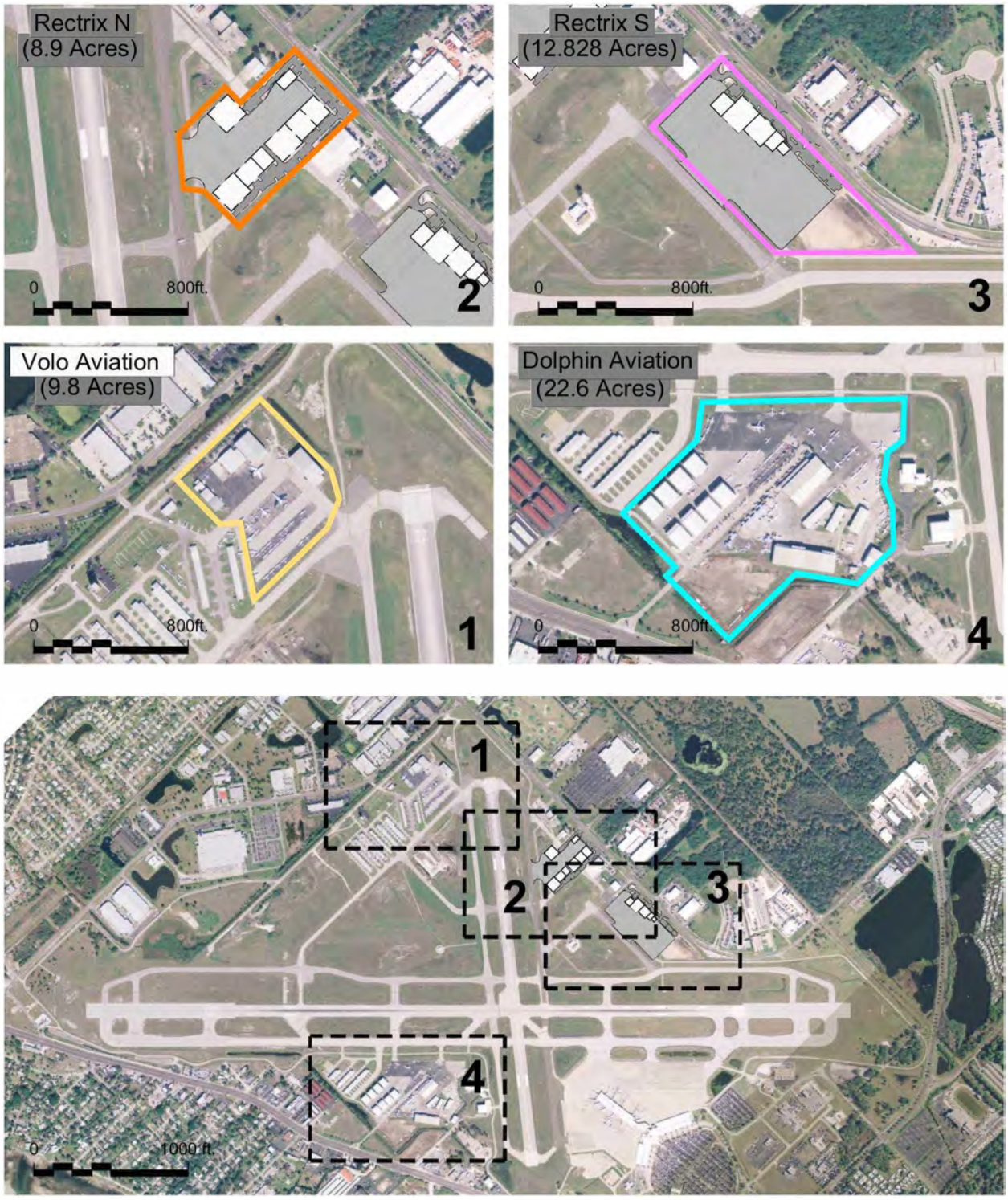
FBO Facility	Based Aircraft Parking Area (square yards)	Transient Aircraft Parking Area (square yards)	Total Aircraft Parking Area (square yards)
Dolphin Aviation	23,125	13,875	37,000
Volo Aviation	4,000	6,000	10,000
Rectrix North[1/]	1,600	--[2/]	1,600
Rectrix South[1/]	7,000	7,000	14,000

Notes:

1/ The Rectrix Aerodrome Centers is separated into Rectrix North and Rectrix South for ease of reference in the Master Plan Update.

2/ Rectrix North only includes based aircraft parking areas

Source: The LPA Group Incorporated, April 2007.
Prepared by: The LPA Group Incorporated, April 2007.



Source: The LPA Group Incorporated, May 2007
Prepared by: The LPA Group Incorporated

Exhibit II-13

north

Fixed Base Operator (FBO) Facilities

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-13 FBO facilities.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:20am

Volo Aviation sublets two large hangars on the west side of the ramp area that collectively encompass 28,000 square feet (15,000 square feet and 13,000 square feet). Additional hangar facilities operated and maintained by Volo Aviation include two 3,000-square-foot corporate hangars and a 2,000-square-foot T-hangar unit. An 8,000-square-foot maintenance hangar adjoins the FBO terminal area. In addition to hangar storage, approximately 27,000 square yards of pavement is available for aircraft tiedown, parking, and circulation. Within the apron, approximately 40 tiedown spaces are available for based and transient aircraft use. Table II-23 summarizes the hangar facilities operated by Volo Aviation. Aircraft parking area for transient and based aircraft is summarized in Table II-24.

Volo Aviation operates three leased fuel trucks for dispensing fuel, two 3,000-gallon trucks for Jet-A fuel storage, and one 1,200-gallon truck for 100LL fuel. In addition to vehicular fuel storage, Volo Aviation has two 10,000-gallon stationary fuel storage tanks (one for Jet-A and the other for 100LL). Fuel is provided to Volo Aviation by Exxon, which also maintains and inspects the facility and fuel tanks.

Volo Aviation's future plans include the investment of capital for the rehabilitation and expansion of its FBO facilities.

2.6.3 Rectrix Aerodrome Centers

Rectrix Aerodrome Centers contracted with the Airport Authority in 2004 and again in 2005 to develop two sites on the east side of the airfield that will include an FBO facility, apron space, and a variety of hangar spaces necessary to provide services catering to the corporate jet market. For ease of reference, the north side and south side are referred to as Rectrix North and Rectrix South, respectively. Rectrix North, situated alongside Taxiway B and north of Taxiway E, includes hangar facilities for based aircraft and commercial aviation activities. Rectrix South, located adjacent to Taxiway J, encompasses the FBO terminal building and an adjacent apron having approximately 36,000 square yards of space, along with three large corporate hangars. Rectrix plans to designate these hangars as ownership-optional whereby owners maintain the building and associated pavement areas.

Transient aircraft will ultimately use the apron at Rectrix South for parking, whereas Rectrix North will be used exclusively for the owners of based aircraft that lease hangar space. However, a small portion of the Rectrix North area—approximately 1,600 square yards—could be allocated to those aircraft owners who wish to park on the apron. The remaining pavement areas are expected to be used for circulation and aircraft positioning. Table II-24 distinguishes between expected transient and based aircraft parking areas.

2.6.4 SMAA Hangars

The SMAA operates and leases nine T-hangars and two portable hangars at SRQ. Three T-hangars are situated just north of Dolphin Aviation with direct taxilane access to Taxiway A. These facilities are identified as D-1, D-2, and D-3. Collectively, these T-hangars house nearly 45,000 square feet of aircraft hangar and storage space. Another eight T-hangars are situated adjacent to Volo Aviation on the north side of the airfield with direct access to Taxiway F and Taxiway H. These hangars vary in size from 9 units to 20 units. Although some hangars are identified by a letter/number designation through SMAA's naming convention, others are not. **Table II-25** tabulates the existing dimensions and capacity of the SMAA T-hangars at SRQ.

Table II-25

SMAA T-hangar Facilities

Location and Description[1/]	Number of Units	Approximate Total Area[2/] (square feet)	Approximate Area per T-hangar (square feet)	Condition
North of Dolphin Aviation				
T-hangar D-1	20	21,300	1,065	Good
T-hangar D-2	13	14,000	1,077	Good
T-hangar D-3	6	9,500	1,583	Good
West of Volo Aviation				
T-hangar J-1	17	18,200	1,071	Good
T-hangar J-2	17	18,200	1,071	Good
T-hangar J-3	12	14,100	1,175	Good
T-hangar J-4	20	27,700	1,385	Good
Portable Hangar 1	14	17,800	1,271	Fair
Portable Hangar 2	14	17,800	1,271	Fair
T-hangar 1	10	10,300	1,030	Good
T-hangar 2	9	9,300	1,033	Good

Notes:

1/ Hangars D-1, D-2, D3, J-1, J-2, J-3, and J-4 were so designated by the SMAA. The two portable hangars, as well as the two hangars closest to Volo Aviation, are not identified by the SMAA naming convention.

2/ Approximate total area obtained from drawings provided by the SMAA.

Source: Sarasota Manatee Airport Authority, April 2007.
Prepared by: The LPA Group Incorporated, April 2007.

2.7 Support Facilities

In addition to the facilities already discussed, ancillary types of aviation-related facilities are necessary for the safe and efficient operation of the Airport or provide necessary aviation services to the community. The support facilities at SRQ, including the ARFF and air cargo facilities, and the ATCT, are discussed below.

2.7.1 Aircraft Rescue and Fire Fighting Building

The ARFF building is located on the west side of the airfield just south of Dolphin Aviation. The facility is aligned with Taxiway A for direct access to the airfield and encompasses approximately 9,000 square feet. Approximately 2,500 square feet is reserved for general administration and 6,500 square feet is reserved for interior operations, storage, and crew quarters. The building is equipped with a three-bay vehicle storage area with airfield access. A fourth bay is accessible from the side of the building and is used for smaller rescue vehicles. The SRQ ARFF unit operates four fire trucks that are equipped with water, foam, and dry chemical agents. Three additional vehicles supplement the fire fighting vehicles and assist with general emergency response. **Table II-26** delineates these vehicles and their fire-fighting capacities, as well as their operational roles.

The FAA assigns specific ARFF requirements for airports that are certified under FAR Part 139. These requirements are based on the largest aircraft operating at the airport (in terms of length and wingspan) with at least five average daily departures. The ARFF station at SRQ meets requirements for ARFF Index C and complies with associated stipulations under FAR Part 139 for response time, equipment, and extinguishing agents. The facility operates 24 hours per day and employs five State-certified medics and fire fighter crew members. Rotating shifts are 24 hours and last from 7 a.m. to 7 a.m. the following day. For vehicular parking, a 12-space parking lot is located next to the building for employees. Sufficient space exists to accommodate up to 30 vehicles in an adjacent grassed area.

Table II-26

ARFF Vehicle Inventory

Vehicle Identifier	Water Capacity (gallons)	Foam Capacity (gallons)	Dry Chemical (pounds)	Role
ARFF-1 Rapid Intervention Vehicle	300	40	500	Interventional vehicle; limited fire fighting
ARFF-2 1995 Titan E-1	1,500	200	500	Fire fighting
ARFF-3 1992 Oshkosh T-3000	3,000	400	500	Fire fighting
ARFF-4 2006 Oshkosh Striker	3,000	400	450	Fire fighting
ARFF-5 BLS Ambulance Ford 350 Econoline Chassis	-	-	-	Ambulance response
ARFF-6 Emergency Responder Ford 350 Econoline Chassis	-	-	-	Mass casualty triage unit
ARFF-8 Chief's Command Vehicle Ford Explorer 4 Wheel Drive	-	-	-	Fire Chief command vehicle
Foam Trailer	-	1,000	-	Foam storage
Hazardous, Spill Containment Trailer	-	-	-	Absorbent material storage for spill containment

Source: Discussions with SRQ ARFF personnel, May 2007.
Prepared by: The LPA Group Incorporated, May 2007.

2.7.2 Air Cargo Facility

One air cargo facility serves domestic and international cargo and special handling needs at SRQ. The facility is located on the south side of the airfield east of the overflow parking lot and fuel farm area. Two handling agents, Delta Air Cargo and Servisair Cargo, currently conduct their operations at this facility. Servisair leases approximately 1,610 square feet of building and is assigned to bay number 2. An additional 1,281 square feet of space is leased to Servisair in the ticket wing and concourse area of the passenger terminal building for administrative offices, skycap offices, and a break room. The remainder of the building is leased by Delta Air Cargo.

The building encompasses 23,500 square feet and does not have direct airfield access. However, a 16,500-square-foot concrete staging area is available for cargo marshalling and ground equipment storage within the secure airside. In addition, 27,000 square feet of truck docking area adjacent to the building provides access to the Employee Parking Loop and to University Parkway.

2.7.3 Airport Traffic Control Tower

The ATCT at SRQ was constructed in 1986 and is located on the northernmost portion of Airport property, due west of Volo Aviation and north of the T-hangar complex. The ATCT is staffed and operational from 6 a.m. until midnight. During these hours, ATCT personnel control the movement and coordination of aircraft arrivals and departures on the ground as well as within the Class C airspace of SRQ. The ATCT floor elevation is 98.47 feet above MSL and eye elevation is 103.47

feet above MSL (5 feet above the ATCT floor height). The parking lot for ATCT employees is due east of the ATCT, behind a secure gate, and contains approximately 30 spaces.

During discussions with ATCT representatives, it was revealed that there are visibility issues with the existing line-of-sight relating to the end of Runway 32. The ATCT height in relation to the distance to the runway end currently exceeds FAA viewing angle of incidence requirements, as specified in FAA Order 6480.4, *Air Traffic Control Tower Siting Process*. Concurrent with this Master Plan Update, the Airport Authority has identified a site for relocation of the ATCT. The location is proposed to be a vacant parcel on the west side of the Airport, by Dolphin Aviation's corporate hangars. This relocation will address the existing line-of-sight issues. It will also allow the Airport Authority to maximize the land use on the north side of the Airport for future t-hangars.

2.8 Environmental Inventory

To inventory potential environmental constraints to future development at the Airport, a review of available background information and literature was conducted. Sources of information included the following:

- 2004 U.S. Geological Survey (USGS) true color aerial photography
- USGS topographic mapping (1:100,000 scale Sarasota Quadrangle, 1979; 1:24,000 scale Sarasota Quadrangle, 1992; and Bradenton Quadrangle, 1987)
- 2004 Southwest Florida Water Management District, Florida Land Use, Cover, and Forms Classification System mapping
- Natural Resources Conservation Service (NRCS) digital soils mapping
- U.S. Fish and Wildlife Service (USFWS) digital National Wetlands Inventory (NWI) mapping (extracted on May 3, 2007)
- USFWS Federally Listed Species for Manatee County (August 10, 2006) and Sarasota County (June 2000)
- Florida Natural Areas Inventory (FNAI) Tracking Lists for Manatee County and Sarasota County (May 2007)
- FNAI element occurrence data for Manatee County and Sarasota County (June 2000)
- Florida Fish and Wildlife Conservation Commission wading bird colony location data (including wood stork colonies, 1999)
- FFWCC eagle nest location data (2003)
- 1996 Federal Emergency Management Agency (FEMA) digital 100-year floodplain mapping
- 1993 Sarasota Bradenton International Airport Master Plan Update

Mapping of some of these environmental constraint categories is provided in **Appendix A**. Due to the limited nature of this environmental inventory, and because no additional property acquisition is associated with this Master Plan Update beyond that already covered in the 1993 Master Plan Update, some environmental constraint categories were not examined in detail. Those categories include:

- Social impacts
- Hazardous materials storage areas
- Contaminated areas

Based on the review of available environmental documentation, future projects at the Airport could result in environmental impacts to the following:

- Southwest Florida Water Management District and/or U.S. Army Corps of Engineers (COE) jurisdictional wetlands, ponds, ditches, and swales
- Floodplains
- State and federally protected species

No impacts are anticipated in the following environmental categories:

- Historic and archaeological resources
- Air quality
- Prime farmland
- Department of Transportation Section 4(f) land
- Hazardous materials (associated with new property)

Supporting documentation for these no impact categories is provided in Appendix A.

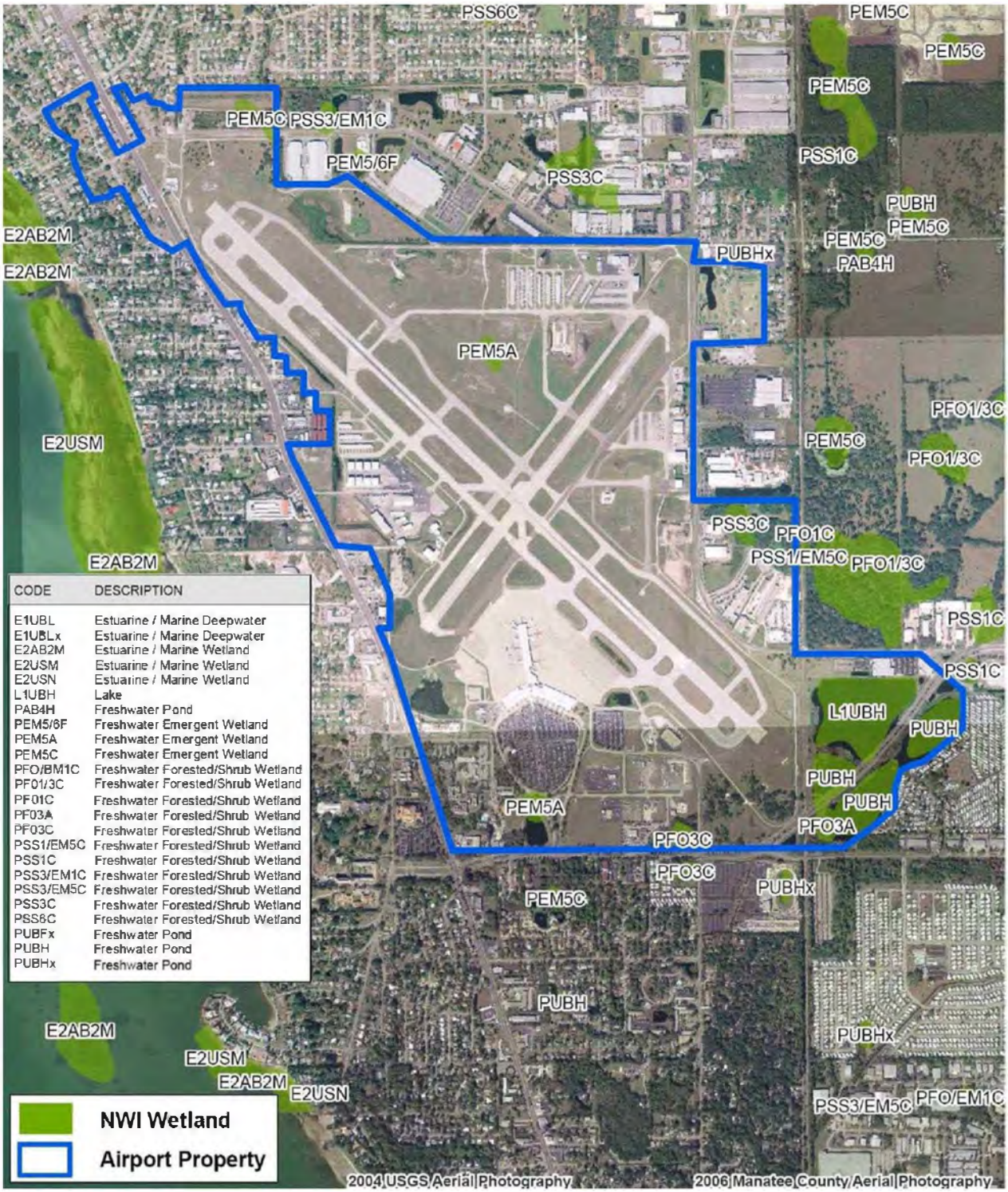
2.8.1 Aquatic Concerns

2.8.1.1 Wetlands

Based on available NWI mapping (**Exhibit II-14**), Florida Land Use, Cover, and Forms Classification System mapping (**Exhibit II-15**), and a review of 2004 and 2006 aerial photography, wetlands that are subject to the permitting authority of the COE and/or the Southwest Florida Water Management District present a potential constraint to development in a few areas of Airport property. Areas mapped on the NWI and/or the Florida Land Use, Cover, and Forms Classification System as wetlands include a small area mapped as mixed forested wetlands in the northernmost portion of the Airport, north of Tallevast Road; an area mapped as mixed forested/shrub wetlands off the east end of Taxiway E, just east of 15th Street East, and just north of the Sassaman complex; freshwater marsh wetlands associated with the large ponds on the north and south sides of University Parkway at the southeastern end of Airport property; and an area mapped as freshwater marsh/shrub wetland just northwest of the intersection of University Parkway and Old Bradenton Road. One additional wetland area located in the mowed maintained portion of the airfield, just north of the existing VORTAC, is mapped as freshwater marsh on the NWI mapping. Based on this area's aerial signature, it may not actually be a jurisdictional area because of its small size, lack of connectivity, and unverified hydrology. Establishing whether any of these areas are actually jurisdictional would require field verification and coordination with the COE and/or the Southwest Florida Water Management District. A version of the existing and future land use that was provided by the SMAA is illustrated in Appendix A.

2.8.1.2 Ponds, Ditches, and Swales

Several stormwater retention ponds are located throughout the Airport property. These areas are subject to the jurisdiction and permitting authority of the Southwest Florida Water Management District as State Surface Waters, and an Environmental Resource Permit for a modification to an existing water treatment system is typically required if these areas are to be altered. The COE also can exert jurisdiction over these areas when they are connected to other Waters of the United States by streams or ditches exhibiting an ordinary high water mark.



CODE	DESCRIPTION
E1UBL	Estuarine / Marine Deepwater
E1UBLx	Estuarine / Marine Deepwater
E2AB2M	Estuarine / Marine Wetland
E2USM	Estuarine / Marine Wetland
E2USN	Estuarine / Marine Wetland
L1UBH	Lake
PAB4H	Freshwater Pond
PEM5/6F	Freshwater Emergent Wetland
PEM5A	Freshwater Emergent Wetland
PEM5C	Freshwater Emergent Wetland
PFO/BM1C	Freshwater Forested/Shrub Wetland
PFO1/3C	Freshwater Forested/Shrub Wetland
PFO1C	Freshwater Forested/Shrub Wetland
PFO3A	Freshwater Forested/Shrub Wetland
PFO3C	Freshwater Forested/Shrub Wetland
PSS1/EM5C	Freshwater Forested/Shrub Wetland
PSS1C	Freshwater Forested/Shrub Wetland
PSS3/EM1C	Freshwater Forested/Shrub Wetland
PSS3/EM5C	Freshwater Forested/Shrub Wetland
PSS3C	Freshwater Forested/Shrub Wetland
PSS6C	Freshwater Forested/Shrub Wetland
PUBFx	Freshwater Pond
PUBH	Freshwater Pond
PUBHx	Freshwater Pond

Source: USFWS Wetlands Mapper, 2007
Prepared by: The LPA Group Incorporated

Exhibit II-14

0 2000 ft.

north

NWI Wetlands Map

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-14 NWI wetlands.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:18am

Source: SWFWMD 2004
Prepared by: The LPA Group Incorporated

Exhibit II-15

0 2000 ft.

north

Land Use and Land Cover Map

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-15 Land Use cover.dwg_Layout: 8.5x11 portrait_Apr24, 2009, 10:16am

In addition to the mapped wetland areas and ponds, numerous ditches and swales are found throughout the Airport property. In many cases, these areas also fall under the jurisdiction and permitting authority of the COE (if they exhibit an ordinary high water mark) and/or the Southwest Florida Water Management District as jurisdictional waters of the United States or as State Surface Waters. Based on a review of aerial photography and the 1:24,000 scale USGS mapping, some of the ditches and swales on the northern portion of the Airport property drain to the north toward the Bowlees Creek sub-watershed. Stormwater retention areas on the west-central portion of the Airport property are connected via a piped outfall directly to Sarasota Bay. Stormwater in the southern portion of the Airport property drains to the large ponds on the southeastern end of Airport property adjacent to University Parkway, which, in turn, outfall to the Whitaker Bayou sub-watershed. As such, it is likely that most of the ditches, swales, and ponds on Airport property are subject to the jurisdiction and permitting authority of both the Southwest Florida Water Management District and the COE.

Impacts to COE and/or Southwest Florida Water Management District jurisdictional areas would require that permits be obtained through the Southwest Florida Water Management District /COE joint Environmental Resource Permit process. In some cases, wetland mitigation may be required, but this would be determined on a case-by-case basis.

2.8.1.3 Floodplains

Based on digital flood mapping obtained from FEMA (**Exhibit II-16**), two very small areas within Airport property limits are within the 100-year floodplain for the project area.

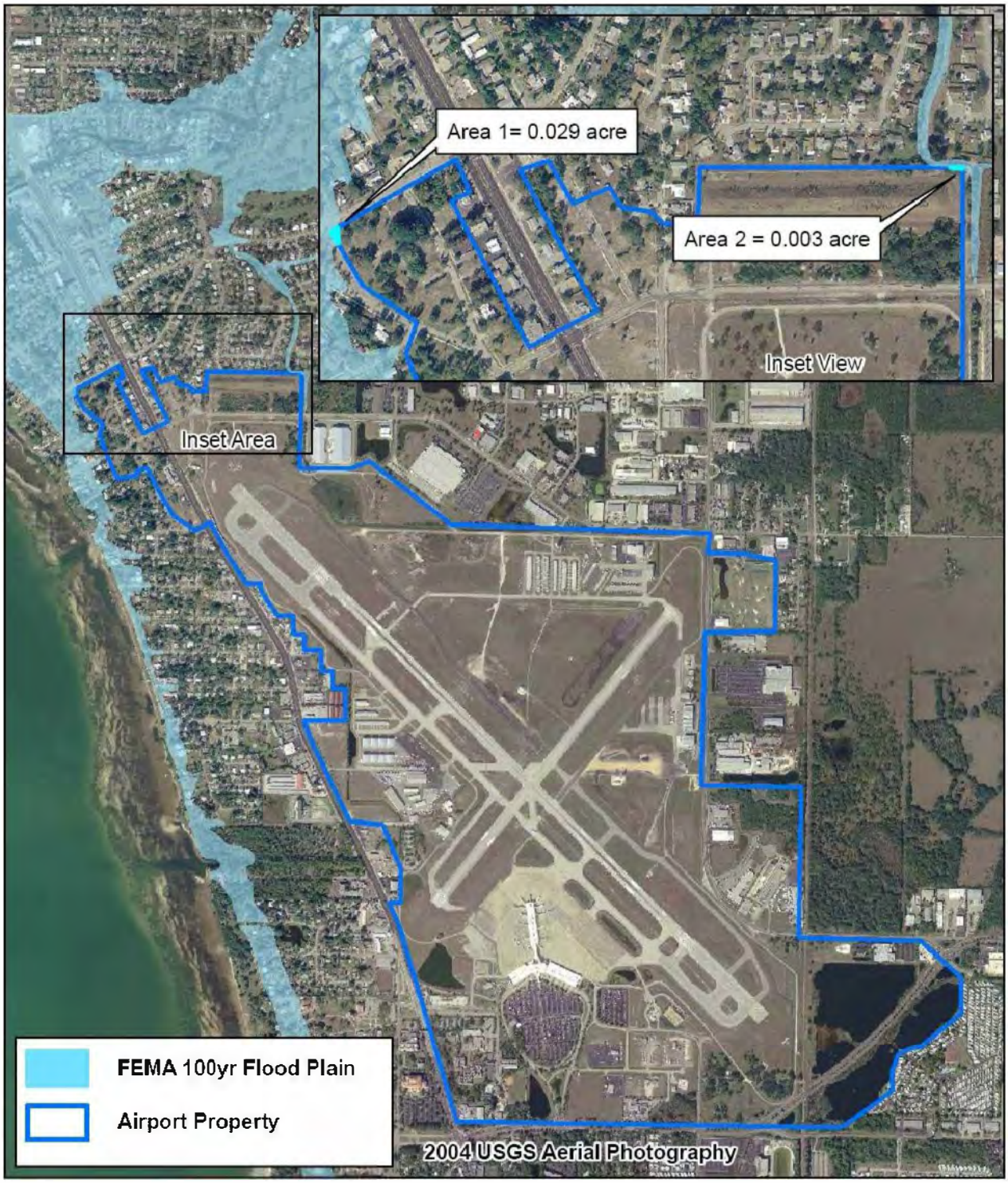
One of these is in the northwestern portion of the property, near the intersection of Whitfield Avenue and Phillips Street. The other is located due east of this area, between Tallevast Road and Saturn Avenue. Because of the extremely limited extent of floodplains on Airport property, it is likely that they would not present a constraint to future Airport development. If floodplain impacts were to occur as a result of projects at the Airport, floodplain compensation may be required.

2.8.2 Terrestrial Concerns / Protected Species

The USFWS lists of Federally Protected Species for Manatee County and Sarasota County were obtained from the USFWS North Florida Field Office web site[1] and the FNAI tracking lists for Manatee County and Sarasota County were obtained from the FNAI web site[2]. These lists are provided in Appendix A. In addition, readily available information concerning documented locations of protected species occurrences was obtained from the Florida Fish and Wildlife Conservation Commission and FNAI. The documentation available from the Florida Fish and Wildlife

Conservation Commission included locations of wading bird colonies, including wood storks, and eagle nest locations. The FNAI documentation included element occurrence data for all protected species in Manatee and Sarasota counties.

1 http://www.fws.gov/northflorida/index.htm
2 http://www.fnai.org/trackinglist.cfm



Source: FEMA, 1996
Prepared by: The LPA Group Incorporated

Exhibit II-16

0 2000 ft.

north

100-Year Floodplains Map

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit 2-16 100yr flood.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:51am

Based on this review and taking into consideration the Florida Land Use, Cover, and Forms Classification System land cover types that are mapped in the vicinity of the Airport, it was determined that, of the 14 federally protected species on the USFWS Manatee County and Sarasota County lists, the following 3 species have some potential for using habitats on or adjacent to Airport property:

- Bald eagle (Haliaeetus leucocephalus)
- Wood stork (Mycteria americana)
- American alligator (Alligator mississippiensis)

In addition, it was determined that, of the 53 species listed on the FNAI tracking lists for Manatee and Sarasota counties, the following State-protected species could potentially use habitats on or adjacent to Airport property:

- Gopher tortoise (Gopherus polyphemus)
- Florida burrowing owl (Athene cunicularia floridana)
- Limpkin (Aramus guarauna)
- Little blue heron (Egretta caerulea)
- Snowy egret (Egretta thula)
- Tricolored heron (Egretta tricolor)
- White ibis (Eudocimus albus)
- Southeastern American kestrel (Falco sparverius paulus)
- Florida sandhill crane (Grus canadensis pratensis)
- Brown pelican (Pelecanus occidentalis)
- Roseate spoonbill (Ajaia ajaja)

Field survey within future development areas would be required to determine whether any protected species could be affected by the recommended projects. If field surveys indicate the presence of protected species, species-specific protected species surveys and coordination or formal consultation with the USFWS and/or Florida Fish and Wildlife Conservation Commission may be required.

III. Airport Activity Forecasts

This chapter documents the development of activity forecasts prepared for Sarasota Bradenton International Airport. The forecasts serve as the basis for:

- Determining the level of passenger demand to be served at SRQ in the future, and identifying the associated aircraft operations and fleet mix serving this passenger demand.
- Evaluating the capability of existing facilities to serve the forecast Airport activity, and estimating the extent to which airside terminal and landside facilities should be developed at the Airport through 2026.

3.1 Airport Background

SRQ is located on the west coast of Florida and primarily accommodates a domestic origin and destination (O&D) market. In 2006, only 3.9 percent of passengers at the Airport were connecting to other flights. Approximately 1 percent of aircraft operations at the Airport from 2002 through 2006 were international, predominantly operated by Air Canada, CanJet Airlines, and Jetsgo Airlines. Passengers whose origin and destination were international, but who connected through another airport to initiate or complete the international segment of their travel accounted for 5 percent of SRQ's O&D passengers in 2001 and 4 percent in 2006. Originating international traffic is of interest in developing the forecasts because it indicates enplaned passenger demand to international gateways, such as John F. Kennedy International Airport (JFK) in New York, which might not be evident in an analysis of O&D traffic.

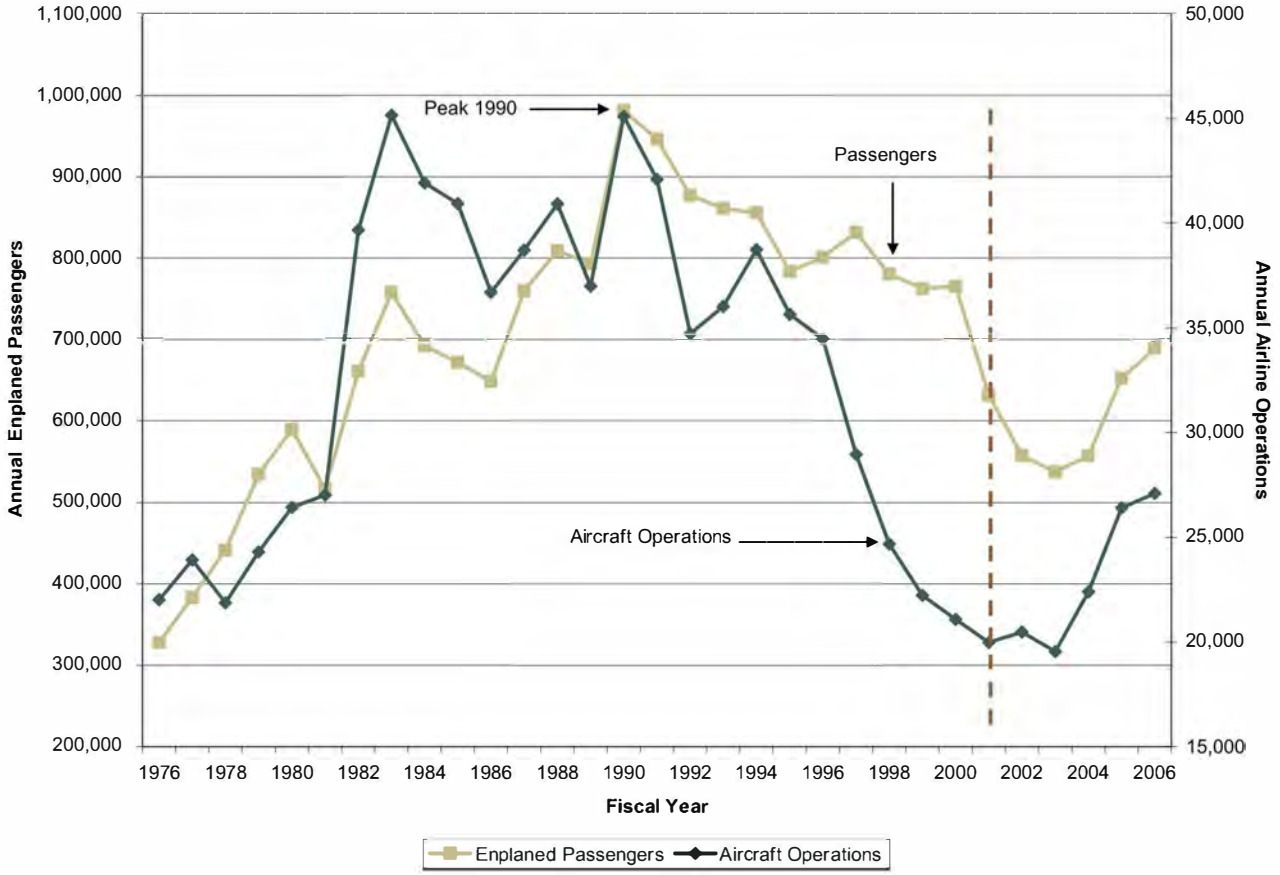
The numbers of passengers and air carrier aircraft operations at SRQ grew steadily from 1976 though 1990. However, since the reduction in service by many airlines in the early 1990s, the number of enplaned passengers at SRQ declined steadily from 1990 through 2003. From 2003 through 2006, the number of enplaned passengers rebounded, and was once again exhibiting a growth trend, although pre-1990 levels have not been regained. These trends are presented on **Exhibit III-1**.

SRQ traffic has some seasonal components, as it is driven by travelers seeking sunshine, beaches, and warm weather in the winter months and by travelers leaving Florida's summer heat from June through October. This seasonality is demonstrated on **Exhibit III-2**. In August and September, fewer than 7 percent of total annual passengers travel through the Airport, while more than 10 percent of annual passengers travel in the peak months from February through April. Data for 2004 through 2006 are presented to ensure that the effects of the September 11, 2001, terrorist attacks did not influence the seasonal data. From 2001 through 2003, traffic at SRQ declined steadily and air service was volatile (i.e., the composition of airlines serving SRQ was unstable). By 2004, the number of enplaned passengers began to increase again.

The airlines serving SRQ from 2003 through 2007 are listed in **Table III-1**. The airlines are separated into "air carrier" and "regional" (also referred to as "commuter") based on service provided on large jets versus smaller-sized regional jets or piston aircraft. A solid dot in the table indicates that an airline provided service during the peak month of March in the year specified. For the regional airlines, the major (mainline) affiliated airline is noted. Air Canada and Florida Coastal Airlines provide service using small aircraft, with each operating under its own name, unlike the other regional airlines.

Exhibit III-1

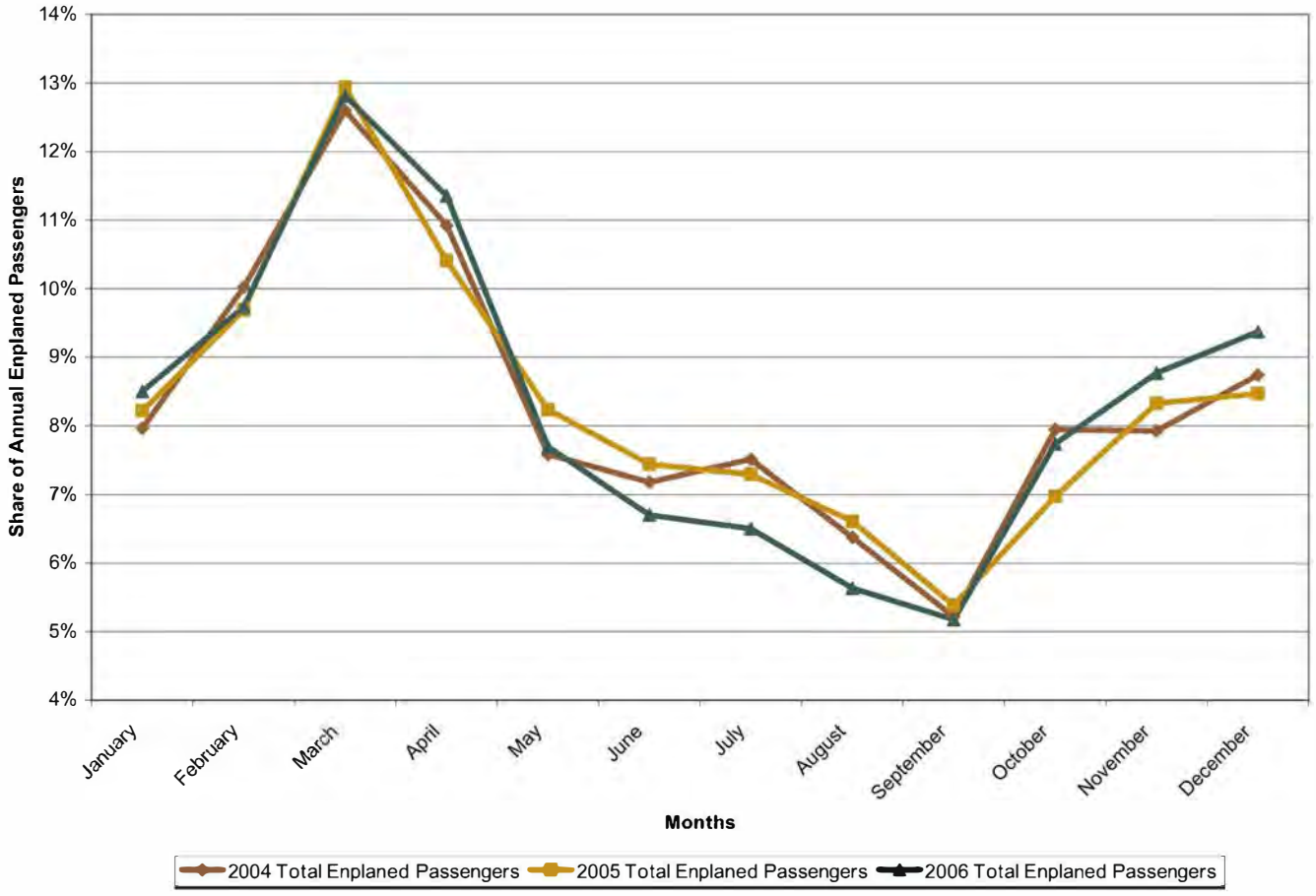
Historical Enplaned Passengers and Air Carrier Aircraft Operations



Source: Airport Activity Records. May 2007
Prepared by: Mary A. Lynch, May 2007.

Exhibit III-2

Enplaned Passenger Seasonality at SRQ



Source: Airport Activity Records (2004-2006), May 2007.
Prepared by: Mary A. Lynch, May 2007.

Table III-1

Airlines Serving SRQ – Peak Month (March)

		Peak Month of March				
Airlines Air Carrier	Code	2003	2004	2005	2006	2007
Air Sunshine	Y1	•	•			
AirTran Airways	FL			•	•	•
American Airlines	AA				•	
ATA Airlines	TZ	•	•	•		
CanJet Airlines	C6		•		•	
Continental Airlines	CO	•	•	•	•	•
Delta Air Lines	DL	•	•	•	•	•
JetBlue Airways	B6					•
Jetsgo Airlines	SG			•		
Northwest Airlines	NW	•	•	•	•	•
US Airways	US	•	•	•	•	•
Regional/Commuter	Affiliate Code					
Air Canada	AC[1/]					•
Atlantic Southeast Airlines	DL	•	•		•	
Cape Air	CO	•	•	•	•	•
Comair	DL	•	•	•	•	•
ExpressJet Airlines	CO		•	•	•	•
Florida Coastal Airlines	PA[1/]			•	•	
Mesa Airlines	US					•
PSA Airlines	US				•	•
Republic Airlines	US					•
Trans States Airlines	AA				•	

Note:
1/ Airline operates under its own name with no affiliate.

Source: Official Airline Guides, Inc. May 2007
Prepared by: Mary A. Lynch, May 2007.

Continental Airlines (and its Cape Air affiliate), Delta Air Lines (and its Comair affiliate), Northwest Airlines, and US Airways have served SRQ steadily since 2003. A variety of airlines have served Canada from SRQ since 2004, including CanJet, Jetsgo, and Air Canada at various times. CanJet and Jetsgo served SRQ using large jet aircraft (i.e., B-737-500, MD83), while Air Canada operates an Embraer 175 regional jet. AirTran Airways introduced service at SRQ in late 2004, and JetBlue Airways initiated service in the latter part of 2006. AirTran has become the second busiest airline at the Airport in terms of enplaned passengers. JetBlue has increased service from a single daily flight to one additional flight during peak periods.

The Airport is affected by service and airfares offered at Tampa International Airport 50 miles to the north and Southwest Florida International Airport 90 miles to the south. The service areas of the three airports have some overlap. Sarasota Bradenton is a vibrant tourist destination in Florida. SRQ's four-county service area, which encompasses Sarasota, Manatee, DeSoto, and Hardee counties, accounts for 16 percent of the population of the combined service areas (14 counties) for

the three airports, and 20 percent of the combined service areas' hotel and condominium capacity[1]. In prior years, airlines have elected to develop service at these other airports more rapidly than at SRQ. This trend, combined with the previously described high seasonality patterns in the market, presents a challenge for SRQ to attract as much airline service as the market can support. In a 2004 study by The Boyd Group/ASRC, Inc., it was determined that SRQ's share of its service area's population, tourist accommodations, income, and consumption are all higher than its share of the area's airline service. **Table III-2** demonstrates the level of passenger service at Tampa and Southwest Florida international airports, which exceeds that provided at SRQ.

Table III-2

Airline Service at Competing Airports

Airport	2003	2004	2005	2006	2003-2006 Average Annual Growth
Sarasota Bradenton International Airport					
Enplaned Passengers	535,190	557,309	652,483	689,673	8.8%
Airline Aircraft Operations	19,491	22,409	26,3751	27,079	11.6%
Tampa International Airport					
Enplaned Passengers	7,614,529	8,183,833	9,222,541	9,547,895	7.8%
Airline Aircraft Operations	192,447	197,751	226,146	217,056	4.1%
Southwest Florida International Airport (Fort Myers)					
Enplaned Passengers	2,788,034	3,156,412	3,679,735	3,777,558	10.7%
Airline Aircraft Operations	57,105	64,703	78,184	79,072	11.5%

Sources: Tampa International Airport and Southwest Florida International Airport, Airport Statistics, May 2007; FAA *Terminal Area Forecast* December 2006; Sarasota Bradenton International Airport - Airport Activity Records; May 2007.
Prepared by: Mary A. Lynch, May 2007.

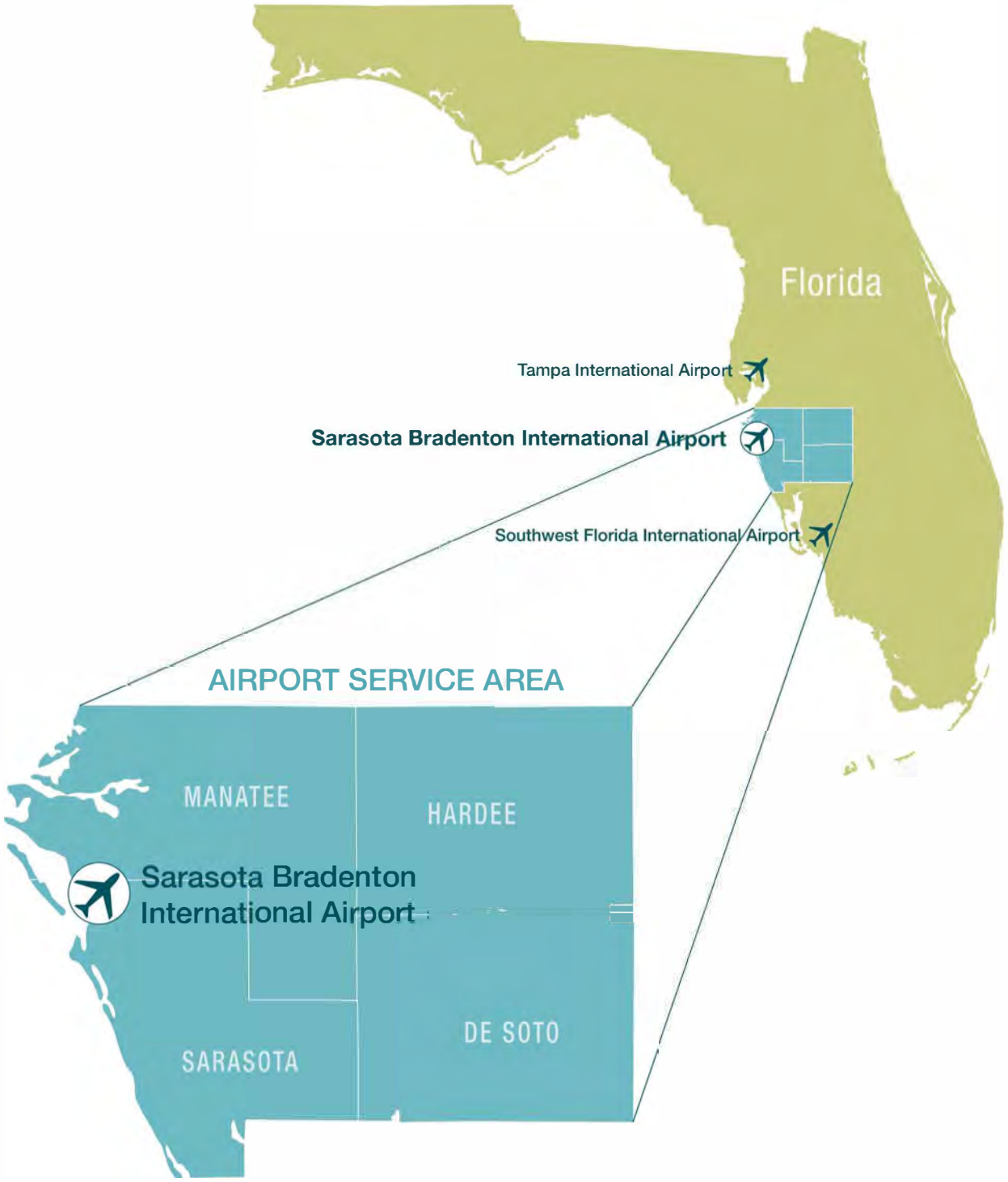
Passenger surveys completed at Tampa International Airport in 2004 revealed that approximately 10.8 percent of that airport's traffic is generated by residents from SRQ's service area. This percentage of Tampa International Airport's 2004 enplaned passengers equates to approximately 883,900 enplaned passengers, some of which could easily be accommodated at SRQ.

From 2003 through 2006, the number of aircraft operations at SRQ increased at a higher rate than at Tampa International and at a similar rate as at Southwest Florida International. In terms of enplaned passengers, SRQ accounted for about 19 percent of the number at Southwest Florida International and 7 percent the of the number at Tampa International between 2003 and 2006.

3.2 Socioeconomic Environment

As noted in the previous section, the geographical area served by the Airport primarily encompasses the four Florida counties of Sarasota, Manatee, DeSoto, and Hardee, as illustrated on **Exhibit III-3**. It is recognized that the Airport's service area extends beyond this four-county area, but it is the economic strength of this area that provides the primary base for supporting air transportation at the Airport. Therefore, for these analyses, the primary service area (also referred to herein as the "Air Trade Area") for the Airport is considered to be the four counties.

[1] The Boyd Group/ASRC, Inc., *Air Service Blueprint & Market Plan 2004 Update.*



Source: Cartesia Map Art.
Prepared by: Ricondo & Associates, Inc., July 2006.

Exhibit III-3

0 NTS

north

Air Trade Area

3.2.1 Population

Table III-3 presents the historical and projected population for the Air Trade Area, the State of Florida, and the United States. As the table presents, the Air Trade Area's population increased at a compounded annual growth rate of 2.0 percent between 1990 and 2006, slightly slower than population growth in the State of Florida, but faster than in the United States as a whole. Population in the Air Trade Area from 2000 to 2006 grew at a compounded annual growth rate of 2.3 percent, which was slightly higher than in the State of Florida (2.1 percent) and more than twice as high as the 1.0 percent growth in the nation during the same period.

Also presented in Table III-3 are population projections for 2010, 2015, 2020, and 2025[2] for the Air Trade Area, the State of Florida, and the United States. As shown, population in the Air Trade Area is projected to increase from 746,769 in 2006 to approximately 1,026,000 in 2025, representing a compounded annual growth rate of 1.7 percent. This exceeds the population growth rate projected for the United States (0.8 percent) and is the same as projected for the State of Florida during this same time period.

These population projections for the Air Trade Area do not include the seasonal and transient population (winter residents, visitors in occupied housing units, hotel/motel occupants, and migrant/seasonal workers).

3.2.2 Income

One measure of the relative income of an area is its per capita income (PCI). PCI is a composite measurement of market potential and indicates the general ability to purchase an available product or service. **Table III-4** presents PCI for the Air Trade Area, the State of Florida, and the United States between 1996 and 2006, as well as projected PCI through 2027[3]. As presented, the 1.2 percent compounded annual growth in PCI in the Air Trade Area between 1996 and 2006 was not as high as the 1.9 percent growth experienced in the State of Florida or the 2.0 percent growth experienced in the United States during this same time period. The 2006 PCI for the Air Trade Area ($34,343) was higher than that for both the State of Florida ($30,111) and the United States ($31,690) for that same year.

Projected PCI was obtained from the National Planning Association (NPA), Data Services, Inc. As shown in Table III-4, according to NPA Data Services, the compounded annual growth in PCI for the Air Trade Area between 2007 and 2027 is projected to be 1.8 percent, the same growth rate projected for the State of Florida and slightly higher than that projected for the United States as a whole (1.7 percent) during this same time period.

3.2.3 Employment

Table III-5 presents the civilian labor force for the Air Trade Area, the State of Florida, and the United States between 1996 and 2006. As shown in the table, the civilian labor force in the Air Trade Area increased from 279,000 workers in 1996 to 362,000 workers in 2006, an increase of approximately 2.6 percent annually during this time period. This rate of growth was higher than the growth experienced in the State of Florida (2.2 percent) and the United States (1.2 percent) during this same time period.

[2] Population projections obtained from the U.S. Department of Commerce, Bureau of the Census and the University of Florida, Bureau of Economic and Business Research were available through 2025.

[3] Per Capita Income projections obtained from the National Planning Association data services were available through 2027.

Table III-3

Historical and Projected Resident Population

	Historical			Projected				Compounded Annual Growth Rates				
Area	1990	2000	2006	2010	2015	2020	2025	1990-2000	2000-2006	1990-2006	2006-2010	2006-2025
DeSoto County	23,865	32,311	35,315	35,700	39,900	42,600	45,100	3.1%	1.5%	2.5%	0.3%	1.3%
Hardee County	19,499	26,923	28,621	28,400	29,700	30,900	32,100	3.3%	1.0%	2.4%	-0.2%	0.6%
Manatee County	211,707	265,742	313,298	338,300	372,300	403,700	431,400	2.3%	2.8%	2.5%	1.9%	1.7%
Sarasota County	277,776	327,053	369,535	413,000	451,400	486,500	517,400	1.6%	2.1%	1.8%	2.8%	1.8%
Total Air Trade Area	532,847	652,029	746,769	815,400	893,300	963,700	1,026,000	2.0%	2.3%	2.1%	2.2%	1.7%
State of Florida	12,937,926	15,982,378	18,089,888	19,974,200	21,831,500	23,552,100	25,086,000	2.1%	2.1%	2.1%	2.5%	1.7%
United States	248,709,873	281,421,906	299,398,484	308,935,581	312,268,000	335,804,546	349,439,199	1.2%	1.0%	1.2%	0.8%	0.8%

Sources: U.S. Department of Commerce, Bureau of the Census (historical - all areas; projected - United States) and University of Florida, Bureau of Eeonomic and Business Research (projected - Air Trade Area and Florida). May 2007.
Prepared by: Ricondo & Associates, Inc. May 2007.

Table III-4

Per Capita Income

Year	Air Trade Area	State of Florida	United States
Historical			
1996	$30,491	$25,050	$25,943
1997	$31,525	$26,079	$26,647
1998	$33,032	$27,143	$27,908
1999	$33,375	$27,536	$28,461
2000	$34,337	$28,236	$29,628
2001	$34,452	$28,634	$29,919
2002	$34,557	$28,893	$29,899
2003	$34,070	$29,003	$30,191
2004	$33,766	$29,101	$30,559
2005	$33,737	$29,443	$31,030
2006	$34,343	$30,111	$31,690
Projected			
2007	$35,429	$31,032	$32,630
2012	$40,355	$35,201	$36,877
2017	$44,256	$38,479	$40,160
2022	$47,691	$41,359	$42,997
2027	$50,782	$44,077	$45,702
Compounded Annual Growth Rate			
1996 - 2006	1.2%	1.9%	2.0%
2007 - 2012	2.6%	2.6%	2.5%
2012 - 2017	1.9%	1.8%	1.7%
2017 - 2022	1.5%	1.5%	1.4%
2022 - 2027	1.3%	1.3%	1.2%
2007 - 2027	1.8%	1.8%	1.7%

Note: The Air Trade Area consists of Sarasota, Manatee, DeSoto, and Hardee counties.

Source: NPA Data Services, Inc., May 2007.
Prepared by: Ricondo & Associates, Inc. May 2007.

Table III-5

Civilian Labor Force and Unemployment Rates

Year	Civilian Labor Force (thousands)		
	Air Trade Area	State of Florida	United States
1996	279	7,208	131,056
1997	290	7,409	132,304
1998	289	7,573	133,943
1999	302	7,711	136,297
2000	296	7,870	137,673
2001	299	7,998	139,368
2002	313	8,125	142,583
2003	320	8,246	143,734
2004	335	8,451	144,863
2005	347	8,711	146,510
2006	362	8,989	147,401
Compounded Annual Growth Rate			
1996 - 2006	2.6%	2.2%	1.2%
	Unemployment Rates		
1996	3.9%	5.3%	5.4%
1997	3.4%	5.0%	4.9%
1998	3.1%	4.5%	4.5%
1999	2.7%	4.0%	4.2%
2000	3.3%	3.8%	4.0%
2001	4.1%	4.7%	4.7%
2002	4.9%	5.7%	5.8%
2003	4.6%	5.3%	6.0%
2004	4.2%	4.7%	5.5%
2005	3.4%	3.8%	5.1%
2006	3.0%	3.3%	4.6%

Note: The Air Trade Area consists of Sarasota, Manatee, DeSoto, and Hardee counties.

Source: U.S. Department of Labor, Bureau of Labor Statistics, May 2007.
Prepared by: Ricondo & Associates, Inc., May 2007.

Average annual unemployment rates between 1996 and 2006 are also presented in Table III-5. As shown, unemployment rates for the Air Trade Area decreased from 1996 through 1999, increased from 2000 through 2002, and decreased again from 2003 through 2006. This is similar to the trend experienced in the State of Florida and the United States, although the years in which the trends shifted varied slightly. In each year since 1996, the Air Trade Area has experienced lower unemployment rates than both the State of Florida and the United States.

3.2.4 Economic Base

As presented in **Table III-6**, retail sales per household increased each year between 2002 and 2006, reflecting a recovery from the previous nationwide economic downturn and the terrorist attacks in 2001. Between 2000 and 2006, retail sales per household increased at a compounded annual growth

rate of 8.5 percent in the Air Trade Area, similar to the 9.0 percent annual increase in the State of Florida and higher than the 4.7 percent increase in the United States during this same period. According to *Sales and Marketing Management* magazine, retail sales per household in the Air Trade Area in 2006 through 2011 are projected to increase at a compounded annual growth rate of 3.1 percent, which is higher than the projected growth rate for the State of Florida (2.9 percent) and the United States (2.0 percent).

Table III-6

Retail Sales per Household

Year	Air Trade Area	State of Florida	United States
Historical			
2002	$28,633	$32,024	$33,662
2003	$29,165	$32,512	$34,036
2004	$30,621	$33,595	$35,529
2005	$33,096	$36,387	$37,890
2006	$39,670	$45,143	$40,435
Projected			
2011	$46,141	$52,184	$44,580
Compounded Annual Growth Rate			
2002 - 2006	8.5%	9.0%	4.7%
2006 - 2011	3.1%	2.9%	2.0%

Source: *Sales and Marketing Management*, "Survey of Buying Power, 2000 – 2005"; Trade Dimensions International, Inc., Demographics USA 2006 - County Edition
Prepared by: Ricondo & Associates, Inc., May 2007.

3.3 Passenger Forecasts

Recent passenger numbers at SRQ have increased because the addition of service by two new low-fare airlines has stimulated the market by serving new destinations and lowering fares to existing destinations. AirTran Airways entered the SRQ market in December 2004 and JetBlue Airways initiated service at the Airport in September 2006. The SRQ passenger base responded positively to both airlines, indicating that the market continues to demonstrate the potential for growth. The conclusion that SRQ has the potential to support incremental airline service additions underlies this analysis.

3.3.1 Methodology

The number of passengers accommodated at an airport is usually driven by the local socioeconomic environment and the strategy of the airlines serving the market. If an area is growing in population, income, local attractions, and other economic drivers, the demand for air travel will grow. The degree to which this demand will be accommodated is dependent on the airlines' willingness to provide service and the alternative gateways available to the area. An airline might provide service at an airport specifically to serve the local market, or the airline might choose to use an airport as a hub through which it transfers passengers traveling to or from points other than this airport. SRQ has minimal connecting traffic; therefore, most of the service provided at SRQ is directed toward passengers traveling specifically to or from the Airport service area. Three approaches were used to forecast the number of enplaned passengers to be accommodated at SRQ through 2026:

- Regression analysis relating passenger activity at SRQ to socioeconomic variables in the four-county service area
- Development of enplaned passenger levels based on estimates of incremental growth in air service
- Market share analysis relating passenger activity at SRQ to total United States' enplaned passengers to assess the reasonableness of the estimates of incremental growth in air service

Air carrier aircraft operations were forecast by assigning the appropriate aircraft types necessary to accommodate the numbers of forecast enplaned passengers. Assumptions were made regarding the type of airline, major or commuter, that would most likely serve the market. The fleet mix forecasts were based on the existing fleet mix and assumptions regarding the types of aircraft operated, and on order, by airlines currently operating at SRQ. Historical fleet types recently used to serve O&D activity to markets in the Midwest and Northeast United States (SRQ's primary demand destinations) were also considered.

Unless specified otherwise, the 12-month period used in this analysis is the Airport Authority's Fiscal Year (FY) ending September 30, which is the same as the Federal Fiscal Year.

3.3.2 Enplaned Passengers and Air Carrier Aircraft Operations

As indicated on Exhibit III-1, the number of enplaned passengers at SRQ declined fairly steadily through 2003 before increasing again. On the other hand, the socioeconomic indicators in the four-county service area--population, total income, per capita income, and nonagricultural employment, have grown steadily for the last 20 years. Therefore, it was not possible to establish a statistically significant relationship between these variables and enplaned passengers at the Airport. Passenger yield data were also evaluated as a possible explanatory variable. Yield is defined as the amount paid by a passenger to fly one mile and is calculated by dividing the airfare by the number of miles flown. Variables such as SRQ yield, and SRQ yield relative to United States yield, failed to relate to SRQ traffic in a significant way. Variables to account for events such as the 2001 terrorist attacks were also introduced, but reasonable relationships still could not be established. It appears that, at SRQ, the limited service provided by the airlines since the 1990s is driving the traffic volume at the Airport rather than the other way around, resulting in leakage of SRQ traffic to Tampa International Airport and, to a lesser extent, to Southwest Florida International Airport. Therefore, SRQ O&D traffic by market was analyzed to understand how the market responds to service when it is provided, and to identify where incremental service might be added by the airlines and supported by passenger demand at SRQ.

Table III-7 presents the SRQ O&D markets to which nonstop service has been offered since 2003. In the left-hand column of the table, the rank that market held at SRQ in terms of O&D passengers in 2006 is presented. Schedules for the peak month of March in 2003 through 2007 were analyzed to identify which markets were served nonstop. The markets identified with an asterisk (*) are those that were served nonstop in March of the year indicated. The center of the table lists the destinations served nonstop and the annual one-way O&D passenger traffic from 2000 through 2006[4]. Table III-7 also presents the number of nonstop daily departing weekday seats for each market in March of 2003 through 2007. Analyzing the data in this table provides insight into the likely response of the Sarasota market to new airline service.

[4] At the time the forecasts were prepared, 2006 O&D data by market were available only through September 2006. Calendar year 2006 data were estimated for each market using the historical relationship between total SRQ January-September passengers and calendar year passengers.

Table III-7

Origin and Destination Markets Served Nonstop from SRQ

2006	March Nonstop Service						Calendar Year One Way O & D Passengers							Nonstop Departing Seats (Weekdays in Peak Month of March)				
Rank	'03	'04	'05	'06	'07	Destination	2000	2001	2002	2003	2004	2005	Est. 2006*	2003	2004	2005	2006	2007
1	*	*	*	*	*	Newark	46,480	38,860	43,160	46,700	49,340	48,310	67,973	155	279	279	464	362
2	*	*	*	*	*	Chicago (Midway)	36,380	33,900	37,530	39,270	35,520	42,770	62,760	185	175	292	234	254
3	*	*	*	*	*	Atlanta	21,660	28,990	30,700	28,670	31,150	55,180	60,740	1,006	912	1,343	1,285	1,522
4			*	*	*	Baltimore	6,220	7,260	6,610	6,110	6,580	31,790	28,600			117	117	117
5		*	*	*	*	Indianapolis	37,690	35,730	34,130	34,070	35,400	21,530	26,753		175	175	117	137
6	*	*	*	*	*	Detroit	20,580	17,160	14,050	13,250	13,100	14,990	25,653	248	248	296	365	413
7	*	*	*	*	*	Cincinnati	21,050	15,750	19,810	21,420	28,730	30,620	22,747	190	260	240	140	140
9				*		New York (LaGuardia)	20,430	14,870	11,910	10,210	8,460	12,920	15,413				70	
10	*	*	*	*	*	Charlotte	11,870	7,710	6,910	8,290	12,110	13,660	14,607	432	432	378	410	408
13					*	Washington, D.C. (Reagan)	11,990	10,020	9,490	9,800	8,470	8,230	9,580					70
16		*				Minneapolis/ St. Paul	16,680	8,360	5,780	5,550	9,110	8,800	8,193		124			
18		*	*	*	*	Cleveland	15,940	13,480	9,710	7,700	12,120	9,530	7,553		50	50	50	50
28				*		St. Louis	11,790	2,890	2,760	2,930	3,100	3,100	5,613				50	
30		*	*	*	*	Houston (. Bush)	4,270	1,360	1,800	1,930	5,970	4,670	5,407		50	50	50	50
54		*	*	*	*	Toronto (Pearson)	3,050	2,510	3,870	2,900	2,495	3,050	2,100		118	147	118	73
56					*	New York (JFK)	2,150	1,650	1,110	1,120	1,170	1,030	2,073					300
83	*	*	*	*	*	Tampa			230	280	150	640	907	36	36	36	27	27
	*	*	*	*		Fort Lauderdale	4,110	3,440	1,650					15	9	16	8	
	Cities Served Nonstop																	
	8	13	13	15	14	Originating Passengers In Nonstop Markets				157,880	235,195	276,740	337,453	2,267	2,868	3,419	3,505	3,923

Notes:

* 2006 data were estimated based on data for January through September 2006 and the 2004-2005 historical relationship between full year and January-September data.

Sources: U.S. Department of Transportation O&D Surveys; Airport Activity Records; Official Airline Guides, Inc. (OAG); Mary A. Lynch analysis.
Prepared by: Mary A. Lynch, May 2007.

Continental Airlines increased service to the busiest market, Newark, in 2006, in terms of both frequency and aircraft size. The number of enplaned passengers increased an estimated 40 percent in a market that might have been considered "mature," having been served steadily by Continental in the past. About 35,000 passengers annually had been traveling from SRQ to Chicago Midway International Airport for several years, with a single daily flight by ATA Airlines. When AirTran Airways introduced service between SRQ and Chicago in 2005, O&D traffic in that market increased 20 percent in 2005 and an estimated 47 percent in 2006. A similar increase in O&D traffic occurred in the Atlanta market in 2005 and 2006 when AirTran began serving Atlanta nonstop from SRQ. A similarly "mature" market, Detroit, responded with an estimated 70 percent increase in passengers when AirTran initiated service from SRQ to Detroit Metropolitan Wayne County Airport in 2006. In these examples, passenger demand responded well when incremental service was added.

In the Baltimore market, the introduction of first-time nonstop service between SRQ and Baltimore/Washington International Thurgood Marshall Airport by AirTran in 2005 resulted in a more-than-fourfold increase in the number of passengers in that market. Response to JetBlue Airways' initiation of single daily service to JFK from SRQ was so positive that JetBlue added a second flight through the 2007 peak January-April season. As mentioned earlier, JetBlue provides SRQ passengers traveling to international destinations through New York (JFK) easy access to their international gateway without having to travel to alternative airports, such as Tampa or Southwest Florida international airport. Also shown in Table III-7 are total departing seats for a day in the peak month of March. From 2003 through 2006, these seats increased 55 percent. Over that same period, SRQ O&D passengers in markets that were served nonstop increased 113 percent.

The responses to service additions described above relate only to O&D passengers; that is, passengers who are traveling specifically to or from the destinations mentioned. The top 20 nonstop O&D destinations are illustrated on **Exhibit III-4**. Adding the incremental traffic from passengers connecting beyond the points of the new service represents an even greater response to potential service improvements.

Given this level of response to incremental additions of service to existing markets and nonstop service to new markets, it is reasonable to expect that SRQ can continue to support increases in service to its top and under-served markets. Therefore, it was assumed in the forecasts that the incremental service would be viable, and is likely, over the forecast period, through 2026.

Initially, service is most likely to be offered in the peak month of March. Because of the seasonality of the SRQ market, as shown on Exhibit III-2, a departure added in March does not necessarily translate into a year-round daily operation. Historically, a major airline flight in the peak month of March translates to 282 annual flights, as all airlines routinely reduce their schedules at SRQ in July and August. A regional airline flight added in March has historically generated 282 annual flights. Therefore, estimated growth in incremental peak month major and regional airline aircraft departures generates the annual departures shown in **Table III-8**. The average number of seats per airline aircraft departure at SRQ is currently 131. Given the expectations for the aircraft fleet sizes of the major airlines likely to operate at SRQ in the future, this number is expected to increase to 136 through the forecast period. Regional aircraft operations are expected to increase from a current 49 seats to 54 seats per departure through the forecast period. The annual load factors for air carrier and regional/commuter airline activity in 2006 were 75.3 percent and 77.4 percent, respectively. These load factors were based on T100 data from the FAA. Air carrier load factors are anticipated to reach 77 percent by 2026. Regional/commuter load factors are expected to reach 69 percent by the end of the forecast period, which is reflective of historical load factors for regional/commuter activity at SRQ.

Note: 2006 Origin and Destination (O&D) market data was available only through September 2006. Calender year 2006 was estimated for each market using the historical relationship between total January through September traffic at the Airport and annual calender year traffic.

Source: Cartesia Map Art; US DOT Origin and Destination Survey (CY 2006).
Prepared by: Ricondo & Associates, Inc., July 2006

Exhibit III-4

0 NTS

north

Top 20 O&D Non-Stop Markets

Table III-8

Incremental Peak Month (March) Service

Fiscal Year	Incremental Daily Aircraft Departures, Peak Month of March		Incremental Annual Aircraft Departures		Incremental Annual Enplaned Passengers		
	Air Carrier	Regional/ Commuter	Air Carrier	Regional/ Commuter	Air Carrier	Regional/ Commuter	Total
Actual 2006	22	13	Total Typical Weekday Departures in March 2006				
Forecast							
2011	4	3	1,127	845	106,527	31,958	138,485
2016	3	2	845	564	79,895	21,305	101,201
2021	2	1	564	282	53,264	10,653	63,916
2026	1	1	282	282	26,632	10,653	37,285

Sources: Mary A. Lynch, May 2007; Official Airline Guides, Inc. (OAG), May 2007.
Prepared by: Mary A. Lynch, May 2007.

To assess the reasonableness of these incremental air service growth estimates and the resultant enplaned passenger forecasts, the forecasts were compared to expectations for growth in the number of enplaned passengers in the United States over the forecast period using a market share approach. This comparison is presented in **Table III-9.**

SRQ is expected to grow rapidly in the early years of the forecast period as recently introduced service by new airlines matures, and as these airlines establish their operations at the Airport at levels that can be supported. From 2006 through 2011, total SRQ enplaned passengers are forecast to increase 3.7 percent annually. Once this new service has matured, and given the greater enplaned passenger base that is expected to be established, percentage growth in the later years of the forecast period is expected to taper off. This growth rate is lower than the rates in the FAA forecasts for the United States after 2011; therefore, SRQ's share of U.S total passengers is forecast to decline by 2026. Over the forecast period, the number of enplaned passengers at the Airport is forecast to increase an average of 2.0 percent per year.

In **Table III-10,** a comparison of these forecasts to the forecasts in the FAA *Terminal Area Forecast* (TAF) for SRQ, published in December 2006, is presented. The Master Plan enplaned passenger forecast for 2026 is 21.4 percent higher than the FAA TAF for SRQ for 2026. There is ample evidence that the number of SRQ enplaned passengers can grow as implied in the Master Plan forecast at a higher rate than in the FAA TAF. **Exhibit III-5** graphically illustrates both forecasts.

In the FAA TAF for SRQ, it was assumed that there would be no increase in air carrier aircraft operations after 2006, and that all increases in operations would occur in the regional category. Operations at SRQ since the FAA's latest actual data (2005) available when these forecasts were prepared show that this assumption was incorrect. The March 2007 airline schedule showed 25 typical weekday flights on air carriers compared to 22 in March 2006. For the first 6 months of FY 2007 (i.e., October 2006 through March 2007), the number of SRQ passengers enplaned on air carrier aircraft was 12 percent higher than in the first 6 months of FY 2006, and the total number of enplaned passengers (including regional passengers) was 13.5 percent higher. If this year-to-date growth evolves into a full FY 2007 annual growth of only half that rate, SRQ will have achieved in 2007 the traffic level forecast in the FAA TAF for 2011. Therefore, the current environment at SRQ supports a higher enplaned passenger forecast than that contained in the FAA TAF for SRQ. Specific market conditions also support assumptions about additional service in the future.

Table III-9

Enplaned Passenger Forecasts

	SRQ Enplaned Passengers			FAA TAF U.S. Enplaned Passengers			SRQ Share of U.S. Total		
Fiscal Year	Air Carrier	Regional/ Commuter	Total Enplaned Passengers	Air Carrier	Regional/ Commuter	Total Enplaned Passengers	Air Carrier	Regional/ Commuter	Total Enplaned Passengers
Actual 1986	615,468	33,227	648,695	410,310,794	21,063,522	431,374,316	0.150%	0.158%	0.150%
1987	729,679	30,137	759,816	443,952,471	26,258,047	470,210,518	0.164%	0.115%	0.162%
1988	779,906	29,115	809,021	452,360,403	29,395,919	481,756,322	0.172%	0.099%	0.168%
1989	771,982	21,356	793,338	450,838,300	30,258,289	481,096,589	0.171%	0.071%	0.165%
1990	954,040	27,369	981,409	460,010,654	35,357,954	495,368,608	0.207%	0.077%	0.198%
1991	906,542	39,451	945,993	450,317,882	38,353,539	488,671,421	0.201%	0.103%	0.194%
1992	843,560	33,727	877,287	468,163,724	41,968,805	510,132,529	0.180%	0.080%	0.172%
1993	806,595	54,453	861,048	472,991,619	46,859,129	519,850,748	0.171%	0.116%	0.166%
1994	772,414	83,372	855,786	508,900,456	52,905,876	561,806,332	0.152%	0.158%	0.152%
1995	626,571	156,814	783,385	528,645,401	53,122,160	581,767,561	0.119%	0.295%	0.135%
1996	638,603	162,727	801,330	555,728,158	57,819,790	613,547,948	0.115%	0.281%	0.131%
1997	701,256	130,447	831,703	577,661,559	60,004,775	637,666,334	0.121%	0.217%	0.130%
1998	646,190	134,186	780,376	586,662,816	62,366,542	649,029,358	0.110%	0.215%	0.120%
1999	698,275	64,460	762,735	604,768,159	70,780,780	675,548,939	0.115%	0.091%	0.113%
2000	688,951	76,060	765,011	629,494,006	75,350,694	704,844,700	0.109%	0.101%	0.109%
2001	571,153	60,307	631,460	612,827,404	80,335,600	693,163,004	0.093%	0.075%	0.091%
2002	490,457	66,708	557,165	540,743,827	86,933,257	627,677,084	0.091%	0.077%	0.089%
2003	456,403	80,716	537,119	537,617,301	105,632,178	643,249,479	0.085%	0.076%	0.084%
2004	457,748	99,561	557,309	564,713,895	126,269,192	690,983,087	0.081%	0.079%	0.081%
2005	517,773	134,710	652,483	587,743,645	145,394,840	733,138,485	0.088%	0.093%	0.089%
2006	529,190	160,483	689,673	585,619,663	149,221,967	734,841,630	0.090%	0.108%	0.094%
Forecast									
2011	635,717	192,441	828,158	679,664,677	178,808,796	858,473,473	0.094%	0.108%	0.096%
2016	715,613	213,746	929,359	779,793,166	210,690,325	990,483,491	0.092%	0.101%	0.094%
2021	785,365	207,911	993,275	895,333,949	248,857,405	1,144,191,354	0.088%	0.084%	0.087%
2026	812,615	217,945	1,030,560	1,028,064,311	294,283,627	1,322,347,938	0.079%	0.074%	0.078%
Average Annual Growth Rates									
2006-2011	3.7%	3.7%	3.7%	3.0%	3.7%	3.2%			
2011-2016	2.4%	2.1%	2.3%	2.8%	3.3%	2.9%			
2016-2026	1.3%	0.2%	1.0%	2.8%	3.4%	2.9%			
2006-2026	2.2%	1.5%	2.0%	2.9%	3.5%	3.0%			

Note: Rows may not add to totals shown because of rounding.

Sources: Historical Data: Sarasota Bradenton International Airport - Airport Activity Records; Forecasts: FAA *Terminal Area Forecast,* December 2006; Mary A. Lynch analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

Table III-10

Master Plan Update Enplaned Passenger Forecast Compared to FAA TAF

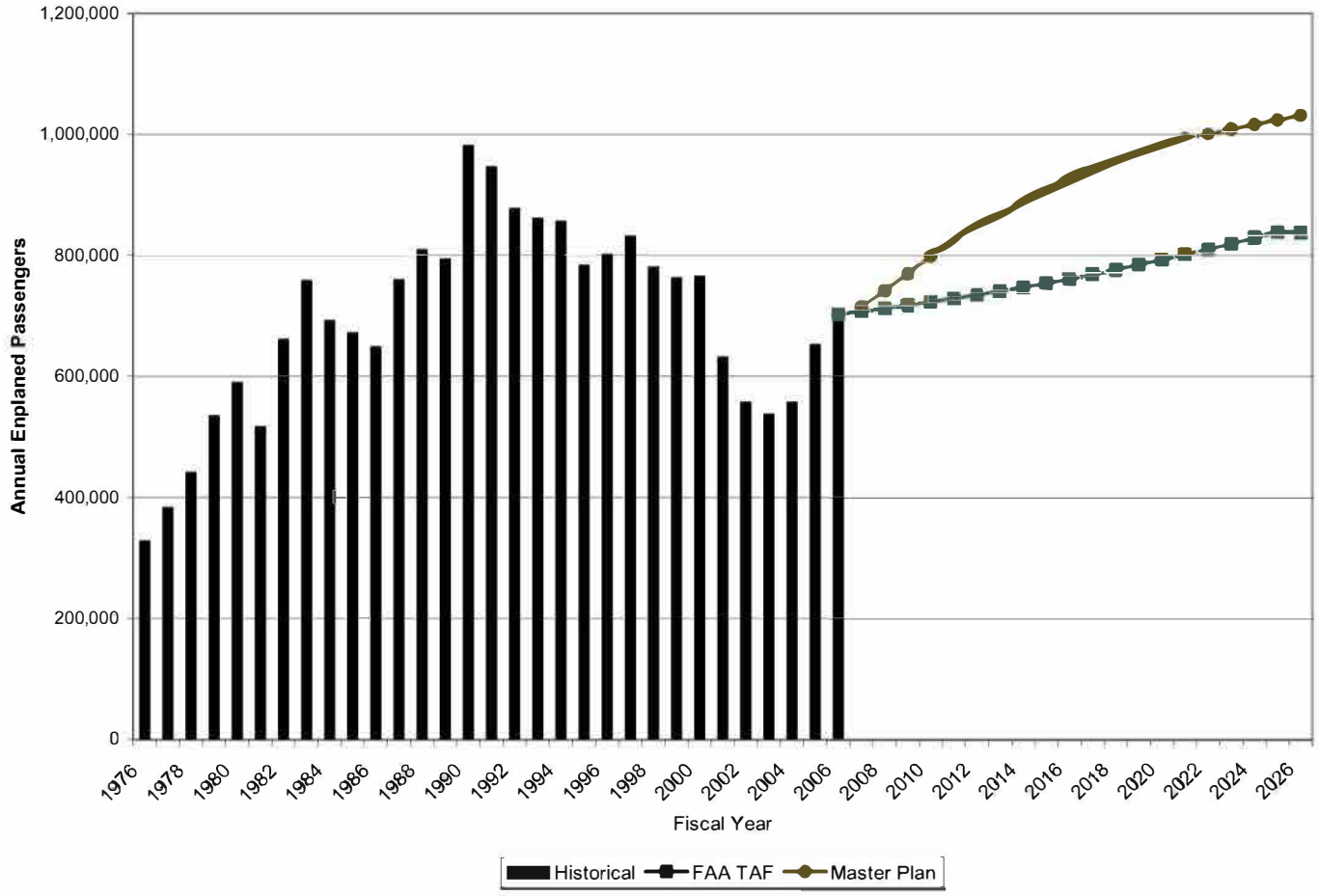
	SRQ Enplaned Passengers			FAA TAF SRQ Enplaned Passengers			SRQ vs. FAA TAF (increase/(decrease))		
Fiscal Year	Air Carrier	Regional/ Commuter	Total Enplaned Passengers	Air Carrier	Regional/ Commuter	Total Enplaned Passengers	Air Carrier	Regional/ Commuter	Total Enplaned Passengers
Actual									
2004	457,748	99,561	557,309	430,554	123,036	553,590	6.3%	(19.1)%	0.7%
2005	517,773	134,710	652,483	500,030	134,162	634,192	3.5%	0.4%	2.9%
2006	529,190	160,483	689,673	579,881	122,363	702,244	(8.7)%	31.2%	(1.8)%
Forecast									
2011	635,717	192,441	828,158	579,881	148,994	728,875	9.6%	29.2%	13.6%
2016	715,613	213,746	929,359	579,881	181,422	761,303	23.4%	17.8%	22.1%
2021	785,365	207,911	993,275	579,881	220,907	800,788	35.4%	(5.9)%	24.0%
2026	812,615	217,945	1,030,560	579,881	268,987	848,868	40.1%	(19.0)%	21.4%
Average Annual Growth Rates									
2006-2011	3.7%	3.7%	3.7%	0.0%	4.0%	0.7%			
2011-2016	2.4%	2.1%	2.3%	0.0%	4.0%	0.9%			
2016-2026	1.3%	0.2%	1.0%	0.0%	4.0%	1.1%			
2006-2026	2.2%	1.5%	2.0%	0.0%	4.0%	1.0%			

Note: Rows may not add to totals shown because of rounding.

Sources: Sarasota Bradenton International Airport - Airport Activity Records; FAA *Terminal Area Forecast,* December 2006; Mary A. Lynch analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

Exhibit III-5

Master Plan Update Enplaned Passenger Forecast Compared to FAA TAF Enplaned Passenger Forecast



TAF = Terminal Area Forecast

Sources: Sarasota Bradenton International Airport - Airport Activity Records; FAA TAF, December 2006; Mary A. Lynch analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

In calendar year 2006, the Boston market ranked eighth for SRQ's O&D passengers, and currently no nonstop service is provided between SRQ and Boston. Originating passengers in this market number about 18,000, and Boston is one of JetBlue's and AirTran's focus cities. Significant Boston-Florida service is currently offered by both of these airlines serving SRQ, and it is not unreasonable to assume that these airlines might add SRQ-Boston nonstop service, possibly two to three departures daily during the peak season. Dallas-Fort Worth is also in the top 20 SRQ O&D markets, currently ranking 19th, with no nonstop service available from SRQ. Given the status of Dallas/Fort Worth International Airport (DFW) as a major connecting hub airport, and given that SRQ currently has no significant service to the west (Houston has one daily nonstop regional jet flight from SRQ provided by Continental Airlines), Dallas-Fort Worth could be considered a possible new nonstop market. Las Vegas, Los Angeles, and San Francisco are all among SRQ's top 30 O&D markets, and these destinations could be served with connecting service through DFW. In addition to these potential new markets, the possibility exists for incremental additional service to existing markets, such as New York (JFK) and Baltimore. SRQ's O&D data indicate that 4 percent to 5 percent of SRQ traffic is traveling to international destinations. With the recent addition of nonstop JetBlue service to New York (JFK), these passengers have the opportunity to travel nonstop from SRQ to a major international gateway without traveling through Tampa International Airport. This service by JetBlue could stimulate traffic at SRQ and some current international traffic at Tampa International Airport could be accommodated at SRQ.

Also, surveys conducted at Tampa International Airport in 2004 indicated that 10.8 percent of the passengers surveyed had begun their trips to the airport from Sarasota and Manatee counties;[5] that percentage of Tampa's 2004 enplaned passengers represents over 880,000 passengers, some of which could easily be accommodated at SRQ with the addition of service to relevant destinations. Socioeconomic data published in the April 2007 issue of the magazine *Florida Trend, Economic Yearbook 2007* lists Sarasota County as among the State's top five counties in per capita personal income, indicating that the County retains it potential to generate airline travel at SRQ.

Table III-11 presents the forecast of annual operations derived from the assumptions outlined in Table III-8. Table III-8 indicated the addition of 10 major airline weekday aircraft departures in the peak month (March) over the forecast period. It was also assumed that seven regional airline flights would be added. The share of service on air carrier and regional aircraft is forecast to remain similar to the share in 2006 throughout the forecast period.

3.3.3 Aircraft Fleet Mix

The air carrier aircraft fleet mix at SRQ is not expected to change significantly over the forecast period. The mix of major and regional airline aircraft operations is not assumed to change, and the length of haul of the markets served is not expected to change. **Table III-12** presents the mix of air carrier aircraft types expected to operate at SRQ throughout the forecast period.

[5] Ricondo & Associates, Inc., and Quest Corporation of America Inc., *Tampa International Airport Departing Passenger Survey*, May 16-22, July 12-16, and October 17-23, 2004.

Table III-11

Total Airline Aircraft Operations Forecast

	SRQ Airline Aircraft Operations			Share of Airline Aircraft Operations	
Fiscal Year	Air Carrier	Commuter	Total	Air Carrier	Commuter
Actual 2006	10,746	8,500	19,246	56%	44%
Forecast					
2011	12,636	9,948	22,584	56%	44%
2016	14,067	10,903	24,970	56%	44%
2021	15,060	11,377	26,437	57%	43%
2026	15,484	11,848	27,332	57%	43%
Average Annual Growth Rates					
2006-2011	3.3%	3.2%	3.3%		
2011-2016	2.2%	1.8%	2.0%		
2016-2026	1.0%	0.8%	0.9%		
2006-2026	1.8%	1.7%	1.8%		

Sources: Sarasota Bradenton International Airport - Airport Activity Records; Mary A. Lynch analysis, May 2007; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

Table III-12

Air Carrier Aircraft Fleet Mix

	Share of Total Aircraft Operations					Annual Aircraft Operations				
	2006	2011	2016	2021	2026	2006[1/]	2011	2016	2021	2026
Equipment	(Estimated)					(Estimated)				
Cessna	11.5%	9.9%	9.1%	8.4%	8.0%	2,204	2,237	2,284	2,234	2,177
Canadair Regional Jet (50 Seats)	2.9%	Equipment not in March 2007 Schedule				551	--	--	--	--
Embraer Regional Jet (50 Seat)	14.3%	9.9%	9.1%	8.4%	10.6%	2,756	2,237	2,284	2,234	2,903
Canadair Regional Jet (70 Seats)	14.3%	13.2%	12.2%	11.3%	10.6%	2,756	2,983	3,045	2,978	2,903
Embraer Regional Jet (70 Seat)		6.6%	9.1%	11.3%	10.6%	--	1,492	2,284	2,978	2,903
Canadair Regional Jet (86 Seats)		3.3%	3.0%	2.8%	2.7%	--	746	761	745	726
Boeing B-737-500	1.0%	2.0%	1.9%	1.9%	1.8%	198	460	477	493	491
Boeing B-717-200	21.3%	8.2%	7.6%	7.5%	7.2%	4,097	1,841	1,908	1,970	1,965
Airbus A319	5.2%	4.1%				999	921	--	--	--
Boeing B-737-300	8.3%	8.2%	7.6%	7.5%	7.2%	1,593	1,841	1,908	1,970	1,965
Boeing B-737-700		16.3%	19.1%	20.5%	19.8%	--	3,682	4,770	5,418	5,404
MCDONNEL DOUGLAS MD-88	5.2%	8.2%	7.6%	7.5%	7.2%	999	1,841	1,908	1,970	1,965
Airbus A320		10.0%	13.1%	12.8%	14.1%	--	2,248	3,277	3,378	3,853
Boeing B-737-400	2.6%	Equipment not in March 2007 Schedule				499	--	--	--	--
Boeing B-737-800	10.7%	Equipment not in March 2007 Schedule				2,051	--	--	--	--
Boeing B-757-200	0.2%	0.2%	0.2%	0.3%	0.3%	45	54	62	70	77
Boeing B-757-300	2.6%	Equipment not in March 2007 Schedule				499	--	--	--	--
Total	100.0%	100.0%	100.0%	100.0%	100.0%	19,246	22,584	24,970	26,437	27,332
						Average Number of Seats				
Major						130.8	132.4	133.9	135.5	136.3
Regional/ Commuter						48.8	51.2	52.5	52.0	53.5

Notes:

1/ 2006 aircraft fleet mix was estimated based on the March 2006 scheduled fleet mix and historical relationships between the March schedule and annual total operations.

2/ Columns may not add to totals shown because of rounding.

Sources: Mary A. Lynch Analysis, May 2007; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

The busiest aircraft in the fleet serving SRQ in 2006 was the 117-seat B-717 operated by AirTran Airways. AirTran operates the largest fleet of B-717s of any airline. However, the airline also has approximately 43 B-737-700s in its fleet and 36 on order. The B-737-700 has 137 seats compared to the B-717-200 with 117 seats. Over time, AirTran could introduce this larger aircraft into service in the Sarasota Bradenton market, while still operating the B-717. JetBlue operates the A320, which enters the fleet mix by 2007. Aircraft that were in the fleet in 2006 that are not shown in the forecast fleet mix were eliminated because they were not in the fleet at SRQ as of March 2007.

Regional aircraft in service at the Airport are forecast to transition over the forecast period from aircraft with 50 seats to aircraft with 70 or more seats. In 2006, twice as many operations were conducted at SRQ using 50-seat or smaller regional aircraft than regional aircraft with more than 50 seats. By the end of the forecast period, operations by the larger regional aircraft are anticipated to exceed operations by the 50-seat and smaller aircraft.

3.3.4 Charter, International, and Connecting Traffic

Table III-13 presents the forecasts of charter, international, and connecting traffic (passengers and operations) at SRQ throughout the forecast period. These categories are embedded in the total enplaned passenger forecasts presented earlier in this chapter. Charter and international service accounts for such minuscule portions of total enplaned passengers and operations at SRQ that it can only be reasonably forecast as a portion of a more stable, larger whole.

Charter and international activity at SRQ has been minimal and difficult to distinguish in the data since 2001. Fewer than three charter aircraft departures per month have occurred over the last 5 years and, similar to other activity, they have been seasonal. Over the last 5 years, the number of charter enplaned passengers has averaged approximately 0.3 percent of total traffic, and that share is forecast to continue through 2026. Charter aircraft operations are forecast to increase from 64 operations in 2006 to 104 operations, or one departure per week, in 2026. It was assumed that all charter aircraft operations will be conducted using air carrier rather than regional aircraft.

Identifiable international passenger traffic at SRQ consists of Canadian traffic that has been accommodated on various airlines over the years. In 2002 and 2003, there was no international traffic at SRQ. In 2004 through 2006, Canadian traffic represented approximately 1.66 percent of total enplaned passengers at SRQ. International passengers are forecast to represent 1.66 percent of total enplaned passengers at the Airport through 2026. Prior to 2006, service between SRQ and Canada was provided on air carrier aircraft. In 2007, Air Canada provided the only service to Canada using Embraer 175 regional aircraft. Through 2016, forecast international traffic could be accommodated on regional jets, as it was in 2006. By 2016, however, the traffic is forecast to increase to the level where it is could support air carrier aircraft operations.

With the exception of the period from 2001 through 2004, connecting passengers at SRQ have represented an annual average of 3.9 percent of total enplaned passengers. From 2001 through 2004, less than 1 percent of the passengers at SRQ were connecting between flights. As the connecting share reverted to the 3.9 percent level in 2005 and 2006, this share of connections was incorporated in the forecasts.

Table III-13

Charter, International, and Connecting Passengers and Aircraft Operations

	Enplaned Passengers										
	Air Carrier				Regional/Commuter					Connecting Passengers	
Fiscal Year	Domestic	International	Charter	Total	Domestic	International	Charter	Total	Total - All	Share of Total	Connections
Actual 2006	514,447	12,838	1,905	529,190	160,483	--	--	160,483	689,673	3.9%	26,897
Forecast 2011	633,233	--	2,484	635,717	178,694	13,747	--	192,441	828,158	3.9%	32,298
2016	712,825	--	2,788	715,613	198,319	15,427	--	213,747	929,359	3.9%	36,245
2021	765,897	16,488	2,980	785,365	207,911	--	--	207,911	993,276	3.9%	38,738
2026	792,417	17,107	3,092	812,615	217,945	--	--	217,945	1,030,560	3.9%	40,192

	Operations								
	Air Carrier				Regional/Commuter				
	Domestic	International	Charter	Total	Domestic	International	Charter	Total	Total - All
Actual 2006	10,404	278	64	10,746	8,500	--	--	8,500	19,246
Forecast 2011	12,562	--	74	12,636	9,524	423	--	9,947	22,583
2016	13,983	--	84	14,067	10,446	457	--	10,903	24,970
2021	14,702	264	94	15,060	11,377	--	--	11,377	26,437
2026	15,105	275	104	15,484	11,848	--	--	11,848	27,332

Note: Rows may not add to totals shown because of rounding

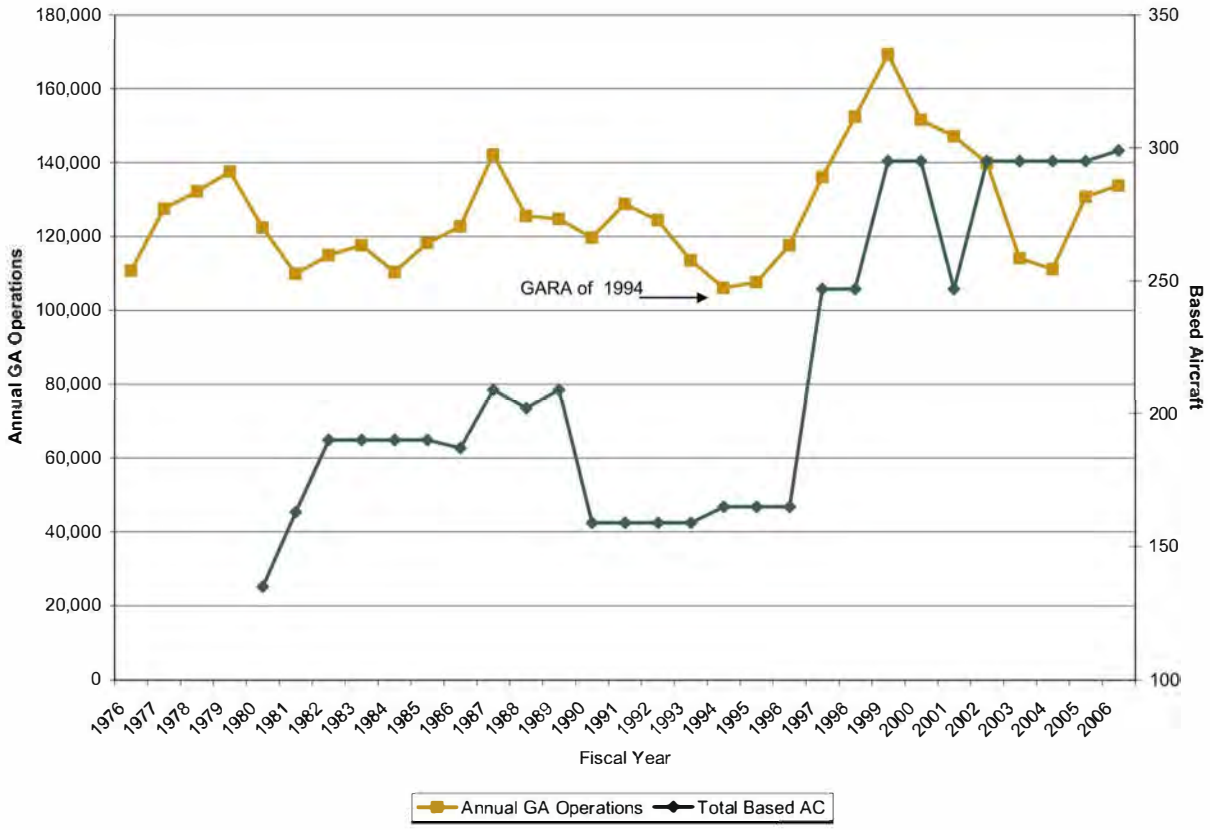
Source: Mary A. Lynch Analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

3.4 General Aviation Activity Forecast

General aviation (GA) activity throughout the United States has been faced with several external factors that have had a significant effect on levels of aircraft ownership and operations. Late in the 1980s and early 1990s, the industry was subject to rising product liability costs resulting from judgments that held aircraft manufacturers liable for performance failures of aircraft that were decades old. According to the FAA, the industry "…had gone from producing a high of almost 18,000 aircraft in 1978 down to only 928 aircraft in 1994."[6] The General Aviation Revitalization Act (GARA) of 1994, which limited this liability, resulted in an increase in GA aircraft production and operations. **Exhibit III-6** indicates that GA activity at the Airport has been influenced by these factors.

Exhibit III-6

General Aviation Aircraft Operations and Based Aircraft



Source: Mary A. Lynch Analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

After passage of the GARA, the GA industry began to recover. As Exhibit III-6 shows, the events of September 11, 2001, again depressed GA activity at SRQ as flight restrictions and security issues reduced the level of operations. GA operations at SRQ declined from 1987 through 1994, rebounded until 1999, then declined steadily through 2004. A local factor contributed to the sharp decline after

6 *FAA Aerospace Forecasts, Fiscal Years 2003-2014, 2002*

1999. A GA accident at the Airport in March 2000 led to changes in air traffic control that required GA flights at SRQ to be handled by air traffic controllers at Tampa International Airport, even though SRQ has its own ATCT. This factor had a depressing effect on GA activity at the Airport. The Airport Authority has worked diligently with the FAA to mitigate some of these restrictions and has achieved some success. Thus, GA operations at the Airport have increased since 2004.

Exhibit III-6 also presents the history of based aircraft at SRQ. Similar to GA operations, aircraft ownership declined after 1989 and remained stagnant until after 1996, when it increased to a new peak in 1999 before again leveling off.

When this forecast was reviewed for approval by the FAA, GA operations at SRQ for the first forecast year, FY 2007, were 14 percent lower compared to FY 2006. However, the start-up of the new FBO (i.e., Rectrix Aerodrome Centers) is expected to contribute to a reversal of this trend over the next few years and to assist in the growth of GA activity at the Airport in the future.

3.4.1 Methodology

GA activity, similar to passenger activity at SRQ, is driven by factors unrelated to local socioeconomic factors. Therefore, the forecasts of GA operations and based aircraft were developed based on an understanding of local events at SRQ, and input from Airport staff, FBO staff, and FAA ATCT staff. Analysis of historical and forecast GA trends in the United States as a whole, as included in the FAA TAF for the nation and for SRQ, was also used to develop the forecasts and to assess the reasonableness of the results.

The GA aircraft fleet mix at SRQ was developed based on conversations with FAA ATCT staff and the fleet mix expectations incorporated in the December 2006 *FAA Aerospace Forecasts* for Federal Fiscal Years 2007-2020. Data from the FAA Aircraft Situation Display to Industry (ASDI) were also reviewed in forecasting the GA fleet mix.

The split of GA operations between itinerant and local activity was developed based on historical Airport activity records and input from local Airport, ATCT, and FBO representatives.

3.4.2 GA Aircraft Operations and Based Aircraft

Table III-14 presents historical and forecast data on GA aircraft operations at SRQ. The table presents the split between itinerant and local GA activity as well as the share of total U.S. GA operations accommodated at the Airport. Local operations are defined by the FAA as those that remain in the local traffic pattern, and those that occur to and from the airport or a practice area within a 20-mile radius of the ATCT. These operations tend to be training operations from local flight schools and from other flight schools in the region, and recurrent training operations by the owners of based aircraft at the specific airport. Itinerant GA operations are those that are not classified as local operations.

Since 2000, GA operations at SRQ have accounted for 0.37 percent to 0.40 percent of total SRQ operations except for a decrease to 0.32 percent in 2003 and 2004. As previously stated, GA aircraft operations decreased 14 percent in FY 2007 compared to FY 2006. This decline is primarily attributed to the high prices of fuel coupled with a weak economy nationwide. The actual share of GA operations at the Airport to total GA operations in the United States was 0.338 percent in FY 2007. Given the current state of the economy, it was assumed that this share would remain constant until 2011, gradually increasing to 0.340 percent by 2026.

Table III-14

General Aviation Aircraft Operations[1/]

Fiscal Year	Itinerant	Local	Total	Share of SRQ Total GA Itinerant	Share of SRQ Total GA Local	SRQ Share of Total U.S. GA Operations
Actual 1996	88,846	28,824	117,670	75.5%	24.5%	0.33%
1997	102,720	33,343	136,063	75.5%	24.5%	0.36%
1998	114,917	37,475	152,392	75.4%	24.6%	0.39%
1999	126,780	42,464	169,244	74.9%	25.1%	0.42%
2000	120,308	39,065	159,373	75.5%	24.5%	0.40%
2001	105,172	41,885	147,057	71.5%	28.5%	0.39%
2002	94,530	45,405	139,935	67.6%	32.4%	0.37%
2003	83,134	31,022	114,156	72.8%	27.2%	0.32%
2004	81,118	30,091	111,209	72.9%	27.1%	0.32%
2005	91,888	38,846	130,734	70.3%	29.7%	0.38%
2006	90,838	42,954	133,792	67.9%	32.1%	0.40%
Forecast						
2007[2/]	83,715	31,399	115,114	72.7%	27.3%	0.338%
2008	86,670	32,476	119,146	72.7%	27.3%	0.338%
2009	88,630	33,179	121,809	72.8%	27.2%	0.338%
2010	90,590	33,880	124,470	72.8%	27.2%	0.338%
2011	**92,550**	**34,579**	**127,129**	**72.8%**	**27.2%**	**0.338%**
2012	94,571	35,263	129,834	72.8%	27.2%	0.338%
2013	96,550	35,928	132,478	72.9%	27.1%	0.338%
2014	98,425	36,552	134,977	72.9%	27.1%	0.338%
2015	100,230	37,147	137,377	73.0%	27.0%	0.339%
2016	**101,949**	**37,707**	**139,656**	**73.0%**	**27.0%**	0.339%
2017	104,007	37,856	141,863	73.3%	26.7%	0.339%
2018	106,034	37,973	144,006	73.6%	26.4%	0.339%
2019	108,042	38,061	146,103	73.9%	26.1%	0.339%
2020	110,046	38,128	148,174	74.3%	25.7%	0.339%
2021	**111,826**	**40,318**	**152,144**	**73.5%**	**26.5%**	0.339%
2022	114,216	40,512	154,728	73.8%	26.2%	0.339%
2023	116,626	40,688	157,314	74.1%	25.9%	0.340%
2024	119,055	40,846	159,902	74.5%	25.5%	0.340%
2025	121,506	40,986	162,491	74.8%	25.2%	0.340%
2026	**122,161**	**42,922**	**165,083**	**74.0%**	**26.0%**	0.340%
Average Annual Growth Rates						
2006-2011	0.4%	-4.2%	-1.0%			
2011-2016	2.0%	1.7%	1.9%			
2016-2026	1.8%	1.3%	1.7%			
2006-2026	1.5%	0.0%	1.1%			

Notes:

1/ Rows may not add to totals shown because of rounding.

2/ The 2007 values shown are actual data for FY 2007. At the request of the FAA, the GA forecast was reviewed to reflect the 14 percent decrease in GA operations in FY 2007 compared to FY 2006. This revised forecast was then compared to the December 2007 FAA TAF.

Sources: Sarasota Bradenton International Airport - Airport Activity Report; Share of U.S. Operations: *FAA Aerospace Forecasts* 2007 - 2020, FAA *Terminal Area Forecast*, December 2007; Ricondo & Associates, Inc., February 2008.

Prepared by: Ricondo & Associates, Inc., February 2008.

Itinerant operations accounted for more than 70 percent of total GA operations at SRQ from 1993 through 2006, with the exception of 2002 and 2006. Therefore, it was assumed in developing the forecasts that the share of itinerant operations at SRQ will remain above 70 percent and increase through 2026. This assumption is in keeping with expectations for the development of FBO activity

at SRQ given the recent introduction of a new FBO and the purchase of one of the existing FBOs. Input from Airport staff, FBO representatives, and ATCT representatives contributed to the based aircraft forecasts presented in **Table III-15**.

Table III-15

Based Aircraft

Fiscal Year	Single-engine Aircraft	Multi-engine Aircraft	Helicopters	Jet Aircraft	Total Based Aircraft	GA Aircraft Operations	GA Operations per Based Aircraft
Actual 1986	131	47	2	7	187	122,792	657
1987	145	57	3	4	209	142,204	680
1988	145	57	--	--	202	125,493	621
1989	145	57	3	4	209	124,469	596
1990	126	27	2	4	159	119,715	753
1991	126	27	2	4	159	128,797	810
1992	126	27	2	4	159	124,416	782
1993	126	27	2	4	159	113,622	715
1994	116	37	2	10	165	106,169	643
1995	116	37	2	10	165	107,737	653
1996	116	37	2	10	165	117,670	713
1997	172	58	6	11	247	136,063	551
1998	193	73	6	14	286	152,392	533
1999	195	77	6	17	295	169,244	574
2000	195	77	6	17	295	159,373	540
2001	172	58	6	11	247	147,057	595
2002	195	77	6	17	295	139,935	474
2003	195	77	6	17	295	114,156	387
2004	195	77	6	17	295	111,209	377
2005	195	77	8	17	297	130,734	440
2006	197	77	8	17	299	133,792	447
Forecast 2011	203	82	9	22	317	127,129	402
2016	211	88	10	31	341	139,656	410
2021	218	94	11	40	364	152,144	418
2026	224	99	12	50	385	165,083	429
Average Annual Growth Rate							
2006-2011	0.6%	1.3%	2.0%	5.5%	1.1%	-1.0%	-2.1%
2011-2016	0.8%	1.5%	2.5%	6.7%	1.5%	1.9%	0.4%
2016-2021	0.6%	1.3%	2.0%	5.5%	1.3%	1.7%	0.4%
2021-2026	0.5%	1.0%	1.6%	4.4%	1.1%	1.6%	0.5%
2006-2026	0.6%	1.3%	2.0%	5.5%	1.3%	1.1%	-0.2%

Note: Rows may not add to totals shown because of rounding.

Sources: Sarasota Bradenton International Airport, FAA *Terminal Area Forecast*, December 2007; February 2008.
Prepared by: Ricondo & Associates, Inc., February 2008.

Typical types of single-engine aircraft are the Beechcraft Bonanza 36, the Cessna Centurion, and the Mooney M-20. Examples of multi-engine aircraft are the Piper Aerostar, the Cessna 402, and the Cessna 310. Examples of jet aircraft are the Cessna Challenger 300 and 400 series, the Raytheon Hawker 800, and the Learjet 45.

Table III-15 presents the based aircraft forecast by equipment category. It also includes the forecast of total GA operations and the resulting implied operations per based aircraft. Input regarding fleet plan for the FBOs at SRQ and expectations for fleet expansion in the United States as a whole led to the based aircraft forecast presented in Table III-15. Single-engine aircraft are expected to continue to be the dominant aircraft type based at SRQ. The most significant increase is expected to occur in the jet fleet based at SRQ. This fleet is expected to include traditional business jets for business use and for-hire passenger service as well as, potentially, the emerging very light jets. Airport staff and FBO representatives indicated that the expected increase in jet activity at SRQ is very likely. Current Airport records for FY 2007 indicated a total of 24 based jet aircraft.

The number of operations per based aircraft is forecast to decline from 2006 to 2011 as a result of the forecast decrease in total aircraft operations over that same time period (at the request of the FAA, total GA aircraft operations for 2007 were adjusted to reflect actual operations). Thereafter, however, operations per based aircraft are forecast to increase at an average annual growth rate of 0.4 percent. This forecast is reasonable given that the mission of the new FBO is geared less toward training and more toward providing for-hire passenger service. Operations per based aircraft have declined over time, from a range of 500 to 700 prior to 1998 to a range of 300 to 500 since 2002. These forecasts are compared with the FAA TAF in **Table III-16**.

Table III-16

Based Aircraft Forecast Compared with the FAA TAF

Fiscal Year	Single-engine Aircraft	Multi-engine Aircraft	Helicopters	Jet Aircraft	Total
FAA TAF for SRQ					
Actual 2006	188	46	8	24	266
Forecast					
2011	205	51	9	26	291
2016	225	56	10	29	320
2021	247	62	12	32	353
2026	267	67	14	35	383
Master Plan Update Forecast for SRQ					
Actual 2006	197	77	8	17	299
Forecast					
2011	203	82	9	22	317
2016	211	88	10	31	341
2021	218	94	11	40	364
2026	224	99	12	50	385

Note: The FAA TAF number of based aircraft for 2026 was extrapolated.

Sources: FAA *Terminal Area Forecast*, December 2007; Ricondo & Associates, Inc., February 2008.
Prepared by: Ricondo & Associates, Inc., February 2008.

As shown, there are discrepancies in the actual data for FY 2006 between the FAA TAF and Airport records. The FAA's 2007 TAF shows 266 based aircraft for 2006 while Airport records indicate that a total of 299 aircraft were based at the Airport. The FAA obtains the based aircraft data from FAA Form 5010, which is produced once a year when the Airport certification inspection is completed. Based aircraft data from Airport records are compiled from data obtained from the FBOs, the

Properties Department, and Airport Operations staff. Airport staff could not explain the disparity in the number of based aircraft at SRQ in 2006 between the FAA TAF and Airport records. For the purposes of forecasting based aircraft at the Airport, however, the total number of 299 based aircraft was used as the starting point.

As Table III-16 summarizes, the total number of based aircraft is about the same for both forecasts by the end of the planning period. The difference between the two forecasts is in the growth of based aircraft by category. The Master Plan Update forecast differs from the FAA TAF based on input received from the FBOs. Jet aircraft specifically are anticipated to increase beyond their existing base. Therefore, the Master Plan Update forecast for based jet aircraft is higher than the FAA forecast. In the multi-engine aircraft category, FAA records show 31 fewer based aircraft than Airport records for 2006. However, the Master Plan display a greater number of multi-engine aircraft based at SRQ than the FAA TAF over the forecast period as Airport records were used as the starting point for the Master Plan Update forecasts. The number of based helicopters is relatively the same in both forecasts. In total, the Master Plan Update and TAF forecast 385 and 383 total based aircraft at SRQ in 2026, respectively.

3.4.3 General Aviation Aircraft Fleet Mix

There is no reliable source of data on the actual fleet mix used for GA operations at the Airport. One source of operational fleet mix data for SRQ is the FAA ASDI. This source records data on flights that are considered by the FAA to be flying under IFR and for which a flight plan has been filed with the FAA. Airport staff and SRQ ATCT staff indicated that they do not believe that this source adequately represented all GA activity at the Airport because many GA flights at SRQ are not operating under IFR and a flight plan has not been filed. Extrapolating the ASDI GA fleet mix to the total GA fleet mix at SRQ was not considered reasonable because some aircraft types would be disproportionately represented in the ASDI data relative to their share of actual operations at SRQ. For example, a high percentage of business jets operating at SRQ would appear in ASDI because these aircraft operate under IFR and flight plans are filed. However, many single-engine aircraft at SRQ would not be in ASDI because a flight plan for operation would not have been filed.

Therefore, the FAA *Aerospace Forecasts* for Federal Fiscal Years 2007-2020 were used as the basis for forecasting the GA fleet mix. Conversations with ATCT personnel provided input on the GA aircraft operations fleet mix. This input was used to modify the FAA's fleet mix to more adequately represent operations at the Airport. The resulting GA fleet mix is presented in **Table III-17**.

The largest percentage increase in operations over the forecast period is expected to be in the jet category, which is forecast to more than double from 2006 through 2026. This increase is in keeping with input from FBO and Airport staff regarding the future of business jet activity at SRQ and the potential for very light jet operations. Multi-engine aircraft operations are forecast to decline through 2026, as FBOs envision that these aircraft would transition to a commercial service role at SRQ rather than a predominantly training and leisure role during the forecast period. This transition is also somewhat true for the single-engine aircraft category, although a less dramatic role change is foreseen.

Table III-17

GA Aircraft Operations Fleet Mix

Fiscal Year	Total GA Aircraft Operations	Single-engine Aircraft	Multi-engine Aircraft	Jet Aircraft	Helicopters
Actual 2006	133,792	76,261	25,420	25,420	6,690
Forecast					
2011	127,129	71,192	22,883	26,697	6,356
2016	139,656	74,018	20,948	37,707	6,983
2021	152,144	76,072	19,779	48,686	7,607
2026	165,083	80,891	19,810	56,128	8,254

Note: Rows may not add to totals shown because of rounding

Sources: FAA *Aerospace Forecasts,* Federal Fiscal Years 2007-2020; Mary A. Lynch Analysis; Ricondo & Associates, Inc., February 2008.
Prepared by: Ricondo & Associates, Inc., February 2008.

3.5 Air Taxi

Air taxi operations are associated with nonscheduled for-hire charter services or other commercial use (aerial photography, traffic advisory services, sightseeing, etc). For the purposes of this forecast, air taxi operations are defined as the difference between total aircraft operations from the FAA Air Traffic Activity Data System (ATADS) minus the sum of GA and military aircraft operations from ATADS and air carrier aircraft operations from Airport records (which differ greatly from ATADS data). **Table III-18** provides a summary of actual 2006 and forecast air taxi operations for the Airport through 2026.

Table III-18

Air Taxi Aircraft Operations

Year	Air Taxi Operations[1/]
Actual 2006	7,863[1/]
Forecast 2011	8,471
2016	8,903
2021	9,127
2026	9,359
Average Annual Growth Rate, 2006-2026	0.9%

Sources: SMAA Airport Records; FAA Air Traffic Activity Data System; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

3.6 Cargo Operations and Aircraft Fleet Mix

The Airport's activity records do not break out scheduled or unscheduled all-cargo operations at SRQ. Virtually all air cargo at the Airport is carried as aircraft belly cargo by the scheduled passenger airlines. However, a review of the ASDI data indicated operations by what appeared, by name, to be all-cargo operators. It was assumed that a cargo operation is a commercial operation, therefore flying under IFR with a flight plan and included in ASDI information. The data indicated that 36 all-cargo aircraft operations were conducted at SRQ in 2004, 474 in 2005, and 68 on 2006.

Airport staff could not explain the apparent 474 all-cargo aircraft operations in 2005. It was decided that the 2004 and 2006 cargo data were more representative, and all-cargo aircraft operations were forecast using this assumption. The ASDI indicated that all-cargo operations were conducted using single-engine, multi-engine, and jet aircraft. These assumptions led to the forecasts presented in **Table III-19.**

Table III-19

Cargo Operations and Aircraft Fleet Mix

	Fleet Mix			
Fiscal Year	Single-engine Aircraft	Multi-engine Aircraft	Jet Aircraft	Total Aircraft Operations
Actual: 2004	--	12	24	36
2005	432	6	36	474
2006	42	2	24	68
Forecast: 2011	65	3	12	80
2016	73	3	14	90
2021	81	4	15	100
2026	89	4	17	110

Sources: FAA Aircraft Situation Display to Industry (ASDI) Data; Mary A. Lynch Analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

3.7 Military Operations and Fleet Mix

Military operations at the Airport have fluctuated between 1,000 and 2,800 annually over the last 20 years. Approximate 66 percent of these operations are itinerant operations. Data in the ASDI indicated that 50 percent of the military operations from 2003 through 2006 were performed using multi-engine aircraft, and the other 50 percent were performed using jet aircraft. Military operations are forecast throughout the forecast period at the same level as the number (2,733) conducted at SRQ in 2006, as presented in **Table III-20.**

Table III-20

Military Operations and Fleet Mix

				Fleet Mix		
Fiscal Year	Itinerant	Local	Total Operations	Single-engine Aircraft	Multi-engine Aircraft	Jet Aircraft
Actual: 2004	1,303	683	1,986	0	993	993
2005	1,382	732	2,114	0	1,057	1,057
2006	1,819	914	2,733	0	1,367	1,367
Forecast: 2011	1,819	914	2,733	0	1,367	1,367
2016	1,819	914	2,733	0	1,367	1,367
2021	1,819	914	2,733	0	1,367	1,367
2026	1,819	914	2,733	0	1,367	1,367

Note: Rows may not add to totals shown because of rounding

Sources: FAA Aircraft Situation Display to Industry (ASDI) Data; Mary A. Lynch Analysis, May 2007.
Prepared by: Mary A. Lynch, May 2007.

3.8 Peaking Characteristics

3.8.1 Enplaned Passengers

For planning and design purposes, activity on the average day of the peak month is used as the level of activity that must be accommodated according to FAA design standards. This activity level is estimated for the various passenger and aircraft operations elements at an airport that drive either landside, terminal, or airside facilities requirements so that such facilities can be properly sized to accommodate demand throughout the forecast period. **Table III-21** presents enplaned passenger peaking characteristics at SRQ.

The top portion of the table presents total enplaned passengers separated into air carrier, regional/commuter, domestic, and international activity. Airport activity records (from 2004 to 2006) indicate that the peak month for air carrier enplaned passengers, both domestic and international, is March, during which 13.7 percent of annual enplaned passengers are accommodated. The records indicate that regional/commuter passenger traffic peaks in December, when 9.8 percent of enplaned passengers are accommodated. Activity on the average day of the peak month was calculated based on the estimated departing passengers for an average day in March 2006 (March 14, 2006). Passengers were estimated using the load factor obtained from the FAA T100 database for that month by equipment and destination. As Table III-2 shows, the peak month average day activity equates to approximately 3.1 percent of peak month activity.

3.8.2 Aircraft Operations

Table III-22 presents peaking characteristics by type of operations. The peak month for both air carrier and regional/commuter operations is March, with 11.0 percent of annual activity. General aviation operations also peak in March, with 10.2 percent of annual GA activity. Data on the monthly activities of cargo operators are not available. However, cargo activity tends to peak industrywide in October, as commercial/retail preparations begin for the November/December holiday season. The peak month for military activity in 2006 was October, with 2.4 percent of the total annual aircraft operations.

3.9 Forecast Summary

Table III-23 summarizes the enplaned passenger forecast for SRQ. A comparison of this forecast with the enplaned passenger forecasts from both the 2006 and 2007 FAA TAFs is also provided (both TAFs are referenced, as the forecast for SRQ was originally prepared in early 2006 using the FAA 2006 TAF). Total enplaned passengers are forecast to increase an average of 3.7 percent per year over the next 5 years. From 2011 to 2016, total enplaned passengers are forecast to increase an average of 2.3 percent per year and to taper off to 1.0 percent per year from 2016 to 2026. Total enplaned passengers are forecast to increase from 689,673 in 2006 to 1,030,560 in 2026, corresponding to an average annual growth rate of 2.0 percent.

As Table III-23 shows, the Master Plan Update enplaned passenger forecast for SRQ is 17.6 percent and 8.4 percent above the 2006 and 2007 FAA TAFs, respectively.

Table III-21

Total Enplaned Passenger Peaking Characteristics

	FY2006	FY2011	FY2016	FY2021	FY2026
Annual					
Air Carrier					
Domestic	516,352	635,717	715,613	768,876	795,508
International	12,838	--	--	16,488	17,107
Regional/Commuter					
Domestic	160,483	178,694	198,319	207,911	217,945
International	--	13,747	15,427	--	--
Total	689,673	828,158	929,359	993,275	1,030,560
Peak Month					
Air Carrier					
Domestic	75,159	88,453	99,570	106,981	110,687
International	3,381	--	--	2,294	2,380
Regional/Commuter					
Domestic	15,659	17,436	19,351	20,287	21,266
International	--	1,341	1,505	--	--
Total	94,199	107,230	120,426	129,562	134,333
Peak Month Average Day					
Air Carrier					
Domestic	2,356	3,127	3,520	3,782	3,913
International	99	--	--	85	102
Regional/Commuter					
Domestic	479	533	592	621	651
International	--	69	71	--	--
Total	2,934	3,729	4,183	4,487	4,665

Note: Columns may not add to totals shown because of rounding

Sources: Mary A. Lynch, May 2007; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

Table III-22

Total Aircraft Operations Peaking Characteristics

	Actual 2006	Forecast 2011	2016	2021	2026
Annual					
Air Carrier					
Domestic	10,468	12,636	14,067	14,796	15,209
International	278	--	--	264	275
Regional/Commuter					
Domestic	8,500	9,525	10,446	11,377	11,848
International	--	423	457	--	--
Total Air Carrier/Regional/Commuter	19,246	22,584	24,970	26,437	27,332
All-Cargo	68	80	90	100	110
Air Taxi	7,863	8,470	8,903	9,127	9,359
General Aviation	133,792	127,109	139,656	152,144	165,083
Military	2,733	2,733	2,733	2,733	2,733
Total Annual Aircraft Operations	163,702	160,976	176,352	190,541	204,617
Peak Month					
Air Carrier					
Domestic	1,328	1,755	1,941	2,055	2,124
International	62	--	--	62	62
Regional/Commuter					
Domestic	744	712	794	844	875
International	--	62	62	--	--
Total Air Carrier/Regional/Commuter	2,134	2,529	2,797	2,961	3,061
All-Cargo	7	8	9	10	11
Air Taxi	865	932	979	1,004	1,029
General Aviation	13,605	11,948	13,128	14,302	15,518
Military	398	398	398	398	398
Total Peak Month Aircraft Operations	17,009	15,815	17,311	18,674	20,017
Peak Month Average Day					
Air Carrier					
Domestic	42	57	63	66	69
International	2	--	--	2	2
Regional/Commuter					
Domestic	26	23	26	27	28
International	--	2	2	--	--
Total Air Carrier/Regional/Commuter	70	82	90	96	99
All-Cargo	1	1	1	1	1
Air Taxi	15	16	17	17	18
General Aviation	439	382	420	458	497
Military	13	13	13	13	13
Total Peak Month Average Day Aircraft Operations	537	494	541	584	627

Note: Peak month average day all-cargo operations were insignificant (less than one operation). Numbers shown are rounded up to one operation

Sources: Mary A. Lynch, May 2007; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008

Table III-23

Summary of Enplaned Passengers

SRQ Master Plan Update Enplaned Passenger Forecast				Enplaned Passengers from FAA TAF		SRQ vs. FAA TAF	
Fiscal Year	Air Carrier	Regional/Commuter	Total Enplaned Passengers	2006	2007	2006 FAA TAF	2007 FAA TAF
Actual							
2004	457,748	99,561	557,309	553,590	553,590	0.7%	0.7%
2005	517,773	134,710	652,483	634,192	634,192	2.8%	2.8%
2006	529,190	160,483	689,673	702,244	674,389	-1.8%	2.2%
Forecast							
2011	635,717	192,441	828,158	728,875	753,418	12.0%	9.0%
2016	715,613	213,747	929,360	761,303	811,590	18.1%	12.7%
2021	785,365	207,911	993,276	800,788	878,667	19.4%	11.5%
2026	812,615	217,945	1,030,560	848,868	944,499	17.6%	8.4%
Average Annual Growth Rates							
2006-2011	3.7%	3.7%	3.7%	0.7%	2.2%		
2011-2016	2.4%	2.1%	2.3%	0.9%	1.5%		
2016-2026	1.3%	0.2%	1.0%	1.1%	1.5%		
2006-2026	2.2%	1.5%	2.0%	1.0%	1.7%		

Sources: FAA TAF December 2006; FAA TAF December 2007; Mary A. Lynch, May 2008; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

Table III-24 presents a summary of total operations by type of activity. Similar to enplaned passengers, a comparison of the Master Plan Update total operations forecast with the operations forecasts from the 2006 and 2007 FAA TAFs for SRQ is also presented in the table. Total airline aircraft operations are forecast to increase an average of 3.2 percent annually over the first 5 years of the forecast period. Cargo aircraft operations are anticipated to increase an average of 2.4 percent annually over the forecast period.

Due to differences in categorizing aircraft operations (i.e., FAA ATCT air taxi and "commuter" categories also include a number of general aviation flights that are conducted on a commercial or "for hire" basis by FBOs and others), only the total aircraft operations forecast is compared with the December 2007 FAA TAF. As Table III-24 shows, the Master Plan Update total aircraft operations forecast exceeds the 2006 and 2007 FAA TAFs by 3.7 percent and 9.6 percent, respectively, in 2026.

A comprehensive summary of the Baseline Forecasts for SRQ is presented in **Table III-25**.

Table III-24

Summary of Total Aircraft Operations

Fiscal Year	Airline Aircraft Operations			Air Taxi	GA/Cargo Aircraft Operations			Military Aircraft Operations	Total SRQ Operations
	Air Carrier	Regional/ Commuter	Total		GA	Cargo	Total	Total	
Actual									
2006	10,746	8,500	19,246	7,863	133,792	68	133,860	2,733	163,702
Forecast									
2011	12,636	9,947	22,583	8,471	127,129	80	127,209	2,733	160,996
2016	14,067	10,903	24,970	8,903	139,656	90	139,746	2,733	176,352
2021	15,060	11,377	26,437	9,127	152,144	100	152,244	2,733	190,541
2026	15,484	11,848	27,332	9,359	165,083	110	165,193	2,733	204,617
Average Annual Growth Rates									
2006-2011	3.3%	3.2%	3.2%	1.5%	-1.0%	3.3%	-1.0%	0.0%	-0.3%
2011-2016	2.2%	1.9%	2.0%	1.0%	1.9%	2.4%	1.9%	0.0%	1.8%
2016-2026	1.0%	0.8%	0.9%	0.5%	1.7%	2.0%	1.7%	0.0%	1.5%
2006-2026	1.8%	1.7%	1.8%	0.9%	1.1%	2.4%	1.1%	0.0%	1.1%

Total SRQ Aircraft Operations

Fiscal Year	Master Plan Update	2006 FAA TAF	2007 FAA TAF	Master Plan Update vs. 2006 FAA TAF	Master Plan Update vs. 2007 FAA TAF
Actual					
2006	163,702	163,634	163,650	0.04%	0.03%
Forecast					
2011	160,996	172,892	152,669	-7.4%	5.2%
2016	176,352	181,659	164,852	-3.0%	6.5%
2021	190,541	189,170	175,472	0.7%	7.9%
2026	204,617	197,088	184,914	3.7%	9.6%
Average Annual Growth Rates					
2006-2011	-0.3%	1.1%	-1.4%		
2011-2016	1.8%	1.0%	1.5%		
2016-2026	1.5%	0.8%	1.2%		
2006-2026	1.1%	0.9%	0.6%		

Note: Rows may not add to totals shown because of rounding.

Sources: Mary A. Lynch, December 2006; FAA TAF, 2007; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

Table III-25

Baseline Forecasts Summary

	2006	2011	2016	2021	2026	2006-2011	2011-2016	2016-2021	2021-2026	2006-2026
Enplaned Passengers										
Air Carrier	529,190	635,717	715,613	785,365	812,615	3.74%	2.40%	1.88%	0.68%	2.17%
Regional/Commuter	160,483	192,441	213,747	207,911	217,945	3.70%	2.12%	-0.55%	0.95%	1.54%
Total	689,673	828,158	929,359	993,276	1,030,560	3.73%	2.33%	1.34%	0.74%	2.03%
Aircraft Operations										
Air Carrier	10,746	12,636	14,067	15,060	15,484	3.29%	2.17%	1.37%	0.56%	1.84%
Regional/Commuter	8,500	9,947	10,903	11,377	11,848	3.19%	1.85%	0.85%	0.81%	1.67%
Total	19,246	22,583	24,970	26,437	27,332	3.25%	2.03%	1.15%	0.67%	1.77%
Air Taxi	7,863	8,471	8,903	9,127	9,359	1.50%	1.00%	0.50%	0.50%	0.87%
General Aviation	133,792	127,129	139,656	152,144	165,083	-1.02%	1.90%	1.73%	1.65%	1.06%
All-Cargo	68	80	90	100	110	3.30%	2.38%	2.13%	1.92%	2.43%
Military	2,733	2,733	2,733	2,733	2,733	0.00%	0.00%	0.00%	0.00%	0.00%
Total - ALL	163,702	160,996	176,352	190,541	204,617	-0.33%	1.84%	1.56%	1.44%	1.12%
Based Aircraft										
Single-Engine	197	203	211	218	224	0.64%	0.77%	0.64%	0.52%	0.64%
Multi-Engine	77	82	88	94	99	1.26%	1.52%	1.26%	1.01%	1.26%
Helicopter	8	9	10	11	12	2.05%	2.46%	2.05%	1.64%	2.05%
Jet	17	22	31	40	50	5.54%	6.69%	5.54%	4.41%	5.54%
Total	299	317	341	364	385	1.15%	1.48%	1.33%	1.14%	1.27%
GA Operations per Based Aircraft	447	402	410	418	429	-2.14%	0.41%	0.39%	0.50%	-0.21%
Average Number of Seats per Departure										
Air Carrier	130.8	132.4	133.9	135.5	136.3	0.24%	0.23%	0.24%	0.12%	0.21%
Regional/Commuter	48.8	51.2	52.5	52.5	53.5	0.96%	0.50%	0.00%	0.38%	0.46%
Load Factors										
Air Carrier	75.3%	76.0%	76.0%	77.0%	77.0%	-	-	-	-	-
Regional/Commuter	77.4%	75.5%	74.7%	69.6%	68.8%	-	-	-	-	-

Sources: FAA TAF, 2007; Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc., April 2008.

3.10 Accelerated Baseline Forecasts

For purposes of determining facility requirements only, an Accelerated Baseline Forecast was derived at an annual level for total enplaned passengers and aircraft operations. This forecast reflects an accelerated growth in enplaned passengers over the short-term period. As shown in **Table III-26,** total enplaned passengers are forecast to grow at an average annual rate of 8.7 percent from 2007 through 2011. This growth rate was based on the enplaned passenger average annual growth rate from 2003 to 2006 (Note: this growth is similar to that experienced between 1986 to 1990, as depicted on **Exhibit III-7** below). By the end of the forecast period, this growth tapers down to 1.0 percent per year. The enplaned passenger average annual growth rate over the 20-year forecast period is 3 percent. Exhibit III-7 presents a comparison of the Accelerated Baseline Forecast with the Baseline forecast and the FAA TAF.

Table III-26

Accelerated Baseline Forecasts of Enplaned Passengers [1/]

Fiscal Year	Air Carrier	Average Annual Growth	Regional/ Commuter	Average Annual Growth	Total	Average Annual Growth
Actual						
2003	N.A.	-	N.A.	-	537,119	-3.60%
2004	N.A.	-	N.A.	-	557,309	3.80%
2005	N.A.	-	N.A.	-	652,483	17.10%
2006	529,190	-	160,483	-	689,673	5.70%
Forecast						
2007	575,582	8.8%	174,024	8.4%	749,605	8.7%
2008	626,040	8.8%	188,707	8.4%	814,747	8.7%
2009	680,923	8.8%	204,629	8.4%	885,551	8.7%
2010	740,616	8.8%	221,894	8.4%	962,510	8.7%
2011	805,543	8.8%	240,617	8.4%	1,046,159	8.7%
2012	817,626	1.5%	244,226	1.5%	1,061,851	1.5%
2013	829,890	1.5%	247,889	1.5%	1,077,779	1.5%
2014	842,338	1.5%	251,608	1.5%	1,093,946	1.5%
2015	854,973	1.5%	255,382	1.5%	1,110,355	1.5%
2016	867,798	1.5%	259,212	1.5%	1,127,010	1.5%
2017	876,476	1.0%	261,805	1.0%	1,138,281	1.0%
2018	885,241	1.0%	264,423	1.0%	1,149,663	1.0%
2019	894,093	1.0%	267,067	1.0%	1,161,160	1.0%
2020	903,034	1.0%	269,737	1.0%	1,172,772	1.0%
2021	912,064	1.0%	272,435	1.0%	1,184,499	1.0%
2022	921,185	1.0%	275,159	1.0%	1,196,344	1.0%
2023	930,397	1.0%	277,911	1.0%	1,208,308	1.0%
2024	939,701	1.0%	280,690	1.0%	1,220,391	1.0%
2025	949,098	1.0%	283,497	1.0%	1,232,595	1.0%
2026	958,589	1.0%	286,332	1.0%	1,244,921	1.0%

Notes:

N.A. = Not available

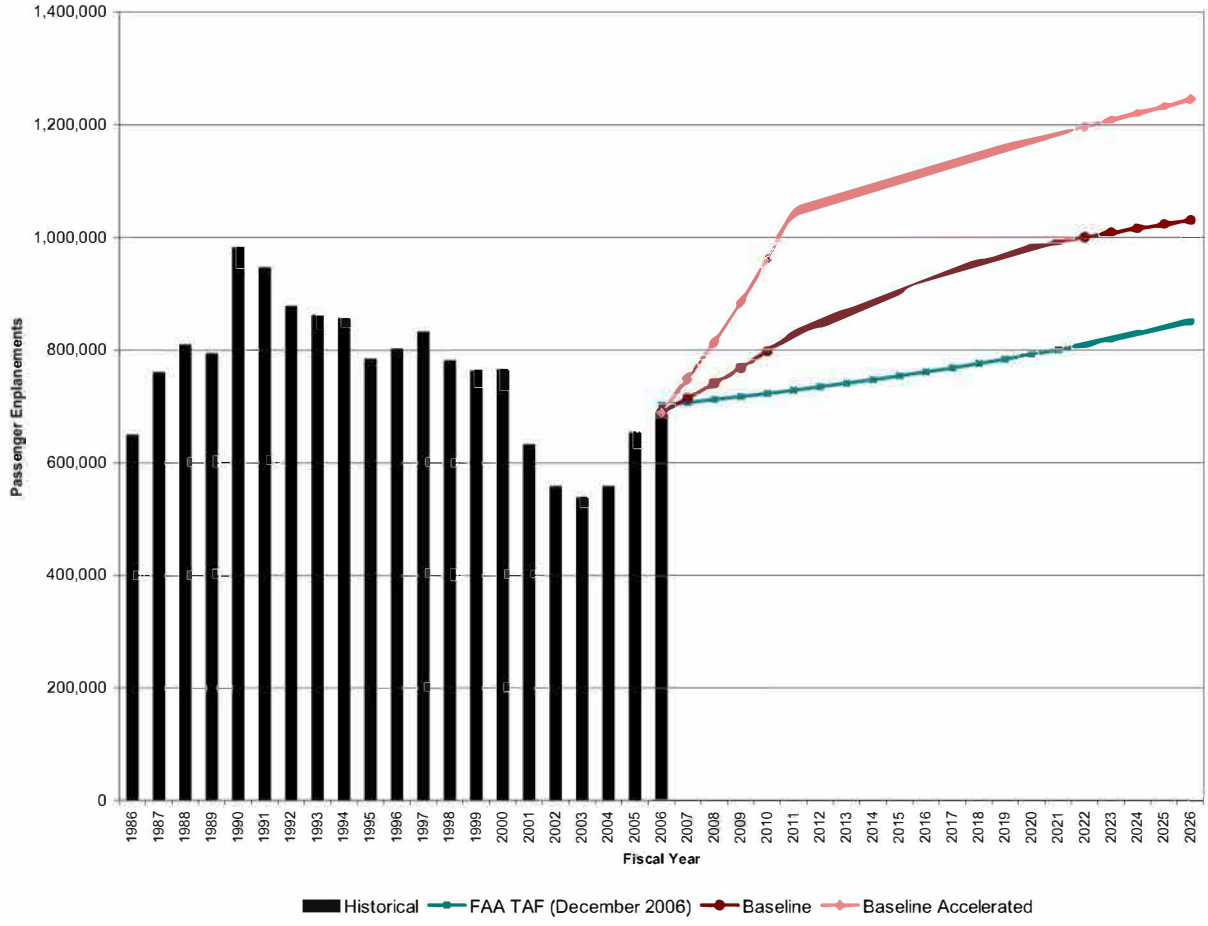
Rows may not add to totals shown because of rounding.

1/ The Accelerated Baseline Forecasts of enplaned passengers were based on an 8.7 percent average annual growth rate from 2007 through 2011. This growth rate was based on the average growth rate from 2003 to 2006.

Source: Ricondo & Associates, Inc., April 2008
Prepared by: Ricondo & Associates, Inc, April 2008.

Exhibit III-7

Enplaned Passenger Forecasts Comparison



Source: Ricondo & Associates, Inc., July 2007.
Prepared by: Ricondo & Associates, Inc, July 2007.

Table III-27 summarizes the annual aircraft operations associated with the Accelerated Baseline Forecasts. As shown, only air carrier aircraft operations would be affected. General aviation and military aircraft operations are unchanged from the Baseline Forecasts.

Table III-27

Accelerated Baseline Forecasts of Aircraft Operations [1/]

	Airline Aircraft Operations			GA/Air Taxi/Cargo Aircraft Operations				Military Operations	
Fiscal Year	Air Carrier	Commuter	Total Airline Aircraft Operations	GA	Air Taxi	Cargo	Total	Total	Total SRQ Operations
Actual 2006	10,746	8,500	19,246	133,792	7,863	68	141,723	2,733	163,702
Forecast									
2011	16,012	12,439	28,451	127,129	8,471	80	135,680	2,733	166,864
2016	17,059	13,222	30,281	139,656	8,903	90	148,649	2,733	181,663
2021	17,483	14,907	32,391	152,144	9,127	100	161,371	2,733	196,495
2026	18,266	15,566	33,832	165,083	9,359	110	174,552	2,733	211,117
Average Annual Growth Rates									
2006-2011	8.30%	7.91%	8.13%	-1.02%	1.50%	3.30%	-0.87%	0.00%	0.38%
2011-2016	1.27%	1.23%	1.25%	1.90%	1.00%	2.38%	1.84%	0.00%	1.71%
2016-2026	0.69%	1.65%	1.12%	1.69%	0.50%	2.03%	1.62%	0.00%	1.51%
2006-2026	2.69%	3.07%	2.86%	1.06%	0.87%	2.43%	1.05%	0.00%	1.28%

Note:

1/ The Accelerated Baseline Forecasts for aircraft operations only affect air carrier and commuter airline aircraft operations. General aviation and military aircraft operations were assumed to be unchanged from the Baseline Forecasts under this scenario.

Source: Ricondo & Associates, Inc., April 2008.
Prepared by: Ricondo & Associates, Inc, April 2008.

IV. Demand/Capacity Analyses and Facility Requirements

The relationship between demand and capacity pertaining to airport components is complex. Various parameters affect how efficiently a certain level of activity (demand) can be processed within a specific system or facility (capacity). In addition, the acceptable level of service or convenience varies by user, facility, or sponsor.

The purpose of this chapter is to explore the relationship between demand and capacity in the context of various Airport systems, and provide a general assessment of the ability of existing Airport facilities to meet future demand in order to determine the requirements necessary to accommodate that demand. Alternatives for providing the future facilities to accommodate forecast demand are presented in Chapter V of this document.

This chapter is organized by functional system on the Airport. For clarity purposes, each functional system was assessed separately. Ultimately, the facility requirements for each system are combined on the Airport Layout Plan, as presented in Chapter VI. Four functional systems were identified—airfield, passenger terminal, landside components, and aviation support facilities—as summarized below:

- **Airfield:** includes the runway and taxiway system. The ability of the airfield to accommodate forecast demand and activity profiles in terms of runway capacity and design standards was evaluated.
- **Passenger Terminal:** includes the terminal building from the curbfront to the gates. Enplaning, deplaning, and connecting passenger demand defines the need for various facilities, such as ticket counters, baggage claim devices, security screening stations, holdrooms, and terminal curbfront, among other elements. Terminal gates/aircraft parking requirements are established according to peak hour demand and gate occupancy times for commercial passenger aircraft.
- The **Landside Components** consist of three subcategories: public parking, rental car facilities, and on-Airport roadway access:
  - **Public Parking**: includes on-Airport short-term, long-term, and employee automobile parking facilities.
  - **Rental Car Facilities**: primarily encompasses all facilities pertaining to rental car company activities, including the customer service area (counters in the baggage claim area) ready/return spaces, and vehicle service area (i.e., vehicle storage, fueling positions, wash bays, and maintenance bays).
  - **On-Airport Roadway Access**: includes on-Airport ground transportation and circulation systems, such as access roads, and service roads.

  The demand associated with these components is predicated on passenger demand and the distribution of demand among the various modes of transportation that serve the Airport and the local roadway system.
- **Aviation Support Facilities:** include cargo facilities, GA)/FBO facilities, ARFF facilities, and fueling facilities. As the Airport is not currently served by any all-cargo carriers, the cargo facilities at the Airport serve belly cargo that is transported on regularly scheduled passenger aircraft flights. GA/FBO facilities serve privately owned and corporate-owned

based and transient aircraft. These facilities typically include aircraft storage, aircraft parking/tiedown areas, and support facilities, such as office buildings and fuel farms.

The methodologies used to determine facility requirements as described in this chapter adhere to industry standards. Initially, the calculations used for the demand/capacity analysis were based on information presented in Chapter II.

4.1 Existing Conditions

Based on the timing for conducting the different analyses for the various Airport components discussed above, the reference to "existing conditions" varies by component. As presented in Chapter III, the Airport activity forecasts were prepared in early spring 2007. Thus, the "existing conditions" in Chapter III were defined using FY 2006 as the base year. The FAA approved the Master Plan Update forecasts in June 2008. As the master planning process progressed, some analyses were conducted considering the latest available data to reflect "existing conditions". As a result, "existing conditions" as presented in this document do not always refer to FY 2006 conditions. The following summarizes the year used to define "existing conditions" for analysis of each Airport component:

- Airfield: Fiscal Year 2006
- Passenger Terminal: Calendar Year 2007
- Public Parking: Calendar Year 2006
- Rental Car Facilities: Calendar Year 2006
- On-Airport Roadway Access: Calendar Year 2007
- Aviation Support Facilities: Fiscal Year 2006

4.2 Planning Activity Levels

To facilitate the analytical process associated with the demand/capacity analyses, facility requirements assessment, and subsequent alternatives development and evaluation, the demand scenarios are defined to represent specific PALs. As previously defined, PALs correspond to particular demand thresholds identified as part of the demand/capacity scenarios. By design, PALs reflect more detailed analyses of the activity parameters for that threshold.

For purposes of the analyses in this chapter, two PALs were selected. PAL 1 and PAL 2 generally correspond to the activity levels and characteristics associated with the midpoint (i.e., the year 2015) and the endpoint (i.e., the year 2025) of the planning horizon, respectively, under the Baseline Forecasts approved by the FAA for this Master Plan Update. As such, PAL 1 and PAL 2 correspond to 1.8 MAP and 2.0 MAP, respectively. In terms of total aircraft operations, PAL 1 and PAL 2 correspond to 173,300 and 201,800 annual aircraft operations, respectively.

PALs were used for the airfield and terminal building analyses. Because of the Airport Authority's need to monitor other Airport components by "short-term" timeframe increments, the demand/capacity analyses and facility requirements for public parking, rental car facilities, on-Airport roadways, and aviation support facilities were assessed based on 5-year increments from existing conditions.

4.3 Airfield

The airfield demand/capacity analysis was conducted to assess the ability of the airfield to accommodate existing and forecast aircraft demand. In evaluating the ability of the Airport to

accommodate PAL 1 and PAL 2 demand, airfield capacity was identified using methodologies consistent with FAA AC 150/5060-5, *Airport Capacity and Delay,* Change 2.

Airfield capacity is defined as the maximum number of aircraft operations that can be accommodated on an airfield during a specific time period. A number of factors affect airfield capacity. These factors primarily include weather conditions, types of aircraft operating at the Airport, runway configuration and operating conditions, the percentage of arrivals, and FAA Air Traffic Control (ATC) airspace handling procedures. The number and location of the runway exits and the share of touch-and-go operations also influence airfield capacity. As demand nears or exceeds airfield capacity, aircraft delays increase exponentially. (Note: airfield delays were not assessed as part of this Master Plan Update analysis.) The following FAA airfield capacity and aircraft delay definitions are used in the analyses described in this chapter:

- **Peak-Hour Capacity.** Peak hour capacity is the maximum number of aircraft operations that can be accommodated on the airfield in one hour under specific operating conditions.
- **Annual Service Volume (ASV).** The ASV, as defined in FAA AC 150/5060-5 "is a reasonable estimate of an airport's annual capacity."

4.3.1 Factors Affecting Airfield Capacity

The capacity of an airfield is not constant over time. The various factors that affect airfield capacity, as mentioned above, directly affect runway occupancy time. Each of these factors is discussed below.

4.3.1.1 Weather Conditions

Airfield capacity can vary significantly as a result of the weather conditions experienced at the Airport. Prevailing winds (direction and speed) dictate which runways can be used for aircraft arrivals and departures. Aircraft typically land and take off into the wind, and can withstand a limited amount of cross wind and tail wind. If the maximum cross wind or tail wind is exceeded, the aircraft may not be able to operate on that particular runway. Therefore, wind conditions may prevent the use of a higher-capacity runway operating configuration, thus increasing aircraft delays.

Other meteorological conditions affecting airfield capacity include cloud ceiling and visibility. Low cloud ceiling and poor visibility conditions result in increased spacing between aircraft in the airspace surrounding the Airport. These conditions may also restrict which runways can be used. Two operating conditions have been established based on cloud ceiling and visibility:

- VFR conditions
- IFR conditions

Visual flight rules govern the procedures used to conduct aircraft operations under visual meteorological conditions (VMC). Similarly, instrument flight rules govern the procedures used to conduct aircraft operations under instrument meteorological conditions (IMC). The criteria for establishing these operating conditions are summarized in **Table IV-1**.

Table IV-1

Operating Conditions for Airfield Capacity and Aircraft Delay Analysis

Operating Condition	Visibility	Cloud Ceiling
VFR	Greater than or equal to 5 statute miles and/or	Greater than or equal to 3,000 feet AGL
IFR	Less than 3 statute miles and/or	Less than 1,000 feet AGL

Source: FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay,* Change 2, 1983.
Prepared by: Ricondo & Associates, Inc., October 2008.

During IFR conditions, in-trail separations for arrivals and departures increase, thus reducing the hourly capacity of the airfield. This reduction in in-trail separations results from the restriction of aircraft arrivals to runways with an established instrument approach procedure during IFR conditions. Aircraft arrivals and departures on intersecting runways are also limited during IFR conditions. From a capacity calculation standpoint, aircraft operational demand and the aircraft mix index may also be reduced during IFR conditions, as private pilots must have an instrument rating to fly during these conditions.

4.3.1.2 Aircraft Fleet Mix

The aircraft fleet mix is an important factor in determining airfield capacity. As the disparity in approach speeds and aircraft weights increases, airfield capacity decreases. This decrease is related to a safety issue referred to as wake vortex or wake turbulence. This phenomenon creates air turbulence behind an aircraft as a result of its movement through the air. Heavier aircraft result in more severe wake vortices than smaller aircraft. Although wake vortices are more prevalent during departures than arrivals, they are considered a significant safety hazard during any operation.

To alleviate the hazards of wake vortices, aircraft are spaced according to the difference in their airspeed and weight. Lighter aircraft are more susceptible to damage from wake vortices than heavy aircraft. Therefore, light aircraft are typically required to wait up to 2 minutes before operating on a runway after a heavy aircraft. This delay results in a loss in airfield capacity. The greater the size and weight differential of the aircraft fleet, the greater the separation required between successive aircraft operations.

The FAA's AC on airport capacity and delay incorporates a factor referred to as the "mix index" to account for the composition of the aircraft fleet mix serving an airport. To establish the mix index, aircraft are assigned to one of four classifications based on the maximum certificated takeoff weight of the aircraft. Based on the number of operations in each classification, a percentage is established to represent the "mix index". **Table IV-2** summarizes the weights of the four aircraft classifications considered in the fleet mix.

Table IV-2

Aircraft Classifications for Establishing Aircraft Mix Index

Aircraft Classification	Aircraft Wake Turbulence Classification	Maximum Certificated Takeoff Weight (pounds)	Representative Aircraft Types
A	Small	12,500 or less	Cessna 172, Cessna 207, and King Air
B	Medium	12,501 to 41,000	Lear 25, Cessna Citation, Falcon 50
C	Large	41,001 to 300,000	G-IV, F-900, Dash 8, B-737, B-757
D	Heavy	300,001 or more	MD-11, B-767, A330, B-747, A340, A380, B-787

Source: FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay,* Change 2, 1983.
Prepared by: Ricondo & Associates, Inc., October 2008.

Class A aircraft include single-engine, light turboprop, multi-engine GA, and light business jet aircraft. At SRQ, a limited number of operations are performed by aircraft in this classification, including single-engine aircraft (e.g., Cessna 172 or Piper 28) and light turboprop aircraft (e.g., King Air). This classification also includes single- and multi-engine aircraft flown by general aviation pilots and the light business jet aircraft, which are currently in the design or production stage. These aircraft include, but are not limited to, the Adam 500 and 700, the Cessna Mustang, the Diamond Jet, the Eclipse 500, the Embraer Phenom 100, and the HondaJet.

Class B aircraft include light jet aircraft, such as the Lear jets (Lear 25, Lear 45, and Lear 60), the Cessna Citations (Citation CJ1, Citation Mustang, Citation Sovereign, and Citation X), and the Falcon 50. This classification primarily consists of medium business jet aircraft. Several of the Class B aircraft cited above currently operate at SRQ.

Class C aircraft encompass midsize and heavy business jet aircraft, such as the Bombardier Gulfstream Global Express, Gulfstream V, regional jet aircraft, and narrowbody jet aircraft, such as the B-737 series and the A320 series. The B-757, which is at the threshold between the narrowbody and widebody aircraft classifications, is included in Class C. At SRQ, Class C aircraft include the majority of air carrier and general aviation business jet aircraft.

Class D aircraft include the majority of widebody passenger and cargo aircraft, including, among others, the B-767 and B-747 series, the A330 and A340 series, and military jet aircraft. Currently, no Class D aircraft operate at SRQ.

The aircraft classifications are used to determine the mix index, which is required to determine the theoretical capacity of an airfield. The mix index, as defined in FAA AC 5060-5, *Airport Capacity and Delay*, Change 2, is the percent of Class C aircraft plus three times the percent of Class D aircraft, written as "%(C+3D)". To account for the increased wake vortices of Class C aircraft and the share of Class B aircraft serving the Airport, the mix index for SRQ was calculated as the sum of the following: the percent of Class B aircraft, two times the percent of Class C aircraft, and three times the percent of Class D aircraft. As such, the mix index can be written as "%(B+2C+3D)". Class D aircraft, however, currently do not operate at the Airport. Thus, the mix index for SRQ is reflective of Class B and Class C aircraft. It is expected to increase from 33 percent in 2006 to 41 percent at PAL 1 (2015) and 47 percent at PAL 2 (2025).

4.3.1.3 Runway Configuration/Airfield Operating Configuration

The number of runways, their orientation, the location of runway intersections, and the lateral separation between parallel runways are the primary factors affecting airfield capacity.

Aircraft operations on intersecting runways are typically considered dependent operations. Aircraft separation must be increased to allow adequate time for aircraft operations on the intersecting runway to occur safely. The in-trail separation between aircraft is dependent on the type of operation (arrival/departure) and the distance between the runway intersection and the approach ends of the runways. As the distance between the end of the runway and the intersection increases, the amount of in-trail separation required may also increase because of the greater amount of time required for an aircraft to travel beyond the runway intersection and subsequently allow an operation on the intersecting runway to commence. As in-trail separations increase, airfield capacity decreases.

4.3.1.4 Touch-and-Go Operations

Touch-and-go operations are defined as operations by a single aircraft that lands and departs without stopping or exiting the runway. Pilots conducting touch-and-go operations are usually conducting training exercises. Thus, they remain in the airport traffic pattern. Analytically, the airfield capacity, in terms of the number of operations accommodated, increases with the ratio of touch-and-go operations to total operations because aircraft remaining in the airport traffic pattern continually land and depart without occupying the runway for a significant amount of time. A touch-and-go operation is counted as two operations: one arrival and one departure. Continuous touch-and-go operations, however, reduce the availability of the runway for other non-training operations. As airfield capacity is typically determined by peak-hour operations, no touch-and-go operations are assumed to occur at SRQ in the peak hour.

4.3.1.5 Percentage of Arrivals

The ratio of aircraft arrivals to total airport operations is critical in determining airfield capacity. Typically, a high percentage of arrivals during peak operating periods indicates a decrease in available capacity because a runway is occupied for longer periods of time by an arriving aircraft than by a departing aircraft.

At SRQ, departures exceed arrivals at times, and vice versa. Typically, the departure peaks occur in the morning hours while the arrival peaks occur in the evening hours. As presented in previous chapters of this document, the air carrier departure peak occurs around noon (six departures generally between 11:09 a.m. and 12:09 p.m.) and the air carrier arrival peak occurs later in the day (five arrivals generally between 3:19 p.m. and 4:19 p.m.). The peaking characteristics of general aviation aircraft operations do not necessarily match the air carrier peaking patterns. Based on data obtained from the Airport's noise office, the arrival and departure peaks for general aviation aircraft operations occur in the afternoon, around 4:00 p.m. on an average day of the peak month (March). It should be noted that peaking patterns for general aviation aircraft operations can vary greatly as demand is driven by nonscheduled activity.

For planning purposes, a 50/50 split between arrivals and departures was assumed in the airfield demand/capacity analyses. This assumption is conservative and provides an average measure of overall airfield capacity.

4.3.1.6 Runway Exits/Runway Occupancy Times

Another factor affecting airfield capacity is the amount of time an aircraft occupies a runway. Runway occupancy time for arriving aircraft is dependent on the number, type, and location of runway exits, as well as aircraft performance. Typically, lighter aircraft require less runway distance for landing and, therefore, less runway occupancy time. However, if a runway exit is not available once the aircraft decelerates to a speed that allows for safe maneuvering off the runway, airfield capacity is compromised. Runway occupancy times can also be reduced by the presence of high-speed exit taxiways. High-speed exit taxiways are typically aligned at an acute 30 to 45 degree angle relative to the runway orientation. This angle allows landing aircraft to exit at a higher speed than standard exit taxiways that are perpendicular (90 degrees) to the runway. High-speed exit taxiways result in lower runway occupancy times, which increase airfield capacity. At SRQ, however, most runway exits are perpendicular to the runways, with no high-speed exits to either runway.

4.3.2 Airfield Demand/Capacity Analyses

4.3.2.1 Overview

For each runway use configuration, hourly capacities were established for VFR and IFR operating conditions. Historical weather data obtained from the National Climatic Data Center were used to establish the availability of each runway use configuration during the two operating conditions. The data were recorded from January 1, 1997, to December 31, 2006.

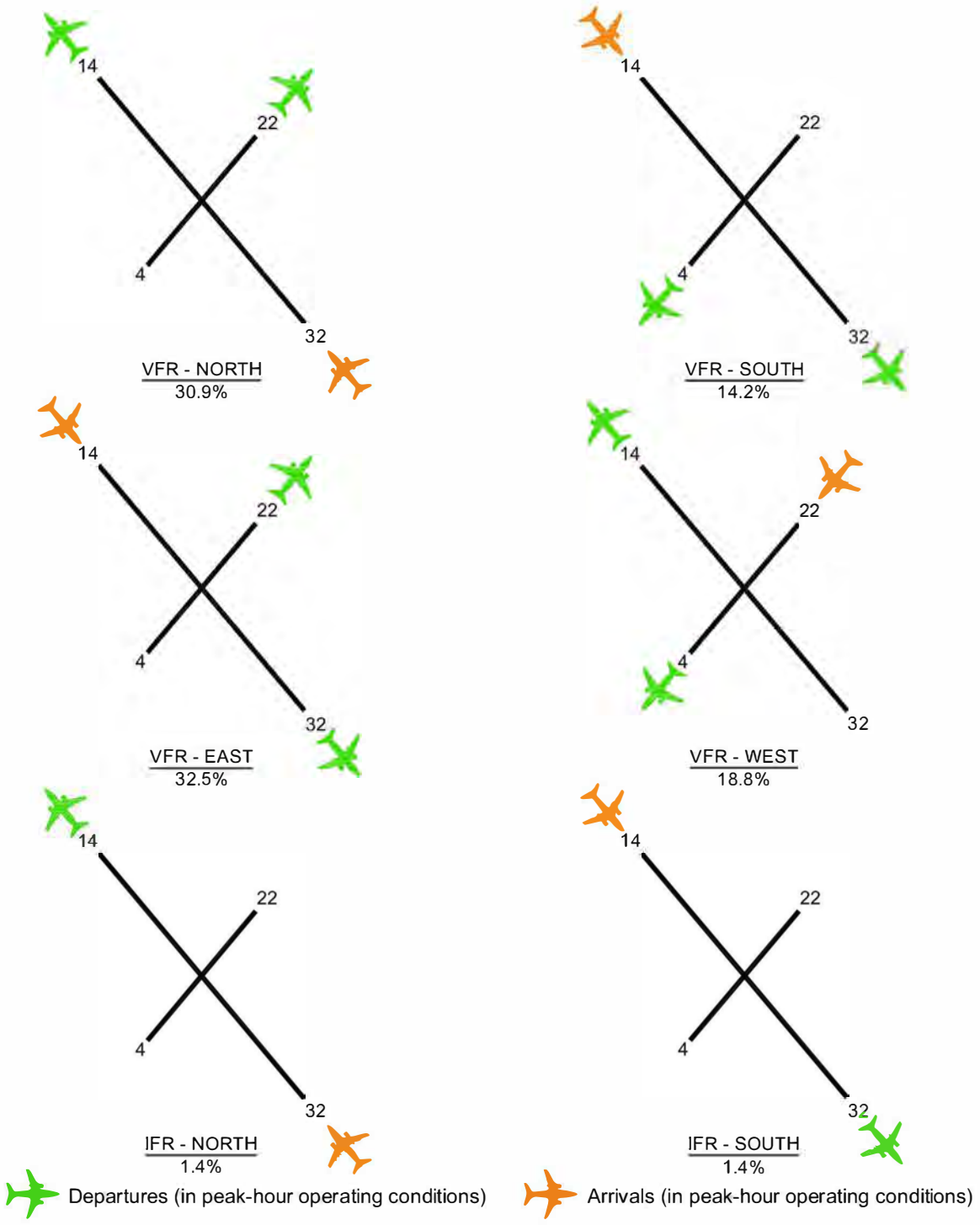
A weighted hourly capacity was then established based on the percentage of occurrence of each runway use configuration/weather condition and their respective hourly capacities. The weighted hourly capacity forms the basis for determining the airfield ASV. The ASV represents an estimate of the annual number of aircraft operations that can efficiently be accommodated on an airfield taking hourly, daily, and monthly operational patterns into consideration.

The formula for calculating ASV consists of three variables: C_W (weighted hourly capacity), D (the ratio of annual demand to average daily demand in the peak month), and H (the ratio of average daily demand to average peak hour demand during the peak month). These variables are then multiplied (C_W*D*H) to obtain the ASV for an airport.

4.3.2.2 Hourly Airfield Capacity

When hourly demand begins to reach hourly capacity, aircraft delays grow at an increasing rate. These delays generate extended traffic patterns and departure queue delays in VFR conditions or holding patterns and flow control delays in IFR conditions.

SRQ has two intersecting runways, primary Runway 14-32 and crosswind Runway 4-22, thus making operations on these runways dependent. **Exhibit IV-1** illustrates the runway operating configurations for SRQ, assuming peak hour operations. As shown, the airfield has six operating configurations: four operating configurations in VFR conditions (VFR North Flow, VFR South Flow, VFR East Flow, and VFR West Flow) and two operating configurations in IFR conditions (IFR North Flow and IFR South Flow). During VFR North Flow, arrivals and departures are accommodated on Runway 32, and departures are accommodated on Runway 4. Similarly, in VFR South Flow, arrivals and departures are accommodated on Runway 14, and departures are accommodated on Runway 22. VFR East Flow is similar to VFR South Flow, except that departures on the crosswind runway occur on Runway 4 rather than Runway 22. Likewise, VFR West Flow is comparable to VFR North Flow, except that departures occur on Runway 22 rather than Runway 4.



Note: Airport is close to 0.8% of the time.

Source: FAA AC 150/5060-5, Airport Capacity and Delay - Change 2; National Climatic Data Center, Weather Observations, January 1, 1997 - December 31, 2006; Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc., October 2008

Exhibit IV-1

N.T.S.

north

Airfield Operating Configurations

Arrivals also occur on Runway 22 in VFR West Flow. In IFR weather conditions, the operating configuration at SRQ becomes a one-runway operation, with arrivals and departures accommodated on the primary runway, Runway 14-32.

Exhibit IV-1 also shows the percentage occurrence of each operating condition. This information is based on historical weather data for a 10-year period between January 1, 1997, and December 31, 2006, accounting for more than 80,000 weather observations. Overall, the airfield operates predominantly in VFR East Flow (32.5 percent of the time) and VFR North Flow (30.9 percent of the time). VFR West Flow occurs 18.8 percent of the time and VFR South Flow occurs 14.2 percent of the time. The percentage occurrence for IFR North Flow and IFR South Flow is 1.4 percent each. The Airport is closed 0.8 percent of the time.

Table IV-3 summarizes the weighted hourly airfield capacity (C_W) of SRQ's six operating configurations for existing conditions (2006), PAL 1, and PAL 2. The VFR weighted hourly airfield capacity decreases from 82 operations in 2006 to 77 operations by PAL 2, while the weighted IFR hourly airfield capacity remains relatively constant over the 20-year planning period. **Exhibit IV-2** illustrates the weighted airfield capacity versus peak hour demand. As shown, on an hourly basis, the existing airfield at SRQ is adequate to serve existing (2006) and forecast demand through PAL 2.

Table IV-3

Weighted Hourly Capacity [1/]

		Weather Conditions	
Year	Mix Index	VFR	IFR
2006	33	82	57
PAL 1 (2015)	41	78	56
PAL 2 (2025)	47	77	56

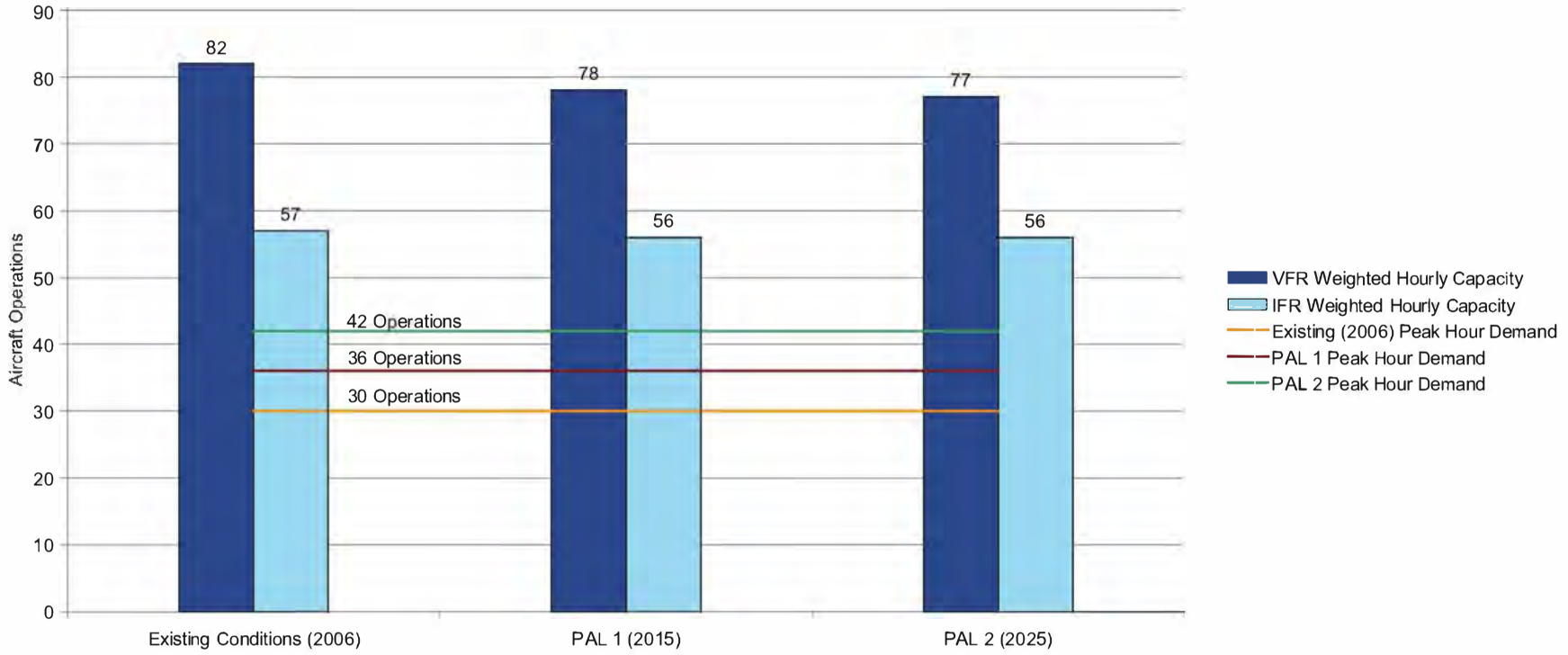
Note:
1/ Assuming a 50 percent arrival rate.

Source: FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay,* Change 2, 1983.
Prepared by: Ricondo & Associates, Inc., October 2008.

4.3.2.3 Annual Service Volume

Per FAA AC 150/5060-5, *Airport Capacity and Delay*, ASV is "a reasonable estimate of an airport's annual capacity." A comparison of the existing airfield ASV with the annual aircraft operational demand during 2006, and that forecast for PAL 1 and PAL 2 is presented in **Table IV-4**. The table also presents annual demand, expressed as a percentage of ASV, as well as peak-hour demand estimates.

As shown, the ASV in 2006 was 256,300 operations. Actual demand in 2006 totaled 163,702 operations. As a result, with annual demand representing 63.9 percent of the ASV, the existing airfield was adequate to accommodate demand in 2006. However, based on the fleet mix forecasts, the ASV would decrease to 245,900 operations at PAL 1 and 243,600 operations at PAL 2. Therefore, annual demand would represent 70.5 percent and 82.8 percent of the ASV by PAL 1 and PAL 2, respectively, under the Baseline Forecasts scenario. Similarly, annual demand at PAL 1 and PAL 2 under the Accelerated Baseline Forecasts would be 72.7 percent and 85.5 percent, respectively, of the ASV.



Note: The peak hour demand includes air carrier and general aviation aircraft operations. The general aviation peak hour operations were estimated based on noise data obtained from Airport records for an average day of the peak month. The share of general aviation operations in the peak hour was kept constant for PAL 1 and PAL 2 demand.

Source: FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay*, Change 2, 1983.
Prepared by: Ricondo & Associates, Inc., October 2008.

Exhibit IV-2

Hourly Airfield Capacity

Table IV-4

Annual Service Volume

	Existing Conditions (2006)	PAL 1 (2015)	PAL 2 (2025)
Weighted Average Hourly Capacity	74	71	70
Annual Operations (Demand)[1/]			
Baseline Forecasts	163,702	173,281	201,802
Accelerated Baseline Forecasts	163,702	178,703	208,193
Annual Service Volume (ASV)[2/]	256,300	245,900	243,600
Annual Demand (Percent of ASV)			
Baseline Forecasts	**63.9%**	**70.5%**	**82.8%**
Accelerated Baseline Forecasts	**63.9%**	**72.7%**	**85.5%**

Notes:

1/ See Chapter III.

2/ The decrease in ASV is the result of fleet mix changes.

Source: FAA Advisory Circular 150/5060-5, *Airport Capacity and Delay,* Change 2, 1983.
Prepared by: Ricondo & Associates, Inc., October 2008.

4.3.3 Airfield Facility Requirements

At the Airport Authority's request, runway expansion alternatives were not assessed as part of this Master Plan Update. This decision was further supported by the slowdown in operations in calendar year 2008. As demand at the Airport increases, additional runways and taxiways should be evaluated. In the meantime, it is SMAA's objective to maximize the capacity and use of the Airport's existing airfield infrastructure. This objective can be further supported by the use of Runway 4-22 and the change in the aircraft fleet serving the Airport over the last 5 years.

4.3.3.1 Airport Reference Code

As prescribed in FAA AC 150/5300-13, *Airport Design*, Change 14, the FAA has established airport classifications referred to as the Airport Reference Code (ARC) applicable to each airport and its individual runway and taxiway components. The primary determinants of these classifications are the operational and physical characteristics of the most demanding types of aircraft intended to use the runway and taxiway system and the instrument approach minimums applicable to a particular runway end. Typically, an aircraft type must account for 500 or more annual operations (equivalent to 250 departures and 250 arrivals) to be considered the critical aircraft type. Each ARC consists of two components relating to aircraft design and performance. The first component, depicted by a letter, is the Aircraft Approach Category, as determined by the approach speed of the critical aircraft. These categories are as follows:

- Aircraft Approach Category A: Speed less than 91 knots
- Aircraft Approach Category B: Speed 91 knots or more but less than 121 knots
- Aircraft Approach Category C: Speed 121 knots or more than but less than 141 knots
- Aircraft Approach Category D: Speed 141 knots or more but less than 166 knots
- Aircraft Approach Category E: Speed 166 knots or more

Aircraft Approach Categories A and B typically include small single-engine (e.g., Cessna 172) and twin-engine piston aircraft (e.g., Piper Seminole), turboprop fleet (e.g., King Air) and, in the case of Approach Category B, smaller business jets (e.g., Falcon 50, Beechcraft 400) having approach speeds of 121 knots or less. Categories C and D consist of commercial jets (e.g., B-737, A320) and propeller aircraft (e.g., ATR 72) generally associated with commercial or military use. This category

also includes general aviation business jet aircraft (e.g., Gulfstream V, Global Express). Approach Category E almost exclusively consists of military jet aircraft.

The second component, depicted by a Roman numeral, is the Airplane Design Group (ADG), as determined by the critical aircraft's wingspan and tail height.

- ADG I: Up to but not including 49 foot wingspan or tail height up to but not including 20 feet
- ADG II: 49 feet up to but not including 79 foot wingspan or tail height from 20 feet up to but not including 30 feet
- ADG III: 79 feet up to but not including 118 foot wingspan or tail height from 30 feet up to but not including 45 feet
- ADG IV: 118 feet up to but not including 171 foot wingspan or tail height from 45 feet up to but not including 60 feet
- ADG V: 171 feet up to but not including 214 foot wingspan or tail height from 60 feet up to but not including 66 feet
- ADG VI: 214 feet up to but not including 262 foot wingspan or tail height from 66 feet up to but not including 80 feet.

ADG I and II primarily include small single-engine (e.g., Cessna 172) and twin-engine piston aircraft (e.g., Piper Seminole), light and midsize business jets (e.g., Citation V/X, Beechcraft 400) and turboprop aircraft (e.g., King Air). ADG III includes a significant share of Approach Category C aircraft (most of the commercial fleet, such as the B-737, A320, E170, E190), and large business jet aircraft, such as the Global Express and the Gulfstream V.

Generally, the aircraft approach category applies to runways and runway-related facilities. The ADG relates primarily to separation criteria between runways, taxiways, parking areas, and taxilanes.

4.3.3.2 Use of Runway 4-22

During the last ALP update for SRQ in 2003, Runway 4-22 was downgraded from an ARC D-II runway to an ARC B-II runway to comply with runway safety area design standards. Recent discussions with FAA ATCT representatives at SRQ revealed that Runway 4-22 is used by C-II and C-III aircraft, including aircraft in commercial service, more than occasionally. Radar data, however, are not available to quantify the exact number and type of aircraft using the crosswind runway. Based on FAA guidelines, up to 250 departures by C-II or C-III aircraft are permissible on a runway before these aircraft are considered critical for the runway. Operations by air carrier aircraft do occur on Runway 4-22, even though the runway is currently designated as an ARC B-II runway.

Between 2003 and 2006, following the redesignation of Runway 4-22 to ARC B-II, commercial aircraft operations on the runway increased an average of 10.8 percent per year. In 2007, total commercial aircraft operations on the runway increased 8.6 percent compared with 2006 numbers. FAA ATCT representatives feel that Runway 4-22 should regain its capability to accommodate larger than B-II aircraft to provide flexibility for ATC traffic management in accommodating the increase in commercial aircraft operations. Furthermore, Runway 4-22 is essential to providing redundancy when Runway 14-32 is not operational.

The flexibility and redundancy that Runway 4-22 offers also affect general aviation activity at the Airport. As **Table IV-5** shows, taxiing distances to Runway 4-22 are shorter than taxiing distances

to Runway 14-32. In addition, the newest FBO at the Airport, Rectrix Aerodrome Centers, accommodates specific aircraft, including the Gulfstream V and Global Express, which are C-III design aircraft.

Table IV-5

Taxiing Distances from the FBO Facilities to Runways 14-32 and 4-22 (in feet)

FBOs	Runway 14	Runway 32	Runway 4	Runway 22
Volo Aviation	5,287	7,150	4,805	275
Dolphin Aviation	4,362	5,246	2,321	4,229
Rectrix Aerodrome Centers	7,935	3,090	4,406	3,525

Source: Ricondo & Associates, Inc. August 2007.
Prepared by: Ricondo & Associates, Inc., August 2007.

4.3.3.3 Fleet Mix Change (C-II and C-III Aircraft)

With the introduction of service at SRQ by low-fare carriers (such as AirTran Airways and JetBlue Airways), annual aircraft operations at the Airport grew an average of 10.8 percent per year between 2003 and 2006. In addition, an analysis of the commercial airline aircraft fleet mix at SRQ, obtained from Official Airline Guides, Inc. (OAG), revealed that the share of C-III aircraft operating at the Airport increased from 59.5 percent to 84.3 percent between 2003 and 2007. Furthermore, during an average day of the peak month (PMAD) in 2007, C-III aircraft represented 91.7 percent of the total commercial (airline) fleet compared with 56.5 percent during the PMAD in 2003. These shares are summarized in **Table IV-6**.

Table IV-6

Share of ARC C-III Aircraft Serving the Airport

	2003	2004	2005	2006	2007
Annual Share of C-III Aircraft	59.5%	65.3%	68.5%	73.9%	84.3%
PMAD Share of C-III Aircraft	56.5%	62.1%	70.6%	62.1%	91.7%

Notes: PMAD = Peak month, average day.
Typical C-III aircraft serving SRQ include the A319, A320, ATR 72, B-717, and Embraer 170/190.

Source: Official Airline Guides, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., August 2007.

In addition, an analysis of the FAA Enhanced Traffic Management System Counts report for 2007 showed that more than 1,500 C-II aircraft operations were accommodated at SRQ. Typical C-II aircraft using the Airport include the Cessna Citation III/VI/VII/X, Bombardier Challenger 600, Gulfstream III/G300, and Embraer 135/140/Legacy. Based on discussions with representatives from the SRQ ATCT, the C-II and C-III aircraft referenced above currently use the existing 5,000-foot crosswind runway, even though the runway is designated as an ARC B-II runway.

4.3.3.4 Runway 4-22 Future Design Category

To support the SMAA's objective to maximize existing airfield infrastructure at SRQ, it is recommended that Runway 4-22 be designated as an ARC C-II runway on the ALP. For long-term planning purposes (beyond the Master Plan Update planning horizon), Runway 4-22 should be protected as an ARC C-III runway to potentially serve regional commercial service aircraft.

Due to limited land availability at both ends of Runway 4-22 (less than 600 feet), an Engineered Materials Arresting System (EMAS) would be required at both ends of the runway to comply with runway safety area requirements. It should be noted that this EMAS would be a nonstandard EMAS (arresting bed length less than 600 feet given site constraints on both runway ends) subject to further analysis and approval by the FAA.

4.4 Terminal

The terminal demand/capacity analysis focused on the terminal's ability to accommodate passenger demand as well as user/tenant needs. The overall terminal facility was evaluated at a macro level of detail to assess the collective passenger processing functions, as well as individual functional components (e.g., ticketing, passenger security screening, bag claim areas) to determine their adequacy to serve existing and forecast demand.

At the time this analysis was undertaken (spring 2008), a terminal renovation/redesign project, the Ticket Wing and Baggage Make-up Renovation project, was under way. The Ticket Wing project is still ongoing and consists of renovating and redesigning the existing terminal ticketing area (without changing the current footprint of the terminal building). The Baggage Make-up Renovation project includes relocation of the baggage screening equipment currently located in the ticketing area (at SRQ, the baggage screening equipment consists of L-3 machines) to relieve congestion and improve the outbound baggage processing rate. As part of the Master Plan Update, these projects were considered in assessing the terminal building components at SRQ to determine their ability to adequately serve PAL 1 and PAL 2 demand.

Typically, a demand/capacity assessment for a terminal facility correlates the existing aircraft and passenger demand characteristics with the adequacy of an existing terminal facility and its individual functional components. FAA AC 150/5360-13, *Planning and Design Guidelines for Airport Terminal Buildings,* prescribes general planning guidelines for evaluating the overall terminal facility and the adequacy of the individual functional components of the terminal. However, these guidelines are for general planning purposes only. They are adequate for assessing the overall size of the terminal facility, but not the individual functional components of the terminal because of the variety of terminal configurations and the unique operating characteristics associated with each terminal configuration. For example, a terminal facility designed to serve primarily O&D passengers, as is the case at SRQ, does not have the same requirements as a terminal that serves an airline's hubbing operation. The individual functional components of the terminal building at SRQ were assessed using more specific planning criteria (i.e., aircraft turns per gate, passenger processing rates, baggage processing rates, and International Air Transport Association [IATA] guidelines) related to actual and forecast demand at the Airport.

For purposes of evaluating the terminal building at the Airport, the following primary functional components were analyzed for existing conditions, as well as PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand.

- **Aircraft Gates:** Using a design day schedule for the PMAD, a ramp chart was developed to evaluate aircraft gate use at the Airport. Using aircraft turns per gate and a gate utilization benchmark, a gate use analysis was conducted to determine aircraft gate needs at SRQ.
- **Ticketing Area**: All ticketing modes, including curbside checking, staffed ticket counter checking, kiosk checking, and Internet checking, were considered in assessing the ticketing facility requirements at SRQ.

- **Passenger Security Screening:** Since inception of the TSA following the September 2001 terrorist attacks, the requirements for passenger screening have changed considerably. As a result of revised screening procedures, passenger-screening times have increased at times, thus reducing throughput. The passenger security screening functions considered for this assessment include the adequacy of the security checkpoint stations (quantity) to process peak-hour demand. This analysis was closely coordinated with TSA representatives at SRQ.
- **Baggage Handling (Inbound and Outbound)**: Inbound and outbound baggage handling facilities were analyzed in terms of the number of baggage claim units required to accommodate arriving passengers and the outbound baggage processing capability in terms of the number of bags processed per hour.
- **Terminal Concessions:** The concession areas include the nonairline revenue-producing businesses located within the terminal. Several types of concessions are available at SRQ, including, but not limited to, food and beverage and retail (news, gifts, etc.). The gross areas of each type of concession space were evaluated.
- **Curbside:** The terminal inner curbside consists of three lanes of traffic, including two through lanes and a single passenger loading and unloading lane. Although all lanes encompass 860 linear feet of space, a few areas are marked for pedestrian crossings and for emergency vehicles. Therefore, some portions of the inner curbside are unusable for vehicle staging. The outer curbside consists of two lanes and is dedicated for commercial and rental car vehicles. The intermodal curbside and queuing area is located at the western end of the terminal building and consists of three loading lanes designated for taxicabs, commercial vehicles other than buses, and buses (carrying more than 15 passengers). An assessment of the terminal curbsides was conducted to determine if additional areas would be required to accommodate future demand.

4.4.1 Design Day Schedule

To assess the terminal needs at SRQ, a design day schedule was developed for the PMAD in 2007. The design-day schedule represents the flight activity scheduled or anticipated at the Airport during the PMAD and provides information relative to arrival time, departure time, equipment type, seating capacity, and O&D markets for each commercial flight during the design day. An average day of the peak month for existing conditions, March 13, 2007, was selected early in the demand/capacity analyses. **Table IV-7** presents the design day schedule for March 13, 2007, at SRQ. As shown, each arrival flight is paired with a departure flight. The representative airline or operator for each flight is also provided in the table.

Table IV-7

Design Day Schedule (March 13, 2007)[1/]

ARRIVALS										DEPARTURES									
Carrier	Operator	Origin	Flight No.	Arrival Time	Equip.	Seat. Config.	Gate	Load Factor	Total Arriving Passengers	Carrier	Operator	Destination	Flight No.	Departure Time	Equip.	Seat. Config.	Gate	Load Factor	Total Departing Passengers
AC	AC	YYZ	1228	17:55	'E75	73	B7	100.0%	73	AC	AC	YYZ	1229	18:40	'E75	73	B7	91.8%	67
B6	B6	JFK	345	12:35	'320	150	B9	84.0%	126	B6	B6	JFK	346	13:15	'320	150	B9	90.7%	136
B6	B6	JFK	347	16:10	'320	150	B9	87.3%	131	B6	B6	JFK	348	16:50	'320	150	B9	80.0%	120
CO	A136	Overnight								CO	A136	IAH	2295	7:45	'ERJ	50	B14	88.0%	44
CO	A136	CLE	3077	11:22	'ERJ	50	B5	96.0%	48	CO	A136	CLE	2516	11:55	'ERJ	50	B5	96.0%	48
CO	A136	IAH	2596	22:50	'ERJ	50	B14	90.0%	45	CO	A136	Overnight							
CO	CO	Overnight								CO	CO	EWR	1481	7:00	'733	124	B5	58.9%	73
CO	CO	EWR	1480	10:13	'735	114	B5	81.6%	93	CO	CO	EWR	1410	11:05	'735	114	B5	95.6%	109
CO	CO	EWR	1717	19:05	'733	124	B5	91.1%	113	CO	CO	EWR	1710	19:50	'733	124	B5	66.1%	82
CO	CO	EWR	1462	23:27	'733	124	B5	57.3%	71	CO	CO	Overnight							
CO	9K	TPA	9371	10:35	'CNA	9	B1	11.1%	1	CO	9K	TPA	9372	11:00	'CNA	9	B1	44.4%	4
CO	9K	TPA	9373	12:55	'CNA	9	B5	55.6%	5	CO	9K	TPA	9374	13:55	'CNA	9	B5	100.0%	9
CO	9K	TPA	9375	16:05	'CNA	9	B5	100.0%	9	CO	9K	TPA	9376	16:35	'CNA	9	B5	66.7%	6
DL	DL	Overnight								DL	DL	ATL	475	6:45	'M88	142	B4	82.50%	117
DL	DL	Overnight								DL	DL	ATL	1178	8:10	'M88	142	B6	82.50%	117
DL	DL	ATL	1629	10:19	'M88	142	B6	82.50%	117	DL	DL	ATL	1644	10:59	'M88	142	B6	82.50%	117
DL	DL	ATL	960	11:52	'M88	142	B6	82.50%	117	DL	DL	ATL	1731	12:40	'M88	142	B6	82.50%	117
DL	DL	ATL	1709	13:11	'M88	142	B6	82.50%	117	DL	DL	ATL	624	14:00	'M88	142	B6	82.50%	117
DL	DL	ATL	485	14:59	'M88	142	B6	82.50%	117	DL	DL	ATL	434	15:42	'M88	142	B6	82.50%	117
DL	DL	ATL	1587	16:55	'M88	142	B6	82.50%	117	DL	DL	ATL	1493	17:40	'M88	142	B6	82.50%	117
DL	DL	ATL	1224	20:29	'M88	142	B6	82.50%	117	DL	DL	Overnight							
DL	DL	ATL	1450	22:47	'M88	142	B6	82.50%	117	DL	DL	Overnight							
DL	OH	CVG	5439	11:20	'CR7	70		89.7%	63	DL	OH	CVG	5440	11:50	'CR7	70	B4	89.70%	63
DL	OH	CVG	5670	17:13	'CR7	70		89.7%	63	DL	OH	CVG	5626	17:50	'CR7	70	B4	89.70%	63
FL	FL	Overnight								FL	FL	ATL	696	8:45	'73G	137	B12	89.8%	123
FL	FL	ATL	693	9:28	'717	117	B12	56.4%	66	FL	FL	DTW	228	10:04	'717	117	B12	93.2%	109
FL	FL	ATL	662	10:36	'717	117	B12	65.8%	77	FL	FL	MDW	842	11:13	'717	117	B12	94.0%	110
FL	FL	BWI	690	12:09	'717	117	B12	68.4%	80	FL	FL	BWI	328	13:00	'717	117	B12	94.0%	110
FL	FL	MDW	859	13:49	'73G	137	B12	94.9%	130	FL	FL	ATL	699	14:30	'73G	137	B12	86.9%	119
FL	FL	ATL	694	15:02	'73G	137	B12	72.3%	99	FL	FL	MDW	861	15:42	'73G	137	B12	96.4%	132
FL	FL	DTW	227	16:19	'717	117	B12	78.6%	92	FL	FL	ATL	692	16:54	'717	117	B12	63.2%	74
FL	FL	IND	405	17:18	'73G	137	B12	74.5%	102	FL	FL	IND	401	17:58	'73G	137	B12	95.6%	131
FL	FL	ATL	691	18:19	'73G	137	B12	95.6%	131	FL	FL	ATL	358	18:59	'73G	137	B12	52.6%	72
FL	FL	MDW	358	20:51	'73G	137	B12	40.1%	55	FL	FL	Overnight							
NW	NW	Overnight								NW	NW	DTW	1605	10:00	'320	148	A7	84.1%	125
NW	NW	DTW	1602	13:23	'320	148	A7	73.0%	108	NW	NW	DTW	1603	14:49	'320	148	A7	83.8%	124
NW	NW	DTW	1604	23:54	'320	148	A7	73.0%	108	NW	NW	Overnight							
US	A454	Overnight								US	A454	CLT	2240	7:00	'CR7	70	B3	90.2%	63
US	A454	CLT	2223	23:20	'CR7	70	B3	90.2%	63	US	A454	Overnight							
US	RW	DCA	3365	12:27	'E70	70	B3	89.0%	62	US	RW	DCA	3472	13:00	'E70	70	B3	89.0%	62
US	US	CLT	1979	11:03	'733	126	B3	83.0%	105	US	US	CLT	1972	11:50	'733	126	B3	83.0%	105
US	US	CLT	1965	16:09	'733	126	B3	83.0%	105	US	US	CLT	1958	17:00	'733	126	B3	83.0%	105
US	YV	CLT	2603	14:29	'CR9	86	B3	78.3%	67	US	YV	CLT	2608	15:04	'CR9	86	B3	78.3%	67
							Total Arriving Passengers:		3,111								**Total Departing Passengers:**	**83.1%**	3,274

Note:

1/ All passenger and gate data shown above are actual data obtained from the airlines, except the data shown for Delta Air Lines and US Airways. For those airlines, passenger numbers were based on load factors for March 2007 (by destination and equipment) obtained from U.S. DOT T100 data.

Sources: Official Airline Guide (OAG) data for March 13, 2007; U.S. Department of Transportation T100 data for March 2007.
Prepared by: Ricondo & Associates, Inc., August 2007.

It is important to recognize that the design-day schedule represents the activity that occurred during the specified PMAD in terms of hourly arriving and departing passengers and aircraft operations (arrivals and departures). The design-day schedule also represents individual airline activity and market service patterns. However, it should be noted that the schedule represents only one of several viable operating scenarios that may materialize at the Airport throughout the year, identified in terms of airline composition, aircraft fleet mix, daily passenger distribution, and passenger types (i.e., domestic versus international). The following subsections present the methodology and assumptions used to derive the design-day schedule.

4.4.1.1 Assumptions and Methodology

The following methodology was used to derive the design-day schedule shown in Table IV-7 and assess the distribution of activity within the design day:

- The schedule of airline activity for March 13, 2007, was obtained from the OAG. March represented the peak month for passenger activity and aircraft operations at SRQ in 2007. The March 13, 2007, schedule reflected a total of 36 scheduled aircraft departures.
- Arriving and departing passengers and gate use shown on the March 13, 2007, schedule reflect actual data obtained from the airlines for that day (with the exception of Delta Air Lines and US Airways). A combination of Airport data and load factors obtained from the U.S. Department of Transportation (DOT) T100 database for March 2007 was used to derive the information shown on the schedule for Delta Air Lines and US Airways.

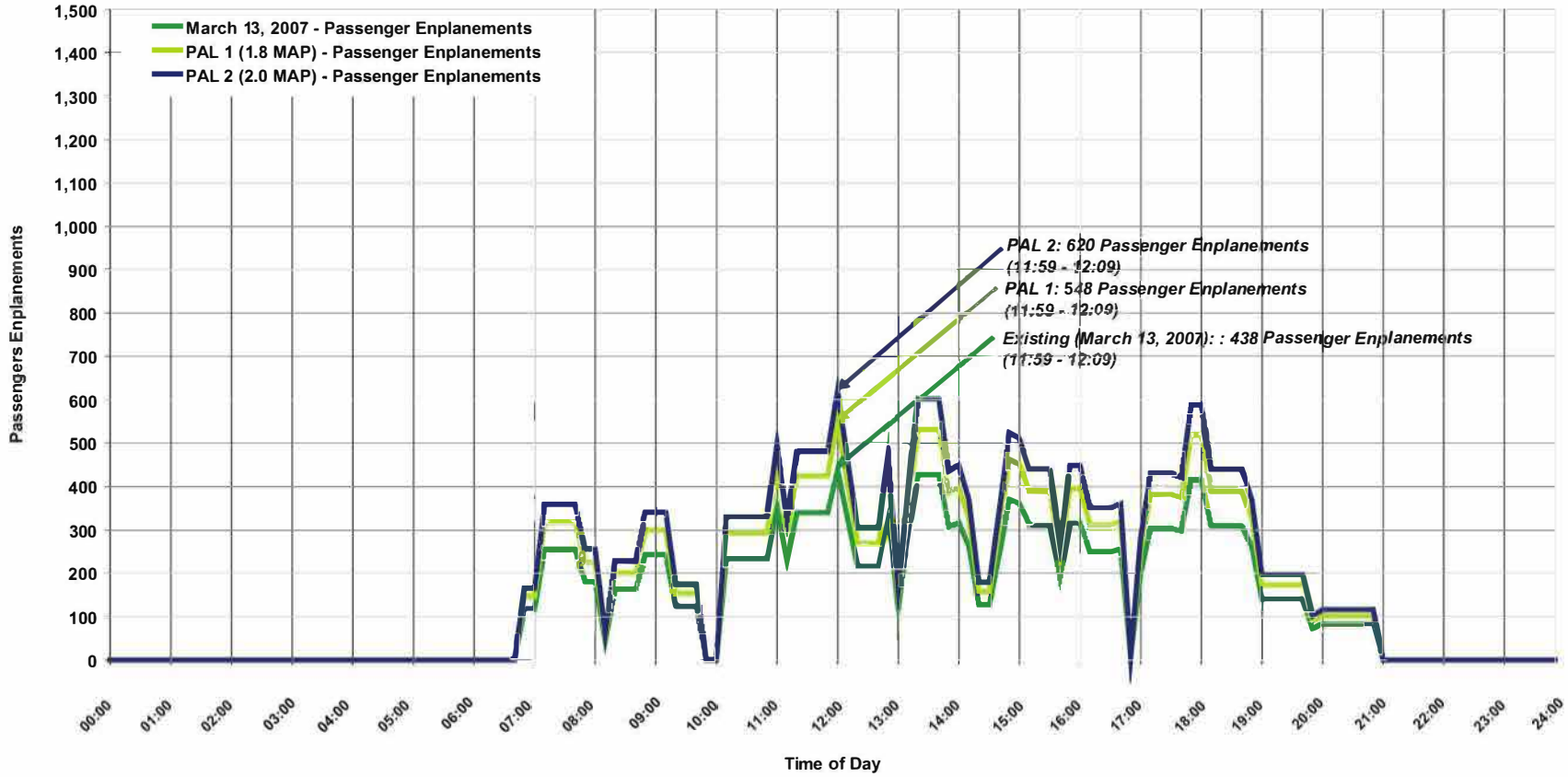
Future design day schedules were not developed for the future PALs. However, peaking and service patterns from the March 13, 2007, schedule were extrapolated to reflect a peak month condition for PALs 1 and 2.

4.4.1.2 Peaking Characteristics

Peaking characteristics for both passengers and scheduled commercial aircraft operations were derived from the March 13, 2007, schedule. To obtain 'dynamic' peak hour numbers for both arriving and departing passengers, as well as arriving and departing flights, peaking characteristics were developed using rolling peaks at 10-minute intervals. As such, the data obtained for every 10-minute interval (i.e., departing passengers, arriving passengers, departing flights, or arriving flights) were used to represent the sum for the previous hour.

As previously noted, future design day schedules for SRQ were not developed. The existing rolling peaks for March 13, 2007, were extrapolated for PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand, assuming that the existing peaking patterns remain unchanged in the future.

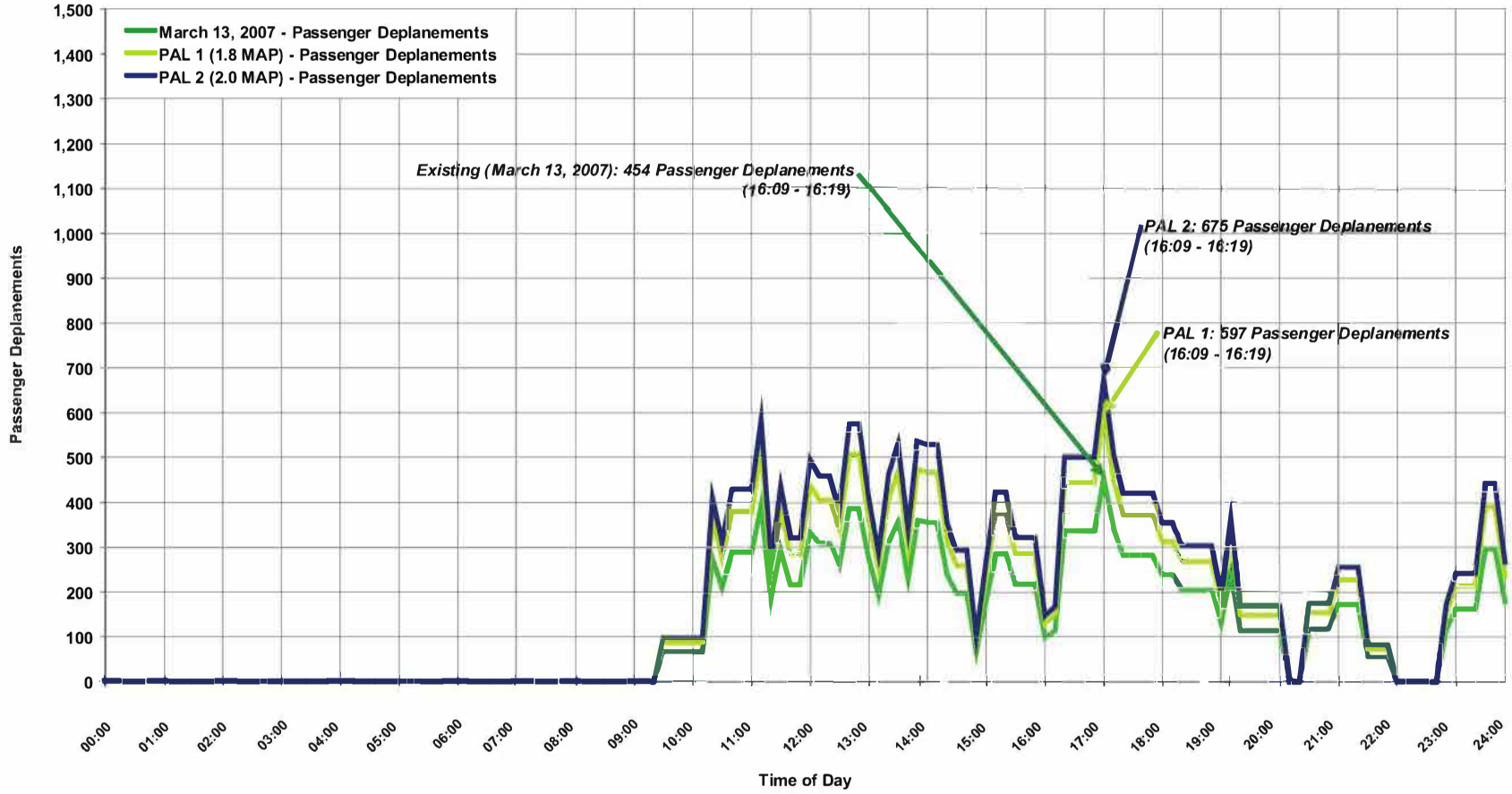
Exhibit IV-3 and **Exhibit IV-4** illustrate the departing passengers and arriving passengers, respectively, for the March 13, 2007, schedule and the estimated PMAD patterns and volumes for PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP). As shown, the PMAD peak hour for departing passengers is from 11:10 a.m. to 12:09 p.m., with 438 enplaned (i.e., departing) passengers, increasing to 548 and 620 enplaned passengers by PAL 1 and PAL 2, respectively. Similarly, the PMAD peak hour for arriving passengers is from 3:20 p.m. to 4:19 p.m., with 454 deplaned (arriving) passengers on March 13, 2007, increasing to 597 and 675 deplaned passengers by PAL 1 and PAL 2, respectively. **Exhibit IV-5** depicts the peaking patterns for both departing and arriving passengers combined, showing 782 total passengers for March 13, 2007, between 12:40 p.m. and 1:39 p.m., increasing to 1,001 and 1,132 passengers by PAL 1 and PAL 2, respectively.



Sources: Official Airline Guide (OAG); Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-3

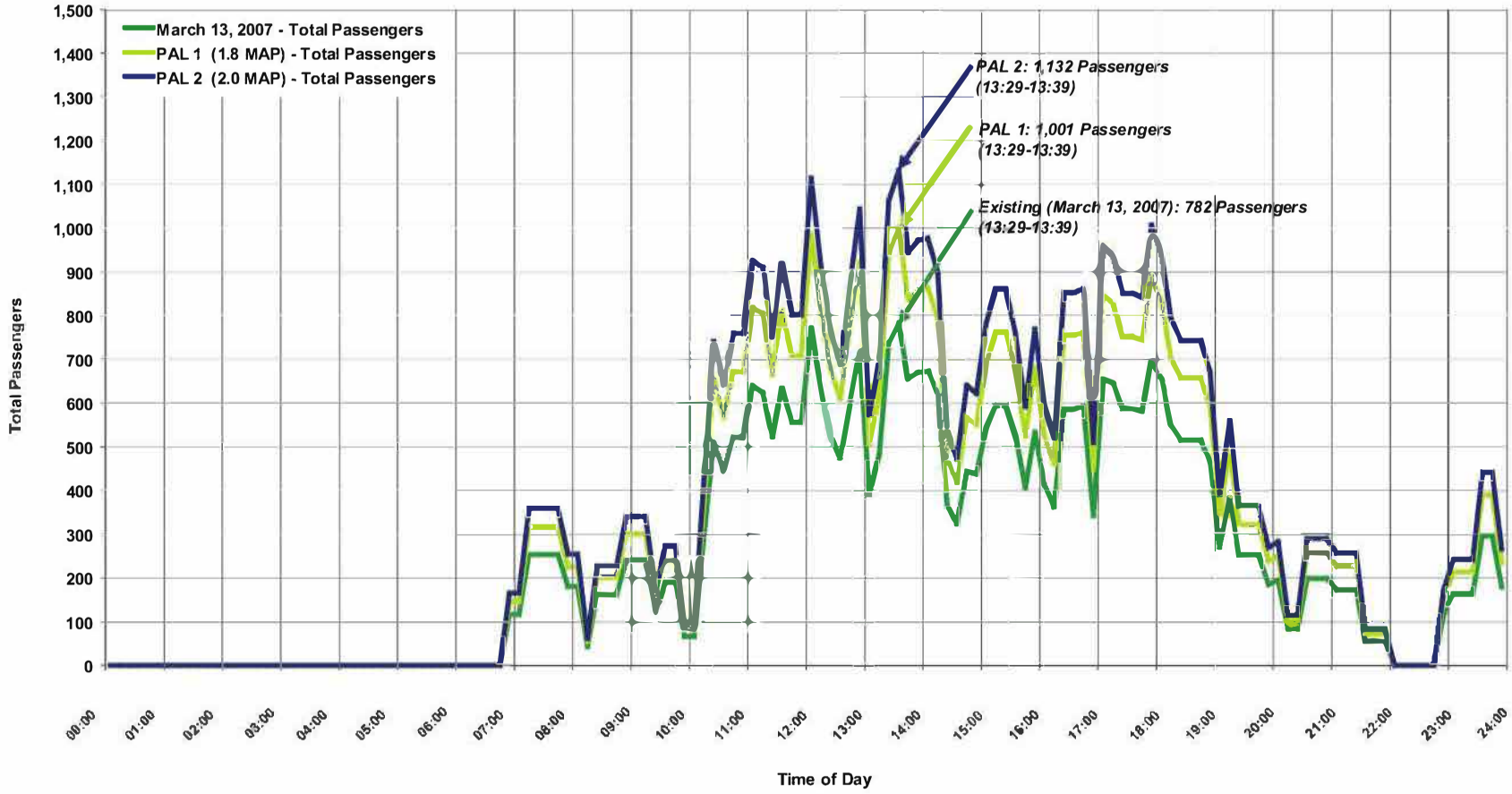
Departing Passengers
(Rolling Peak in 10-minute Increments)



Sources: Official Airline Guide (OAG); Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-4

Arriving Passengers
(Rolling Peak in 10-minute Increments)



Sources: Official Airline Guide (OAG); Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-5

Total Passengers
(Rolling Peak in 10-minute Increments)

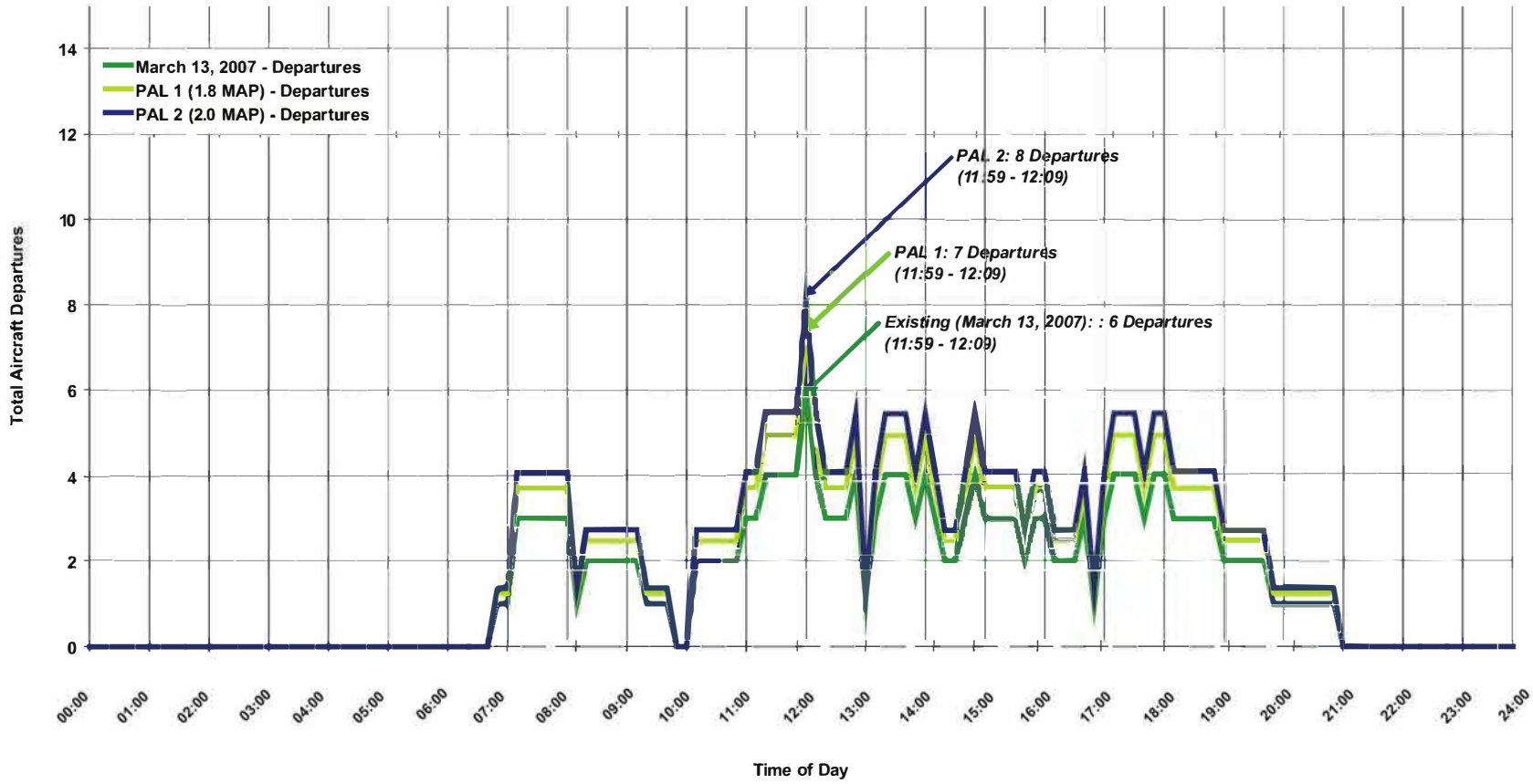
Exhibits IV-6 through **IV-8** display peaking patterns for scheduled commercial (airline) aircraft departures, arrivals, and total operations for March 13, 2007, PAL 1, and PAL 2. As illustrated, the peaking times for aircraft operations coincide with the passenger peaking times discussed above. Peak-hour aircraft departures are forecast to increase from 6 on the March 13, 2007, design day to 8 at PAL 2. Similarly, peak-hour aircraft arrivals are forecast to increase from 5 on the March 13, 2007, design day to 7 at PAL 2. Total peak-hour commercial (airline) aircraft operations are forecast to increase from 10 on the March 13, 2007, design day to 14 at PAL 2.

4.4.2 Ramp Chart and Aircraft Gate Analysis

The March 13, 2007, schedule was processed through a ramp chart (gating) model to assist in analyzing aircraft gate use at the Airport. The future gate requirements for PAL 1 and PAL 2 demand were assessed at a macro level of detail based on the March 13, 2007, ramp chart and a gate utilization factor. Planning metrics, such as the ratios of enplaned passengers per gate and enplaned passengers per square foot, were also used as benchmarks.

Exhibit IV-9 illustrates the SRQ ramp chart for March 13, 2007. The ramp chart depicts a series of bars representing the time periods during which an air carrier or commuter aircraft is parked at a designated gate. Each bar is assigned a color and labeled according to the aircraft operator, equipment type, scheduled arrival/departure time, and the origin and destination. To the left of the bar, the associated gate is identified, along with the airline(s) using the gate. The aircraft turns per gate are also shown. As the ramp chart depicts, the existing 13 gates are adequate to serve existing demand at SRQ. Gates B2, B8, and B11 are currently vacant. Aircraft turns per gate is an indicator of gate utilization: one turn per gate corresponds to an arrival and a departure. As Exhibit IV-9 illustrates, aircraft turns per gate vary from one to nine. If the Cape Air and Air Canada flights at Gates B1 and B7, respectively, are relocated to Gate B10, the total vacant gates at SRQ would increase from three to five. This relocation assumption is reasonable, as these flights would be relocated from SMAA gates to another SMAA gate. As a result, the average aircraft turns per gate experienced on March 13, 2007, is 4.5, not including vacant gates. The average turns per gate with all gates accounted for would be 2.8. Based on FAA AC 150/5360-13, *Planning and Design Guidelines for Airport Terminal Facilities*, Change 1, fewer than an average of six turns per gate is considered a low utilization rate for the PMAD, while seven or more average turns per gate is perceived to be a high utilization rate. The existing ramp chart shows that, in addition to the five vacant gates, the eight gates currently in use have the potential to accommodate additional flights. As illustrated by AirTran Airways (Gate B12), gate utilization at SRQ can be as high as nine aircraft turns per gate. This utilization rate has been observed to be typical of low cost carriers operating at airports where demand has materialized.

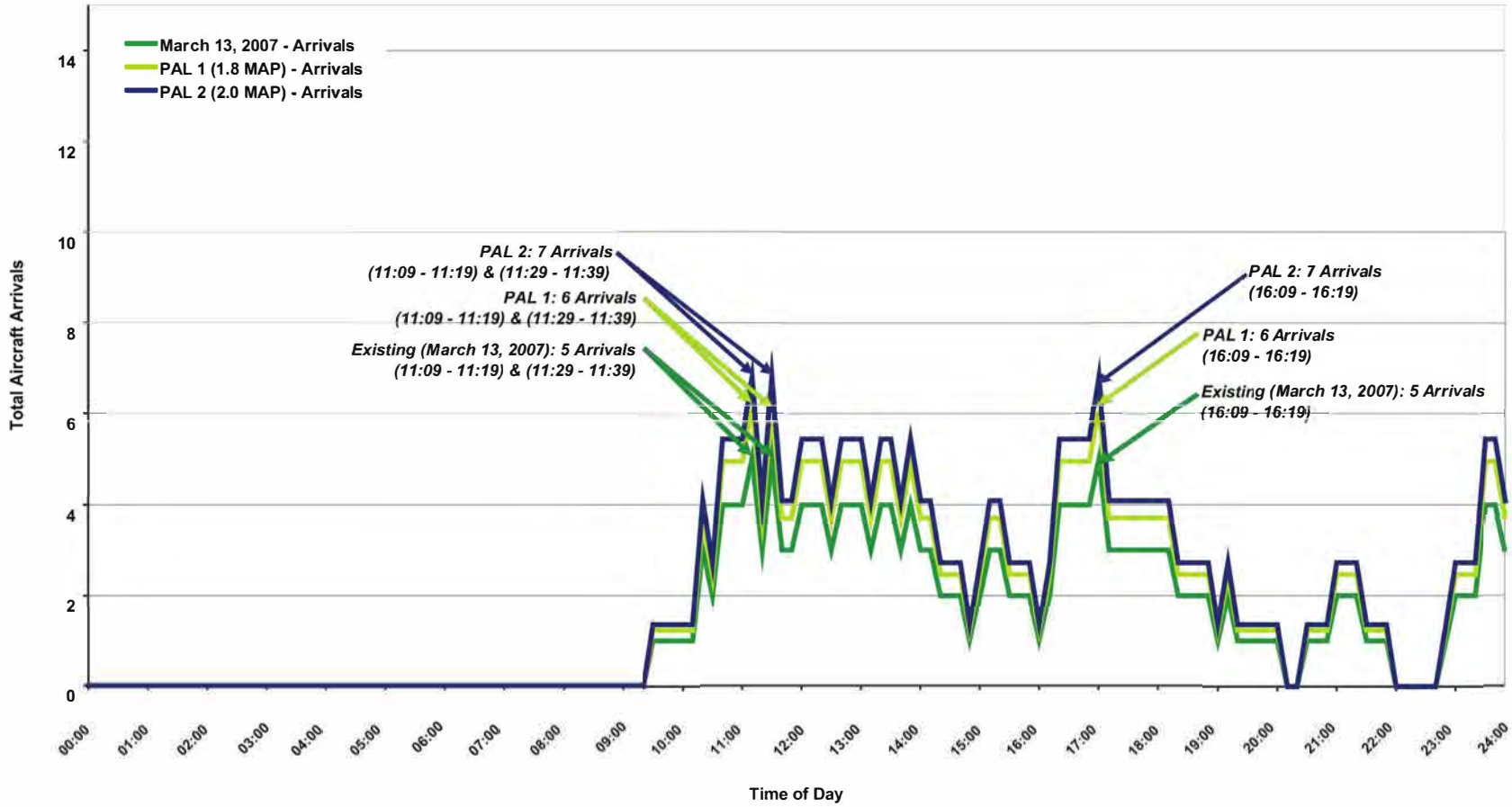
As previously stated, the gate requirements for PAL 1 and PAL 2 demand were assessed at a macro level of detail based on the net increase of PMAD aircraft operations for those PALs and an average gate utilization factor of six aircraft turns per gate. This gate utilization factor is held constant for both PAL 1 and PAL 2 demand. **Table IV-8** summarizes the analysis results. As shown, the existing surplus gates would accommodate future SRQ gate requirements at PAL 1 and PAL 2 demand. The theoretical capacity of the 13 gates was also calculated assuming an average gate utilization of six aircraft turns per gate for all gates. As Table IV-8 shows, this theoretical gate capacity translates to 2.5 million annual enplaned passengers.



Sources: Official Airline Guide (OAG); Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-6

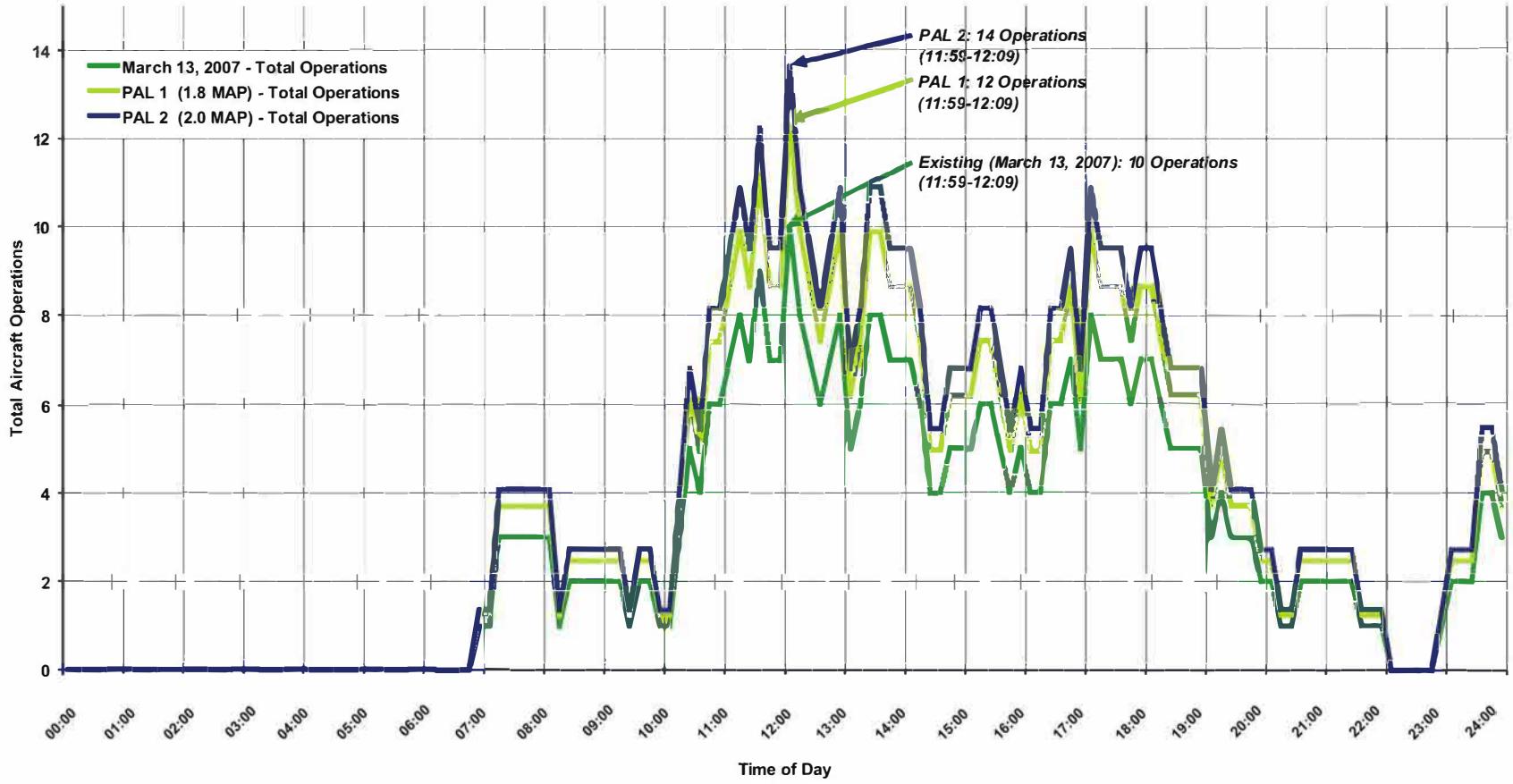
Scheduled Commercial Aircraft Departures (Rolling Peak in 10-minute Increments)



Sources: Official Airline Guide (OAG); Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-7

Scheduled Commercial Aircraft Arrivals (Rolling Peak in 10-minute Increments)



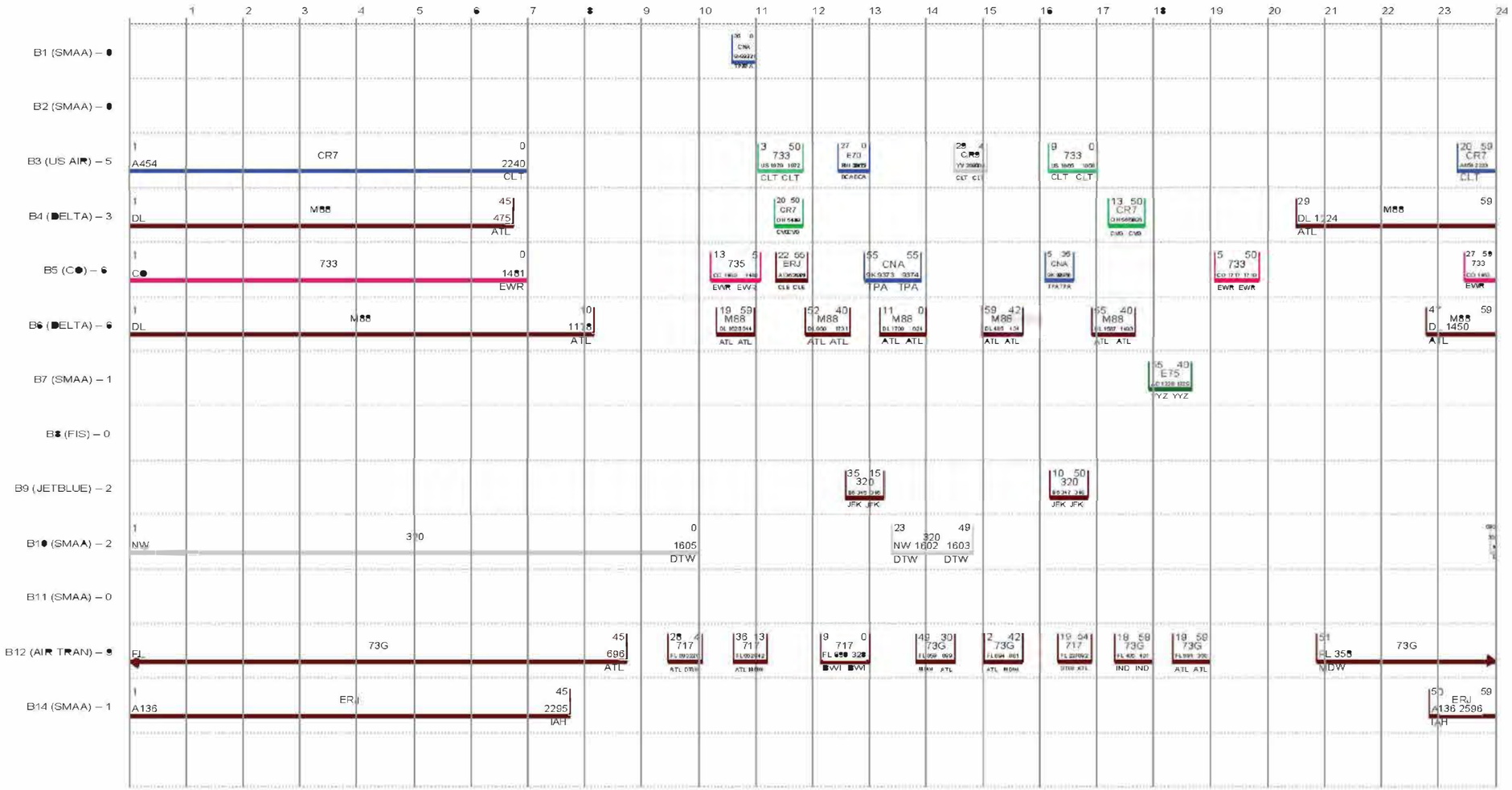
Sources: Official Airline Guide (OAG); Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-8

Total Scheduled Commercial Aircraft Operations (Rolling Peak in 10-minute Increments)

Exhibit IV-9

Ramp Chart (March 13, 2007)



Legend

"B1 (SMAA) – 0" denotes: Gate Designation (Assigned Airline) – Turns per Gate

Sources: Official Airline Guide (OAG) for March 13, 2007; U.S. Department of Transportation T100 Data for March 2007.
Prepared by: Ricondo & Associates, Inc., August 2007.

Table IV-8

Gate Demand Analysis

Ramp Chart Analysis[1/]:

	Existing (March 13, 2007)	PAL 1 (1.8 MAP--2015)	PAL 2 (2.0 MAP--2025)
Peak Hour Operations	10	12	14
PMAD Operations	72	89	98
Net Increase in PMAD Operations	-	17	26
Additional Gates Required[1/]	-	**3**	**4**
Existing Vacant Gates	5	5	5
Gates Surplus or (Deficiency)	**5**	**2**	**1**

Theoretical Capacity of 13 gates:[2/]

	Existing (March 13, 2007)
PMAD Operations	78
Average Seats per Departure	179.6
Average Load Factor	76.3%
Enplanements per Departure	137
Total Enplanements	5,343
Total Gates Theoretical Capacity[3/]	2.5 MAP

MAP = Million annual passengers
PMAD = Peak month, average day

Notes:

1/ The additional gates required at PAL 1 and PAL 2 do not account for the assumed existing gate surplus (five vacant gates). Thus, there would be a gate surplus at both PAL 1 and PAL 2 demand. Assuming six aircraft turns per gate at PAL 1 and PAL 2 demand.

2/ Assuming six aircraft turns per gate for all 13 gates.

3/ Based on 39 departures for the PMAD; PMAD represent 3.1 percent of peak month operations; peak month represents 13.7 percent of annual commercial aircraft operations. These shares were based on the peaking characteristics discussed in Chapter III.

Source: Official Airline Guide (OAG) for March 13, 2007; Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

At SRQ, enplaned passengers per gate in FY 2007 totaled 60,705 despite a 14 percent increase in enplaned passengers from FY 2006 numbers. This number of turns per gate includes the five existing vacant gates. A review of the March 13, 2007, ramp chart for the Airport reveals that activity for that day could be accommodated at six gates (instead of eight). This more efficient gate utilization would yield 5.6 aircraft turns per gate and approximately 131,000 enplaned passengers per gate. Therefore, the total gate capacity at SRQ is 3.4 million annual enplaned passengers.

As these two analyses show, the gate capacity at SRQ varies between 2.5 MAP and 3.4 MAP.

Table IV-9 presents a comparison of enplaned passengers per gate for selected airports in Florida, including Jacksonville International Airport (JAX), Palm Beach International Airport (PBI), Southwest Florida International Airport (RSW), and Tampa International Airport (TPA). The enplaned passengers per gate shown for these airports were assumed to be accommodated at the total

number of gates at that particular airport, whether or not the gate was actually being used in 2007. For the three medium-hub airports, JAX, PBI, and RSW, enplaned passengers per gate ranged from 112,887 to 144,596 in FY 2007. At TPA, a large-hub airport, enplaned passengers per gate totaled 155,293 for the same time-period.

Table IV-9

Enplaned Passengers per Gate Comparison at Selected Florida Airports

Primary Commercial Service Airports[1/]	Enplaned Passengers (FY 2007)	Total Number of Gates (FY 2007)	Estimated Enplaned Passengers per Gate[2/]
Small Hub[3/]			
SRQ	789,165	13	60,705
Medium Hub[3/]			
JAX	3,160,829	28	112,887
PBI	3,502,394	29	120,772
RSW	4,048,688	28	144,596
Large Hub[3/]			
TPA	9,628,144	62	155,293

Notes:

1/ SRQ = Sarasota Bradenton International Airport; JAX = Jacksonville International Airport; PBI = Palm Beach International Airport; RSW = Southwest Florida International Airport; TPA = Tampa International Airport.

2/ Accounts for all gates at the airport, whether in use or not.

3/ The FAA groups primary commercial service airports in four categories: large hub, medium hub, small hub, and nonhub. The FAA's definition for each category is as follows:
- Large hub airports account for at least 1.0 percent of the total U.S. enplaned passengers.
- Medium hub airports account for between 0.25 percent and 1.0 percent of total U.S. enplaned passengers.
- Small hub airports account for between 0.05 percent and 0.25 percent of total U.S. enplaned passengers. -
- Nonhub airports account for less than 0.05 percent of total U.S. enplaned passengers.

Sources: Airport statistics from respective airport websites; Ricondo & Associates, Inc., August 2008.
Prepared by: Ricondo & Associates, Inc., August 2008.

4.4.3 Passenger Security Screening Checkpoints

Following the terrorist attacks on September 11, 2001, the TSA was created to strengthen the security of the nation's transportation system. The efficiency in the passenger security screening process has evolved considerably since screening procedures and systems implemented in late 2001. Consequently, passenger-processing times have decreased considerably while other initiatives to provide the most secure, efficient, and hassle-free security screening experience remain ongoing. The demand/capacity analysis for the security screening checkpoints at SRQ was based on the existing configuration and technology of the facilities and close coordination with the Airport's TSA representatives. Future technologies and processes being tested at other airports and their potential application at SRQ were also considered for long-term planning purposes.

4.4.3.1 Assumptions

The analysis of the security screening checkpoints was based on the hourly distribution of passengers throughout the PMAD. The March 13, 2007, schedule also served as the basis for this analysis. In conducting this analysis, it was first essential to determine the arrival distribution pattern of

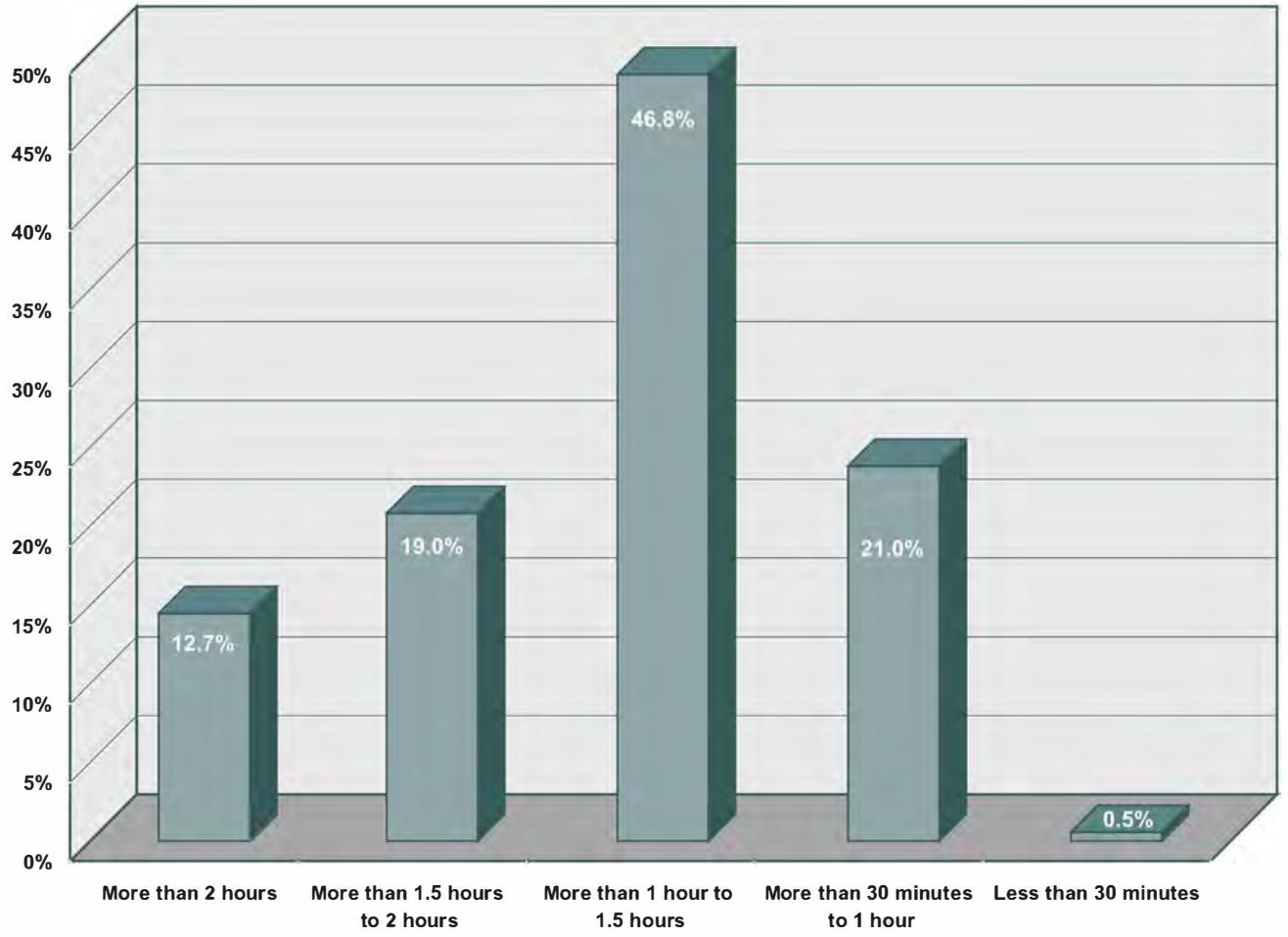
passengers at the security screening checkpoints. Second, accurate passenger processing rates at the security screening checkpoints were key to effectively replicating actual conditions.

Exhibit IV-10 illustrates the passenger arrival distribution patterns at SRQ. As shown, 46.8 percent of passengers arrive at the Airport 1.0 hour to 1.5 hours before their scheduled flight departure times; 19.0 percent arrive at the Airport 1.5 hours to 2.0 hours before their scheduled flight departure times; and 12.7 percent of passengers arrive more than 2.0 hours before their scheduled flight departure times. In addition, 21.0 percent of passengers arrive 1.0 hour before their scheduled flight departure times, while 0.5 percent arrive less than 30 minutes before their scheduled flight departure times. To determine the estimated passenger arrival curve at the security screening checkpoints, it was assumed that the passenger arrival distribution at the Airport would be adjusted over a total time interval that represents passengers arriving at the security screening checkpoints as early as 1.5 hours before the scheduled flight departure. It addition, it was assumed that most passengers (46.8 percent) would arrive at the security screening checkpoints within 30 to 44 minutes prior to flight departure. This assumption is supported by the current layout of the security screening checkpoints in the immediate vicinity of the concessions located on the nonsecure side of the terminal building. Such a layout allows passengers not to feel stressed by increasing security screening queues as they can monitor these queues from the concessions area (i.e., restaurant, gift shop). **Exhibit IV-11** depicts the resulting passenger arrival distribution at the security screening checkpoints in 15-minute increments.

The passenger processing rate at the security screening checkpoints was closely coordinated with TSA representatives at the Airport. Typically, the TSA recommends that an average processing rate of 180 passengers per hour per lane be used at airports nationwide because it is the performance parameter that TSA aims to maintain (referred to as the TSA target passenger capacity throughput). The actual passenger processing rates at SRQ for March 13, 2007, averaged 137 passengers per hour per lane based on data obtained from TSA representatives at the Airport. **Exhibit IV-12** illustrates the actual passenger processing rate by hour based on the number of security screening checkpoints open (note: one security screening checkpoint corresponds to one lane). Based on the information presented earlier in Chapter II, six magnetometers (or security screening checkpoints) are currently available at SRQ. As Exhibit IV-12 shows, a maximum of three security screening checkpoints were open on March 13, 2007, to accommodate anticipated peak-hour demand.

4.4.3.2 Existing and Future Daily Passenger Distributions at Security Screening Checkpoints

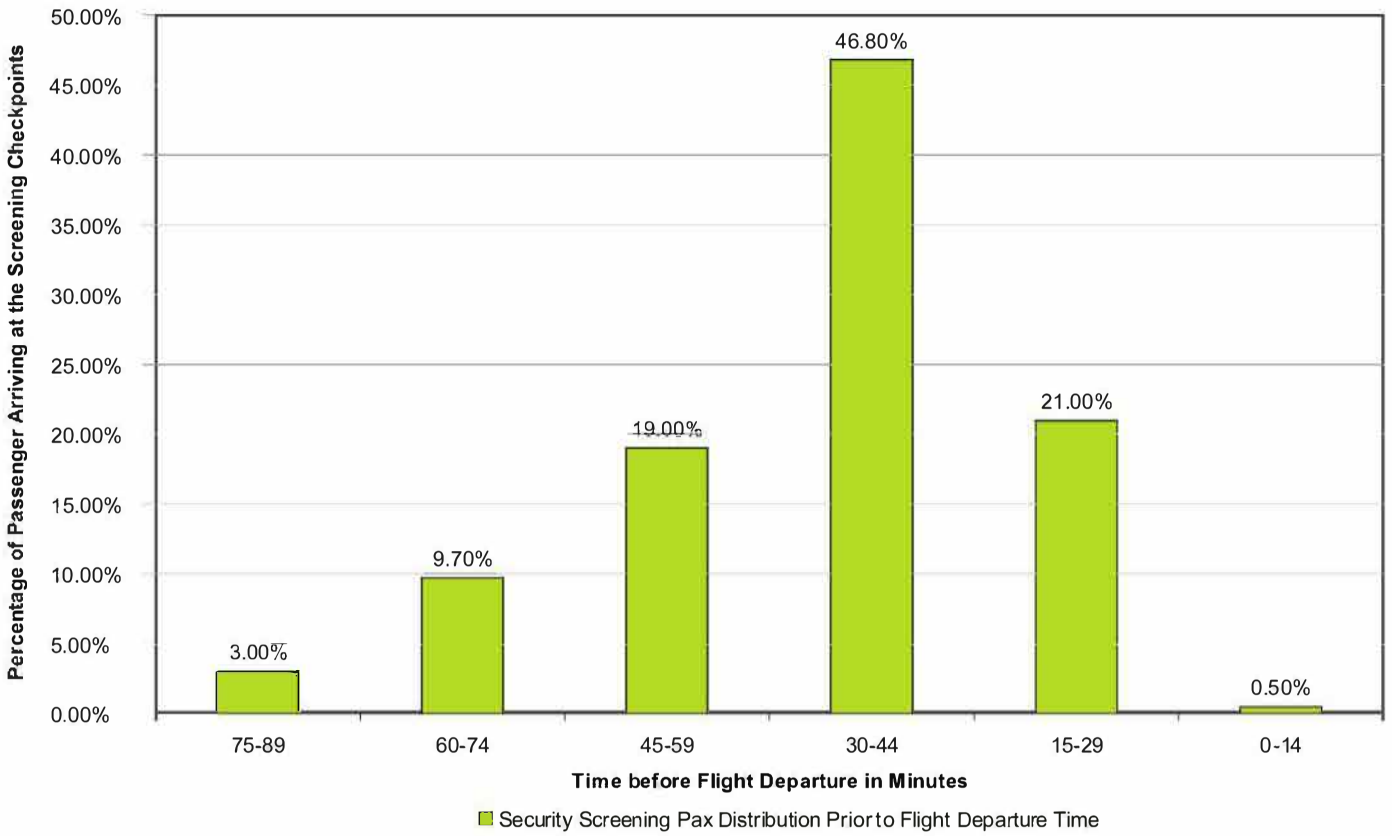
Based on the passenger arrival curve at the security screening checkpoints and the average processing rate of 137 passengers per hour per lane, total passengers at the security screening checkpoints were distributed for March 13, 2007, PAL 1 (1.8 MAP), and PAL 2 (2.0 MAP) demand, as illustrated on **Exhibit IV-13**. Also illustrated on Exhibit IV-13 is the TSA-target passenger capacity throughput assuming three and six security screening checkpoints open, which correspond to a total throughput of 540 and 1,080 passengers per hour, respectively. As shown, three security screening checkpoints are adequate to meet existing demand, and are expected to be adequate to meet PAL 1 and PAL 2 demand.



Source: Sarasota-Bradenton International Airport, 2007 Passenger Survey, October 7-10, 2007, conducted by Quest Corporation of America, October 2007.
Prepared by: Ricondo & Associates, Inc., October 2007.

Exhibit IV-10

Passenger Arrival Distribution at the Airport

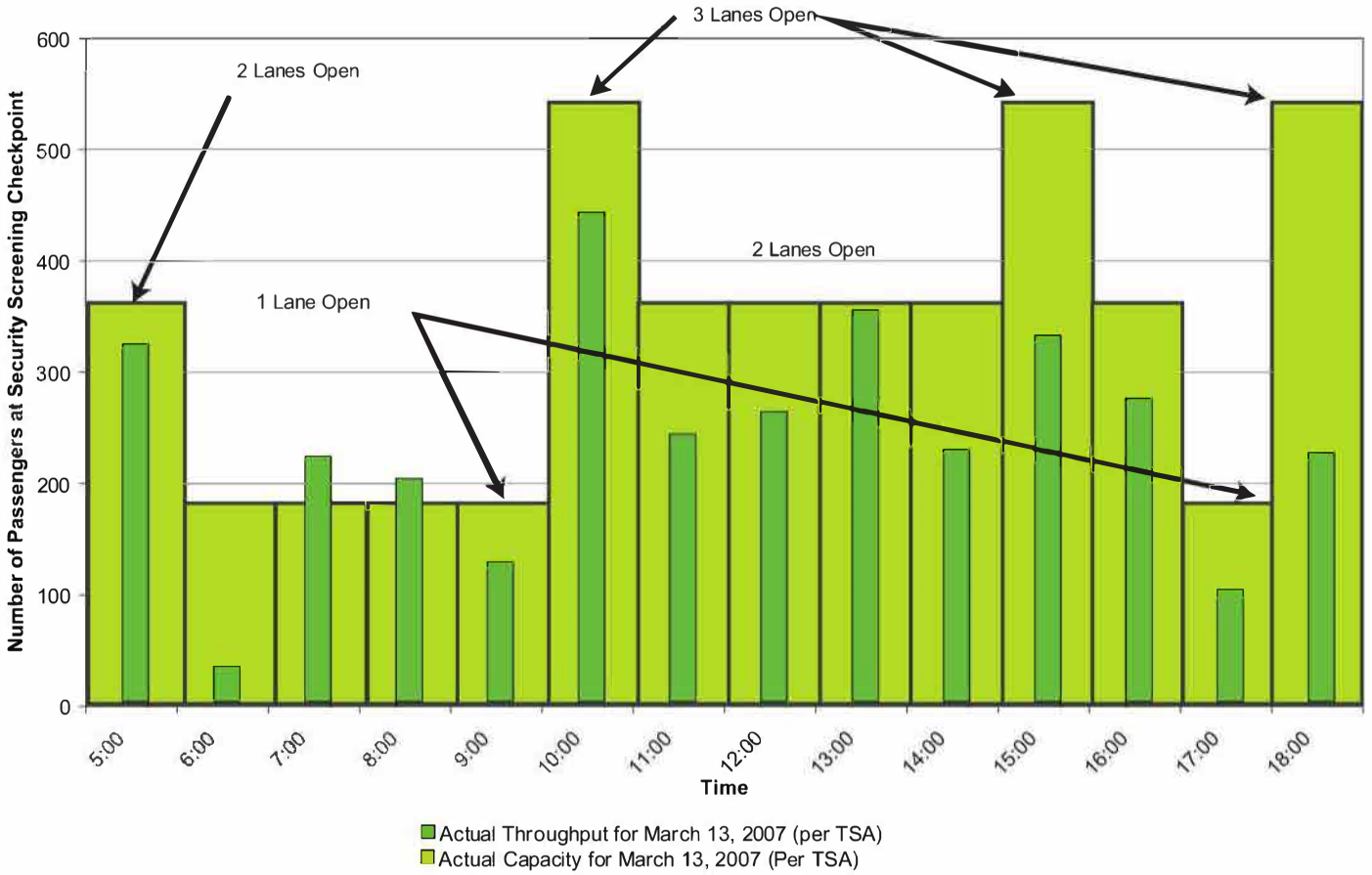


Note: This curve was derived based on the passengers' arrival distribution curve at the Airport (see Exhibit IV-10). It was assumed that passengers would arrive at the security screening checkpoints with 1.5 hours before flight departure time. In addition, it was assumed that most passengers (46.80 percent) would arrive at the security screening checkpoints within 30 to 44 minutes prior to flight departure time. This assumption is supported by the current layout of the security screening checkpoints in the immediate vicinity of the concessions located on the nonsecure side of the terminal building. Such a layout allows passengers not to feel stressed by security screening queue lines buildup as they can monitor these queue lines from the concessions area (i.e. restaurant, gift shop).

Sources: Sarasota-Bradenton International Airport, 2007 Passenger Survey, October 7-10, 2007, conducted by Quest Corporation of America, October 2007; Ricondo & Associates, Inc., October 2007.
Prepared by: Ricondo & Associates, Inc., October 2007.

Exhibit IV-11

Passenger Arrival Distribution at the Security Screening

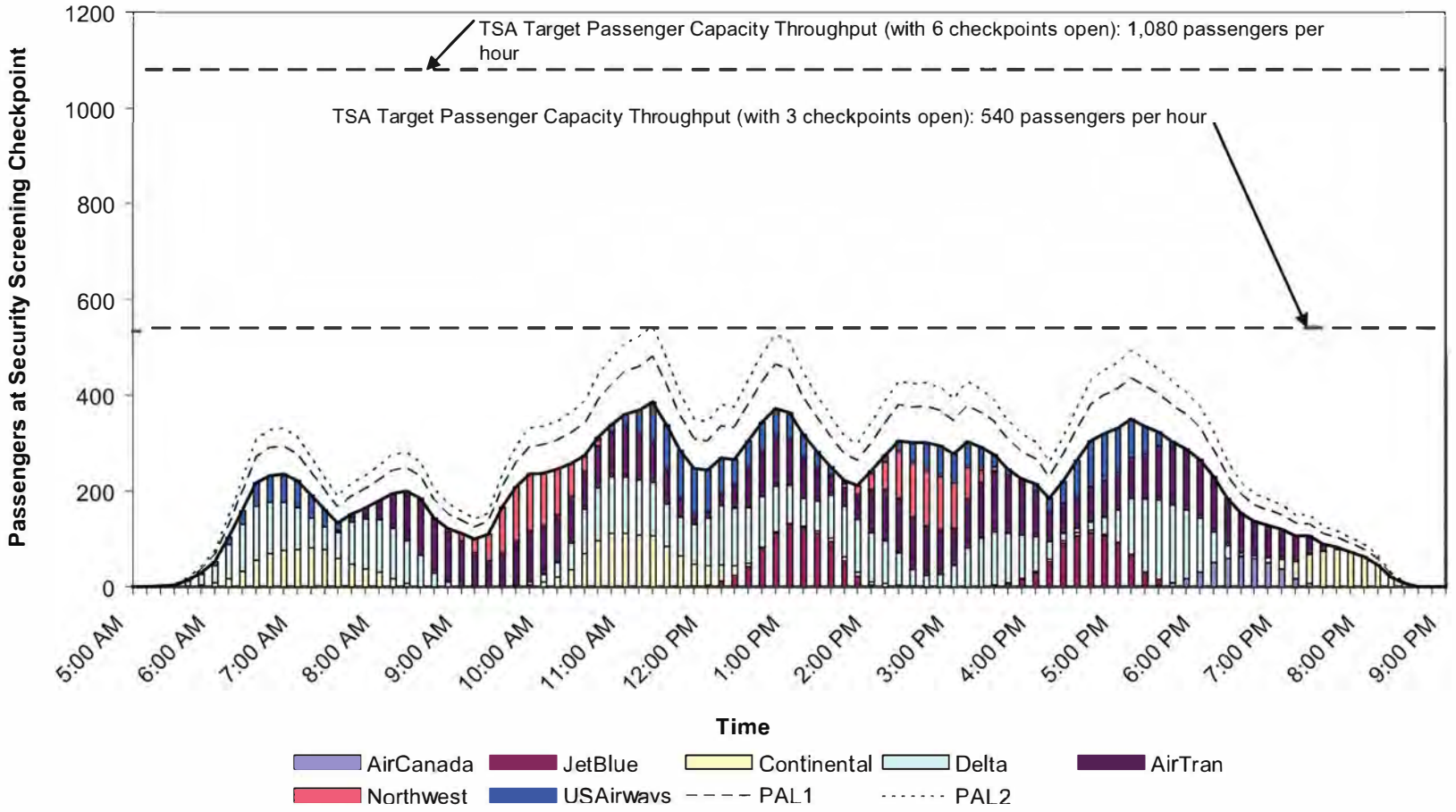


Note: Based on passengers manual counts from TSA representatives, peak-hour passengers reflected above may not reflect and/or match peak hour departing passengers presented in Exhibit IV-3.

Source: SRQ Transportation Security Administration (TSA) data for March 13, 2007.
Prepared by: Ricondo & Associates, Inc., August, 2008.

Exhibit IV-12

Actual Passenger Distribution at Security Screening Checkpoints on March 13, 2007



Source: Official Airline Guide (OAG) for March 13, 2007; SRQ Transportation Security Administration (TSA) data for March 13, 2007.
Prepared by: Ricondo & Associates, Inc., August 2008.

Exhibit IV-13

Existing and Future Passenger Distribution at Security Screening Checkpoints

4.4.3.3 Future Concept in Screening Passengers at Security Checkpoints

As the industry has adapted to security threats as they have arisen in the past, it must prepare to better anticipate the next level of threat. The TSA checkpoint redesign program, referred to as "Checkpoint Evolution"[1], has been in the testing phase at Baltimore/Washington International Thurgood Marshall Airport (BWI) since March 2008.

According to the TSA website, the new program addresses the passenger experience as well as the need to continually upgrade the ability to assess threats by improving the detection of explosives and other threats. Checkpoint Evolution involves the latest whole-body-imaging technologies and multidimensional carry-on baggage screening systems, as well as additional measures for assessing potential threats. A virtual tour of the Checkpoint Evolution program can be viewed on the TSA website. Based on the BWI experience, the new concept addresses the technology, the procedures, and the aesthetics of the checkpoint area. It also appears that Checkpoint Evolution requires a larger footprint than traditional security screening checkpoints. In addition, although passengers at BWI have responded well to the new screening procedures, BWI officials have noted a somewhat slower throughput than anticipated (no exact figures could be obtained).

As previously stated, the existing configuration and technology of SRQ's passenger security screening facilities are adequate to meet existing and future demand through PAL 2. As Checkpoint Evolution continues to be tested at BWI and potentially at other airports, the SMAA should monitor TSA's target passenger throughput with the new system, as well as the potentially larger footprint that may be required.

4.4.4 Passenger Ticketing at Ticket Counters, Kiosk, and Curbside Check-in

The ticketing facilities at SRQ are exclusively used by the airline(s) that lease space in the ticketing area. Ticketing facilities include the ticket counters, kiosks, and curbside check-in areas. The ability of these facilities to accommodate existing and future (PAL 1 and PAL 2) demand, or 1.8 MAP and 2.0 MAP, respectively, was analyzed. The March 13, 2007, schedule and the passenger arrival curve at the Airport were used to distribute passengers among the various check-in facilities. The March 13, 2007, demand profile was projected to reflect PAL 1 and PAL 2 demand patterns, which was then compared to the throughput capacity of each airline's ticketing system (ticket counters, kiosks, and curbside check-in facilities combined).

The common-use facilities required for passenger processing (and baggage handling, which is discussed in a later section) systems at an airport are determined by the extent of the systemwide operations of the individual airlines and other factors, such as economies of scale that could be gained from such common-use systems. The basic idea of common-use terminal equipment (CUTE) is to enable the airlines to share equipment and facilities in the passenger terminal. These facilities include common-use check-in and gate counters, which enable the airlines to use their own host computer program applications for reservations, ticketing, boarding pass processing, and baggage tag issuance. A similar system exists for common-use self-service (CUSS) kiosks. The airlines are able to share self-service facilities (i.e., kiosks) without having to install and operate proprietary hardware. The major benefit of both systems from a facility standpoint is the increased use of the existing

[1] TSA website regarding Checkpoint Evolution: http://www.tsa.gov; "Security Evolution", *Airport Revenue News*, September 2008.

check-in counters and kiosks, thus decreasing the need for airport operators or airlines to build and install additional facilities. For purposes of this Master Plan Update, the demand/capacity analyses for the passenger ticketing facilities did not take into account the effects of a CUTE or CUSS system on existing terminal facilities. Thus, consideration of these common-use systems could help prolong the need for additional ticketing facilities.

The assumptions and methodology used to analyze the passenger ticketing demand/capacity and facility requirements are described in the following subsections.

4.4.4.1 Passenger Processing Time and Distribution at Check-in Facilities

As part of the Ticket Wing and Baggage Make-up Renovation project for SRQ, the URS Corporation developed a questionnaire for the airlines serving the Airport. The purpose of this questionnaire was to gather information from the airlines to assist the SMAA in renovating the terminal ticketing area. **Appendix B** provides the questionnaire submitted to the airlines. Because very few airline responses were obtained, however, the passenger processing times at the various ticketing positions, including ticket counters, kiosks, and curbside check-in positions, were assumed based on actual survey data at other airports in Florida, as presented below. Note that all passengers departing SRQ are domestic passengers. Thus, the passenger processing times below are reflective of a domestic market.

- Curbside Check-in Positions: 3 minutes
- Ticket Counters: 3 minutes
- Self-service Kiosks: 2 minutes

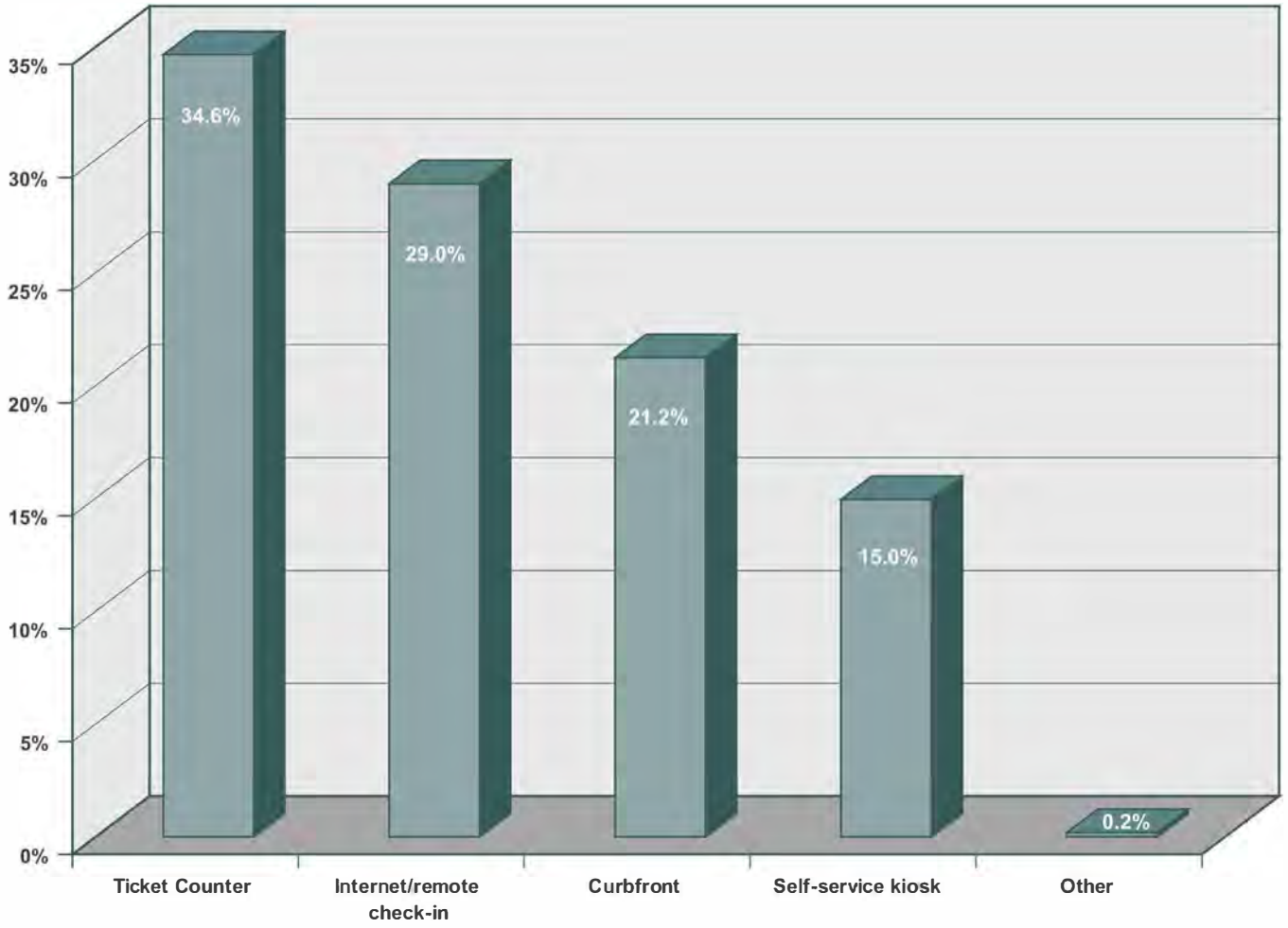
The distribution of passenger check-in methods at SRQ was based on the 2007 passenger survey conducted as part of the Master Plan Update, as shown on **Exhibit IV-14.** Approximately 70.8 percent of passengers checking in for flights at the Airport used the ticket counters, self-service kiosks, and curbside check-in positions, while 29.0 percent of passengers checked in remotely via the Internet. The remaining 0.2 percent of passengers reported obtaining their boarding passes through travel agencies. In reality, those passengers most likely misunderstood the survey question or assumed that airline tickets issued by travel agencies are the same as boarding passes.

Since their inception in the late 1990s, self-service kiosks have become more commonly used at airports. Based on the IATA *Airport Development Reference Manual*[2], this trend is expected to continue. At SRQ, the passenger distribution at the various check-in facilities shown on Exhibit IV-14 was assumed to remain constant over the planning period because of a lack of data from the survey questionnaire, as mentioned above.

4.4.4.2 Existing and Future Daily Passenger Distributions at Ticketing Facilities

Based on the above assumptions and existing (March 13, 2007) and future PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand, the hourly distribution of passengers checking in at the ticket counters, kiosks, and curbside was graphed by airline. **Table IV-10** summarizes the passenger throughput estimates for each check-in mode by airline. These throughput estimates (or system capacity) were then compared to the hourly passenger distribution, as illustrated on **Exhibit IV-15**. As shown, the existing check-in facilities, including ticket counters, kiosks, and curbside check-in positions, are adequate to serve existing demand at the Airport, as well as PAL 1 and PAL 2 demand.

[2] International Air Transport Association, *Airport Development Reference Manual*, 9th Edition, January 2004.



Sources: Sarasota Bradenton International Airport, 2007 Passenger Survey, October 7-10, 2007, by Quest Corporation of America.
Prepared by: Ricondo & Associates, Inc., September 2008.

Exhibit IV-14

Passenger Distribution at SRQ's Check-in Facilities

Table IV-10

Check-in Position Passenger Throughput Estimates by Airline

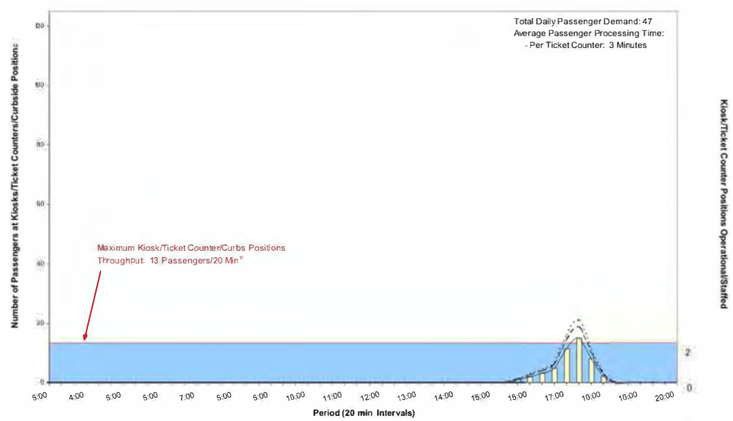
	Staffed Counters				Kiosks				Curbside Ticketing Positions					
		Peak Hour Throughput				Peak Hour Throughput				Peak Hour Throughput				
Airlines	Estimated Average Passenger Processing Time	Per Position	Ticket Counter Positions	Total Throughput	Estimated Average Passenger Processing Time	Per Kiosk	Number of Kiosks	Total Throughput	Estimated Average Passenger Processing Time	Per Position	Number of Positions	Total Throughput	Total Throughput	Weighted Average Throughput per Kiosk/Ticket Counter/Curbside Positions
Air Canada	3	20	2	40	2	30	0	0	3	20	0	0	40	20
Continental	3	20	8	160	2	30	4	120	3	20	0	0	280	23
JetBLue	3	20	2	40	2	30	4	120	3	20	2	40	200	25
Delta	3	20	8	160	2	30	6	180	3	20	4	80	420	23
Northwest	3	20	2	40	2	30	0	0	3	20	0	0	40	20
US Airways	3	20	4	80	2	30	6	180	3	20	2	40	300	25
Air Tran	3	20	2	40	2	30	4	120	3	20	2	40	200	25
Northwest + Delta	3	20	10	200	2	30	6	180	3	20	4	80	460	23

Sources: Sarasota Bradenton International Airport, 2007 Passenger Survey, October 7-10, 2007, conducted by Quest Corporation of America, October 2007; Ricondo & Associates, Inc., September 2008.

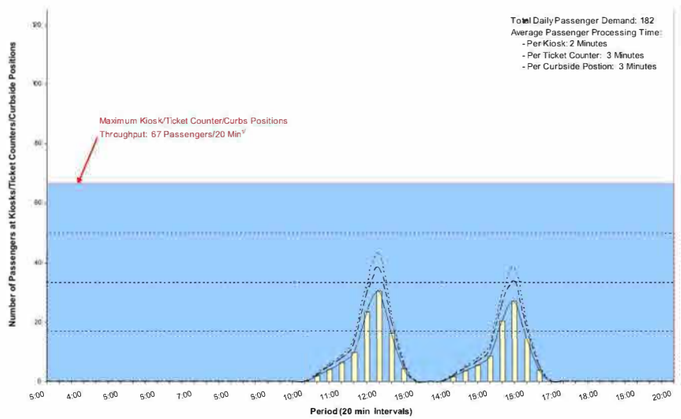
Prepared by: Ricondo & Associates, Inc., September 2008.

Exhibit IV-15

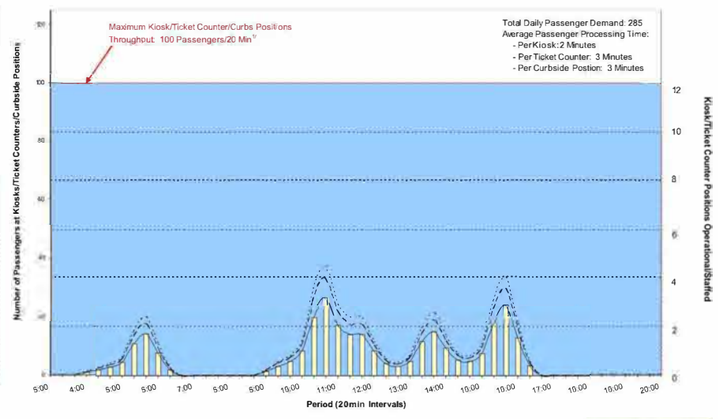
Passenger Distributions at Check-in Facilities



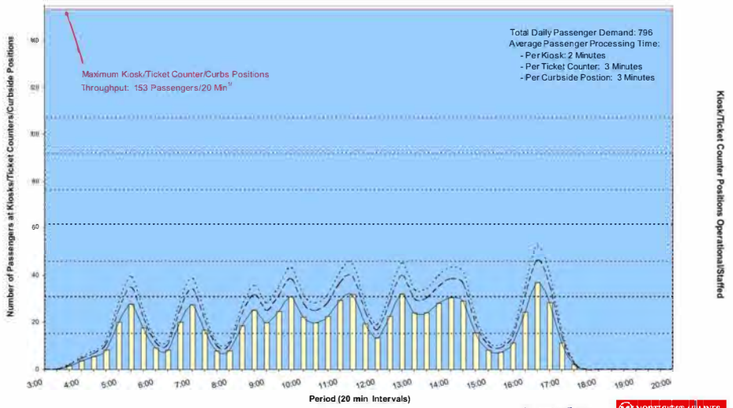
AIR CANADA



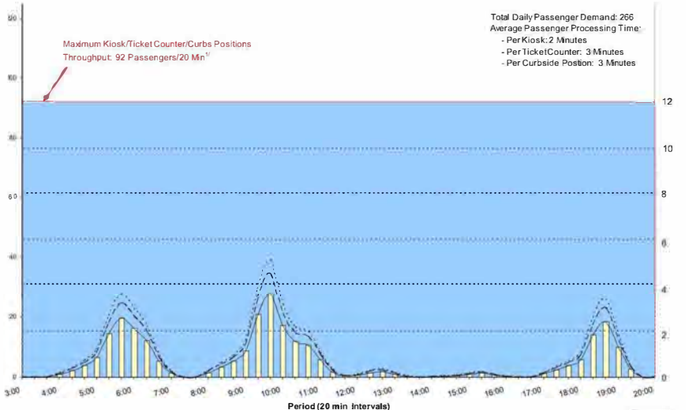
jetBlue AIRWAYS

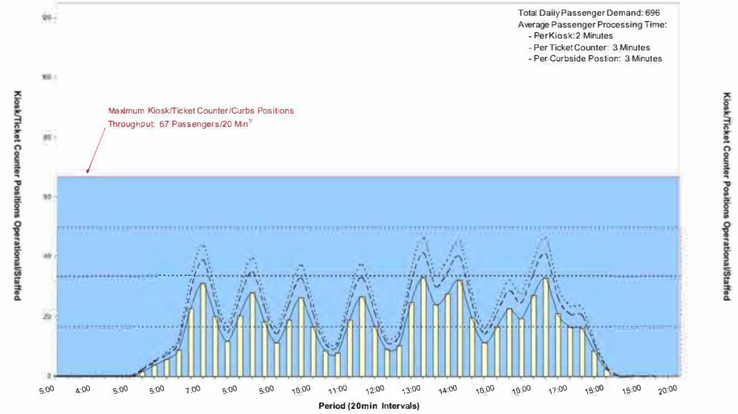


US AIRWAYS
MEA



Delta
NORTHWEST AIRLINES





AirTran Airways

Notes:

1/ The throughput of the kiosk/ticket counter/curbside check-in positions was estimated based on typical passenger processing rates. In determining the throughput rate, it was assumed that both ticket counter positions would be staffed/operational.

2/ The March 13, 2007, schedule was assumed for the projected daily distribution of passenger demand.

Source: Sarasota Bradenton International Airport, 2007 Passenger Survey, October 7-10, 2007, conducted by Quest Corporation of America, October 2007.
Prepared by: Ricondo & Associates, Inc., September 2008.

As part of the ongoing Ticket Wing and Baggage Make-up Renovation project, the SMAA should closely monitor industry trends in ticketing/outbound passenger processing.

4.4.5 Outbound and Inbound Baggage Handling

The outbound baggage make-up area includes the area where baggage is received from the ticket counters and curbside check-in facilities. Bags are sorted and loaded into containers or carts for subsequent delivery to aircraft. The outbound baggage area also includes all areas dedicated to the mechanical systems/tug drives used to transfer bags from the ticket counters to the outbound baggage area and to the EDS equipment used by the TSA to screen baggage. The size of the outbound baggage makeup area is directly influenced by the number of peak-hour originating passengers.

The inbound baggage area is nonpublic space used to offload bags from carts and containers onto claim devices or conveyor systems for transfer to the public baggage claim area. It should also be readily accessible from the aircraft apron by means of carts, tugs, or mechanical conveyors for quick and direct baggage delivery. The size of the inbound baggage area is directly influenced by the number of peak-hour terminating passengers.

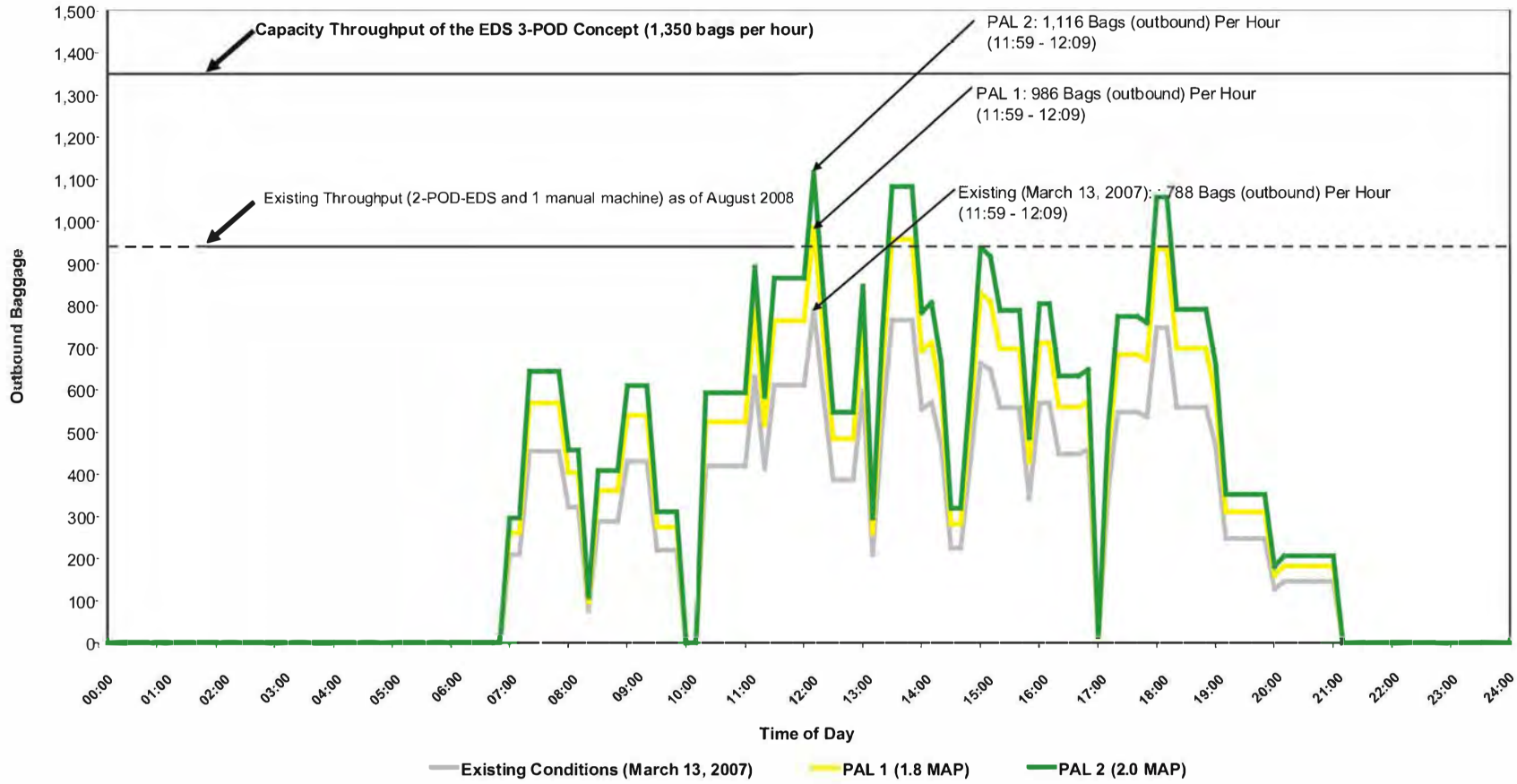
4.4.5.1 Outbound Baggage

The URS Corporation has evaluated several EDS concepts for the outbound baggage system at SRQ, including pod concepts to full in-line EDS concepts. The purpose of the evaluation was to relocate the baggage screening machines (L-3 baggage screening machines) currently located in the ticketing area, relieve congestion, and improve the current (March 2007) processing rate of 432 outbound bags per hour to a target processing rate of 1,350 bags per hour (for the preferred EDS three-pod concept, as depicted in Chapter II). The 432 bags per hour rate is reflective of the processing rate of two L-3 machines located in the ticketing area. The 1,350 bags per hour target is anticipated to be achieved by the end of 2009. For the purposes of this Master Plan Update, the following were assumed:

- The existing condition for the outbound baggage make-up area is that of the preferred EDS three-pod concept, with a total throughput capacity of 1,350 bags per hour.

- FAA AC 150/5360-13, *Planning and Design Guidelines for Airport Terminal Buildings*, recommends a typical planning ratio of 1.3 bags per passenger. A higher ratio of 1.8 bags per passenger, however, was used for SRQ based on data obtained from the 2007 passenger survey conducted at the Airport.

Exhibit IV-16 illustrates the outbound baggage distribution for existing conditions, as well as for PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand. The capacity throughput of 1,350 bags per hour with the EDS three-pod system is also shown. As depicted, peak hour outbound baggage increases from 788 bags under existing conditions to 1,116 bags by PAL 2 (2.0 MAP). Thus, the newly installed EDS three-pod system is adequate to serve existing and future demand at the Airport.



Sources: Lease drawings, Sarasota-Bradenton International Airport, 2007; Discussions with The URS Corporation, May 2008.
Prepared by: Ricondo & Associates, Inc., September 2008.

Exhibit IV-16

Peak Month Average Day Outbound Baggage Distribution

4.4.5.2 Inbound Baggage

The inbound baggage analysis consisted of determining how many claim devices, in terms of units and linear frontage would be required to accommodate PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand. The planning standards from IATA's *Airport Development Reference Manual* were used. The inbound baggage claim devices required were calculated as follows:

$$\text{Peak Hour Baggage Claim Devices Required (quantity)} = \frac{\text{PHTP} \times \text{PNB} \times \text{CDN}}{60 \times \text{NNB}}, \text{ where}$$

PHTP = Peak Hour Terminating Passengers

PNB = Proportion of Passengers Arriving by Narrowbody Aircraft in the Peak Hour

CDN = Average Claim Device Occupancy Time per Bag (assumed to be 20 minutes)

NNB = Number of Passengers per Narrowbody Aircraft

On March 13, 2007, peak-hour terminating passengers numbered 454 and are estimated to number 597 and 675 for PAL 1 and PAL 2 demand, respectively. Based on the existing design-day schedule (March 13, 2007), all peak-hour terminating passengers were on board narrowbody aircraft; therefore, the proportion of passengers arriving by narrowbody aircraft (PNB) corresponds to 100 percent. The number of passengers per narrowbody aircraft (NNB) was assumed to be 111 based on the weighted average number of narrowbody seats times the actual load factor (83.1 percent) at the Airport. In lieu of actual data, IATA recommends planning factors averaging 20 minutes per bag for bag claim device occupancy time. In terms of bag claim frontage, the IATA standards recommend between 165 and 230 feet for bag claim device expected to accommodate bags transported in a widebody aircraft, and between 100 and 130 feet for narrowbody aircraft. The fleet mix at SRQ mostly consist of narrowbody aircraft or smaller.

Currently, the inbound baggage claim devices at SRQ consist of three units. As depicted in Exhibit II-9 in the Inventory Chapter, the bag claim device located to the south encompasses approximately 150 feet of claim frontage. The middle unit has a total length of 147 feet of claim frontage. The northern bag claim device is the largest and includes approximately 168 feet of claim frontage. Thus, the existing bag claim frontage totals 465 feet. Given the IATA planning guidelines, the three claim devices are sufficient to accommodate the peak hour inflow of baggage for existing and future demand through PAL 2. In terms of bag claim frontage, the PAL 1 and PAL 2 demand require 260 and 305 feet, respectively. Thus, additional claim frontage is not required.

Based on IATA guidelines, it is estimated that the existing 465 feet of bag claim frontage at SRQ have the capacity to handle 1,200 bags per hour. To account for increasing fees imposed on passengers for checked baggage, a checked baggage per passenger is assumed versus the 1.3 factor recommended by the FAA AC 5360/13 or the 1.8 baggage per passenger obtained from the passenger survey.

4.4.6 Concessions

Although concessions are recognized as a significant source of revenue for airports, the types and sizes of those facilities that would be economically feasible, especially at a small-hub airport such as SRQ, primarily depend on passenger traffic volumes. IATA planning guidelines[3] for contemporary concessions recommend that 12 percent to 15 percent of the total terminal area be dedicated to concessions. FAA planning criteria typically result in between 8 percent and 10 percent of the total terminal area being dedicated to concessions.

Exhibit IV-17 illustrates the existing food/beverage and retail/news/gift concessions at SRQ. A summary by type of concession is also provided. As shown, total concessions at the Airport represent approximately 9.2 percent of total terminal area. The majority of the concessions (81.7 percent) are centrally located on the second level of the main terminal, while the remaining 19.3 percent are located at Concourse B. In 2008, the SMAA completed concession upgrades on Concourse B, including the opening of Starbucks Coffee and CNBC News Shops. The Airport's restaurant and two other retail shops on the second level of the terminal were also upgraded. In an effort to foster and improve customer service at the Airport, the SMAA also began offering complimentary Wi-Fi Internet access in the terminal building in early 2006.

As demand materializes and matures at SRQ, the SMAA should assess additional areas in the terminal that could be used to generate additional revenue. **Table IV-11** lists the top 50 performing airports in the United States and Canada in terms of concession sales per enplaned passenger, excluding duty free sales. SRQ is ranked 43rd on the list, with an average of $6.85 in sales per enplaned passenger in 2007. Table IV-11 also shows how SRQ compares with other airports in Florida.

4.4.7 Terminal Curbside

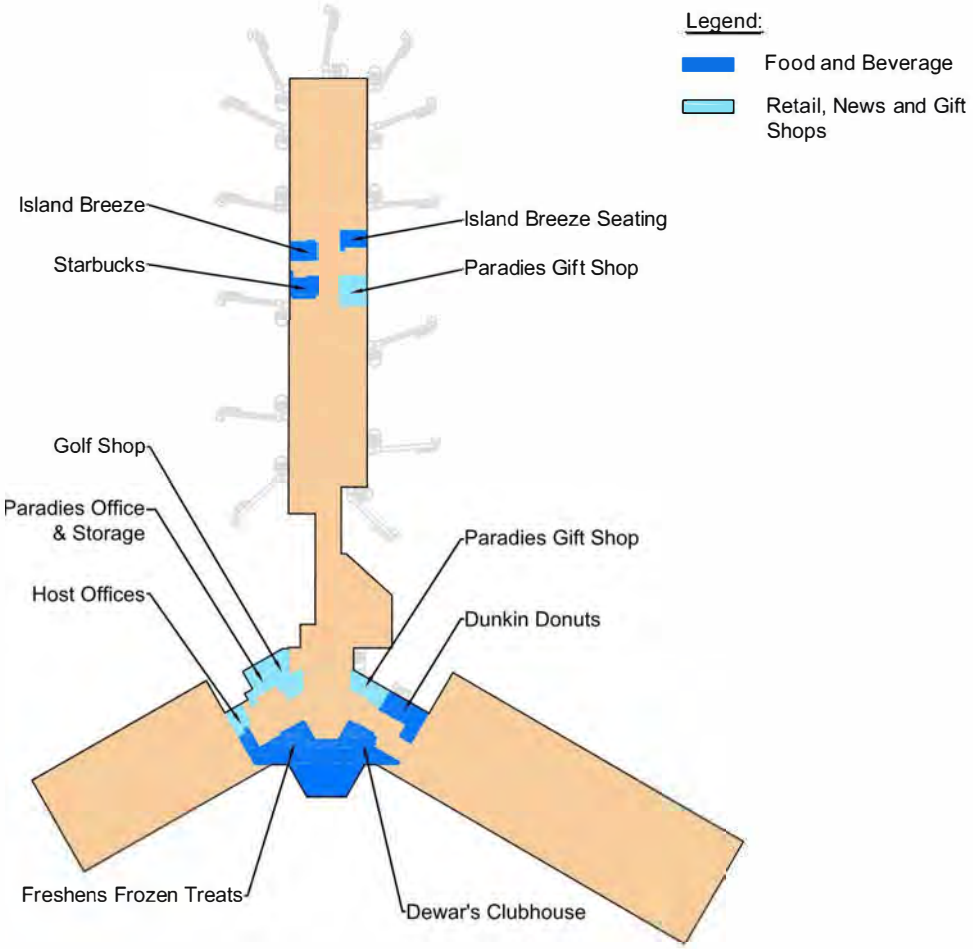
Terminal curbside utilization and operational patterns were assessed, and potential physical improvements/modifications or operational changes were identified that would either increase curbside capacity or optimize the use of existing landside facilities to more efficiently accommodate existing and future demand.

The recommended improvements are based on data collected and onsite observations at SRQ in June 2007.

4.4.7.1 Existing Terminal Curbside Facilities

For purposes of loading and unloading passengers, the terminal building is considered a single-level facility with three terminal area curbsides, two located in front of the terminal building and a third, the intermodal curbside, located at the western end of the terminal. The eastern end of the curbside is designated for departing passenger activities, while the western end of the terminal curbside is designated mainly for arriving passenger activities. **Exhibit IV-18** shows the existing terminal area curbsides and adjacent roadways.

[3] International Air Transport Association, *Airport Development Reference Manual*, 9th Edition, January 2004.



	Concession Type	Concession Area (Square Feet)
Main Terminal	Food and Beverage	12,474
	Retail, News, and Gift	8,719
		21,193
Concouse B	Food and Beverage	4,103
	Retail, News, and Gift	974
		5,077
	Total All Concessions:	26,270
	Total Terminal Area (including Concourse B):	285,205
	Share of Total Concession Area to Total Terminal Area:	**9.2%**

Sources: Sarasota Manatee Airport Authority; Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

Exhibit IV-17

0 170 ft.

north

Concessions (2nd Level)

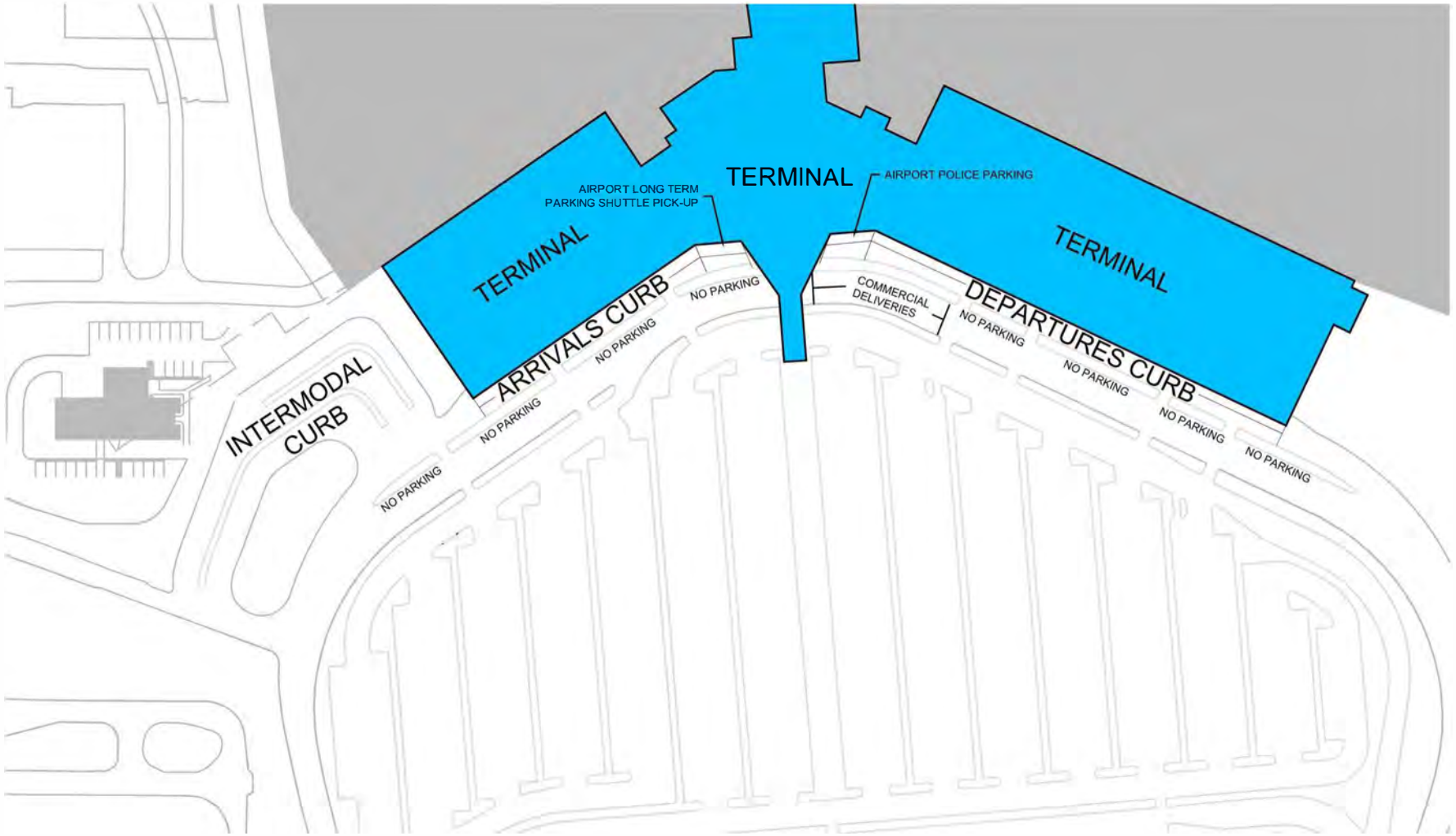
P:\Sarasota\Master Plan\Task 4 - Terminal Systems\CAD Drawings\SarasotaTerminalSecondFloor.dwg

Table IV-11

Sales per Enplaned Passenger at the Top 50 Performing U.S. and Canadian Airports (2007)

Top 50 Airports	Rank	Enplanements	F&B Total Sales	Specialty Total Sales	N&G Total Sales	Total Sales (Excluding DF)	Sales E/P
Pittsburgh (PIT)	1	4,890,697	$25,400,000	$31,600,000	$9,500,000	$66,500,000	$13.60
San Francisco (SFO)	2	17,686,632	$116,454,817	$57,264,786	$28,649,080	$202,368,683	$11.44
New York (JFK)	3	23,728,195	$134,401,905	$47,667,412	$73,938,361	$256,007,678	$10.79
Newark (EWR)	4	18,226,761	$101,609,839	$50,151,728	$40,134,737	$191,896,304	$10.53
Calgary (YYC)	5	6,128,932	$36,196,025	$13,123,910	$14,478,473	$63,798,408	$10.41
Montreal (YUL)	6	6,179,023	$36,624,853	$9,170,897	$16,267,824	$62,063,574	$10.04
Portland (PDX)	7	7,332,478	$35,474,378	$21,874,650	$16,053,403	$73,402,431	$10.01
Miami (MIA)	8	16,615,415	$94,930,531	$27,918,162	$36,519,180	$159,367,873	$9.59
Seattle (SEA)	9	15,661,671	$86,453,436	$23,758,074	$38,178,035	$148,389,545	$9.47
Las Vegas (LAS)	10	23,885,974	$132,852,175	$43,923,681	$49,152,271	$225,928,127	$9.46
Reno (RNO)	11	2,516,232	$8,906,304	$9,528,497	$4,994,639	$23,429,440	$9.31
Boston (BOS)	12	13,948,616	$80,431,639	$16,609,657	$30,240,406	$127,281,702	$9.13
Toronto (YYZ)	13	15,753,707	$79,495,000	$10,910,000	$53,189,000	$143,594,000	$9.11
Anchorage (ANC)	14	2,684,781	$13,797,543	$4,125,129	$6,073,742	$23,996,414	$8.94
Detroit (DTW)	15	18,005,350	$93,390,758	$42,707,483	$22,977,995	$159,076,236	$8.83
Orlando (MCO)	16	17,831,818	$86,910,059	$44,635,649	$25,646,714	$157,192,422	$8.82
Los Angeles (LAX)	17	30,975,748	$164,190,995	$25,775,935	$77,162,252	$267,129,182	$8.62
Fort Myers (RSW)	18	4,061,936	$19,087,969	$10,161,656	$5,598,222	$34,847,847	$8.58
Denver (DEN)	19	24,940,953	$137,140,010	$37,962,955	$36,124,631	$211,227,596	$8.47
Washington (DCA)	20	9,294,078	$45,362,910	$20,290,423	$13,018,090	$78,671,423	$8.46
Savannah (SAV)	21	1,011,815	$4,987,977	$532,782	$3,042,976	$8,563,735	$8.46
Minneapolis/St. Paul (MSP)	22	17,478,364	$94,837,115	$30,941,810	$20,754,663	$146,533,588	$8.38
Tampa (TPA)	23	9,579,029	$52,597,265	$9,040,057	$18,362,196	$79,999,518	$8.35
Ottawa (YOW)	24	2,038,486	N/A	N/A	N/A	$16,821,952	$8.25
Philadelphia (PHL)	25	16,038,183	$78,411,058	$26,972,560	$25,528,767	$130,912,385	$8.16
New York (LGA)	26	12,513,769	$58,784,894	$14,459,280	$28,681,725	$101,925,899	$8.15
Phoenix (PHX)	27	20,865,639	$105,760,320	$32,737,897	$30,714,562	$169,212,779	$8.11
Indianapolis (IND)	28	4,136,352	$19,914,302	$5,864,807	$7,735,732	$33,514,841	$8.10
Washington (IAD)	29	12,233,986	$58,634,926	$19,765,021	$19,826,814	$98,226,761	$8.03
Baltimore (BWI)	30	10,518,071	$48,503,852	$14,630,931	$21,149,630	$84,284,413	$8.01
Chicago (ORD)	31	37,700,300	$209,541,000	$33,115,000	$53,714,000	$296,370,000	$7.86
San Diego (SAN)	32	9,172,966	$46,055,853	N/A	$25,873,439	$71,929,292	$7.84
Charlotte (CLT)	33	16,568,589	$83,686,127	$23,055,511	$20,022,199	$126,763,837	$7.65
Chicago (MDW)	34	9,414,181	$45,816,000	$11,008,000	$14,223,000	$71,047,000	$7.55
Dallas/Fort Worth (DFW)	35	29,775,878	$143,483,250	$50,381,770	$30,195,052	$224,060,072	$7.52
Memphis (MEM)	36	5,353,100	$28,200,917	$4,273,644	$7,761,569	$40,236,130	$7.52
West Palm Beach (PBI)	37	3,488,937	$15,587,388	$1,332,941	$8,909,043	$25,829,372	$7.40
Salt Lake City (SLC)	38	11,000,967	$45,933,618	$20,682,730	$13,666,435	$80,282,783	$7.30
Cincinnati (CVG)	39	7,842,380	$33,512,756	$14,649,658	$8,269,176	$56,431,590	$7.20
Atlanta (ATL)	40	44,831,102	$213,965,801	$59,825,216	$46,667,084	$320,458,101	$7.15
Louisville (SDF)	41	1,917,661	$7,953,378	N/A	$5,650,699	$13,604,077	$7.09
Sacramento (SMF)	42	5,130,701	$23,668,266	$4,775,572	$7,532,038	$35,975,876	$7.01
Sarasota/Bradenton (SRQ)	43	783,694	$2,820,807	N/A	$2,548,743	$5,369,550	$6.85
Santa Ana (SNA)	44	4,989,018	$23,505,000	$1,714,787	$8,961,709	$34,181,496	$6.85
Colorado Springs (COS)	45	1,033,586	$3,567,824	N/A	$3,473,562	$7,041,386	$6.81
Jacksonville (JAX)	46	3,170,975	$14,272,134	$3,384,308	$3,927,491	$21,583,933	$6.81
Milwaukee (MKE)	47	3,868,098	$15,678,460	$2,250,561	$8,246,957	$26,175,978	$6.77
Providence (PVD)	48	2,509,862	$11,263,616	N/A	$5,687,208	$16,950,824	$6.75
San Antonio (SAT)	49	4,009,776	$15,220,455	$5,411,166	$6,136,341	$26,767,962	$6.68
Columbus (CMH)	50	3,865,481	$16,409,759	$2,874,239	$6,404,534	$25,688,532	$6.65
Top 50 Totals		593,189,943	$3,051,685,264	$942,840,932	$1,061,564,399	$5,072,912,547	$8.38

Source: *Airport Revenue News* , September 2008.
Prepared by: Ricondo & Associates, Inc., September 2008.



Source: Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., July 2007.

Exhibit IV-18

0 N.T.S. north

Exsiting Curbside Allocations

Drawing: P:\Sarasota\Master Plan\Task 5 - Landside Systems\Landside Exhibits_031809\Roadway Links_031909-RL.dwg, Layout: 8.5x11 Exh 4-18, Apr 24, 2009, 2:19pm

4.4.7.2 Data Collection

As part of the June 2007 landside data collection effort at the Airport, vehicle volumes, classifications, dwell time information, and license plate numbers for vehicles accessing either the inner or outer terminal curbside roadways were collected during the arrivals and departures peak periods. An automatic traffic recorder (ATR) was used to collect traffic data on 7 consecutive days for vehicles accessing the terminal curbsides. The data were analyzed and compared to the March 13, 2007, flight schedule to identify the peak arrival and departure periods for data collection. **Exhibit IV-19** illustrates the terminal curbside data collection locations. **Table IV-12** provides the vehicle classification data for both the inner and outer curbsides for the arrivals and departures peak periods. **Table IV-13** provides average vehicle dwell time data for the terminal curbsides.

4.4.7.3 Existing Conditions Assessment

From multiple site visits at the Airport, a review and analysis of the data collected, and discussions with Airport Engineering staff, the following Airport curbside conditions were determined.

- The inner curbside located closest to the terminal building currently functions as the passenger drop-off and pickup curbside for private and commercial vehicles, as well as for the Airport's long-term parking shuttle. The inner curbside consists of three lanes, including two travel lanes and a single passenger loading and unloading lane. A slip ramp, which enables vehicles departing the arrivals curbside on the inner roadway to move to the outer roadway and avoid driving past the departures curbside on the inner roadway, is located just past the center point of the terminal. Therefore, fewer vehicles drive past the departures curbside on the inner roadway.
- Observations in June 2007 showed that both the departures and arrivals curbsides along the inner roadway function at a high level of service with minimal congestion, even during peak hours. Both the arrivals and departures curbsides are signed for "No Standing", meaning parking along the curbs is for active loading and unloading only. Observations revealed that this restriction was not always actively enforced during nonpeak activity periods if the driver remained with the vehicle. Vehicles did not commonly remain along the departures curbside beyond the typical loading/unloading time, but vehicles were observed standing for significant periods of time along the arrivals curbside during the data collection period. It should be noted that vehicle standing along the arrivals curbside during peak times is not permitted.
- Discussions with Airport staff revealed that some congestion is experienced during higher travel periods and during peak activity months. Double parking and delays along the curbside, particularly during peak holiday periods, are typical.
- The outer curbside is located between the inner curbside and the short-term parking lot. This curbside is not typically used for passenger pickup or drop-off activity and is reserved for authorized commercial deliveries only. The outer curbside roadway provides commercial vehicle access to the intermodal curbside and access for rental car returns to the drop-off area adjacent to the short-term parking lot. During holiday peak passenger activity, portions of the outer curbside are used for passenger drop-off and pickup.

Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-19

0 N.T.S.

north

Terminal Curbside Data Collection Locations

Drawing: P:\Sarasota\Master Plan\Task 5 - Landside Systems\Landside Exhibits_031809\Roadway Links_031909-RL.dwg Layout: 8.5x11 Exh 4-19 Apr 24, 2009, 2:20pm

Table IV-12

Vehicle Classification Data

Outer Curb

	Arrivals Peak Period												Departures Peak Period											
WHY ITALICS BELOW?]	9:30 - 9:45	9:45- 10:00	10:00- 10:15	10:15- 10:30	10:30- 10:45	10:45- 11:00	11:00- 11:15	11:15- 11:30	11:30- 11:45	11:45- Noon	Noon- 12:15	Total	1:15- 1:30	1:30- 1:45	1:45- 2:00	2:00- 2:15	2:15- 2:30	2:30- 2:45	2:45- 3:00	3:00- 3:15	3:15- 3:30	3:30- 3:45	3:45- 4:00	4:00- 4:15	Total
1. Private Vehicles	21	21	23	35	26	31	28	31	30	33	16	295	28	18	30	19	21	23	30	24	39	24	24	27	307
2. Taxicabs	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3. Courtesy Vehicles												0													0
Hotel/Motel	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
On-Airport Rental Car Shuttle[1]	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Off Airport/Parking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. SMAA-Operated Shuttles												0													0
Public	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Employee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Shared Ride / Door-to-Door Vehicles	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	1
6. Luxury Service Vehicles	1	0	1	3	2	4	4	5	3	6	1	30	0	0	0	0	0	1	0	0	0	0	0	0	1
7. Charter / Intercity Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8. Public Transportation	0	0	1	1	0	0	1	1	0	0	1	5	1	0	0	1	2	0	0	1	1	0	0	1	7
9. Service / Other Vehicles	1	2	1	0	0	0	0	1	1	0	0	6	1	1	1	0	0	0	0	1	0	0	0	0	4
Totals	23	23	27	39	28	35	33	39	35	40	18	340	30	20	31	20	23	26	30	26	40	24	24	28	322

Inner Curb

	Arrivals Peak Period												Departures Peak Period											
	9:30- 9:45	9:45- 10:00	10:00- 10:15	10:15- 10:30	10:30- 10:45	10:45- 11:00	11:00- 11:15	11:15- 11:30	11:30- 11:45	11:45- Noon	Noon- 12:15	Total	1:15- 1:30	1:30- 1:45	1:45- 2:00	2:00- 2:15	2:15- 2:30	2:30- 2:45	2:45- 3:00	3:00- 3:15	3:15- 3:30	3:30- 3:45	3:45- 4:00	4:00- 4:15	Total
1. Private Vehicles	48	45	42	58	54	44	50	33	40	28	40	482	22	15	22	23	24	29	45	38	60	62	35	14	389
2. Taxicabs	1	0	0	0	1	1	0	0	3	1	1	8	1	2	2	0	1	0	0	1	0	1	0	0	8
3. Courtesy Vehicles												0													0
Hotel/Motel	1	0	0	1	0	0	0	0	0	0	1	3	1	1	0	1	0	0	0	0	0	0	0	0	3
On-Airport Rental Car Shuttle[1]	2	1	2	0	2	1	1	1	1	3	1	15	1	3	0	1	1	1	1	1	1	1	0	1	12
Off Airport/Parking	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4. SMAA-Operated Shuttles												0													0
Public	1	0	0	2	0	0	0	2	0	0	0	5	0	0	1	1	0	1	0	0	0	0	1	1	5
Employee	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Shared Ride / Door-to-Door Vehicles	0	0	0	0	0	0	1	2	0	1	1	5	0	0	0	0	0	0	1	0	0	0	0	0	1
6. Luxury Service Vehicles	7	2	2	2	5	1	0	1	2	0	1	23	2	1	5	0	0	1	3	0	0	0	0	0	12
7. Charter / Intercity Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8. Public Transportation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9. Service / Other Vehicles	0	1	2	6	3	0	0	0	0	0	2	14	0	1	0	0	0	0	1	0	0	0	0	0	2
Totals	60	49	48	69	65	47	52	39	46	33	47	555	27	23	30	26	26	32	51	40	61	64	36	16	432

1/ On-Airport Rental Car Shuttles are operated by Alamo/National, Avis, Budget, Dollar/Thrifty, Enterprise, and Hertz.

Source: Ricondo & Associates, Inc., Onsite Observations, June 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Table IV-13

Average Vehicle Dwell Times at Terminal Curbsides

Vehicle Class	Number of Observations	Average Dwell Time (minutes:seconds)	Minimum	Maximum
Arrivals Curbside				
Service / Other Vehicle	1	0:01:53	0:01:53	0:01:53
Airline Crew Bus	0	0:00:00	0:00:00	0:00:00
Public Transportation Bus	0	0:00:00	0:00:00	0:00:00
Charter / Intercity Bus	0	0:00:00	0:00:00	0:00:00
Van Service	0	0:00:00	0:00:00	0:00:00
Limousine	0	0:00:00	0:00:00	0:00:00
Door-to-Door Shuttle	0	0:00:00	0:00:00	0:00:00
SMAA-Operated Shuttle	2	0:00:10	0:00:09	0:00:11
Courtesy Vehicle	0	0:00:00	0:00:00	0:00:00
Taxicab	1	0:00:48	0:00:00	0:00:00
Private Vehicle	104	0:04:24	0:00:06	1:01:20
Departures Curbside				
Service / Other Vehicle	0	0:00:00	0:00:00	0:00:00
Airline Crew Bus	0	0:00:00	0:00:00	0:00:00
Public Transportation Bus	0	0:00:00	0:00:00	0:00:00
Charter / Intercity Bus	0	0:00:00	0:00:00	0:00:00
Van Service	4	0:01:37	0:00:43	0:02:22
Limousine	19	0:01:35	0:00:35	0:02:52
Door-to-Door Shuttle	4	0:01:33	0:00:24	0:03:23
SMAA-Operated Shuttle	8	0:00:37	0:00:25	0:01:01
Courtesy Vehicle	2	0:01:23	0:00:54	0:01:52
Taxicab	9	0:01:05	0:00:47	0:01:56
Private Vehicle	226	0:02:39	0:00:11	0:19:54

Source: Ricondo & Associates, Inc., Onsite Observations, June 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

- The intermodal curbside and queuing area is located at the western end of the terminal building and serves as the loading area for taxicabs, prearranged or limousine car services, hotel/courtesy shuttles, shared ride vans, and transit bus service. The intermodal curbside consists of three loading lanes and are designated[4] as follows:
  - Lane 1: Taxicab Concession Operator Only
  - Lane 2: Commercial Vehicles Other than Buses
  - Lane 3: Buses Only (vehicles longer than 25 feet, carrying more than 15 passengers)
- Observations revealed significant queuing of commercial vehicles, especially taxicabs and prearranged or limousine car service vehicles, extending around the curbside to the Bradenton Connector roadway. In general, this curbside operates reasonably well and is self regulating as long vehicle queuing does not extend beyond the queuing area.

4.4.7.4 Curbside Recommendations

Based on observations in June 2007, the curbsides at SRQ operate at a high level of service with minimal congestion and delays. The SMAA indicated, however, that some curbside congestion occurs during peak times (i.e., holiday periods), when the loading/unloading lane of the inner curbside is fully occupied, forcing other vehicles to load and unload from the second through lane of the inner curbside. Options to better manage curbside capacity have been discussed with the SMAA. Such options could include reconfiguring the curbside by shifting vehicular traffic away from the inner curb (e.g., use the outer curb for passenger loading and unloading). Shifting vehicular traffic away from the terminal curbside would provide better utilization of the existing curbside capacity, and enhance security at the Airport by providing greater separation between vehicle staging areas along the curbside and the terminal complex.

As passenger activity increases, demand for commercial vehicle services will also increase. Active management of the intermodal curbside may be required to prevent vehicle queues from extending beyond the curbside queuing area. Thus, a separate commercial vehicle queuing area may become necessary. This would be an operational change that will need to be considered and evaluated as Airport activity increases in the future.

4.4.8 Terminal Capacity Summary

Various terminal facilities were considered in the demand/capacity analyses, including aircraft gates, passenger security screening checkpoints, various ticketing modes (curbside, kiosks, and staffed ticket counters), the processing of inbound and outbound baggage, and concessions. As demonstrated in previous sections, these various facilities are adequate to serve existing demand (789,165 enplaned passengers in FY 2007), as well as anticipated demand at PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP). The following provides a capacity summary of the various terminal elements cited above:

- Overall **terminal gate** capacity - The gate utilization analysis revealed that SRQ can accommodate between 2.5 MAP and 3.4 MAP (with 130,000 enplaned passengers per gate).
- **Passenger security screening checkpoints** – The existing six magnetometers have the capacity to accommodate between 822 (at 137 passengers per lane) and 1,080 passengers per hour (at 180 passengers per lane).

[4] Sarasota Manatee Airport Authority, *Ground Transportation Operating Rules and Regulations, Sarasota Bradenton International Airport*, November 19, 2007.

- **Ticketing** - The existing staffed ticket counter positions and kiosks combined have a total throughput of 713 passengers per 20-minute intervals.
- **Outbound baggage** – The EDS three-pod system (third pod to be operational by the end of 2009) will have a throughput capacity of 1,350 bags per hour.
- **Inbound baggage** – The claim area consists of three claim devices. These claim devices have a total capacity of 1,200 bags per hour.

4.5 Public Parking

Existing and future public parking needs were assessed based on passenger activity in the Baseline Forecasts and Accelerated Baseline Forecasts. The feasibility of constructing a parking garage adjacent to the terminal building is also addressed.

4.5.1 Public Parking Inventory

The Airport provides both short-term and long-term public parking, as shown on **Exhibit IV-20**. Short-term public parking is provided in the surface parking lot adjacent to the terminal building and extends south to the main east-west drive aisle within the lot. The remainder of the parking spaces south of the east-west drive aisle bisecting the parking lot are available for long-term parking. Both public parking areas are a short walk to the terminal building; however, shuttle bus service is provided between the long-term parking lot and the terminal curbside.

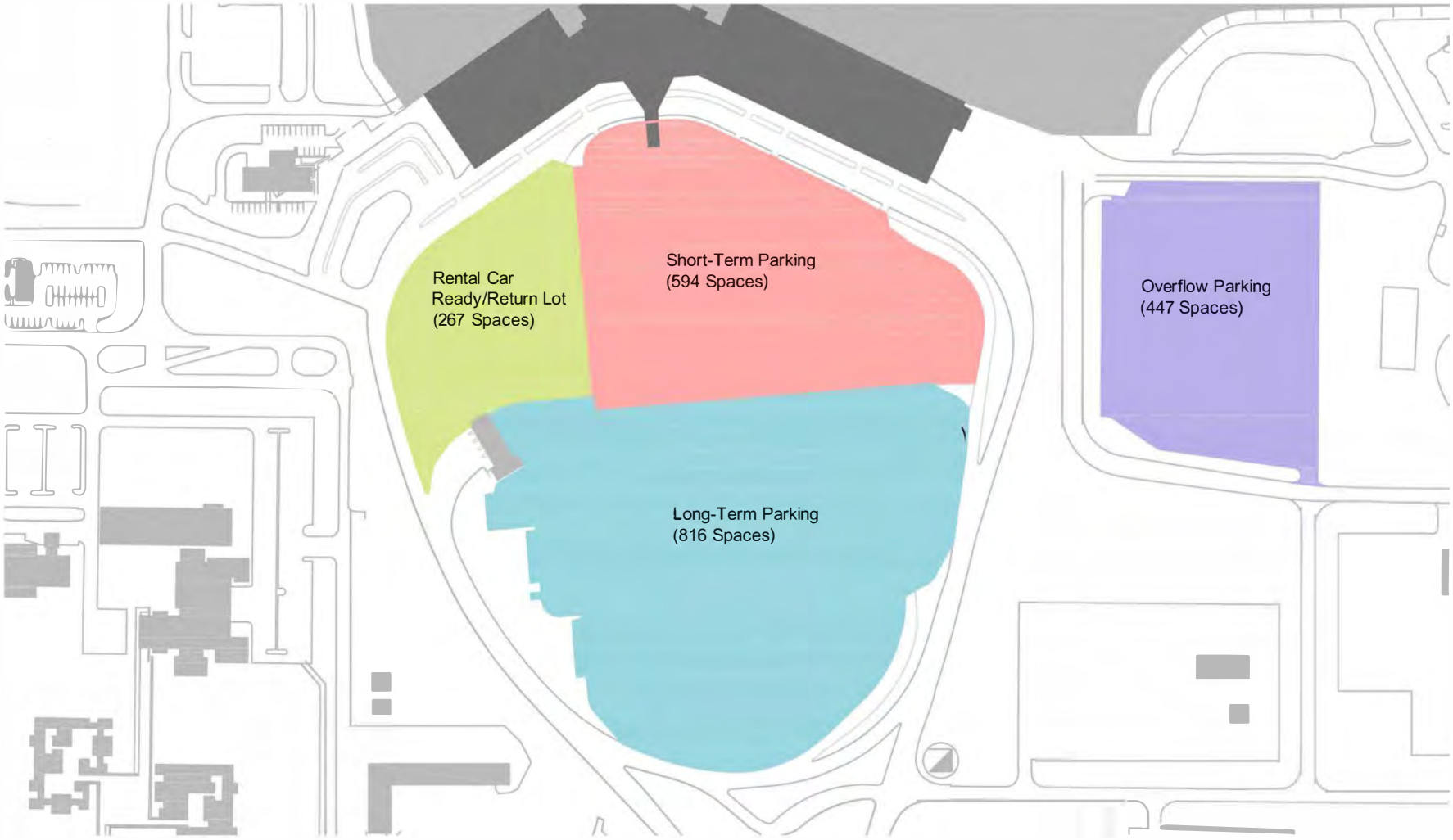
The short-term public parking area has a capacity of 594 spaces, while the long-term public parking area has a capacity of 816 spaces. **Table IV-14** provides a summary of the public parking rates at SRQ as of October 1, 2007.

Table IV-14

Public Parking Rates at the Airport as of May 2007

Type	Parking Rate	
Short-term	0-30 minutes:	No charge
	31-60 minutes:	$2.00
	61-90 minutes:	$3.00
	91-120 minutes:	$4.00
	2-3 hours:	$6.00
	3-4 hours:	$8.00
	4-5 hours:	$10.00
	5-6 hours:	$12.00
	6-24 hours:	$13.00
Long-term	0-30 minutes:	No charge
	31-60 minutes:	$2.00
	1-2 hours:	$4.00
	2-4 hours:	$6.00
	4-6 hours:	$8.00
	6-8 hours:	$10.00
	8-24 hours:	$11.00
Weekly Rate	$70 flat rate	

Source: SarasotaManatee Airport Authority, October 1, 2007.
Prepared by: Ricondo & Associates, Inc., December 2007.



Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-20

0 N.T.S. north

Existing Parking and Rental Car Ready/Return Lots

Drawing: P:\Sarasota\Master Plan\Task 5 - Landside Systems\Landside Exhibits_031809\Roadway Links_031909-RL.dwg Layout: 8.5x11 Exh 4-20 Apr 24, 2009, 2:21pm

4.5.2 Existing Public Parking Demand

To determine future public parking facility requirements at an airport, an understanding of parking demand is required. Historical parking data, such as customer transactions and overnight parking counts, are required to ensure a thorough understanding of parking demand by product. Understanding existing parking demand and comparing that demand to current passenger numbers allows the establishment of relationships between existing parking product demand and future passenger activity. At the time this analysis was conducted, parking data for calendar year 2006 were the latest data available. Therefore the existing conditions for the parking analyses are based on calendar year 2006.

Existing public parking demand characteristics are typically based on a full year of historical parking data. **Exhibit IV-21** provides the existing (2006) public parking demand for all parking facilities at the Airport. **Exhibit IV-22** and **Exhibit IV-23** provide the existing short-term and long-term public parking demand, respectively.

Exhibit IV-24 shows maximum daily demand for all on-Airport public parking facilities in 2006, sorted by decreasing order of magnitude. Highlighted are various relevant holiday periods of peak activity. Also highlighted is the selected design day. The design day is typically selected as an average busy day during the peak month from a parking demand standpoint, which is then used as a basis for forecasting demand in all facilities.

4.5.3 Existing and Future Requirements

The first step in forecasting future requirements was to convert the existing demand into requirements. A design day buffer of 10 percent was applied to the on-Airport demand to reflect the fact that the SMAA closes facilities before they reach 100 percent capacity to avoid customers entering facilities and searching unsuccessfully for empty parking spaces. Peak day conditions were used to determine total capacity requirements (including overflow lots), so no buffer was applied. **Table IV-15** summarizes existing (2006) public parking design day and peak day demands and requirements. All parking requirements were rounded up to the nearest 10 spaces.

Table IV-15

Existing Public Parking Space Requirements

	2006			
	Capacity	Demand[3/]	Buffer[4/]	Required
Design Day[1/]				
Short-Term Lot	594	339	10%	380
Long-Term Lot	816	660	10%	730
All Facilities	1,410	999	10%	1,110
Peak Day[2/]				
All Facilities	1,410	1,363	-	1,370

Notes:

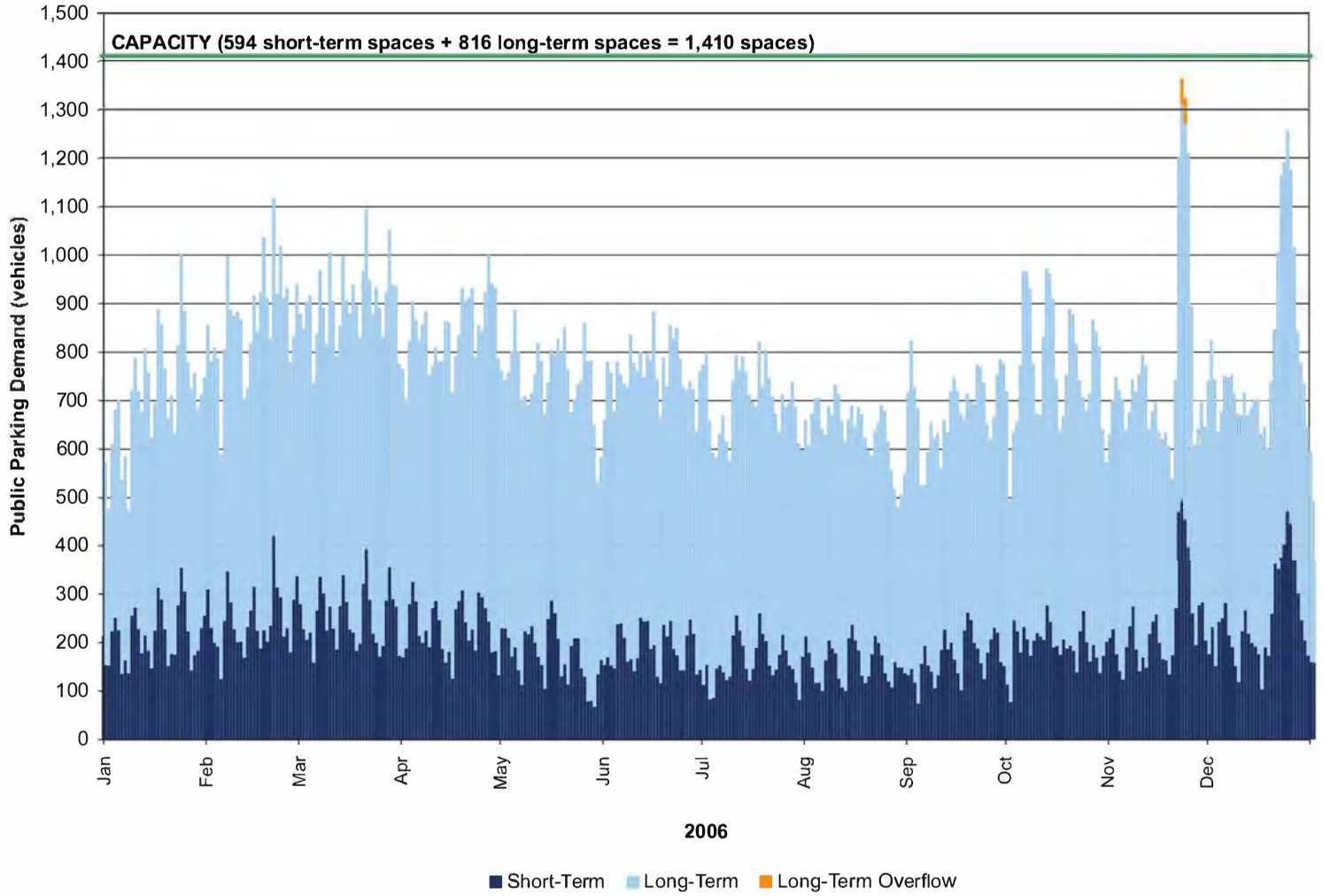
1/ Parking demand on March 14, 2006, met or exceeded the daily peak parking demand of 94.5 percent of all days in 2006.

2/ Parking demand on November 23, 2006, exceeded the daily peak parking demand of all other days in 2006.

3/ Maximum daily occupancy.

4/ The buffer is the factor applied to estimate the number of spaces required to meet demand plus additional spaces required to meet level of service standards.

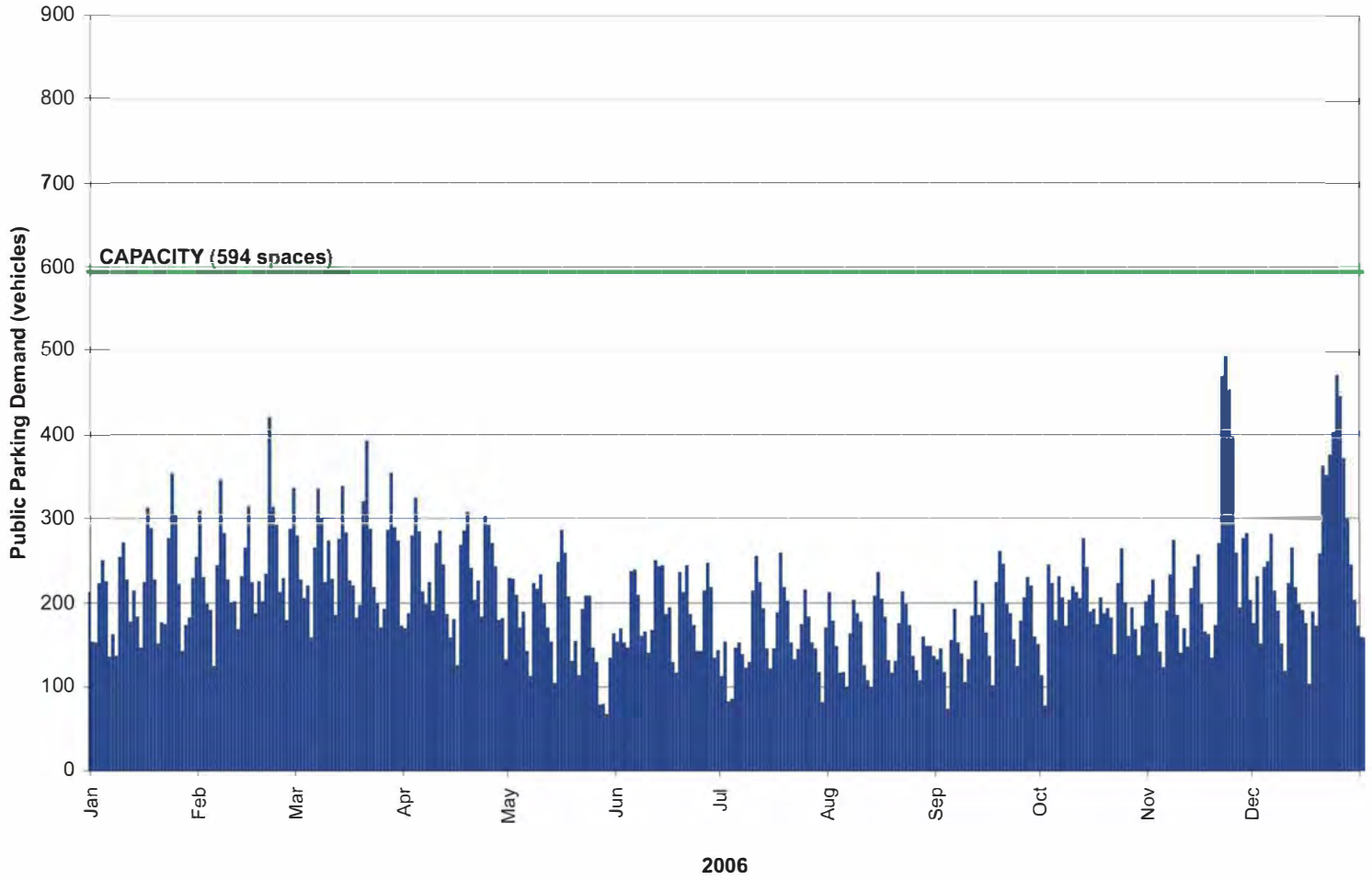
Sources: Parking data from Republic Parking; Ricondo & Associates, Inc., July 2007.
Prepared by: Ricondo & Associates, Inc., 2007



Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-21

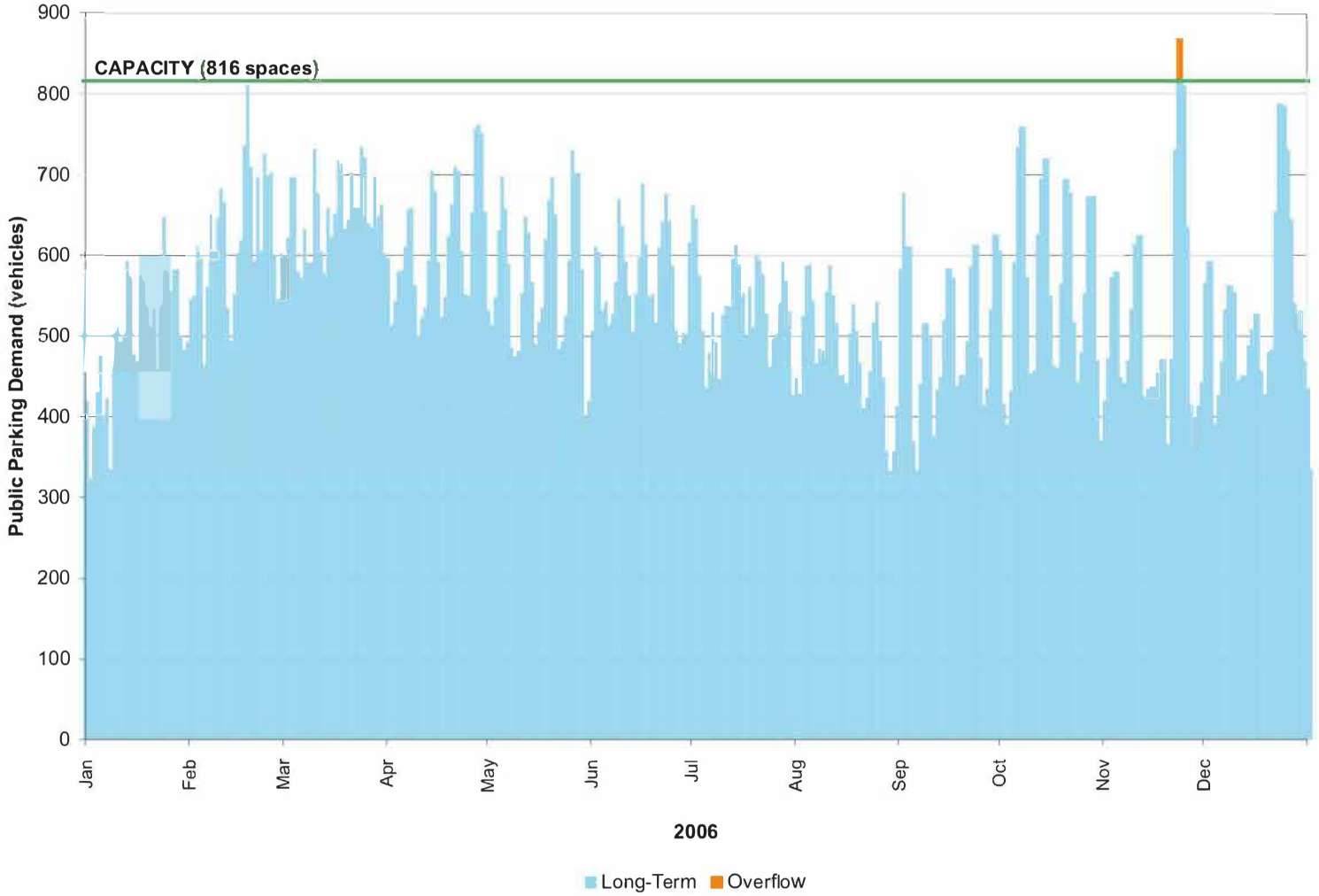
Existing (2006) Public Parking Demand
All Facilities



Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-22

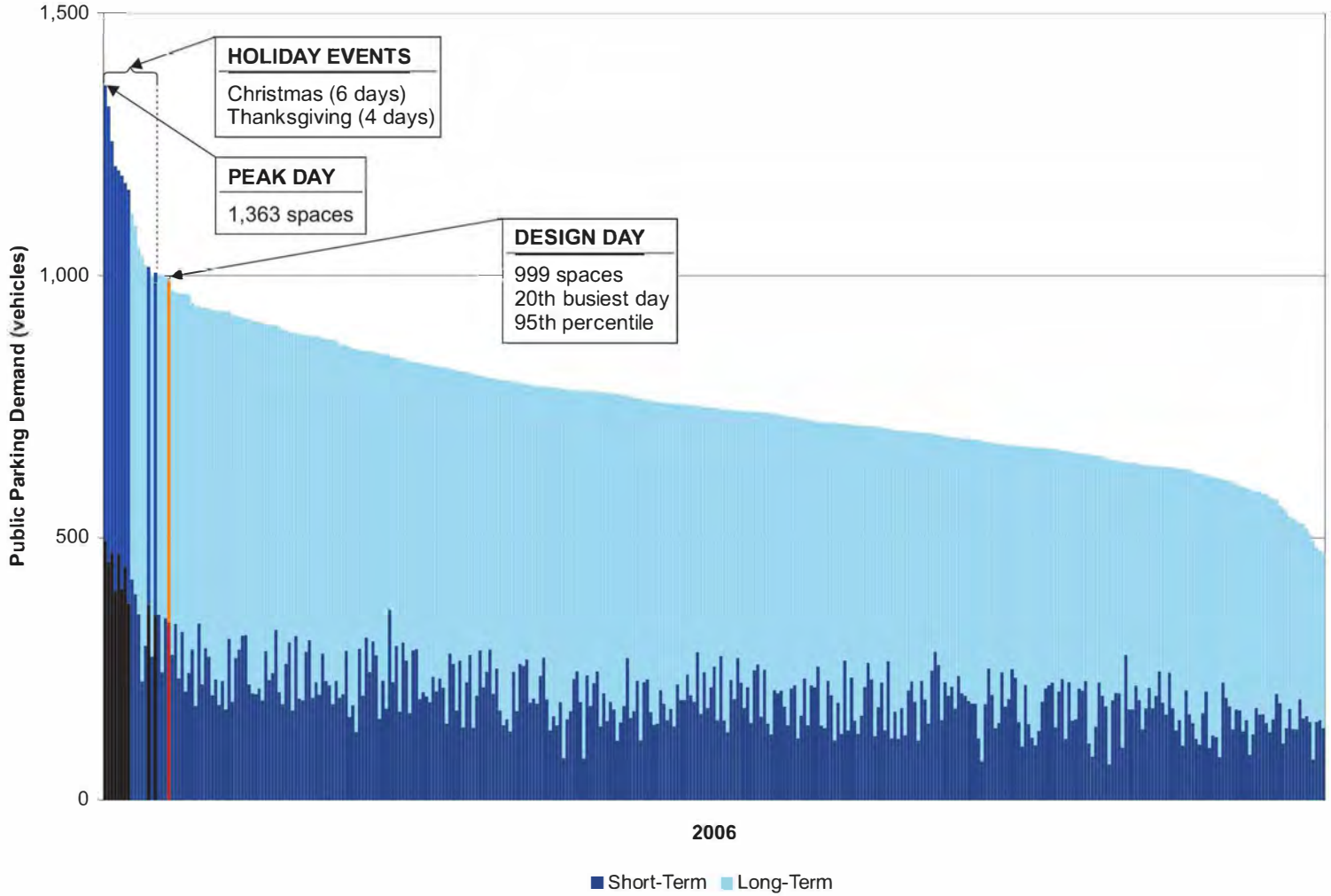
Existing (2006) Public Parking Demand
Short-Term Lot



Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-23

Existing (2006) Public Parking Demand
Long-Term Lot



Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-24

Existing (2006) Maximum Daily Demand for All On-Airport Public Parking Facilities Sorted by Magnitude

For design purposes, short-term and long-term public parking requirements were determined to be 380 and 730 spaces, respectively, when the buffer is considered. Under the peak day scenario, the parking requirement for both short-term and long-term public parking in 2006 totals 1,370 spaces.

Once existing requirements were established, the estimated number of on-Airport spaces that would be required to accommodate demand at various passenger activity levels was analyzed. This approach allows the SMAA to add capacity or adjust parking products as Airport passenger activity changes. **Table IV-16** summarizes on-Airport public parking requirements and surpluses or deficits for the design day and peak day, for both the Baseline Forecasts and Accelerated Baseline Forecasts. **Exhibit IV-25** through **Exhibit IV-28** depict the short- and long-term public parking lot design day and peak day parking space requirements for both the Baseline Forecasts and Accelerated Baseline Forecasts.

4.5.4 Future Parking Capacity Enhancements

The public parking requirements analysis indicates that the existing parking supply is insufficient to accommodate future parking demand as activity at the Airport continues to increase. To address the shortfall in the future public parking supply, the recommended expansion alternative is to convert the existing employee lot on the eastern end of the terminal building to additional long-term public parking. This recommended expansion of the public parking supply would provide approximately 447 additional spaces.

An expansion alternative would include the construction of a parking structure in the existing short-term public parking lot to provide the required capacity to accommodate future parking demand and potentially accommodate a consolidated rental car facility. These alternatives are discussed in the following sections.

4.5.5 Parking Garage Feasibility

As previously described, the Airport currently provides both short-term and long-term public parking spaces in two surface lots adjacent to the south side of the terminal building and contained within the on-Airport circulation roadway. The SMAA is interested in assessing the potential for a new parking garage adjacent to the terminal building to improve customer service and accommodate future parking demand. It was assumed that a new garage for public parkers would provide for some short-term surface parking adjacent to the garage, but located within the existing boundaries of the short-term lot either to the east, west, or south of the garage. A new garage would allow the Airport Authority to offer convenient parking close to the terminal building, while protecting both customers and vehicles from weather elements, such as the sun and rain.

Public parking demand forecasts for short-term and long-term products were developed for the 20-year planning horizon for both the design day and the peak day. To assess the feasibility of a public parking structure at SRQ, parking durations by public parking facility were analyzed. Public parking transaction data provided by Republic Parking were used in the analysis to identify parking space demand by duration. Peak parking demand and peak overnight demand for each facility, monthly public parking transactions sorted by duration, and assumed turnover per space rates were considered. The data were used to generate parking space demand by duration for both the short-term and long-term lots. **Table IV-17** and **Exhibit IV-29** highlight parking space demand in the short-term lot by duration and reveal that more than 95 percent of all customer transactions are for durations less than 4 hours. It was also determined that 45.5 percent of the short-term space demand is generated by vehicles parking less than 4 hours, and the remaining 54.5 percent of the short-term

Table IV-16

On-Airport Public Parking Requirements[1/]

	2006 (Existing)			Forecasts							
				Baseline				Accelerated Baseline			
	Demand[4/]	Service Factor[5/]	Required	2011	2016	2021	2026	2011	2016	2021	2026
Million Annual Passengers (MAP)				1.7	1.9	2.0	2.1	1.7	2.3	2.4	2.5
Design Day[2/]											
Passenger Demand											
Short-Term Lot	339	10%	380	450	510	540	560	570	610	650	680
Long-Term Lot	660	10%	730	880	980	1,050	1,090	1,110	1,190	1,250	1,320
All Facilities	999	10%	1,110	1,330	1,490	1,590	1,650	1,680	1,800	1,900	2,000
Capacity											
Short-Term Lot	594	-	-	-		-	-	-		-	-
Long-Term Lot	816	-	-	-		-	-	-		-	-
All Facilities	1,410	-	-	-		-	-	-		-	-
Surplus / (Deficit)											
Short-Term Lot	255	-	214	144	84	54	34	24	(16)	(56)	(86)
Long-Term Lot	156	-	86	(64)	(164)	(234)	(274)	(294)	(374)	(434)	(504)
All Facilities	411	-	300	80	(80)	(180)	(240)	(270)	(390)	(490)	(590)
Peak Day[3/]											
Passenger Demand											
Short-Term Lot	494	-	494	593	666	711	738	749	807	848	892
Long-Term Lot	869	-	869	1,043	1,171	1,252	1,299	1,318	1,420	1,492	1,569
All Facilities	1,363	-	1,363	1,637	1,837	1,963	2,037	2,068	2,227	2,341	2,460
Capacity											
Short-Term Lot	594	-	-	-		-	-	-		-	-
Long-Term Lot	816	-	-	-		-	-	-		-	-
All Facilities	1,410	-	-	-		-	-	-		-	-
Surplus / (Deficit)											
Short-Term Lot	100	-	100	1	(72)	(117)	(144)	(155)	(213)	(254)	(298)
Long-Term Lot	(53)	-	(53)	(227)	(355)	(436)	(483)	(502)	(604)	(676)	(753)
All Facilities	47	-	47	(227)	(427)	(553)	(627)	(658)	(817)	(931)	(1,050)

Notes:

1/ Parking requirements are provided in 5-year increments to allow the Airport Authority to monitor parking demand for short-term periods (i.e., 5 years). For comparison purposes, PAL 1 and PAL 2 demand corresponds approximately to the 2015 and 2025 timelines.

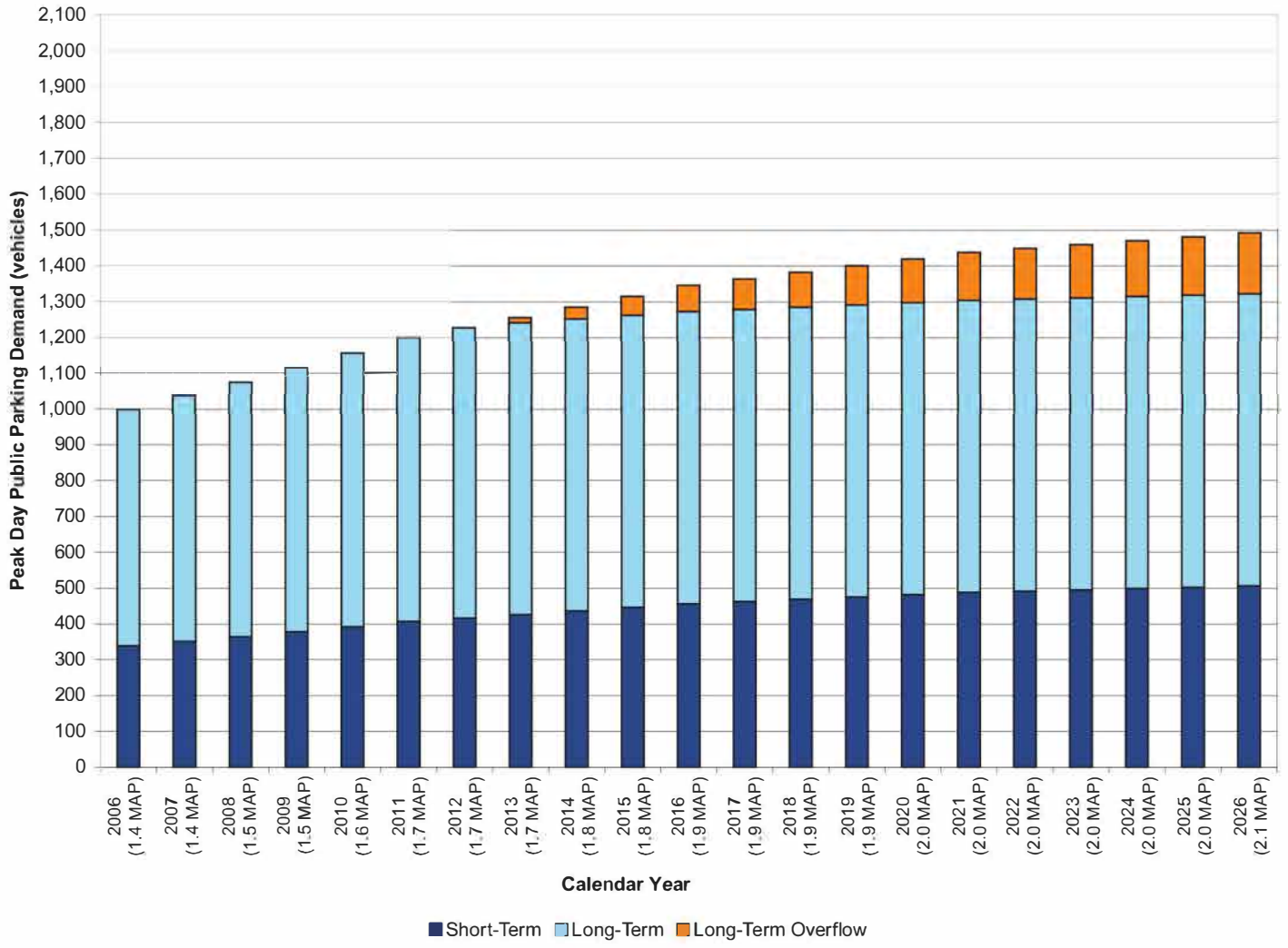
2/ Parking demand on March 14, 2006, met or exceeded the daily peak parking demand of 94.5 percent of all days in 2006.

3/ Parking demand on November 23, 2006, exceeded the daily peak parking demand of all other days in 2006.

4/ Maximum daily occupancy.

5/ Factor applied to estimate the number of spaces required to meet demand plus additional spaces required to meet level of service standards.

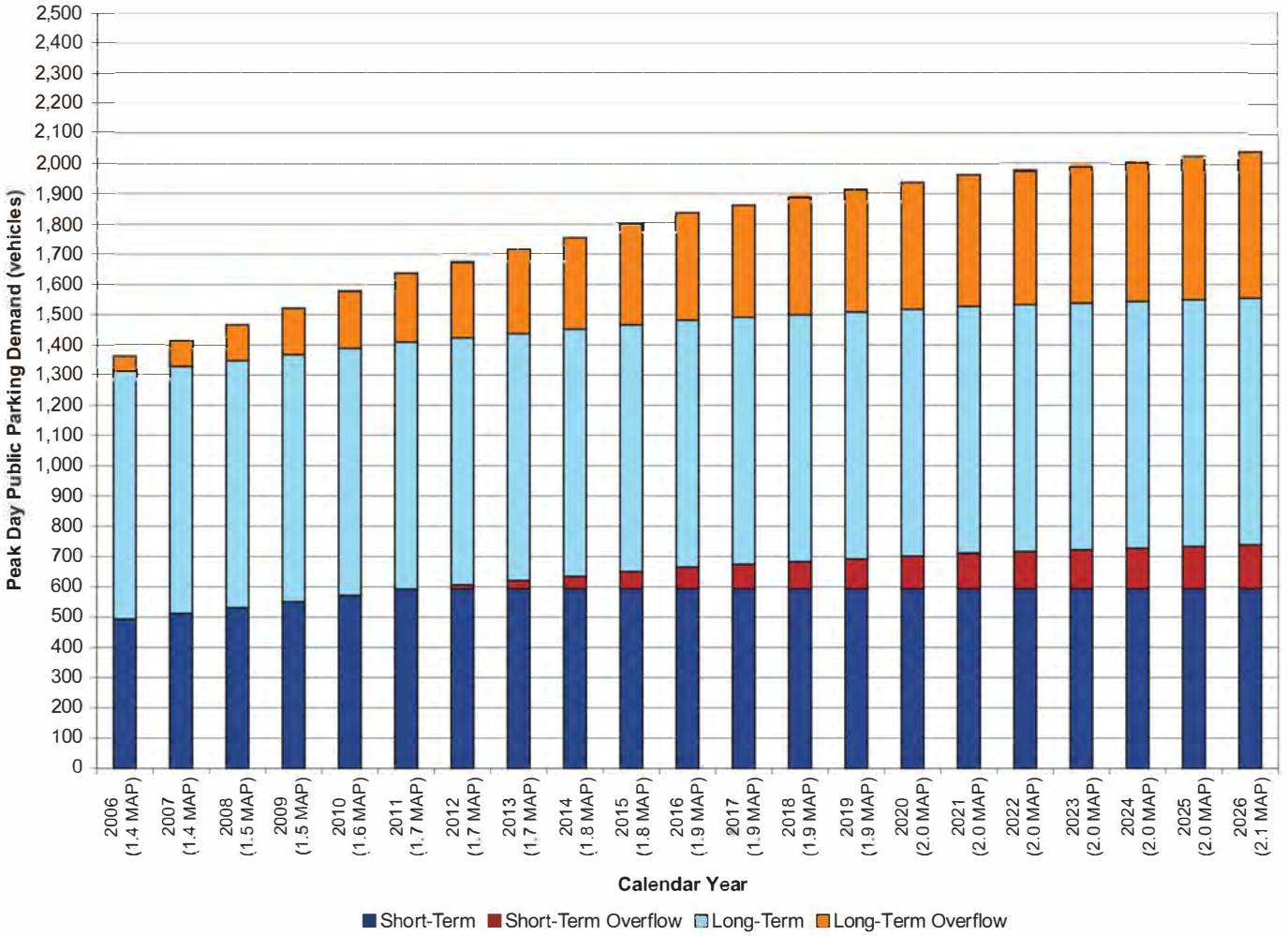
Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared By: Ricondo & Associates, May 2008.



Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

Exhibit IV-25

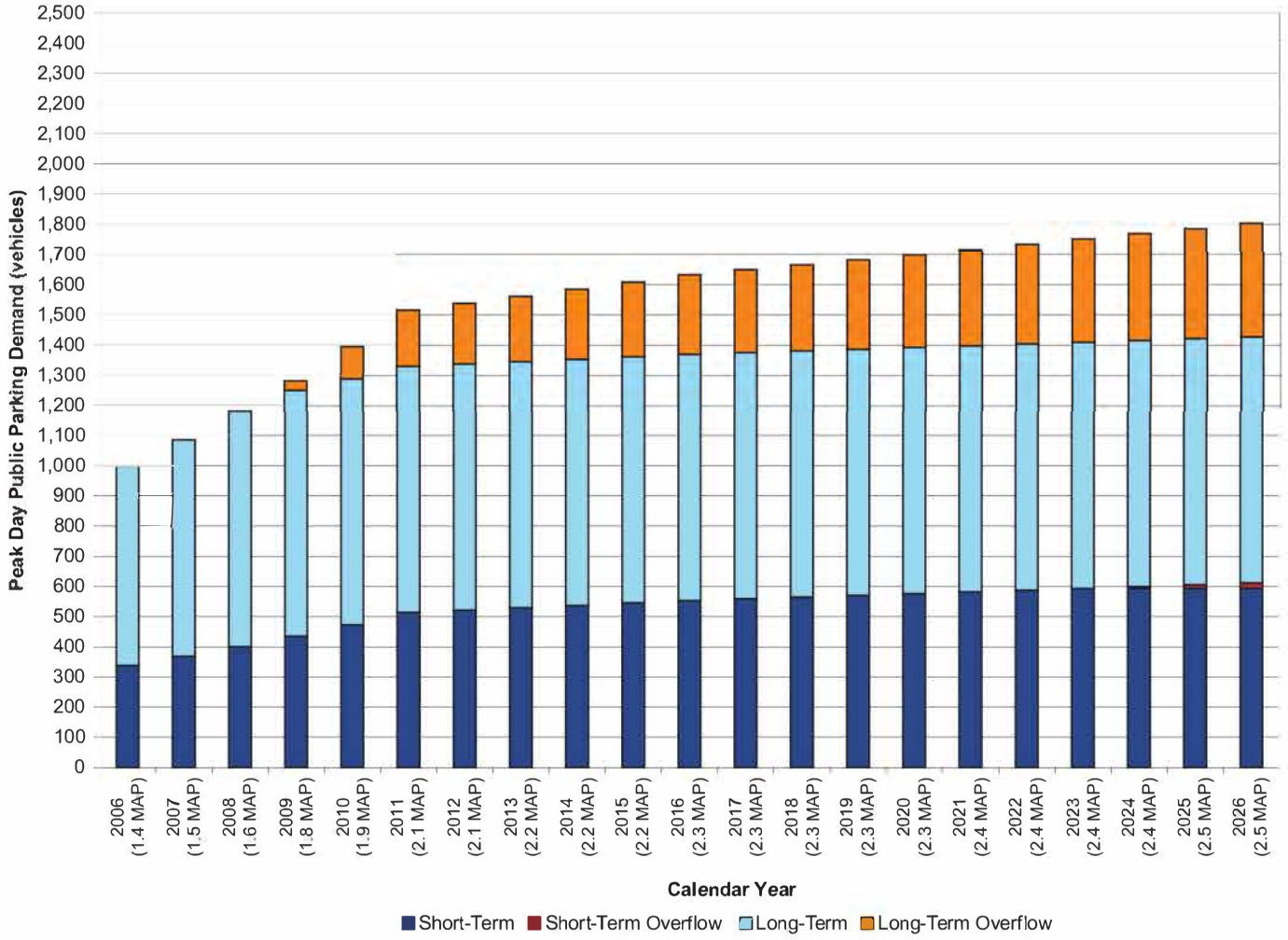
Baseline Forecast Public Parking Demand Design Day



Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

Exhibit IV-26

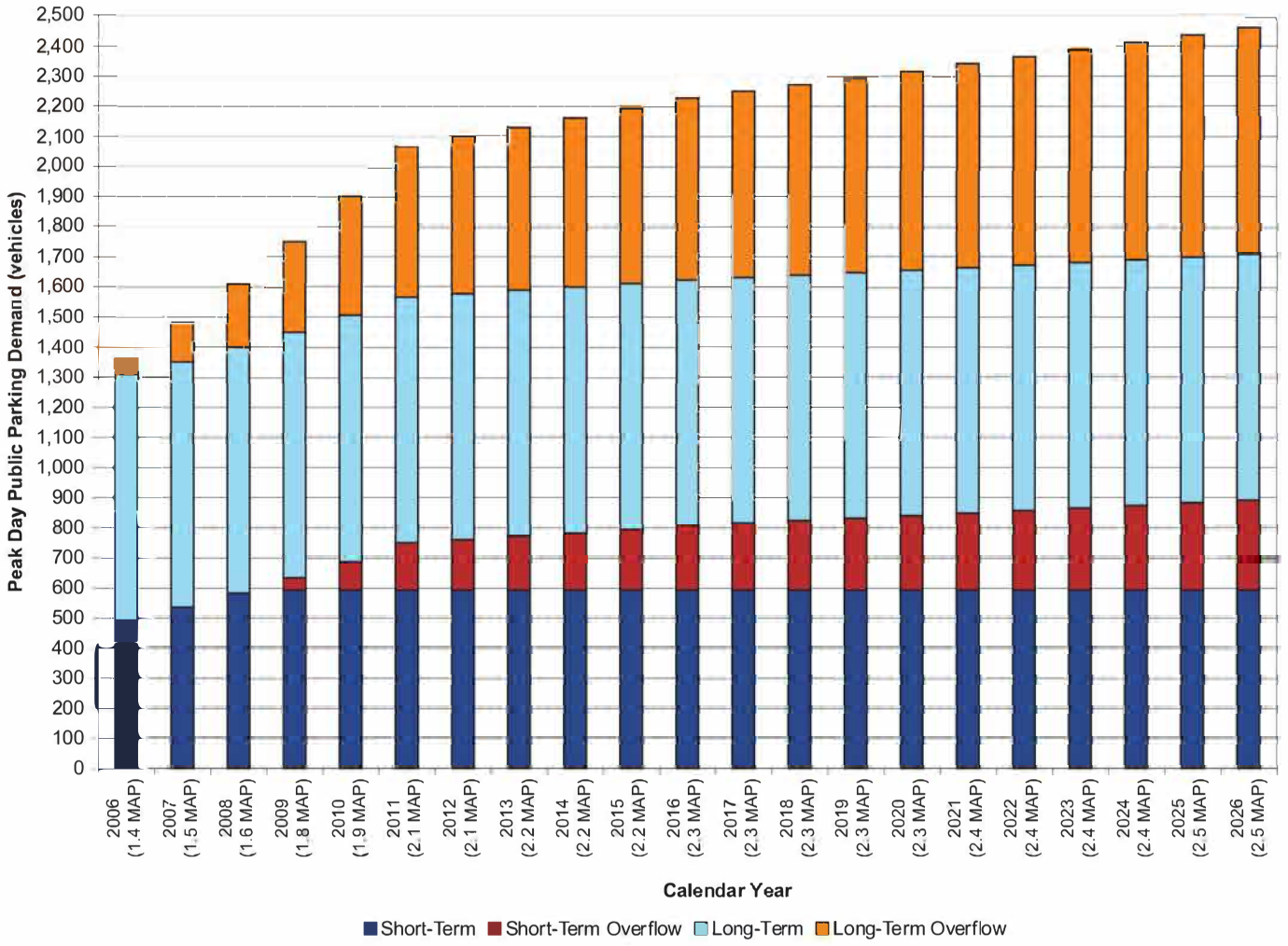
Baseline Forecast Public Parking Demand Peak Day



Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

Exhibit IV-27

Accelerated Baseline Forecast Public Parking Demand Design Day



Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

Exhibit IV-28

Accelerated Baseline Forecast Public Parking Demand Peak Day

Table IV-17

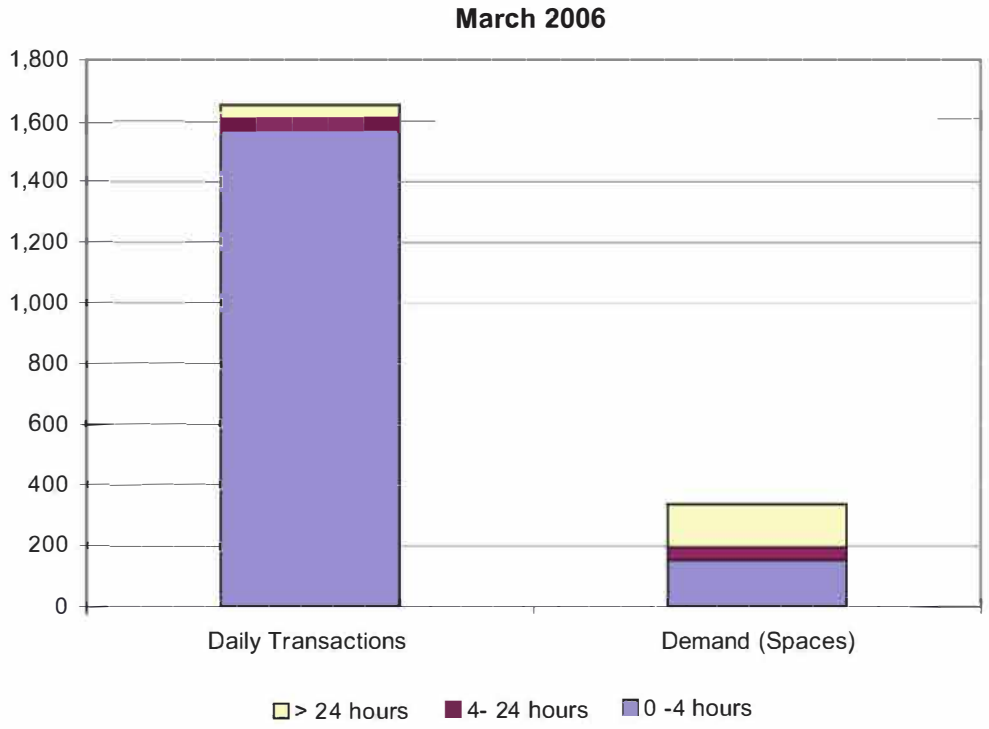
Existing Parking Space Demand by Duration, Short-Term Lot

Duration	Revenue per Transaction	Monthly Transactions	Monthly Revenue	Daily Transaction Busy day = 1/31*1.41	Busy Day Demand (spaces)	Assumed Turns per Space
0 hour <= 2 hours	$ 0.41	33,805	$13,872.00	1,537	154	10.00
2 hours <= 4 hours	$ 24.92	707	$17,618.00	32	4	8.00
4 hours <= 6 hours	$ 40.45	75	$ 3,034.00	3	1	6.00
6 hours<= 8 hours			$ 985.00	0	0	1.50
8 hours <= 24 hours	$ 1.68	422	$ 711.00	19	16	1.20
1 day<= 2 days	$ 11.85	426	$ 5,046.00	19	27	0.71
2 days<= 3 days	$ 25.67	383	$ 9,833.00	17	42	0.42
3 days<= 4 days	$ 48.95	274	$13,411.00	12	42	0.29
4 days<= 5 days	$ 87.23	147	$12,823.00	7	29	0.23
5 days<= 6 days	$151.30	57	$ 8,624.00	3	14	0.19
6 days<= 7 days	$223.44	18	$ 4,022.00	1	5	0.16
> 7 days	$ 44.85	33	$ 1,480.00	2	14	0.11
			$ 3,766.00			
Total Estimated:		36,347	$95,225.00	1,653	348	

Duration		Monthly Transactions	Transactions by Duration	Transactions by Spaces	Parking Space Demand
0 hour<= 4 hour		34,587	95.16%	45.53%	154
4 hours<= 24 hours		848	2.33%	12.40%	42
> 1 day		912	2.51%	42.08%	143
	Total	36,347			339

Sources: Public Parking Data from Republic Parking, July 2007: Ricondo & Associates, Inc., May 2008.
Prepared By: Ricondo & Associates, May 2008.

Duration	Daily Transactions	Demand (Spaces)
0 hour < Duration <= 4 hour	1,573	154
4 hours < Duration <= 24 hours	39	42
Duration > 1 day	41	143



Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

Exhibit IV-29

Existing Parking Space Demand by Duration (March 2006)
Short-Term Lot

space demand is generated by vehicles parking longer than 4 hours. This implies that, while most of the transactions in the short-term lot are for customers parking less than 4 hours, these same customers use less than half the spaces available, while the 5 percent of customers who park longer than 4 hours use 54 percent of the spaces available. **Table IV-18** and **Exhibit IV-30** highlight parking space demand in the long-term lot by duration. More than 98 percent of all customers who park in the long-term lot park for more than 24 hours.

Tables IV-17 and IV-18 provide a breakdown of March 2006 parking durations for both the short- and long-term public parking lots at SRQ. To assess the feasibility of constructing a parking garage at the Airport, it is important to have knowledge of parking characteristics, such as duration of stay for existing customers, and to be able to reasonably predict how many existing customers in either the short-term or long-term lot might park in a new garage adjacent to the terminal building. For the purposes of this analysis, it was assumed that a new public parking garage, if constructed, would be located on the site of the existing short-term public parking lot adjacent to the terminal building. **Table IV-19** presents estimated demand for a public parking garage based on the parking duration characteristics of existing parking customers. It was assumed that 90 percent of all customers who today park in the short-term public parking lot for less than 4 hours would, in the future, park in a garage if available, while approximately 20 percent of all long-term public parking customers who park for longer than 24 hours would park in a garage, if available. Directly derived from airports with similar characteristics and adapted to SRQ conditions, it was estimated that 43 percent of parking customers would choose to park in a new garage, 8 percent would park in a short-term surface lot adjacent to a new garage, and the remaining 49 percent would park in the long-term surface lot. **Table IV-20** presents the existing and future public parking demand for a garage, if available, as well as the short-term and long-term surface lots. The public parking garage alternatives are presented in Chapter V of this document.

4.6 Rental Car Facilities

Six rental car companies operate at SRQ, two of which operate two brands. These companies are Alamo/National, Avis, Budget, Dollar/Thrifty, Enterprise, and Hertz. The demand/capacity analyses of these eight rental car brands was initiated by sending a survey to the companies to obtain information regarding their space needs and operating requirements. A copy of this survey is provided in **Appendix C**. Information collected from each rental car company consisted of the following:

- **Existing Facility Information** – Includes facilities that the rental car companies use on a regular basis, such as counters, ready/return spaces, storage spaces, and service areas. This information served as the basis for assessing the physical size of the existing rental car operation.
- **Gross Revenue Data** – Includes total revenue reported by the rental car companies. The data were analyzed in aggregate (data for all rental car companies were combined) to determine historical trends in rental car activity at SRQ.
- **Number of Rental Car Transactions** – A transaction consists of the rental of a vehicle, regardless of the duration for which it is rented. The data were collected and analyzed in aggregate to assess historical trends in rental car activity.
- **Number of Transaction Days** – Transaction days reflect the number of days for which a vehicle is rented. The data were analyzed in aggregate and used in the affordability analysis.
- **Hourly Transaction Data** – The number of transactions by hour were collected to determine peak-hour facility requirements.

Table IV-18

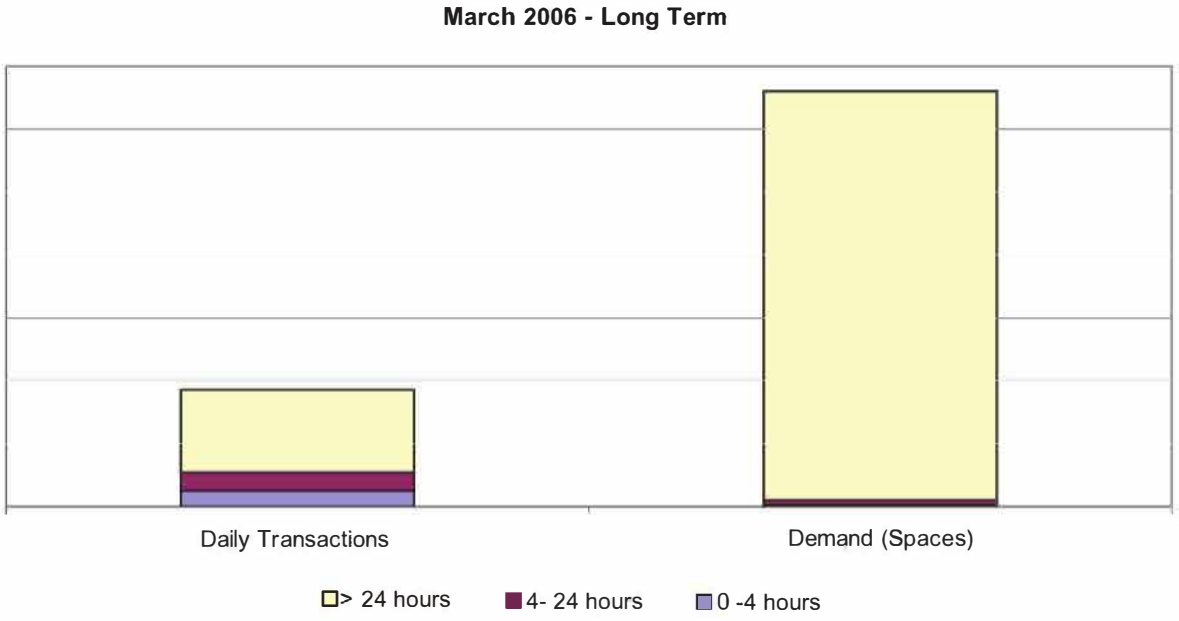
Existing Parking Space Demand by Duration, Long-Term Lot

Duration	Revenue per Transaction	Monthly Transactions	Monthly Revenue	Daily Transaction Busy day = 1/31*1.08	Busy Day Demand (spaces)	Assumed Turns per Space
0 hour<= 2 hour	$ 1.08	656	$ 711.00	23	2	10.00
2 hours<= 4 hours	$ 5.00	42	$ 210.00	1	0	8.00
4 hours<= 6 hours	$ 7.00	27	$ 189.00	1	0	6.00
6 hours<= 8 hours	$ 9.00	26	$ 234.00	1	1	1.50
8 hours<= 24 hours	$10.00	203	$ 2,030.00	7	6	1.20
1 day<= 2 days	$18.94	607	$11,497.00	21	30	0.71
2 days<= 3 days	$28.62	1,137	$32,536.00	40	95	0.42
3 days<= 4 days	$38.38	1,009	$38,728.00	35	119	0.29
4 days<= 5 days	$48.36	688	$33,274.00	24	105	0.23
5 days<= 6 days	$58.49	355	$20,765.00	12	67	0.19
6 days<= 7 days	$65.36	205	$13,399.00	7	46	0.16
> 7 days	$95.81	380	$ 36,407.00	13	119	0.11
Total Estimated:		5,335	$189,980.00	185	590	

Duration	Monthly Transactions	Transactions by Duration	Transactions by Spaces	Parking Space Demand
0 hour<= 4 hour	698	13.08%	0.42%	3
4 hours<= 24 hours	256	4.80%	1.13%	7
> 1 day	4,381	82.12%	98.45%	650
Total	5,335			660

Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, May 2008.

Duration	Daily Transactions	Demand (Spaces)
0 hour < Duration <= 4 hour	25	3
4 hours < Duration <= 24 hours	29	7
Duration > 1 day	131	650



Sources: Public Parking Data from Republic Parking, July 2007; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

Exhibit IV-30

Existing Parking Space Demand by Duration (March 2006)
Long-Term Lot

Table IV-19

Estimated Demand for New Public Parking Garage

Short-Term Lot				Long Term Lot					Combined Facilities				
	Parking Garage	Short-Term Surface Lot	Total		Parking Garage	Short-Term Surface Lot	Long-Term Surface Lot	Total		Potential Parking Garage	Short-Term Surface Lot	Long-Term Surface Lot	Total
Total Parking Demand			**339**	Total Parking Demand				**660**	Total Parking Demand				999
Parking Demand (spaces)			Short Duration (0 -4 hours)	Parking Demand (spaces)					Parking Demand (spaces)				
Short Duration (0 -4 hours)	139	15	154	Short Duration (0 -4 hours)	3	0	0	3	Short Duration (0 -4 hours)	142	15	0	157
Mid Duration (4- 24 hours)	38	4	42	Mid Duration (4- 24 hours)	6	0	1	7	Mid Duration (4- 24 hours)	44	5	1	**50**
Long Duration (> 24 hours)	114	29	143	Long Duration (> 24 hours)	130	32	487	**649**	Long Duration (> 24 hours)	244	61	487	792
Total	**291**	**48**	**339**		**139**	**32**	**488**	660		**430**	**81**	**488**	**999**
										43%	8%	49%	
Space Demand Distribution by Facility			Total	Space Demand Distribution by Facility				Total	Space Demand Distribution by Facility				Total
Short Duration (0 -4 hours)	90%	10%	100%	Short Duration (0 -4 hours)	100%	0%	0%	100%	Short Duration (0 -4 hours)	90%	10%	0%	100%
Mid Duration (4- 24 hours)	90%	10%	100%	Mid Duration (4- 24 hours)	80%	5%	15%	100%	Mid Duration (4- 24 hours)	88%	9%	2%	100%
Long Duration (> 24 hours)	80%	20%	100%	Long Duration (> 24 hours)	20%	5%	75%	100%	Long Duration (> 24 hours)	31%	8%	62%	100%
Space Demand Distribution by Duration				Space Demand Distribution by Duration					Space Demand Distribution by Duration				
Short Duration (0 -4 hours)	48%	32%	79%	Short Duration (0 -4 hours)	2%	0%	0%	1%	Short Duration (0 -4 hours)	33%	19%	0%	16%
Mid Duration (4- 24 hours)	13%	9%	21%	Mid Duration (4- 24 hours)	4%	1%	0%	1%	Mid Duration (4- 24 hours)	10%	6%	0%	5%
Long Duration (> 24 hours)	39%	59%	73%	Long Duration (> 24 hours)	94%	99%	100%	98%	Long Duration (> 24 hours)	57%	75%	100%	79%
Total	100%	100%	173%		100%	100%	100%	100%		100%	100%	100%	100%

Source: Ricondo & Associates, May 2008.
Prepared by: Ricondo & Associates, May 2008.

Table IV-20

Estimated Public Parking Demand by Facility

Baseline Forecasts - Parking Spaces

				Parking Product Distribution			
				Short-Term		Long-Term	
Year	Short-Term	Long-Term	Total	Parking Garage	Surface Lot	Surface Lot	Total
2006	339	660	999	430	81	488	999
2011	450	880	1,330	571	108	651	1,330
2016	510	980	1,490	643	121	725	1,490
2021	540	1,050	1,590	684	129	777	1,590
2026	560	1,090	1,650	709	134	807	1,650

Accelerated Baseline Forecasts - Parking Spaces

				Parking Product Distribution			
				Short-Term		Long-Term	
Year	Short-Term	Long-Term	Total	Parking Garage	Surface Lot	Surface Lot	Total
2006	339	660	999	430	81	488	999
2011	570	1,110	1,680	722	136	822	1,680
2016	610	1,190	1,800	773	146	881	1,800
2021	650	1,250	1,900	820	155	925	1,900
2026	680	1,320	2,000	861	162	977	2,000

Source: Ricondo & Associates, January 2008.
Prepared By: Ricondo & Associates, January 2008.

Completed surveys were obtained from all eight rental car brands. **Table IV-21** presents an aggregate summary of the existing rental car facilities at SRQ.

Table IV-21

Existing Rental Car Facilities (All Rental Car Companies Combined)

Ready/Return Spaces	251
Storage Spaces	1,886
Service Area:	
Maintenance Bays	9
Fueling Positions	14
Wash Bays	6

Sources: SRQ Rental Car Company Surveys, November 2007; Ricondo & Associates, Inc., September 2008.
Prepared by: Ricondo & Associates, Inc., September 2008.

According to the historical survey data, total rental car transactions increased from approximately 102,000 in 2004 to approximately 139,000 in 2006, representing a total growth rate of approximately 36 percent. During the same period, deplaned passengers at the Airport increased from 565,000 to almost 708,000, representing a total growth rate of 25 percent. SRQ is primarily an O&D airport. Connecting passengers represent less than 1 percent of total passengers at the Airport. Therefore, it was assumed that all passengers at SRQ are O&D passengers. **Table IV-22** presents a comparison of

terminating passengers and rental car transactions during this period. Also shown is the transactions per terminating passenger, which remained relatively stable, ranging between 18 percent and 20 percent in 2004 through 2006.

Table IV-22

Transactions per Terminating Passenger

Calendar Year	Terminating Passengers	Percent Growth	Total Transactions	Percent Growth	Transactions per Terminating Passenger
2004	565,667	--	101,977	--	18%
2005	665,583	17.7%	122,072	19.7%	18%
2006	707,976	6.4%	139,293	14.1%	20%

Sources: SRQ Rental Car Companies, November 2007; Ricondo & Associates, Inc., September 2008.
Prepared by: Ricondo & Associates, Inc., September 2008.

Based on the number of rental car transactions to be accommodated during a peak period at the Airport, the estimated sizing requirement for an Airport rental car facility was analyzed. The number of future rental car transactions was projected and the size of each primary component of a consolidated rental car facility was calculated.

For the purposes of this analysis, future rental car transactions were projected based on O&D passenger forecasts developed for the Master Plan Update in 5-year increments, similar to the parking demand/capacity and facility requirements analyses. Both the Baseline Forecasts and Accelerated Baseline Forecasts were used to project transaction growth. Consistent with historical trends, total rental car transactions are projected to increase at a similar rate as O&D passengers.

Table IV-23 presents projections of rental car activity at the Airport from 2006 through 2026 in 5-year increments. As shown, total rental car transactions under the Baseline Forecasts are projected to increase from approximately 689,973 in 2006 to approximately 929,000 in 2016 and approximately 1.0 million in 2026. Transactions under the Accelerated Baseline Forecasts are projected to increase from 689,673 in 2006 to approximately 1.1 million in 2016 and approximately 1.2 million in 2026.

Facility requirements were determined for the primary components of a rental car facility, including:

- **Ready/Return Car Parking** – Area that accommodates vehicles ready to be rented and returned vehicles that have been parked.
- **Vehicle Storage** – Area where vehicles that are not needed in the ready/return area are stored.
- **Quick Turnaround (QTA) Service Centers** – Area where vehicles are serviced and maintained. Facilities include maintenance bays, wash bays, and fuel islands.

It was assumed that the customer service counters would remain in the terminal building.

After the primary components of the rental car facility were appropriately sized, an initial site envelope was determined for conceptual site planning purposes. **Table IV-24** summarizes the facility requirements for the primary components for the Baseline Forecasts and Accelerated Baseline Forecasts and shows the total area required for each.

Table IV-23

Rental Car Activity Projections

Baseline Forecasts

Year	O&D Passengers	Total Transactions	Growth Rate
2006	689,673	139,293	--
2011	828,158	167,263	20.1%
2016	929,359	187,702	12.2%
2021	993,275	200,611	6.9%
2026	1,030,560	208,142	3.8%

Accelerated Baseline Forecasts

Year	O&D Passengers	Total Transactions	Growth Rate
2006	689,673	139,293	--
2011	1,046,159	211,292	51.7%
2016	1,127,010	227,622	7.7%
2021	1,184,499	239,233	5.1%
2026	1,244,921	251,436	5.1%

Sources: Survey sent to SRQ Rental Car Companies, November 2007; Ricondo & Associates, Inc., September 2008.
Prepared by: Ricondo & Associates, Inc., September 2008.

Table IV-24

Rental Car Activity Projections

		2011		2016		2021		2026	
	Existing	BF[1/]	ABF[2/]	BF[1/]	ABF[2/]	BF[1/]	ABF[2/]	BF[1/]	ABF[2/]
Million Annual Passengers (MAP)		1.7	2.1	1.9	2.3	2.0	2.4	2.1	2.5
Ready/Return Spaces	251	393	497	441	535	471	562	489	591
Storage Spaces	1,886	1,141	1,441	1,280	1,553	1,369	1,632	1,420	1,715
Quick Turn Around (QTA) Facilities									
Fuel Islands	14	16	21	19	22	20	24	21	25
Wash Bays	6	4	6	5	6	5	6	5	7

Notes:
1/ BF = Baseline Forecasts
2/ ABF = Accelerated Baseline Forecasts

Sources: SRQ Rental Car Company Survey, November 2007; Ricondo & Associates, Inc., September 2008.
Prepared by: Ricondo & Associates, Inc., September 2008.

4.7 On-Airport Roadway Access Capacity and Circulation Analyses

The demand/capacity analyses and facility requirements at SRQ included an assessment of the Airport's roadway capacity and circulation. Calendar year 2007 data were used to represent existing traffic volumes, roadway classifications, capacity, and levels of service.

4.7.1 Airport Roadway Traffic Volumes

The physical characteristics and estimated capacity of the roadway facilities, including the number of roadway lanes, were documented in Chapter II of this Master Plan Update. A single 7-day ATR count was conducted to determine the peak day and peak period for the Airport roadways. Following this 7-day count, 24-hour ATR counts were collected at 12 on-Airport roadway locations, and entry/exit information was collected from the Airport's parking revenue control system by time of day at six locations for the consecutive 24-hour period, coinciding with the peak day and time period identified in the 7-day count. **Exhibit IV-31** shows the locations of the ATR counters and the revenue control system data points.

The traffic data collected were used to complete the roadway analysis using a balanced roadway network approach. In this approach, it is assumed that inbound and outbound trips account for vehicle sourcing links. The balanced roadway volumes were adjusted to account for peak month, peak day activities because the traffic data were not collected during the Airport's peak period for passenger activity. **Table IV-25** provides the conversion factor results of adjusting the traffic data collected in June 2007 relative to the Airport's PMAD (March 13, 2007), as determined from passenger activity data.

Table IV-25

Peak Month Average Day Adjustment Factor

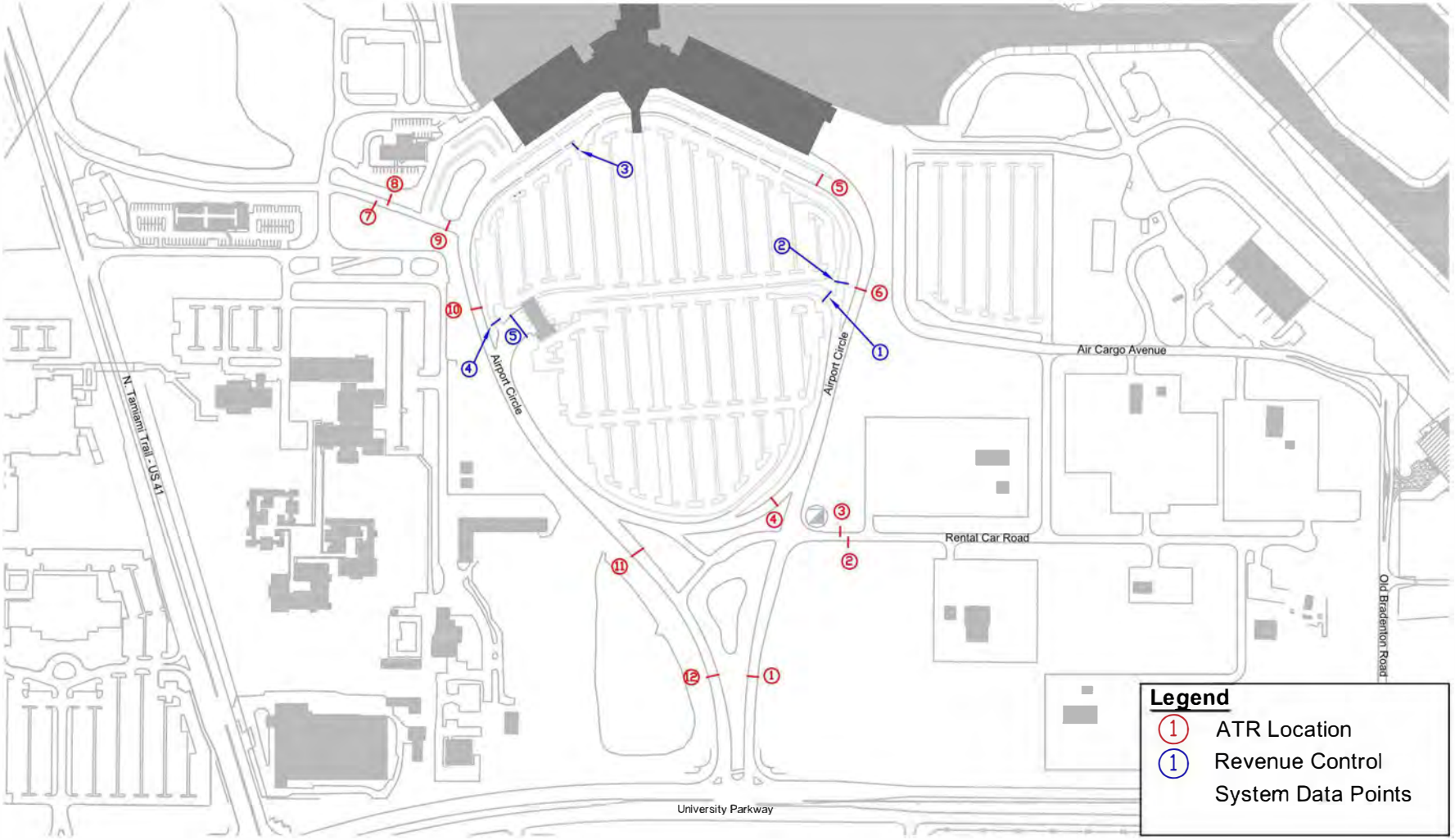
	Date	Arriving Airline Passengers	Departing Airline Passengers	Total Airline Passengers
Peak Month Average Day	March 13, 2007	3,087	3,248	6,335
Data Collection Date	June 21, 2007	2,011	1,937	3,948
			Conversion Factor =	**1.6046**

Sources: Official Airline Guides, Inc., March 2007; Ricondo & Associates, Inc., June 2007.
Prepared By: Ricondo & Associates, Inc., August 2007.

Table IV-26 lists the roadway segments shown on **Exhibit IV-32**, the balanced traffic volumes for the on-Airport roadway network from the ATR counts, and the roadway volumes adjusted for PMAD conditions in 2007.

4.7.2 Roadway Classification and Capacity

To analyze the level of service (LOS) of the Airport roadways for existing (2007) conditions and future scenarios, roadway capacities were assigned to each roadway link. The capacities of the roadway links are determined by the type of roadway and the number of travel lanes. Based on the Transportation Research Board's (TRB's) *Special Report 209, Highway Capacity Manual* (HCM), the theoretical capacity of a roadway is the maximum hourly flow rate per lane under "ideal" conditions, which consist of (a) uninterrupted flow, (b) all passenger cars driven by individuals who are frequent users of the roadway, (c) 12-foot minimum lane widths, (d) relatively flat grades with minor curvature, and (e) optimal lateral clearance between the edge of the lane and nearby obstacles and walls. The theoretical roadway capacity under these conditions is 2,200 passenger cars per hour per lane.



Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-31

0 N.T.S. north

Automatic Traffic Counter (ATR) and Revenue Control System Data Point Locations

Drawing: P:\Sarasota\Master Plan\Task 5 - Landside Systems\Landside Exhibits_031809\Roadway Links_031909-RL.dwg Layout: 8.5x11 Exh 4-31 Apr 24, 2009, 2:21pm

Table IV-26

Balanced On-Airport Roadway Traffic Volumes – June 2007

Roadway Links	Description	Peak Hour Traffic Volume	Estimated March 13, 2007, Traffic Volume
A	Sarasota Airport Entrance	388	623
B	Rental Car Road Westbound	66	106
C	Rental Car Road Eastbound	66	106
D	Return to Terminal Road	89	143
E	Terminal through Traffic	131	210
F	Airport Circle Terminal Traffic	361	579
G	Bradenton Connector Eastbound	18	29
H	Bradenton Connector Westbound	19	30
I	One-Way to Connector and Limousine Parking	51	82
J	Airport Circle leaving Terminal	252	404
K	Airport Circle between Rental Car Road and the Airport Exit	325	522
L	Sarasota Airport Exit	340	546
M	Long Term Parking Entrance	51	82
N	Short Term Parking Entrance	98	157
O	Rental Car Entrance	94	151
P	Rental Car Exit	101	162
Q	Airport Circle between Rental Car Road and Return to Terminal Road	353	566
R	Return to Terminal Road	28	45
S	Inner Curb	230	369
T	Airport Circle leaving Terminal before Limousine Parking	262	420
U	Airport Circle between Return to Terminal Road and Parking Entrance	510	818

Sources: Data collected by Adams Traffic and processed by Ricondo & Associates, Inc., June 2007.
Prepared by: Ricondo & Associates, Inc., August 2007.

Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-32

0 N.T.S. north

On-Airport Roadway Links

Drawing: P:\Sarasota\Master Plan\Task 5 - Landside Systems\Landside Exhibits_031809\Roadway Links_031909-RL.dwg Layout: 8.5x11 Exh 4-32 Apr 24, 2009, 2:22pm

For Airport roadways, however, capacities are significantly lower, as many of the ideal conditions listed above cannot be achieved. To date, no industry standards have been published for these classifications. However, using the HCM, research conducted by the TRB, FAA AC 150/5360-13, *Planning and Design Guidelines for Airport Terminal Facilities*, and engineering judgment, major ranges and classifications for the Airport roadways were developed, as provided in **Table IV-27**. Each segment of the Airport's roadway network was assigned one of the following labels: Airport Access Highway, Primary Access Roadway, Terminal Circulation Roadway, Terminal Access Roadway, Ramps, Curbside, or Service Roadway. Based on the label assigned to each roadway link, classification and vehicle capacities within the ranges provided in Table IV-27 were assigned to each roadway link. **Exhibit IV-33** identifies the individual roadway links listed in Table IV-26 and illustrates the roadway classifications and capacities assigned to each link.

Table IV-27

Roadway Link Classifications and Associated Capacities

Roadway Link Classification	Capacity Ranges *(passenger cars per hour per lane)*
Airport Access Highway	1,800 - 2,200
Primary Access Roadway	1,600 - 1,800
Terminal Circulation Roadway	1,200 - 1,600
Terminal Access Roadway	1,000 - 1,200
Ramps	600 - 1,200
Curbside	300 - 900
Service Roadway	1,000 - 1,200

Sources: Ricondo & Associates, Inc., based on Transportation Research Board, *Special Report 209, Highway Capacity Manual*, 2000; and FAA Advisory Circular 150/5360-13, *Planning and Design Guidelines for Airport Terminal Facilities*, 1994.
Prepared by: Ricondo & Associates, Inc., September 2007.

4.7.3 Roadway Level of Service – Volume to Capacity Analysis

The LOS for each link within the roadway network was calculated using each link's volume to capacity (V/C) ratio. This ratio was then applied to the range of LOS standards provided in **Table IV-28,** as taken from the *Highway Capacity Manual*. Using the balanced roadway volumes developed for existing conditions (March 2007), and the future passenger activity levels for both the Baseline Forecasts and Accelerated Baseline Forecasts, along with the assigned roadway link capacities discussed in the previous section, LOS estimates were calculated for each link in the network. **Tables 4-29** and **4-30** provide the vehicle capacities assigned to each roadway link, as well as each link's V/C ratio and LOS calculation.

Table IV-28

Volume to Capacity Ratio Ranges and Corresponding Roadway Level of Service

Level of Service	Volume/Capacity Ratio	Conditions	Description
A	Less than 0.60	Excellent	Traffic is free flow, with low volumes and high speeds.
B	0.61-0.70	Very good	Drivers have reasonable freedom to select speed and lane of operation.
C	0.71-0.80	Good	Drivers are becoming restricted in their ability to select their speed or to change lanes.
D	0.81-0.90	Fair	Drivers have little freedom to maneuver and driving comfort levels are low.
E	0.91-1.00	Poor	Roadway is operating at or near capacity.
F	Greater than 1.00	Failure	Forced flow operation where excessive roadway queuing develops.

Source: Transportation Research Board, *Special Report 209, Highway Capacity Manual*, 2000.
Prepared by: Ricondo & Associates, Inc., September 2008.

Sources: Sarasota Bradenton International Airport, August 2007; Ricondo & Associates, Inc., August 2007.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit IV-33

0 N.T.S. north

On-Airport Roadway Classifications and Capacities

Drawing: P:\Sarasota\Master Plan\Task 5 - Landside Systems\Landside Exhibits_031809\Roadway Links_031909-RL.dwg Layout: 8.5x11 Exh 4-33 Apr 24, 2009, 2:23pm

Table IV-29

Level of Service and Volume to Capacity Analysis – Baseline Forecasts

Location ID	Location	Number of Lanes	Vehicle Capacity per Lane	Total Capacity	Peak 2007 Vehicle Volumes	2007 Volume to Capacity [V/C] Ratio	2007 Level of Service	0-5 Year Growth Rate	Peak 2010 Vehicle Volumes	2010 V/C Ratio	2010 Level of Service	5-10 Year Growth Rate	Peak 2015 Vehicle Volumes	2015 V/C Ratio	2015 Level of Service	10-15 Year Growth Rate	Peak 2020 Vehicle Volumes	2020 V/C Ratio	2020 Level of Service	15-20 Year Growth Rate	Peak 2025 Vehicle Volumes	2025 V/C Ratio	2025 Level of Service
A	Sarasota Airport Entrance	2	1,200	2,400	623	0.26	A		695	0.29	A		778	0.32	A		830	0.35	A		860	0.36	A
B	Rental Car Road Westbound	1	1,000	1,000	106	0.11	A		118	0.12	A		132	0.13	A		141	0.14	A		146	0.15	A
C	Rental Car Road Eastbound	1	1,000	1,000	106	0.11	A		118	0.12	A		132	0.13	A		141	0.14	A		146	0.15	A
D	Return to Terminal Road	2	1,000	2,000	143	0.07	A		159	0.08	A		179	0.09	A		191	0.10	A		197	0.10	A
E	Terminal through Traffic Outer Curb	2	900	1,800	210	0.12	A		234	0.13	A		262	0.15	A		280	0.16	A		290	0.16	A
F	Airport Circle Terminal Traffic	2	1,000	2,000	579	0.29	A		646	0.32	A		723	0.36	A		772	0.39	A		799	0.40	A
G	Bradenton Connector Eastbound	1	600	600	29	0.05	A		32	0.05	A		36	0.06	A		39	0.06	A		40	0.07	A
H	Bradenton Connector Westbound	1	600	600	30	0.05	A		33	0.06	A		37	0.06	A		40	0.07	A		41	0.07	A
I	One-Way to Connector and Limousine Parking	1	600	600	82	0.14	A		91	0.15	A		102	0.17	A		109	0.18	A		113	0.19	A
J	Airport Circle leaving Terminal	2	1,200	2,400	404	0.17	A		451	0.19	A		505	0.21	A		538	0.22	A		558	0.23	A
K	Airport Circle between Rental Car Road and Airport Exit	2	1,200	2,400	522	0.22	A	1.037	582	0.24	A	1.023	652	0.27	A	1.013	696	0.29	A	1.007	720	0.30	A
L	Sarasota Airport Exit	2	1,200	2,400	546	0.23	A		609	0.25	A		682	0.28	A		728	0.30	A		754	0.31	A
M	Long Term Parking Entrance	1	300	300	82	0.27	A		91	0.30	A		102	0.34	A		109	0.36	A		113	0.38	A
N	Short Term Parking Entrance	1	600	600	157	0.26	A		175	0.29	A		196	0.33	A		209	0.35	A		217	0.36	A
O	Rental Car Entrance	1	600	600	151	0.25	A		168	0.28	A		189	0.31	A		201	0.34	A		208	0.35	A
P	Rental Car Exit	1	600	600	162	0.27	A		181	0.30	A		202	0.34	A		216	0.36	A		224	0.37	A
Q	Airport Circle between Rental Car Road and Return to Terminal Road	2	1,200	2,400	566	0.24	A		631	0.26	A		707	0.29	A		754	0.31	A		781	0.33	A
R	Return to Terminal Road	2	1,000	2,000	45	0.02	A		50	0.03	A		56	0.03	A		60	0.03	A		62	0.03	A
S	Inner Curb	2	600	1,200	369	0.31	A		411	0.34	A		461	0.38	A		492	0.41	A		509	0.42	A
T	Airport Circle leaving Terminal before Limousine Parking	2	900	1,800	420	0.23	A		468	0.26	A		525	0.29	A		560	0.31	A		580	0.32	A
U	Airport Circle between Return to Terminal Road and Long and Short Term Parking Entrance	2	1,200	2,400	818	0.34	A		912	0.38	A		1,022	0.43	A		1,090	0.45	A		1,129	0.47	A
V	Parking Lot Exit	1	600	600	0	0.00	A		0	0.00	A		0	0.00	A		0	0.00	A		0	0.00	A

Note: All capacities are provided per lane and per hour

Source: Ricondo & Associates, Inc., September 2007.
Prepared by: Ricondo & Associates, Inc., September 2007.

Table IV-30

Level of Service and Volume to Capacity Analysis – Accelerated Baseline Forecast Growth Scenario

Location ID	Location	Number of Lanes	Vehicle Capacity per Lane	Total Capacity	Peak 2007 Vehicle Volumes	2007 Volume to Capacity [V/C] Ratio	2007 Level of Service	0-5 Year Growth Rate	Peak 2010 Vehicle Volumes	2010 V/C Ratio	2010 Level of Service	5-10 Year Growth Rate	Peak 2015 Vehicle Volumes	2015 V/C Ratio	2015 Level of Service	10-15 Year Growth Rate	Peak 2020 Vehicle Volumes	2020 V/C Ratio	2020 Level of Service	15-20 Year Growth Rate	Peak 2025 Vehicle Volumes	2025 V/C Ratio	2025 Level of Service
A	Sarasota Airport Entrance	2	1,200	2,400	623	0.26	A		800	0.33	A		1,021	0.43	A		1,073	0.45	A		1,128	0.47	A
B	Rental Car Road Westbound	1	1,000	1,000	106	0.11	A		136	0.14	A		174	0.17	A		183	0.18	A		192	0.19	A
C	Rental Car Road Eastbound	1	1,000	1,000	106	0.11	A		136	0.14	A		174	0.17	A		183	0.18	A		192	0.19	A
D	Return to Terminal Road	2	1,000	2,000	143	0.07	A		184	0.09	A		234	0.12	A		246	0.12	A		259	0.13	A
E	Terminal through Traffic Outer Curb	2	900	1,800	210	0.12	A		270	0.15	A		344	0.19	A		362	0.20	A		380	0.21	A
F	Airport Circle Terminal Traffic	2	1,000	2,000	579	0.29	A		744	0.37	A		949	0.47	A		998	0.50	A		1,048	0.52	A
G	Bradenton Connector Eastbound	1	600	600	29	0.05	A		37	0.06	A		48	0.08	A		50	0.08	A		53	0.09	A
H	Bradenton Connector Westbound	1	600	600	30	0.05	A		39	0.06	A		49	0.08	A		52	0.09	A		54	0.09	A
I	One-Way to Connector and Limousine Parking	1	600	600	82	0.14	A		105	0.18	A		134	0.22	A		141	0.24	A		148	0.25	A
J	Airport Circle Leaving Terminal	2	1,200	2,400	404	0.17	A		519	0.22	A		662	0.28	A		696	0.29	A		732	0.30	A
K	Airport Circle between Rental Car Road & Airport Exit	2	1,200	2,400	522	0.22	A	1.087	670	0.28	A	1.05	856	0.36	A	1.01	899	0.37	A	1.01	945	0.39	A
L	Sarasota Airport Exit	2	1,200	2,400	546	0.23	A		701	0.29	A		895	0.37	A		941	0.39	A		989	0.41	A
M	Long Term Parking Entrance	1	300	300	82	0.27	A		105	0.35	A		134	0.45	A		141	0.47	A		148	0.49	A
N	Short Term Parking Entrance	1	600	600	157	0.26	A		202	0.34	A		257	0.43	A		270	0.45	A		284	0.47	A
O	Rental Car Entrance	1	600	600	151	0.25	A		194	0.32	A		248	0.41	A		260	0.43	A		273	0.46	A
P	Rental Car Exit	1	600	600	162	0.27	A		208	0.35	A		266	0.44	A		279	0.47	A		293	0.49	A
Q	Airport Circle between Rental Car Road and Return to Terminal Road	2	1,200	2,400	566	0.24	A		727	0.30	A		928	0.39	A		975	0.41	A		1,025	0.43	A
R	Return to Terminal Road	2	1,000	2,000	45	0.02	A		58	0.03	A		74	0.04	A		78	0.04	A		81	0.04	A
S	Inner Curb	2	600	1,200	369	0.31	A		474	0.39	A		605	0.50	A		636	0.53	A		668	0.56	A
T	Airport Circle leaving Terminal before Limousine Parking	2	900	1,800	420	0.23	A		539	0.30	A		688	0.38	A		724	0.40	A		760	0.42	A
U	Airport Circle between Return to Terminal Road & Long and Short Term Parking Entrance	2	1,200	2,400	818	0.34	A		1,051	0.44	A		1,341	0.56	A		1,409	0.59	A		1,481	0.62	B
V	Parking Lot Exit	1	600	600	0	0.00	A		0	0.00	A		0	0.00	A		0	0.00	A		0	0.00	A

Note: All capacities are provided per lane and per hour.

Source: Ricondo & Associates, Inc., September 2007.
Prepared by: Ricondo & Associates, Inc., September 2007.

The results of the analysis presented in Tables IV-29 and IV-30 indicate that the on-Airport roadway links analyzed would operate at LOS A for each of the future years under both forecast scenarios.

4.8 Aviation Support Facilities

The requirements for general aviation, fixed base operator, aircraft rescue and fire fighting, and air cargo facilities at SRQ are presented in this section. Requirements for these facilities were developed in accordance with FAA planning guidelines and are a result of communications with the various FBO and support facility operators held during onsite inspections and interviews. The requirements developed herein were based on the FAA-approved forecasts of operational and based aircraft activity that are presented in Chapter III of this Master Plan Update. Facility surpluses and deficits were identified for existing conditions (2006), and for every 5 years thereafter throughout the 20-year planning horizon (i.e., 127,129 GA operations in 2011, 139,656 GA operations in 2016, 152,144 GA operations in 2021, and 165,083 GA operations in 2026 in accordance with the Baseline Forecasts).

4.8.1 General Aviation Facilities

Forecast demand and the facility requirements necessary to support the storage of GA aircraft at the Airport throughout the 20-year planning horizon are discussed in this section. Several aircraft storage options are currently available at SRQ, including T-hangars/port-a-port hangars, commercial/corporate hangars, and transient aircraft apron space and tiedowns. The following describes each type of aircraft storage facility at SRQ.

- **T-hangar/Port-a-Port Hangar Storage** – A T-hangar is a fully enclosed building that contains multiple aircraft units. Each unit is capable of storing one aircraft, typically a single-engine or light multi-engine aircraft. Port-a-port hangars are portable T-hangars, and are therefore included in the T-hangar category. T-hangars are the preferred aircraft storage method for small aircraft owners. T-hangar facilities are eligible for grants through the Florida Department of Transportation (FDOT). According to the SMAA's T-hangar waiting list, some aircraft owners who currently park their aircraft on the ramp would prefer T-hangar storage. As such, there is currently a deficit of T-hangar facilities at SRQ.
- **Commercial/Corporate Hangar Storage** – These are larger hangars designed to accommodate several small aircraft or that may be used to store one very large aircraft. The hangars are typically occupied by aviation-related businesses or by corporations for the storage and maintenance of their own turboprop and jet aircraft. All commercial/corporate hangars at SRQ are developed and maintained by the FBOs or are sold to tenants by the FBOs (i.e., hangars sold by Rectrix Aerodrome Centers). While conventional hangars are more expensive to construct, they also generate higher lease revenues.
- **Based Aircraft Apron Storage** – Based aircraft apron storage consists of aircraft tiedowns and ramp parking. Some owners of small based aircraft prefer the low-cost tiedown storage option rather than the more expensive hangar space.
- **Transient Aircraft Apron Storage** – The transient aircraft apron is typically located adjacent to the primary airside main entrance to an FBO facility. This area is used for the temporary parking of aircraft that visit the Airport for a short period of time, e.g., to drop off or to pick up passengers or to fuel the aircraft.

4.8.1.1 Based Aircraft Storage Preferences

Prior to determining the based aircraft storage requirements for SRQ, it was necessary to gather information regarding the storage desires of based aircraft owners at the Airport. After collectively interviewing all three FBOs and members of SMAA staff, the following conclusions were reached:

- **Single-engine Aircraft** – It was determined that 80 percent of single-engine aircraft owners prefer T-hangar storage at SRQ. The remaining 20 percent prefer apron tiedown storage.
- **Multi-engine Aircraft** – The multi-engine aircraft types expected to use the Airport in the future include an equal number of piston and turboprop powered aircraft. It was assumed that most of the owners of turboprop aircraft would prefer commercial/corporate hangar storage and that most of the owners of piston-powered aircraft would prefer T-hangar storage. Thus, it was determined that 50 percent of multi-engine aircraft owners prefer commercial/corporate hangar storage, 40 percent prefer T-hangar storage, and 10 percent prefer apron tiedown storage.
- **Helicopters** – Most helicopters are stored in commercial/corporate hangars at SRQ; however, T-hangar storage is common for smaller helicopters. Therefore, it was determined that 80 percent of helicopter owners prefer commercial/corporate hangar storage and 20 percent prefer T-hangar storage.
- **Jet Aircraft** – As jets are the most expensive aircraft type, it was determined that nearly all jet aircraft owners prefer commercial/corporate hangar storage at SRQ. However, because of their small size, very light jets (VLJs) can also be stored in T-hangars. The VLJ growth rate in the *FAA Aerospace Forecasts 2008-2025* was used to anticipate additional T-hangar demand at the Airport through the planning period. VLJs were expected to encompass an estimated 0.6 percent of jet traffic in 2007; however, the introduction of approximately 450 additional VLJs each year would increase the overall percentage to approximately 17 percent by 2026. As the SMAA has the sole responsibility for constructing T-hangars and because a surplus of conventional hangar space was identified at the Airport, all VLJ increases were allocated to T-hangar storage.

The based aircraft fleet mix forecast presented in Chapter III, and provided in **Table IV-31,** was combined with the aircraft storage preferences shown in **Table IV-32** to formulate the based aircraft storage requirements at the Airport, shown in **Table IV-33**. To determine facility requirements through the 20-year planning period, the based aircraft storage requirements were compared to the existing availability of T-hangars, commercial/corporate hangars, and apron space at SRQ. The resulting analysis is presented in the following sections.

Table IV-31

Based Aircraft Fleet Mix Forecast

Year	Single-engine Aircraft	Multi-engine Aircraft	Helicopters	Jet Aircraft	Very Light Jet Aircraft	Total[1]
2006 (actual)	197	77	8	16	1	299
2011	204	82	9	21	1	317
2016	212	88	10	28	3	341
2021	219	94	11	34	6	364
2026	224	99	12	42	8	385

Note:

1/ Total based aircraft represent the unrounded sum of single-engine aircraft, multi-engine aircraft, helicopters, and jet aircraft from Table III-15.

Sources: FAA Approved Aviation Activity Forecasts for the Master Plan Update, June 2008. FAA *Terminal Area Forecast*, December 2007; Ricondo & Associates, Inc., June 2008

Prepared by: Ricondo & Associates, Inc., February 2008.

Table IV-32

Aircraft Storage Preferences

Storage Preference	Single-engine Aircraft	Multi-engine Aircraft	Helicopters	Jet Aircraft	Very Light Jet Aircraft
Apron	20%	10%	0%	0%	0%
Commercial/Corporate Hangar	0%	50%	80%	100%	0%
T-hangar/Port-a-Port Hangar	80%	40%	20%	0%	100%

Sources: The LPA Group Incorporated, June 2008; Discussions with the SMAA and FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Table IV-33

Based Aircraft Storage Requirements

Year	Storage Preference	Single-engine	Multi-engine	Helicopter	Jet	Very Light Jet	Total Aircraft
2006	Apron	39	8	0	0		47
2006	Commercial/Corporate Hangar	0	38	6	16		60
2006	T-hangar/Port-a-Port Hangar	158	31	2	0	1	192
	Total 2006 (133,792 GA operations)	197	77	8	16	1	299
2011	Apron	41	8	0	0		49
2011	Commercial/Corporate Hangar	0	41	7	21		69
2011	T-hangar/Port-a-Port Hangar	162	33	2	0	1	198
	Total 2011 (127,129 GA operations)	203	82	9	21	1	316
2016	Apron	42	9	0	0		51
2016	Commercial/Corporate Hangar	0	44	8	28		80
2016	T-hangar/Port-a-Port Hangar	169	35	2	0	3	209
	Total 2016 (139,656 GA operations)	211	88	10	28	3	340
2021	Apron	44	9	0	0		53
2021	Commercial/Corporate Hangar	0	47	9	34		90
2021	T-hangar/Port-a-Port Hangar	174	38	2	0	6	220
	Total 2021 (152,144 GA operations)	218	94	11	34	6	363
2026	Apron	45	10	0	0		55
2026	Commercial/Corporate Hangar	0	49	10	42		101
2026	T-hangar/Port-a-Port Hangar	179	40	2	0	8	229
	Total 2026 (165,083 GA operations)	224	99	12	42	8	385

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

4.8.1.2 T-hangar/Port-a-Port Hangar Storage Requirements

The SMAA currently manages a total of 146 small-bay T-hangars/port-a-port hangar bays and six large-bay T-hangars. The doors of the small-bay T-hangars and port-a-port hangars range between 40 feet and 42 feet wide and the doors of the large-bay T-hangars are all 48 feet wide. Dolphin Aviation has additional port-a-port hangar facilities within its leasehold area; however, these hangars are not being used for aircraft storage and were, therefore, not considered in this analysis.

As previously mentioned, T-hangar storage is needed for 80 percent of single-engine aircraft, 20 percent of multi-engine aircraft, and 10 percent of helicopters. In addition, a percentage of VLJ aircraft also require T-hangar storage. Single-engine aircraft and helicopters require storage in 1,200-square-foot small-bay T-hangars or port-a-port hangars at SRQ, whereas multi-engine aircraft and VLJs require storage in 1,600-square-foot large-bay T-hangars. By applying the based aircraft forecasts to the aircraft storage percentages, the T-hangar storage requirements were identified, as shown in **Table IV-34**.

The existing deficit of 39 T-hangar bays, which is split between 14 small-bay and 25 large-bay T-hangars, is consistent with the current aircraft owner demand, as indicated on the SMAA's T-hangar waiting list.[5] Overall, an additional 35 small-bay T-hangars and 34 large-bay T-hangars, or 109,200 square feet of T-hangar space, are forecast to be required to accommodate demand by the end of the planning period. Because of their poor condition, 28 existing port-a-port hangar bays should be considered for replacement with T-hangar bays during the short-term planning period.[

4.8.1.3 Commercial/Corporate Hangar Storage Requirements

Based on discussions with the FBOs, it was determined that 25 percent (approximately 80,000 square feet) of commercial/corporate hangar space at SRQ is currently available for lease or purchase. However, as commercial/corporate hangars at SRQ are regularly leased or purchased by different businesses or individuals, the existing availability of large hangar storage space was considered negligible and therefore not considered in this analysis. Commercial/corporate hangar storage requirements were based on the aircraft storage preferences shown earlier in Table IV-32 and also on the based aircraft forecasts presented in Chapter III. **Table IV-35** illustrates the existing hangar storage capacity at SRQ.

The estimated commercial/corporate hangar storage requirements differ substantially from T-hangar requirements because of the wide spectrum of aircraft sizes within the larger aircraft categories. With the exception of some smaller multi-engine aircraft, nearly all large aircraft, including jets, are typically stored (or their owners desire storage) within larger commercial/corporate hangars. The SMAA does not currently construct nor lease large hangar facilities. For this reason, staff from each FBO were interviewed to establish the percentage of large aircraft types currently based at SRQ. Then, a representative aircraft from each of three categories (multi-engine aircraft, helicopters, and jet aircraft) was selected and later used to calculate commercial/corporate hangar space requirements. These requirements were based on the wingspans and lengths of the representative aircraft type, with 5 feet of clearance added around all sides of the aircraft. However, as there are many different sizes of aircraft in these groups, it was necessary to use a weighted average of the anticipated based aircraft fleet mix to determine the space requirements for SRQ. **Exhibit IV-34** illustrates the methodology used to calculate the following hangar space requirements:

- **Multi-engine Aircraft** – Piper PA-44 Seminole (30 percent) and King Air C90 (70 percent) – 2,500 square feet
- **Helicopters** – Bell 206 (30 percent) and Bell 412 (70 percent) – 2,400 square feet
- **Jet Aircraft** – Hawker 800 (70 percent) and Gulfstream V (30 percent) – 6,200 square feet

[5] The SMAA's T-hangar waiting list is split between small-bay and large-bay T-hangars. The small-bay T-hangar list contains approximately 40 names, 20 of which are current port-a-port hangar tenants; as the SMAA plans to replace the port-a-port hangars with T-hangars, the port-a-port hangar tenants were not included in the analysis. The large-bay T-hangar list contains approximately 30 names. Therefore, as not all aircraft owners on the T-hangar waiting list would be expected to lease a T-hangar if available, 14 small-bay and 25 large-bay T-hangars were determined to be sufficient to accommodate the 2016 T-hangar demand at SRQ.

Table IV-34

T-hangar Storage Requirements[1/]

Year	Forecast Based Aircraft	Small-Bay Requirement	Small-Bay/ Port-a-Port Available	Small-Bay Surplus/(Deficit)[1/]	Large-Bay Requirement	Large-Bay Available	Large-Bay Surplus/(Deficit)[1/]	Total Surplus/(Deficit)[1/]
2006	299	160	146	(14 Bays)	31	6	(25 Bays)	(39 Bays)
				(16,800 sq ft)			(40,000 sq ft)	(56,800 sq ft)
2011	317	164	-	(4 Bays)	34	-	(3 Bays)	(7 Bays)
				(4,800 sq ft)			(4,800 sq ft)	(9,600 sq ft)
2016	341	171	-	(7 Bays)	37	-	(4 Bays)	(11 Bays)
				(8,400 sq ft)			(6,400 sq ft)	(14,800 sq ft)
2021	364	176	-	(5 Bays)	41	-	(6 Bays)	(11 Bays)
				(6,000 sq ft)			(9,600 sq ft)	(15,600 sq ft)
2026	385	181	-	(5 Bays)	42	-	(4 Bays)	(9 Bays)
				(6,000 sq ft)			(6,400 sq ft)	(12,400 sq ft)
Additional Bays Required by 2026				35 Bays			42 Bays	77 Bays
				42,000 sq ft			67,200 sq ft	109,200 sq ft

Note:

1/ 1,200 square feet of space were allocated for small bay T-hangars; and 1,600 square feet of space were allocated for large bay T-hangars. Also, it was assumed in the data in the surplus/deficits columns that demand will be met after each milestone year.

Sources: The LPA Group Incorporated, June 2008; Discussions with SMAA, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Table IV-35

Existing General Aviation Commercial/Corporate Hangar Inventory

FBO	Hangar Area (square feet)
Dolphin Aviation	144,000
Rectrix Aerodrome Centers	140,500
Volo Aviation	34,000
Total Commercial/Corporate Hangar Storage	318,500

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

As previously mentioned, commercial/corporate hangar storage is needed for 50 percent of multi-engine aircraft, 80 percent of helicopters, and 100 percent of jets. By applying the based aircraft forecasts to the space requirements above, the commercial/corporate hangar storage requirements were identified, as presented in **Table IV-36**.

Table IV-36

Commercial/Corporate Hangar Storage Requirements

	Multi-engine Aircraft		Helicopters		Jet Aircraft		All Aircraft		Existing	Surplus/
Year	Forecast	Required (sq ft)	Forecast	Required (sq ft)	Forecast	Required (sq ft)	Forecast	Required (sq ft)	Availability (sq ft)	(Deficit) (sq ft)
2006	38	95,000	6	14,400	17	105,400	61	214,800	318,500	103,700
2011	41	102,500	7	16,800	22	136,400	70	255,700	318,500	62,800
2016	44	110,000	8	19,200	31	192,200	83	321,400	318,500	(2,900)
2021	47	117,500	9	21,600	40	248,000	96	387,100	318,500	(68,600)
2026	49	122,500	10	24,000	50	310,000	109	456,500	318,500	(138,000)

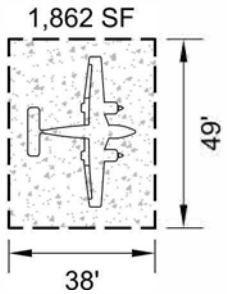
Sources: The LPA Group Incorporated, June 2008; Discussions with the FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

As shown in Table IV-36, there is currently a surplus of commercial/corporate hangar storage space at SRQ; however, a deficit is anticipated by the year 2016, when 83 based general/corporate aviation aircraft are forecast for the Airport. Approximately 138,000 square feet of additional commercial/corporate hangar space would be required during the 20-year planning period. All three FBOs indicated plans to develop new commercial/corporate hangars at SRQ in the future.

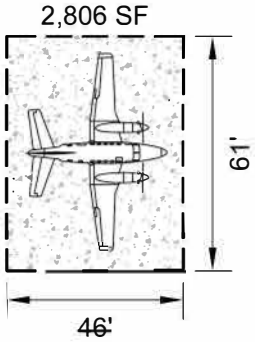
4.8.1.4 Apron Storage Requirements

General aviation apron storage requirements must be determined for both based and transient aircraft at SRQ. Apron parking is currently located within the leaseholds of all three FBOs. The FBOs conduct their own pavement maintenance as needed, and keep their facilities in 'good' or better condition. The existing capacity of apron space is summarized in **Table IV-37**.

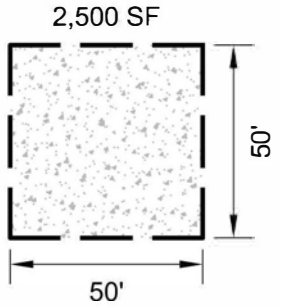
Multi - Engine



Piper PA-44 Seminole
(30% Weighting)

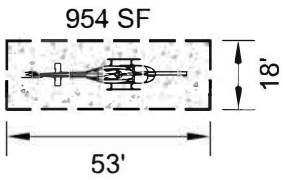


King Air C90
(70% Weighting)

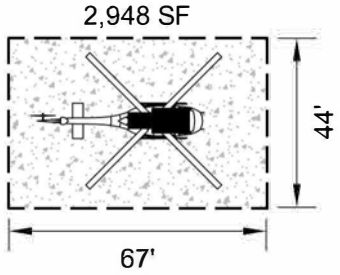


Multi-Engine
Hangar Requirement

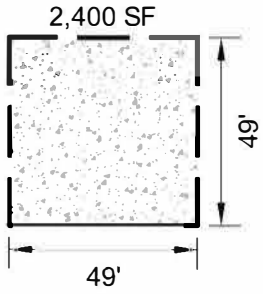
Helicopter



Bell 206
(30% Weighting)

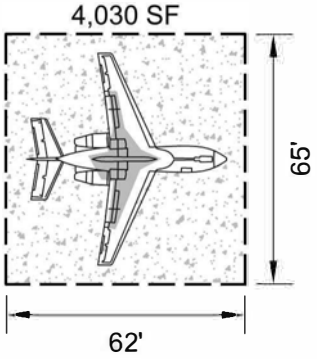


Bell 412
(70% Weighting)

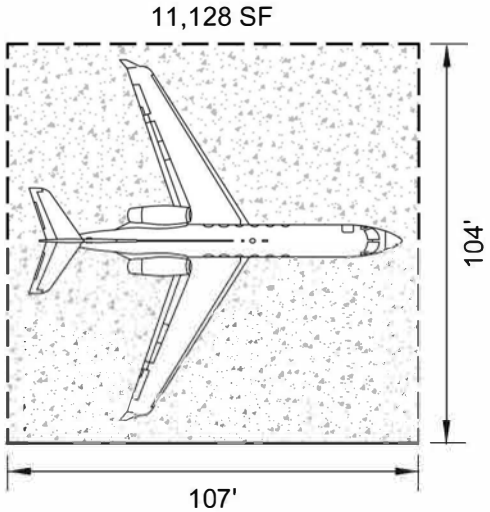


Helicopter
Hangar Requirement

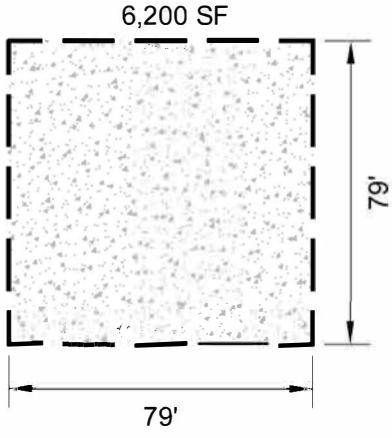
Jets



Hawker 800
(70% Weighting)



Gulfstream V
(30% Weighting)



Jet Hangar
Requirement

Note: Five feet of clearance is provided around all sides of the illustrated aircraft for maneuvering purposes.

Sources: The LPA Group Incorporated; Ricondo & Associates, Inc., June 2008
Prepared by: The LPA Group Incorporated; Ricondo & Associates, Inc. June 2008

Exhibit IV-34

N.T.S.

Commercial/Corporate Hangar Sizing Requirements

P:\Sarasota\Master Plan\Task 6 - Support Facilities\Exhibits\exhibit 4-34.dwg_Layout: 8.5X11_Apr 24, 2009, 11:36am

Table IV-37

Existing General Aviation Apron Parking Inventory

FBO[1/]	Apron Area (square yards)
Dolphin Aviation	37,000
Rectrix Aerodrome Centers	39,000
Volo Aviation/SMAA	27,000
Total Apron Parking	103,000
Based Aircraft Parking (one-third of total apron parking)[1/]	35,000
Transient Aircraft Parking (two-thirds of total apron parking)[1/]	68,000

Note:

1/ Approximately one-third of the total apron space around the FBO facilities is used for based aircraft parking and two-thirds is used for transient aircraft parking based on discussions with the Airport's FBOs.

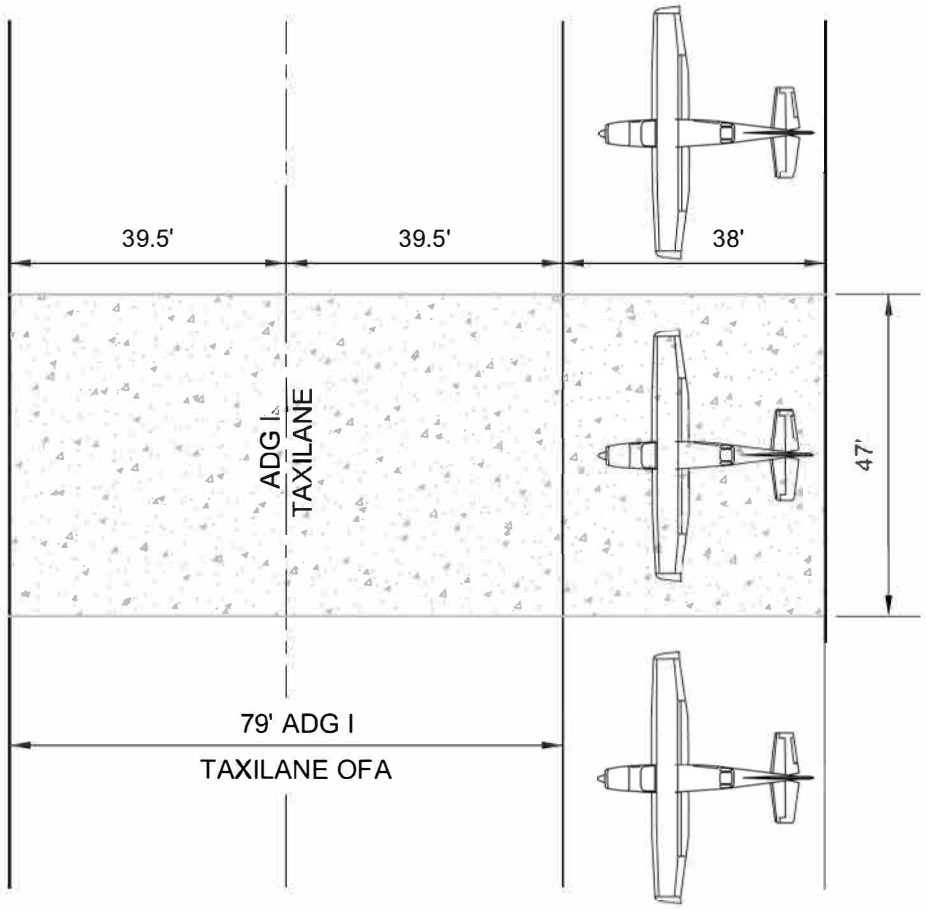
Sources: The LPA Group Incorporated, June 2008; Discussions with the FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Of the 103,000 square yards of existing GA apron at SRQ, approximately one-third (35,000 square yards) is dedicated to based aircraft parking and the remaining two-thirds (68,000 square yards) is dedicated to transient aircraft parking. In the sections that follow, the apron space requirements at SRQ for based and transient aircraft are identified.

Based Aircraft Apron Requirements

As shown in Table IV-32, apron (or tiedown) parking at SRQ should be provided for 20 percent of based single-engine aircraft and 10 percent of based multi-engine aircraft. Various methods can be used to determine the aircraft space requirement for apron parking. For the purposes of this analysis, a specific aircraft type was selected to represent the average dimensions of single and multi-engine piston aircraft currently based at SRQ – the Cessna 172 single-engine piston. Furthermore, the Cessna 172 was selected because there are many more based single-engine aircraft (197 aircraft) than multi-engine aircraft (77 aircraft) at SRQ, and also because the Cessna 172 has a wider wingspan (37 feet) compared to many small single-engine aircraft.

Exhibit IV-35 illustrates the methodology used to calculate the based aircraft apron requirement for both single- and multi-engine aircraft. The wingspan and length of a Cessna 172 requires an area of approximately 610 square yards per based aircraft, which includes a single adjacent taxilane. This area includes approximately 10 feet of separation between aircraft wingtips. At SRQ, the FBOs currently tow many based aircraft to and from their respective tiedown positions, which allows for increased use of apron parking space. However, so as not to underestimate based aircraft apron requirements, the methodology discussed above was used to determine the based aircraft apron requirements presented in **Table IV-38.**



Based Aircraft Apron Requirement
Sample Aircraft (Cessna 172)
Apron Area Required = 5,500 SF or 610 SY

Note: The dimensions of the Cessna 172 were used to calculate the based aircraft apron area requirements for both single and multi-engine aircraft.

Sources: The LPA Group Incorporated; Ricondo & Associates, Inc., June 2008
Prepared by: The LPA Group Incorporated; Ricondo & Associates, Inc., June 2008

Exhibit IV-35

N.T.S.

Based Aircraft Apron Area Requirements

P:\Sarasota\Master Plan\Task 6 - Support Facilities\Exhibits\exhibit 4-35.dwg_Layout: 8.5X11_Apr 24, 2009, 11:35am

Table IV-38

Based Aircraft Apron Requirements[1/]

Year	Single-engine Aircraft (quantity)	Multi-engine Aircraft (quantity)	Total Based Aircraft (quantity)	Apron Requirement (square yards)	Apron Available (square yards)	Surplus/ (Deficit) (square yards)
2006	39	8	47	28,670	35,000	6,330
2011	41	8	49	29,890	35,000	5,110
2016	42	9	51	31,110	35,000	3,890
2021	44	9	53	32,330	35,000	2,670
2026	45	10	55	33,550	35,000	1,450

Note:

1/ 610 square yards per based aircraft was used to determine the apron requirements for both single-engine and multi-engine based aircraft.

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

As shown in Table IV-38, there is expected to be a surplus of based aircraft apron storage space at SRQ throughout the 20-year planning period. However, because of the current deficit of T-hangar storage space at the Airport (see Section 4.8.1.2), more than 20 percent of based single-engine aircraft park on an apron. As T-hangar development is planned at the Airport, it is anticipated that many aircraft will relocate from apron tiedowns to T-hangar facilities.

Transient Aircraft Apron Requirements

Transient aircraft are aircraft passing through the Airport and can range in size from small single-engine pistons to large jets. Generally speaking, transient aircraft require substantially more apron area so that they can maneuver into and out of the transient apron under their own power. Based on discussions with the FBOs, transient aircraft tend to stay at the Airport for short durations to drop off and pick up passengers. To determine transient aircraft apron requirements at SRQ, peak hour general aviation operations and anticipated fleet mix characteristics were analyzed collectively. Chapter III of this Master Plan Update provides a peak month, average day forecast for GA operations. Consistent with FAA AC 150/5300, *Airport Design,* Change 2, 15 percent of PMAD operations was assumed to occur during the peak hour, as shown in **Table IV-39**.

Table IV-39

Forecast General Aviation Aircraft Peak Hour Operations

Year	Peak Month Average Day Aircraft Operations	Peak Hour Aircraft Operations (15% of Peak Day)	Peak Hour Transient Aircraft Operations[1]
2006	439	66	45
2011	382	57	42
2016	420	63	46
2021	458	69	51
2026	497	75	55

Note:

1/ Based on the Itinerant operations percentage in Table III-14.

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Similar to the based aircraft apron analysis, representative aircraft types were selected to determine the transient aircraft apron parking requirements. However, the transient aircraft were selected according to ADG rather than engine type. Transient aircraft apron requirements were determined based on the assumption that two taxilanes would be required (one in front and one behind) for each aircraft parking position. **Exhibit IV-36** illustrates the methodology used to calculate the following transient aircraft apron requirements:

- **ADG I** – Cessna 172 single-engine piston aircraft – 35 percent transient operations – 1,025 square yards
- **ADG II** – Hawker 800 jet aircraft – 50 percent transient operations – 2,100 square yards
- **ADG III** – Gulfstream V jet aircraft – 15 percent transient operations – 5,000 square yards

The GA peak-hour operations forecast includes both transient and local takeoff and landing operations. As such, it was assumed that only one-half of peak hour transient aircraft operations (i.e., landings only) need to be included in the determination of transient aircraft apron parking requirements. The transient aircraft fleet mix percentages above were derived based on discussions with the FBOs and were applied to the peak-hour forecasts to determine the number of transient aircraft operations by ADG. The space requirements were then multiplied by the number of transient aircraft operations to calculate the transient aircraft apron requirements for SRQ. Overall, a surplus of transient aircraft apron storage space was identified throughout the 20-year planning period. While no additional transient aircraft apron requirements are anticipated based on the methodology described above, Dolphin Aviation and Volo Aviation have indicated potential plans to expand their aprons. The transient aircraft apron space requirements for SRQ are presented in **Table IV-40**.

Summary of Aircraft Apron Requirements

As described in the previous sections, adequate apron area is available at SRQ to accommodate the forecast long-term needs of based and transient aircraft. Although several aircraft currently park on the apron because of a lack of T-hangar storage, the ongoing development of T-hangars should reduce any need to provide additional apron area for based aircraft. The GA aircraft apron requirements are summarized in **Table IV-41**.

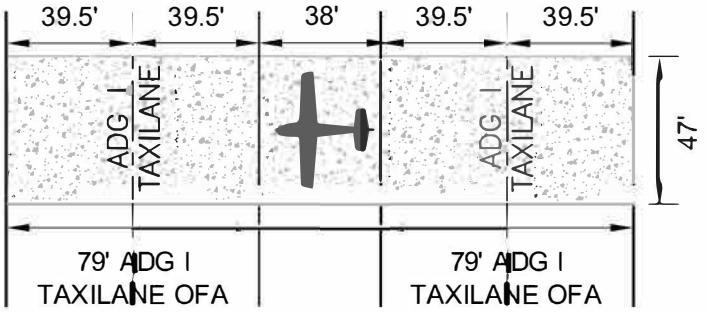
4.8.2 Fixed Base Operator Facilities

Three FBOs at SRQ provide a full range of services for general aviation aircraft—Dolphin Aviation, Volo Aviation, and Rectrix Aerodrome Centers. The terminal area, fuel storage, and vehicle access and parking requirements for these operators are specifically addressed in this section. The requirements were developed in accordance with federal, State, and local planning guidelines and onsite inspections and interviews with the FBOs. **Exhibits 4-37** through **4-39** illustrate the facilities for the three FBOs operating at SRQ.

4.8.2.1 FBO Terminal Area

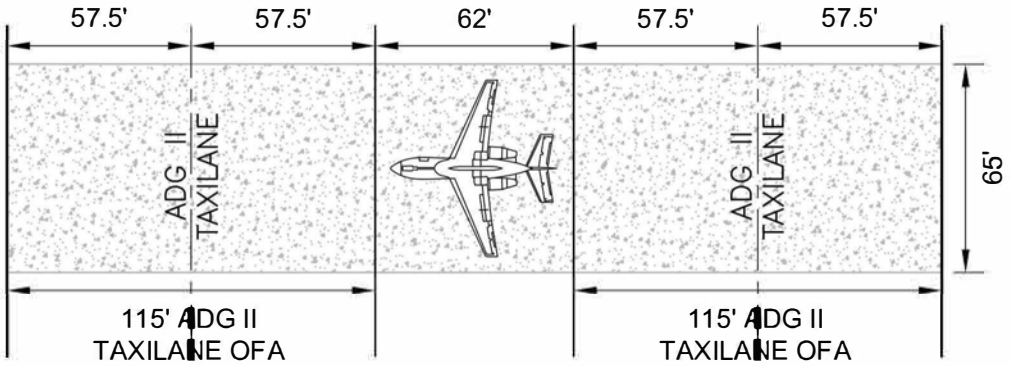
At most commercial service airports, FBO terminal facilities are required to support the high frequency of GA operations, as such facilities provide a variety of amenities and services for based and itinerant GA passengers and pilots. **Table IV-42** summarizes the existing inventory of GA terminal area at SRQ. A functional space value, which incorporates all functional areas of a full-service GA terminal building, including FBO counter, waiting area, snack room, pilot's lounge, restrooms, etc., was used in the calculations of terminal space requirements. However, utility areas, administrative offices, and other nonpublic areas were not included in the functional space inventory.

ADG I



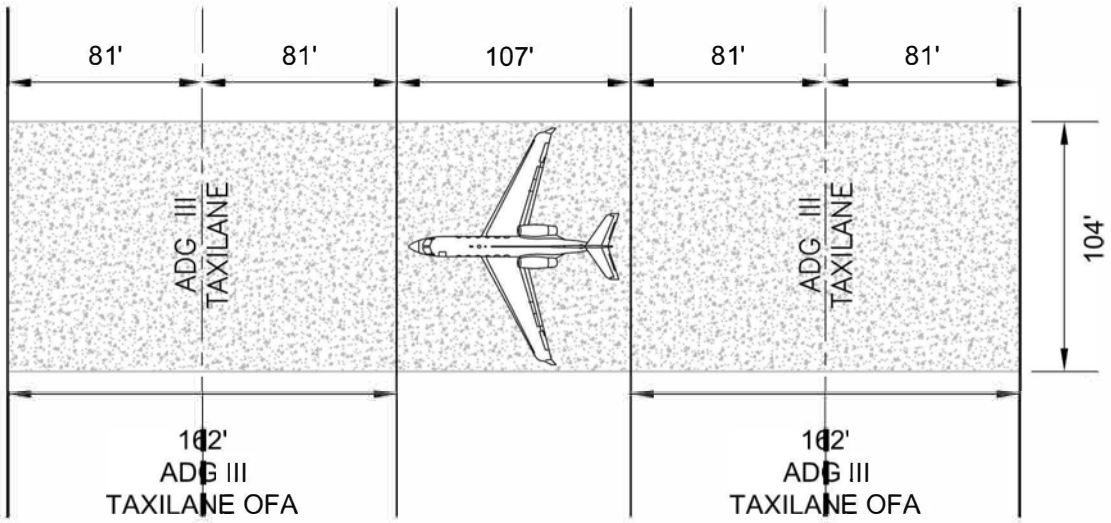
Sample Aircraft (Cessna 172)
Apron Area Required = 9,200 SF or 1,025 SY

ADG II



Sample Aircraft (Hawker 800)
Apron Area Required = 19,000 SF or 2,100 SY

ADG III



Sample Aircraft (Gulfstream V)
Apron Area Required = 45,000 SF or 5,000 SY

Note: OFA stands for Object Free Area.
Sources: The LPA Group Incorporated; Ricondo & Associated, Inc., June 2008
Prepared by: The LPA Group Incorporated; Ricondo & Associates, Inc., June 2008

Exhibit IV-36

N.T.S.

Transient Aircraft Apron Area Requirements

P:\Sarasota\Master Plan\Task 6 - Support Facilities\Exhibits\exhibit 4-36.dwg_Layout: 8.5X11_Apr 24, 2009, 11:35am

Table IV-40

Transient Apron Space Requirements[1/]

Year	50% Peak Hour Transient Operations	ADG I Aircraft Operations (35%)	ADG I Apron Required (square yards)	ADG II Aircraft Operations (50%)	ADG II Apron Required (square yards)	ADG III Aircraft Operations (15%)	ADG III Apron Required (square yards)	Total Apron Required (square yards)	Available Apron (square yards)	Surplus/ (Deficit) (square yards)
2006	22	8	8,200	11	23,100	3	15,000	46,300	68,000	21,700
2011	20	7	7,175	10	21,000	3	15,000	43,175	68,000	24,825
2016	22	8	8,200	11	23,100	3	15,000	46,300	68,000	21,700
2021	26	9	9,225	13	27,300	4	20,000	56,525	68,000	11,475
2026	28	10	10,250	14	29,400	4	20,000	59,650	68,000	8,350

Note

1/ Transient aircraft apron space requirements were calculated based on the following: ADG I – 1,025 square yards per aircraft, ADG II – 2,100 square yards per aircraft, ADG III – 5,000 square yards per aircraft.

Sources: The LPA Group Incorporated, June 2008; Discussions with FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Table IV-41

Summary of GA Aircraft Apron Requirements (in square yards)

Year	Based Aircraft Apron Required	Transient Aircraft Apron Required	Total Apron Required	Total Apron Available	Surplus/ (Deficit)
2006	28,670	46,300	74,970	103,000	28,030
2011	29,890	43,175	73,065	103,000	29,935
2016	31,110	46,300	77,410	103,000	25,590
2021	32,330	56,525	88,855	103,000	14,145
2026	33,550	59,650	93,200	103,000	9,800

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Table IV-42

GA Terminal Area Inventory (in square feet)

FBO	Terminal Area	Functional Space[1/]
Dolphin Aviation	3,000	2,550
Rectrix Aerodrome Centers	16,000	8,000
Volo Aviation	3,000	1,500
Total Terminal Area Availability	22,000	12,050

Note:

1/ The functional space value incorporates all functions of a full-service GA terminal building, including FBO counter, waiting area, snack room, pilot's lounge, restrooms, and the like.

Sources: The LPA Group Incorporated, June 2008; Discussions with FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated.

Exhibit IV-37

0 300ft

north

Fixed Base Operator Dolphin Aviation

P:\Sarasota\Master Plan\Task 6 - Support Facilities\Exhibits\exhibit 4-37.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 11:48am

Source: The LPA Group Incorporated, June 2008
Prepared by: The LPA Group Incorporated

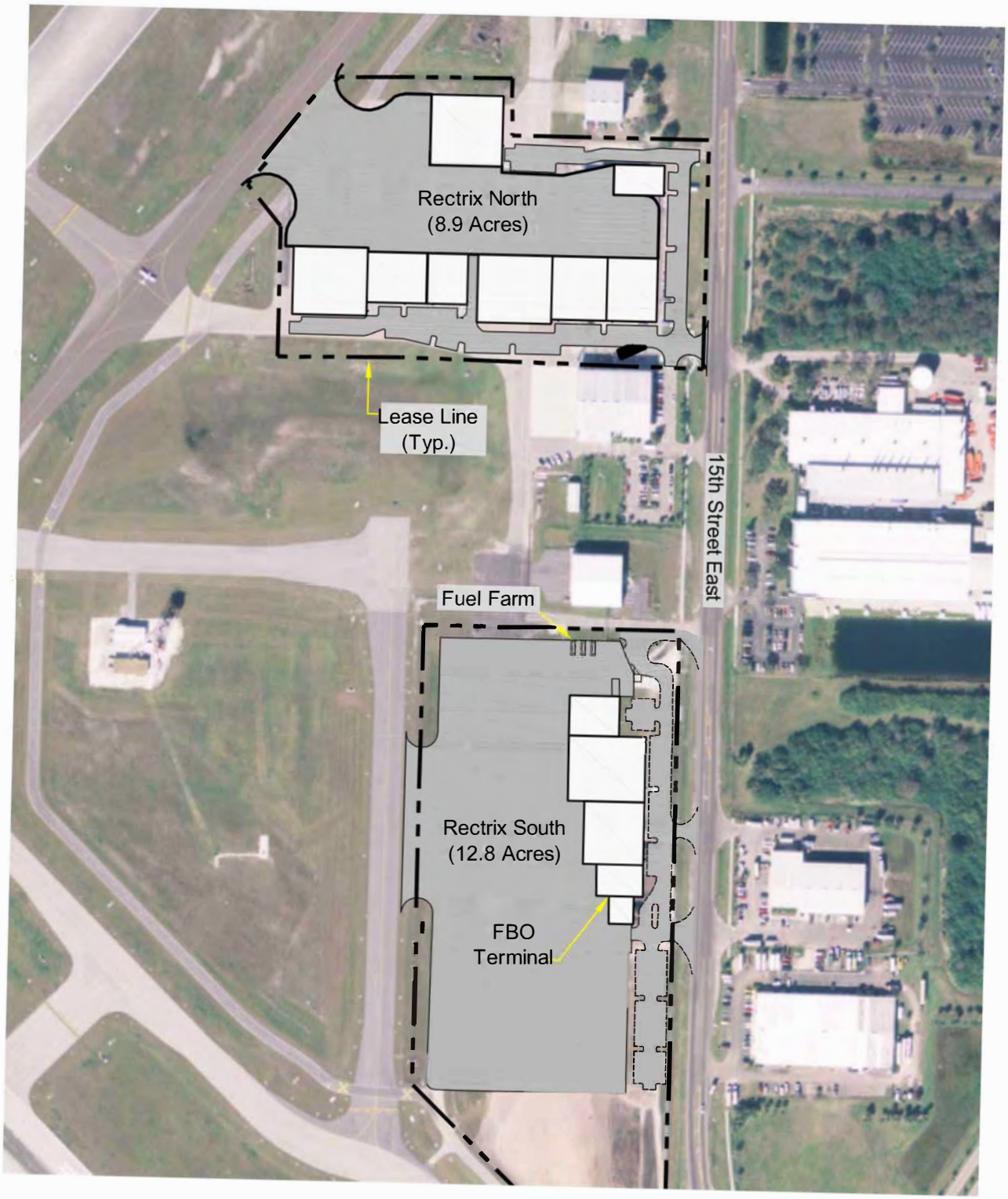
Exhibit IV-38

0 300ft

north

Fixed Base Operator Volo Aviation

P:\Sarasota\Master Plan\Task 6 - Support Facilities\Exhibits\exhibit 4-38.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 11:39am



Source: The LPA Group Incorporated, June 2008
Prepared by: The LPA Group Incorporated

Exhibit IV-39

0 300ft

north

Fixed Base Operator
Rectrix North & South

P:\Sarasota\Master Plan\Task 6 - Support Facilities\Exhibits\exhibit 4-39.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 11:38am

According to FDOT's *Guidebook for Airport Master Planning*, the number of peak-hour GA pilots/passengers should be used to project the highest average number of pilots and passengers that use an airport during a one-hour period. To estimate the peak-hour number of GA pilots/passengers at SRQ, the following assumptions were made:

- Only one-half of transient aircraft operations (i.e., landings only) would require use of the GA terminal.
- Based on the ADG (as discussed earlier in Sections 4.3.3.1 and 4.8.1.4), the following assumptions regarding the average numbers of pilots/passengers were used:
  - ADG I: 4
  - ADG II: 7
  - ADG III: 10

To determine terminal space requirements, FDOT recommends using an area between 40 square feet and 100 square feet for each pilot/passenger. The FBOs at SRQ indicated that most passengers only stay for a short amount of time. As such, it was determined that FDOT's minimum recommendation of 40 square feet for each pilot/passenger was appropriate for SRQ.

Table IV-43 summarizes the number of peak hour transient aircraft operations by ADG, as well as the associated number of pilot/passenger seats required.

Table IV-43

Peak Hour Transient Aircraft Operations and Passengers

	ADG I Aircraft		ADG II Aircraft		ADG III Aircraft		Total Peak Hour Transient Aircraft Operations and Passengers	
Year	Operations (35%)	Pilots/ Passengers	Operations (50%)	Pilots/ Passengers	Operations (15%)	Pilots/ Passengers	Total Operations	Total Pilots/ Passengers
2006	8	32	11	77	3	30	22	139
2011	7	28	10	70	3	30	20	128
2016	8	32	11	77	3	30	22	139
2021	9	36	13	91	4	40	26	167
2026	10	40	14	98	4	40	28	178

Sources: The LPA Group Incorporated, June 2008; Discussions with FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

By applying the total peak hour number of transient pilots/passengers shown in Table IV-43 to the 40-square-foot requirement, the GA terminal space requirements were determined, as presented in **Table IV-44**.

Table IV-44

GA Terminal Space Requirements

Year	Peak Hour Transient Passengers	GA Terminal Space Required (square feet)	Existing Availability (square feet)	Surplus (square feet)
2006	139	5,560	12,050	6,490
2011	128	5,120	12,050	6,930
2016	139	5,560	12,050	6,490
2021	167	6,680	12,050	5,370
2026	178	7,120	12,050	4,930

Sources: The LPA Group Incorporated, June 2008; Discussions with the FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Dividing the existing capacity (12,050 square feet) by the projected peak hour transient passengers to existing general aviation terminal facilities provides more than the minimum 40 square feet per pilot/passenger recommended by FDOT guidelines (i.e., 87 square feet per pilot/passenger in 2016 and 68 square feet per pilot/passenger in 2026). Based on the methodology above, no deficit of GA terminal space would be expected at SRQ during the 20-year planning period. Inspections of each FBO facility were conducted to determine their individual terminal requirements, as summarized below:

- Dolphin Aviation's existing terminal area represents 36 percent of the total terminal area required for SRQ by 2026 (i.e., 36 percent of 7,120 square feet). As such, assuming that each FBO will attract an equal share of GA business at the Airport, Dolphin's existing terminal area should be adequate throughout the planning period.
- Volo Aviation's terminal has the least amount of functional space of the three FBO terminals at SRQ. Volo personnel indicated plans to construct a new terminal building within the next few years. Assuming that each FBO will attract an equal share of GA business during the planning period, Volo should consider constructing its new terminal with a minimum of 2,400 square feet or one-third of the total terminal area required for SRQ by 2026 (if not larger to accommodate future growth).
- Rectrix Aerodrome Centers' terminal opened in July 2008, and is the largest of the three FBO terminals.

4.8.2.2 FBO Vehicle Access and Parking

FBO vehicle access and parking requirements were evaluated to determine any potential improvements that may be necessary to safely and effectively accommodate anticipated growth during the 20-year planning period. The evaluation was accomplished through interviews with the FBOs, review of aerial imagery, and onsite inspection.

4.8.2.3 FBO Vehicle Access

As illustrated on Exhibits IV-37 through IV-39, the FBO facilities are easily accessible from several major roads in the vicinity of SRQ.

- Dolphin Aviation is located on North Tamiami Trail (U.S. Route 41), a highway that runs between Tampa and Miami. No vehicle access concerns were identified for Dolphin's facility.

- Volo Aviation is located on Clyde Jones Road, near the intersection of Tallevast Road, a main connector between U.S. Routes 41 and 301, and 15th Street East. No vehicle access concerns were identified for this facility. However, the SMAA may ultimately close a portion of Clyde Jones Road to accommodate future Airport development. If pursued, this project should provide improved access and expansion opportunities for Volo's facility.
- Rectrix Aerodrome Centers is located on 15th Street East, which is accessible from University Parkway – the main connector between SRQ and Interstate 75– and Tallevast Road.

No vehicle access concerns were identified in relation to the three FBO facilities. In addition, a site visit reconfirmed this conclusion, as all three FBOs were easily accessible and were also visible from nearby main roads. Subsequently, no vehicle access improvements are recommended for the FBO facilities at this time.

4.8.2.4 FBO Vehicle Parking

In addition to vehicle access requirements, vehicle parking requirements were also collectively evaluated for the three FBO facilities. Generally speaking, a sufficient number of vehicle parking spaces should be provided to accommodate GA passengers using the FBO facility, as well as employees. For SRQ, the vehicle parking requirements were calculated based on peak hour transient aircraft activity and consistency with local development codes and ordinances. **Table IV-45** summarizes the existing inventory of vehicle parking spaces.

Table IV-45

FBO Vehicle Total Parking Space Inventory

FBO	Parking Spaces
Dolphin Aviation	100
Rectrix Aerodrome Centers	100
Volo Aviation	40
Total Inventory	240

Sources: Drawings provided by FBOs and SMAA.
Prepared by: The LPA Group Incorporated, June 2008.

A number of spaces within the current parking lots are regularly used by businesses that lease hangar/office space from the FBOs. This factor increases the overall number of parking spaces that would ordinarily be required for pilots, passengers, and FBO employees. According to the *Land Development Code of Manatee County* (enacted April 3, 2008), off-street parking requirements for a commercial service airport must be calculated as follows:

> One (1) space per employee, plus one (1) space for each vehicle used in connection with the facility, plus sufficient space to accommodate the largest number of vehicles that may be expected at any one time.

Based on the criteria above, it was determined that the peak hour transient pilots/passengers requirement presented in Table IV-43 provides a realistic requirement for FBO vehicle parking spaces at SRQ. **Table IV-46** presents the FBO vehicle parking requirement for SRQ.

Table IV-46

FBO Vehicle Parking Space Requirements

Year	Parking Space Requirements	Existing Availability	Surplus
2006	139	240	101
2011	128	240	112
2016	139	240	101
2021	167	240	73
2026	178	240	62

Source: Manatee County, *Land Development Code of Manatee County*, April 2008.
Prepared by: The LPA Group Incorporated, April 2008.

An analysis of peak hour activity revealed that no FBO vehicle parking improvements would be required at SRQ throughout the planning period. Furthermore, a review of the local development code revealed that the existing lots comply with Manatee County's requirements for handicap accessible spaces. However, as mentioned in Chapter II, the lack of space at Volo Aviation's facilities requires some patrons to park in the grassed area across the street from the FBO. Volo intends to pave some of the grassed area to create additional space for vehicle parking. Any new parking areas that are developed by the FBOs at SRQ should be constructed in accordance with the guidelines of the *Land Development Code of Manatee County*.

4.8.2.5 FBO Fuel Storage

General aviation aircraft fueling services are provided by all three FBOs at SRQ. As summarized in **Table IV-47**, the FBOs store Jet A and 100LL (AvGas) fuels in a combination of above-ground storage tanks and delivery trucks.

Table IV-47

FBO Fuel Storage Inventory

	Jet A Storage (gallons)			AvGas Storage (gallons)		
FBO	Tanks	Trucks	Total	Tanks	Trucks	Total
Dolphin Aviation	12,000	15,200	27,200	12,000	2,350	14,350
Rectrix Aerodrome Centers	40,000	15,000	55,000	15,000	1,000	16,000
Volo Aviation	40,000	6,000	46,000	20,000	1,200	21,200
Total Fuel Storage	92,000	36,200	128,200	47,000	4,550	51,550

Sources: The LPA Group Incorporated, June 2008; Discussions with the FBOs, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

The Airport's overall GA fuel storage capacity is 128,200 gallons of Jet A fuel and 51,550 gallons of AvGas. According to FDOT's *Guidebook for Airport Master Planning*, depending on the specific nature of the airport, anywhere from a 7-day to a 45-day supply of fuel storage capacity is desired. The FBOs indicated that a 7-day supply of fuel storage is adequate to accommodate GA fueling activity at the Airport. To analyze fuel storage requirements at SRQ, it was necessary to review the fuel flowage data provided by the SMAA. As shown below, the average weekly flowage of Jet A fuel and AvGas was calculated and applied to the 2006 baseline year.

- 2006 Baseline Jet A Average Weekly Flowage – approximately 56,000 gallons
- 2006 Baseline AvGas Average Weekly Flowage – approximately 6,000 gallons

A forecast of GA operations by piston, turboprop, and jet aircraft was then reviewed to determine the fuel storage requirements. The GA operations fleet mix forecast from Chapter III provided a similar breakdown of operations by aircraft for use in this analysis. However, as turboprops were not identified in the forecast, it was assumed that jets and helicopters were the aircraft types that use Jet A fuel at SRQ. Therefore, AvGas was assumed to be used for all single-engine and multi-engine aircraft. The average numbers of weekly operations by aircraft that use Jet A and AvGas at SRQ are presented in **Table IV-48.**

Table IV-48

General Aviation Fuel Storage Requirements (in gallons)

	Jet A Fuel				AvGas			
Year	Average Week Operations[1]	Requirement	Availability	Surplus	Average Week Operations[1/]	Requirement	Availability	Surplus
2006	618	55,675	128,200	72,525	1,955	5,526	51,550	46,024
2011	636	57,311	128,200	70,889	1,809	5,113	51,550	46,437
2016	859	77,488	128,200	50,712	1,826	5,161	51,550	46,389
2021	1,083	97,606	128,200	30,594	1,843	5,209	51,550	46,341
2026	1,238	111,632	128,200	16,568	1,937	5,473	51,550	46,077

Note:

1/ Based on the GA operations fleet mix forecast from Chapter III. The numbers were divided by 52 to represent an average week.

Sources: Sarasota Manatee Airport Authority Fuel Flowage Data; The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

Consistent with FDOT's guidelines, to forecast fuel flowage during the 20-year planning period, an average weekly gallons to average weekly operations ratio was determined for the 2006 baseline year.

- **Jet A Ratio** = 2006 Weekly Flowage (56,000 gallons) ÷ 2006 Weekly Operations (618) = **90.2**
- **AvGas Ratio** = 2006 Weekly Flowage (6,000 gallons) ÷ 2006 Weekly Operations (1,955) = **2.8**

These ratios were applied to the weekly Jet A operations and weekly AvGas operations values in Table IV-49 to determine the GA fuel storage requirements.
The resulting analysis determined that no additional Jet A or AvGas fuel storage capacity would be required throughout the planning period. However, an investigation of Dolphin's historical fuel flowage data revealed that it currently pumps the highest volume of fuel per month compared to other FBOs. Conversely, Dolphin has the least amount of fuel tank storage capacity. For this reason, an additional Jet A storage tank with a capacity of 10,000 gallons is recommended for Dolphin Aviation.

4.8.3 Support Facilities

Several additional facilities are important to keeping the Airport operational and necessary to provide key capabilities at the Airport, such as ARFF and air cargo facilities. It is important to identify any needed improvements to these facilities during the planning period to accommodate future growth. The requirements for existing and future ARFF and air cargo facilities at SRQ are discussed in this section.

4.8.3.1 Aircraft Rescue and Fire Fighting Requirements

The FAA assigns specific ARFF requirements for airports certified under FAR Part 139. These requirements are contingent upon the largest aircraft operating at the Airport (in terms of length and wingspan) with at least five average daily departures. As mentioned in Chapter II of this Master Plan Update, the ARFF station at SRQ meets the requirements for ARFF Index C and complies with the associated stipulations under FAR Part 139 for response time, equipment, and extinguishing agents.

A review of the fleet mix forecasts in Chapter III showed that SRQ's ARFF Index will remain unchanged throughout the 20-year planning period. The B-757-300, which is included in ARFF Index D by dimensions alone (not by daily departures), was the largest airline aircraft in operation at SRQ, but this aircraft no longer serves the Airport. The dimensions of all other existing and forecast airline aircraft are ARFF Index C or lower.

In summary, no ARFF upgrades or additional ARFF facilities/equipment would be required for SRQ during the planning period. However, vehicle replacement and facility maintenance should be conducted as necessary.

4.8.3.2 Air Cargo Requirements

The air cargo facility at SRQ serves domestic and international cargo, as well as special cargo handling needs. The air cargo building encompasses 23,500 square feet of space, but only 3,220 square feet (approximately 14 percent) is occupied by the single cargo handling agent – Delta Air Cargo. The remaining portions are used by Servisair, ASIG, and the SMAA.

A 16,500-square-foot concrete staging area is located in front of the air cargo building, within the secure airside, for cargo marshalling and storage, but no direct airfield access is currently provided. There are very few dedicated air cargo flights at SRQ. Instead, most of the cargo is transported in the belly compartments of commercial passenger airline flights. Air cargo facility requirements were evaluated in relation to building demand and airfield access.

4.8.3.3 Air Cargo Building Demand

As previously mentioned, Delta Air Cargo currently leases approximately 14 percent of the existing 23,500-square-foot air cargo building. An additional 14 percent is occupied by Servisair and ASIG in support of their Airport maintenance and ground service equipment operations. The remaining 72 percent of the building is occupied by the SMAA for the storage of equipment and other items.

Generally, forecasts of air cargo operations or cargo tonnage are used to calculate air cargo facility requirements. A review of the air cargo forecasts presented in Chapter III revealed that 24 air cargo jet operations occurred at SRQ in 2006, with a forecast decrease to 17 air cargo jet operations by 2026. Since most of SRQ's air cargo is carried by the passenger airlines as belly cargo, the airline and cargo operations forecast was also considered for determining cargo facility requirements. As

such, a ratio of utilized air cargo building area to airline operations was used to determine the area required per operation.

- Air Cargo Ratio = Existing Building Area Being Utilized (3,220 square feet) ÷ 2006 Airline Operations (19,246) = **0.17**

This ratio was applied to the airline operations and cargo operations forecast in Chapter III to determine the air cargo building area requirements presented in **Table IV-49**.

Table IV-49

Air Cargo Building Requirements

Year	Airline and Cargo Aircraft Operations 1/	Air Cargo Building Requirements (square feet)	Existing Availability (square feet)	Surplus (square feet)
2006	19,314	3,220	20,140	16,920
2011	22,664	3,778	20,140	16,362
2016	25,060	4,178	20,140	15,962
2021	26,537	4,424	20,140	15,716
2026	27,342	4,558	20,140	15,582

Note:

1/ Based on the airline aircraft operations presented in Chapter III of this Master Plan Update.

Sources: The LPA Group Incorporated, June 2008; Data from the Sarasota Manatee Airport Authority.
Prepared by: The LPA Group Incorporated, June 2008.

Assuming that the SMAA can relocate its equipment currently stored in the air cargo building, sufficient space would be available to accommodate the anticipated cargo processing demands at the Airport. However, Delta Air Cargo may require a small amount of additional space within the air cargo building to meet its needs by 2026. No additional air cargo requirements are expected during the planning period unless a new air cargo operator were to relocate or base its operations at SRQ in the future.

In summary, additional space could be provided within the existing air cargo building simply by relocating a portion of SMAA's stored equipment or by relocating Servisair or ASIG in the future.

As all cargo operations are shown to decrease over the planning period relative to 2006, there does not appear to be a need for additional cargo ramp.

4.8.3.4 Air Cargo Airfield Access Requirements

Direct airfield access is generally ideal for air cargo facilities, but unique circumstances may reduce this need at some airports. As previously mentioned, most of the cargo at SRQ is carried by the passenger airlines as belly cargo, and there are very few dedicated all-cargo flights at the Airport. As is the case with nearly all belly cargo handled at airports throughout the country, cargo is transported from the aircraft to the cargo sort facility via ground service agents, similar to passenger baggage. Unless there is a shift in the way cargo is carried by aircraft at SRQ (e.g., from airline aircraft belly cargo to dedicated all-cargo aircraft operations), direct airfield access will not be required during the planning period. In the event that a new cargo operator were to establish SRQ as a base of operations, the entire cargo building may have to be dedicated to cargo activity – and the need for improved airfield or expanded access would need to be revisited.

4.8.3.5 Summary of Aviation Support Facility Requirements

The requirements for GA, FBO, ARFF, and air cargo facilities to meet the 20-year forecast of aviation demand at SRQ are summarized in **Table IV-50**.

Table IV-50

Summary of Aviation Support Facility Requirements

T-hangar Bays	Replace port-a-port hangar bays with an equal or greater number of T-hangar bays.
	Construct at least 77 additional T-hangar bays (109,200 square feet), including 35 small-bay T-hangars (42,000 square feet) and 42 large-bay T-hangars (67,200 square feet).
Commercial/Corporate Hangars	Construct at least 138,000 square feet of additional commercial hangar storage.
Based Aircraft Apron	No additional based aircraft apron space would be required.
Transient Aircraft Apron	No additional transient aircraft apron space would be required.
GA Terminal Area	Collectively, the GA terminal area is adequate for the three FBOs.
	Volo Aviation is planning to construct a new terminal to provide additional space for its operations.
Vehicle Access	No vehicle access improvements are required.
Vehicle Parking	Collectively, vehicle parking is adequate for the three FBOs.
	However, Volo Aviation should consider providing additional paved parking area for its facility.
Aircraft Fuel Storage	Collectively, aircraft fuel storage is adequate for the three FBOs.
	Dolphin Aviation should consider increasing its stationary Jet A fuel supply to reduce delivery requirements.
ARFF	No change in ARFF index is anticipated during the planning period. As such, no additional ARFF facilities or equipment would be required.
Building Demands	With the potential relocation of SMAA equipment or one of the other air cargo building occupants, no additional air cargo processing area is required.
	Delta Air Cargo may require a small amount of additional cargo processing area within the air cargo building to meet its needs by 2026.
Airfield Access	As most air cargo is carried by passenger airlines as belly cargo, direct airfield access to the air cargo facility is not required.

Source: The LPA Group Incorporated, June 2008.
Prepared by: The LPA Group Incorporated, June 2008.

V. Airport Facility Development Alternatives and Recommendations

Based on the demand/capacity analyses and facility requirements for each of the Airport elements identified in Chapter IV to meet PAL 1(1.8 MAP) and PAL 2 (2.0 MAP) demand, development alternatives were identified. As evidenced in Chapter IV, not all elements of the Airport require new or additional capacity to accommodate demand. Those Airport elements requiring additional infrastructure are shown on the ALP (see Chapter VI of this Master Plan Update).

5.1 Alternatives

The alternatives for Airport facilities not requiring new infrastructure and for facilities requiring new infrastructure are discussed below.

5.1.1 Airport Facilities Not Requiring New Infrastructure

The airfield, terminal, and on-Airport roadway access facilities that would not require new infrastructure are discussed in this section.

5.1.1.1 Airfield

In 2006, annual operational demand represented 63.9 percent of the ASV; thus, the existing airfield was adequate to satisfy "existing" demand. Based on the fleet mix projections, the ASV is anticipated to decrease to 245,900 operations at PAL 1 and 243,600 operations at PAL 2. Therefore, annual demand is anticipated to represent 70.5 percent and 82.8 percent of the ASV by PAL 1 and PAL 2, respectively, under the Baseline Forecasts. At the Airport Authority's request, runway expansion alternatives were not explored. This decision was further supported by the slowdown in aircraft operations experienced in calendar year 2008.

5.1.1.2 Terminal

As summarized in Chapter IV, the existing terminal at SRQ is adequate to serve existing, PAL 1, and PAL 2 demand. Therefore, new terminal infrastructure is not anticipated through the planning horizon.

5.1.1.3 On-Airport Roadway Access

All on-Airport roadway links analyzed in Chapter IV are anticipated to operate at LOS A at both PAL 1 and PAL 2 demand. These results indicate that the Airport roadways in their existing configuration will provide sufficient capacity to meet forecast traffic demand. Thus, additional roadway infrastructure would not be required through the planning horizon.

5.1.2 Airport Facilities Requiring New Infrastructure

New infrastructure would be required for public parking, consolidated rental car, and aviation support facilities, as discussed below.

5.1.2.1 Public Parking Facilities

Based on the public parking requirements identified in Chapter IV, two garage siting and configuration concepts were considered. The two garage sites considered were: (1) the existing short-term public parking lot adjacent to the terminal building, and (2) the employee lot east of the terminal building. After consultation with Airport Engineering staff, the employee lot was

eliminated from further consideration as a possible site for a future public parking garage, as the ideal location from a customer service standpoint was determined to be directly across from the terminal building. This location would provide equal walking distances from the parking area to the departure and arrival terminal areas.

Exhibit V-1 illustrates the potential garage configurations for the Baseline and Accelerated Baseline Forecasts, as well as the vehicle entry and exit points. For both forecast scenarios, a two-level garage is recommended. A smaller footprint resulting in at least a three-level structure was also considered, but was determined to be less desirable because of the resulting higher construction costs. The parking garage for the Baseline Forecast scenario would provide approximately 355 parking spaces per level, while the garage for the Accelerated Baseline Forecast scenario would provide 431 parking spaces per level. To reflect the anticipated growth in public parking demand, the SMAA requested consideration of a phased approach to development of the parking garage.

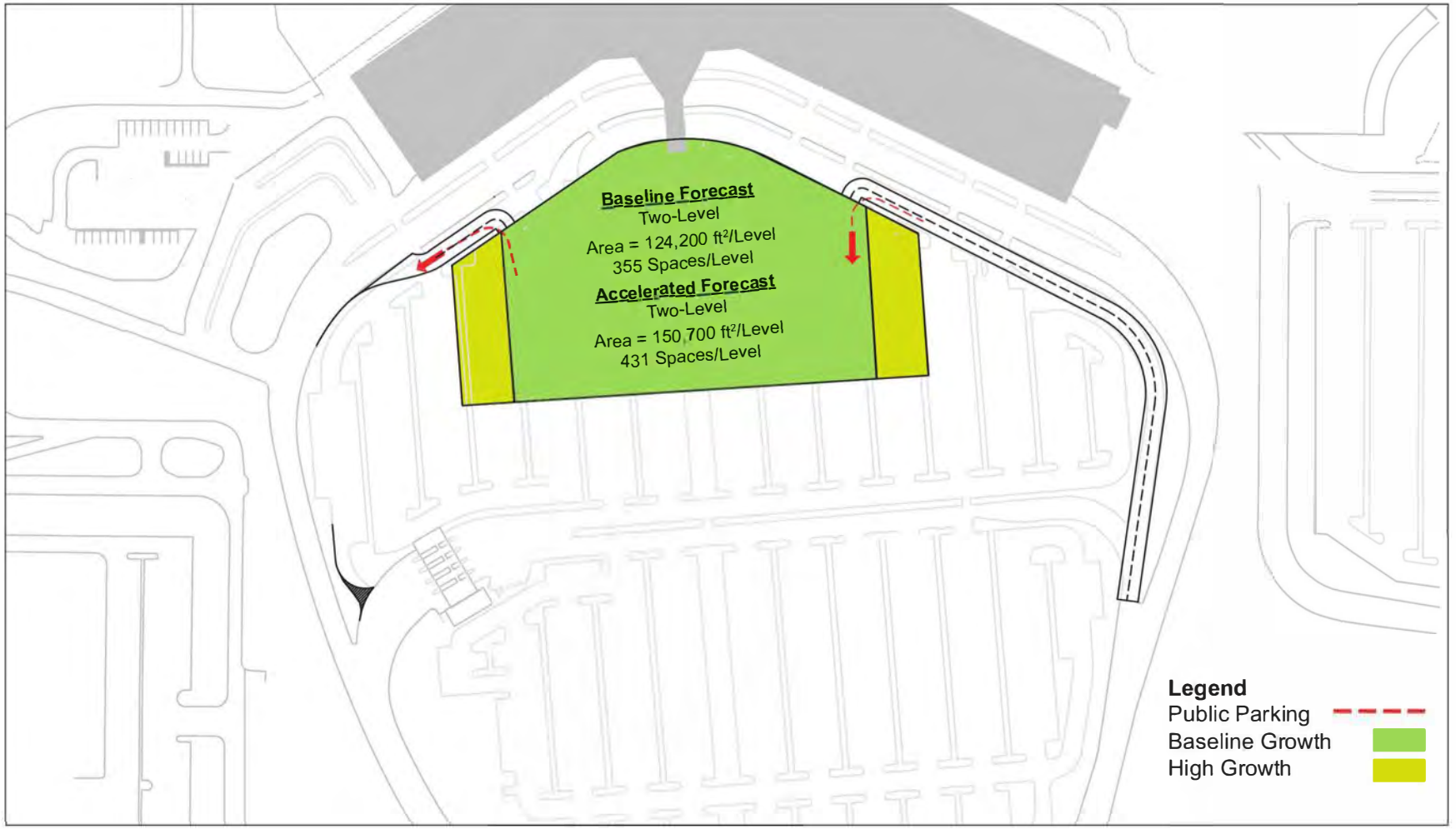
Exhibit V-2 illustrates the footprints required to accommodate public parking demand associated with both the Baseline and Accelerated Baseline Forecasts at PAL 1 (1.8 MAP). The second phase of garage development would provide the additional capacity necessary to accommodate public parking demand at PAL 2 (2.0 MAP).

Prior to completion of this analysis, the SMAA determined that the cost of constructing and operating a parking garage using only public parking revenues would not be feasible based on projected parking demand. The SMAA requested that alternatives to a parking garage be considered, including a consolidated rental car facility and a consolidated rental car facility that would also accommodate public parking. The feasibility of constructing a combined public parking and consolidated rental car facility adjacent to the terminal building is discussed in the following subsection.

5.1.2.2 Consolidated Rental Car Facility

Four alternative layouts for a consolidated rental car facility located on the site of the surface parking lot adjacent to the terminal were developed. **Exhibits V-3** through **V-8** depict the close-in (ready/return and QTA service areas) and remote facilities (storage and maintenance facilities) that would be required. All alternatives also show a two-level structure (or deck) with the rental car ready/return area on the second level and QTA service areas at grade (or elevated, depending on alternative), located south of the ready/return area. The existing rental car counters located at the terminal buildings arrivals level were assumed to remain in place. Thus, the consolidated facility would not include a dedicated customer service building. The parking spaces that would be lost to accommodate QTA services at grade or interior roadway circulation for all alternatives were assumed to be replaced by maximizing the overflow parking lot. The deck would also provide the added benefit of covered public parking spaces (at ground level).

Exhibit V-3 illustrates the close-in facilities associated with Alternative 1, which includes an elevated ready/return and QTA service area. In accordance with the SMAA's request, a "mid-term" alternative was also developed. This alternative, Alternative 1A, would only accommodate the Baseline Forecast through the 2016 (1.9 MAP) planning horizon, as shown on Exhibit V-4. The purpose of this alternative was to determine the reduction in cost for a smaller facility footprint to accommodate this "mid-term" timeframe. As shown, in this alternative, the facility includes an elevated ready/return area and a QTA area at grade, with potential expansion areas to either side of the structure.



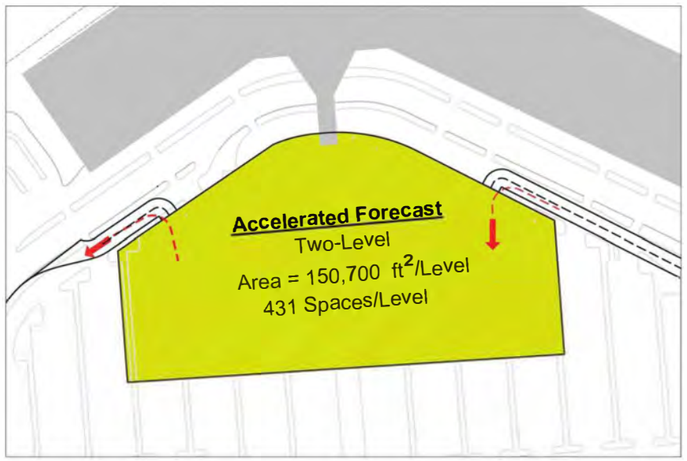
Source: Ricondo & Associates, Inc., January 2008.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit V-1

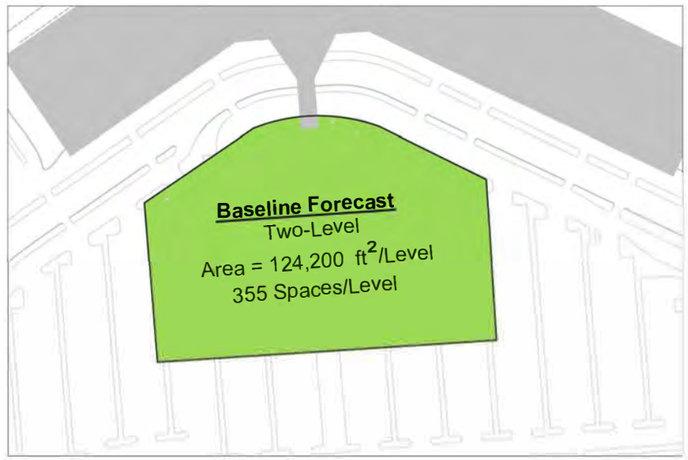
0 150 ft.

north

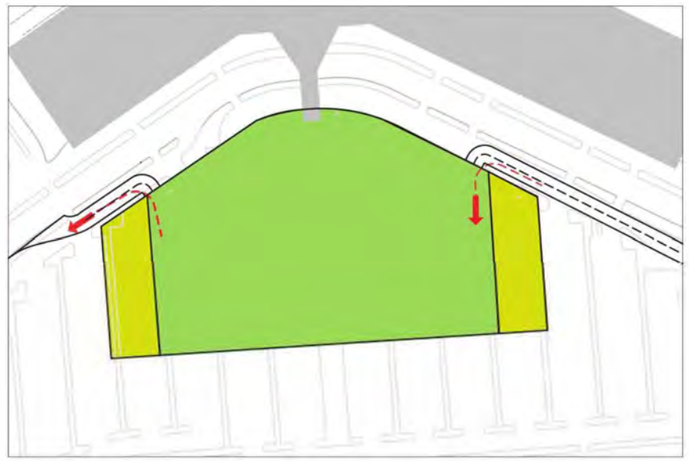
Parking Garage
Public Parking Only



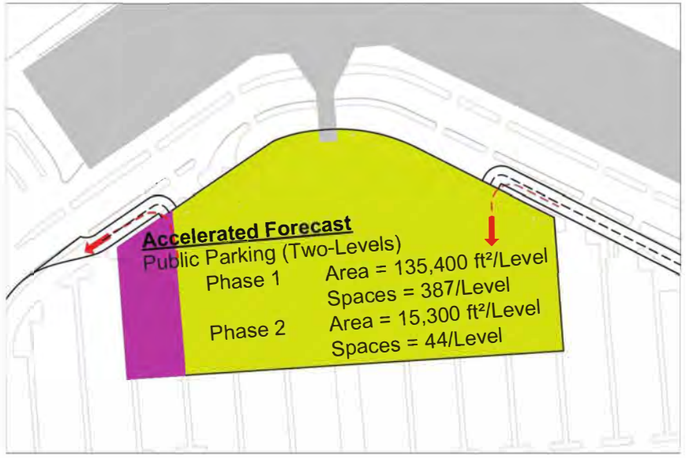
Accelerated Forecast Parking Garage



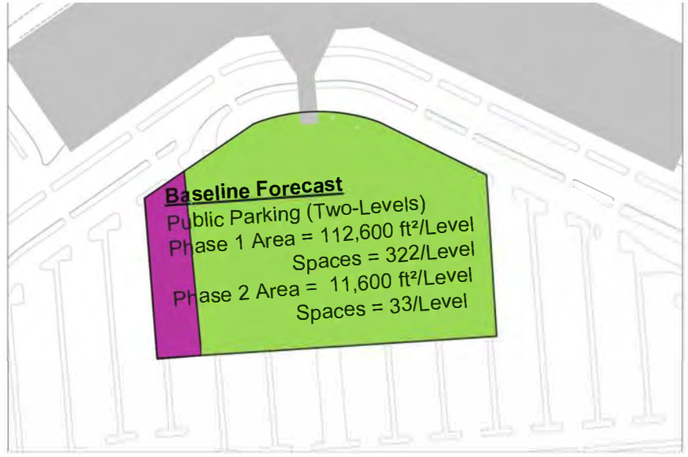
Baseline Forecast Parking Garage



Difference in Baseline and Accelerated Forecast



Accelerated Forecast Phasing



Baseline Forecast Phasing

Source: Ricondo & Associates, Inc., January 2008.
Prepared by: Ricondo & Associates, Inc., March 2009

Exhibit V-2

0 200 ft. north

Comparison of Public Parking Garage Options
Accelerated & Baseline Forecasts

Source: Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

Exhibit V-3

0 300 ft.

north

Close-in Facilities (Ready/Return and Quick Turn Around Areas) Alternative 1

Drawing: Z:\SRQ\Rental Car\Requirements\CAD\SRQ-Alt-1.dwg Layout: Exhibit-V-3 May22, 2009, 7:29am

Source: Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

Exhibit V-4

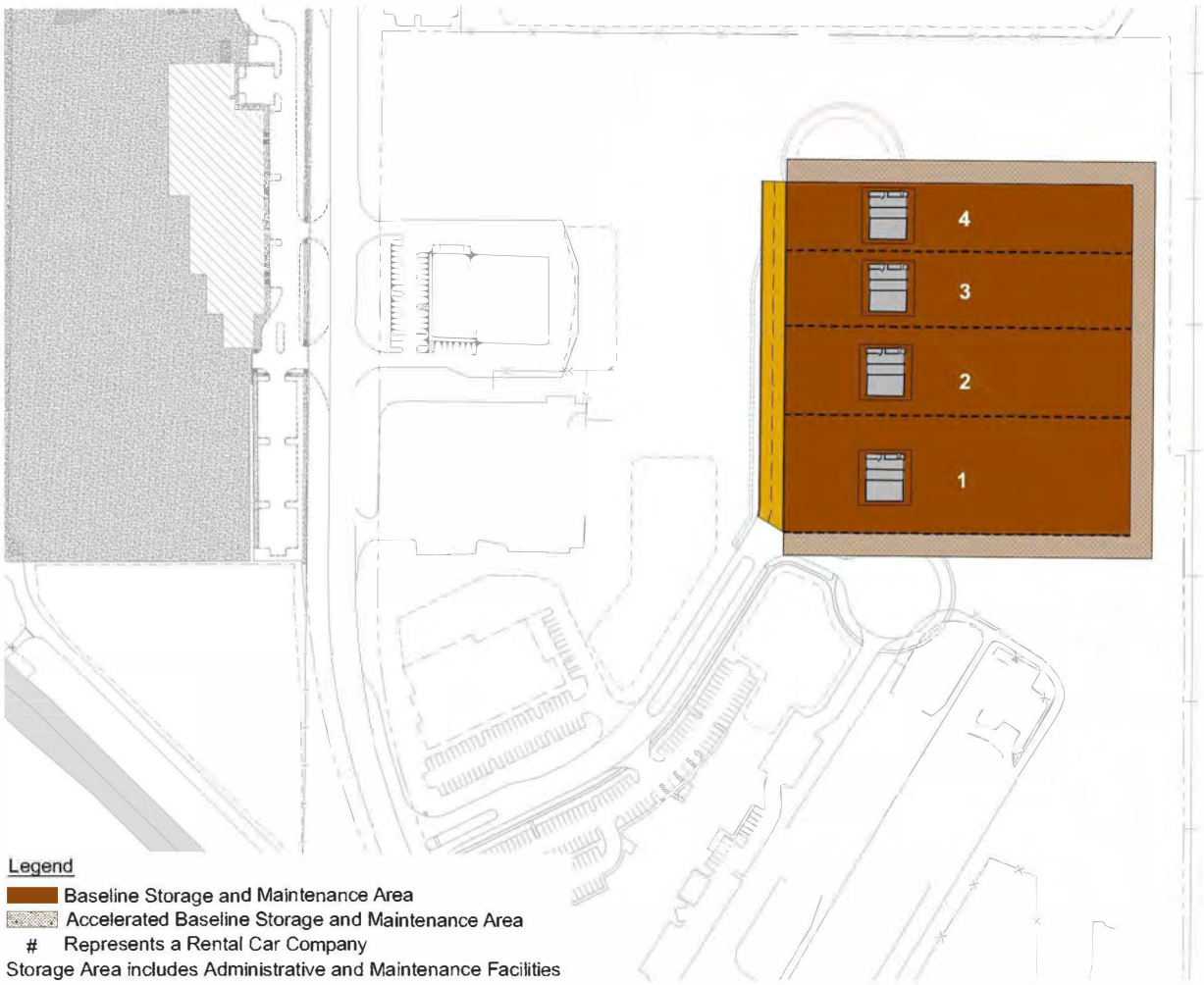
0 300 ft.

north

Close-in Facilities (Ready/Return and Quick Turn Around Areas) Alternative 1A

May 2009

Drawing: Z:\SRQ\Rental Car\Requirements\CAD\SRQ- Refined -Alt-1.dwg Layout: Exhibit-V-4 May 22, 2009, 7:29am



Source: Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

Exhibit V-5

0 300 ft.

north

Remote Storage and Maintenance Facilities Alternatives 1 and 1A

Drawing: Z:\SRQ\Rental Car\Requirements\CAD\SRQ-Alt-2.dwg Layout: Exhibit-V-5 May 22, 2009, 2:37pm

Source: Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

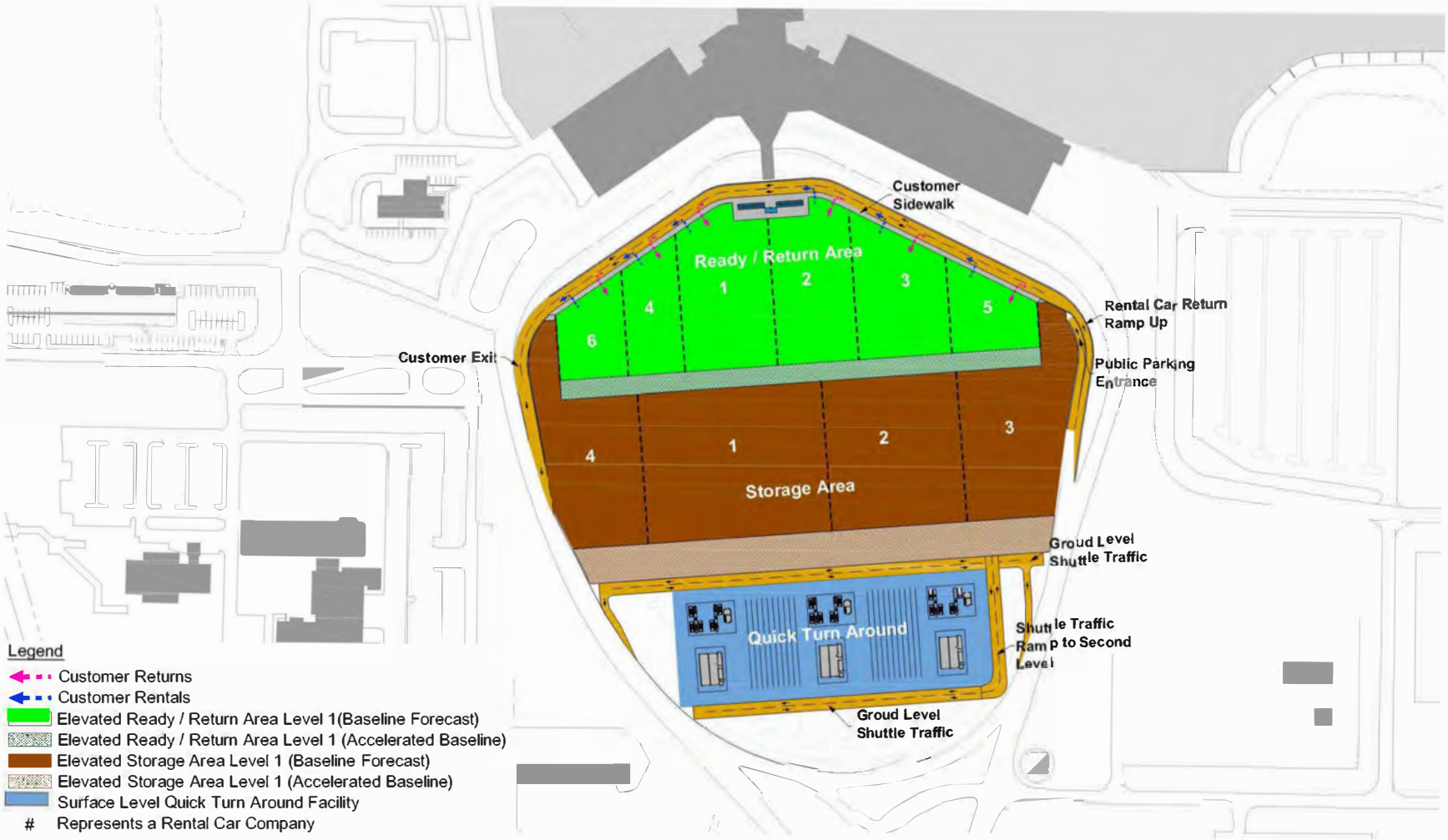
Exhibit V-6

0 300 ft.

north

Close-in Facilities (Ready/Return, Quick Turn Around and Storage Areas) Alternative 2

Drawing: Z:\SRQ\Rental Car\Requirements\CAD\SRQ-Alt-2.dwg Layout: Exhibit-V-6 May22, 2009, 7:30am



Source: Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

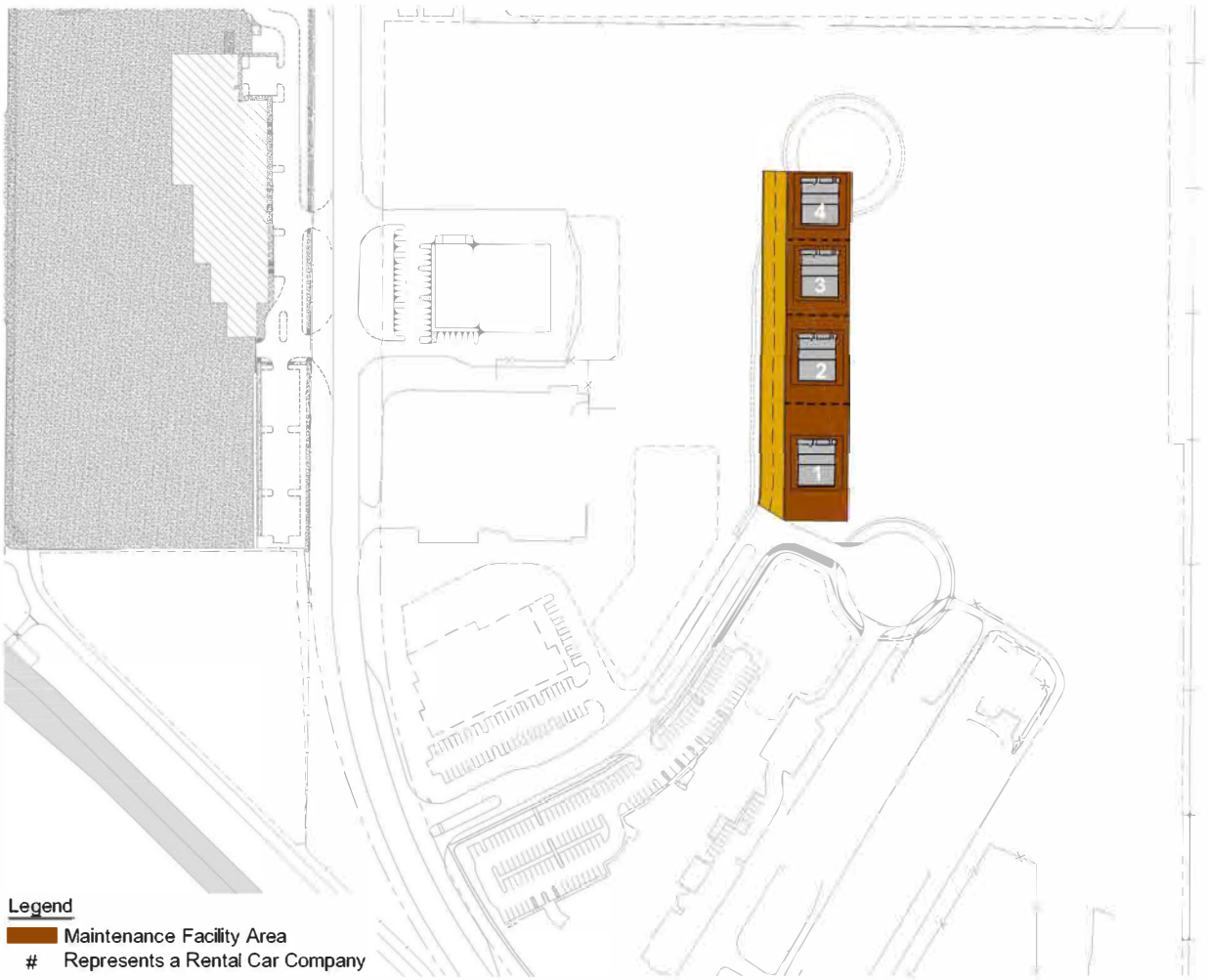
Exhibit V-7

0 300 ft.

north

Close-in Facilities (Ready/Return, Quick Turn Around and Storage Areas) Alternative 3

Drawing: Z:\SRQ\Rental Car\Requirements\CAD\SRQ-Alt-3.dwg Layout: Exhibit-V-7 May22, 2009, 7:34am



Source: Ricondo & Associates, Inc., July 2008.
Prepared by: Ricondo & Associates, Inc., July 2008.

Exhibit V-8

0 300 ft.

north

Remote Maintenance Facilities Alternatives 2 and 3

Drawing: Z:\SRQ\Rental Car\Requirements\CAD\SRQ-Alt-1.dwg Layout: Exhibit-V-8 May22, 2009, 7:34am

Exhibit V-5 illustrates the remote storage and maintenance facilities associated with both Alternatives 1 and 1A. As shown, under these alternatives, the facilities would be located on the northeast side of the Airport, north of West University Parkway.

Alternative 2 is similar to Alternative 1 except that, under Alternative 2, the storage area would be located within the terminal area versus a remote location on the northeast side of the Airport under Alternative 1. Therefore, most of the existing parking lot is shown to be decked (a one-level structure) to accommodate the ready/return area, the QTA service area, and rental car vehicle storage area above grade. This concept, presented on Exhibit V-6, would eliminate the need to shuttle rental cars back and forth between the ready/return and QTA area and a remote vehicle storage area.

Alternative 3 is similar to Alternative 2. It includes an elevated ready/return area and vehicle storage area. The QTA service area, however, would be at grade and located behind the vehicle storage area. Such a layout would generate traffic on the Airport's roadways related to the shuttling of cars back and forth from the elevated ready/return area and the at grade QTA service area, as shown on Exhibit V-7. The maintenance facilities associated with Alternatives 2 and 3 would be remotely located on the northeast side of the Airport, similar to Alternatives 1 and 1A, as shown on Exhibit V-8.

Alternatives 2 and 3 would provide covered spaces for both short- and long-term public parkers, as both surface lots would be decked.

Table V-1 provides order-of-magnitude cost estimates for each of the alternatives discussed above. All alternatives were considered to be implemented in two phases. The two phases can be considered mutually exclusive. In other words, the Airport Authority may choose to implement Phases 1 and 2 concurrently, or it may choose to develop them sequentially with a time-gap between the two phases to facilitate financing of the project or to minimize the project's cost implications. Phase 1 would primarily consist of construction of the parking structure, including the ready/return area and QTA service area. Phase 1 would also include rental car storage areas for Alternatives 2 and 3. As shown in Table V-1, the estimated cost of Phase 1 of the consolidated rental car facility, a one-level structure capable of accommodating public parking and rental car demand through PAL 2 (2.0 MAP), would range from approximately $25 million for Alternative 1 to approximately $56 million for Alternative 2 (in 2008 dollars). The estimated cost for building a smaller structure to accommodate the "mid-term" timeframe (i.e., 2016 or 1.9 MAP), as in Alternative 1A, would be approximately $13 million.

Phase 2 of the project would involve building the remote facilities, including storage areas and maintenance facilities. As noted above, Phase 2 could be built concurrent with Phase 1 or at a later time. As Table V-1 shows, the estimated cost for Phase 2 (in 2008 dollars) ranges from approximately $6 million to $13 million.

Overall, the total cost for a consolidated rental car facility that would also accommodate public parking (Phases 1 and 2 combined) would range from approximately $25 million to $62 million.

Table V-1

Consolidated Rental Car Facility – Estimated Costs (2008 Dollars)

	Alternative 1	Alternative 1A[1/]	Alternative 2	Alternative 3
Phase 1:				
Parking Structure				
(with ready/return area)	$ 11,202,000	$ 7,630,000	$ 37,276,000	$ 36,159,000
Quick Turn Around (QTA) Area	$ 8,440,000	$ 3,050,000	$ 7,695,000	$ 8,099,000
Total Construction - Phase 1	$ 19,642,000	$ 10,680,000	$ 44,971,000	$ 44,258,000
Design (10%)	$ 1,964,200	$ 1,068,000	$ 4,497,100	$ 4,425,800
Contingency (15%)	$ 2,946,300	$ 1,602,000	$ 6,745,650	$ 6,638,700
Total Program - Phase 1	**$ 24,552,500**	**$ 13,350,000**	**$ 56,213,750**	**$ 55,322,500**
Phase 2:				
Remote Facilities	$ 10,039,000	$ 9,197,000	$ 4,653,000	$ 4,653,000
Total Construction - Phase 2	$ 10,039,000	$ 9,197,000	$ 4,653,000	$ 4,653,000
Design (10%)	$ 1,003,900	$ 919,700	$ 465,300	$ 465,300
Contingency (15%)	$ 1,505,850	$ 1,379,550	$ 697,950	$ 697,950
Total Program Phase - 2	**$ 12,548,750**	**$ 11,496,250**	**$ 5,816,250**	**$ 5,816,250**
Total Program (Phases 1 and 2)	**$ 37,101,250**	**$ 24,846,250**	**$ 62,030,000**	**$ 61,138,750**

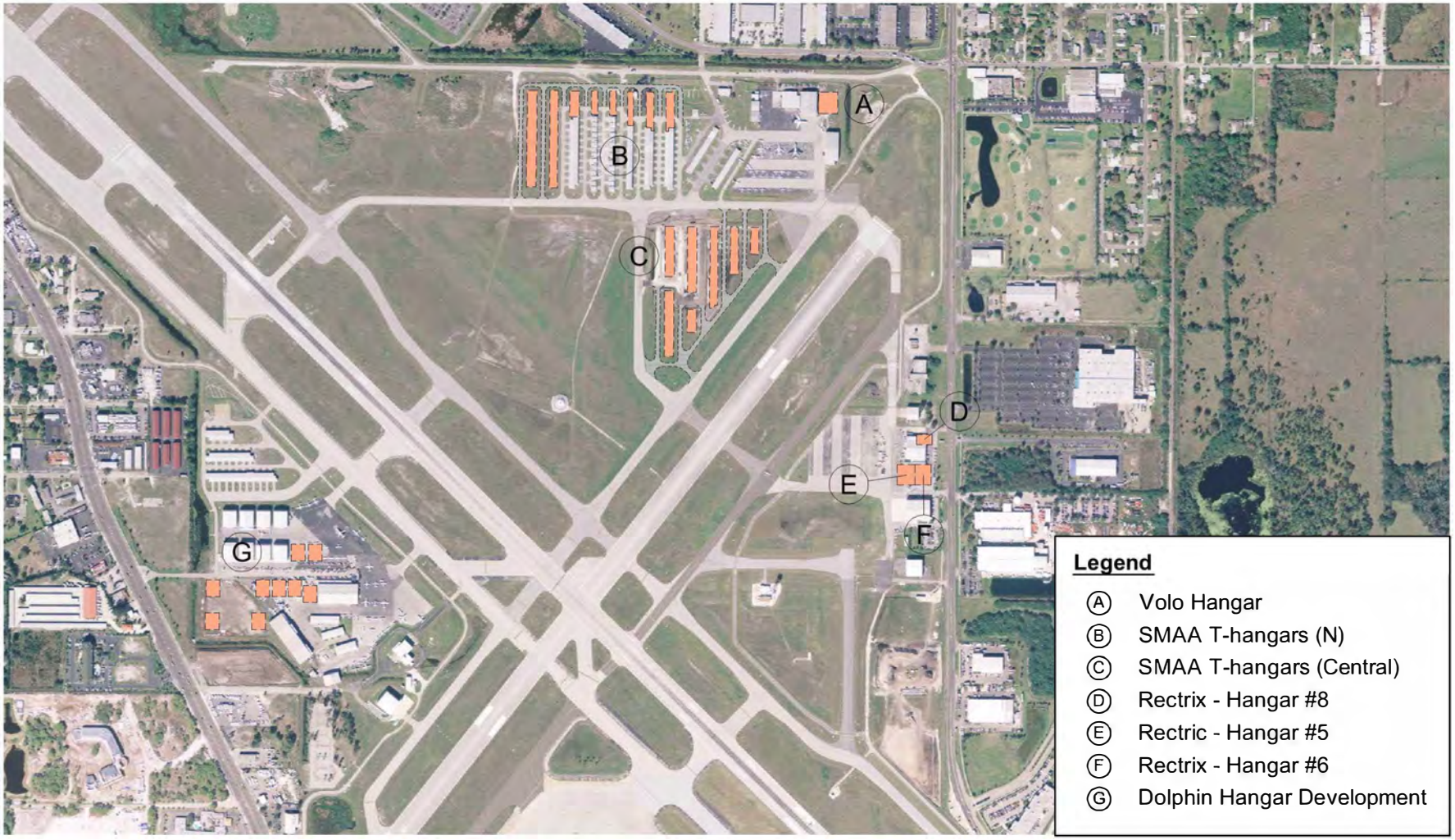
Note:

1/ Alternative 1A would only accommodate the Baseline Forecast through the 2016 planning horizon (1.9 MAP), as shown on Exhibit V-4. The purpose of this alternative is to provide an incremental development alternative that limits the initial development to a parking structure that provides enough capacity to accommodate demand through the mid-term timeframe (i.e., 2016).

Sources: The LPA Group, May 2008; Ricondo & Associates, Inc., May 2008.
Prepared by: Ricondo & Associates, Inc., May 2008.

5.1.2.3 Aviation Support Facilities

The other aviation support facilities required to accommodate the forecast demand discussed in Chapters III and IV are T-hangar bays and commercial/corporate hangar facilities. Additional T-hangar bays are recommended on the north quadrant of the Airport. The majority of the additional commercial/corporate hangars are recommended on the west and east sides of the Airport. **Exhibit V-9** illustrates the recommended T-hangar bays and commercial/corporate hangars at SRQ to accommodate demand through PAL 2.



Sources: LPA Group, ALP Set, March 2009; Manatee County, February 2006.
Prepared by: Ricondo & Associates, Inc., March 2009.

Exhibit V-9

0 1,000 ft.

north

Recommended Hangar Developments

5.2 Recommendations

From a capacity standpoint, no additional runways, terminal facilities, or roadway infrastructure would be required to accommodate PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand at the Airport. These facilities would, however, require renovations and/or rehabilitations consistent with the age of the facilities. Additional public parking spaces would be required to accommodate PAL 1 and PAL 2 demand. A consolidated rental car facility within the terminal area would provide several benefits, including better customer service, operational efficiency and cost savings for the rental car companies, and commercial development/revenue opportunities for the Airport enterprise. Additional hangars would also be required over the planning horizon of this Master Plan Update. Recommendations for each of these facilities are provided below.

- Runway 14-32 was overlaid in 2007, and Runway 4-22 is planned for rehabilitation this year (2009). It is recommended that the Airport Authority maximize the capacity of its existing runways by upgrading Runway 4-22 from an ARC B-II runway to an ARC C-II runway, and ultimately to an ARC C-III runway (post the Master Plan Update planning horizon). In addition, when demand warrants, high-speed runway exits could also be designed to reduce aircraft occupancy time on the runway, thus increasing airfield capacity. As part of this Master Plan Update, one immediate recommendation to maximize existing infrastructure is to maximize the Runway 32 takeoff run available (TORA) to equal the runway length.
- Renovations to the terminal building, which was built in 1989, are expected to be required during the planning period to address wear and tear associated with the facility's age.
- Additional on-Airport roadways would not be required, as the existing infrastructure was determined to provide adequate capacity through the planning period.
- Additional public parking spaces at the Airport would be required to accommodate PAL 1 (1.8 MAP) and PAL 2 (2.0 MAP) demand. As demand materializes at SRQ, these additional parking spaces can be accommodated by restriping the existing overflow lot to maximize its use. Parking demand alone does not justify the need for a multiple-level garage. A two-level garage (or deck) could be provided to accommodate anticipated demand. As previously shown, this structure would occupy the site of the existing short-term lot and ready/return area for rental cars. It could also be combined with a consolidated rental car facility.
- Providing a consolidated rental car facility with ready/return and QTA service areas within the terminal core would both enhance customer service at the Airport and improve the operational efficiency of the rental car companies. In addition, the SMAA would be able to maximize the commercial land areas currently occupied by the rental car companies. Coordination with the rental car companies serving the Airport is recommended to refine a preferred option. From an operational standpoint, a facility that consolidates rental car operations to include ready/return areas, QTA service areas, and vehicle storage areas located in one facility would be preferred (i.e., Alternative 2). The facility's cost, implementation phasing, and the ability to impose a customer facility charge (CFC) would also influence the selection of a preferred alternative. The financing of the various alternatives is further discussed in Chapter VII, assuming different CFC levels.
- The need for additional T-hangar bays and commercial/corporate hangars at the Airport was also identified. The recommended locations for these facilities were based on close coordination with the Airport Properties department and a review of previously approved locations shown on the 2003 ALP, for which some taxilanes have already been constructed.

VI. Airport Layout Plan Set

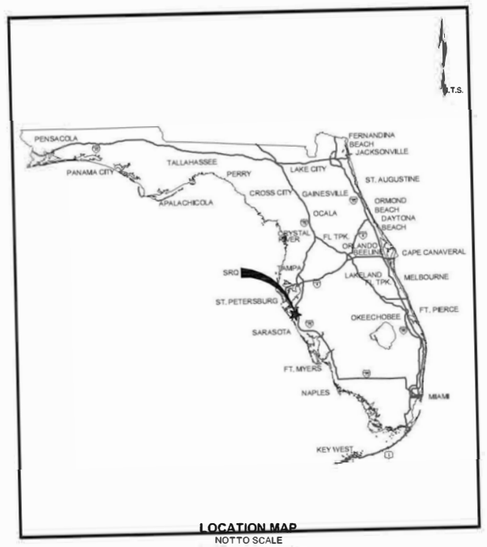
This chapter presents reduced copies of the Airport Layout Plan set for SRQ in 11 inch x 17 inch format. The ALP is a scaled graphic presentation of existing and planned Airport facilities. Airport development projects recommended in the Master Plan Update are included in the ALP set. The ALP illustrates the locations of recommended development on the Airport and the appropriate clearance and dimensional information required to demonstrate compliance with applicable standards.

The ALP set for SRQ consists of the following drawing sheets:

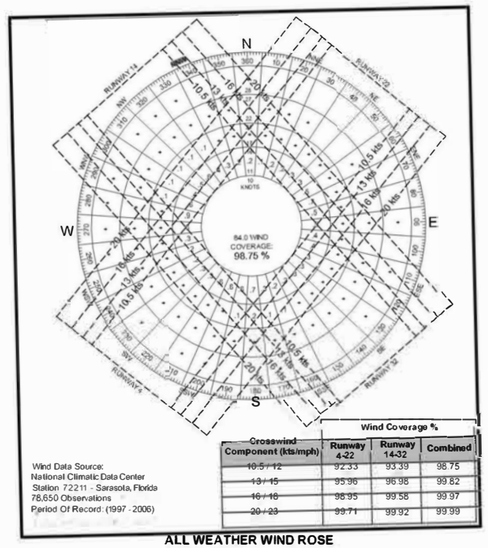
- Cover Sheet
- Airport Layout Plan Drawing
- Terminal Area Drawing
- Airport Airspace Drawing (1 of 4)
- Airport Airspace Drawing (2 of 4)
- Airport Airspace Drawing (3 of 4)
- Airport Airspace Drawing (4 of 4)
- Inner Portion of the Approach Surface Drawing – Runway 4
- Inner Portion of the Approach Surface Drawing – Runway 22
- Inner Portion of the Approach Surface Drawing – Runway 14
- Inner Portion of the Approach Surface Drawing – Runway 32
- Runway Departure Surfaces Drawing
- Airport Land Use Drawing
- Airport Property Map Drawing
- Airport Property Map Data Sheet Drawing

AIRPORT LAYOUT PLAN SET

SARASOTA BRADENTON INTERNATIONAL AIRPORT
SARASOTA, FLORIDA



LOCATION MAP
NOTTO SCALE



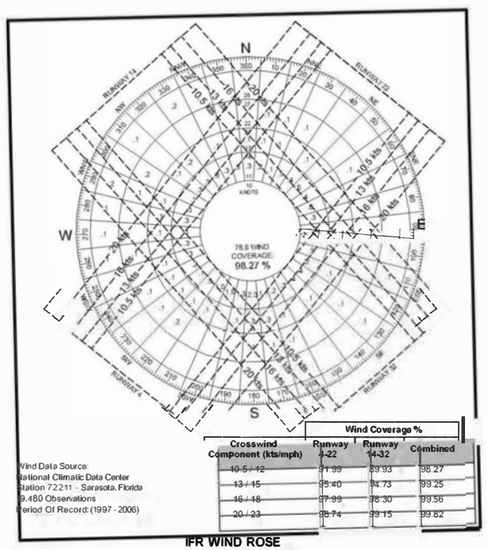
Crosswind Component (kts/mph)	Wind Coverage % Runway 4-22	Runway 14-32	Combined
10.5 / 12	92.33	93.39	98.75
13 / 15	95.96	96.98	99.82
16 / 18	98.95	99.58	99.97
20 / 23	99.71	99.92	99.99

Wind Data Source:
National Climatic Data Center
Station 72211 - Sarasota, Florida
78,650 Observations
Period Of Record: (1997 - 2006)

ALL WEATHER WIND ROSE

INDEX TO DRAWINGS

VICINITY MAP
NOTTO SCALE



Crosswind Component (kts/mph)	Wind Coverage % Runway 4-22	Runway 14-32	Combined
10.5 / 12	91.99	89.93	98.27
13 / 15	95.40	94.73	99.25
16 / 18	97.93	96.30	99.56
20 / 23	98.74	99.15	99.82

Wind Data Source:
National Climatic Data Center
Station 72211 - Sarasota, Florida
9,460 Observations
Period Of Record: (1997 - 2006)

IFR WIND ROSE

DECEMBER 2008

PREPARED FOR:

SARASOTA MANATEE AIRPORT AUTHORITY

PREPARED BY:

The LPA Group Incoporated

IN ASSOCIATION WITH:

Ricondo & Associates, Inc.

FAA A.I.P. Project Number: 3-12-0071-039-2006

LEGEND

DESCRIPTION	EXISTING	FUTURE
BUILDINGS - ON AIRPORT		
BUILDINGS - OFF AIRPORT		N/A
PAVEMENT - VEHICULAR / ROADS / PARKING		
PAVEMENT - TAXIWAYS / APRONS		
FENCE		
PROPERTY LINE / EASEMENT LINE		
EASEMENT		
OFF-AIRPORT SMALL PARCELS		
RPZ / DEPARTURE RPZ		
RUNWAY MARKINGS		
FAPI		
THRESHOLD LIGHTING		
REILS		
LUNAS		
RAILROAD		
RVZ	RVZ	RVZ
RSA	RSA	RSA
ROFA	ROFA	ROFA
BRL	BRL	BRL
PRECISION OBJECT FREE ZONE (POFZ)		
NAVAID CRITICAL AREA		
WATER, DITCH OR CANAL		
WINDSOCK		
AIRPORT REFERENCE POINT (ARP)		
SVRL		

EXISTING BUILDING DATA TABLE

BLDG NO	DESCRIPTION	TOP ELEV.
1	TERMINAL	47.9
2	TERMINAL (AIRSIDE B)	64.2
3	AIR CARGO	48.7
4	JEANNE MCELMURRAY BUILDING / DAN MCCLURE AUDITORIUM	37.9
5	CORPORATE HANGARS DOLPHIN	59.9
6	ARFF	53.9
7	FBO (DOLPHIN AVIATION)	51.6
8	HANGARS	67.9
9	HANGARS	42.4
10	HANGARS	38.7
11	HANGARS	38.7
12	FAA ARTT	119.4
13	T-HANGARS (SMAA) (J1)	49.9
14	HANGARS (J2)	37.9
15	HANGARS (J4)	37.3
16	HANGARS	38.9
17	HANGARS - VOLO	43.6
18	FBO VOLO AVIATION	43.2
19	SEA GREYHOUSE	49.2
20	ASOLO THEATER	53.2
21	HANGAR	51.4
22	BUILDING (AIRPORT MAINTENANCE)	53.2
23	AIRPORT MALL	42.7
24	BUILDING (SASSAMAN)	44.9
25	BUILDING (SASSAMAN)	46.8
26	BUILDING (SASSAMAN)	49.2
27	BUILDING (GLENN WATERS)	53.3
28	GOLF DRIVING RANGE (POLES)	63.9
29	SUNSTATE TRUCKING	43.5
30	SHELL GAS STATION	33.9
31	MANATEE U. S. POSTAL FACILITY	33.9
32	ELECTRICAL VAULT	33.6
33	PORTABLE HANGARS (J4)	32.3
34	T-HANGARS (SMAA) (J11)	29.5
35	T-HANGARS (SMAA) (D3)	29.6
36	HANGAR - GYRO-CAM	33.1
37	VOLO AVIATION CORPORATE HANGAR	32.5
38	CORPORATE HANGAR	37.3
39	CORPORATE HANGAR	37.9
40	BUILDING (TREDCO)	43.9
41	HANGAR CORP(J)	30.9
42	HANGAR - VOLO	37.9
43	DOLPHIN AVIATION CORPORATE HANGAR B1	57.9
44	DOLPHIN AVIATION CORPORATE HANGAR B2	57.9
45	DOLPHIN AVIATION CORPORATE HANGAR B3	57.9
46	DOLPHIN AVIATION CORPORATE HANGAR B4	57.9
47	DOLPHIN AVIATION CORPORATE HANGAR B5	57.9
48	DOLPHIN AVIATION CORPORATE HANGAR B6	57.9
49	DOLPHIN AVIATION CORPORATE HANGAR B7	57.9
50	DOLPHIN AVIATION CORPORATE HANGAR B8	57.9
51	DOLPHIN AVIATION CORPORATE HANGAR C5	55.9
52	DOLPHIN AVIATION CORPORATE HANGAR C6	55.9
53	DOLPHIN AVIATION CORPORATE HANGAR C9	55.9
54	DOLPHIN AVIATION CORPORATE HANGAR C10	55.9
55	DOLPHIN AVIATION FUEL FARM	49.9
56	DOLPHIN AVIATION PORTA-POTHANGARS	33.9
57	T-HANGARS (SMAA) (D2)	34.9
58	T-HANGARS (SMAA) (J2)	39.5
59	T-HANGARS (SMAA) (J3)	37.0
60	PORTABLE HANGARS (J3)	37.9
61	T-HANGARS (SMAA) (J5)	37.9
62	HERTZ RENTAL CAR	33.9
63	AVIS RENTAL CAR	48.9
64	ENTERPRISE RENTAL CAR	39.3
65	BUDGET RENTAL CAR	44.9
66	DOLLAR RENTAL CAR	30.9
67	FAA TRANSMITTER SITE	37.3
68	ALAMO / NATIONAL RENTAL CAR	43.9

EXISTING BUILDING DATA TABLE (CONTINUED)

BLDG NO	DESCRIPTION	TOP ELEV.
69	HANGAR F7 - RECTRIX NORTH	64.3
70	HANGAR F1 - RECTRIX NORTH	64.3
71	HANGAR F2 - RECTRIX NORTH	64.3
72	HANGAR F3 - RECTRIX NORTH	64.3
73	HANGAR F4 - RECTRIX NORTH	64.3
74	HANGAR - RECTRIX F3 SOUTH	65.1
75	HANGAR - RECTRIX F2 SOUTH	65.1
76	HANGAR - RECTRIX F1 SOUTH	65.1
77	RECTRIX FBO TERMINAL	76.4
78	INNOVATION GREEN - PHASE 1 HOTEL	86.9
79	SMAA VEHICLE STORAGE BUILDING	56.3

FUTURE BUILDING DATA TABLE

BLDG NO	DESCRIPTION	TOP ELEV.
A	VOLO HANGAR	59.9
B	SMAA T-HANGARS (N)	49.9
C	SMAA T-HANGARS (CENTRAL)	49.9
D	RECTRIX - HANGAR R5 NORTH	64.3
E	RECTRIX - HANGAR R5 NORTH	64.3
F	RECTRIX - HANGAR R5 NORTH	64.3
G	DOLPHIN HANGAR DEVELOPMENT	55.9

NOTE:
BUILDING ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
FUTURE BUILDING ELEVATIONS ARE ESTIMATED USING HIGHEST GROUND ELEVATION IN VICINITY

EXISTING DECLARED DISTANCE TABLE

DESCRIPTION	RUNWAY 14	RUNWAY 32
TAKEOFF RUN AVAILABLE (TORA)	8,350'	8,150'
TAKEOFF DISTANCE AVAILABLE (TODA)	9,520'	8,530'
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	8,890'	8,650'
LANDING DISTANCE AVAILABLE (LDA)	7,540'	7,540'

FUTURE DECLARED DISTANCE TABLE

DESCRIPTION	RUNWAY 14	RUNWAY 32
TAKEOFF RUN AVAILABLE (TORA)	SAME	8,500'
TAKEOFF DISTANCE AVAILABLE (TODA)	SAME	SAME
ACCELERATE STOP DISTANCE AVAILABLE (ASDA)	SAME	SAME
LANDING DISTANCE AVAILABLE (LDA)	SAME	SAME

AIRPORT DATA

DESCRIPTION	EXISTING	FUTURE
AIRPORT ACREAGE	1442.37	SAME
SERVICE LEVEL (NPIAS)	PRIMARY / SMALL HUB	SAME
AIRPORT REFERENCE CODE (ARC)	B-IV / B-II	D-IV / D-II
AIRPORT ELEVATION (M.S.L.)	23.9'	SAME
MEAN MAX. TEMP. (HOTTEST MONTH)	91°	SAME
AIRPORT REFERENCE POINT LATITUDE	N 27° 23' 43.809"	SAME
(NAD83) LONGITUDE	W 82° 32' 15.896"	SAME
MAGNETIC DECLINATION	4° 28' W	SAME
AIRPORT BOUNDARY	SAG	SAME
RUNWAY COURSE		
AIRPORT NAVAIDS	VOR/BEACON, ILS, GS (PAPI, GPS, REILS, MALSR)	SAME

AIRPORT SPONSOR APPROVAL

THIS AIRPORT DRAWING IS APPROVED BY

(SIGNATURE) _____ DATE: _____

NAME: _____

TITLE: _____

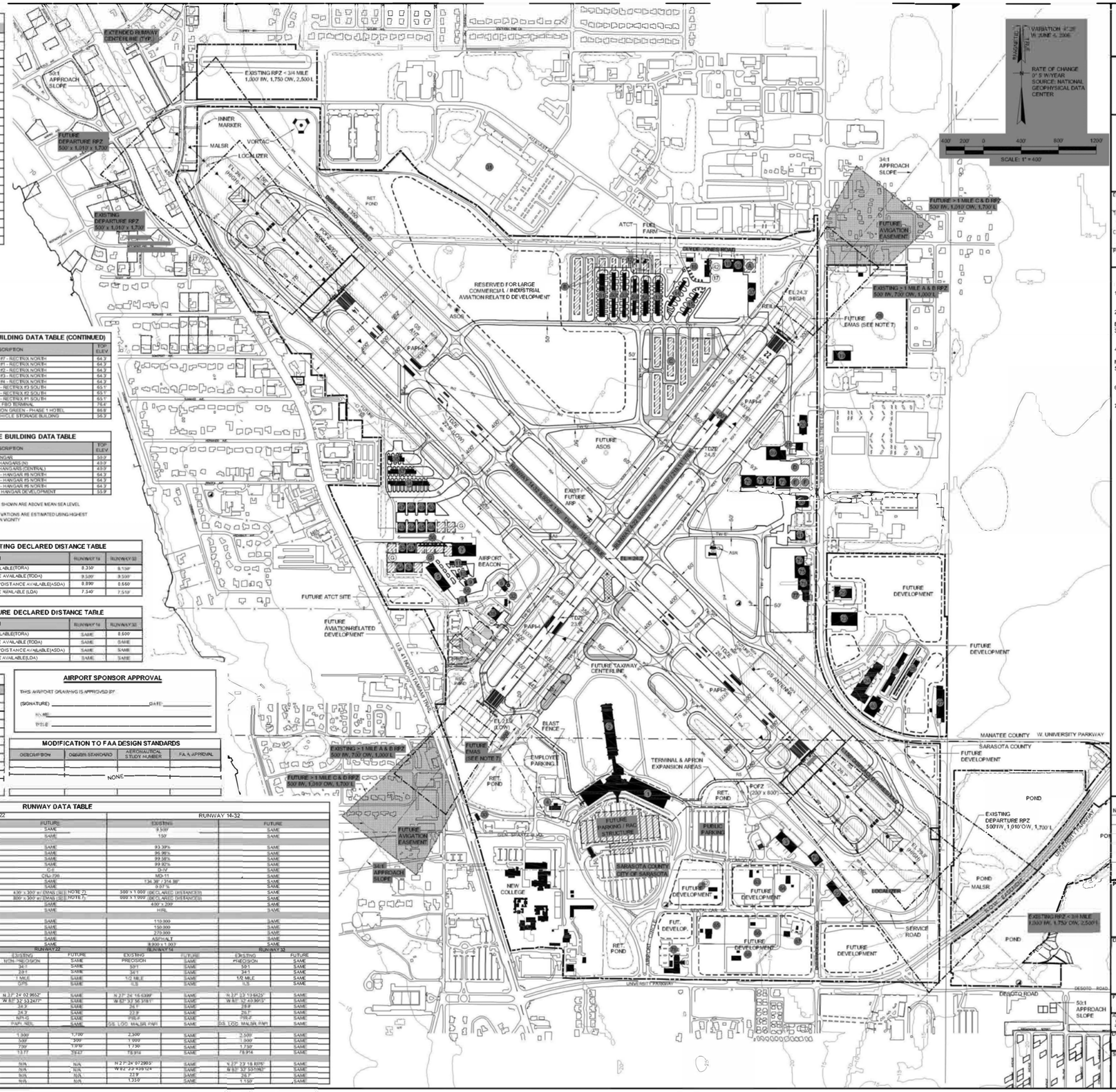
MODIFICATION TO FAA DESIGN STANDARDS

DESCRIPTION	DESIGN STANDARD	AERONAUTICAL STUDY NUMBER	FAA APPROVAL
NONE			

RUNWAY DATA TABLE

	RUNWAY 4-22 EXISTING	RUNWAY 4-22 FUTURE	RUNWAY 14-32 EXISTING	RUNWAY 14-32 FUTURE
RUNWAY LENGTH	3,909'	SAME	9,500'	SAME
RUNWAY WIDTH	150'	SAME	150'	SAME
RUNWAY WIND COVERAGE, % (ALL WEATHER)				
10.5KTS / 12MPH	82.33%	SAME	93.39%	SAME
13KTS / 15MPH	95.90%	SAME	96.98%	SAME
16KTS / 18MPH	98.85%	SAME	99.36%	SAME
20KTS / 23MPH	99.71%	SAME	99.92%	SAME
AIRPORT REFERENCE CODE	D-IV	D-II	D-IV	SAME
CRITICAL AIRCRAFT	DASSAULT FALCON (B2)	CRJ-700	MD-11	SAME
TRUE BEARING	38.19° / 218.19°	SAME	134.39° / 314.39°	SAME
EFFECTIVE GRADIENT (%)	0.04 %	SAME	0.07 %	SAME
RSA DIMENSIONS (RWY END)	150' x 300'	400' x 300' w/ EMAS (SEE NOTE 2)	500' x 1,000' (DECLARED DISTANCES)	SAME
ROFA DIMENSIONS (RWY END)	500' x 300'	800' x 300' w/ EMAS (SEE NOTE 7)	800' x 1,000' (DECLARED DISTANCES)	SAME
OFZ DIMENSIONS (RWY END)	400' x 200'	SAME	400' x 200'	SAME
RUNWAY LIGHTING	HIRL	SAME	HIRL	SAME
PAVEMENT STRENGTH				
SINGLE WHEEL GEAR (LBS)	82,000	SAME	110,000	SAME
DUAL WHEEL GEAR (LBS)	170,000	SAME	190,000	SAME
DUAL TANDEM WHEEL GEAR (LBS)	190,000	SAME	270,000	SAME
SURFACE COMPOSITION	ASPHALT	SAME	ASPHALT	SAME
PRIMARY SURFACE (PAR PART 77)	5,400' x 500'	SAME	8,800' x 1,000'	SAME

	RUNWAY 4 EXISTING	RUNWAY 4 FUTURE	RUNWAY 22 EXISTING	RUNWAY 22 FUTURE	RUNWAY 14 EXISTING	RUNWAY 14 FUTURE	RUNWAY 32 EXISTING	RUNWAY 32 FUTURE
APPROACH CATEGORY	NON-PRECISION	SAME	NON-PRECISION	SAME	PRECISION	SAME	PRECISION	SAME
APPROACH SURFACE SLOPE	34:1	SAME	34:1	SAME	50:1	SAME	50:1	SAME
THRESHOLD SITING SURFACE NEOMITS	20:1	SAME	20:1	SAME	34:1	SAME	34:1	SAME
APPROACH MINIMUMS	1 MILE	SAME	1 MILE	SAME	1/2 MILE	SAME	1/2 MILE	SAME
TYPE OF APPROACH TO RWY END	GPS	SAME	GPS	SAME	ILS	SAME	ILS	SAME
RUNWAY END COORDINATES								
LATITUDE (NAD 83)	N 27° 23' 23.9346"	SAME	N 27° 24' 02.9652"	SAME	N 27° 24' 16.5399"	SAME	N 27° 23' 19.6425"	SAME
LONGITUDE (NAD 83)	W 82° 33' 27.5462"	SAME	W 82° 32' 53.2477"	SAME	W 82° 33' 56.3181"	SAME	W 82° 32' 49.9915"	SAME
RUNWAY END ELEVATION (NAVD 88)	21.9'	SAME	20.3'	SAME	24.1'	SAME	23.9'	SAME
TOUCHDOWN ZONE EL. (NAVD 88)	23.2'	SAME	24.3'	SAME	22.9'	SAME	20.7'	SAME
RUNWAY MARKINGS	NPI-G	SAME	NPI-G	SAME	PIR-E	SAME	PIR-E	SAME
NAVAIDS	PAPI	SAME	PAPI, REIL	SAME	GS, LOC, MALSR, PAPI	SAME	GS, LOC, MALSR, PAPI	SAME
RUNWAY PROTECTION ZONE:								
LENGTH	1,700'	1,700'	1,700'	1,700'	2,500'	SAME	2,500'	SAME
INNER WIDTH	500'	500'	500'	500'	1,000'	SAME	1,000'	SAME
OUTER WIDTH	700'	1,510'	700'	1,510'	1,750'	SAME	1,750'	SAME
ACRES	13.77	29.67	13.77	29.67	78.914	SAME	78.914	SAME
DISPLACED THRESHOLD COORDINATES:								
LATITUDE (NAD 83)	N/A	N/A	N/A	N/A	N 27° 24' 07.2903"	SAME	N 27° 23' 18.8975"	SAME
LONGITUDE (NAD 83)	N/A	N/A	N/A	N/A	W 82° 33' 43.9124"	SAME	W 82° 32' 53.5780"	SAME
DISPLACED THRESHOLD ELEVATION	N/A	N/A	N/A	N/A	22.9'	SAME	20.7'	SAME
DISPLACED THRESHOLD DISTANCE	N/A	N/A	N/A	N/A	1,330'	SAME	1,150'	SAME



srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NOOFZ PENETRATIONS WERE IDENTIFIED
   B-II TO C-III / C-III
3. RUNWAY SAFETY AREA WIDTH OF RUNWAY 4-22 WILL INCREASE FROM 150' WIDE TO 400' WIDE
4. ROFA WILL INCREASE FROM 500' WIDE TO 800' WIDE

   NON-STANDARD ITEMS
5. SERVICE ROAD PENETRATES LOCALIZER CRITICAL AREA (RUNWAY 14 END)
6. SERVICE ROAD PENETRATES SMALL PORTION OF POFA (RUNWAY 14 END)
7. THE FUTURE EMAS SHOWN ARE PROPOSED TO HAVE NON-STANDARD SAFETY AREAS PRIOR TO THRESHOLD. THE STANDARD IS 600' RSA PRIOR TO THRESHOLD. RUNWAY 22 WILL HAVE APPROXIMATELY 492' OF RSA; WHEREAS, RUNWAY 22 WILL HAVE APPROXIMATELY 300' OF RSA PRIOR TO THRESHOLD. THE RUNWAY 4 EMAS IS PLANNED TO BE 225' AND 170' WIDE. THE RUNWAY 22 EMAS IS PLANNED TO BE 255' LONG AND 170' WIDE.

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60days.

REVISIONS

No.	Description	Date	By

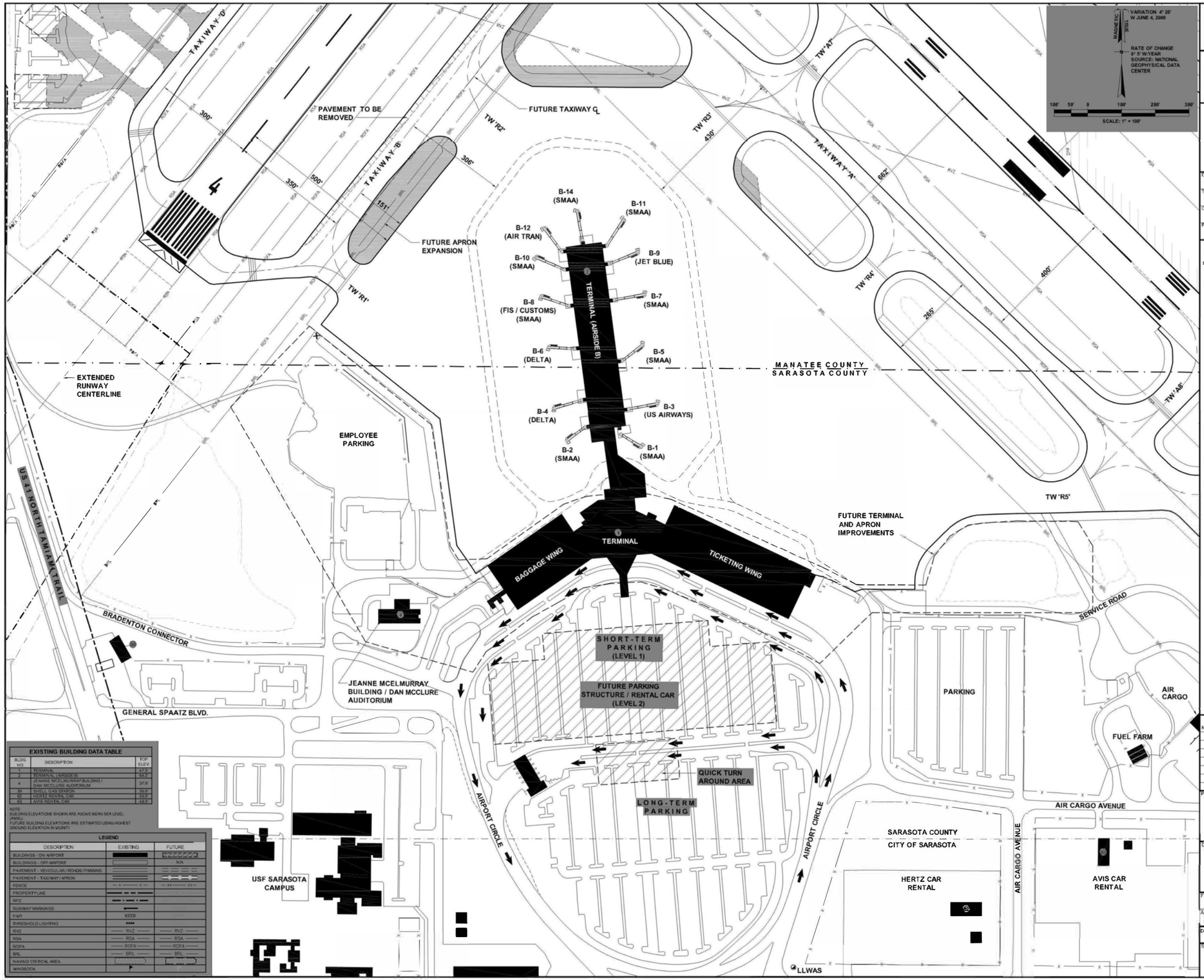
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
AIRPORT LAYOUT PLAN DRAWING

FAA A.I.P. Project Number: 3-12-0071-039-2006

AutoCad Drawing Reference:
Path: F:\Projects\SRQ - Sarasota-Bradenton Intl\Master Plan Update\Drawings\Layout Plan\SRQ ALP.dwg
Layout Key: ALP - 2 - Runway Analysis - Project No. 01.1900 - 4.80in

Date: DECEMBER 2008
Division: PLANNING
Scale: 1" =400'
Drawing Number: 2



EXISTING BUILDING DATA TABLE

BLDG NO.	DESCRIPTION	TOP ELEV
1	TERMINAL	47.3'
2	TERMINAL (AIRSIDE B)	64.2'
4	JEANNE MCELMURRAY BUILDING / DAN MCCLURE AUDITORIUM	37.9'
30	SHELL GAS STATION	35.9'
62	HERTZ RENTAL CAR	43.9'
63	AVIS RENTAL CAR	48.9'

NOTE
BUILDING ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
FUTURE BUILDING ELEVATIONS ARE ESTIMATED USING HIGHEST GROUND ELEVATION IN VICINITY

LEGEND

DESCRIPTION	EXISTING	FUTURE
BUILDINGS - ON AIRPORT		
BUILDINGS - OFF AIRPORT		N/A
PAVEMENT - VEHICULAR / ROADS / PARKING		
PAVEMENT - TAXIWAY / APRON		
FENCE		
PROPERTY LINE		
RPZ		
RUNWAY MARKINGS		
PAPI	XXXX	
THRESHOLD LIGHTING		
RVZ	RVZ	RVZ
RSA	RSA	RSA
ROFA	ROFA	ROFA
BRL	BRL	BRL
NAVAID CRITICAL AREA		
WINDSOCK		

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer:	APN
Technician:	APN
Checked by:	RWO
Project Number:	PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
TERMINAL AREA DRAWING

FAA A.I.P. Project Number:
3-12-0071-039-2006

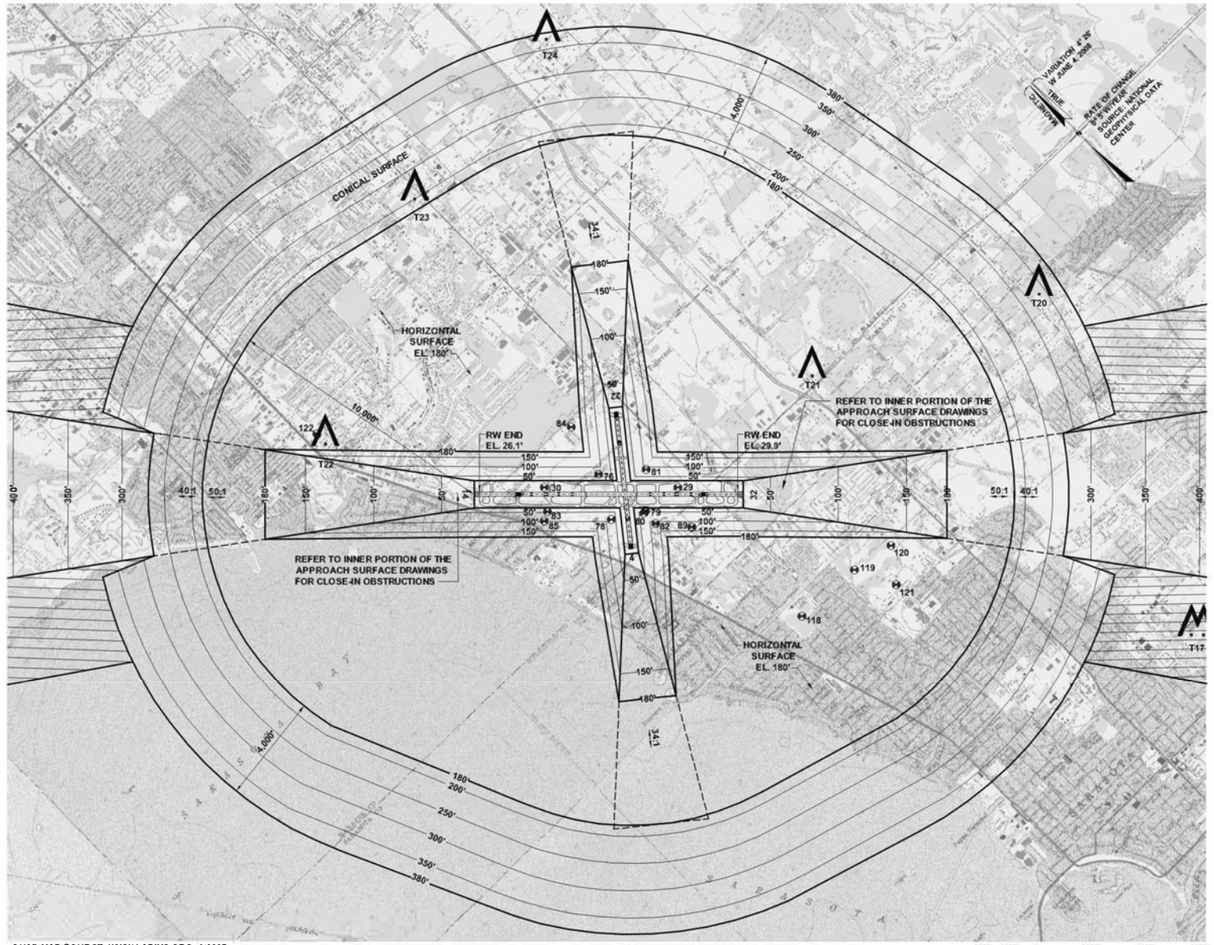
Autocad Drawing Reference:

Date: DECEMBER 2008

Division: PLANNING

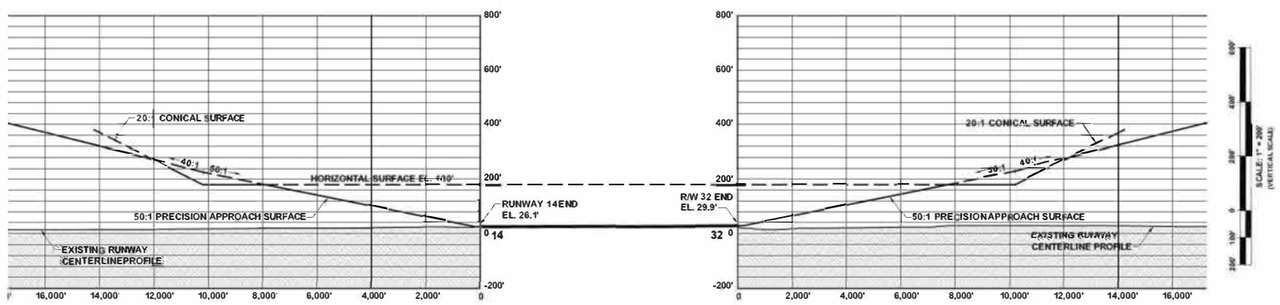
Scale: 1" = 100'

Drawing Number: 3



QUAD MAP SOURCE: WWW.LABINS.ORG 9/2007

PLAN VIEW RUNWAY 14 - 32



PROFILE VIEW RUNWAY 14 - 32

TOWER DATA TABLE

#	CITY	TYPE	AGL	AMSL	MARKING	LIGHTING	FAA STUDY #
T17	SARASOTA	TOWERS 3	212'	249'	RED LIGHTING	MARKED	1981ASO008830OE
T20	SARASOTA	TOWER	156'	190'	NOLIGHTS	NONE	1996ASO02913OE
T21	SARASOTA	TOWER	141'	159'	NONE	NOLIGHTS	2007ASO03479OE
T22	BRADENTON	TOWER	162'	177'	NONE	NO LIGHTS	2002ASO04660OE
T23	BRADENTON	TOWER	134'	151'	NONE	NO LIGHTS	1999ASO02235OE
T24	BRADENTON	TOWER	122'	140'	NONE	NOLIGHTS	1999ASO04182OE

NOTES:
NONE OF THE TOWERS SHOWN PENETRATE THE FAR PART 77 SURFACE
TOWER OBSTRUCTION DATA OBTAINED FROM THE FAA'S DIGITAL OBSTACLE FILE (DOF)
DATED 3/9/2008

OBSTRUCTION DATA TABLE

#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	ALLOWABLE PART 77 ELEVATION	PART 77 PENETRATION	DISPOSITION
29	ROD ON OL GS	PRIMARY	59'	25'	34'	LIGHTED
30	ROD ON OL GS	PRIMARY	69'	22'	47'	LIGHTED
76	ROD ON OL POLE	TRANSITIONAL	63'	57'	6'	LIGHTED
76	ROD ON OL APBN	TRANSITIONAL	81'	74'	7'	LIGHTED
79	TREE	TRANSITIONAL	42'	39'	3'	TRIM / REMOVE
80	TREE	TRANSITIONAL	43'	51'	-8'	NONE
81	ROD ON ASR	TRANSITIONAL	135'	84'	51'	LIGHTED
82	FLDLT	TRANSITIONAL	90'	185'	-15'	NONE
83	TREE	TRANSITIONAL	41'	41'	0	NONE
84	ANT ON ATCT	HORIZONTAL	134'	180'	-46'	LIGHTED
85	TREE	TRANSITIONAL	91'	91'	0	NONE
89	FLDLT	TRANSITIONAL	82'	126'	-44'	NONE
118	CLCN TANK	HORIZONTAL	181'	179'	2'	LIGHTED
119	ANT	HORIZONTAL	156'	180'	-24'	NONE
121	ANT	HORIZONTAL	178'	180'	-2'	NONE
122	ROD ON OL ANT	HORIZONTAL	178'	176'	-2'	NONE

OBSTRUCTION DATA SOURCE
NATIONAL GEODETIC SURVEY
SURVEY DATE: 01/25/2006
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE

3. ZONING / ORDINANCES / STATUTES

SARASOTA COUNTY CODE OF ORDINANCES, CHAPTER 16, ARTICLE III, AIRPORT ZONING

MANATEE COUNTY CODE OF ORDINANCES, CHAPTER 2-25, PLANNING AND DEVELOPMENT

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

Project Name:
Sarasota Bradenton International Airport Master Plan Update

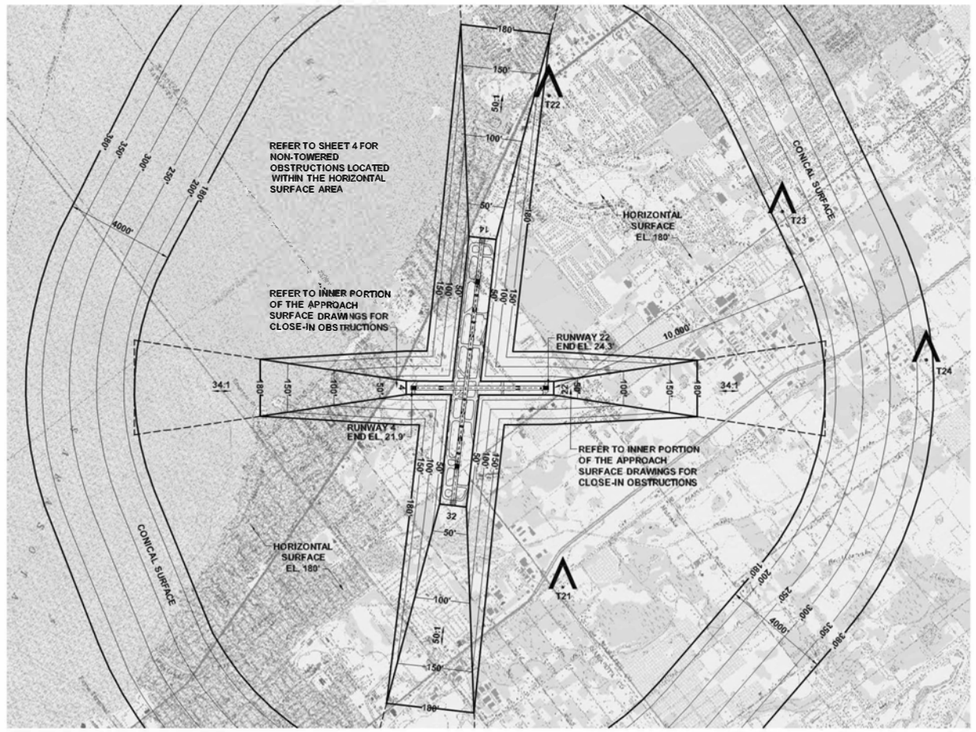
Drawing Name:
AIRPORT AIRSPACE DRAWING (1 OF 4)

FAA A.I.P. Project Number: 3-12-0071-039-2006

Autocad Drawing Reference:

Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 4

Path: Y:\Planning\SRQ - Sarasota\SRQ - MPU\Drawings\2008 ALP Update\04-07-SRQ-Airspace.dwg
Saved: May 13, 2009 - 3:55pm by rwoolsey / Plotted: May 13, 2009 - 4:06pm

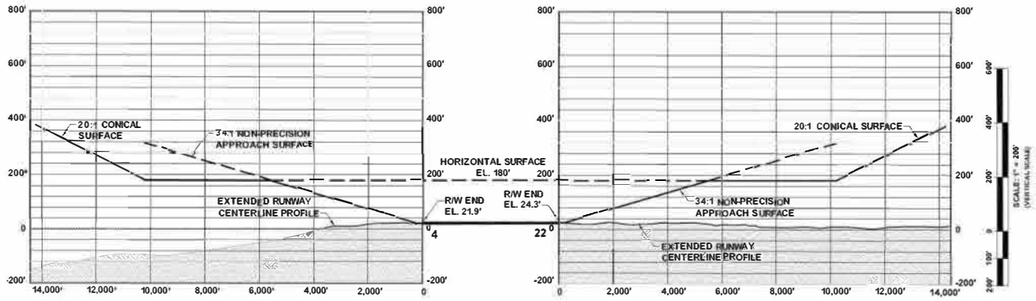


QUAD MAP SOURCE: WWW.LABINS.ORG 09/2007

2000' 1000' 0 2000' 4000' 6000'

SCALE: 1" = 2000'
(HORIZONTAL / PLAN SCALE)

PLAN VIEW RUNWAY 4 - 22

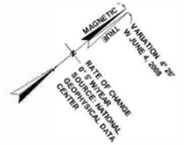


PROFILE VIEW RUNWAY 4 - 22

TOWER DATA TABLE

#	CITY	TYPE	AGL	AMSL	LIGHTING	MARKING	FAA STUDY #
T21	SARASOTA	TOWER	141'	159'	NO LIGHTS	NONE	2007ASO03479OE
T22	BRADENTON	TOWER	162'	177'	NO LIGHTS	NONE	2002ASO04660OE
T23	BRADENTON	TOWER	134'	151'	NO LIGHTS	NONE	1999ASO02235OE
T24	BRADENTON	TOWER	122'	140'	NO LIGHTS	NONE	1999ASO04182OE

NOTES:
NONE OF THE TOWERS SHOWN ABOVE PENETRATE THE FAR PART 77 SURFACE
TOWER OBSTRUCTION DATA OBTAINED FROM THE FAA'S DIGITAL OBSTACLE FILE (DOF)
DATED 3/9/2008



FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER. FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designed:	APN
Technician:	APN
Checked by:	RWO
Project Number:	PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE
3. ZONING / ORDINANCES / STATUTES

SARASOTA COUNTY CODE OF ORDINANCES, CHAPTER 18, ARTICLE III, AIRPORT ZONING

MANATEE COUNTY CODE OF ORDINANCES, CHAPTER 2-25, PLANNING AND DEVELOPMENT

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

ProjectName:
Sarasota Bradenton International Airport Master Plan Update

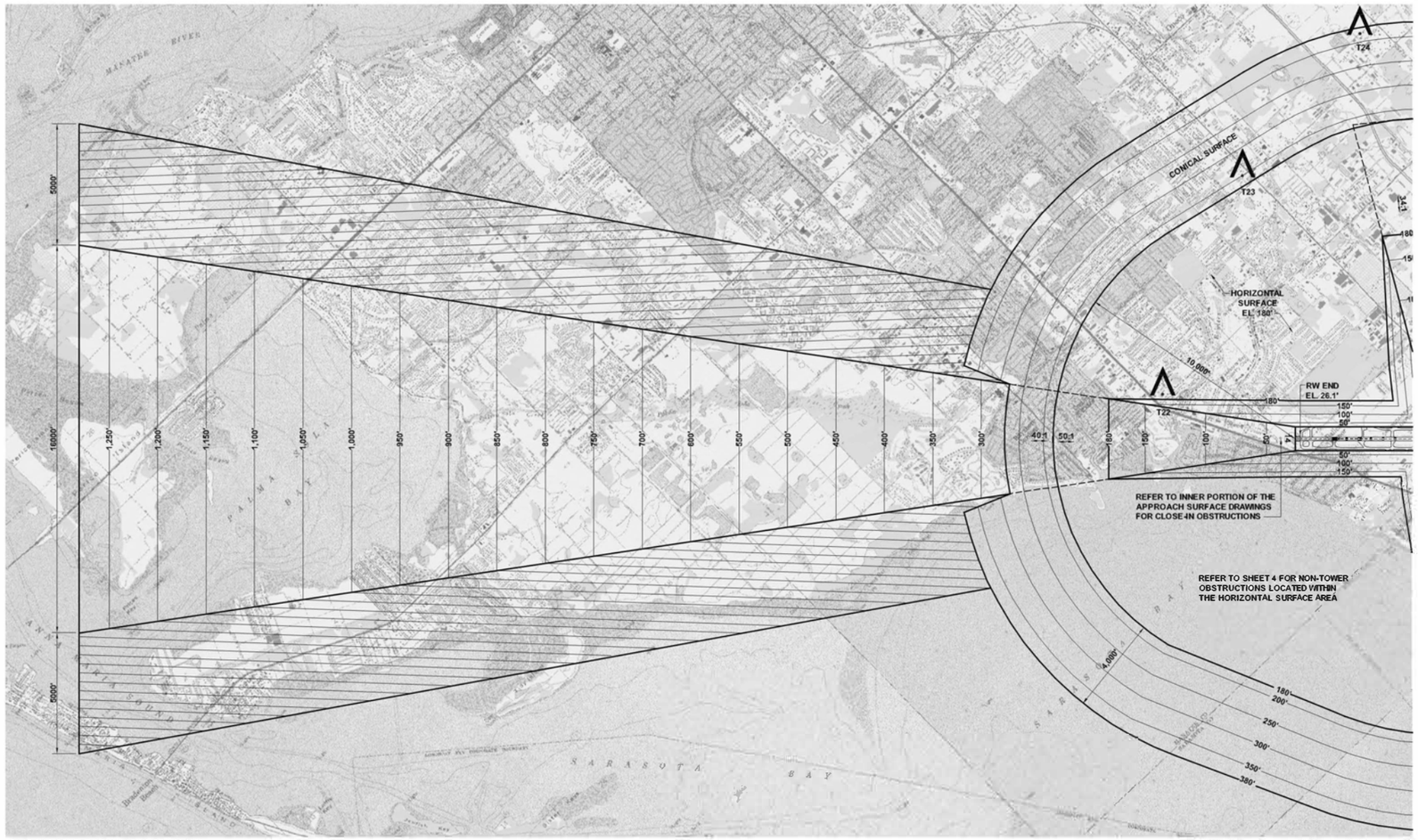
Drawing Name:
AIRPORT AIRSPACE DRAWING (2 OF 4)

FAA A.I.P. Project Number:
3-12-0071-039-2006

Autocad Drawing Reference:
[illegible]

Date:	Division:
DECEMBER 2008	PLANNING
Scale: AS SHOWN	Drawing Number: 5

Path: I:\Planning\SRQ - Sarasota\SRQ - MPU\Drawings\2008 ALP Update\04-07-SRQ-Airspace.dwg
Saved: May 13, 2009 - 3:56pm by rwisdome / Plotted: May 13, 2009 - 4:07pm



QUAD MAP SOURCE: WWW.LABINS.ORG 09/2007

2000' 1000' 0 2000' 4000' 6000'

SCALE: 1" = 2000'
(HORIZONTAL / PLAN SCALE)

PLAN VIEW RUNWAY 14

PROFILE VIEW RUNWAY 14

TOWER DATA TABLE							
#	CITY	TYPE	AGL	AMSL	MARKING	LIGHTING	FAA STUDY #
T22	BRADENTON	TOWER	162'	177'	NONE	NO LIGHTS	2002ASO04569OE
T23	BRADENTON	TOWER	134'	151'	NONE	NO LIGHTS	1999ASO02235OE
T24	BRADENTON	TOWER	122'	149'	NONE	NO LIGHTS	1999ASO041620E

NOTES:
NONE OF THE TOWERS SHOWN ABOVE PENETRATE THE FAR PART 77 SURFACE
TOWER OBSTRUCTION DATA OBTAINED FROM THE FAA'S DIGITAL OBSTACLE FILE (DOF)
DATED 3/9/2006

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE

3. ZONING / ORDINANCES / STATUTES

SARASOTA COUNTY CODE OF ORDINANCES, CHAPTER 16, ARTICLE II, AIRPORT ZONING

MANATEE COUNTY CODE OF ORDINANCES, CHAPTER 2-25, PLANNING AND DEVELOPMENT

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

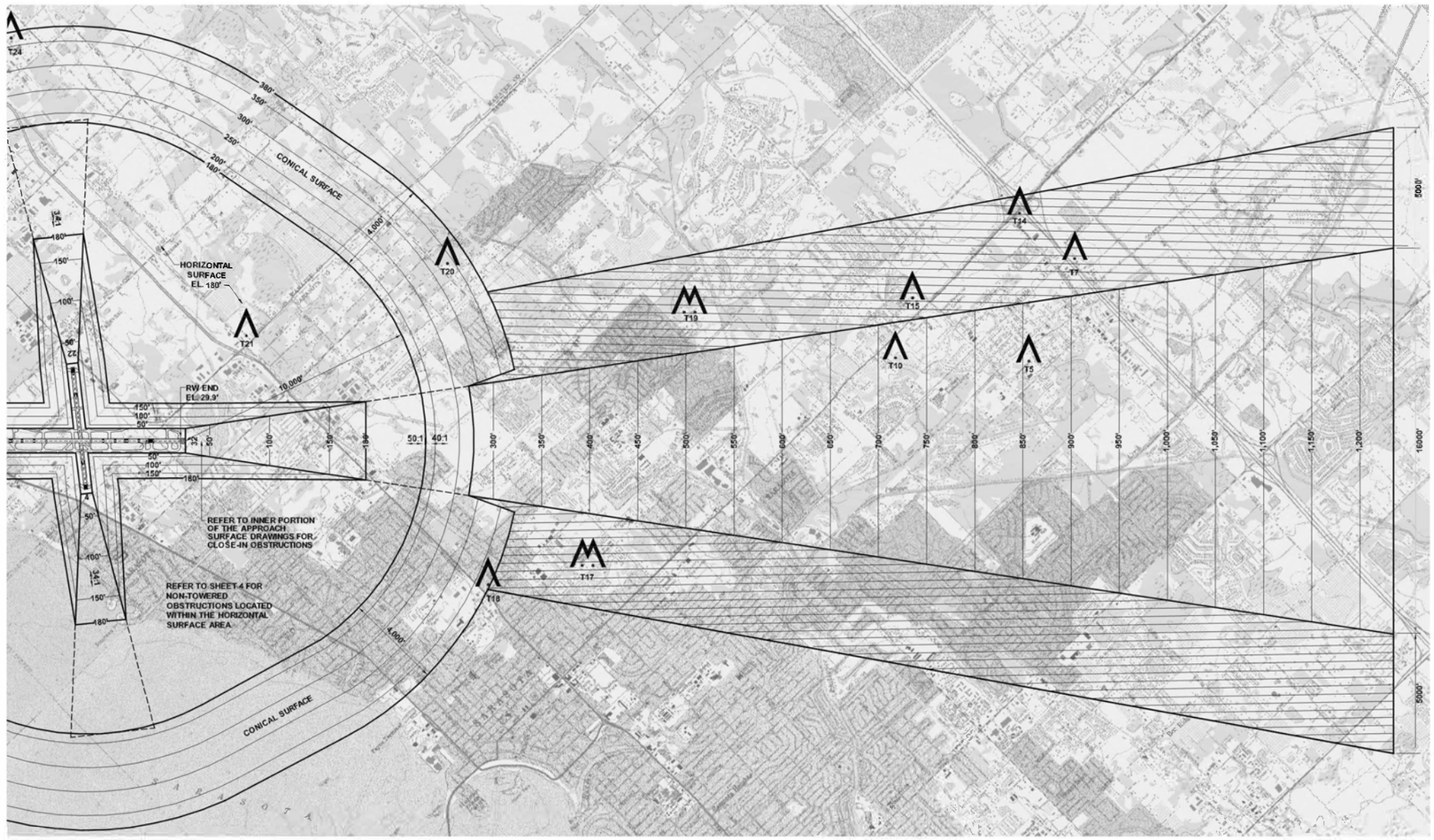
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
AIRPORT AIRSPACE DRAWING (3 OF 4)

FAA A.I.P. Project Number:
3-12-0071-039-2006

Autocad Drawing Reference:

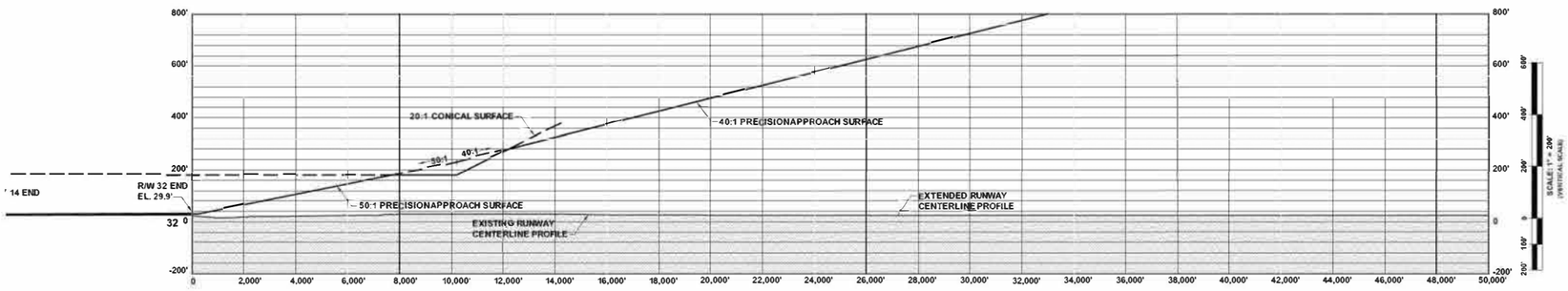
Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 6



QUAD MAP SOURCE: WWW.LABINS.ORG 09/2007

SCALE: 1" = 2000'
(HORIZONTAL / PLAN SCALE)

PLAN VIEW RUNWAY 32



PROFILE VIEW RUNWAY 32

TOWER DATA TABLE

#	CITY	TYPE	AGL	AMSL	LIGHTING	MARKING	FAA STUDY #
T5	SARASOTA	TOWER	199'	229'	NO LIGHTS	NONE	
T7	SARASOTA	TOWER	284'	309'	DUAL, RED WITH MEDIUM INTENSITY WHITE STROBE	NONE	2008ASO03789OE
T10	SARASOTA	TOWER	351'	382'	DUAL, RED WITH MEDIUM INTENSITY WHITE STROBE	NONE	2007ASO04135OE
T14	FRUITVILLE	TOWER	338'	362'	DUAL, RED WITH MEDIUM INTENSITY WHITE STROBE	NONE	2004ASO04315OE
T15	SARASOTA	TOWERS (2)	504'	532'	RED LIGHTING	MARKED	1985ASO09371OE
T17	SARASOTA	TOWERS (3)	212'	249'	RED LIGHTING	MARKED	1981ASO09830OE
T18	SARASOTA	TOWER	199'	228'	NO LIGHTS	UNKNOWN	1981ASO01608OE
T19	SARASOTA	TOWER	155'	175'	UNKNOWN	UNKNOWN	
T20	SARASOTA	TOWER	158'	199'	NO LIGHTS	NONE	1998ASO02013OE
T21	SARASOTA	TOWER	141'	159'	NO LIGHTS	NONE	2007ASO03479OE

NOTES:
NONE OF THE TOWERS SHOWN PENETRATE THE FAR PART 77 SURFACE
TOWER OBSTRUCTION DATA OBTAINED FROM THE FAA'S DIGITAL OBSTACLE FILE (DOF)
DATED 3/9/2008

VARIATION 4.3°W AS OF JUNE 4, 2008
TRUE
MAGNETIC
RATE OF CHANGE 0.1°W/2.5 YEARS NATIONAL GEOPHYSICAL DATA CENTER

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designed: APN	
Technician: APN	
Checked by: RWO	
Project Number: PL133057	

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE
3. ZONING / ORDINANCES / STATUTES

SARASOTA COUNTY CODE OF ORDINANCES, CHAPTER 18, ARTICLE III, AIRPORT ZONING

MANATEE COUNTY CODE OF ORDINANCES, CHAPTER 2-25, PLANNING AND DEVELOPMENT

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

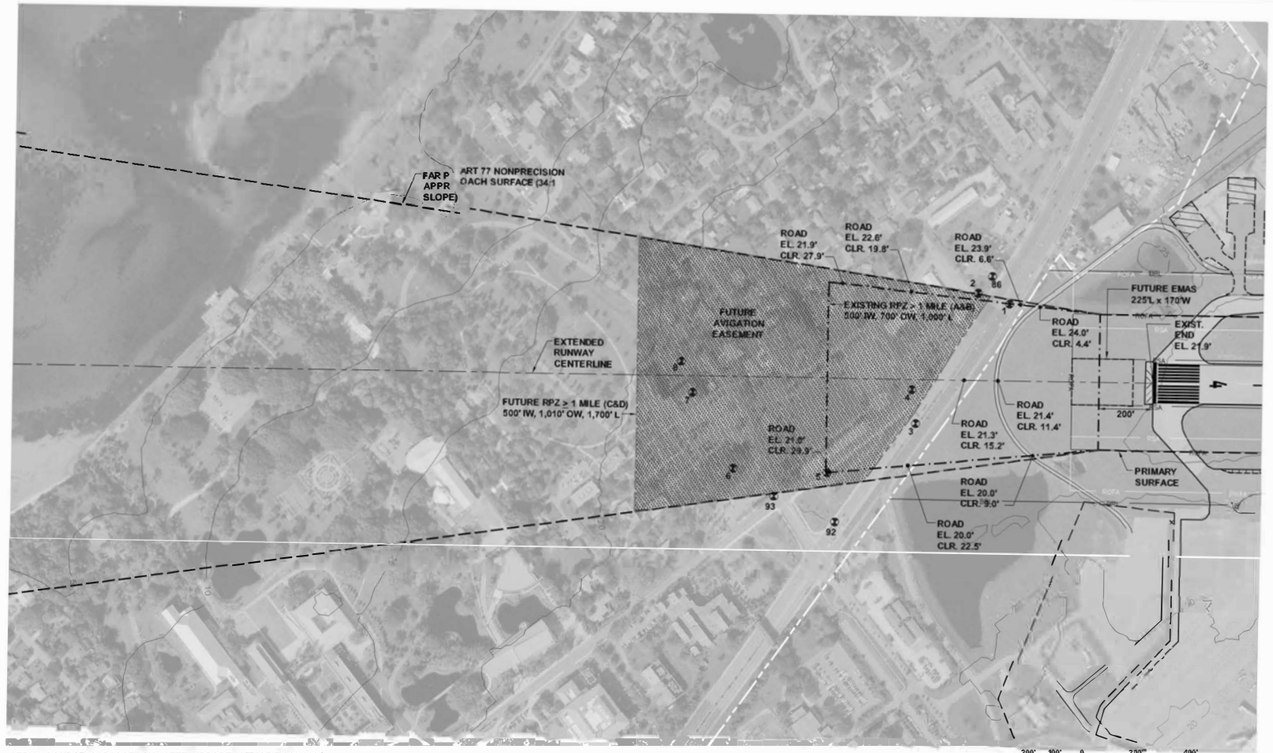
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
AIRPORT AIRSPACE DRAWING (4 OF 4)

FAA A.I.P. Project Number:
3-12-0071-039-2006

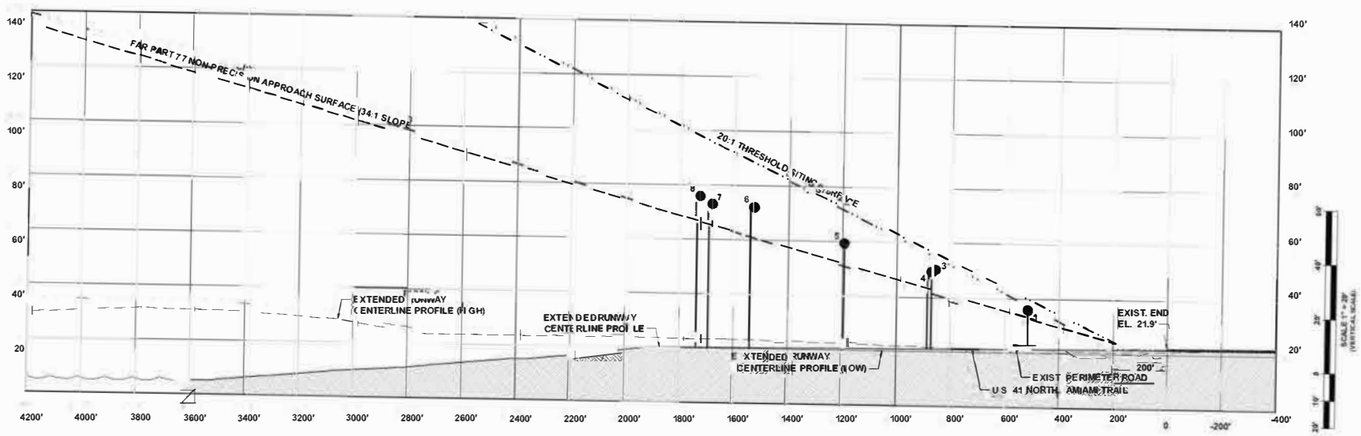
Autocad Drawing Reference:
Path: Y:\Planning\SRQ - Sarasota\SRQ - MPU\Drawings\2008 ALP Update\04-07-SRQ-Airspace.dwg
Saved: May 13, 2009 - 3:56pm by rwoburne / Plotted: May 13, 2009 - 4:08pm

Date: DECEMBER 2008	Division: PLANNING
Scale: AS SHOWN	Drawing Number: 7



AERIAL SOURCE: SARASOTA MANATEE AIRPORT AUTHORITY 09/2007

RUNWAY 4 INNER APPROACH PLAN VIEW



RUNWAY 4 INNER APPROACH PROFILE VIEW

LEGEND

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE / EASEMENT LINE		
PAVEMENT	RCA	
SAFETY LINES		
FAR PART 77 SURFACE		
THRESHOLD SITING SURFACE		
RP-2		
RUNWAY MARKINGS		
SEABOARD COASTLINE RAILROAD		
EXISTING GROUND CONTOURS	5	5
OBSTRUCTIONS / PLAN VIEW	50	N/A
OBSTRUCTIONS / PROFILE VIEW	50	N/A

OBSTRUCTION DATA TABLE - RUNWAY 4 (NPI SLOPE=34:1)

#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	PART 77 ELEVATION	PART77 PENETRATION	DISPOSITION	#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	PART 77 ELEVATION	PART77 PENETRATION	DISPOSITION
1	RDWY	APPROACH	36'	32'	4.0'	OBS. LIGHT	7	VENT ON BLDG	APPROACH	75'	66'	9.0'	OBS. LIGHT
2	FLD.T	TRANSITIONAL	47'	35'	12.0'	OBS. LIGHT	87	TREE	APPROACH	76'	87'	-11.0'	TRIM / REMOVE
3	SIGN	APPROACH	51'	42'	9.0'	OBS. LIGHT	88	SIGN	TRANSITIONAL	48'	51'	-3.0'	NONE
4	LT POLE	APPROACH	50'	42'	8.0'	OBS LIGHT	92	LT POLE	TRANSITIONAL	62'	70'	-8.0'	NONE
5	POLE	APPROACH	61'	51'	10.0'	OBS LIGHT	93	TREE	TRANSITIONAL	73'	58'	15.0'	TRIM / REMOVE
6	TREE	APPROACH	74'	61'	13.0'	OBS LIGHT							

SOURCE:
AERONAUTICAL DATA SHEET
NATIONAL GEODETIC SURVEY
SURVEY DATE: 9/25/2006
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

MAGNETIC NORTH — VARIATION 4°W — JUNE 4, 2008
RATE OF CHANGE 0.0° WEST/ANNUAL — SOURCE: NATIONAL GEODETIC CENTER

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checked by: RWO
PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE

CONSTRUCTION NOTICE REQUIREMENT:
To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60days.

REVISIONS

No.	Description	Date	By

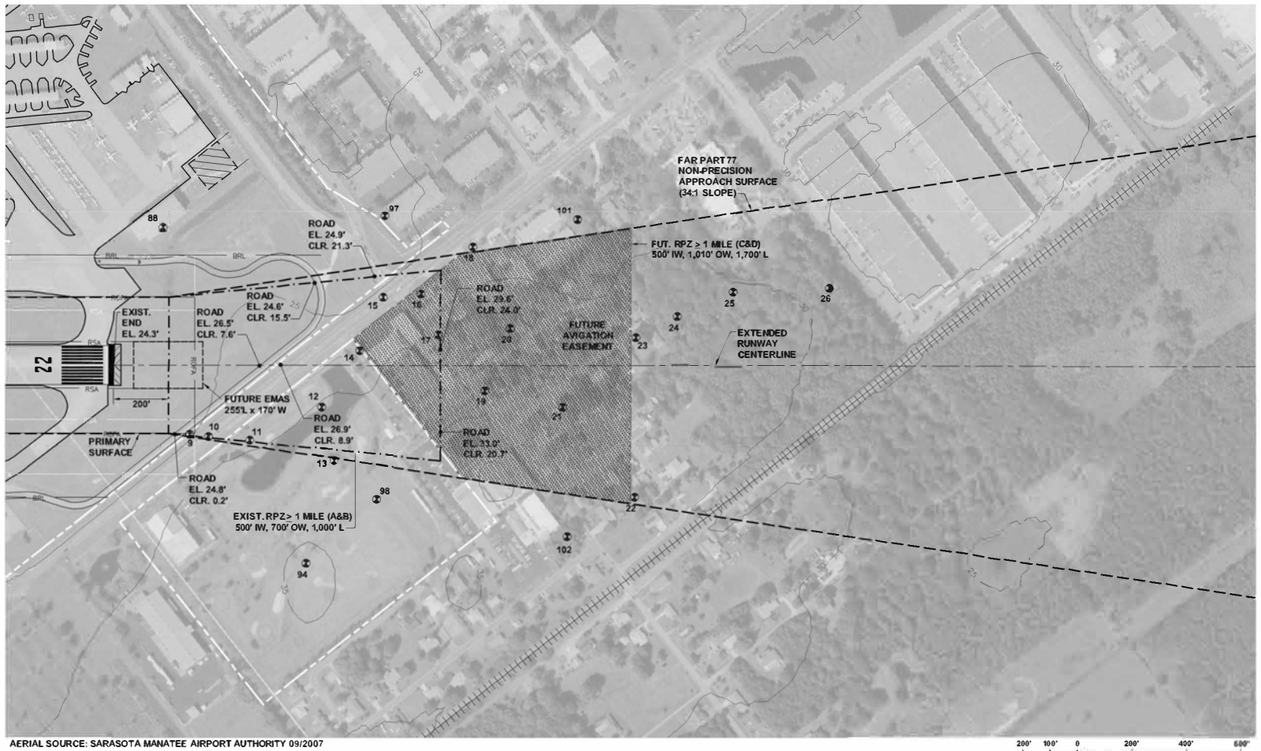
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
INNER PORTION OF THE APPROACH SURFACE DRAWING - RUNWAY 4

FAA A.I.P. Project Number: 3-12-0071-029-2006

Autocad Drawing Reference:

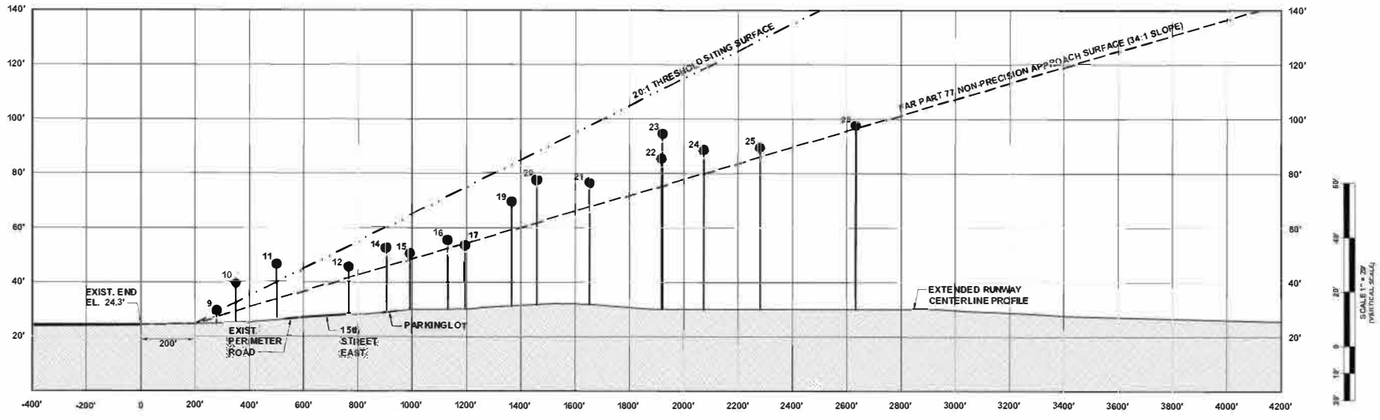
Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 8



AERIAL SOURCE: SARASOTA MANATEE AIRPORT AUTHORITY 09/2007

SCALE 1" =200'
(HORIZONTAL / PLAN SCALE)

RUNWAY 22 INNER APPROACH PLAN VIEW



RUNWAY 22 INNER APPROACH PROFILE VIEW

LEGEND

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE / EASEMENT LINE		
PAVEMENT		
SAFETY LINES	RSA	
FAR PART 77 SURFACE		
THRESHOLD SITING SURFACE		
RPZ		
RUNWAY MARKINGS		
SEABOARD COASTLINE RAILROAD		
EXISTING GROUND CONTOURS	5	5
OBSTRUCTIONS / PLAN VIEW	50	N/A
OBSTRUCTIONS / PROFILE VIEW	50	N/A

OBSTRUCTION DATA TABLE RUNWAY 22 (NPI SLOPE=34:1)

#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	PART 77 ELEVATION	PART 77 PENETRATION	DISPOSITION
9	FENCE	APPROACH	31'	27'	4'	OBS. LIGHT
10	RD(N)	APPROACH	41'	29'	12'	
11	FLDLT	APPROACH	48'	34'	14'	OBS. LIGHT
12	FLDLT	APPROACH	47'	41'	6'	OBS. LIGHT
13	TREE	TRANSITIONAL	51'	43'	18'	TRIM / REMOVE
14	TREE	APPROACH	54'	45'	9'	TRIM / REMOVE
15	CAMERA	APPROACH	52'	46'	4'	OBS. LIGHT
16	TREE	APPROACH	57'	52'	5'	TRIM / REMOVE
17	POLE	APPROACH	55'	54'	1'	OBS. LIGHT
18	POLE	TRANSITIONAL	58'	58'	0	NONE
19	TREE	APPROACH	71'	60'	11'	TRIM / REMOVE
20	TREE	APPROACH	79'	62'	17'	TRIM / REMOVE
21	TREE	APPROACH	78'	68'	10'	TRIM / REMOVE
22	TREE	APPROACH	87'	75'	12'	TRIM / REMOVE
23	TREE	APPROACH	96'	76'	20'	TRIM / REMOVE
24	TREE	APPROACH	90'	80'	10'	TRIM / REMOVE
25	TREE	APPROACH	91'	86'	5'	TRIM / REMOVE
26	TREE	APPROACH	99'	96'	3'	TRIM / REMOVE
86	BLDG	TRANSITIONAL	58'	61'	-3'	NONE
94	POLE	TRANSITIONAL	92'	96'	-4'	NONE
97	TREE	TRANSITIONAL	67'	73'	-6'	NONE
98	POLE	TRANSITIONAL	65'	85'	-9'	NONE
101	TREE	TRANSITIONAL	89'	77'	12'	TRIM / REMOVE
102	TREE	TRANSITIONAL	87'	90'	-3'	NONE

SOURCE:
AERONAUTICAL DATA SHEET
NATIONAL GEODETIC SURVEY
SURVEY DATE: 01/25/2006
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

MAGNETIC NORTH — VARIATION 4°29' W ANNUAL CHANGE 0.08W
RATE OF CHANGE IS NOT AN OFFICIAL NOAA/NGS/NATIONAL GEODETIC SURVEY CENTER

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designed: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

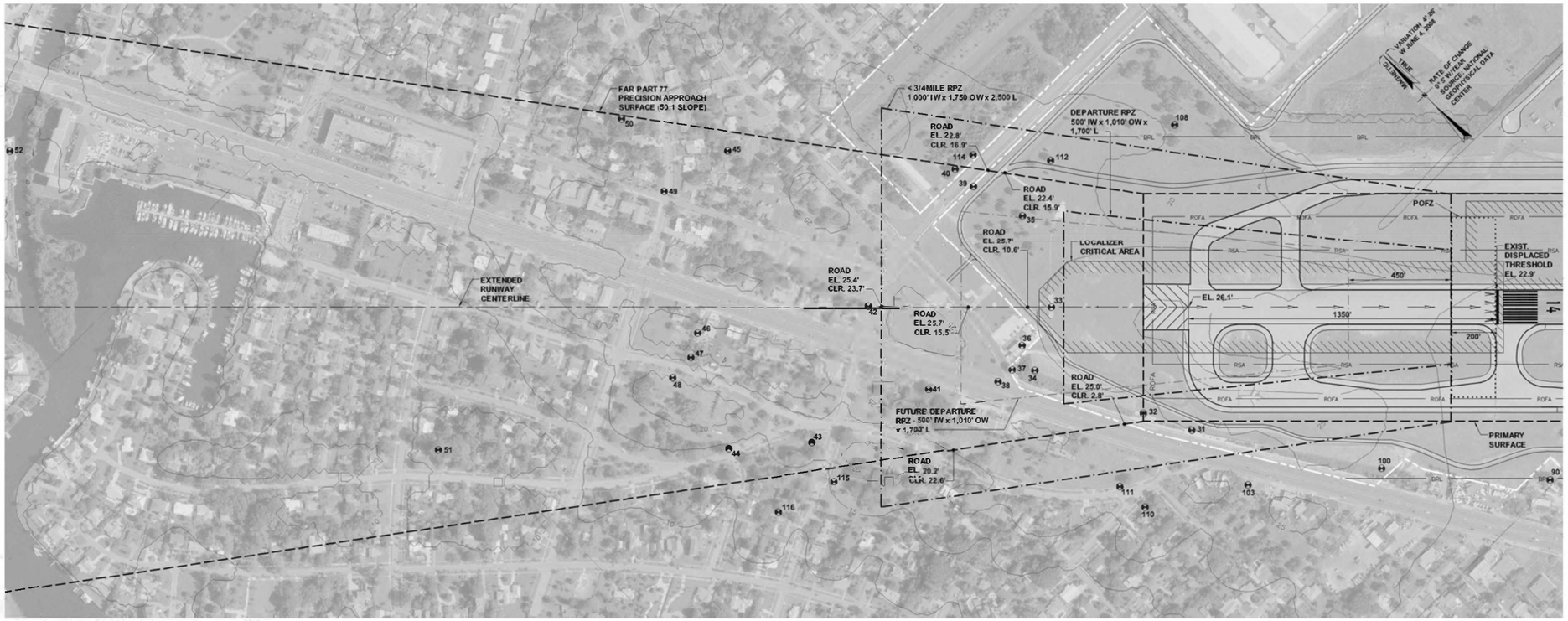
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
INNER PORTION OF THE APPROACH SURFACE DRAWING - RUNWAY 22

FAA A.I.P. Project Number: 3-12-0071-039-2006

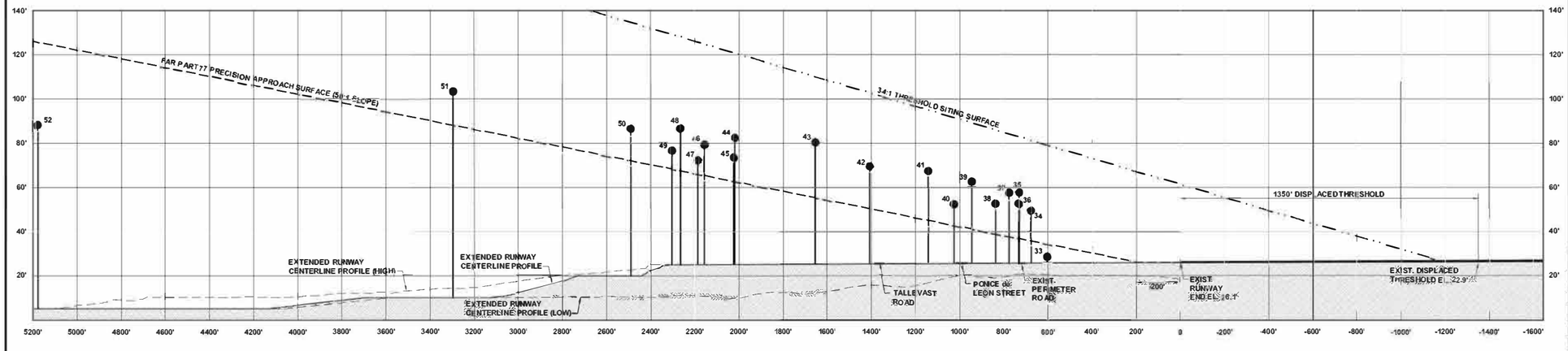
Autocad Drawing Reference:

Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 9



AERIAL SOURCE: SARASOTA MANATEE AIRPORT AUTHORITY 09/2007

RUNWAY 14 INNER APPROACH PLAN VIEW



RUNWAY 14 INNER APPROACH PROFILE VIEW

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

LEGEND

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE / EASEMENT LINE		
PAVEMENT		
SAFETY LINES	RSA	
FAR PART 77 SURFACE		
THRESHOLD SITING SURFACE		
RPZ		
RUNWAY MARKINGS		
SEABOARD COASTLINE RAILROAD		
EXISTING GROUND CONTOURS	5	5
OBSTRUCTIONS / PLAN VIEW	50	N/A
OBSTRUCTIONS / PROFILE VIEW	50	N/A

OBSTRUCTION DATA TABLE - RUNWAY 14 (PIR SLOPE=50:1)

#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	PART 77 ELEVATION	PART 77 PENETRATION	DISPOSITION
31	WALL	TRANSITIONAL	45'	27'	18'	OBS. LIGHT
32	WALL	PRIMARY	49'	27'	22'	OBS. LIGHT
33	OL ON LOC	APPROACH	30'	34'	-4'	NONE
34	GRD	APPROACH	51'	36'	15'	OBS. LIGHT
35	TREE	APPROACH	59'	37'	22'	TRIM / REMOVE
36	ANT	APPROACH	54'	37'	17'	OBS. LIGHT
37	TREE	APPROACH	59'	37'	22'	TRIM / REMOVE
38	LTPOLE	APPROACH	54'	39'	15'	OBS. LIGHT
39	POLE	APPROACH	61'	41'	20'	OBS. LIGHT
40	TREE	APPROACH	54'	43'	11'	TRIM / REMOVE
41	TREE	APPROACH	69'	44'	25'	TRIM / REMOVE
42	TREE	APPROACH	71'	50'	21'	TRIM / REMOVE
43	TREE	APPROACH	82'	55'	27'	TRIM / REMOVE
44	TREE	APPROACH	84'	62'	22'	TRIM / REMOVE
45	TREE	APPROACH	75'	63'	12'	TRIM / REMOVE
46	TREE	APPROACH	81'	66'	15'	TRIM / REMOVE

#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	PART 77 ELEVATION	PART 77 PENETRATION	DISPOSITION
47	TREE	APPROACH	74'	66'	8'	TRIM / REMOVE
48	TREE	APPROACH	88'	67'	21'	TRIM / REMOVE
49	TREE	APPROACH	78'	68'	10'	TRIM / REMOVE
50	TREE	APPROACH	88'	72'	16'	TRIM / REMOVE
51	TREE	APPROACH	105'	88'	17'	TRIM / REMOVE
52	ANT	APPROACH	88'	126'	-38'	NONE
90	TREE	TRANSITIONAL	77'	59'	18'	TRIM / REMOVE
100	BUSH	TRANSITIONAL	52'	54'	-2'	NONE
103	TREE	TRANSITIONAL	78'	65'	13'	TRIM / REMOVE
108	TREE	TRANSITIONAL	66'	69'	-3'	NONE
110	TREE	TRANSITIONAL	82'	69'	2'	TRIM / REMOVE
111	POLE	TRANSITIONAL	60'	67'	-7'	NONE
112	TREE	TRANSITIONAL	55'	46'	9'	TRIM / REMOVE
114	TREE	TRANSITIONAL	69'	49'	11'	TRIM / REMOVE
115	TREE	TRANSITIONAL	83'	63'	20'	TRIM / REMOVE
116	TREE	TRANSITIONAL	79'	81'	-2'	NONE

SOURCE:
AERONAUTICAL DATA SHEET
NATIONAL GEODETIC SURVEY
SURVEY DATE: 01/25/2006
HORIZONTAL DATUM:NAD83
VERTICAL DATUM: NAVD88

60' 40' 20' 0 20' 40' 60'
SCALE 1" = 20'
(VERTICAL SCALE)

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designed: APN	
Technician: APN	
Checked by: RWO	
Project Number: PL133057	

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

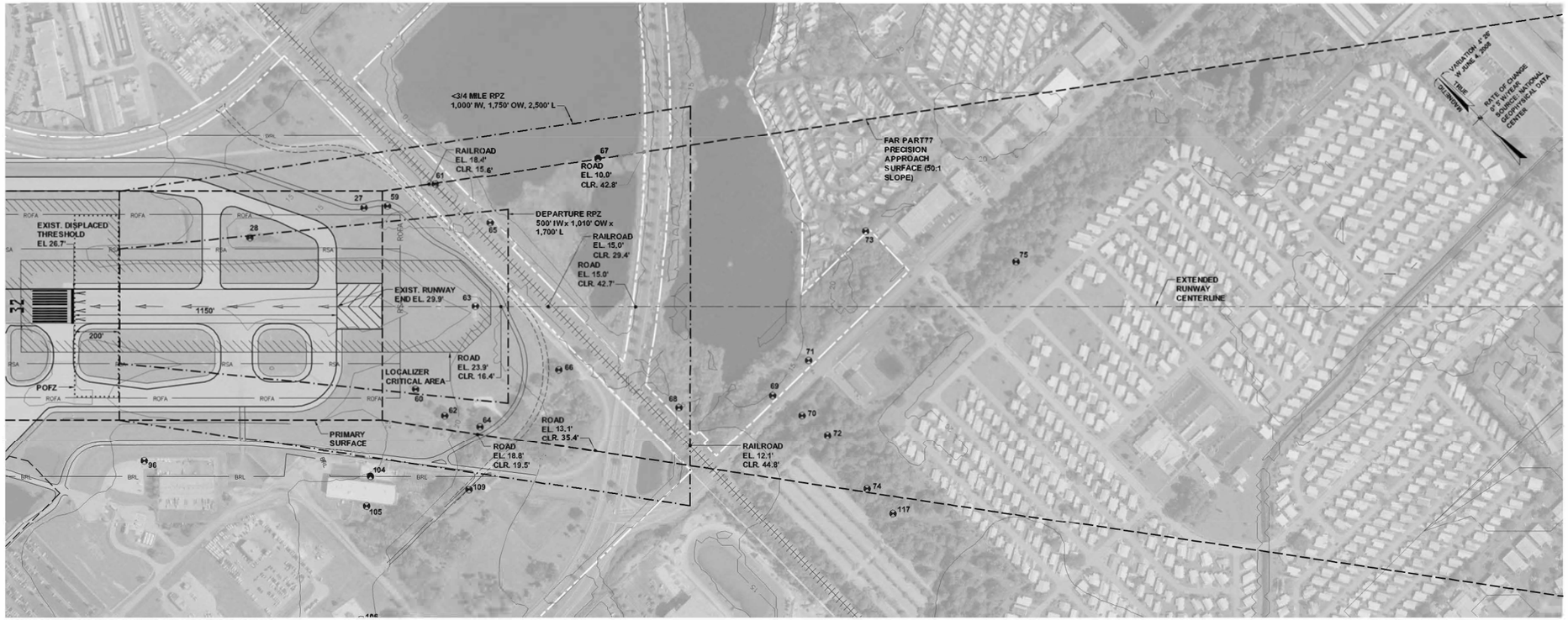
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
INNER PORTION OF THE APPROACH SURFACE DRAWING - RUNWAY 14

FAA A.I.P. Project Number: 3-12-0071-0392006

Autocad Drawing Reference:

Date:	Division:
DECEMBER 2008	PLANNING
Scale: AS SHOWN	Drawing Number: 10

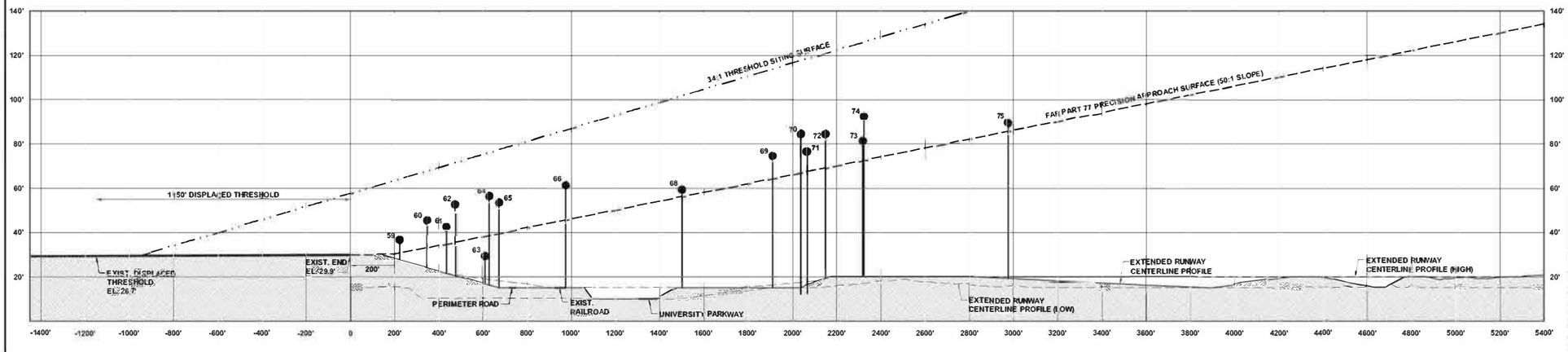


AERIAL SOURCE: SARASOTA MANATEE AIRPORT AUTHORITY 09/2007

200' 100' 0 200' 400' 800'

SCALE 1" = 200'
(HORIZONTAL / PLAN SCALE)

RUNWAY 32 INNER APPROACH PLAN VIEW



RUNWAY 32 INNER APPROACH PROFILE VIEW

FAA CLEARANCE REQUIREMENTS NOTE

SECTION 77.23 OF FEDERAL AVIATION REGULATIONS (FAR) PART 77 SPECIFIES CLEARANCE REQUIREMENTS FOR ROADS, RAILROADS, AND WATERWAYS AS FOLLOWS:

1) SEVENTEEN FEET FOR AN INTERSTATE HIGHWAY THAT IS PART OF THE NATIONAL SYSTEM OF MILITARY AND INTERSTATE HIGHWAYS WHERE OVERCROSSINGS ARE DESIGNED FOR A MINIMUM OF 17 FEET VERTICAL DISTANCE.

2) FIFTEEN FEET FOR ANY OTHER PUBLIC ROADWAY.

3) TEN FEET OR THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE THE ROAD, WHICHEVER IS GREATER, FOR A PRIVATE ROAD.

4) TWENTY-THREE FEET FOR A RAILROAD, AND,

5) FOR A WATERWAY OR ANY OTHER TRAVERSE WAY NOT PREVIOUSLY MENTIONED, AN AMOUNT EQUAL TO THE HEIGHT OF THE HIGHEST MOBILE OBJECT THAT WOULD NORMALLY TRAVERSE IT.

LEGEND

DESCRIPTION	EXISTING	FUTURE
PROPERTY LINE / EASEMENT LINE		
PAVEMENT		
SAFETY LINES	RSA	
FAR PART 77 SURFACE		
THRESHOLD SITING SURFACE		
RPZ		
RUNWAY MARKINGS		
SEABOARD COASTLINE RAILROAD		
EXISTING GROUND CONTOURS	5	5
OBSTRUCTIONS / PLAN VIEW	50 64	N/A
OBSTRUCTIONS / PROFILE VIEW	50	N/A

OBSTRUCTION DATA TABLE - RUNWAY 32 (PIR SLOPE=50:1)

#	TYPE	SURFACE AFFECTED	OBSTRUCTION ELEVATION	PART 77 ELEVATION	PART 77 PENETRATION	DISPOSITION
27	TREE	PRIMARY	40'	30'	10'	TRIM / REMOVE
28	BUSH	PRIMARY	30'	29'	1'	TRIM / REMOVE
59	TREE	APPROACH	38'	30'	8'	TRIM / REMOVE
60	TREE	APPROACH	47'	32'	15'	TRIM / REMOVE
61	RR *	APPROACH	44'	35'	-15.6'	OBS LIGHT
62	TREE	APPROACH	54'	35'	19'	TRIM / REMOVE
63	O L ON LOC	APPROACH	31'	38'	-7'	NONE
64	TREE	APPROACH	58'	39'	19'	TRIM / REMOVE
65	TREE	APPROACH	55'	40'	15'	TRIM / REMOVE
66	TREE	APPROACH	63'	45'	18'	TRIM / REMOVE
67	TREE	TRANSITIONAL	51'	48'	3'	TRIM / REMOVE
68	TREE	APPROACH	81'	56'	5'	TRIM / REMOVE
69	TREE	APPROACH	76'	64'	12'	TRIM / REMOVE
70	TREE	APPROACH	86'	67'	19'	TRIM / REMOVE
71	RODON POLE	APPROACH	78'	67'	11'	OBS. LIGHT
72	TREE	APPROACH	86'	69'	17'	TRIM / REMOVE
73	TREE	APPROACH	83'	72'	11'	TRIM / REMOVE
74	TREE	APPROACH	94'	73'	21'	TRIM / REMOVE
75	TREE	APPROACH	91'	86'	5'	TRIM / REMOVE
96	FLDLT	TRANSITIONAL	52'	53'	-1'	
104	TREE	TRANSITIONAL	74'	65'	9'	TRIM / REMOVE
105	TREE	TRANSITIONAL	78'	84'	-6'	NONE
108	ANT ONRTR TWR	TRANSITIONAL	95'	155'	-60'	NONE
109	TREE	TRANSITIONAL	68'	73'	-5'	NONE
117	TREE	TRANSITIONAL	91'	85'	6'	TRIM / REMOVE

SOURCE:
AERONAUTICAL DATA SHEET
NATIONAL GEODETIC SURVEY
SURVEY DATE: 01/25/2006
HORIZONTAL DATUM: NAD83
VERTICAL DATUM: NAVD88

SCALE 1" = 20'
(VERTICAL SCALE)

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designed: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW FAR PART 77 SURFACE

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
INNER PORTION OF THE APPROACH SURFACE DRAWING - RUNWAY 32

FAA A.I.P. Project Number: 3-12-0071-039-2006

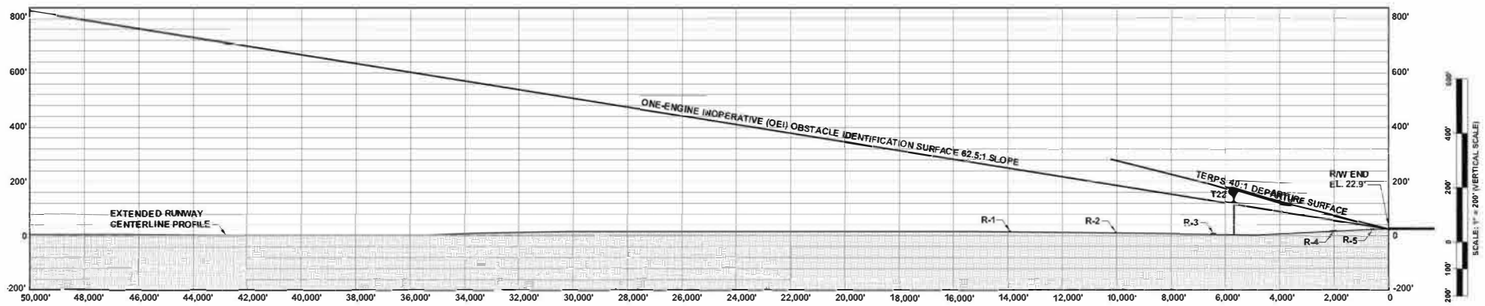
Autocad Drawing Reference:
Path:Y:\Planning\Mkt - Survey\2010 - AT Master\Drawings\Updated\Inner Approach.dwg
Xref: file:///L:/2010 - Drawings/Airspace/Plates/ Mar 15, 2010 - 8:51:54

Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 11

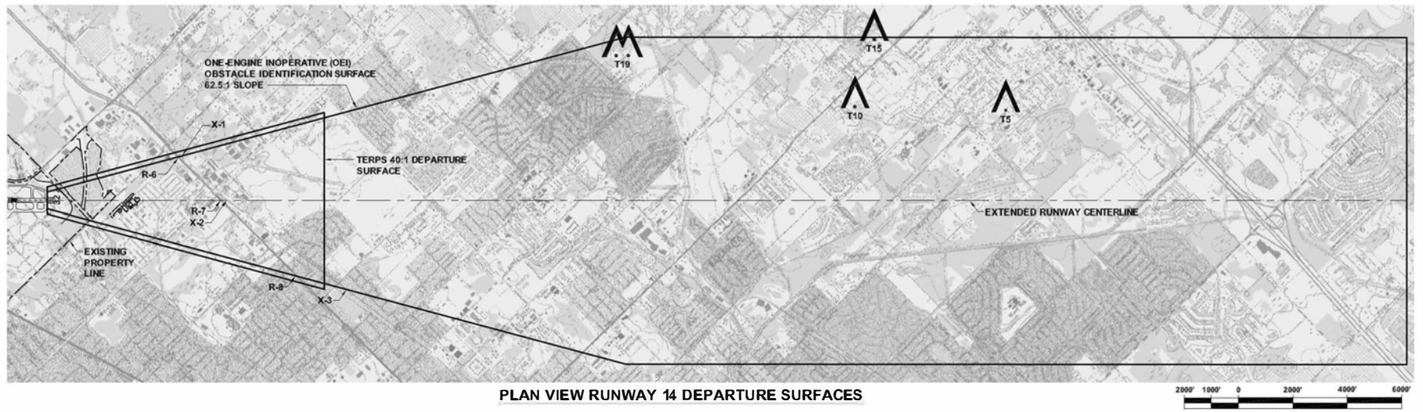
PLAN VIEW RUNWAY 32 DEPARTURE SURFACES

2000' 1000' 0 2000' 4000' 6000'

SCALE: 1" = 2000' (HORIZONTAL / PLAN SCALE)



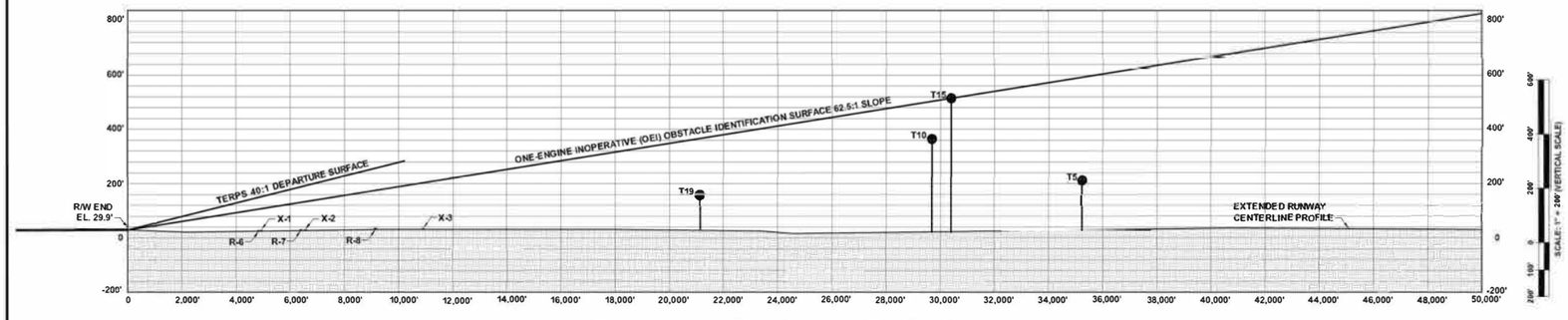
PROFILE VIEW RUNWAY 32 DEPARTURE SURFACES



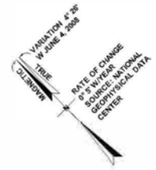
PLAN VIEW RUNWAY 14 DEPARTURE SURFACES

2000' 1000' 0 2000' 4000' 6000'

SCALE: 1" = 2000' (HORIZONTAL / PLAN SCALE)



PROFILE VIEW RUNWAY 14 DEPARTURE SURFACES



RUNWAY 32 (OEI) OBSTRUCTION DATA TABLE

#	TYPE	AGL	MSL	(OEI) SURFACE PENETRATION	DISPOSITION
T22	TOWER	162'	177'	6.326	OBS LIGHT
R-1	ROAD	0	22'	-222.5'	NONE
R-2	ROAD	0	12'	-170.8'	NONE
R-3	ROAD	0	12'	-233.1'	NONE
R-4	ROAD	0	24'	-28.4'	NONE
R-5	ROAD	0	23'	-7.6'	NONE

RUNWAY 32 40:1 DEPARTURE SURFACE OBSTRUCTION DATA TABLE

#	TYPE	AGL	MSL	40:1 SURFACE PENETRATION	DISPOSITION
T22	TOWER	162'	177'	20.1'	OBS LIGHT
R-2	ROAD	0	12'	-267.9"	NONE
R-3	ROAD	0	12'	-182.2"	NONE
R-4	ROAD	0	24'	-56.0"	NONE
R-5	ROAD	0	23'	-14.8"	NONE

NOTE:
NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW THE (OEI) (OIS) SURFACE.

RUNWAY 14 (OEI) OBSTRUCTION DATA TABLE

#	TYPE	AGL	MSL	(OEI) SURFACE PENETRATION	DISPOSITION
T5	TOWER	199'	229'	-364.8'	NONE
T10	TOWER	351'	382'	-123.5'	NONE
T15	TOWER	504'	532'	15.65'	-
T19	TOWERS 2	155'	175'	-192.9'	NONE
R-6	ROAD	0	18'	-88.4'	NONE
R-7	ROAD	0	20'	-111.9'	NONE
R-8	ROAD	0	21'	-154.3'	NONE
X-1	RAILROAD	0	18'	-88.4'	NONE
X-2	RAILROAD	0	20'	-111.9'	NONE
X-3	RAILROAD	0	25'	-161.5'	NONE

RUNWAY 14 40:1 DEPARTURE SURFACE OBSTRUCTION DATA TABLE

#	TYPE	AGL	MSL	40:1 SURFACE PENETRATION	DISPOSITION
R-6	ROAD	0	18'	-124.2'	NONE
R-7	ROAD	0	20'	-160.9'	NONE
R-8	ROAD	0	21'	-225.7'	NONE
X-1	RAILROAD	0	18'	-127.1'	NONE
X-2	RAILROAD	0	20'	-164.8'	NONE

NOTE:
NEGATIVE PENETRATIONS INDICATE DISTANCE BELOW THE (OEI) (OIS) SURFACE.

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. QUAD MAP SOURCE: SARASOTA MANATEE AIRPORT AUTHORITY 09/2007

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
RUNWAY DEPARTURE SURFACES DRAWING

FAA A.I.P. Project Number: 3-12-0071-039-2006

Autocad Drawing Reference:

Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 12

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer:	APN
Technician:	APN
Checked by:	RWO
Project Number:	PL133057

NOTES

1. ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL)
2. NO FUTURE LAND USE CHANGES RECOMMENDED

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60days.

REVISIONS

No.	Description	Date	By

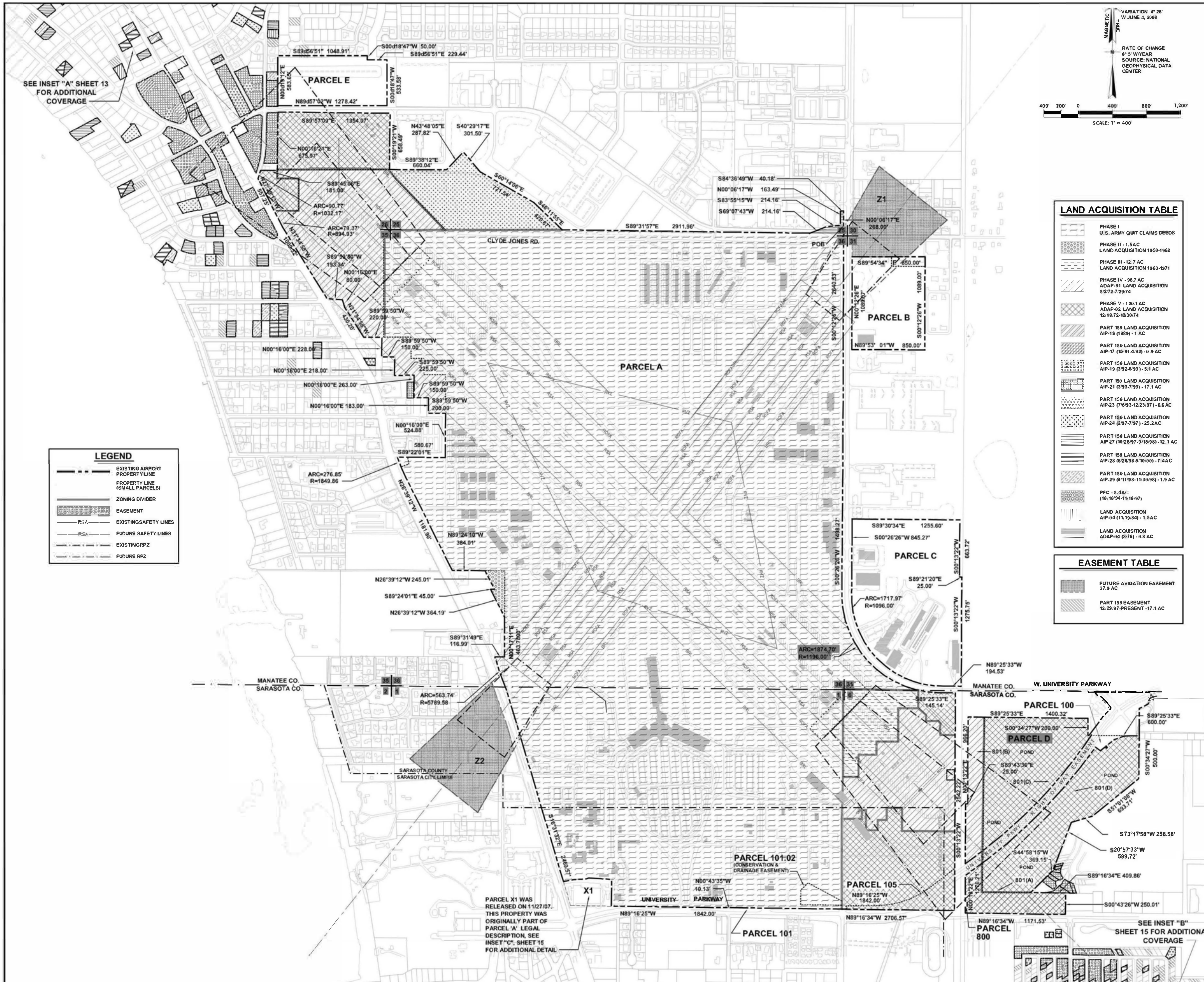
Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
AIRPORT LAND USE DRAWING

FAA A.I.P. Project Number:
3-12-0071-039-2006

AutoCad Drawing Reference:

Date: DECEMBER 2008	Division: PLANNING
Scale: 1" = 400'	Dwg. Number: 13



LAND ACQUISITION TABLE

	PHASE I U.S. ARMY QUIT CLAIMS DEEDS
	PHASE II - 1.5AC LAND ACQUISITION 1950-1962
	PHASE III - 12.7 AC LAND ACQUISITION 1963-1971
	PHASE IV - 96.7 AC ADAP-01 LAND ACQUISITION 5/2/72-7/29/74
	PHASE V - 120.1 AC ADAP-02 LAND ACQUISITION 12/18/72-12/30/74
	PART 150 LAND ACQUISITION AIP-16 (1989) - 1 AC
	PART 150 LAND ACQUISITION AIP-17 (10/91-4/92) - 0.9 AC
	PART 150 LAND ACQUISITION AIP-19 (3/92-6/93) - 5.1 AC
	PART 150 LAND ACQUISITION AIP-21 (3/93-7/93) - 17.1 AC
	PART 150 LAND ACQUISITION AIP-23 (7/6/93-12/23/97) - 6.6 AC
	PART 150 LAND ACQUISITION AIP-24 (2/97-7/97) - 25.2AC
	PART 150 LAND ACQUISITION AIP-27 (10/28/97-9/15/98) - 12.1 AC
	PART 150 LAND ACQUISITION AIP-28 (6/26/98-5/10/00) - 7.4AC
	PART 150 LAND ACQUISITION AIP-29 (9/11/98-11/30/98) - 1.9 AC
	PFC - 5.4AC (10/10/94-11/10/97)
	LAND ACQUISITION AIP-04 (11/19/84) - 1.5AC
	LAND ACQUISITION ADAP-04 (3/76) - 0.8 AC

EASEMENT TABLE

	FUTURE AVIGATION EASEMENT 37.9 AC
	PART 150 EASEMENT 12/29/97-PRESENT - 17.1 AC

SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checkedby: RWO
Project Number: PL133057

NOTES

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

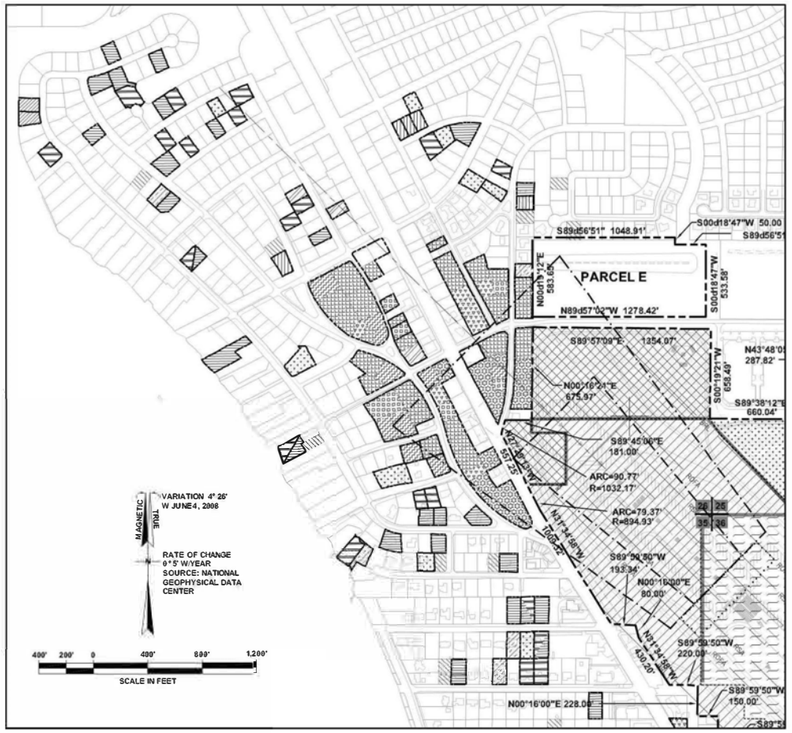
ProjectName:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
AIRPORT PROPERTY MAP DRAWING

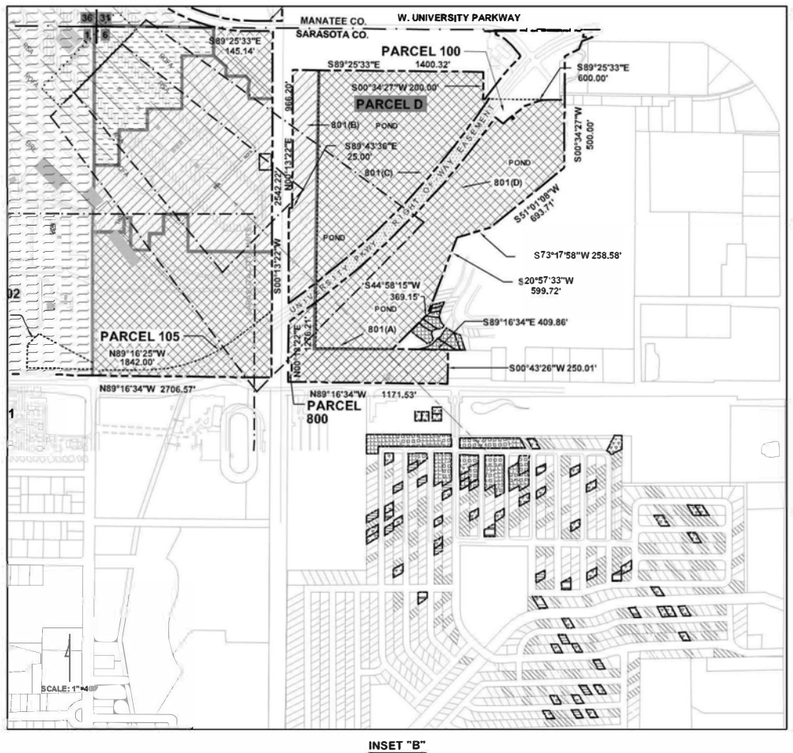
FAA A.I.P. Project Number: 3-12-0071-039 2006

Autocad Drawing Reference:

Date: DECEMBER 2008
Division: PLANNING
Scale: 1" = 400'
Drawing Number: 14



INSET "A"



INSET "B"

LEGAL DESCRIPTIONS

MAIN PARCELS

THAT PART OF: SECTIONS 25, 26, 35, TOWNSHIP 35'SOUTH, RANGE 17 EAST, LYING EAST OF U.S. HIGHWAY 41, SECTION 36, TOWNSHIP 35 SOUTH, RANGE 17 EAST; SECTION 31, TOWNSHIP 35SOUTH, RANGE 18 EAST, MANATEE COUNTY, FLORIDA; SECTION 1, TOWNSHIP 36 SOUTH, RANGE 17 EAST; SECTION 6, TOWNSHIP 36 SOUTH, RANGE 18 EAST LYING NORTH OF DESOTO ROAD AND EAST OF U.S. HIGHWAY 41; SARASOTA COUNTY, FLORIDA LYING WITHIN THE FOLLOWING DESCRIBED BOUNDARIES TO WIT:

PARCEL "A"

COMMENCE AT THE NORTHEAST CORNER OF SECTION 36, TOWNSHIP 35 SOUTH, RANGE 17 EAST, MANATEE COUNTY, FLORIDA; THENCE RUN NORTH 88° 49' 04" WEST 50.00 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF U.S. HIGHWAY 41 FOR A POINT OF BEGINNING OF PARCEL "A"; THENCE RUN SOUTH09° 12' 26" WEST ALONG SAID WESTERLY RIGHT- OF-WAY OF U.S. HIGHWAY 301 A DISTANCE OF 2,640.53 FEET TO A POINT; THENCE RUN SOUTH 00° 26' 26" WEST ALONG SAID RIGHT-OF-WAY 1,498.27 FEET TO A POINT;THENCE ON A CURVE TO THE LEFT HAVING A START TANGENT BEARING OF SOUTH 09° 23' 02" WEST, A RADIUS OF 1,196.00 FEET, AN ARC LENGTH OF 1,874.70 FEET AND AN END TANGENT BEARING OF SOUTH89°25'33" EAST; THENCE RUN SOUTH 89° 25' 33" EAST 185.14 FEET TO THE WESTERLY RIGHT-OF-WAY OF SEABOARD COASTLINE RAILROAD; THENCE RUN SOUTH 00° 13' 22" WEST ALONG SAID RAILROAD RIGHT-OF-WAY 2,542.22 FEET TO THE NORTH RIGHT-OF-WAY OF DESOTO ROAD; THENCE RUN NORTH 89° 16' 34" WEST ALONG SAID ROAD RIGHT-OF-WAY 2,706.57 FEET TO A POINT; THENCE RUN NORTH 00° 43' 35" WEST ALONG SAID ROAD RIGHT-OF-WAY 16.13 FEET TO A POINT; THENCE RUN NORTH 89° 16' 25" WEST ALONG SAID ROAD RIGHT-OF-WAY 1,842.00 FEET TO A POINT OF INTERSECTION WITH THE EASTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 41; THENCE RUN NORTH 16° 54' 52" WEST ALONG SAID U.S. HIGHWAY 41 RIGHT-OF-WAY 2,469.57 FEET TO A POINT; THENCE ON A CURVE TO THE LEFT, HAVING A START TANGENT BEARING OF NORTH 17° 15' 11" WEST, A RADIUS OF 5,789.58 FEET, AN ARC LENGTH OF 563.74 FEET AND A END TANGENT BEARING OF NORTH 22° 49' 35" WEST; THENCE RUN SOUTH 89° 31' 49" EAST 116.19 FEET TO A POINT; THENCE RUN NORTH 00° 17' 11" EAST 463.78 FEET TO A POINT; THENCE RUN NORTH 26° 39' 12" WEST 364.19 FEET TO A POINT; THENCE RUN SOUTH 89° 24' 01" EAST 45.00 FEET TO A POINT; THENCE RUN NORTH 26° 39' 12" WEST245.01 FEET TO A POINT; THENCE RUN NORTH 89° 24' 01" WEST 34.01 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 41; THENCE RUN NORTH 26° 39' 12" WEST ALONG SAIDHIGHWAY RIGHT-OF-WAY 1,161.90 FEET TO A POINT; THENCE ON A CURVE TO THE RIGHT HAVING A START TANGENT OF NORTH 35° 13' 42" WEST, A RADIUS OF 1,849.86 FEET, AN ARC LENGTH OF 276.85 FEET AND AN END TANGENT BEARING OF NORTH 26° 39' 12" WEST; THENCE RUN SOUTH 89° 22' 01" EAST 58.67 FEET TO A POINT; THENCE RUN NORTH 00° 16' 00" EAST 524.88 FEET TO A POINT; THENCE RUNSOUTH89° 59' 50" WEST 200.00 FEET TO A POINT; THENCE RUN NORTH 00° 16' 00" EAST 183.00 FEET TO A POINT;THENCE RUN SOUTH 89° 59' 50" WEST 150.00 FEET TO A POINT; THENCE RUN NORTH 00° 16' 00" EAST263.00 FEET TO A POINT; THENCE RUN SOUTH 89° 59' 50" WEST 225.00 FEET; THENCE RUN NORTH 00° 16' 00" EAST28.00 FEET TO A POINT; THENCE RUN SOUTH 89° 59' 50" WEST 150.00 FEET TO A POINT; THENCE RUN NORTH 00° 16' 00" EAST 228.00 FEET TO A POINT; THENCE RUN SOUTH 89° 59' 50" WEST 220.00 FEET TO A POINT; THENCE RUN NORTH 31° 34' 58" WEST 430.00 FEET TO A POINT; THENCE RUN SOUTH 89° 59' 50" WEST 2.92 FEET TO A POINT; THENCE RUN NORTH 00° 16' 00" EAST 80.00 FEET TO A POINT; THENCE RUN SOUTH 89° 59' 50" WEST 193.34 FEET TO A POINT ON THE WEST RIGHT-OF-WAY LINE OF U.S. HIGHWAY 41; THENCE RUNNORTH31°34'58" WEST 1,099.32 FEET ALONG SAID HIGHWAY RIGHT-OF-WAY TO A POINT; THENCE ON ACURVE TOTHE RIGHT HAVING A RADIUS OF 5,789.58 FEET, A CENTRAL ANGLE OF 04°47'58" AND A CHORD BEARING OF NORTH 47° 58' 41" WEST, A RADIUS OF 894.93 FEET AN ARC LENGTH OF 79.37 FEET AND AN END TANGENT BEARING OF NORTH 42° 53' 46" WEST; THENCE RUN NORTH 27°25' 13" WEST 557.25 FEET TO A POINT; THENCE ON A CURVE TO THE LEFT HAVING A START TANGENT BEARING OF NORTH 42° 53' 46" WEST, A RADIUS OF 1,032.17 FEET, AN ARC LENGTH OF 90.77 FEET, AND A END TANGENT BEARING OF NORTH 19° 39' 58" EAST; THENCE RUN SOUTH 89° 45' 06" EAST 181.00 FEET TO A POINT; THENCE RUN NORTH 00° 16' 00" EAST 675.97 FEET TO A POINT; THENCE RUN SOUTH 89° 57'09" EAST 1,254.07 FEET TO A POINT; THENCE RUN SOUTH 00° 09' 21" WEST 658.49 FEET TO A POINT; THENCE RUNSOUTH89°38'12" EAST 660.04 FEET TO A POINT; THENCE RUN NORTH 43° 48' 05" EAST 287.82 FEET TO A POINT; THENCE RUN SOUTH40°23'17" EAST 301.50 FEET TO A POINT; THENCE RUN SOUTH 60° 16' 06" EAST 721.54 FEET TO A POINT; THENCE RUN SOUTH 46° 11' 55" EAST 420.67 FEET TO A POINT ON THE NORTH BOUNDARY OF SECTION 36, TOWNSHIP 35 SOUTH, RANGE 17 EAST, THENCE RUN SOUTH 89° 31' 57" EAST ALONG SAID SECTION LINE 2,211.96 FEET TO A POINT; THENCE RUN SOUTH 89° 07' 43" WEST214.16FEET TO A POINT; THENCE RUN SOUTH 83° 55' 15" WEST 160.91 FEET TO A POINT; THENCE RUN NORTH 00° 06' 17" WEST 163.49 FEET TO A POINT; THENCE RUN SOUTH 84° 36' 49" WEST 40.16 FEET TO A POINT; THENCE RUN NORTH 00°06' 17" EAST268.00 FEETTO THE POINT OF BEGINNING.

CONTAINING 967.37 ACRES, MORE OR LESS.

PARCEL "B"

COMMENCE AT THE NORTHEAST CORNER OF SECTION 36, TOWNSHIP 35 SOUTH, RANGE 17 EAST, MANATEE COUNTY, FLORIDA; THENCE RUN SOUTH 90° 47' 34" EAST 50.00 FEET TO A POINT ONTHE EASTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 301; THENCE RUN SOUTH 09° 12' 26" WEST ALONG SAID HIGHWAY RIGHT-OF-WAY 229.35 FEET TO THE POINT OF BEGINNING; FROM SAID POINT OF BEGINNINGRUNSOUTH89° 54' 34" EAST 850.00 FEET TO A POINT; THENCE RUN SOUTH 00° 12' 26" WEST 1,069.45 FEET TO A POINT; THENCE RUN NORTH 89° 53' 01" WEST 850.00 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF U.S. 301; THENCE RUN NORTH 00° 12' 26" EAST ALONG SAID RIGHT-OF-WAY 1,069.07 FEET TO THE POINT OF BEGINNING.

CONTAINING 21.26 ACRES, MORE OR LESS.

PARCEL "C"

COMMENCE AT THE NORTHEAST CORNER OF SECTION 36, TOWNSHIP 35 SOUTH, RANGE 17 EAST, MANATEE COUNTY, FLORIDA; THENCE RUN SOUTH 89° 47' 34" EAST 50.00 FEET TO A POINT ONTHE EASTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 301; THENCE RUN SOUTH 00° 12' 26" WEST 2,640.08 FEET ALONG SAID RIGHT-OF-WAY TO A POINT; THENCE RUN SOUTH 89° 26' 26" WEST ALONG SAID RIGHT-OF-WAY 652.99 FEET TO THE POINT OF BEGINNING OF PARCEL "C"; THENCE RUN SOUTH 89° 30' 34" EAST1,255.66 FEET TO A POINT ON THE WESTERLY RIGHT-OF-WAY OF THE SEABOARD COASTLINE RAILROAD; THENCE RUN SOUTH 00° 13' 22" WEST ALONG SAID RAILROAD RIGHT-OF-WAY 663.72 FEET TO A POINT; THENCE RUNSOUTH89° 21' 20" EAST ALONG SAID RIGHT-OF-WAY 25.00 FEET TO A POINT; THENCE RUN SOUTH00° 13'22" WEST 1,275.75 FEET ALONG SAID RIGHT-OF-WAY TO A POINT ON THE NORTHEASTERLY RIGHT-OF-WAY OF U.S. HIGHWAY 301; THENCE RUN NORTH 89° 25' 33" WEST, ALONG SAID HIGHWAY RIGHT-OF-WAY 194.53 FEET TO A POINT; THENCE ON A CURVE TO THE RIGHTHAVING A STARTTANGENT BEARING OF NORTH 89° 25'33" WEST, A RADIUS OF 1,096.00 FEET, AN ARC LENGTH OF 1,717.97 FEET AND AN END TANGENT BEARING OF NORTH 09° 23'02" EAST; THENCE RUN NORTH 09° 26' 26" EAST ALONG SAID HIGHWAY RIGHT-OF-WAY 845.27 FEET TO THE POINT OF BEGINNING.

CONTAINING 50.88 ACRES, MORE OR LESS.

PARCEL "D"

COMMENCE AT THE NORTHWEST CORNER OF SECTION 6, TOWNSHIP 36 SOUTH, RANGE 18 EAST, SARASOTA COUNTY, FLORIDA; THENCE RUN SOUTH 89° 25' 33" EAST ALONG THE NORTH BOUNDARY OF SAID SECTION 6, 1,363.17 FEET TO THE CENTERLINE OF THE SEABOARD COAST LINE RAILROAD; THENCE RUNSOUTH09° 13' 22" WEST ALONG SAID CENTERLINE 359.15 FEET TO A POINT; THENCE RUN SOUTH 89°25'33" EAST175.00 FEET TO THE EAST RIGHT-OF-WAY LINE OF SAID RAILROAD FOR A POINT OF BEGINNING; FROM SAID POINT OF BEGINNING RUN SOUTH 89° 25' 33" EAST 1,400.00 FEET TO A POINT; THENCE RUN SOUTH 09° 34' 27" WEST 200.00 FEET TO A POINT; THENCE RUN SOUTH 89° 25' 33" EAST 600.00 FEET TO A POINT; THENCE RUN SOUTH 00° 34' 27" WEST 500.00 FEET TO A POINT; THENCE RUN SOUTH 51° 01'08" WEST693.71 FEET TO A POINT; THENCE RUN SOUTH 73° 17' 58" WEST 258.58 FEET TO A POINT; THENCE RUN SOUTH20°57' 33" WEST 599.72 FEET TO A POINT; THENCE RUN SOUTH44° 58' 15" WEST 360.15 FEET TO A POINT;THENCE RUNSOUTH89°16' 34" EAST409.86 FEET TO A POINT;THENCE RUN SOUTH 00° 43' 26" WEST 250.01 FEET TO A POINTON THE NORTH RIGHT-OF-WAY LINE OF DESOTO ROAD; THENCE RUN NORTH 89° 16' 34" WEST 1,171.53FEET TO THE EASTERLY RIGHT-OF-WAY LINE OF SEABOARD COAST RAILROAD; THENCE RUN NORTH 09° 13'22" EAST ALONG SAID RAILROAD RIGHT-OF-WAY 1,276.21 FEET TO A POINT; THENCE RUN SOUTH 89° 43' 36" EAST ALONG SAID RIGHT-OF-WAY 25.00 FEET TO A POINT; THENCE RUN NORTH 09° 13' 22" EAST ALONG SAID RIGHT-OF-WAY 966.20 FEET TO THE POINT OF BEGINNING.

CONTAINING 73.75 ACRES, MORE OR LESS.

PARCEL "E"

AS DEPICTED ON SHEET 14 CONTAINING 16.9 ACRES MORE OR LESS

SUB PARCELS

PARCEL 100

RIGHT-OF-WAY EASEMENTS TO BE CONVEYED TO THE COUNTY.

COMMENCE AT A BRASS DISK MARKING THE CENTER THE CORNER OF SECTION 6 TOWNSHIP 36SOUTH, RANGE 18 EAST, SARASOTA COUNTY, FLORIDA THENCE S.89o 03' 15" WEST. ALONG THE EAST-WEST CENTERLINE OF SAID SECTION 6, A DISTANCE OF 1239.53 FEET; THENCE NORTH 01o 27' 31" WEST, A DISTANCE OF 40.00 FEET TO A POINT OF INTERSECTION OF THE EXISTING NORTH RIGHT-OF-WAY LINE OF DESOTO ROAD AND THE EAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD;THENCE NORTH 01o 27' 31" WEST, ALONG SAID EAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD, A DISTANCE OF 437.36 FEET TO THE POINT OF BEGINNING; THENCE NORTH 01o 27' 31" WEST, CONTINUING ALONG SAID EAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD, A DISTANCE OF 137.32 FEET; THENCE NORTH 51o36' 22" EAST, A DISTANCE OF 266.57 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE LEFT, HAVING A RADIUS OF 5674.58 FEET, A CENTRAL ANGLE OF 16o54' 33", A TANGENT LENGTH OF 843.47 FEET, A CHORD BEARING OF NORTH43o 19' 06" EAST, AND A CHORD LENGTH OF 1688.61 FEET; THENCE ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 1674.68 FEET TO THE END OF SAID CURVE THENCE NORTH 33o 35' 26" EAST, A DISTANCE OF 140.37 FEET; THENCE NORTH 88o 54' 16" EAST, A DISTANCE OF 389.23 FEET; THENCE SOUTH 69o 56' 32" WEST, A DISTANCE OF 90.92 FEET TO THE POINT OF CURVATURE OF A CURVE TO THE LEFT, HAVING A RADIUS OF 180.00FEET, A CENTRAL ANGLE OF 19o 37' 27", A TANGENT LENGTH OF 31.13 FEET, A CHORD BEARING OF SOUTH60o 07'49" WEST, AND A CHORD LENGTH OF 61.35 FEET THENCE ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 61.65 FEET TO THE END OF SAID CURVE; THENCE SOUTH 49o36' 10" WEST, A DISTANCE OF 96.95 FEET; THENCE SOUTH40o 23' 50" EAST, A DISTANCE OF 21.00 FEET THENCE SOUTH 49o36' 10" WEST, A DISTANCE OF 15.00 FEET; THENCE NORTH 40o 23.50" WEST, A DISTANCE OF 21.00 FEET; THENCE SOUTH 49o 36' 10" WEST, A DISTANCE OF 71.50 FEET; THENCE NORTH 55o 08' 11" WEST, A DISTANCE OF 75.00 FEET; THENCE SOUTH 36o 07' 52" WEST, A DISTANCE OF 59.68 FEET TO A POINT OF CURVATURE OF A CURVE TO THE RIGHT HAVING A RADIUS OF 5784.58 FEET, A CENTRAL ANGLE OF 16o 54' 33", A TANGENT LENGTH OF 859.82 FEET, A CHORD BEARING OF SOUTH 49o 19' 06" WEST, AND A CHORD LENGTH OF 1700.96 FEET; THENCE ALONG THE ARC OF SAID CURVE, AN ARC LENGTH OF 1707.15 FEET TO THE POINT OF TANGENCY OF SAIDCURVE; THENCE SOUTH 51o46' 22" WEST, A DISTANCE OF 348.77 FEET TO THE POINT OF BEGINNING.

PARCEL CONTAINS 264,174 SQUARE FEET OR 6.06 ACRES, MORE OR LESS.

PARCEL 101

COMMENCE AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER (1/4) OF SECTION 1, TOWNSHIP 36 SOUTH, RANGE 17 EAST, SARASOTA COUNTY, FLORIDA, THENCE RUN NORTH 01o 07' 32" EAST ALONG THE EAST LINE OF SAID NORTHEAST QUARTER (1/4) FOR A DISTANCE OF 40.00 FEET; THENCE RUN NORTH 88o 50' 08" WEST FOR A DISTANCE OF 40.00 FEET TO THE NORTHWEST CORNER OF DESOTO ROAD AND OLD BRADENTON ROAD FOR THE POINT OF BEGINNING, THENCE RUN NORTH 01o 07' 32" EAST ALONG THE WEST RIGHT-OF-WAY LINE OF OLD BRADENTON ROAD, ACCORDING TO THE PLAT OF SARASOTA, RECORDED IN PLAT BOOK 3, PAGE 61, OF THE PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA, FOR A DISTANCE OF 60.00 FEET, THENCE RUN NORTH 88o 50' 08" WEST FOR A DISTANCE OF 1334.56 FEET, THENCE RUN NORTH 87o 05' 19" WEST FOR A DISTANCE OF 169.43 FEET, THENCE RUN SOUTH88o50'08" WEST FOR A DISTANCE 266.00 FEET, THENCE RUN SOUTH 01o 09' 52" EAST FOR A DISTANCE OF 12.00FEET, THENCE RUN SOUTH 88o 50' 08" WEST FOR A DISTANCE OF 245.83 FEET, TO THE POINT OF CURVATURE OF A CIRCULAR CURVE TO THE LEFT, THENCE RUN SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, HAVING A RADIUS OF 3334.06 FEET, THROUGH A CENTRAL ANGLE 11o 46' 20", FOR AN ARC DISTANCE OF 685.02 FEET TO THE INTERSECTION WITH THE NORTH RIGHT-OF-WAY OF DESOTO ROAD, ACCORDING TO THE STATE ROAD DEPARTMENT RIGHT-OF-WAY MAP FOR S.R. 45, SECTION NO. 1702-204, SHEET NO. 5, FILED IN ROADPLAT BOOK 1, PAGE 15, OF THE PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA, THENCE RUN NORTH88o46' 52" EAST ALONG SAID RIGHT-OF-WAY LINE FOR A DISTANCE OF 166.26 FEET TO THE INTERSECTION WITH WEST LINE OF THE NORTHEAST QUARTER (1/4) OF SECTION 1, THENCE RUN NORTH 88o 50'08" ALONG THE NORTH MAINTAINED RIGHT-OF-WAY OF DESOTO ROAD, ACCORDING TO THE STATE ROAD DEPARTMENT RIGHT-OF-WAY MAP FOR S.R. 778, SECTION 1730, SHEET 12A, OF SAID PUBLIC RECORDS, FOR A DISTANCE OF 112.14 FEET, THENCE RUN NORTH 89o 24' 31" EAST FOR A DISTANCE OF 300.02FEET, THENCE RUN NORTH 89o 13' 03" EAST FOR A DISTANCE OF 300.01 FEET, THENCE RUN NORTH88o 50'08" EAST FOR A DISTANCE OF 300.00 FEET, THENCE RUN NORTH 87o 53' 09" EAST FOR A DISTANCE OF 301.68FEET, THENCE RUN NORTH 89o 39' 52" WEST, ALONG THE WEST RIGHT-OF-WAY LINE OF GENERAL KENNEDY AVENUE, ACCORDING TO SAID PLAT OF SARASOTA, RECORDED IN PLAT BOOK 3, PAGE 61, VACATED RIGHT-OF-WAY RECORDED IN OFFICIAL RECORDS BOOK 2039, PAGE 1850 OF SAID PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA, A DISTANCE OF 10.00 FEET, THENCE RUN NORTH 88o 50' 08" EAST FOR A DISTANCE OF 1275.18 FEET TO THE POINT OF BEGINNING.

CONTAINING 168,204.9 SQUARE FEET OR 3.86 ACRES, MORE OR LESS

PARCEL 101.02

COMMENCE AT THE SOUTHEAST CORNER OF THE NORTHEAST QUARTER (1/4) OF SECTION 1, TOWNSHIP 36 SOUTH, RANGE 17 EAST, SARASOTA COUNTY, FLORIDA; THENCE RUN SOUTH 88o 50' 08" WEST ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER (1/4) FOR A DISTANCE OF 39.93 FEET; THENCE RUNNORTH 01o 09' 52" WEST FOR A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING; THENCE RUNNORTH 10o 07' 32" WEST ALONG THE WEST RIGHT-OF-WAY LINE OF OLD BRADENTON ROAD, ACCORDING TO THE PLAT OF SARASOTA, RECORDED IN PLAT BOOK 3, PAGE 61, OF THE PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA, FOR A DISTANCE OF 64.94 FEET; THENCE RUN NORTH 63o40' 13" WEST FOR A DISTANCE OF 413.85 FEET; THENCE RUN SOUTH 43o 50' 08" WEST FOR A DISTANCE OF 117.38 FEET; THENCE RUN SOUTH 01o 09' 52" EAST FOR A DISTANCE OF 173.00 FEET TO THE INTERSECTION WITH A LINE 100.00 FEET NORTH OF AND PARALLEL WITH SAID SOUTH LINE OF THE NORTHEAST QUARTER (1/4) SAID SECTION 1; THENCE RUN NORTH 88o 50' 08" EAST ALONG SAID PARALLEL LINE FOR A DISTANCE OF 450.07 FEET TO THE POINT OF BEGINNING.

CONTAINING 76,712.8 SQUARE FEET OR 1.76 ACRES, MORE OR LESS.

PARCEL 105

A PARCEL OF LAND LYING WITHIN SECTION 6, TOWNSHIP 36 SOUTH, RANGE 18 EAST, SARASOTA COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF NORTHWEST QUARTER (1/4) OF SECTION 6, TOWNSHIP 36 SOUTH, RANGE 18 EAST, SARASOTA COUNTY, FLORIDA; THENCE RUN NORTH 89o 01' 18" EAST ALONG THE SOUTH LINE OF SAID NORTHWEST QUARTER (1/4) FOR A DISTANCE OF 39.87 FEET; THENCE RUNNORTH 00o 58' 42" WEST, A DISTANCE OF 40.00 FEET, TO THE POINT OF BEGINNING ALSO BEING THE INTERSECTION WITH THE EAST RIGHT-OF-WAY LINE OF OLD BRADENTON ROAD AND THE NORTH RIGHT-OF-WAY LINE OF DESOTO ROAD, THENCE RUN NORTH 01o 07' 32" WEST ALONG THE EAST RIGHT-OF-WAY LINE OF OLD BRADENTON ROAD FOR A DISTANCE OF 57.17 FEET; THENCE RUN SOUTH 72o42' 32" EAST, A DISTANCE OF 15.83 FEET; THENCE RUN NORTH 88o 50' 00" EAST, A DISTANCE OF 349.31 FEET; TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHERLY, THENCE RUN NORTHEASTERLY ALONG THE ARC OF SAID CURVE HAVING A RADIUS OF 1003.74 FEET, THROUGH A CENTRAL ANGLE OF 37o03'38" FOR AN ARC LENGTH OF 649.25 FEET TO THE POINT OF TANGENCY; THENCE RUN NORTH 51o46'22" EAST, A DISTANCE OF 365.67 FEET TO THE INTERSECTION WITH THE WEST RIGHT-OF-WAY LINE OF THE SEMINOLE GULF RAILWAY; THENCE RUN SOUTH 01o 27' 43" EAST ALONG SAID WEST RIGHT-OF-WAY LINE, A DISTANCE OF 486.87 FEET TO THE INTERSECTION WITH THE NORTH RIGHT-WAY OF DESOTO ROAD, THENCE RUN SOUTH 89o 03' 15" WEST ALONG SAID RIGHT-OF-WAY LINE OF DESOTO ROAD, A DISTANCE OF 1263.56FEET, TO THE POINT OF BEGINNING.

CONTAINING 199,871.3 SQUARE FEET OR 4.59 ACRES, MORE OR LESS.

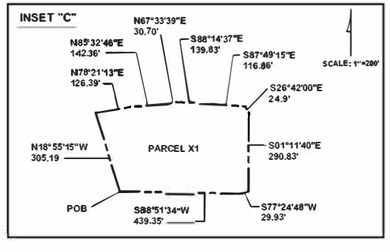
PARCEL 800

BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT A BRASS DISK MARKING THE CENTER OF SECTION 6, TOWNSHIP 36 SOUTH, RANGE 18 EAST, SARASOTA COUNTY, FLORIDA; THENCE SOUTH 89o 03' 15" WEST, ALONG THE EAST -WEST CENTERLINE OF SAID SECTION 6, A DISTANCE OF 1239.53 FEET; THENCE NORTH 01o 27' 31" WEST, A DISTANCE OF 40.00 FEET TO A POINT OF INTERSECTION OF THE EXISTING NORTH RIGHT-OF-WAY LINE OF DESOTO ROAD AND THE EAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD; THENCE NORTH 01o27' 31" WEST, ALONG SAID EAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD, A DISTANCE OF 76.45 FEET TO THE POINT OF BEGINNING; THENCE NORTH 01o 27' 31" WEST, CONTINUING ALONG SAIDEAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD, A DISTANCE OF 55.00 FEET; THENCE NORTH 88o 32' 29" EAST, LEAVING SAID EAST RIGHT-OF-WAY LINE OF THE SEABOARD COASTLINE RAILROAD, A DISTANCE OF 25.00 FEET; THENCE SOUTH 01o 27' 31" EAST, A DISTANCE OF 55.00 FEET; THENCE SOUTH88o 32' 29" WEST, A DISTANCE OF 25.00 FEET TO THE POINT OF BEGINNING.

PARCEL CONTAINS 1,375 SQUARE FEET OR .032 ACRES, MORE OR LESS.

INSET "C"



PARCEL "X1" - RELEASED 11/27/2008

A PARCEL OF LAND LYING AND BEING IN THE NORTHWEST ¼ OF SECTION 1, TOWNSHIP 36S, RANGE 17E, SARASOTA COUNTY, FLORIDA BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: FROM THE SOUTHEAST CORNER OF THE NORTHWEST ¼ OF SECTION 1, TOWNSHIP 36S, RANGE 17E, AS A POINT OF REFERENCE; THENCE S 88°51'34"W ALONG THE SURVEY BASELINE OF DESOTO ROAD 587.40 FEET TO THE CENTERLINE STATION 1176+49.72 OF U.S. HIGHWAY 41 (TAMIAMI TRAIL)AS SHOWN ON RIGHT-OF-WAY MAPS FOR STATE ROAD NO. 45 SECTION 1702- (19) 204, FILED IN ROAD PLAT BOOK 1, PAGE 15, PUBLIC RECORDS OF SARASOTA COUNTY; THENCE N18°52'02"W ALONG SAID CENTERLINE 31.50 FEET; THENCE N88°51'34"E LEAVING SAID CENTERLINE 51.62 FEET FOR A POINT OF BEGINNING; THENCE N18°55'15"W ALONG THE EAST RIGHT-OF-WAY LINE OF U.S. HIGHWAY 41, A DISTANCE OF 305.19 FEET; THENCE N78°21'13"E LEAVING SAID RIGHT-OF-WAY, 126.39 FEET; THENCE ALONG A CHAIN LINK FENCE THE FOLLOWING 4 COURSES: 1) N85°32'46"E 142.36 FEET; 2) N67°33'39"E 30.70 FEET; 3) S88°14'37"E 139.83 FEET; 4) S87°49'15"E 116.86 FEET; THENCE S26°42'00"E 24.90 FEET; S01°11'40"E 290.83 FEET; THENCE ALONG THE NORTH RIGHT-OF-WAY LINE OF DESOTO ROAD (UNIVERSITY PARKWAY), ON A CURVE TO THE LEFT HAVING A RADIUS OF 3334.06 FEET, A CENTRAL ANGLE OF 00°59'52", AN ARC LENGTH OF 29.93 FEET, AND A CHORD OF S77°24'48"W 29.93FEET; THENCE S88°51'34"W 439.35 FEET TO THE POINT OF BEGINNING. CONTAINING 3.795 ACRES MORE OR LESS.

EXISTING PROPERTY & EASEMENT TOTALS

PROPERTY	
EXISTING (AC.)	TOTAL ACREAGE
PHASE I PARCELS (A-E)	1126.37 A.C.
PHASE II THROUGH PHASE V	231.0 AC.
FAR PART 150 ACQUISITIONS	77.3 AC.
PFC / AIP / ADAP ACQUISITIONS	7.7 AC.
GRAND TOTAL PROPERTY	1442.37 ACRES
EASEMENTS	
EXISTING (AC.)	TOTAL ACREAGE
PART 150 EASEMENTS[1]	17.1 AC.[1]
GRAND TOTAL EASEMENTS	17.1 AC.
GRAND TOTAL ALL PROPERTY	1459.47 AC.

NOTES
1. REFERS TO EASEMENTS ACQUIRED FROM 12/29/97 TO PRESENT AS A PART OF A ~~PREVIOUS~~ FAR PART 150 STUDY

PROPOSED EASEMENT ACQUISITIONS

PARCEL NO.	TYPE OF ACQUISITION	SIZE
21	EASEMENT	16.9 AC.
22	EASEMENT	21.0 AC.
	TOTAL	37.9 AC.

srq SARASOTA BRADENTON INTERNATIONAL

Sarasota Manatee Airport Authority
Sarasota, FL
srq-airport.com

LPA In association with RICONDO & ASSOCIATES

Designer: APN
Technician: APN
Checked by: RWO
Project Number: PL133057

NOTES

CONSTRUCTION NOTICE REQUIREMENT

To protect operational safety and future development, all proposed construction on the airport must be coordinated by the airport owner with the FAA Airports District Office prior to construction. FAA's review takes approximately 60 days.

REVISIONS

No.	Description	Date	By

Project Name:
Sarasota Bradenton International Airport Master Plan Update

Drawing Name:
AIRPORT PROPERTY MAP DATA SHEET DRAWING

FAA A.I.P. Project Number: 3-12-0071-039-2006

Autocad Drawing Reference: [illegible]

Date: DECEMBER 2008
Division: PLANNING
Scale: AS SHOWN
Drawing Number: 15

VII. Financial Analysis

The financial viability of implementing the Airport Master Plan Update recommendations is discussed in this chapter. As noted previously, the actual implementation schedule for the various improvements identified in the Master Plan Update will be defined by development triggers and demand growth rather than specific timeframes. For the purposes of this financial analysis, a specific implementation schedule was assumed; however, it should be noted that this schedule and the resulting financial analysis are intended only to demonstrate financial viability assuming the demand levels and patterns associated with the implementation schedule and recognizing that the actual financing strategies used will be determined as implementation nears. The projected financial results are based on activity forecasts developed as part of this Master Plan Update (the revised Baseline Forecasts). The financial analysis is presented for FY 2009 through FY 2019.[1] The Airport Authority's Fiscal Year ends September 30.

As a result of the significant decline in the U.S. economy and the resulting effects on the aviation industry, the FAA *Terminal Area Forecast* published in December 2008 resulted in forecasts that were lower than the FAA-approved Baseline Forecasts (approved in June 2008). Additionally, a potential increase in the current maximum PFC from $4.50 per enplaned passenger to $7.00 per enplaned passenger is being considered as part of the FAA AIP Reauthorization. Therefore, two financial scenarios (referred to as "Sensitivity Scenarios") were developed to test the sensitivity of implementing the Airport CIP and the Master Plan Update recommendations within the financial performance and comprehensive cost parameters established by Ricondo & Associates, Inc., in close coordination with the SMAA. In Sensitivity Scenario 1, the 2008 TAF for SRQ and the current maximum PFC level of $4.50 were assumed. In Sensitivity Scenario 2, the 2008 TAF for SRQ and a PFC increase to $7.00 were assumed. These scenarios are discussed at the end of this chapter.

This chapter is organized in the following sections:

7.1 Financial Structure of the Airport

This section presents a discussion of the accounting practices at the Airport, a summary of the Scheduled Airline Operating Agreement and Terminal Building Lease (the Airline Agreement) between the SMAA and the airlines serving the Airport that have executed the Airline Agreement

[1] The financial analysis is only presented through FY 2019 because of the likelihood that the CIP will be revised and new projects may be identified beyond the 10-year planning period.

(the Signatory Airlines), the Master Resolution of the SMAA dated December 20, 1984, as amended and restated, and any Series Resolution authorizing the issuance of Bonds, other than Special Purpose Facility Bonds, payable from Airport Revenue (the Bond Resolution). Capitalized terms in this chapter have the meanings set forth in the Bond Resolution and/or the Airline Agreement.

7.1.1 Accounting Practices

The Airport operates on a fiscal year basis, for fiscal years ending September 30. Airport-related revenues and expenditures are categorized by type of revenue and expense and allocated to cost centers, as defined in the Airline Agreement.

Cost centers include those areas or functional activities used to account for Airport revenues, operation and maintenance (O&M) expenses, and debt service, and are used to assist in determining Airport tenant and user rentals, fees, and charges. The cost centers currently used to determine tenant rentals, fees, and charges at the Airport include the following:

- **Airfield Area** – Those areas on the Airport that provide for the landing, take-off, taxiing, parking, or other operations of aircraft, and the approach and clear zones, infield areas, and navigational aids.
- **Apron Area** – The paved aircraft ramp area adjacent to the terminal building that provides for the parking, loading, unloading, and servicing of aircraft.
- **Terminal Building** – The passenger terminal building serving the traveling public.
- **Terminal Area** – The access roads and parking areas serving the terminal building.
- **Other Buildings and Areas** – Those portions of the Airport not included in the preceding cost centers, including the facilities, installations, and improvements thereon.
- **Reliever Airport** – Any general aviation reliever airport, other than the Airport, hereafter owned or operated by the SMAA.[2]

7.1.2 Airline Agreement

Each Signatory Airline has executed an Airline Agreement with the SMAA. Airline Agreements are currently in effect with all scheduled passenger airlines operating at the Airport, including AirTran Airways, Continental Airlines and its affiliates, Delta Air Lines and its affiliates, JetBlue Airways, and US Airways and its affiliates. Although Continental executed the Airline Agreement, it discontinued service at the Airport in September 2008.

The term of the Airline Agreement is scheduled to expire on September 30, 2013, unless terminated sooner under provisions contained within the Airline Agreement. For the purposes of this financial analysis, it was assumed that future airline agreements will have provisions similar to those in the existing Airline Agreement. The current Airline Agreement includes the following key elements:

- **Terminal Building rentals** are calculated using a compensatory formula based on the recovery of the Terminal Building costs. Terminal Building costs include: O&M expenses allocable to the Terminal Building cost center, 125 percent of the annual debt service allocable to the Terminal Building, the portion of the annual deposits to funds and accounts required by the Bond Resolution allocable to the Terminal Building (including the reserve

[2] Although the SMAA currently operates one airport, it is authorized to operate additional airports and the Airport is referred to as the 'Airport System' in the Bond Resolution and Airline Agreement.

amount in the O&M Account), amortization of other Terminal Building capital improvements financed by the SMAA, 50 percent of the direct and indirect costs allocated to the Terminal Area cost center, and any other Airport Expense allocable to the Terminal Building cost center. The net Terminal Building requirement is then divided by the total usable space in the terminal building to derive the average rental rate per square foot.

- **Apron fees** are charged for use of the aircraft parking apron. The annual Apron Area requirement includes: O&M expenses allocable to the Apron Area cost center, that portion of the annual deposits to funds and accounts required by the Bond Resolution allocable to the Apron Area, 125 percent of annual debt service allocable to the Apron Area, amortization of SMAA-funded capital improvements in the Apron Area cost center, any other Airport expense allocable to the Apron Area, and estimated deficits or credits allocable to the Apron Area carried forward from prior years. The preferential apron fee is calculated by dividing the Apron Area requirement by the number of linear feet of the apron measured 100 feet from the concourses.
- **Landing fees** are calculated under an Airport residual cost formula. Airport Expense is defined in the Airline Agreement as the total of: Airport O&M Expenses, 125 percent of total annual debt service, required deposits to any funds and accounts established by the Bond Resolution, amortization of SMAA-funded capital improvements, and any other Airport expense. All Airport revenues, including airline terminal building rentals and preferential apron fees, but excluding Signatory Airline landing fees, together with the balance available in the Prepaid Airline Revenue Sub-Account, are deducted from the total Airport Expense to derive the net Airport requirement. This amount is then divided by total Signatory Airline landed weight to determine the Signatory Airline landing fee rate per 1,000 pounds of landed weight.
- **Recalculation of Rentals and Fees.** Not later than August 1 each Fiscal Year, the SMAA submits to the Signatory Airlines a report of SMAA's proposed annual budget for the succeeding Fiscal Year, reflecting all estimated Airport O&M Expenses, proposed outlays for capital improvements, schedule of annual required debt service, required deposits to funds and accounts under the Bond Resolution, and a preliminary calculation of rentals and fees. Rentals and fees are adjusted annually based on budgeted cost and expense data for the applicable Fiscal Year. A year-end adjustment of all rentals and fees is calculated on or about April 1 each year using actual revenues, expenses, numbers of enplaned passengers, and landed weights from the preceding Fiscal Year to determine under or over collection of rentals and fees paid by the airlines. In the event of under-collection, such deficiency is billed to each airline and due in 60 days; in the event of over-collection, such excess amount is paid to each airline within 60 days from the date of calculation. The Airline Agreement also provides for extraordinary midyear adjustments of airline rentals and fees under certain circumstances.
- **Authorized Financing of Capital Projects.** On or before August 1 of each Fiscal Year, the SMAA reports to the Signatory Airlines the purchase price/construction cost of capital improvements and the amortization/debt service schedule to be added to the airline rate base. Airline concurrence is necessary for capital improvements to be funded with proceeds from the sale of bonds, loans, or other form of borrowing and the debt service on the improvements is to be added to the airline rate base. If the capital improvement can be funded through balances available in the Capital Improvements Account, airline concurrence is not required.

7.1.3 Bond Resolution

The Bond Resolution authorizes the issuance of Airport Revenue Bonds by the SMAA. The requirements of the Bond Resolution and the methodology contained in the Airline Agreement were adhered to in developing the application of revenues included in this financial analysis. Revenues (or Operating Revenues) as defined in the Bond Resolution generally include all revenues due and payable to the SMAA from the ownership or operation of the Airport, including all rentals, concession revenues, use charges, apron fees, and landing fees.

An O&M Reserve requirement was established in an amount equal to one-sixth of the amount appropriated in the annual budget for O&M Expenses for the then-current Fiscal Year. The principal funds and accounts created under the Bond Resolution are summarized below.

As of October 1, 1999, the SMAA had deposited an amount equal to 25 percent of Annual Bond Debt Service (Coverage) to the Prepaid Airline Revenue Sub-Account of the General Purposes Account. The initial transfer to the Prepaid Airline Revenue Sub-Account was be made entirely from Airport Authority resources; no charges were made to the airline rate base in funding the initial Coverage amount. Interest income on moneys held in the Prepaid Airline Revenue Sub-Account are excluded from Airport Revenues and retained in that sub-account.

Each Fiscal Year, revenues for that Fiscal Year plus the amount on deposit in the Prepaid Airline Revenue Sub-Account are to be applied in the following manner:

1. To pay O&M Expenses for the Fiscal Year.
2. To make any deposits necessary to maintain the O&M Reserve at the level required.
3. To pay the principal and interest on any outstanding Bonds payable from Airport Revenues coming due and payable during the then-current Fiscal Year.
4. To make any deposits necessary to maintain the Reserve Account of the Debt Service Fund at the level required.
5. To pay the principal and interest coming due and payable during the Fiscal Year on any outstanding SMAA loans or obligations payable through the Subordinated Debt Account from Airport Revenues.
6. To make any deposits required to maintain the Renewal and Replacement Account at the level required.
7. To transfer to the Capital Improvements Account an amount equal to the Improvements Appropriation for the Fiscal Year.
8. To transfer to the Prepaid Airline Revenue Sub-Account an amount equal to the Coverage associated with Annual Bond Debt Service for that Fiscal Year.

7.2 Baseline Forecasts (Revised for Financial Planning Purposes)

The projected financial results are based on the revised Baseline Forecasts shown in **Table VII-1**. The Baseline Forecasts (developed in early 2007 and approved by the FAA in June 2008) were revised to reflect actual FY 2008 passenger data. FY 2009 data were also adjusted to reflect a 4.5 percent reduction in available aircraft seats. This reduction was based on half of the published percent-seat-decrease difference between September 2008 and December 2008, as reported in the OAG. For financial analysis purposes, the revised Baseline Forecasts also reflect more conservative

passenger activity over the next 10 years. As shown, enplaned passengers are forecast to number 745,900 in FY 2009 and 866,500 in FY 2019, which represents a compounded annual growth rate of 1.5 percent between FY 2009 and FY 2019. Landed weight is forecast to increase from 818.8 million pounds in FY 2009 to 951.2 million pounds in FY 2019 under the revised Baseline Forecasts.

Table VII-1

Forecast Enplaned Passengers and Landed Weight--Revised Baseline Forecasts

	Enplaned Passengers [1/] (thousands)			Landed Weight [2/] (pounds, in millions))		
Fiscal Year	Signatory Airlines	Non-Signatory Airlines	Total	Signatory Airlines	Non-Signatory Airlines	Total
2009	699.8	46.1	745.9	759.3	59.5	818.8
2010	709.6	46.7	756.3	770.0	60.3	830.3
2011	719.5	47.4	766.9	780.7	61.2	841.9
2012	730.3	48.1	778.4	792.4	62.1	854.5
2013	741.3	48.8	790.1	804.3	63.0	867.3
2014	752.4	49.6	801.9	816.4	64.0	880.4
2015	763.7	50.3	814.0	828.6	64.9	893.6
2016	775.1	51.1	826.2	841.1	65.9	907.0
2017	787.5	51.9	839.4	854.5	66.9	921.5
2018	800.1	52.7	852.8	868.2	68.0	936.2
2019	812.9	53.5	866.5	882.1	69.1	951.2
Compounded Annual Growth Rate						
2009-2011			1.4%			1.4%
2012-2016			1.5%			1.5%
2017-2029			1.6%			1.6%
2009-2019			1.5%			1.5%

Notes:

1/ Based on the revised Baseline Forecasts to account for actual FY 2008 passenger data and more conservative FY 2009 data (based on seat reductions as published in the OAG).

2/ Based on actual FY 2008 ratio between enplaned passengers and landed weight.

Source: Ricondo & Associates, Inc., September 2008, based on historical data for enplaned passengers and landed weight provided by the Sarasota Manatee Airport Authority.

Prepared by: Ricondo & Associates, Inc., September 2008.

7.3 Capital Improvement Program – Projects and Funding Sources

This section presents a discussion of the projects proposed by Airport staff, as well as those recommended in the Master Plan Update, and referred to collectively as the Capital Improvement Program. A discussion of major projects and funding sources for the CIP is also provided.

7.3.1 Projects

The estimated capital costs were developed in 2008 dollars and escalated using a compounded annual growth rate of 5.0 percent. As shown in **Table VII-2,** the total CIP for FY 2009 through FY 2019 is estimated to cost $147.5 million (escalated dollars). Highlights of the CIP include the following:

- Terminal Renovations[3] (FY 2011 – FY 2019) $18.2 million
- Parking Garage (Public and Rental Car) (FY 2012) $29.2 million
- Relocate ATCT (FY 2013 - FY 2015) $17.4 million
- Intermodal Roadway (FY 2014 - FY 2019) $12.8 million
- Runway 4-22 RSA/EMAS Construction (FY 2011 - FY 2012) $ 9.5 million
- Rehabilitate ARFF[4] (FY2018-FY2019) $ 9.3 million
- Construct Air Center Aprons Phase 1 (FY2016) $ 7.4 million
- Overlay Runway 4-22 Construction (FY2011) $ 5.8 million
- Taxiway A Rehabilitation (FY 2009) $ 4.0 million

As footnoted, the terminal renovation and ARFF rehabilitation projects will require additional funds beyond the 10-year CIP.

7.3.2 Funding Sources

The SMAA intends to finance the recommended CIP through a combination of FAA AIP grants (entitlements and discretionary), FDOT grants, PFC revenues, CFC revenues, Airport funds (Capital Improvements Account), and proceeds from the sale of General Airport Revenue Bonds (GARBs). **Table VII-3** presents the CIP for FY 2009 through FY 2019 and funding sources for each project. The following subsections briefly summarize the assumptions used for developing the CIP and describe the anticipated funding sources for CIP projects.

7.3.2.1 Assumptions

The 10-year CIP presented in Tables VII-2 and VII-3 was developed based on the following assumptions:

- AIP entitlements were projected based on the revised Baseline Forecasts for passenger activity
- A target of $2.0 million annually was assumed for AIP discretionary grants
- Similarly, a target of $2.0 million annually was assumed for FDOT grants
- PFC revenues were based on the revised Baseline Forecasts for passenger activity, assuming a $4.50 PFC per enplaned passenger

[3] An additional $6.4 million (in 2008 dollars) would be required to complete the terminal renovation project. This cost is not shown in the CIP because of funding limitations within the 10-year timeframe of the CIP.

[4] An additional $16.5 million (in 2008 dollars) would be required to complete the ARFF rehabilitation project. This cost is not shown in the CIP because of funding limitations within the 10-year timeframe of the CIP.

Table VII-2

Capital Improvement Program (in thousands) [1/]

Project	Escalated Cost	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Intermodal Transfer Station	$ 250.0	$ 250.0	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Master Plan Update	300.0	300.0	-	-	-	-	-	-	-	-	-	-
Maintenance Storage Building	400.0	400.0	-	-	-	-	-	-	-	-	-	-
Terminal EDS	400.0	400.0	-	-	-	-	-	-	-	-	-	-
DRI Negotiations	50.0	50.0	-	-	-	-	-	-	-	-	-	-
Taxiway G Construction	1,000.0	1,000.0	-	-	-	-	-	-	-	-	-	-
Rehab Airfield Lightning Construction - Phase 2	300.0	300.0	-	-	-	-	-	-	-	-	-	-
Design On-Airport Access Road	260.0	260.0	-	-	-	-	-	-	-	-	-	-
RPZ Acquisition (Fire Hall Relocation)	2,000.0	2,000.0	-	-	-	-	-	-	-	-	-	-
Taxiway A Rehab - Phase 1 & 2	4,000.0	4,000.0	-	-	-	-	-	-	-	-	-	-
Terminal Roadways - Phase 1	600.0	600.0	-	-	-	-	-	-	-	-	-	-
Service Road Phase 2 & 3A/B	2,207.6	1,050.0	1,157.6	-	-	-	-	-	-	-	-	-
North Access Design	496.1	-	496.1	-	-	-	-	-	-	-	-	-
T-Hangar Construction, Phase 3	1,543.5	-	1,543.5	-	-	-	-	-	-	-	-	-
Improve Rental Car Road	1,102.5	-	1,102.5	-	-	-	-	-	-	-	-	-
EMAS Design	551.3	-	551.3	-	-	-	-	-	-	-	-	-
Construct Phase IV Taxilanes in T-Hangars	2,205.0	-	2,205.0	-	-	-	-	-	-	-	-	-
East Airfield Drainage Improvement Construction	1,102.5	-	1,102.5	-	-	-	-	-	-	-	-	-
Overlay Runway 4-22 Construction	5,788.1	-	-	5,788.1	-	-	-	-	-	-	-	-
Runway 4-22 RSA/EMAS Construction	9,533.1	-	-	3,820.2	5,712.9	-	-	-	-	-	-	-
Terminal Renovation - Phase 1A	918.8	-	-	918.8	-	-	-	-	-	-	-	-
Taxiway B Rehab	2,680.2	-	-	-	2,680.2	-	-	-	-	-	-	-
Parking Garage	29,172.2	-	-	-	29,172.2	-	-	-	-	-	-	-
Terminal Renovation - Phase 1B	922.6	-	-	-	922.6	-	-	-	-	-	-	-
Relocate ATCT, Design/Construction - Phase1	6,183.6	-	-	-	-	6,183.6	-	-	-	-	-	-
Air Center Utilities	2,552.6	-	-	-	-	2,552.6	-	-	-	-	-	-
Terminal Renovation - Phase 1C	973.2	-	-	-	-	973.2	-	-	-	-	-	-
Relocate ATCT, Design/Construction - Phase 2	5,694.3	-	-	-	-	-	5,694.3	-	-	-	-	-
Terminal Renovation - Phase 2A	1,017.8	-	-	-	-	-	1,017.8	-	-	-	-	-
Intermodal Roadway: Air, Cargo, Ground	12,842.4	-	-	-	-	-	3,055.4	2,546.9	-	1,067.3	3,862.1	2,310.7
Terminal Renovation - Phase 2B	3,381.3	-	-	-	-	-	-	3,381.3	-	-	-	-
Relocate ATCT, Design/Construction - Phase 3	5,495.9	-	-	-	-	-	-	5,495.9	-	-	-	-
Terminal Renovation - Phase 2C	3,432.1	-	-	-	-	-	-	-	3,432.1	-	-	-
Construct Air Center Aprons Phase 1	7,387.3	-	-	-	-	-	-	-	7,387.3	-	-	-
Construct Airservice Center Hangar Phase 1	2,068.4	-	-	-	-	-	-	-	2,068.4	-	-	-
Terminal Renovation - Phase 3A	3,487.1	-	-	-	-	-	-	-	-	3,487.1	-	-
Air Center Apron Phase 2	7,756.6	-	-	-	-	-	-	-	-	7,756.6	-	-
Terminal Renovation - Phase 3B	3,542.8	-	-	-	-	-	-	-	-	-	3,542.8	-
Curbside Design/Construction	2,280.5	-	-	-	-	-	-	-	-	-	2,280.5	-
Rehab ARFF - Design	2,778.2	-	-	-	-	-	-	-	-	-	2,778.2	-
Terminal Renovation - Phase 3C	2,324.3	-	-	-	-	-	-	-	-	-	-	2,324.3
Rehab ARFF - Design/Construction	6,512.4	-	-	-	-	-	-	-	-	-	-	6,512.4
Total	$147,494.3	$10,610.0	$ 8,158.5	$10,527.1	$38,487.9	$ 9,709.4	$ 9,767.5	$11,424.1	$12,887.8	$12,311.0	$12,463.6	$11,147.4

Note:

1/ Project costs were escalated 5.0 percent annually from FY 2008.

Sources: Sarasota Manatee Airport Authority (project costs and phasing); Ricondo & Associates, Inc., December 2008.
Prepared by: Ricondo & Associates, Inc., April 2009.

Table VII-3

Capital Improvement Program – Funding Sources (in thousands)

Project Description	Escalated Cost [1/]	PFC [2/]	AIP [3/] Entitlement Grants	AIP [3/] Discretionary Grants	FDOT Grants [4/]	Capital Improvements Account	GARBs [4/]
Intermodal Transfer Station	$ 250.0	$ -	$ -	$ -	$ 187.5	$ 62.5	$ -
Master Plan Update	300.0	-	285.0	-	7.5	7.5	-
Maintenance Storage Building	400.0	-	-	-	200.0	200.0	-
Terminal EDS	400.0	-	-	-	400.0	-	-
DRI Negotiations	50.0	-	-	-	-	50.0	-
Taxiway G Construction	1,000.0	-	950.0	-	25.0	25.0	-
Rehab Airfield Lightning Construction - Phase 2	300.0	-	285.0	-	7.5	7.5	-
Design On-Airport Access Road	260.0	-	247.0	-	6.5	6.5	-
RPZ Acquisition (Fire Hall Relocation)	2,000.0	2,000.0	-	-	-	-	-
Taxiway A Rehab - Phase 1 & 2	4,000.0	-	889.0	1,000.0	1,055.5	1,055.5	-
Terminal Roadways - Phase 1	600.0	-	600.0	-	-	-	-
Service Road Phase 2 & 3A/B	2,207.6	-	1,051.2	-	578.2	578.2	-
North Access Design	496.1	-	471.3	-	12.4	12.4	-
T-Hangar Construction, Phase 3	1,543.5	-	-	-	771.8	771.8	-
Improve Rental Car Road	1,102.5	-	1,047.4	-	27.6	27.6	-
EMAS Design	551.3	-	523.7	-	13.8	13.8	-
Construct Phase IV Taxilanes in T-Hangars	2,205.0	-	104.3	998.2	1,102.5	-	-
East Airfield Drainage Improvement Construction	1,102.5	-	1,047.4	-	27.6	27.6	-
Overlay Runway 4-22 Construction	5,788.1	-	3,699.2	1,898.9	95.0	95.0	-
Runway 4-22 RSA/EMAS Construction	9,533.1	-	3,712.2	-	2,910.5	2,910.5	-
Terminal Renovation - Phase 1A	918.8	918.8	-	-	-	-	-
Taxiway B Rehab	2,680.2	-	-	1,000.0	840.1	840.1	-
Parking Garage	29,172.2	-	-	-	-	-	29,172.2
Terminal Renovation - Phase 1B	922.6	922.6	-	-	-	-	-
Relocate ATCT, Design/Construction - Phase1	6,183.6	-	3,726.8	1,001.9	727.5	727.5	-
Air Center Utilities	2,552.6	-	-	-	1,276.3	1,276.3	-
Terminal Renovation - Phase 1C	973.2	973.2	-	-	-	-	-
Relocate ATCT, Design/Construction - Phase 2	5,694.3	-	3,741.6	1,005.1	473.8	473.8	-
Terminal Renovation - Phase 2A	1,017.8	1,017.8	-	-	-	-	-
Intermodal Roadway: Air, Cargo, Ground	12,842.4	-	-	-	6,421.2	6,421.2	-
Terminal Renovation - Phase 2B	3,381.3	3,381.3	-	-	-	-	-
Relocate ATCT, Design/Construction - Phase 3	5,495.9	-	3,757.1	1,006.1	732.7	-	-
Terminal Renovation - Phase 2C	3,432.1	3,432.1	-	-	-	-	-
Construct Air Center Aprons Phase 1	7,387.3	-	3,772.3	1,034.2	1,290.4	1,290.4	-
Construct Airservice Center Hangar Phase 1	2,068.4	-	-	-	1,034.2	1,034.2	-
Terminal Renovation - Phase 3A	3,487.1	3,487.1	-	-	-	-	-
Air Center Apron Phase 2	7,756.6	-	3,788.0	1,034.7	1,466.9	1,466.9	-
Terminal Renovation - Phase 3B	3,542.8	3,542.8	-	-	-	-	-
Curbside Design/Construction	2,280.5	-	2,166.5	-	-	114.0	-
Rehab ARFF - Design	2,778.2	-	1,637.5	1,001.8	69.5	69.5	-
Terminal Renovation - Phase 3C	2,324.3	2,324.3	-	-	-	-	-
Rehab ARFF - Design/Construction	6,512.4	-	3,821.2	1,000.6	844.9	845.8	-
Total	$147,494.3	$22,000.0	$41,323.6	$11,981.4	$22,606.2	$20,410.9	$29,172.2

Notes:

1/ Project costs were escalated 5.0 percent annually from FY 2008.

2/ Passenger Facility Charge revenue.

3/ Airport Improvement Program.

4/ Florida Department of Transportation.

5/ General Airport Revenue Bonds; partially Customer Facility Charge (CFC) eligible.

Sources: Sarasota Manatee Airport Authority (project costs and phasing); Ricondo & Associates, Inc., December 2008.
Prepared by: Ricondo & Associates, Inc., April 2009.

In addition to the recommended CIP, the SMAA identified other projects that were not included in the CIP because of project priorities and limited funds within the 10-year CIP timeframe. As financial conditions evolve at the Airport, these projects could be added or exchanged for other projects in the CIP. These projects include the following, with estimated costs in 2008 dollars:

- Terminal Ticket Wing ($13.0 million)
- Maintenance Facility Expansion ($3.0 million)
- Pedestrian Facilities ($2.0 million)
- Intermodal Rail Extension ($10.2 million)

7.3.2.2 AIP Grants

One of the main sources of funding for airport improvements is federal AIP grants. The AIP was initially authorized by the Airport and Airway Improvement Act of 1982 to assist airport sponsors in funding planning, development, and noise compatibility projects at public-use airports nationwide to accommodate projected civil aviation growth. To be eligible for funding assistance, an airport must be included in the National Plan of Integrated Airport Systems.

The AIP is funded through the Aviation Trust Fund, which was established by the Airport and Airway Revenue Act of 1970. Revenues for the Aviation Trust Fund are derived through the levying of taxes and fees on aviation fuel and lubricants, airline tickets, international departing passengers, aircraft freight, and other components of the aviation industry. Funds deposited into the Aviation Trust Fund are distributed to eligible airports throughout the United States and its territories through grants administrated by the FAA under appropriations limits established by the United States Congress.

In administering the AIP, the FAA must comply with various statutory provisions, formulas, and set-asides established by law, which specify how AIP grant funds are to be distributed among airports. Each year, the FAA uses the statutory formulas to determine the amount of apportionment funds to be made available to each airport. To receive these entitlement funds, an airport operator must submit a valid grant application to the FAA. These funds to individual airports do not have to be used in the year they are made available. Airport operators are given up to 3 years to use their apportionment funds, allowing larger amounts to accumulate to pay for more costly projects. Once the apportionments have been determined, the remaining AIP funds are deposited in the AIP discretionary fund, which consists of set-asides that are established by statute and other distribution factors. AIP grants are usually limited to planning, design, and construction projects that improve aircraft operations, such as runways, taxiways, aprons, and land purchases, as well as to purchase security, safety, and emergency equipment. AIP grants are also available to plan for and implement programs that mitigate aircraft noise in the vicinity of airports. However, projects related to commercial revenue-generating portions of terminals, such as concessions, commercial maintenance hangars, fuel farms, parking garages, and off-airport road construction, are generally not eligible for these grants.

The Airport Authority expects to use a combination of AIP discretionary and entitlement grants to fund approximately $53.3 million of AIP-eligible projects, including Overlay Runway 4-22 Construction, Relocate ATCT, Construct Air Center Aprons, and various other airfield and runway projects.

The SMAA announced on March 19, 2009, that it was awarded a $4.75 million grant under the American Recovery and Reinvestment Act of 2009. The grant will be used to improve safety at the Airport by overlaying Runway 4-22. The grant was not included in this financial analysis.

7.3.2.3 FDOT Funds

Similar to the federal AIP, the FDOT Aviation Grant Program is funded from the State Transportation Trust Fund. The State Transportation Trust Fund consists, in part, of funds collected through the State's aviation fuel tax. The FDOT Aviation Office administers the Aviation Grant Program to help provide a safe, cost-effective, and efficient Statewide aviation system. The FDOT Aviation Grant Program supplements the AIP, providing up to 50 percent of the sponsor's matching share when federal funding is available and up to 80 percent of the overall project cost when federal funding is not available. FDOT grant funds help airport sponsors to construct T-hangars, construct and maintain runways and taxiways, eliminate airport hazards, protect the airspace, and construct terminals and other facilities.

All publicly owned Florida airports are eligible for State funding. In addition, privately owned airports that are classified as "reliever" airports are eligible for FAA funding. Florida law generally allows FDOT to fund any capital project on airport property and any service that leads to capital projects, such as planning and design services. The only off-airport projects eligible for FDOT funding are the purchase of lands for noise mitigation purposes, the purchase of avigation easements, and access projects for airports. Airport capital equipment is eligible, except equipment closely related to day-to-day operations (mowing machines, weed eaters, Airport vehicles, etc.). In general, operating expenses, such as for maintenance services, equipment, and supplies, are not eligible for FDOT grants. To be eligible for FDOT grants, each airport project must be consistent with the airport's role as defined in the Florida Aviation System Plan, and capital projects must be part of an FDOT-approved airport master plan or ALP. Additionally, for projects to be eligible for State and federal Funding, they must also be included in the Joint Automated Capital Improvement Plan (JACIP). Under this plan, the State accepts requests from airport sponsors for project funding along with each airport sponsor's priority for individual airport projects. Inclusion in the JACIP does not represent a commitment by FDOT or the FAA to fund a particular project or projects. The JACIP is intended to coordinate State and federal funding efforts and provide a realistic approach to funding based on the best and most current information available regarding projects at Florida grant-eligible airports.

FDOT grants are expected to fund approximately $22.6 million of the Master Plan Update projects.

7.3.2.4 Passenger Facility Charge Revenues

In accordance with the Aviation Safety and Capacity Expansion Act of 1990, as amended by the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR-21), the SMAA received approval from the FAA to impose a PFC of $3 per eligible enplaned passenger at the Airport on June 29, 1992. On February 22, 2002, an amendment was approved by the FAA that increased the PFC level from $3.00 to $4.50 per enplaned passenger.

CIP projects totaling $22.0 million are expected to be funded from PFC revenues on a pay-as-you-go basis. In addition, PFC revenues are pledged toward debt service payments on the Series 2003 Revenue Bonds and the Series 2006 Revenue Refunding Bonds in the amount of $13.9 million from FY 2009 through maturity in FY 2014. The calculation of the percentage of enplaned passengers paying a PFC is based on total enplaned passengers at the Airport, although certain classes of carriers

are exempt from collecting a PFC from their passengers. For the purposes of this financial analysis, it was assumed that the SMAA will continue to impose a $4.50 PFC at the Airport through the planning period and that 93 percent of total enplaned passengers using the Airport will pay a PFC. **Table VII-4** presents projections of PFC revenues.

7.3.2.5 Customer Facility Charge Revenues

The SMAA has researched implementing a CFC at the Airport. A CFC is a charge assessed to rental car customers and the resulting revenues are used for rental car projects. One of the projects in SMAA's CIP, construction of a parking garage, is partially driven by the need for rental car parking and other related rental car facilities, as well as the improved customer service a garage would provide to public patrons using the short-term and long-term parking lots adjacent to the terminal building. In this analysis, the garage was assumed to be funded with the proceeds of GARBs that would be partially repaid with CFC revenues. For purposes of this Master Plan Update, it was assumed that 75 percent of the project would be eligible for funding with CFC-backed GARBs. Although the SMAA has not yet initiated implementation of a CFC, preliminary analysis shown in **Table VII-5** indicates that sufficient capacity from CFCs would be available to fund this project when demand warrants.

7.3.2.6 General Airport Revenue Bonds

The SMAA anticipates funding the $29.2 million parking garage with GARB proceeds. As described in Section 7.3.2.5, the resulting debt service from the GARBs would be paid partially (75 percent) from CFCs. The remainder of the annual debt service would be paid through other general Airport revenues. This project is not anticipated to be necessary until FY 2012 and resulting annual debt service on the GARBs is anticipated to be approximately $2.3 million per year from FY 2013 through FY 2042 based on the following assumptions:

- 30-year term
- One year construction period and capitalized interest period
- 6.0 percent interest rate
- Establishment of a Debt Service Reserve Account equivalent to the maximum annual debt service

7.3.2.7 Airport Funds

The SMAA's Bond Resolution and Airline Agreement establish a Capital Improvements Account that can be used for Airport capital projects at SMAA's sole discretion. The Capital Improvements Account is funded by a designated proportion of nonairline revenues to be deposited in the account each year. In FY 2009, this proportion is budgeted to be 11.0 percent, and it is projected to increase 1.0 percent per year, up to 15.0 percent in FY 2013, as defined in the Airline Agreement. For purposes of this analysis, it was assumed to remain at 15.0 percent in the subsequent years included in this analysis. Any additional local funding, beyond that funded from the Capital Improvements Account, would require the issuance of GARBs. As shown in Table VII-3, approximately $20.4 million of Master Plan Update project costs are expected to be funded from Capital Improvements Account (i.e., Airport) funds.

Table VII-4

Projected Passenger Facility Charge Revenues (in thousands, except PFC rate)

		Projected										
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Enplaned Passengers		745.9	756.3	766.9	778.4	790.1	801.9	814.0	826.2	839.4	852.8	866.5
Calculation of PFC												
93% of Enplaned Passengers for PFC	[A]	693.7	703.4	713.2	723.9	734.8	745.8	757.0	768.4	780.6	793.1	805.8
Amount to be Charged (not in thousands)	[B]	$4.50	$4.50	$4.50	$4.50	$4.50	$4.50	$4.50	$4.50	$4.50	$4.50	$4.50
Annual PFC Potential	C = [A * B]	$3,121.5	$3,165.2	$3,209.5	$3,257.7	$3,306.6	$3,356.1	$3,406.5	$3,457.6	$3,512.9	$3,569.1	$3,626.2
Actual PFC Potential												
Less: Carrier Compensation	[D]	$ 76.3	$ 77.4	$ 78.5	$ 79.6	$ 80.8	$ 82.0	$ 83.3	$ 84.5	$ 85.9	$ 87.2	$ 88.6
Plus: Interest Earnings	[E]	53.3	54.0	54.8	55.6	56.5	57.3	58.2	59.0	60.0	60.9	61.9
Adjusted PFC Potential	F=[C-D+E]	$3,098.5	$3,141.9	$3,185.9	$3,233.7	$3,282.2	$3,331.4	$3,381.4	$3,432.1	$3,487.0	$3,542.8	$3,599.5
Application of PFC Revenues												
Beginning Balance		$4,842.6	$3,626.4	$4,454.9	$4,411.2	$4,411.2	$4,411.2	$4,411.2	$4,411.3	$4,411.3	$4,411.2	$4,411.2
Plus: PFC Revenue Collected		3,098.5	3,141.9	3,185.9	3,233.7	3,282.2	3,331.4	3,381.4	3,432.1	3,487.0	3,542.8	3,599.5
Less: Debt Service		2,314.7	2,313.4	2,310.8	2,311.0	2,309.0	2,313.6	--	--	--	--	--
Less: Pay As You Go Projects or Future Uses		2,000.0	--	918.8	922.6	973.2	1,017.8	3,381.3	3,432.1	3,487.1	3,542.8	2,324.3
Ending Balance		$3,626.4	$4,454.9	$4,411.2	$4,411.2	$4,411.2	$4,411.2	$4,411.3	$4,411.3	$4,411.2	$4,411.2	$5,686.4

Sources: Sarasota Manatee Airport Authority (current PFC balance and debt service) ; Ricondo & Associates, Inc. (projections), September 2008.
Prepared by: Ricondo & Associates, Inc., April 2009.

Table VII-5

CFC Revenue Bond Capacity (in thousands, except Average Transaction Days and CFC per transaction day)

		Projected		
Fiscal Year		2009	2009	2009
Deplaned Passengers [1/]	[A]	745.9	745.9	745.9
Rental Car Transactions/ Deplaned Passenger [2/]	[B]	18.7%	18.7%	18.7%
Rental Car Transactions	[C = A * B]	139.8	139.8	139.8
Rental Car Average Transaction Days [3/]	[D]	5.6	5.6	5.6
Rental Car Transaction Days	[E = C * D]	800.0	800.0	800.0
CFC per Transaction Day	[F]	$3.00	$4.00	$5.00
CFC Revenues Available for Debt Service	[G = E * F]	$2,400	$3,200	$4,000
Total Bond Proceeds [4/]		31,300	41,800	52,200
Less: Financing Costs [5/]		(2,200)	(2,900)	(3,600)
Net CFC-Backed Bond Proceeds Available for Project Costs		$29,100	$38,900	$48,600

Notes:

1/ Assumed to be the same as enplaned passengers.

2/ Based on rental car data from the SMAA between calendar years 2004 and 2006.

3/ Based on calendar year 2006 data. Data obtained from survey sent to rental car companies in November 2007.

4/ Amortization Factor (30 years @ 6.5%).

5/ Includes funds required to establish a debt service reserve and issuance costs partially offset by investment earnings assumed to be accumulated during construction.

Source: Rental Car Company Survey, November 2007, Ricondo & Associates, Inc.; Ricondo & Associates, Inc., March 2009
Prepared by: Ricondo & Associates, Inc., April 2009

7.4 Debt Service Requirements

Table VII-6 presents the annual estimated debt service requirements on outstanding Airport Bonds, as well as estimated debt service on projects expected to be funded with PFC- and CFC-backed bonds in FY 2009 through FY 2019. As presented in Table VII-6, the annual debt service requirement is approximately $4.7 million from FY 2009 until FY 2013, when projected annual debt service increases to $7.0 million. In FY 2015, the Series 2003 and Series 2006 Bonds are to be retired and projected annual debt service will decrease to $2.3 million.

As described previously, the parking garage is the only project included in this Master Plan Update that is planned to be partially funded with CFCs ($2.2 million), projected to begin in FY 2013. More detailed analysis should be conducted as the project start date nears to determine if GARBs are the optimal funding source for this project.

Table VII-6 (1 of 2)

Debt Service (in thousands)

					Projected						
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Debt Service by Bond Series											
Series 2003 Bonds	$ 716.6	$ 715.8	$ 712.8	$ 719.7	$ 711.5	$ 716.7	$ --	$ --	$ --	$ --	$ --
Series 2006 Bonds	4,074.6	4,063.0	4,050.8	4,033.8	4,027.0	4,020.0	--	--	--	--	--
Series 2012 Bonds [1/]	--	--	--	--	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7
Total Debt Service	$4,791.2	$4,778.8	$4,763.5	$4,753.5	$7,074.2	$7,072.4	$2,335.7	$2,335.7	$2,335.7	$2,335.7	$2,335.7
Debt Service by Cost Center											
Apron Area	$258.7	$258.1	$ 257.2	$ 256.7	$ 255.9	$ 255.8	$ --	$ --	$ --	$ --	$ --
Terminal Building	4,007.8	3,997.5	3,984.7	3,976.3	3,963.8	3,962.2	--	--	--	--	--
Terminal Area	524.6	523.3	521.6	520.5	518.9	518.7	--	--	--	--	--
Other Buildings and Areas	--	--	--	--	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7
Total Debt Service	$4,791.2	$4,778.8	$4,763.5	$4,753.5	$7,074.2	$7,072.4	$2,335.7	$2,335.7	$2,335.7	$2,335.7	$2,335.7
Coverage (25%) by Cost Center											
Apron Area	$64.7	$64.5	$ 64.3	$ 64.2	$ 64.0	$ 63.9	$ --	$ --	$ --	$ --	$ --
Terminal Building	1,002.0	999.4	996.2	994.1	990.9	990.6	--	--	--	--	--
Terminal Area	131.2	130.8	130.4	130.1	129.7	129.7	--	--	--	--	--
Other Buildings and Areas	--	--	--	--	583.9	583.9	583.9	583.9	583.9	583.9	583.9
Total	$1,197.8	$1,194.7	$1,190.9	$1,188.4	$1,768.6	$1,768.1	$ 583.9	$583.9	$ 583.9	$ 583.9	$ 583.9
Debt Service (125%) by Cost Center											
Apron Area	$323.4	$322.6	$ 321.5	$ 320.9	$ 319.8	$ 319.7	$ --	$ --	$ --	$ --	$ --
Terminal Building	5,009.8	4,996.8	4,980.9	4,970.4	4,954.7	4,952.8	--	--	--	--	--
Terminal Area	655.8	654.1	652.0	650.6	648.6	648.3	--	--	--	--	--
Other Buildings and Areas	--	--	--	--	2,919.7	2,919.7	2,919.7	2,919.7	2,919.7	2,919.7	2,919.7
Total	$5,989.0	$5,973.5	$5,954.4	$5,941.9	$8,842.8	$8,840.5	$2,919.7	$2,919.7	$2,919.7	$2,919.7	$2,919.7

Table VII-6 (2 of 2)

Debt Service (in thousands)

	Projected										
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Debt Service (PFC Eligible) by Cost Center											
Apron Area	$ 123.8	$ 123.8	$ 123.6	$ 123.6	$ 123.5	$ 123.8	$ --	$ --	$ --	$ --	$ --
Terminal Building	2,024.9	2,023.8	2,021.5	2,021.7	2,019.9	2,023.9	--	--	--	--	--
Terminal Area	166.0	165.9	165.7	165.7	165.6	165.9	--	--	--	--	--
Other Buildings and Areas	--	--	--	--	--	--	--	--	--	--	--
Total	$2,314.7	$2,313.4	$2,310.8	$2,311.0	$2,309.0	$2,313.6	$ --	$ --	$ --	$ --	$ --
Debt Service (CFC Eligible) by Cost Center [1/]											
Apron Area	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --
Terminal Building	--	--	--	--	--	--	--	--	--	--	--
Terminal Area	--	--	--	--	--	--	--	--	--	--	--
Other Buildings and Areas	--	--	--	--	2,189.7	2,189.7	2,189.7	2,189.7	2,189.7	2,189.7	2,189.7
Total	$ --	$ --	$ --	$ --	$2,189.7	$2,189.7	$2,189.7	$2,189.7	$2,189.7	$2,189.7	$2,189.7
Debt Service (Non PFC/CFC Eligible) by Cost Center											
Apron Area	$ 199.6	$ 198.8	$ 197.9	$ 197.2	$ 196.3	$ 196.0	$ --	$ --	$ --	$ --	$ --
Terminal Building	2,984.9	2,973.1	2,959.3	2,948.7	2,934.8	2,928.9	--	--	--	--	--
Terminal Area	489.8	488.2	486.3	484.9	483.0	482.5	--	--	--	--	--
Other Buildings and Areas	--	--	--	--	729.9	729.9	729.9	729.9	729.9	729.9	729.9
Total	$3,674.3	$3,660.1	$3,643.6	$3,630.8	$4,344.1	$4,337.2	$ 729.9	$ 729.9	$ 729.9	$ 729.9	$ 729.9

Note:

1/ Assuming that 75.0 percent of projected debt service will be CFC eligible.

Sources: Sarasota Manatee Airport Authority (Budget 2009 & debt service schedules); Ricondo & Associates, Inc. (projections) March 2009.
Prepared by: Ricondo & Associates, Inc., April 2009.

In addition to the debt capacity analysis for the CFC-backed bonds assumed to be used for the parking garage, a total debt capacity analysis was conducted in August 2008. Some key assumptions used for the analysis included the following:

- 30-year term
- 28-year amortization period at 6.25 percent
- Capitalized Interest for 2 years at 6.25 percent
- Bond Issuance fees of 2 percent
- Establishment of a Debt Service Reserve Account equivalent to maximum annual debt service

The analysis was conducted for FY 2011 and FY 2015 and the results indicated PFC- and Airport-revenue-backed debt capacity of $40.4 million and $73.3 million, respectively. Following the completion of this initial debt capacity analysis, several changes were adopted, including the derivation of alternate (lower) activity forecasts for purposes of financial planning in the Master Plan Update, and revision to the Airport CIP reflecting the addition of new projects recommended in the Master Plan Update and the use of funding targets to avoid overstating the amount of federal and State grants the SMAA may receive on an annual basis. Another change since the initial debt capacity analysis was conducted relates to the use of PFCs: PFC funding is now being allocated to pay as you go projects. Thus, a review of the debt capacity analysis in light of these changes indicates that additional debt can still be issued, but it would increase airline rentals and fees. This tradeoff needs to be assessed whenever additional debt is to be supported by the airline rate base.

7.5 Operation and Maintenance Expenses

O&M Expenses include utilities, personnel, administration, operations, supplies, and capital items. Projected O&M Expenses are based on an analysis of historical expenses, the anticipated effects of inflation, planned facility improvements and expansions, and forecast activity levels. **Table VII-7** presents projected O&M Expenses for FY 2009 through FY 2019.

As shown, O&M Expenses are projected to increase from $15.3 million in FY 2009 to $23.6 million in FY 2019, at a compounded annual growth rate of 4.5 percent. In Table VII-7, O&M Expenses are shown by expense type and by cost center allocation. The allocation of O&M Expenses to cost centers shown in Table VII-7 is based on the methodology specified in the Airline Agreement.

7.6 Airport Revenues (Nonairline and Airline)

Airport revenues are generated from nonairline sources, such as tenant (other than the airlines) leases, parking contractor agreements, rental car company agreements, and other miscellaneous agreements, and from airline sources in accordance with the Airline Agreement. Nonairline revenues are categorized by the functional areas in which they occur.

7.6.1 Nonairline Revenues

Nonairline revenues for FY 2009 through FY 2019 are presented in **Table VII-8.** As shown, total nonairline revenues are projected to increase from approximately $11.9 million in FY 2009 to approximately $16.1 million in FY 2019, at a compounded annual growth rate of 3.1 percent throughout the projection period. Each nonairline revenue cost category is discussed below.

Table VII-7

O&M Expenses (in thousands)

	Budget	Projected									Compounded Annual Growth Rate
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2009-FY 2019
Expenses by Category												
Utilities	$ 1,106.7	$ 1,125.0	$ 1,203.7	$ 1,288.0	$ 1,378.1	$ 1,474.6	$ 1,577.8	$ 1,688.3	$ 1,806.4	$ 1,932.9	$ 2,068.2	6.5%
Personnel	8,289.7	8,347.7	8,848.6	9,379.5	9,942.3	10,538.8	11,171.1	11,841.4	12,551.9	13,305.0	14,103.3	5.5%
Administration	2,782.0	2,722.2	2,803.8	2,887.9	2,974.6	3,063.8	3,155.7	3,250.4	3,347.9	3,448.4	3,551.8	2.5%
Operations	2,498.7	2,445.0	2,518.4	2,593.9	2,671.7	2,751.9	2,834.4	2,919.5	3,007.1	3,097.3	3,190.2	2.5%
Supplies	288.3	282.1	290.6	299.3	308.2	317.5	327.0	336.8	346.9	357.3	368.1	2.5%
Capital Items	286.5	280.3	288.8	297.4	306.3	315.5	325.0	334.7	344.8	355.1	365.8	2.5%
Total O&M Expenses	$15,251.9	$15,202.3	$15,953.8	$16,746.0	$17,581.3	$18,462.1	$19,391.1	$20,371.1	$21,405.0	$22,496.0	$23,647.3	4.5%
Annual Growth Rate		-0.3%	4.9%	5.0%	5.0%	5.0%	5.0%	5.1%	5.1%	5.1%	5.1%	
Expense Allocation before Adjustment												
Airfield Area	$ 1,977.4	$ 1,970.9	$ 2,068.3	$ 2,170.9	$ 2,279.2	$ 2,393.3	$ 2,513.7	$ 2,640.7	$ 2,774.6	$ 2,916.0	$ 3,065.1	4.5%
Apron Area	132.6	133.0	140.5	148.4	156.8	165.7	175.0	185.0	195.5	206.6	218.3	5.1%
Terminal Building	6,260.8	6,248.5	6,565.9	6,901.0	7,254.8	7,628.4	8,023.1	8,440.0	8,880.5	9,346.0	9,838.0	4.6%
Terminal Area	951.2	954.3	1,007.9	1,064.7	1,124.7	1,188.3	1,255.6	1,326.9	1,402.3	1,482.2	1,566.8	5.1%
Other Buildings and Areas	23.8	23.3	24.0	24.7	25.4	26.2	27.0	27.8	28.6	29.5	30.4	2.5%
Administration	5,906.1	5,872.3	6,147.2	6,436.3	6,740.4	7,060.2	7,396.7	7,750.8	8,123.5	8,515.7	8,928.7	4.2%
Total O&M Expenses	$15,251.9	$15,202.3	$15,953.8	$16,746.0	$17,581.3	$18,462.1	$19,391.1	$20,371.1	$21,405.0	$22,496.0	$23,647.3	4.5%
Expense Allocation after Adjustment												
Airfield Area	$ 3,230.2	$ 3,216.5	$ 3,372.2	$ 3,536.2	$ 3,708.9	$ 3,890.9	$ 4,082.7	$ 4,284.8	$ 4,497.8	$ 4,722.3	$ 4,959.1	4.4%
Apron Area	216.6	216.5	227.9	240.0	252.7	266.1	280.2	295.2	311.0	327.7	345.3	4.8%
Terminal Building	11,004.4	10,969.2	11,512.0	12,084.4	12,688.0	13,324.5	13,996.0	14,704.5	15,452.0	16,240.9	17,073.6	4.5%
Terminal Area	776.9	776.7	817.6	860.7	906.3	954.4	1,005.2	1,058.9	1,115.6	1,175.6	1,238.9	4.8%
Other Buildings and Areas	23.8	23.3	24.0	24.7	25.4	26.2	27.0	27.8	28.6	29.5	30.4	2.5%
Administration	--	--	--	--	--	--	--	--	--	--	--	--
Total O&M Expenses	$15,251.9	$15,202.3	$15,953.8	$16,746.0	$17,581.3	$18,462.1	$19,391.1	$20,371.1	$21,405.0	$22,496.0	$23,647.3	4.5%

Sources: Sarasota Manatee Airport Authority (Budget 2009); Ricondo & Associates, Inc., (projections), March 2009.
Prepared by: Ricondo & Associates, Inc., April 2009.

Table VII-8

Nonairline Revenues (in thousands)

	Budgeted	Projected										Compounded Annual Growth Rate
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2009- FY 2019
Air Cargo	$ 60.6	$ 59.3	$ 61.0	$ 62.9	$ 64.8	$ 66.7	$ 68.7	$ 70.8	$ 72.9	$ 75.1	$ 77.3	2.5%
Airfield Area	1,585.7	1,555.6	1,606.4	1,659.0	1,713.4	1,769.7	1,827.9	1,888.0	1,950.3	2,014.7	2,081.3	2.8%
Terminal Building	1,129.3	1,109.2	1,146.8	1,186.0	1,226.5	1,268.5	1,311.9	1,356.8	1,403.7	1,452.2	1,502.4	2.9%
Terminal Area	6,829.7	6,706.9	6,951.1	7,207.3	7,472.9	7,748.4	8,034.1	8,330.4	8,641.4	8,964.1	9,298.9	3.1%
Non-Aviation Area	1,164.3	1,139.3	1,173.5	1,208.7	1,244.9	1,282.3	1,320.7	1,360.4	1,401.2	1,443.2	1,486.5	2.5%
Investment Income	1,120.6	1,070.1	1,075.8	1,081.7	1,087.7	1,093.9	1,057.7	1,064.3	1,071.1	1,078.1	1,085.3	-0.3%
Other Income	27.0	27.8	28.6	29.5	30.4	31.3	32.2	33.2	34.2	35.2	36.3	3.0%
Future North Quadrant Land Development[1/]	--	--	--	--	--	240.0	247.2	254.6	262.3	270.1	556.5	--
Total Nonairline Revenues	$11,917.2	$11,668.2	$12,043.2	$12,435.0	$12,840.6	$13,500.8	$13,900.5	$14,358.5	$14,837.0	$15,332.7	$16,124.5	3.1%
Annual Growth Rate		-2.1%	3.2%	3.3%	3.3%	5.1%	3.0%	3.3%	3.3%	3.3%	5.2%	

Note:

1/ Projected values received from SMAA in April, 2009.

Sources: Sarasota Manatee Airport Authority (Budget 2009); Ricondo & Associates, Inc., (projections), March 2009.
Prepared by: Ricondo & Associates, Inc., April 2009.

7.6.1.1 Air Cargo

Air Cargo revenues are generated from rents and fees in the air cargo facility. These revenues are projected to increase from approximately $60,600 in FY 2009 to approximately $77,300 in FY 2019, at a compounded annual growth rate of 2.5 percent over this period. The projected increase in air cargo revenues is the result of projected growth in air cargo activity at SRQ and the effects of inflation during the projection period.

7.6.1.2 Airfield Area

The major sources of nonairline revenues in the Airfield Area are fuel flowage fees, T-hangar facilities, and FBO rentals. Total Airfield Area nonairline revenues are projected to increase from approximately $1.6 million in FY 2009 to approximately $2.1 million in FY 2019. This increase represents a compounded annual growth rate of 2.8 percent during this period, and is the result of projected growth in aircraft operations and the effects of inflation during the projection period.

7.6.1.3 Terminal Building

Nonairline revenues in the Terminal Building primarily consist of rentals and fees from rental car counter space, restaurant services, gift shop, advertising, and other nonairline terminal rents. These revenues are projected to increase from approximately $1.1 million in FY 2009 to approximately $1.5 million in FY 2019. This increase represents a compounded annual growth rate of 2.9 percent during this period, and is the result of projected growth in numbers of enplaned passengers and the effects of inflation during the projection period.

7.6.1.4 Terminal Area

The major sources of nonairline revenues in the Terminal Area are rental car tenants, parking, and rental car building and land rent. Total Terminal Area revenues are projected to increase from approximately $6.8 million in FY 2009 to approximately $9.3 million in FY 2019. This increase represents a compounded annual growth rate of 3.1 percent during this period, and is the result of projected growth in numbers of enplaned passengers and the effects of inflation during the projection period.

7.6.1.5 Non-aviation Income

Non-aviation income consists primarily of revenue from University Self Storage, nonaviation buildings, and land. This revenue is projected to increase from approximately $1.2 million in FY 2009 to approximately $1.5 million in FY 2019, representing a compounded annual growth rate of 2.5 percent over this period. The projected increase is the result of inflation during the projection period.

7.6.1.6 Investment Income

Investment income consists of interest earned on SMAA funds and is conservatively projected to remain flat at $1.1 million per year.

7.6.1.7 Other Non-aviation Income

Other non-aviation income consists of other miscellaneous income and is projected to increase from approximately $27,000 in FY 2009 to $36,300 in FY 2019 at a compounded annual growth rate of

3.0 percent during this period, which is the result of projected growth in numbers of enplaned passengers and inflation during the projection period.

7.6.1.8 Potential Revenue from Land Development in North Quadrant[5]

As the ALP shows (see Chapter VI), the north quadrant of the Airport encompasses approximately 60 acres of leasable land reserved for large commercial/industrial aviation-related development. The SMAA developed projections of revenues from this development, as well as timing for the project and resulting revenue. These projections were based on revenues that resulted from development in the east quadrant between FY 2000 and FY 2008.

The SMAA assumes that one of four 15-acre tracts in the north quadrant will be leased in each of FY 2014, FY 2019, FY 2024, and FY 2029. Using the east quadrant development as a model, SMAA projects annual revenues of $13,400 (in 2008 dollars) per acre, or $201,000 (in 2008 dollars) per 15-acre tract. After escalating this amount at 3.0 percent per year, additional annual revenues of $240,000 are projected starting in FY 2014 and additional annual revenues of $278,000 are projected starting in FY 2019.

7.6.2 Airline Revenues

The remaining revenues generated at the Airport include Terminal Building rentals, preferential apron fees, and landing fees payable by the airlines. The Terminal Building rentals and the apron fees are calculated using a compensatory formula while the landing fees are calculated under an Airport residual cost formula.

7.6.2.1 Terminal Building Rental Revenues

Terminal Building rental rates are adjusted annually. Each Fiscal Year, the SMAA calculates the Terminal Building Costs for the succeeding Fiscal Year by totaling the following amounts, as set forth in the Annual Budget:

- Total direct and indirect O&M expenses allocable to the Terminal Building;
- Annual Bond Debt Service (plus Coverage) allocable to the Terminal Building, as required by the Bond Resolution;
- The amount of any deposits to any funds and accounts required by the Bond Resolution and allocable to the Terminal Building;
- The annual amortization of the amount allocable to the Terminal Building of any expenditures made by the SMAA before October 1 of the adjustment year for capital improvements in or allocable to the Terminal Building;
- 50 percent of the direct and indirect costs allocable to the Terminal Area; the remaining 50 percent is to be recovered through Airport landing fees (described below).
- Any other Airport Expense allocable to the Terminal Building not included above.

The SMAA then subtracts from the Terminal Building Cost (described above) concession revenues from advertising, restaurants and gift shops, and other terminal building concessions as well as nonairline Terminal Building space rentals to yield the Terminal Building requirement.

[5] Projected amounts provided by the SMAA in April 2009.

An average Terminal Building rental rate is then calculated by dividing the Terminal Building requirement computed above by the total amount of space leased by all airlines to determine the total airline Terminal Building rental requirement. The SMAA, in consultation with the Signatory Airline, may determine a schedule of rental rates by class of space in the terminal building.

Table VII-9 presents the Terminal Building rental rate for FY 2009 through FY 2019. As shown, during the projection period, the Signatory Airline Terminal Building rental rate is projected to range from $57.90 per square foot in FY 2015 to $71.08 per square foot in FY 2019. It should be noted that, while planned terminal renovation projects may increase the airline rented square footage through the planning period, for the purposes of this financial analysis, airline rented space was held constant, except in FY 2013 when rented space is projected to decrease following the expiration of Continental's Airline Agreement. It was assumed that neither Continental nor any other airline will lease the space vacated by Continental in 2008 for the duration of the planning period.

7.6.2.2 Apron Area Revenues and Nonpreferential Gate Use Fees

Preferential Apron Area is the area preferentially assigned to an airline for the parking of its aircraft. Preferential Apron Area rentals are due monthly. The rentals are determined by multiplying the total linear footage of the airline's Preferential Apron Area by the annual preferential area rental rate divided by 12. The Apron Area Requirement and rate calculation are summarized below:

- Total direct and indirect O&M expenses allocable to the Apron Area;
- Annual bond debt service (plus coverage) allocable to the Apron Area, as required by the Bond Resolution;
- The amount of any deposits to any funds and accounts required by the Bond Resolution and allocable to the Apron Area;
- The annual amortization of the amount allocable to the Apron Area of any expenditures made by the SMAA before October 1 of the adjustment year for Capital Improvements in or allocable to the Apron Area; and
- Any other Airport Expense allocable to the Apron Area not included above.

The Preferential Apron Area rental rate is then calculated by dividing the Apron Area Requirement by the total linear feet of apron frontage measured 100 feet from the exterior walls of the concourse.

A Nonpreferential Gate Use Fee applies to airline use of any gate that is not assigned to the airline or is not the airline's Preferential Use Gate, and is to be calculated as described in Exhibit E of the Airline Agreement.

7.6.2.3 Landing Fee Revenues

To determine the landing fee rate, the SMAA calculates Airport Expense for the succeeding Fiscal Year by totaling the following amounts, as set forth in the Annual Budget:

- Total direct and indirect O&M expenses allocable to the Airfield Area;
- Annual bond debt service (plus coverage), as required by the Bond Resolution;
- The amount of any deposits to any funds and accounts required by the Bond Resolution;
- Amortization on any Capital Improvement financed by the Airport Authority; and
- Any other Airport Expense not included above.

Table VII-9 (1 of 2)

Rates

		Budget	Projected								
Fiscal Year		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Terminal Building Space Rentals												
Terminal Building Costs												
Operation and Maintenance Expenses (thousands)		$ 11,004.4	$ 10,969.2	$ 11,512.0	$ 12,084.4	$ 12,688.0	$ 13,324.5	$ 13,996.0	$ 14,704.5	$ 15,452.0	$ 16,240.9	$ 17,073.6
Annual Debt Service (including 25% coverage, thousands)		2,984.9	2,973.1	2,959.3	2,948.7	2,934.8	2,928.9	--	--	--	--	--
Amortization of Airport Authority-funded Capital Assets (thousands)		--	--	--	--	--	--	--	--	--	--	--
Total Terminal Building Costs (thousands)	[A]	$13,989.3	$ 13,942.3	$ 14,471.4	$ 15,033.1	$ 15,622.8	$ 16,253.4	$ 13,996.0	$ 14,704.5	$ 15,452.0	$ 16,240.9	$ 17,073.6
Other Terminal Building Revenues												
Rental Cost of Airport Authority Offices (thousands)		$ --	$--	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --
Other Terminal Building Revenue (thousands)		1,129.3	1,109.2	1,146.8	1,186.0	1,226.5	1,268.5	1,311.9	1,356.8	1,403.7	1,452.2	1,502.4
Total Other Terminal Building Revenues (thousands)	[B]	$ 1,129.3	$ 1,109.2	$ 1,146.8	$ 1,186.0	$ 1,226.5	$ 1,268.5	$ 1,311.9	$ 1,356.8	$ 1,403.7	$ 1,452.2	$ 1,502.4
Total Terminal Building Revenue Requirement (thousands)	[C = A - B]	$12,860.0	$ 12,833.1	$ 13,324.6	$ 13,847.1	$ 14,396.3	$ 14,985.0	$ 12,684.1	$ 13,347.7	$ 14,048.3	$ 14,788.7	$ 15,571.3
Total Rentable Space (sq ft)	[D]	219,066	219,066	219,066	219,066	219,066	219,066	219,066	219,066	219,066	219,066	219,066
Average Rental Rate per Square Foot	[E]	**$58.70**	**$ 58.58**	**$ 60.82**	**$ 63.21**	**$ 65.72**	**$ 68.40**	**$ 57.90**	**$ 60.93**	**$ 64.13**	**$ 67.51**	**$ 71.08**
Airline Leased Space	[F]	117,462	117,462	117,462	117,462	109,159	109,159	109,159	109,159	109,159	109,159	109,159
Airline Terminal Building Space Rentals (thousands)	[E * F]	$ 6,895.0	$ 6,880.9	$ 7,144.0	$ 7,424.8	$ 7,173.9	$ 7,466.5	$ 6,320.3	$ 6,651.1	$ 7,000.4	$ 7,369.3	$ 7,759.0
Preferential Apron Fees												
Apron Area Requirement												
Operation and Maintenance Expenses (thousands)		$ 216.6	$ 216.5	$ 227.9	$ 240.0	$ 252.7	$ 266.1	$ 280.2	$ 295.2	$ 311.0	$ 327.7	$ 345.3
Annual Debt Service (with 25% coverage) (thousands)		199.6	198.8	197.9	197.2	196.3	196.0	--	--	--	--	--
Amortization of Airport Authority-funded Capital Assets (thousands)		--	--	--	--	--	--	--	--	--	--	--
Total (thousands)	[A]	$416.2	$ 415.4	$ 425.8	$ 437.2	$ 449.0	$ 462.0	$ 280.2	$ 295.2	$ 311.0	$ 327.7	$ 345.3
Linear Feet of Apron Frontage	[B]	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830	1,830
Preferential Apron Fee per Linear foot	[C = A / B]	**$ 227.41**	**$ 226.97**	**$ 232.70**	**$ 238.90**	**$ 245.35**	**$ 252.48**	**$ 153.14**	**$ 161.31**	**$ 169.95**	**$ 179.07**	**$ 188.71**
Assigned Apron Frontage (linear feet)	[D]	915	915	915	915	767	767	767	767	767	767	767
Preferential Apron Fee Revenue	[C * D]	$ 208.1	$207.7	$ 212.9	$ 218.6	$ 188.1	$ 193.5	$ 117.4	$ 123.6	$ 130.3	$ 137.3	$ 144.6

Table VII-9 (2 of 2)

Rates

Fiscal Year		Budget FY 2009	Projected FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Landing Fee Calculation												
Airport Expense (thousands):												
Operation and Maintenance Expenses		$15,251.9	$15,202.3	$15,953.8	$16,746.0	$17,581.3	$18,462.1	$19,391.1	$20,371.1	$21,405.0	$22,496.0	$23,647.3
Annual Debt Service, Net of PFC & CFC (with coverage)		3,674.3	3,660.1	3,643.6	3,630.8	4,344.1	4,337.2	729.9	729.9	729.9	729.9	729.9
Amortization of Airport Authority-funded Capital Assets		322.7	322.7	322.7	322.7	322.7	322.7	322.7	322.7	322.7	322.7	322.7
	[A}	$19,248.9	$19,185.1	$19,920.1	$20,699.5	$22,248.1	$23,122.1	$20,443.8	$21,423.7	$22,457.6	$23,548.6	$24,700.0
Fund Deposits (thousands):												
Operation and Maintenance Reserve		$ 123.2	$ 118.8	$ 125.3	$ 132.0	$ 139.2	$ 146.8	$ 154.8	$ 163.3	$ 172.3	$ 181.8	$ 191.9
Renewal and Replacement Reserve		--	--	--	--	--	--	--	--	--	--	--
Capital Improvements Account [1/]		1,310.9	1,400.2	1,565.6	1,740.9	1,926.1	1,989.1	2,048.0	2,115.6	2,186.2	2,259.4	2,335.2
Airport Authority Sub-Account - Interest Earnings		545.0	545.0	545.0	545.0	545.0	545.0	545.0	545.0	545.0	545.0	545.0
	[B]	$ 1,979.1	$ 2,064.0	$ 2,235.9	$ 2,417.9	$ 2,610.3	$ 2,680.9	$ 2,747.8	$ 2,823.9	$ 2,903.5	$ 2,986.2	$ 3,072.1
Total Airport Expense	[C = A + B]	$21,227.9	$21,249.1	$22,155.9	$23,117.5	$24,858.4	$25,803.0	$23,191.6	$24,247.6	$25,361.2	$26,534.8	$27,772.0
Less: Revenue Requirement Offsets (thousands)												
Nonairline Revenues [2/]		$11,917.2	$11,668.2	$12,043.2	$12,435.0	$12,840.6	$13,260.8	$13,653.3	$14,103.9	$14,574.8	$15,062.6	$15,568.0
Future North Quadrant Land Development [3/]		--	--	--	--	--	$240.0	$247.2	$254.6	$262.3	$270.1	$556.5
Airline Terminal Building Rentals		6,895.0	6,880.9	7,144.0	7,424.8	7,173.9	7,466.5	6,320.3	6,651.1	7,000.4	7,369.3	7,759.0
Airline Preferential Apron Fees		208.1	207.7	212.9	218.6	188.1	193.5	117.4	123.6	130.3	137.3	144.6
Nonsignatory airline landing fees		20.6	28.5	36.8	45.7	96.7	55.9	58.3	66.4	75.0	84.3	85.6
Charter airline landing fees		14.8	20.5	26.5	32.8	69.5	40.2	41.9	47.7	53.9	60.6	61.5
Fee Waivers		--	--	--	--	--	--	--	--	--	--	--
Terminal Use Fees		357.9	395.4	400.9	407.0	413.1	419.3	425.5	431.9	438.8	445.9	453.0
Nonpreferential Gate Use Fee		--	--	--	--	--	--	--	--	--	--	--
Debt Service Coverage from Prepaid Airline Revenue Sub-Account		1,197.8	1,194.7	1,190.9	1,188.4	1,184.6	1,768.1	583.9	583.9	583.9	583.9	583.9
Debt Service Reserve Funds [4/]		--	--	--	--	--	687.0	--	--	--	--	--
Total Revenue Requirement Offsets	[D]	$20,611.4	$20,395.9	$21,055.3	$21,752.1	$21,966.6	$24,131.2	$21,447.9	$22,263.2	$23,119.3	$24,014.0	$25,212.2
Airport Requirement (thousands)	[E = C - D]	$ 616.5	$ 853.2	$ 1,100.7	$ 1,365.3	$ 2,891.8	$ 1,671.8	$ 1,743.7	$ 1,984.5	$ 2,241.9	$ 2,520.8	$ 2,559.8
Signatory Airline Gross Landed Weight (million lb. units)	[F]	696.8	770.0	780.7	792.4	804.3	816.4	828.6	841.1	854.5	868.2	882.1
Signatory Airline Landing Fee per 1,000 lbs gross landed weight	[E / F]	**$ 0.88**	**$1.11**	**$ 1.41**	**$ 1.72**	**$ 3.60**	**$ 2.05**	**$ 2.10**	**$ 2.36**	**$ 2.62**	**$ 2.90**	**$ 2.90**
Airline Rentals, Fees, and Charges												
Airline Revenues												
Landing Fees – Signatory (thousands)		$ 616.5	$ 853.2	$ 1,100.7	$ 1,365.3	$ 2,891.8	$ 1,671.8	$ 1,743.7	$ 1,984.5	$ 2,241.9	$ 2,520.8	$ 2,559.8
Landing Fees – Nonsignatory (thousands)		20.6	28.5	36.8	45.7	96.7	55.9	58.3	66.4	75.0	84.3	85.6
Landing Fees – Nonscheduled (thousands)		14.8	20.5	26.5	32.8	69.5	40.2	41.9	47.7	53.9	60.6	61.5
Preferential Apron Fees (thousands)		208.1	207.7	212.9	218.6	188.1	193.5	117.4	123.6	130.3	137.3	144.6
Terminal Use Fees (thousands)		357.9	395.4	400.9	407.0	413.1	419.3	425.5	431.9	438.8	445.9	453.0
Nonpreferential Gate Use Fees (thousands)		0	0	0	0	0	0	0	0	0	0	0
Airline Terminal Rents (thousands)		6,895.0	6,880.9	7,144.0	7,424.8	7,173.9	7,466.5	6,320.3	6,651.1	7,000.4	7,369.3	7,759.0
Total Airline Revenues (thousands)	[A]	$ 8,112.9	$ 8,386.3	$ 8,921.8	$ 9,494.1	$10,833.1	$ 9,847.1	$ 8,707.2	$ 9,305.2	$ 9,940.2	$10,618.2	$11,063.6
Enplaned Passengers (thousands)	[B]	684.5	756.3	766.9	778.4	790.1	801.9	814.0	826.2	839.4	852.8	866.5
Airline Cost per Enplaned Passenger	[A / B]	**$ 11.85**	**$ 11.09**	**$ 11.63**	**$ 12.20**	**$ 13.71**	**$ 12.28**	**$ 10.70**	**$ 11.26**	**$ 11.84**	**$ 12.45**	**$ 12.77**

Notes:

1/ Equivalent to 10 percent in FY 2008, to be increased one percentage point each year thereafter up to a maximum of 15 percent in FY 2013 and beyond.

2/ Does not include Future North Quadrant Land development.

3/ Projected amounts provided by the SMAA in April 2009.

4/ Amounts in the Debt Service Reserve Fund are available to pay final debt service on the Series 2003 & Series 2006 Bonds.

Sources: Sarasota Manatee Airport Authority (Rates and Charges for 2009); Ricondo & Associates, Inc., (projections), March 2009.
Prepared by: Ricondo & Associates, Inc., April, 2009.

The Airport Requirement for the succeeding Fiscal Year is calculated by subtracting from total Airport Expense (a) total Airport Revenue (including airline Terminal Building rentals and Preferential Apron Fees, but excluding Signatory Airline landing fees) and (b) the balance available in the Prepaid Airline Revenue Sub-Account, as set forth in the Annual Budget.

The Signatory Airline landing fee rate for the succeeding Fiscal Year is calculated by dividing the Airport Requirement by the Total Landed Weight of all Signatory Airlines at the Airport for the succeeding Fiscal Year as projected by the SMAA.

A regional/commuter airline that has a lease agreement with the SMAA, or has a code-sharing agreement with a Signatory Airline and is handled by such Signatory Airline at the Signatory Airline's gate(s), is considered a Signatory Airline for the purposes of establishing and charging landing fees. During the term of the lease agreement, the Signatory Airline landing fee rate shall be no less than $0.50 per 1,000 pound unit of landed weight.

Table VII-9 presents projected Signatory Airline landing fees for FY 2009 through FY 2019. As shown, the Signatory Airline landing fee rate is projected to range from $0.88 per 1,000 pounds of gross landed weight in FY 2009 to $3.60 per 1,000 pounds of gross landed weight in FY 2013. The increase in landing fee in FY 2013 primarily results from higher projected debt service; the landing fee is projected to subsequently decrease to $2.05 per 1,000 pounds of gross landed weight in FY 2014 and to increase to $2.90 per 1,000 pounds of gross landed weight in FY 2019, reflecting increasing O&M Expenses partially offset by increasing nonairline revenues.

7.7 Cost per Enplaned Passenger

Cost per enplaned passenger (CPE) reflects the average cost for an airline to operate at the Airport. Total airline revenues are divided by the number of enplaned passengers to yield the average CPE for the passenger airlines operating at the Airport. The number of enplaned passengers is forecast to increase at a compounded annual growth rate of 1.5 percent from FY 2009 through FY 2019. As presented in Table VII-9, the passenger airline CPE is projected to range from a low of $10.70 in FY 2015 to a high of $13.71 in FY 2013. It should be noted that the cost per enplaned passenger is derived from conservative estimates of O&M Expenses and Revenues. It is anticipated that the SMAA will continue to monitor increases in O&M Expenses and will maintain O&M Expenses at acceptable budgetary levels.

7.8 Cash Flow

Table VII-10 shows the funds remaining after O&M Expenses and debt service are deducted from total Airport Revenues. The funds remaining are available for the payment of debt service coverage and to fund capital projects. Table VII-10 also shows the calculation of debt service coverage. Funds remaining are projected to be adequate in each Fiscal Year of the planning period to fund the SMAA's portion of CIP projects.

7.9 Debt Service Coverage

Debt service coverage is calculated by subtracting O&M Expenses from total Revenues, including PFC revenues and the amount in the Coverage Account, for the Fiscal Year and then dividing the result by debt service for the Fiscal Year. Coverage must be at least 1.25 percent of debt service as required by the Bond Resolution. As presented in Table VII-10, debt service coverage for the Airport's outstanding debt is projected to be higher than the minimum 1.25 times required in every year of the planning period, indicating that the Airport enterprise is projected to have adequate resources to meet its debt service obligations throughout the projection period.

Table VII-10 [

Cash Flow and Coverage Calculation (thousands except coverage)

	Budget	Projected								
Fiscal Year	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Airline Revenues:											
Landing Fees - Signatory	$ 616.5	$ 853.2	$ 1,100.7	$ 1,365.3	$ 2,891.8	$ 1,671.8	$ 1,743.7	$ 1,984.5	$ 2,241.9	$ 2,520.8	$ 2,559.8
Landing Fees - Nonsignatory	20.6	28.5	36.8	45.7	96.7	55.9	58.3	66.4	75.0	84.3	85.6
Landing Fees - Nonscheduled	14.8	20.5	26.5	32.8	69.5	40.2	41.9	47.7	53.9	60.6	61.5
Preferential Apron Fees	208.1	207.7	212.9	218.6	188.1	193.5	117.4	123.6	130.3	137.3	144.6
Hold Room	2,302.9	2,298.2	2,386.1	2,479.9	2,578.3	2,683.5	2,271.5	2,390.4	2,515.9	2,648.6	2,788.6
Baggage Claim Area	1,565.8	1,562.6	1,622.3	1,686.1	1,753.0	1,824.5	1,544.4	1,625.2	1,710.6	1,800.8	1,896.0
Terminal Use Fees	357.9	395.4	400.9	407.0	413.1	419.3	425.5	431.9	438.8	445.9	453.0
Airline Terminal Rent	3,026.3	3,020.2	3,135.6	3,258.9	2,842.6	2,958.5	2,504.3	2,635.4	2,773.8	2,920.0	3,074.4
Total Airline Revenues	$8,112.9	$ 8,386.3	$ 8,921.8	$ 9,494.1	$10,833.1	$ 9,847.1	$ 8,707.2	$ 9,305.2	$ 9,940.2	$10,618.2	$11,063.6
PFC Revenue Available for Debt Service & Debt Service Coverage	2,314.7	2,313.4	2,310.8	2,311.0	2,309.0	2,313.6	--	--	--	--	--
CFC Revenue Available for Debt Service & Debt Service Coverage	--	--	--	2,189.7	2,737.2	2,189.7	2,189.7	2,189.7	2,189.7	2,189.7	2,189.7
Nonairline Revenues [1/]	11,917.2	11,668.2	12,043.2	12,435.0	12,840.6	13,260.8	13,653.3	14,103.9	14,574.8	15,062.6	15,568.0
Future North Quadrant Land Development [2/]	--	--	--	--	--	240.0	247.2	254.6	262.3	270.1	556.5
Total Revenues	$22,344.8	$22,367.8	$23,275.9	$26,429.9	$28,719.9	$27,851.2	$24,797.4	$25,853.5	$26,967.0	$28,140.6	$29,377.9
Less: O&M Expenses	15,251.9	15,202.3	15,953.8	16,746.0	17,581.3	18,462.1	19,391.1	20,371.1	21,405.0	22,496.0	23,647.3
Net Revenues	$7,092.9	$ 7,165.5	$ 7,322.1	$ 9,683.9	$11,138.6	$ 9,389.1	$ 5,406.3	$5,482.4	$ 5,562.0	$ 5,644.7	$ 5,730.5
Less: O&M Reserve	$ 123.2	$118.8	$ 125.3	$ 132.0	$ 139.2	$ 146.8	$ 154.8	$ 163.3	$ 172.3	$ 181.8	$ 191.9
Renewal & Replacement Reserve	--	--	--	--	--	--	--	--	--	--	--
Existing Debt Service	4,791.2	4,778.8	4,763.5	4,753.5	4,738.5	4,736.7	--	--	--	--	--
Future Debt Service	--	--	--	--	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7
Funds Remaining	$2,178.6	$ 2,267.9	$ 2,433.3	$ 4,798.4	$ 3,925.2	$ 2,169.9	$ 2,915.7	$ 2,983.3	$ 3,053.9	$ 3,127.1	$ 3,202.9
Debt Service Coverage Calculation:											
Revenues (including available PFC & CFC Revenues)	$22,344.8	$22,367.8	$23,275.9	$26,429.9	$28,719.9	$27,851.2	$24,797.4	$25,853.5	$26,967.0	$28,140.6	$29,377.9
Transfer (from Coverage Account)	1,197.8	1,194.7	1,190.9	1,188.4	1,184.6	1,768.1	583.9	583.9	583.9	583.9	583.9
Net Revenues	$23,542.6	$23,562.5	$24,466.8	$27,618.3	$29,904.6	$29,619.3	$25,381.3	$26,437.4	$27,550.9	$28,724.6	$29,961.8
Less O&M Expenses	15,251.9	15,202.3	15,953.8	16,746.0	17,581.3	18,462.1	19,391.1	20,371.1	21,405.0	22,496.0	23,647.3
Net Revenues Available for Coverage	$8,290.74	$ 8,360.23	$ 8,512.98	$10,872.26	$12,323.27	$11,157.21	$5,990.20	$6,066.29	$ 6,145.90	$ 6,228.59	$ 6,314.47
Debt Service	$4,791.2	$ 4,778.8	$ 4,763.5	$ 4,753.5	$7,074.2	$ 7,072.4	$ 2,335.7	$ 2,335.7	$ 2,335.7	$ 2,335.7	$ 2,335.7
Coverage	**1.73**	**1.75**	**1.79**	**2.29**	**1.74**	**1.58**	**2.56**	**2.60**	**2.63**	**2.67**	**2.70**

Note:
1/ Does not include Future North Quadrant Land development.
2/ Projected amounts provided by the SMAA, April 2009.

Sources: Sarasota Manatee Airport Authority (Rates and Charges for 2009); Ricondo & Associates, Inc., (projections), March 2009.
Prepared by: Ricondo & Associates, Inc., April 2009.

7.10 Flow of Funds

Table VII-11 shows the beginning and ending balances in the Airport Authority's funds and accounts. The table shows deposits made to and expenditures drawn from each fund and account throughout the projection period. As shown, the current funding and implementation strategy for the CIP is expected to result in a positive balance of unrestricted funds each year of the projection period.

7.11 Sensitivity Scenarios

As described previously, the projected financial results presented in the previous sections were based on activity forecasts developed in 2007 (approved by the FAA in June 2008) and revised in September 2008 (to account for actual passenger data in FY 2008). To reflect the significant decline in the U.S. economy and the resulting impact on the aviation industry since development of the Baseline Forecasts, the publication of the FAA TAF in December 2008, and the potential increase in the PFC level, sensitivity scenarios were developed.

In **Sensitivity Scenario 1**, the 2008 FAA TAF and the current maximum PFC level of $4.50 per enplaned passenger were assumed. The effect of the lower activity projections includes a decrease in certain volume-driven revenues, including PFCs and CFCs. As a result, certain capital projects may need to be deferred as a result of delayed demand or lower available funding for the projects. A revised CIP reflecting the deferral of some projects to later years was developed based on the lower activity projections, as presented in **Table VII-12. Table VII-13** presents a summary of the financial projections resulting from the lower activity projections.

In **Sensitivity Scenario 2**, the 2008 FAA TAF and the proposed increase in the PFC to $7.00 per enplaned passenger were assumed. This increase is currently being considered as part of the FAA AIP Reauthorization. Additional PFC revenues would decrease the need for other funding sources. An increased PFC of $7.00 levied on the lower passenger activity projections would yield total PFC revenues available for the CIP roughly equivalent to the PFC revenues generated at $4.50 per enplaned passenger at the higher passenger activity level. Thus, this scenario would yield the same financial results as the previously described Baseline Forecasts scenario.

The AIP discretionary grants and FDOT grants assumed for Scenarios 1 and 2 reflect a $2.0 million target annually, similar to the CIP presented in Tables VII-2 and VII-3.

7.12 Summary

Based on analyses of forecast activity at the Airport, in addition to projected revenues and expenses, and the Airport CIP for FY 2009 through FY 2019, it appears that the SMAA has adequate financial resources to accommodate future demand. The SMAA has access to various sources of funds through a mix of FAA funding, State funding, PFC and CFC revenues, Airport funds, and GARBs. The capital projects recommended in this Master Plan Update appear to be financially feasible and the SMAA can reasonably expect to implement these projects so long as the demand triggers associated with each project are adhered to and the cost-to-benefit tradeoffs are re-evaluated as the project is considered for implementation. The airline rates and overall airline CPE are estimated to remain reasonable over the projection period and projected Airport funds appear to be adequate to effectively operate the Airport. As required in the Bond Resolution, debt service coverage is projected to be significantly above the minimum 125 percent of debt service throughout the projection period.

Table VII-11

Flow of Funds (thousands)

	Budget	Projected								
	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Revenue Fund:											
Beginning Balance	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --
Deposit: Total Revenues [1/]	22,344.8	22,367.8	23,275.9	26,429.9	28,719.9	27,851.2	24,797.4	25,853.5	26,967.0	28,140.6	29,377.9
Transfer: O&M Expenses	(15,251.9)	(15,202.3)	(15,953.8)	(16,746.0)	(17,581.3)	(18,462.1)	(19,391.1)	(20,371.1)	(21,405.0)	(22,496.0)	(23,647.3)
Withdrawals O&M Reserve	(123.2)	(118.8)	(125.3)	(132.0)	(139.2)	(146.8)	(154.8)	(163.3)	(172.3)	(181.8)	(191.9)
Withdrawals: Bond Proceeds Account	(4,791.2)	(4,778.8)	(4,763.5)	(4,753.5)	(7,074.2)	(6,371.5)	(2,335.7)	(2,335.7)	(2,335.7)	(2,335.7)	(2,335.7)
Withdrawals: Renewal & Replacement Account	--	--	--	--	--	--	--	--	--	--	--
Withdrawals: Capital Improvements Account	(1,310.9)	(1,400.2)	(1,565.6)	(1,740.9)	(1,926.1)	(1,989.1)	(2,048.0)	(2,115.6)	(2,186.2)	(2,259.4)	(2,335.2)
Withdrawals: Par Airline (General Purpose) Account	--	--	--	--	(3.7)	--	--	--	--	--	--
Withdrawals: Airport Authority (General Purpose) Account	(867.7)	(867.7)	(867.7)	(3,057.5)	(1,995.3)	(881.7)	(867.7)	(867.7)	(867.7)	(867.7)	(867.7)
Ending Balance	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --	$ --
Operation & Maintenance Account (Includes O&M Reserve)											
Beginning Balance	$ 2,418.8	$ 2,414.9	$ 2,533.7	$ 2,659.0	$ 2,791.0	$ 2,930.2	$ 3,077.0	$ 3,231.9	$ 3,395.2	$ 3,567.5	$ 3,749.3
Deposit: Transfer from Revenue Fund	15,375.1	15,321.1	16,079.0	16,878.0	17,720.5	18,608.9	19,546.0	20,534.4	21,577.3	22,677.8	23,839.2
Expend: O&M Expenses	(15,251.9)	(15,202.3)	(15,953.8)	(16,746.0)	(17,581.3)	(18,462.1)	(19,391.1)	(20,371.1)	(21,405.0)	(22,496.0)	(23,647.3)
Ending Balance	$ 2,542.0	$ 2,533.7	$ 2,659.0	$ 2,791.0	$ 2,930.2	$ 3,077.0	$ 3,231.9	$ 3,395.2	$ 3,567.5	$ 3,749.3	$ 3,941.2
Bond Proceeds Account (Includes DSRF [2/])											
Beginning Balance	$634.6	$ 647.6	$ 660.5	$ 673.8	$3,023.0	$ 3,083.4	$ 2,444.1	$ 2,493.0	$ 2,542.9	$ 2,593.7	$ 2,645.6
Interest Earnings (2%)	12.7	13.0	13.2	13.5	60.5	61.7	48.9	49.9	50.9	51.9	52.9
Deposit: Transfer from Revenue Fund	4,791.2	4,778.8	4,763.5	4,753.5	7,074.2	6,371.5	2,335.7	2,335.7	2,335.7	2,335.7	2,335.7
Deposit: Bond Proceeds -Series 2012 DSRF [2/]	--	--	--	2,335.7	--	--	--	--	--	--	--
Expend: Revenue Bond Debt Service	(4,791.2)	(4,778.8)	(4,763.5)	(4,753.5)	(7,074.2)	(7,072.4)	(2,335.7)	(2,335.7)	(2,335.7)	(2,335.7)	(2,335.7)
Ending Balance	$ 647.3	$ 660.5	$ 673.8	$ 3,023.0	$ 3,083.4	$ 2,444.1	$ 2,493.0	$ 2,542.9	$ 2,593.7	$ 2,645.6	$ 2,698.5
Renewal & Replacement Account											
Beginning Balance	$2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0
Deposit: Transfer from Revenue Fund	--	--	--	--	--	--	--	--	--	--	--
Expend: Renewal & Replacement Expenditures	--	--	--	--	--	--	--	--	--	--	--
Ending Balance	$2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0	$ 2,000.0
Capital Improvements Account											
Beginning Balance	$7,171.0	$ 6,461.4	$ 6,705.3	$ 6,265.8	$ 6,166.3	$ 6,088.6	$ 6,076.2	$ 6,850.7	$ 6,641.7	$ 6,827.4	$ 7,086.3
Deposit: Transfer from Revenue Fund	1,310.9	1,400.2	1,565.6	1,740.9	1,926.1	1,989.1	2,048.0	2,115.6	2,186.2	2,259.4	2,335.2
Expend: Capital Projects	(1,689.5)	(1,156.2)	(2,005.1)	(1,840.4)	(2,003.8)	(2,001.5)	(1,273.5)	(2,324.6)	(2,000.6)	(2,000.5)	(2,001.1)
Ending Balance	$6,792.3	$ 6,705.3	$ 6,265.8	$ 6,166.3	$ 6,088.6	$ 6,076.2	$ 6,850.7	$ 6,641.7	$ 6,827.4	$ 7,086.3	$ 7,420.3
PAR Airline (General Purpose) Account											
Beginning Balance	$2,723.8	$ 2,723.8	$ 2,723.8	$ 2,723.8	$ 2,723.8	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6
Deposit: Transfer from Revenue Fund	--	--	--	--	3.7	--	--	--	--	--	--
Expend:	--	--	--	--	--	--	--	--	--	--	--
Ending Balance	$2,723.8	$ 2,723.8	$ 2,723.8	$ 2,723.8	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6	$ 2,727.6
Airport Authority (General Purpose) Account											
Beginning Balance	$10,298.2	$ 11,165.9	$ 12,033.6	$ 12,901.3	$ 15,958.8	$ 17,954.1	$ 18,835.8	$ 19,703.6	$ 20,571.3	$ 21,439.0	$ 22,306.7
Deposit: Transfer from Revenue Fund	867.7	867.7	867.7	3,057.5	1,995.3	881.7	867.7	867.7	867.7	867.7	867.7
Expend:	--	--	--	--	--	--	--	--	--	--	--
Ending Balance	$11,165.9	$ 12,033.6	$ 12,901.3	$ 15,958.8	$ 17,954.1	$ 18,835.8	$ 19,703.6	$ 20,571.3	$ 21,439.0	$ 22,306.7	$ 23,174.4

Note:

1/ Includes PFC and CFC revenues available for debt service and debt service coverage.

2/ Debt Service Reserve Fund

Sources: Ricondo & Associates, Inc., December 2008, based on SMAA FY 2008 financial statements and SMAA's FY 2009 Rates and Charges.
Prepared by: Ricondo & Associates, Inc., April 2009

Table VII-12

Capital Improvement Program - Funding Sources : Sensitivity Scenario 1 (FAA 2008 TAF and $4.50 PFC)

Project Description	Escalated Cost /1	PFC /2	AIP /3 Entitlement	AIP /3 Discretionary	FDOT /4	Capital Improvements Account	GARBs /5
Intermodal Transfer Station	$ 250.0	$ -	$ -	$ -	$ 187.5	$ 62.5	$ -
Master Plan Update	300.0	-	285.0	-	7.5	7.5	-
Maintenance Storage Building	400.0	-	-	-	200.0	200.0	-
Terminal EDS	400.0	-	-	-	400.0	-	-
DRI Negotiations	50.0	-	-	-	-	50.0	-
Taxiway G Construction	1,000.0	-	950.0	-	25.0	25.0	-
Rehab Airfield Lightning Construction - Phase 2	300.0	-	285.0	-	7.5	7.5	-
Design On-Airport Access Road	260.0	-	247.0	-	6.5	6.5	-
RPZ Acquisition (Fire Hall Relocation)*	2,000.0	2,000.0	-	-	-	-	-
Taxiway A Rehab - Phase 1 & 2	4,000.0	-	889.0	1,000.0	1,055.5	1,055.5	-
Terminal Roadways - Phase 1	600.0	-	600.0	-	-	-	-
Service Road Phase 2 & 3A/B	2,207.6	-	1,051.2	-	578.2	578.2	-
North Access Design	496.1	-	471.3	-	12.4	12.4	-
T-Hangar Construction, Phase 3	1,543.5	-	-	-	771.8	771.8	-
Improve Rental Car Road	1,102.5	-	1,047.4	-	27.6	27.6	-
EMAS Design	551.3	-	523.7	-	13.8	13.8	-
Construct Phase IV Taxilanes in T-Hangars	2,205.0	-	104.3	998.2	1,102.5	-	-
East Airfield Drainage Improvement Construction	1,102.5	-	1,047.4	-	27.6	27.6	-
Overlay Runway 4/22 Construction	5,788.1	-	3,433.0	1,898.9	228.1	228.1	-
Runway 4-22 RSA/EMAS Construction	9,533.1	-	3,434.5	-	3,049.3	3,049.3	-
Taxiway B Rehab	2,680.2	-	-	1,000.0	840.1	840.1	-
Parking Garage	29,172.2	-	-	-	-	-	29,172.2
Relocate ATCT, Design/Construction - Phase1	6,183.6	-	3,450.8	1,001.9	865.4	865.4	-
Air Center Utilities	2,552.6	-	-	-	1,276.3	1,276.3	-
Relocate ATCT, Design/Construction - Phase 2	5,694.3	-	3,467.1	1,005.1	611.1	611.1	-
Intermodal Roadway: Air, Cargo, Ground	5,602.3	-	-	-	2,801.2	2,801.2	-
Terminal Renovation - Phase 1A	1,095.0	1,095.0	-	-	-	-	-
Relocate ATCT, Design/Construction - Phase 3	5,495.9	-	3,483.3	1,006.1	503.2	503.2	-
Terminal Renovation - Phase 1B	2,563.5	2,563.5	-	-	-	-	-
Construct Air Center Aprons Phase 1	7,387.3	-	3,499.4	1,034.2	1,426.9	1,426.9	-
Construct Airservice Center Hangar Phase 1	2,068.4	-	-	-	1,034.2	1,034.2	-
Terminal Renovation - Phase 2A	2,615.6	2,615.6	-	-	-	-	-
Air Center Apron Phase 2	7,756.6	-	3,515.3	1,034.7	1,603.3	1,603.3	-
Intermodal Roadway: Air, Cargo, Ground	7,240.1	-	-	-	3,620.1	3,620.1	-
Terminal Renovation - Phase 2B	2,667.6	2,667.6	-	-	-	-	-
Curbside Design/Construction	2,280.5	-	2,166.5	-	-	114.0	-
Rehab ARFF - Design	2,506.4	-	1,365.7	1,001.8	69.5	69.5	-
Terminal Renovation - Phase 3	2,719.6	2,719.6	-	-	-	-	-
Rehab ARFF - Design/Construction	6,238.5	-	3,548.1	1,000.6	844.9	844.9	-
TOTAL FY2009 - FY2019	$138,610.5	$13,661.3	$38,865.0	$11,981.5	$23,197.0	$21,733.5	$29,172.2

Notes:

1/ Project costs were escalated 5.0 percent annually from FY 2008.

2/ Passenger Facility Charge revenues.

3/ Airport Improvement Program grants.

4/ Florida Department of Transportation grant.

5/ General Airport Revenue Bonds.

Sources: Sarasota Manatee Airport Authority (project cost and phasing), December 2008; Ricondo & Associates, Inc., January 2009.
Prepared by: Ricondo & Associates, Inc., April 2009.

Table VII-13

Comparison of Baseline Forecasts Scenario with Sensitivity Scenario 1 (FAA 2008 TAF and $4.50 PFC)

		Projected										
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Sensitivity Scenario 1 [1/]	[A]											
Enplaned Passengers (thousands)		540.81	542.00	554.52	567.04	579.56	592.08	604.60	617.11	629.63	642.15	654.67
Signatory Airline Landing Fee Rate per 1,000 Pounds of Gross Landed Weight		$1.12	$1.61	$2.01	$2.42	$4.95	$2.82	$2.87	$3.19	$3.53	$3.89	$3.87
Average Terminal Rental Rate per Square Foot		$58.70	$58.58	$60.82	$63.21	$65.72	$68.40	$57.90	$60.93	$64.13	$67.51	$71.08
Cost per Enplaned Passenger		$15.00	$15.47	$16.09	$16.74	$18.69	$16.63	$14.40	$15.08	$15.79	$16.54	$16.90
Debt Service Coverage		1.73	1.75	1.79	2.29	1.74	1.58	2.56	2.60	2.63	2.67	2.70
Airport Capital Improvements Account Ending Balance (thousands)		$6,792.3	$6,705.3	$6,132.7	$5,894.4	$5,678.7	$5,529.1	$5,800.4	$5,454.9	$5,504.2	$5,763.1	$6,098.0
Baseline Forecasts Scenario [2/]	[B]											
Enplaned Passengers (thousands)		745.89	756.33	766.92	778.44	790.10	801.95	813.98	826.19	839.40	852.84	866.48
Signatory Airline Landing Fee Rate per 1,000 Pounds of Gross Landed Weight		$0.88	$1.11	$1.41	$1.72	$3.60	$2.05	$2.10	$2.36	$2.62	$2.90	$2.90
Average Terminal Rental Rate per Square Foot		$58.70	$58.58	$60.82	$63.21	$65.72	$68.40	$57.90	$60.93	$64.13	$67.51	$71.08
Cost per Enplaned Passenger		$11.85	$11.09	$11.63	$12.20	$13.71	$12.28	$10.70	$11.26	$11.84	$12.45	$12.77
Debt Service Coverage		1.73	1.75	1.79	2.29	1.74	1.58	2.56	2.60	2.63	2.67	2.70
Airport Capital Improvements Account Ending Balance (thousands)		$6,792.3	$6,705.4	$6,265.9	$6,166.4	$6,088.7	$6,076.3	$6,850.8	$6,641.8	$6,827.4	$7,086.3	$7,420.4
Variance	[C=A-B]											
Enplaned Passengers (thousands)		(205.08)	(214.33)	(212.40)	(211.38)	(210.54)	(209.87)	(209.38)	(209.07)	(209.77)	(210.68)	(211.81)
Signatory Airline Landing Fee Rate per 1,000 Pounds of Gross Landed Weight		$0.24	$0.50	$0.60	$0.69	$1.35	$0.77	$0.77	$0.83	$0.91	$0.98	$0.97
Average Terminal Rental Rate per Square Foot		-	-	-	-	-	-	-	-	-	-	-
Cost per Enplaned Passenger		$3.15	$4.38	$4.46	$4.55	$4.98	$4.35	$3.70	$3.82	$3.95	$4.08	$4.13
Debt Service Coverage		-	-	-	-	-	-	-	-	-	-	-
Airport Capital Improvements Account Ending Balance (thousands)		$0.0	($0.0)	($133.2)	($272.0)	($410.0)	($547.2)	($1,050.4)	($1,186.9)	($1,323.2)	($1,323.2)	($1,322.4)

Notes:

1/ Based on the rate methodology described in the Airline Agreement, using the FAA 2008 TAF as the sensitivity projection.

2/ Baseline Forecasts scenario described earlier in this chapter.

Sources: Sarasota Manatee Airport Authority (Rates and Charges for 2009); Ricondo & Associates, Inc., (projected values), March 2009.
Prepared by: Ricondo & Associates, Inc., April 2009.

As implementation of the CIP progresses, Airport staff should continually assess the financial feasibility of each CIP project. Future considerations regarding the financial feasibility of the CIP include the following:

- **Enplaned passenger/traffic growth** – The financial analysis was conducted using the enplaned passenger forecast derived from the approved FAA forecast (Baseline Forecasts). This forecast was approved by the FAA on June 9, 2008. Actual year to year numbers of enplaned passengers will likely deviate from the forecast. Significant changes in passenger numbers may affect revenues and expenses, as well as PFC and CFC revenues, and AIP grants. The speed at which the economy recovers will affect the timing of growth in the aviation industry and may affect the timing of the Airport CIP.
- **Availability of AIP funds** – In determining the funding strategy proposed for the CIP, it was assumed that the FAA will continue to authorize and appropriate AIP funds for eligible projects on a similar level as experienced in recent years. Because the level of authorized and appropriated AIP funds varies year to year, alternative funding sources may need to be identified if grants cannot be obtained for certain eligible projects.
- **Availability of FDOT funds** – In determining the funding strategy proposed for the CIP, it was assumed that the FDOT Aviation Office will continue to authorize and appropriate FDOT funds for eligible projects on a similar level as experienced in recent years. Because the level of authorized and appropriated FDOT funds varies year to year, alternative funding sources may need to be identified if grants cannot be obtained for certain eligible projects.
- **Potential increase in maximum PFC level** – Partially in response to airport industry organizations' requests that federal regulations be changed to increase the maximum PFC level from its current $4.50 per eligible enplaned passenger, the FAA proposed that the maximum PFC level be increased to $7.00. If federal PFC regulations are changed and the maximum PFC level is increased, the SMAA may choose to apply to the FAA for authorization to collect the higher PFC.
- **Airline approval of capital projects** – Under the current Airline Agreement, the Signatory Airlines have the right to approve or disapprove capital projects. Future Signatory Airline approval may be affected by the state of the airline industry.

Appendix A Mapping of Environmental Constraints

Source: FNAI, 2007
Prepared by: The LPA Group Incorporated

Exhibit A-1

0 4000 ft.

north

Known Protected Species Occurences

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit A-1 FNAI.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:51am

Source: FFWCC, 1999
Prepared by: The LPA Group Incorporated

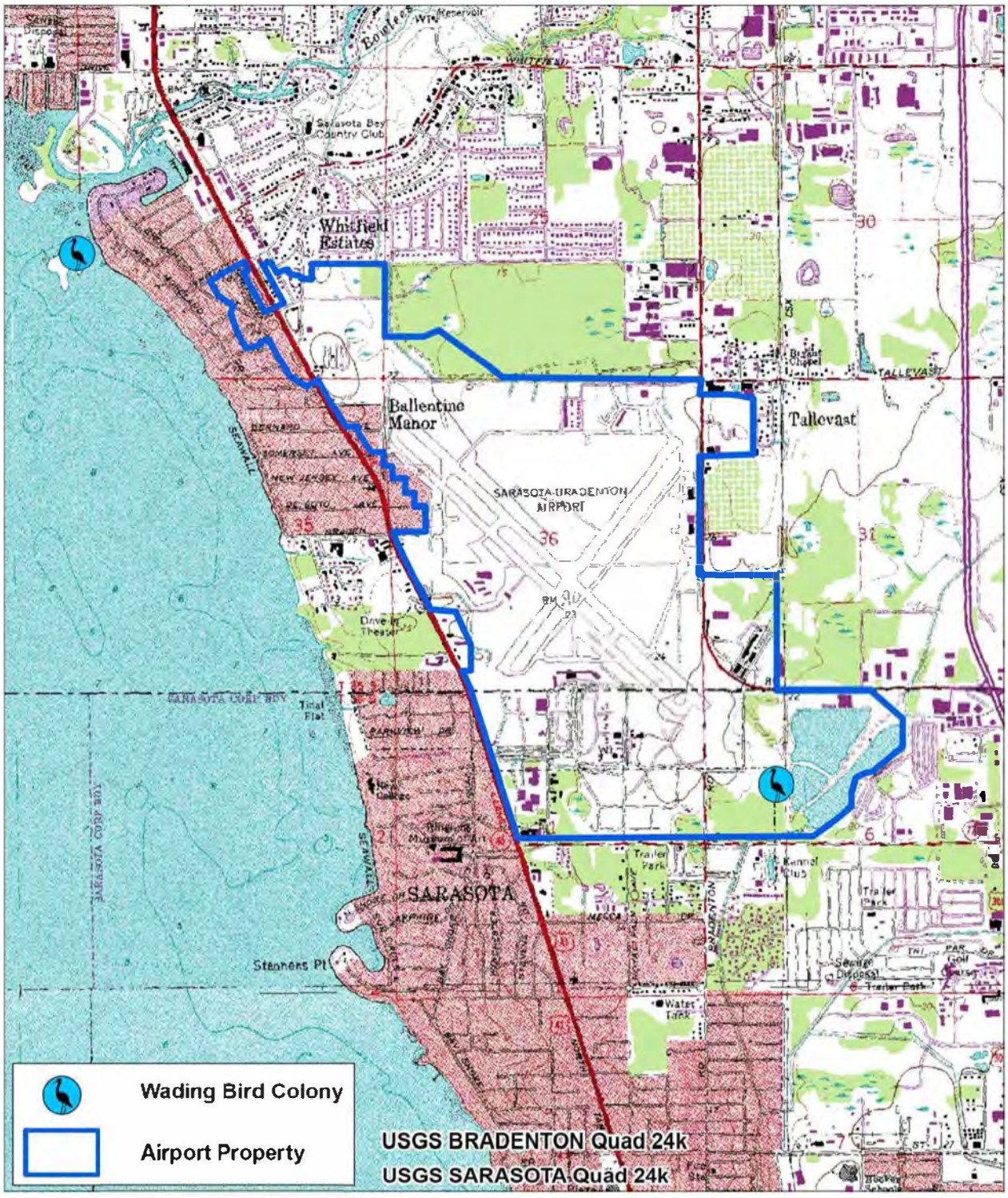
Exhibit A-2

0 2 miles

north

Wood Stork Colony Locations Map

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit A-2 wood stork.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:50am



Source: FFWCC, 1999
Prepared by: The LPA Group Incorporated

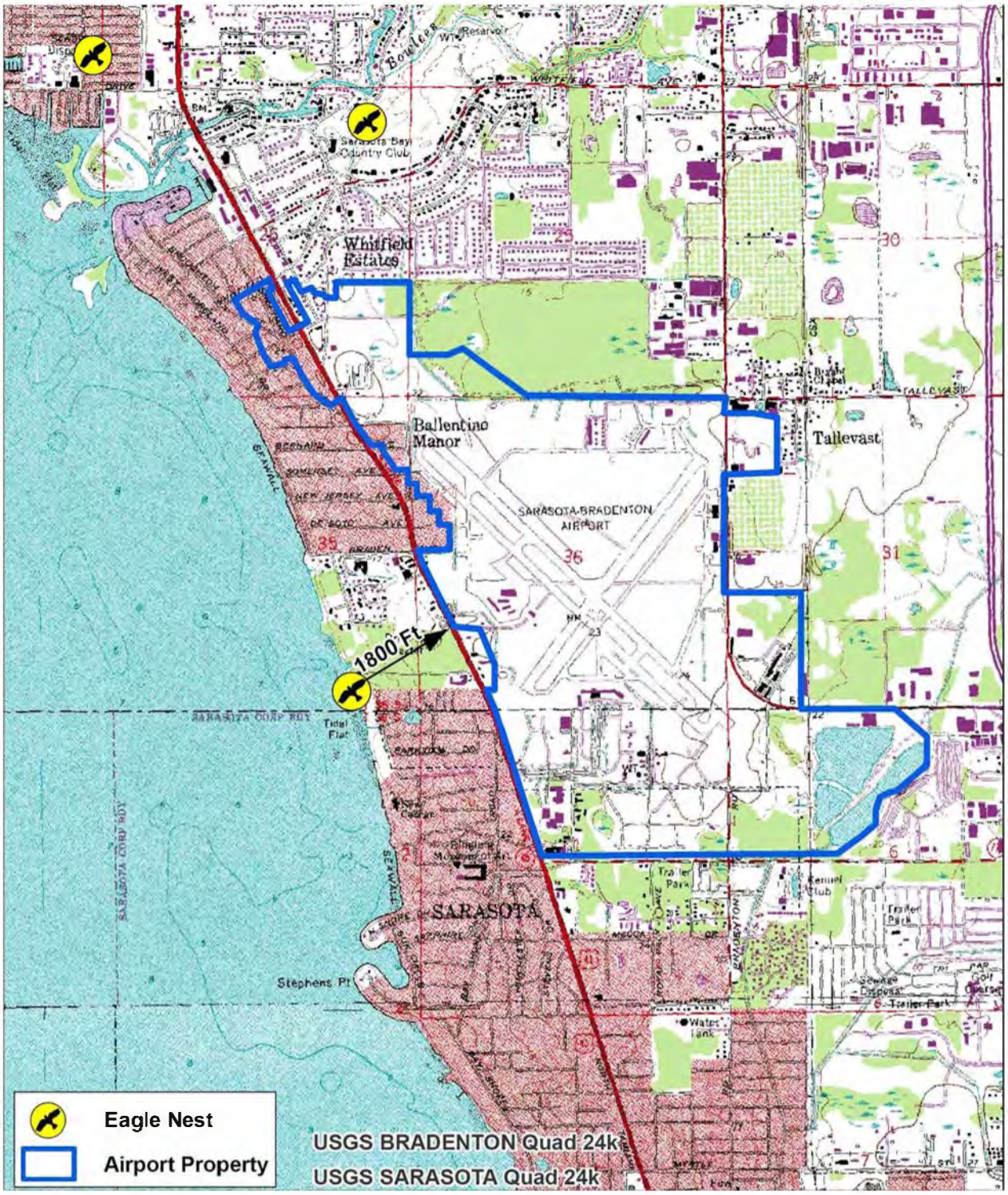
Exhibit A-3

0 .5 miles

north

Wading Bird Colony Locations Map

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit A-3 wading bird.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:49am



Source: FFWCC, 2003
Prepared by: The LPA Group Incorporated

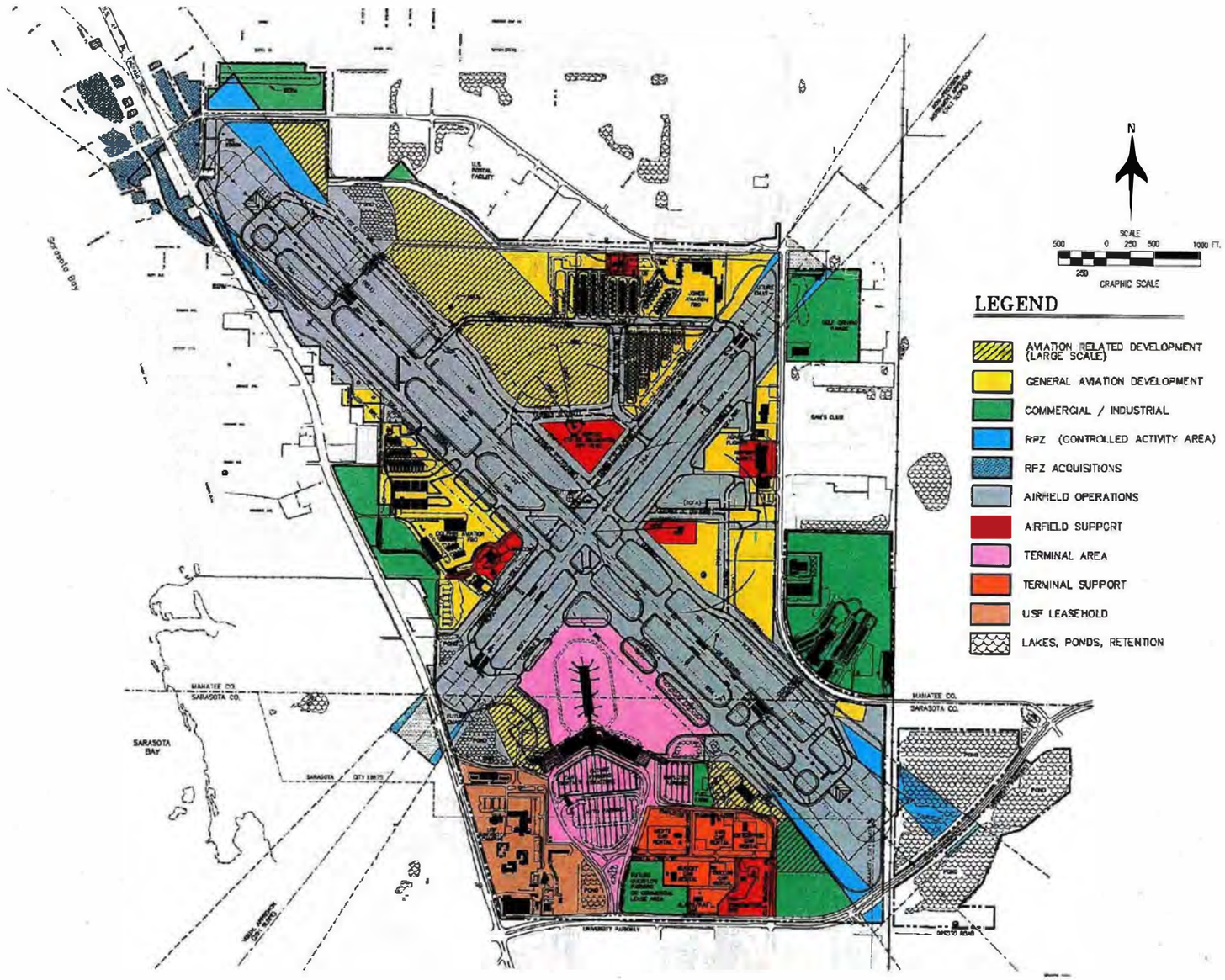
Exhibit A-4

0 .5 miles

north

Eagle Nest Locations Map

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit A-4 eagle.dwg_Layout: 8.5x11 portrait_Apr 24, 2009, 10:48am



Source: Sarasota Manatee Airport Authority - December, 2003
Prepared by: The LPA Group Incorporated

Exhibit A-5

0 60 ft.
north

P:\Sarasota\Master Plan\Task 1 - Inventory\Inventory Exhibits from LPA\exhibit A-5 landuse.dwg_Layout: Layout1_Apr 24, 2009, 10:41am

Existing and Future Land Use Plan

Appendix B Airlines' Questionaire

(Developed by URS as part of the Ticket Wing and Baggage Make Up Renovation Design Services for SRQ. The purpose of this questionnaire was to gather information and input from the airlines to assist the Airport in renovating the terminal ticketing area)

Send Copy To ORA. How much of THIS might they have?

DRAFT

Airline Information Questionnaire

Sarasota – Bradenton International Airport

Date: _____

Airline: _____ Contact Person: _____

Address: _____ Title: _____

_____ Phone: _____

_____ Fax: _____

Introduction:

This document is a planning tool for **Terminal Facility Design** provided as part of the **Ticket Wing and Bag Make-up Renovation** Design Services for the Sarasota – Bradenton International Airport. The information you provide will be used to help plan the renovation.

As a matter of information, the planned renovation will include construction of a consolidated Break Room Facility to serve all the airlines and their agents who use the ticket area. The idea is to avoid duplicating spaces for the benefit of all parties. The attached drawing shows one alternative for a potential distribution of ticket counter, ATO, and Break Room spaces. The public area of the ticket lobby will be expanded by moving the ticket counters northward, toward the bag makeup area. The HVAC system serving the ticket wing will also be replaced at this time.

This questionnaire asks for estimates of facility requirements in the ticket area.

Please complete this questionnaire and return by FAX or Email to _____:

FAX: _____

Email: _____

Thank you for your participation and help in completing this task.

Part 1: Ticket Counter Issues

1. What is the average transaction time per passenger at the ticket counter?_____

2. On average, how many bags per passenger are checked?_____

3. What is the average passenger waiting time in the check-in queue?_____

4. How many full service ticket positions are required?_____

5. How many curbside ticket positions do you have or require?_____

6. How many e-ticket kiosk/check-in counter modules do you have or require?___

7. Do you want remote e-ticket/check-in modules, i.e., not in the ticket counter line but say across the ticket lobby opposite the ticket line?_____

8. Do you want remote e-ticket/check-in modules elsewhere in the terminal? If so, where?_____

9. Do you wish to have check-in positions with bag scales now or in the future?____

10. Can you provide a copy of a drawing of your current airline standard ticket counter inserts and e-ticket kiosk/check-in modules?_____

11. If a drawing of the current ticket counter inserts is not available, what is the preferred length of your standard two-agent check-in counter and e-ticket module/kiosk dimensions?_____

12. Please describe any special features for efficiency at the ticket agent position.___

Airline Ticket Office Issues

1. How many square feet of ATO space do you require?_____
2. Do you need access to plumbing services?_____
3. Is any connection between the ATO and the ticket counter line required other than a personnel access door?_____
4. Are any special provisions for mechanical, electrical or communications required beyond a normal installation?_____
5. Are there ways that we could lay out the **ticket area / ATO's** to improve operational efficiency for your employees?_____

Part 2: Estimate of Facility Requirements

	2008	2009	2015
1. Passenger Data			
Enplaned passengers, peak hour of peak month			
Deplaned passengers, peak hour of peak month			
Peak hour time of day			
Enplaned passengers during peak month			
Enplaned passengers annual total			
2. Terminal Building			
Ticket Counter Length (lineal feet)			
Number of Ticketing Positions			
Number of Curbside Ticketing Positions			
Airline Offices (square feet)			
Station Manager Office			
Radio / Communications Room			
Locker Area			
Other			
Other ATO space (square feet)			
Bag Make-up Area (square feet)			
Skycap and Storage Area (square feet)			

Part 3: Airline Tenant Survey for Common Use Systems (CUS) Requirements

The intent of this portion of the form is to collect information on operational requirements for each airline's use of the proposed new Common Use System (CUS) at Sarasota-Bradenton International Airport.

Section A : General Common Use System Comments

1. Does your airline use an existing CUS system? If so, at which airports?

2. Name of Airline IT/CUS Contact, E-mail address and/or telephone number:

3. General Comments:

Section B : Airline Ticketing Area Requirements for CUS

1. Please indicate the equipment you currently use or intend to use for the following functions and in the following spaces.

Item/Space	Use/will Use	Manufacturer/Model
CUS Equipment	_____	_____
Airline Workstation	_____	_____
Airline Ticket and Boarding		
Pass Printers (ATB2)	_____	_____
Baggage Tag Printers (BTP) (Maybe combined with ATB2 product)	_____	_____
Consumable Stock	_____	_____
ATO Back Office	_____	_____
Generic E-Ticketing	_____	_____
Generic Baggage Check-in/Sky Cap	_____	_____
Visual Displays (Back wall/overhead/ directional)	_____	_____

2. Airline Requirements for Ticketing Area CUS:_____

_____

_____

Please provide any additional comments that you may have regarding airport facilities and services at the airport.

_____

_____

_____

_____

Thank you again for your help in compiling this information.

Appendix C Rental Car Information Survey

RICONDO & ASSOCIATES

SARASOTA BRADENTON INTERNATIONAL AIRPORT
RENTAL CAR INFORMATION SURVEY

Name of Agency: _____
Contact Person: _____
Mailing Address: _____

_____

_____

Telephone: _____
Fax: _____
E-Mail Address: _____

TRANSACTION DATA

Annual Activity

	Transactions	Transaction Days	Gross Revenue
2002			
2003			
2004			
2005			
2006			
2007 (year to date)			

Monthly Activity 2006

	Transactions	Transaction Days	Gross Revenue
Jan			
Feb			
Mar			
Apr			
May			
June			
July			
Aug			
Sept			
Oct			
Nov			
Dec			

Monthly Activity 2007 (year to date)

	Transactions	Transaction Days	Gross Revenue
Jan			
Feb			
Mar			
Apr			
May			
June			
July			
Aug			
Sept			
Oct			
Nov			
Dec			

RICONDO & ASSOCIATES

TRANSACTION DATA (cont'd.)

Peak Month / Typical Week

Peak month of activity _____

Please provide the number of rentals and returns during a typical week in the peak month.

	No. of Rentals	No. of Returns
Sunday		
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		

Peak Day Transactions

Please provide the number of rentals and returns during a peak day in the peak month.

	No. of Rentals	No. of Returns
Midnight to 6:00 AM		
6:00 AM		
7:00 AM		
8:00 AM		
9:00 AM		
10:00 AM		
11:00 AM		
12:00 AM		
1:00 PM		
2:00 PM		
3:00 PM		
4:00 PM		
5:00 PM		
6:00 PM		
7:00 PM		
8:00 PM		
9:00 PM		
10:00 to Midnight		

Average Length of Rental (number of days) | |

RICONDO & ASSOCIATES

EXISTING RENTAL CAR FACILITIES

Rental Car Counters

No. of Workstations	
Width of Workstation	

Ready / Return Facilities

No. of Spaces	
No. of Square Feet	

Vehicle Storage Area

No. of Spaces	
No. of Square Feet	

Service Area

No. of Maintenance Bays	
No. of Fueling Positions	
No. of Car Washes	

Existing Fleet Size

Average	
Peak	

Other Parking Spaces

Employees	
Visitor Parking	

Other Areas, Please Describe

No. of Square Feet	
Function	

In addition, please provide site plan / diagram describing your existing operation including layout of the service sites, ready return area, customer counters and/or any other drawing(s) you feel describes your existing operation.

Additional Comments

Original completed questionnaires should be returned no later than December 16, 2007 to the following : address:

Ricondo & Associates, Inc.
6205 Blue Lagoon Drive, Suite 280
Miami, FL 33136
Attn: Ura Quoniou

In addition, please email an electronic copy of the completed questionnaire to:

u_quoniou@ricondo.com
and,
j_strawn@ricondo.com

RICONDO®
& ASSOCIATES

CHICAGO

20 North Clark Street
Suite 1500
Chicago, IL 60602
312.606.0611

www.ricondo.com