2 INVENTORY

2.1 INTRODUCTION

The development of a Master Plan Update for Southwest Florida International Airport (RSW) necessitates the collection and evaluation of information relating to the Airport and the surrounding areas. The information evaluated in this report includes an inventory of the facilities, structures and services provided by the Airport. Historical background of Lee County aviation and development over the years will provide an insight into the Airport and its setting. Information obtained through on-site investigations and interviews with officials at the airport will allow an accurate and thorough inventory for the successful implementation of the new Airport Master Plan. Information is broken down into a number of major categories:

- Airport Setting
- Climate
- Airside Facilities
- Airspace Configuration / Approach Procedures
- Air Traffic Control Tower
- Passenger Terminal Area
- Landside Facilities
- Utilities
- Airport Imaginary Surfaces
- Airport Environment
- Airport Access

2.2 AIRPORT SETTING

Southwest Florida International Airport (RSW) is located in the southwestern portion of the State of Florida approximately ten miles southeast of downtown Fort Myers. The Airport's reference elevation according to the FDOT Florida Airport Directory is 31 feet above mean sea level (MSL.). The Airport's Reference Point (ARP) coordinates are located latitude 26°32'10.2"N and longitude 081°45'18.6"W and the magnetic variation at the Airport is two (2) degrees west according to Year 2000 measurements. **Exhibit 2-1**, a general location map of the Airport, depicts the relationship of RSW to other major cities in the State.

Every year, the United States Department of Transportation publishes the National Plan of Integrated Airport Systems (NPIAS). The NPIAS is submitted to Congress in accordance with Section 47103 of Title 49 of United States Code and is utilized to define those airports which warrant Federal investment. The 1998-2002 NPIAS identifies 3,344 airports, including RSW, that are significant to national air transportation and estimates that $35.1 billion in infrastructure development will be needed over the five-year planning period to meet the needs of all segments of civil aviation. It is important to note that the introduction of the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR 21) will dramatically increase Federal

Exhibit 2-1

Exhibit 2-1
Location Map

investment in the nation's aviation system to more than $10 billion spread over the next three years. The local impact of this legislation will hopefully improve the potential for Federal financial support for RSW in the short-term planning period.

In the NPIAS, the role of each airport is identified as one of five basic service levels: Commercial Service – Primary; Commercial Service – Non Primary; Commercial Service – Reliever Airport (included with Commercial Service – Non Primary in statistical summaries); Reliever Airport; and, General Aviation Airport. These levels describe the type of service that the Airport is expected to provide the community at the end of the NPIAS five-year planning period. Southwest Florida International Airport is designated as a public use commercial service-primary airport according to the most recent NPIAS. Commercial service airports are defined as public airports receiving scheduled passenger service and having 2,500 or more enplaned passengers per year. There are 540 commercial service airports throughout the United States. Of these, 413 have more than 10,000 enplanements and are classified as primary airports. Primary airports such as RSW receive an annual apportionment of at least $500,000 in Airport Improvement Program (AIP) funds, with the total amount determined by the number of enplaned passengers.

2.2.1 Locale

All of the property comprising Southwest Florida International Airport is located within an unincorporated portion of Lee County. Currently, the Airport occupies approximately 6,498 acres of land and is located off Daniels Parkway, approximately three miles east of Interstate 75. The airport is owned by Lee County and operated by the Lee County Port Authority. Lee County includes some of the fastest growing cities in the region, including Fort Myers, Cape Coral, Bonita Springs, and Fort Myers Beach. Additionally, the popular tourist destinations of Sanibel and Captiva Island are located within the county (see **Exhibit 2-2**). Lee County is bordered by Charlotte County to the north, Hendry County to the east, Collier County to the south and the Gulf of Mexico to the west. In 1999, the Airport handled 4,897,253 total passengers. This number accounted for more than 75 percent of passenger enplanements in southwest Florida. In addition, Airport Council International-North America's (ACI-NA) preliminary rankings for the year 2000 indicated that Southwest Florida International Airport ranked 7th in the State of Florida and 63rd in the nation in terms of primary airport passenger enplanement activity.

2.2.2 Airport History

Air carrier service has been available in some form in the Fort Myers/Southwest Florida area since 1937. After World War II, the U.S. Army Air Corps' Fort Myers training base (named Page Field in commemoration of World War I hero Captain Channing Page) was decommissioned and turned over to Lee County. For more than 25 years, Page Field offered local area residents and visitors a full-service air transportation facility. However, it was also recognized during this time that Page Field possessed insufficient space to meet potential expansion requirements for commercial jet aircraft operations and significantly increased passenger volumes.

The 1972 State of Florida Aviation System Plan documented Page Field's limitations and recommended that a new air carrier facility be constructed. This Plan also stated that the new airport should be adequate to serve the Southwest Florida region encompassing Lee, Collier,

Exhibit 2-2

Exhibit 2-2
Vicinity Map

Commercial Service Airport

General Aviation Airport

Charlotte, Glades and Hendry Countries. Shortly thereafter, a five-county advisory group was established to select a suitable site for the new aviation facility.

Planning for the new Southwest Florida Regional Airport (as Southwest Florida International Airport was originally named) began in 1973 when a five-county advisory group was established to select a suitable site for the new aviation facility. Lee County received a $195,000 Federal grant on November 4, 1974 to fund the site location process. The location of RSW is the result of a study that eventually considered 27 different sites, ultimately selecting the Daniels Road site on June 13, 1975.

Following a bid for routes stemming from new interest in serving the region, the Civil Aeronautics Board awarded Eastern Airlines routes into Fort Myers' Page Field Airport in 1975. Eastern Airlines was therefore included with National Airlines, who already served Page Field, in the decision-making process for the new airport. In addition to participating airlines, it was necessary to have the approval of the Federal Aviation Administration (FAA) and the Environmental Protection Agency (EPA). A study of the soil at the selected site by consulting engineers indicated it was satisfactory for construction. Safety, and road accessibility issues were approved and support from the environmental community was established. These factors, along with the combined support of the Lee County Board of Commissioners, the FAA, and the airlines, created the impetus to continue the project.

Throughout the late 1970's, while the Board of Commissioners and the FAA were moving ahead with airport development efforts, other positive factors were falling into place. Locally, essential airport access roads, including Daniels Road and I-75, were under construction. On the national scene, deregulation of the airline industry by the Civil Aeronatics Board (CAB) allowed airlines to select their own routes. Lee County, with its aggressive development and unlimited growth potential, was recognized as a profitable and desirable destination. Therefore, soon after deregulation, Delta, United and Northwest Orient joined Eastern and National Airlines in serving the Lee County area via Page Field.

Construction of the new regional airport was a complicated project. Funding was of prime concern and continual change to the development program resulted in an escalation of the initial project cost estimate of $31 million. By 1982, airport construction costs were estimated to be in excess of $93 million, or triple the original figure. This increase was primarily the result of three major changes during the development process. The terminal and the number of gates were expanded from the original design, aircraft-parking apron specifications were changed from asphalt to concrete by airline mandate, and finally, a Florida Power and Light right-of-way had to be relocated.

Despite numerous "start-up" obstacles, the Southwest Florida Regional Airport become a "trend setter" in the U.S. aviation industry and marketplace. Not only was it the nation's first full-scale new airport since the opening of the Dallas/Ft. Worth Regional Airport in 1974, it was the first airport to be built in compliance with National Environmental Protection Association (NEPA) regulations. These new regulations, an uncharted area for airport development, were also responsible for significant unanticipated research and construction costs.

The Airport was officially opened on Saturday, May 14, 1983 with the arrival of Delta Air Line's Flight 1677, the "Owly Bird, at 1:40 a.m. In 1984, Southwest Florida Regional Airport began serving Canadian charter flights. By 1992, the number of Canadian passengers served had increased from 8,000 to 88,000. In the early years, the Canadian visitors were pre-cleared

through Toronto. As the numbers foreign visitors soared, RSW officials petitioned the U. S. government to construct a Federal Inspections Station (FIS) at RSW to provide Customs, Immigration, Public Health and Agriculture services. Agreement was reached that the FIS would be a user-fee facility supported by the Airport Operations Revenue and on July 14, 1987, the RSW Federal Inspections Station opened.

Until 1983, Page Field had served as the only commercial service airport for Southwest Florida. With the opening of Southwest Florida International Airport, all air carrier and commercial operations were shifted to the new airport, relegating Page Field to a "reliever airport" role. A reliever airport is a FAA designated general aviation airport in the vicinity of a capacity impacted commercial service airport. The purpose of a reliever airport is to specifically serve general aviation traffic, thereby lessening the demand on the region's commercial service airports.

By 1990, the phenomenal growth of airport operations, the need for additional airport development, and the complexity of airport administrative requirements were overwhelming the Lee County Commission. To deal with this situation, on January 3, 1990, the Lee County Commission adopted Lee County Ordinance 90-02, which created the Lee County Port Authority, the Board of Port Commissioners of the Lee County Port Authority, and the Airports Special Management Committee. The Board of Port Commissioners is made up of County Commissioners but meets separately to deal with airport and aviation issues. The role of the Airports Special Advisory Committee is to provide general advisory responsibility to the Board of Port Commissioners. Each Commissioner appoints one member to the Airport Special Management Committee; plus one representative each is selected from Collier and Charlotte Counties. The Lee County Port Authority, the Board of Port Commissioners of the Lee County Port Authority, and the Airport Special Management Committee is the political structure that oversees the airport today.

While the Airport had served international passengers primarily traveling on Canadian charter flights since 1984, in the late 1980's the Lee County Port Authority initiated an expansion program to facilitate the airport accommodating direct-nonstop transcontinental as well as transatlantic international flights.

By 1992, two projects, crucial to the international air carrier traffic initiative, were underway. In the summer of 1992, work began to extend Runway 6-24 from 8,400 feet to 12,000 feet. This additional runway length allowed aircraft operating from RSW to increase fuel loads thereby increasing flight ranges to transcontinental and international-transatlantic distances. The $20 million runway project was completed in the fall of 1994. In November of 1992, construction began on a 48,211-square foot terminal addition that would house expanded FIS facilities and additional passenger ticketing and waiting areas. The new FIS facility design increased passenger-processing rates from 150 to 400 per hour and allowed the dual use of existing gates for both international and domestic flight operations. This expansion project reworked portions of the existing terminal while adding approximately 260 feet to its west end. This $6 million project also included terminal access roadway work. The expanded and improved facilities, together with the runway extension, proved to be the catalyst for RSW's entry, initially by charter operations, into new international passenger and cargo markets.

In 1993, the new name of Southwest Florida International Airport was selected to reflect RSW's emerging international status. This new name became official on May 14, 1993, which coincidently marked the ten-year anniversary of the official opening of the airport and the early morning arrival of Delta's "Owly Bird".

In the late 1990's, sustained passenger and aircraft operations increases at RSW necessitated further terminal expansion. This construction was completed in 1998 and included a Concourse B eastern wing that provided three new aircraft gates, passenger boarding bridges and additional office space. In that same year, construction of a commuter aircraft parking ramp was completed on the western side of Concourse B to facilitate commuter aircraft operations.

2.3 CLIMATE

Weather conditions play an important role in the planning and development of an airport. Temperature, along with aircraft other operating parameters, is an important factor in determining runway length. Wind direction and speed are essential in determining optimum runway orientation. The percent of time visible water vapor impairs or restricts visibility at an airport is a major factor in determining the need for aircraft navigational aids and runway lighting systems. Therefore, it is imperative that the meteorological conditions at RSW be analyzed.

Southwest Florida International Airport (RSW) is situated in the subtropical Southwest Florida climate. The airport is located approximately 13 miles from the Gulf of Mexico and the region is often influenced by the maritime air masses that move inland. Typical summertime weather conditions often include daily afternoon thunderstorms caused by rapid convective heating exacerbated by high temperatures and excessive humidity.

2.3.1 Temperature

Temperature is one of the most important factors affecting aircraft performance. High temperature conditions dramatically decrease aircraft performance. The direct impact of the high temperature is a marked increased in runway take-off distance requirements. Temperatures at RSW generally range from the low 60s (F) in winter to the low 90s (F) in summer. Winters are typically mild, with many bright, warm days and moderately cool nights. Occasional cold snaps bring temperatures in the 30s (F) but only rarely do temperatures drop into the 20s (F). However, occasional light frost and minor freeze conditions do occur in the rural-inland areas a few times each year. In the summer, temperatures have reached 100 degrees (F), but these occurrences are very rare. According to metrological data compiled by National Oceanic and Atmospheric Administration (NOAA) August is the hottest month of the year at RSW with an average maximum temperature of 91 degrees (F) and a mean temperature of 83 degrees (F). During the winter, RSW experiences the coldest average temperatures during the month of January, which has an average low temperature of 53 degrees Fahrenheit and a mean temperature of 64 degrees (F).

2.3.2 Precipitation

Precipitation in Southwest Florida occurs during all seasons, although rainfall is more abundant during the hotter summer months. The months of June, July, and August account for 11.30 inches of rainfall a month at RSW. The driest months are January, April, November, and December, accounting for an average of only 1.83 inches of rainfall during each of these months. The average annual rainfall for the RSW station is 57.86 inches.

The amount of precipitation experienced by any airport impacts aircraft operations because of reduced braking action on wet runways and limited ceiling and visibility during storm conditions. About two-thirds of the annual precipitation in Fort Myers occurs during June through September. There are frequent long periods during the winter when only very light, or no rain falls. Most of the summer rain occurs during late afternoon or early evening thunderstorms, which also bring welcome cooling. Although these showers seldom last long, they can yield large amounts of rain. During the late summer and early fall, tropical depressions, tropical storms or hurricanes may pass near the Fort Myers area. These storm tracks can result in heavy downpours that reach torrential proportions. Totals of 6 to over 10 inches of rainfall within a 24-hour period have been recorded. Thunderstorms can occur at any time of the year, but are typically infrequent from November to April. However, between June through September, thunderstorms occur every 2 out of 3 days on average. Heavy fog is rather infrequent and mainly confined to winter mornings. There is seldom a day without sunshine at some point during the day.

2.3.3 Wind

Wind is a primary factor that influences the runway orientation and can subsequently affect the capacity of the airside facilities. Under ideal conditions, aircraft takeoffs and landings are determined by the prevailing winds and conducted in the runway that provides the most head wind to operating aircraft. The FAA recommends that the runway orientation provided achieve 95 percent wind coverage. Wind coverage for a given runway is that percent of time when the crosswind component is below an acceptable velocity. The crosswind component can be defined as the maximum permissible wind velocity occurring at right angles (or 90 degrees left or right) of the heading of a landing or departing aircraft. This is calculated by using a 10.5 knot (12 mph) maximum cross wind component for the smaller, lighter aircraft, while a 13 knot (15 mph) and 16 knot (18 mph) maximum cross wind component is utilized for the larger and jet aircraft. When carrying out an evaluation of this type, the FAA suggests that historical weather information for a period of at least five years and ideally ten be used for determining runway wind coverage.

Wind data from the RSW weather station was not available for a ten-year data period. Due to the airport's close proximity to FMY, the weather station at Page Field was used to analyze historic wind data. Using this data provided by the National Climatic Data Center, wind conditions were analyzed for a 10-year period from 1991-2000. The existing wind distribution and associated velocities under all weather conditions are provided in **Table 2-1** and are assumed to remain consistent through the Year 2020, the period of this study. The primary runway orientation, Runway 6-24, provides 98.06 percent coverage at 13-knots under all weather conditions and 97.21 percent under Instrument Flight Rules (IFR) conditions. For comparison purposes, more typical of air carrier airports, a crosswind component of 16-knots was analyzed and resulted in coverage of 99.65 percent for all weather conditions and 99.29 percent for IFR conditions.

Exhibit 2-3 graphically displays the All Weather Wind Rose for the 13-knot crosswind component based upon ideal Visual Flight Rule (VFR) conditions. Each segment of the wind rose represents a wind direction and speed grouping based on a percentage of the total recorded hourly observations for the airport. **Exhibit 2-4** graphically displays the IFR Weather Wind Rose for the 13-knot crosswind component based upon instrument meteorological weather conditions.

TABLE 2-1
WIND VELOCITIES AND DIRECTION AS A % OF TIME

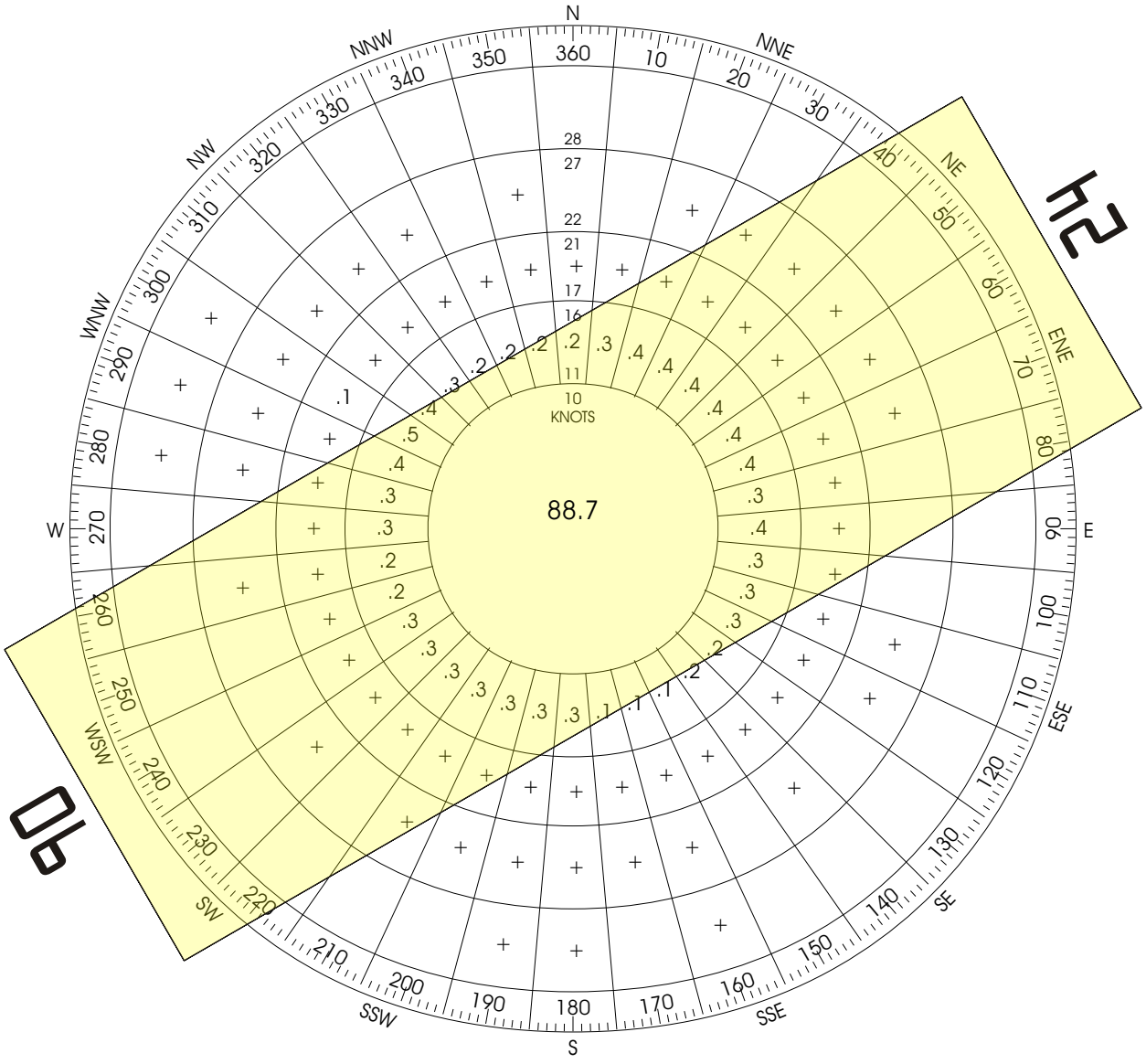
Average Wind Velocity (Kts.)										
Wind Direction	**0-3**	**4-6**	**7-10**	**11-16**	**17-21**	**22-27**	**28-33**	**38-40**	**41 Over**	**Total**
1	29	521	617	203	10	0	0	0	1	1381
2	43	744	939	296	10	1	0	0	0	2033
3	79	998	921	312	14	8	0	0	0	2332
4	99	1647	1171	320	16	1	0	0	0	3254
5	133	1977	1215	306	25	1	0	0	0	3657
6	179	2264	1319	319	17	1	0	0	0	4099
7	184	2332	1260	354	19	1	0	0	1	4151
8	200	1825	1023	265	13	0	0	0	0	3326
9	239	1779	964	283	4	0	0	0	1	3270
10	197	1494	844	245	6	0	0	0	2	2788
11	240	1414	866	212	7	1	0	0	0	2740
12	195	1404	820	206	10	2	0	0	1	2638
13	189	1057	649	168	3	0	0	0	0	2066
14	166	937	503	137	3	1	0	0	4	1751
15	109	776	390	102	3	0	0	0	2	1382
16	93	544	400	82	1	1	1	0	0	1122
17	83	548	301	104	3	1	0	0	1	1041
18	80	542	443	207	15	1	1	0	1	1290
19	44	407	393	204	7	1	1	0	0	1057
20	50	315	428	252	17	2	0	0	1	1065
21	31	315	529	267	15	1	0	0	0	1158
22	47	331	601	261	16	0	0	0	0	1256
23	45	366	626	274	7	1	0	0	1	1320
24	54	425	670	238	3	0	0	0	0	1390
25	26	362	552	144	8	0	0	0	0	1092
26	25	309	533	171	5	1	0	0	0	1044
27	21	317	611	250	8	0	0	0	0	1207
28	23	307	579	278	14	4	3	0	1	1209
29	28	395	639	352	35	12	1	1	1	1464
30	30	532	752	394	46	10	2	0	0	1766
31	29	588	722	358	35	5	0	0	0	1737
32	34	480	547	242	24	4	0	0	0	1331
33	31	501	511	163	16	3	0	0	0	1225
34	36	482	468	152	7	0	0	0	0	1145
35	34	442	489	160	7	1	0	0	0	1133
36	45	540	633	184	7	0	0	0	0	1409
Variable	12437	0	0	0	0	0	0	0	0	12437
TOTAL	15607	30217	24928	8465	456	65	9	1	18	79766

Reference: National Climatic Date Center (NCDC), 2001

Review of **Table 2-1** and the wind rose graphics determines that the existing Runway 6-24 at Southwest Florida International Airport provides wind coverage that exceeds the FAA's 95 percent guidance. Based on this, wind conditions at RSW do not appear to warrant a crosswind runway and any proposed runways should be oriented parallel to Runway 6-24.

Exhibit 2-3

Exhibit 2-3
All Weather Windrose

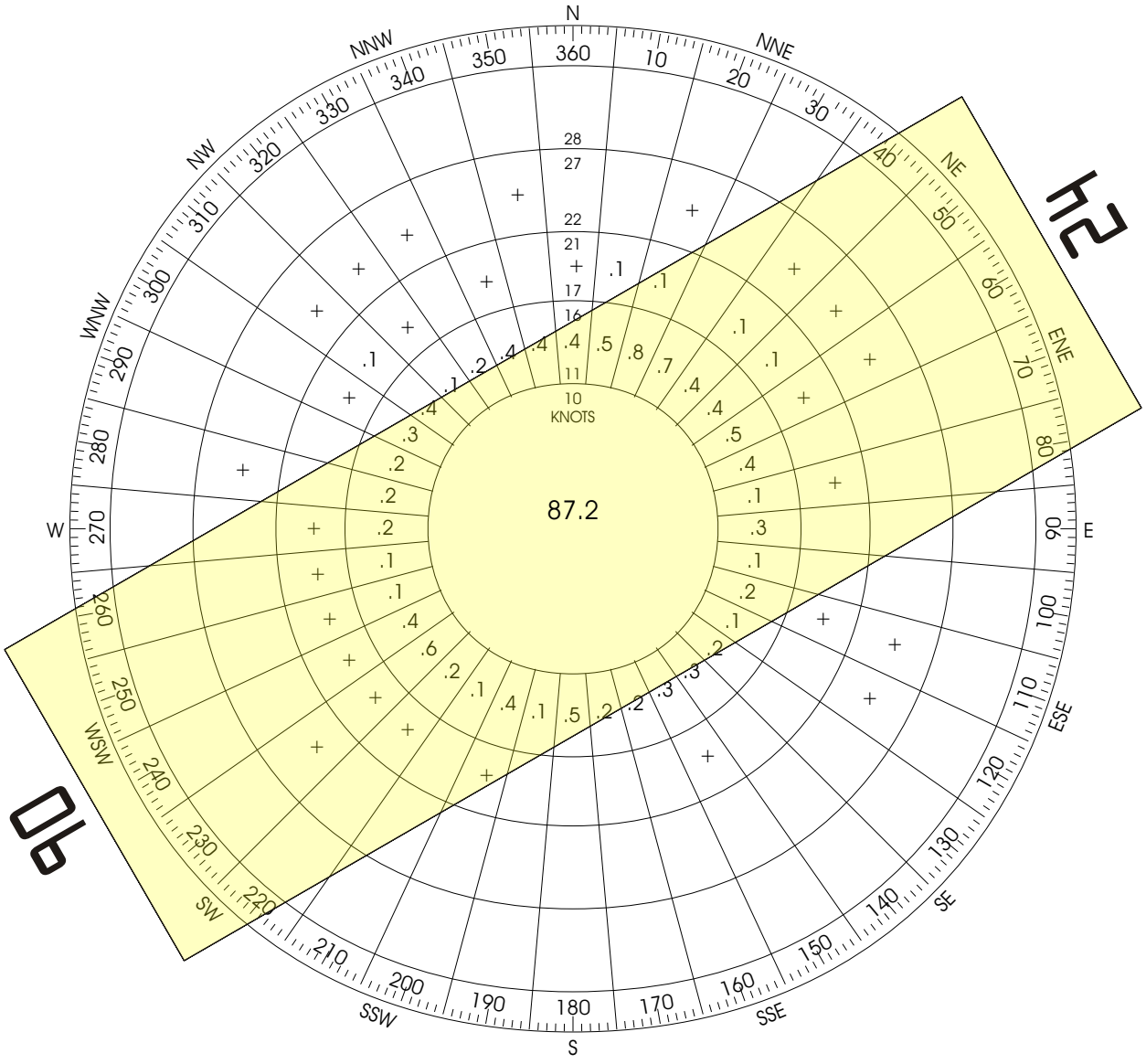


RUNWAY	COVERAGE
06/24	98.06 %
CROSSWIND COMPONENT:	13 KTS.
OBSERVATION PERIOD:	1991-2000
TOTAL OBSERVATIONS:	79,766
STATION:	Fort Myers (FMY)

Source: National Climatic Data Center, Asheville, N.C.

Exhibit 2-4

Exhibit 2-4
IFR Windrose



RUNWAY	COVERAGE
06/24	97.21%
CROSSWIND COMPONENT:	13 KTS.
OBSERVATION PERIOD:	1991-2000
TOTAL OBSERVATIONS:	79,586
STATION:	Fort Myers (FMY)

Source: National Climatic Data Center, Asheville, N.C.

2.4 AIRSIDE FACILITIES

This section presents a description of the existing airside facilities at Southwest Florida International Airport (RSW) and includes recent and currently on-going improvement projects. The description of the following facilities provides the basis for the airfield demand/capacity analysis and the determination of facility requirements to be presented in subsequent chapters.

The airside area of the Airport, also referred to as the "airport operating area" (AOA), is the area in which aircraft, support vehicles and equipment, and other aviation-specific operational activities take place (see **Exhibit 2-5**). The following facilities, equipment and procedures will be discussed in this section:

- Runways
- Apron Areas
- Taxiways / Taxilanes
- Airfield Lighting, Signage and Marking
- Navigational Aids (Navaids)
- Published Instrument Approach Procedures
- Standard Instrument Departures (SID)
- Standard Terminal Arrival Routes (STAR)

2.4.1 Runways

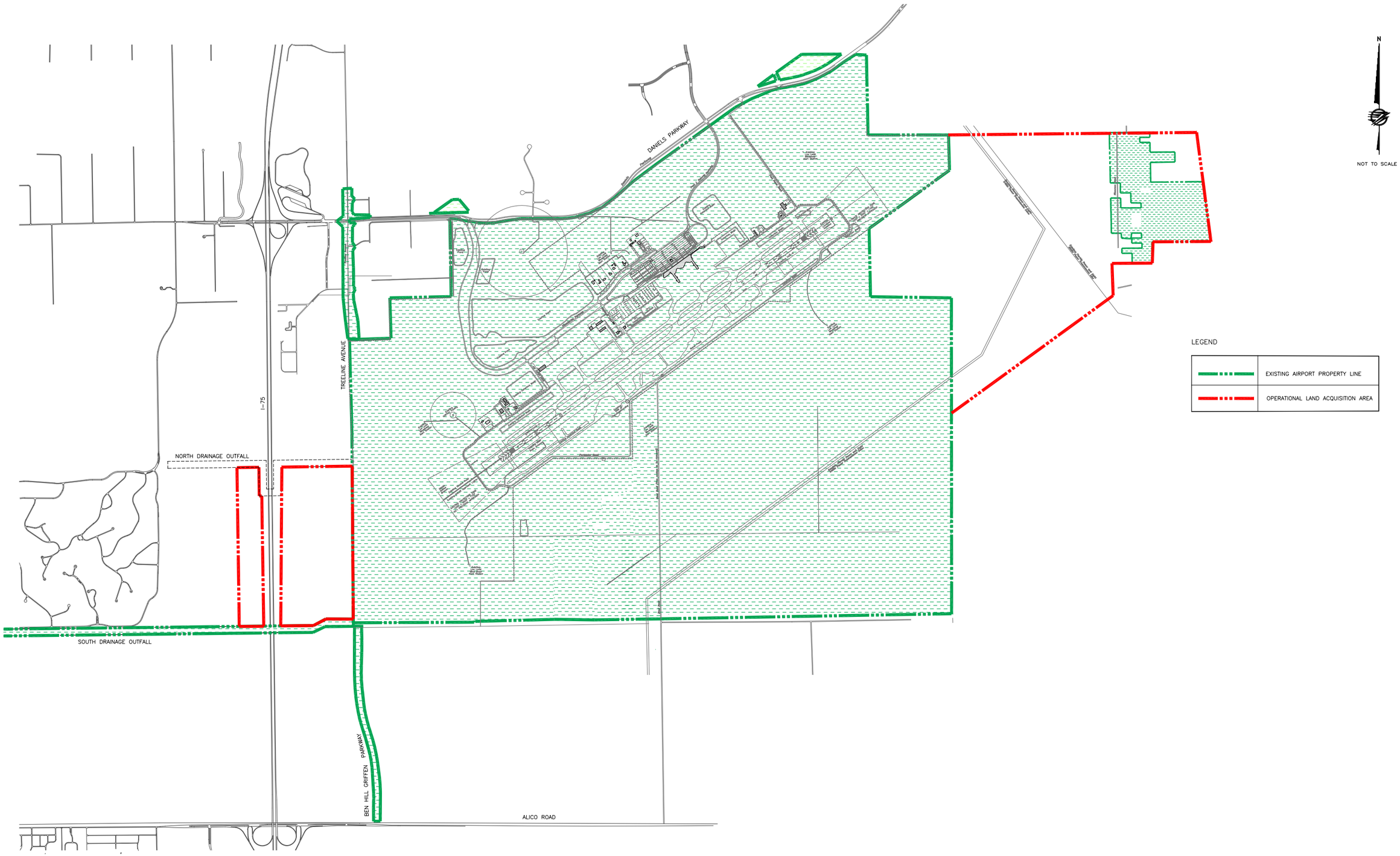
Currently, there is only one runway at Southwest Florida International Airport (RSW). Runway 6-24 is 12,000 feet long and 150 feet wide, constructed of asphalt concrete, and is grooved to help prevent aircraft hydroplaning when the runway is wet. In 1994, the runway was extended from 8,400 to 12,000 feet to accommodate the demand for larger, long-range aircraft associated with inter-continental and international-transatlantic flights. This 3,600-foot runway extension permits aircraft originating at RSW to operate non-stop flights from Fort Myers, Florida to many destinations in Europe and Canada. Runway 6-24 is considered to be in good to fair condition overall, although the need for a near-term rehabilitation is recognized. The estimated gross pavement weight bearing strength for Runway 6-24 is shown below:

Undercarriage Type	Weight (lbs.)
Single Wheel	30,000
Double Wheel	190,000
Double Tandem	430,000
Dual Double Tandem	840,000

Source: Airport Facilities Directory

The PCI index for Runway 6-24 at RSW varies at various points along its length. Both runway ends are rated by the Florida Department of Transportation (FDOT) at a PCI Index of 100 percent, indicating an excellent condition. However, the areas in between and towards the middle of the runway have PCI indexes ranging from 20 to 75, thus indicating fair to very poor pavement conditions. Plans have been made to rehabilitate and recondition the runway.

Exhibit 2-5



Lee County Port Authority

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RS&H

SOUTHWEST FLORIDA INTERNATIONAL AIRPORT
FORT MYERS, FLORIDA

MASTER PLAN UPDATE

EXISTING OPERATIONAL AIRPORT PROPERTY PLAN

DATE:	MARCH 2004
PROJECT NO:	C06901
FILE NAME:	Exhibit 2-5
DESIGNED BY:	S.R
DRAWN BY:	K.P
CHECKED BY:	S.R

EXHIBIT

2-5

The Runway 6 approach end coordinates are latitude 26°31'35"N and longitude 81°46'12"W. Runway 6 is marked as a precision instrument runway and is served by an Instrument Landing System (ILS) with a Category I approach. Runway Visual Range (RVR) equipment is installed and is located at the touchdown zone of Runway 6. A visual glide path angle of 2.5° is provided by a 4-box Visual Approach Slope Indicator (VASI) located to the north of the runway edge at the approach end. The Runway 6 end is at an elevation of 26.5 feet mean sea level (MSL) and the threshold crossing height for the runway is 55 feet above ground level (AGL). The touchdown zone elevation is approximately 27.0 feet MSL.

Runway 24 is also marked as a precision instrument runway. The Runway 24 approach end coordinates are latitude 26°32'45"N and longitude 81°44'25"W. Runway 24 is served only by a non-precision approach procedure, which is defined as a standard instrument approach procedure with no electronic glide slope or vertical guidance to the runway. A 6-box VASI system with two visual glide path angles is installed at the approach end of the runway. The upper glide path angle (used for large aircraft with cockpits that sit high above the ground like the Boeing 747 and the MD-11) is set at 3.25°. The lower glide path angle used by the smaller aircraft is set at 3.0°. The Runway 24 approach end elevation is approximately 29.7 feet MSL and the lower and upper threshold crossing heights for the runway are 85 feet AGL and 52 feet AGL respectively. The touchdown point elevation for the Runway 24 is 30 feet MSL. All Runway 6 – 24 markings and striping are considered to be in good condition.

2.4.2 Apron Areas

Southwest Florida International Airport (RSW) has three designated aircraft parking aprons: the Passenger Terminal Apron, the General Aviation Apron, and the Cargo Apron. All parking aprons are located on the north side of the runway.

Passenger Terminal Apron

The Passenger Terminal Apron at Southwest Florida International Airport is located parallel to and northwest of Runway 6-24. It is the largest of the three aircraft parking aprons and is located closest to the approach end of Runway 24. Access to and from the terminal apron is provided by three connector taxiways, A-6, A-7 and A-8, which provide direct access between to the parallel taxiway, Taxiway "A", and the apron edge taxilane, Taxilane B. The apron taxiways and aircraft movement areas providing access to the aircraft gate positions were all designed to accommodate an aircraft the size of Boeing 747, which is designated as Aircraft Design Group (ADG) IV according to the Federal Aviation Administration (FAA). The apron is approximately 165,000 square yards (including Taxilane "B") in area and only serves the air carrier and charter airlines utilizing the terminal. The apron accommodates 17 gate positions served by passenger boarding bridges. Additional apron space is available to park up to two commuter aircraft adjacent to Concourse B and two commuter aircraft adjacent to Gate A1A depending on their size. The apron was generally noted to be in good condition.

General Aviation Apron

The General Aviation Apron is located west of the Passenger Terminal Apron and has a total area of approximately 26,000 square yards. This apron serves the FBO facility, and the associated general aviation maintenance hangar and provides approximately 25 to 30 tie-down spaces for

small single engine and multi engine prop aircraft. Additional space is designated for itinerant jet aircraft parking and aircraft movement and circulation. The pavement was noted to be in good condition and access to the apron is provided by Taxiway A-5 which connects directly to Taxiway A.

Cargo Area Apron

The Cargo Apron at RSW is located southwest of the Passenger Terminal and the general aviation facility, closer to the approach end of Runway 6. The Cargo Apron totals approximately 69,000 square yards and is capable of accommodating between 6-7 aircraft depending on their size. Aircraft serving the cargo facilities and utilizing the apron typically include the MD-80, Boeing 757 and Boeing 727. The Cargo Apron is served by two taxiway connectors, Taxiway A-3 and Taxiway A-4. Both taxiway connectors provide direct access to the parallel taxiway and are capable of handling Aircraft Design Group IV (ADG IV) aircraft.

2.4.3 Taxiways / Taxilanes

Taxiway A

As mentioned above, RSW has one full-length parallel taxiway, Taxiway "A", located on the north side of Runway 6-24. Taxiway A is 12,000 feet long and 75 feet wide and is in relatively good condition. The taxiway centerline to runway centerline separation distance is 400 feet, which complies with the FAA standards for an ADG V. There are a total of nine taxiway connectors, all of which provide access between the taxiway and the runway. Five of these taxiways, Taxiways A-4 through A-8, are high-speed exit taxiways. These taxiways are constructed at forty-five degree angles to the runway which allow aircraft to safely exit the runway at higher than normal speeds therefore decreasing runway occupancy times. The other four runway exits are the traditional ninety degree or perpendicular taxiway connectors.

The Passenger Terminal Apron is accessible by three connector taxiways A-6, A-7, and A-8, all of which connect to Taxiway A. Taxiway A-8 was observed to have severe cracking and a sealant has been applied as a temporary solution until the area can be resurfaced. Taxiway A-5 provides access to the general aviation ramp from Taxiway A, and Taxiway A-3 and A-4 provides access to the cargo apron area. All taxiways are designed for ADG V aircraft with the exception of Taxiway A-5, which was designed to accommodate ADG III aircraft or smaller.

Taxilane B

Taxilane B is the 1,580 foot long taxilane that runs both parallel to and adjacent to the Passenger Terminal apron. This taxilane serves as the terminal apron area for aircraft transitioning to and from the gate positions and to and from taxiways A-6, A-7, and A-8. The distance between the Taxilane B and Taxiway A centerlines is 435.5 feet. This separation distance exceeds the FAA minimum of 267 feet for ADG V type aircraft. Taxilane B is part of the aircraft movement area and an ATC clearance is required before aircraft can move onto the taxilane.

2.4.4 Airfield Lighting and Signage

Proper airfield lighting is required at all airports that are utilized for nighttime operations. As required per AC 150/5S40-24 Chg. 1 "Runway and Taxiway Edge Lighting System", edge and centerline lights are used to outline usable operational areas of airports during periods of darkness and low visibility weather conditions. The Southwest Florida International Airport is capable of accommodating night aircraft operations because appropriate airfield lighting has been installed on the airfield.

Runway Lighting

Runway edge lights define the lateral and longitudinal limits of the usable landing area. Runway 6-24 is equipped with white High Intensity Runway Lights (HIRL), which define the runway edges. The runway has no centerline lights or touchdown zone lights.

Taxiway Lighting

Taxiway lighting, similar to runway lighting but blue in color, is essential to safe operations during low visibility conditions and nighttime operations at an airport. Taxiway lights allow pilots to maneuver to and from the active runways, terminals and hangars. Taxiway edge lights also provide surface guidance to other ground vehicles on the airport.

Taxiway A, the five high-speed exit taxiways (A-4 through A-8) and Taxiways A-1, A-2, A-9 and A-10 have semi-flush mounted green taxiway centerline lights. The use of taxiway centerline lights has historically demonstrated that guidance from these types of lights is superior to that of taxiway edge lights, especially in low visibility conditions. Taxiway centerline lights are steady burning green lights inserted into the pavement along the taxiway centerline to provide visual guidance to aircraft and ground vehicle traffic.

Currently, the only taxiway edge lighting installed at RSW extends from the Terminal Apron and General Aviation Apron to Taxiway A. Other taxiways not supplied with edge lights are equipped with blue barrel, taxiway edge reflectors. Additionally, Taxilane B has blue taxiway edge lights installed on the southeast side of the taxilane to visually assist pilots transiting through the terminal area.

Pavement Markings

As stated above, both Runway 6 and Runway 24 are marked as precision instrument runways. Precision runway markings include number designation markers, a centerline stripe, runway side stripes, threshold markers, aiming point markers and touchdown zone markings. All of the runway striping was noted to be in good condition.

At RSW, all of the taxiways are properly marked with a yellow taxiway centerline stripe and taxiway edge stripes. Hold short markings are properly located at all taxiways/runway intersection. Additionally, all taxiway hold short markings are believed to be properly located at all taxiway/taxiway intersections but a hold bar upgrade project is currently ongoing in order to ensure compliance with the new FAA Advisory Circular, AC150/5340-1H Change 1.

On the terminal ramp, gate positions are marked with lead in lines and stop bars for the various aircraft serving that gate. A vehicle service road is properly marked on the terminal apron which promotes a safe operation for ground service equipment and other vehicles to maneuver around the aircraft parking positions. Additionally, ground service equipment restraint lines are marked at every gate, which denote equipment staging areas. An aircraft-parking envelope is also marked at each gate and represents equipment exclusion areas.

Signage

Currently, there are approximately eighty-two lighted signs on the taxiways and runway at RSW to safely guide aircraft and ground vehicles. These signs include mandatory instruction signs (such as holding positions for taxiway/runway intersections), location signs (for the runway and taxiways which identify the taxiway or runway upon which the aircraft is located), direction signs (which indicate directions of other taxiways leading out of an intersection), runway exit signs (directing where the aircraft is to exit the runway), and destination signs (such as outbound and inbound guidance to the terminal area). Additionally, the runway contains lighted distance remaining designators that depict the distance remaining to the end of the runway.

2.4.5 Navigational Aids (Navaids) – Electronic

For the purpose of this assessment, the term NAVAIDs (navigational aids) refers to any item intended to provide either visual or electronic guidance for pilots and their aircraft in the airport environment (excluding runway and taxiway lighting). These aids can have varied owners and operators, including but not limited to the Federal Aviation Administration (FAA), the military, private organizations, individual states and foreign governments. The FAA has the statutory authority to establish, operate, and maintain air navigation facilities and to prescribe standards for the operation of any of these aids that are used for instrument flight in United States government controlled airspace. These aids are tabulated in the Airport/Facility Directory, and the assessment of Southwest Florida International Airport's NAVAIDs includes the following.

- VORTAC/DME
- ILS
- NDB
- GPS
- ASR
- Visual Navaids (Airport Rotating Beacon, VASI, ALS, and Segmented Circle)

VHF Omnidirectional Range/Tactical Air Navigation Facility (VORTAC/DME)

A VHF Omni-Directional Range/Tactical Air Navigation (VORTAC) facility is one of the most fundamental electronic navaids serving the National Airspace System (NAS). A VORTAC collocates the equipment of a VOR and TACAN navigational facilities. The Fort Myers area is served by a VORTAC that is located on coordinates latitude 26°31'47"N and longitude 81°46'32"W, just northwest of Runway 6. This facility is identified as the Lee County VORTAC and operates on a frequency 111.80. The Lee County VORTAC is a low altitude facility, which provides directional service from 1,000 feet above ground level (AGL) up to and including 18,000 feet AGL, at radial distances out to 40 nautical miles. It also broadcasts a Hazardous In-

flight Weather Advisory (HIWAS) to aircraft in the vicinity of the Airport during periods of hazardous weather alerts.

The VOR is a ground-based facility that transmits a very high frequency (VHF) signal, oriented from magnetic north, on a 360-degree azimuth. The VOR signal provides accurate course alignment, which allows an aircraft in-flight to determine its bearing relative to the VOR station. This navaid is utilized to guide aircraft, under both instrument flight and visual flight conditions, into and out of an airport area. A system of high-altitude VOR facilities is used for enroute air navigational purposes and establishes the network of airways and jet routes throughout the world.

A Tactical Air Navigation (TACAN) station provides the same function as a VOR but combines azimuth and distance measuring equipment (DME) into one unit instead of two separate units. The DME provides compatible receivers with very reliable and accurate distance equipment up to 199 nautical miles away. The major difference between a VOR and TACAN is that VOR signals are in the Very High Frequency (VHF) range and TACAN's operate in the Ultra High Frequency (UHF) range that is used primarily by the United States military aircraft.

Since RSW has full TACAN station, that includes azimuth and distance measuring equipment, together with a collocated VOR, the station is considered a VORTAC. The FAA maintained equipment is in good condition and was transferred from Page Field Airport when RSW was opened. The housing for this facility was constructed in 1991 and was also noted to be in relatively good condition.

Instrument Landing System (ILS)

The standard Instrument Landing System (ILS) is composed of a runway approach lighting system, a localizer antenna array and glideslope transmitters to provide horizontal and vertical guidance information for a safe landing on the runway during times of adverse weather conditions or instrument meteorological conditions (IMC). Electronic beacons, known as outer markers and middle markers, provide information regarding the position of the aircraft during key portions of an ILS approach. Distance Measuring Equipment (DME) is also used at these markers to indicate the distance to or from the Airport.

At Southwest Florida International Airport, Runway 6 is the only runway equipped with an ILS Category I approach. The purpose of an ILS is to provide a method of precision instrument navigation, by means of horizontal and vertical guidance, to a point just beyond the approach end of the runway. Since the system provides both course and glideslope information, much lower weather minimums are possible than those provided for by a non-precision instrument approach.

Localizer

The localizer indicates whether the approaching aircraft is left or right of the correct alignment for approach to the runway. This component of an ILS approach only provides horizontal guidance to the runway. The localizer antenna is located approximately 1,050 feet from the approach end of Runway 24. The antenna coordinates are latitude 26°32'51"N and longitude 81°44'15"W. The antennas transmit between 108 and 118 MHz and the localizer frequency for the ILS Runway 6 is 111.5 MHz. The localizer antenna has a course width of 3.07°.

Glide Slope

The glide slope indicates vertical guidance or the correct angle of descent to the runway. At RSW the glide slope is located 1,050 feet from the approach end of Runway 6 and 140 feet west of the runway centerline. The glide slope is positioned at a latitude of 26°31'38"N and a longitude of 81°46'00"W. It is at a field elevation of 26.5 feet MSL and has a standard 3.00° glide slope angle. The glide slope antennas are positioned in close proximity of the intended touchdown point on the runway. The transmitting antennas transmit in the UHF band around 300 MHz. The glide slope will have to be relocated as part of the new Midfield Terminal project and will be discussed further in the Facility Requirements chapter of this report.

Outer Marker Beacon & Compass Locator (LOM)

The Outer Marker (LOM) is located at latitude 26°29'03"N and longitude 81°50'04"W, approximately 4.3 nautical miles (26,098 feet) from the approach end of Runway 6 and is identified by the name MUFFE. In addition, it is identified with a modulation of 336 kHz and a blue light which illuminates in the cockpit of an aircraft flying the ILS approach when over or in close proximity of the LOM. This marker is used to indicate that an aircraft should intercept the glide path when over the transmitter. The Outer Marker beacons are low-power VHF transmitters operating at 75 MHz.

Middle Marker (MM)

The Middle Marker (MM) at RSW is located at latitude 26°31'31"N and longitude 81°46'17"W and lies 0.4 nautical miles (2,600 feet) from the approach end of Runway 6. The MM is used to indicate that the aircraft is at the Decision Height (DH) for the approach to Runway 6. This is the altitude at which the pilot should visually see the runway. If the runway is not yet visible, the approach must be abandoned and a missed approach must be executed.

Non Directional Beacon (NDB)

A Non Directional Beacon (NDB) is a low or medium frequency radio beacon transmitting non-directional signals whereby the pilot of an aircraft equipped with airport direction finding (ADF) equipment can determine the bearing to or from the radio beacon and "home" in or track to or from the station. All radio beacons except the compass locators transmit a continuous three-letter identification in Morse code except during voice transmissions.

NDB's normally operate within the 190 to 535 kHz frequency band, and transmit a continuous carrier. Those NDB's that are not used as Compass Locators are frequently used for NDB approaches, and for homing purposes to help aircraft locate airports that have no published instrument approaches.

Currently, there is an NDB approach available for Runway 6 at RSW. This is a non-precision instrument approach and will likely be replaced or removed in the near future with the implementation of global positioning system (GPS) procedures.

Global Positioning System (GPS)

The Global Positioning System (GPS) is a satellite based radio positioning and navigation system designed to provide accurate position and velocity information on a continuous global basis. This system represents the future of air navigation. It is anticipated that NDB equipment and much of the VOR equipment currently in use will eventually be replaced by GPS. In addition, GPS based navigation, including precision approaches, is expected to become the standard in the future with the introduction of the Wide Area Augmentation System (WAAS) and the Local Area Augmentation System (LAAS).

The GPS operational policies that became effective in July 1998 state that pilots may substitute IFR certified GPS receivers for DME and ADF avionics for all operations except NDB approaches without GPS overlay. GPS can be used in lieu of DME and ADF on all localizer-type approaches as well as VOR/DME approaches, including when charted NDB or DME transmitters are temporarily out of service. These procedures and standards are described in detail in the Aeronautical Information Manual (AIM) and AC-90-94 entitled, "Guidelines for using global positioning system equipment for IFR en route and terminal operations and for non-precision instrument approaches in the U.S. National Airspace System."

GPS procedures have been implemented at Southwest Florida International Airport (RSW) for approaches to Runway 6 and Runway 24. Additional information concerning these approaches is included in Section 2.5.2, Published Instrument Approach Procedures Section.

Airport Surveillance Radar (ASR)

An ASR assists air traffic controllers by detecting and displaying an overall picture of what is going on within the airspace surrounding the terminal. The ASR rotates through 360 degrees and depending on local conditions, the typical coverage area for an ASR can extend out to 60 miles. Because ASR provides the position of aircraft in the vicinity of the airport the information is primarily utilized by air traffic controllers to facilitate the sequencing of both arriving and departing traffic. While the ASR does not provide vertical guidance to the pilot it is used for two published non-precision approaches for both Runway 6 and Runway 24 at RSW.

The ASR at RSW is located on airport property approximately 1.5 miles north-northwest of the airport reference point (ARP). The ASR is a FAA designated Series-8 radar facility and encompasses approximately 40,000 square feet of land. The FAA is proposing to install an ASR Series-11 at RSW at a location approximately 200 feet east-southeast of the existing ASR-8 facility. The new digital ASR-11 system will provide enhanced radar coverage and improved surveillance products for use by controllers. The new site will also require the same equipment installation area and identical external obstacle-free critical areas/zones.

2.4.6 Navaids – Visual/Supplemental

The following section addresses the visual and supplemental navigational aids that are provided at Southwest Florida International Airport.

Airport Rotating Beacon

An airport rotating beacon is a visual navigational aid that displays alternating flashes of high intensity white and green light to indicate the location of an airport. The flashes are sequenced 180 degrees apart as required by the FAA. At RSW the rotating beacon is located approximately 6,000 feet from the end of Runway 6 and 150 feet southeast of the runway centerline. The beacon is elevated to a height of 83 feet AGL, making it easier for pilots to see. The beacon, which is lighted daily from sunset to sunrise and during periods of Instrument Flight Rule (IFR) weather conditions, was noted to be in good condition.

Visual Approach Slope Indicators (VASI)

As noted previously, Runway 6 and Runway 24 at RSW both provide ground based visual aids known as Visual Approach Slope Indicators (VASI). Runway 6 provides a 4-box VASI configuration located on the left side of the Runway and Runway 24 utilizes a 6-box system of lights also located on the left side of the Runway. VASI lighting is provided to give visual descent guidance information during the final approach to a runway. These visual aids can only be used when the visibility is reasonably good. The visual glide path of the VASI provides safe obstruction clearance within plus or minus 10 degrees of the extended runway centerline and up to 4 NM from the runway threshold. Both sets of VASIs were noted to be in fair to good condition.

Medium Intensity Approach Lighting System (MALSR)

As part of the runway lighting system, the identification of the runway end, or threshold, is of critical importance to a pilot during landings and particularly during periods of reduced visibility and ceiling height. Therefore, runway ends and thresholds are equipped with special lighting to aid in the approach to or identification of the approach end of the runway. At RSW, the approach to Runway 6 has the most significant approach lighting that complements the ILS in providing a precision instrument approach system. The approach end of Runway 6 is equipped with a Medium Intensity Approach Lighting System (MALS) with Runway Alignment Indicator Lights (RAIL).

A MALSR is a MALS approved for ILS Category I precision approaches with decision heights as low as 200 feet. The MALS portion of the MALSR extends 1,400 feet from the end of the runway. The Runway Alignment Indicator Light (RAIL) portion of the system extends outward an additional 1,000 feet when the glide slope angle is 2.75 degrees or higher. This is the case at RSW since the precision instrument approach has a 3.0 degree glide slope. The purpose of the MALSR is to aid the pilot in identifying the runway environment and to facilitate a safe transition from the instrument flight phase to the visual phase of the landing. This system, referred to as "the rabbit" because of the sequenced strobe effect that "runs" toward the runway, provides pilots with early runway lineup, lead-in guidance, and runway end identification during landings and is extremely helpful during some periods of restricted visibility. The system at RSW is maintained by the FAA and is in good condition.

Runway End Identifier Lights (REIL)

Runway End Identification Lights (REIL) provides pilots with a rapid and positive visual identification of the approach end of the runway during night, instrument, and marginal weather

conditions. REILs also aid in identification of the runway end in areas having featureless terrain. The REIL system consists of a pair of synchronized white flashing lights facing the approaching aircraft, which are situated on each side and abeam of the runway end/threshold lights. The beam axis is orientated 15 degrees outward from a line parallel to the runway edge and inclined at an angle of 10 degrees upward. The REILs emit a white strobe light simultaneously at a rate of one per second. Runway 24 has a LCPA maintained REIL system that appears to be in good condition.

Automated Surface Observation System (ASOS)

The Automated Surface Observing System (ASOS) is the latest automated weather observation system sponsored by the Federal Aviation Administration (FAA). ASOS automatically provides temperature, dew point, wind, altimeter setting, visibility, sky condition, and precipitation information updated to the minute. A primary advantage of the ASOS system is that critical aviation weather parameters are measured in the vicinity of the runway touchdown zone. The ASOS program is a joint effort of the FAA, National Weather Service (NWS), and the Department of Defense (DOD). A similar system to the ASOS is the Automated Weather Observing System (AWOS). All automated observing systems are designed to provide the pilot, and other users, with daily minute-by-minute airport weather observations 24 hours a day. By providing near-real time information on atmosphere conditions at an increased number of reporting locations, automated systems improve the safety and efficiency of aviation operations as well as act as a key factor in designing better forecasting and warning systems.

The Automated Surface Observation System (ASOS) at RSW is an FAA designated Class II system. The system consists of a combined sensor group located on the airfield. The sensor group is located 1,102 feet northeast of the approach end of Runway 6 and 414 feet southeast of the Runway 6-24 centerline. The sensor group includes a wind sensor tower with a total obstruction height of 30 feet above ground level. An acquisition control unit (ACU) is located on the first floor of the air traffic control tower base building in the equipment room. The ACU collects the data from the sensor group. The communications link from the sensor group to the ACU (Acquisition Control Unit) is by UHF radio frequency 410.075 Mhz. The FAA provides power for the sensor group and the ACU.

RSW also provides ASOS weather information to pilots through a dial-in telephone. The telephone number for the RSW ASOS is 941-561-0966. Additionally, the Page Field (FMY) ASOS information is available by dialing 941-936-2318.

Runway Visual Range (RVR)

Runway Visual Range is defined as the visibility range measured on the runway. It is the distance over which pilots can see the high intensity runway edge lights. At RSW runway visibility is expressed in terms of RVR and miles as it relates to landing and takeoff visibility minimums for only Runway 6. The RVR is measured by transmissometers located along the side of the runway near the threshold. A light beam of a specific intensity is shot from a projector and measured by a receiver approximately 250 feet away. Any obscuring matter such as rain, snow, fog, smoke, haze, etc. reduces the intensity at the receiver and the measurement of the light intensity is converted to an RVR value. This information is displayed to the air traffic facility and updated approximately once every minute for controllers to relay to pilots operating at the airport.

Low Level Wind Shear Alert System (LLWAS)

The low-level wind shear alert system (LLWAS) is used to detect the presence of hazardous wind shear and microbursts in the vicinity of the airport. Six pole-mounted wind sensors are strategically located adjacent to the runway centerline, and on both sides of the approach end of Runway 6 and Runway 24. RSW is one of only thirty-nine airports throughout the United States to have this type of system. The LLWAS is controlled and maintained by the FAA and was noted to be in good condition. The new Midfield Terminal will require two or three of the LLWAS sensors to be relocated. Additional discussions of their exact location will be addressed in the Facility Requirements chapter of this report.

Segmented Circle and Windsocks

Southwest Florida International Airport has two lighted windsocks and a segmented circle. One windsock is located directly across from Taxiway A-8 on the south side of Runway 6-24. The primary windsock and segmented circle are located approximately 4,500 feet from the approach end of Runway 6, approximately 200 feet south of runway centerline. The standard aircraft traffic pattern at the Airport is a left pattern.

2.5 AIRSPACE CONFIGURATION / APPROACH PROCEDURES

2.5.1 Airspace Classifications

The FAA has six classifications of airspace under the National Airspace System (NAS). These classifications, which are designated as Class A, B, C, D, E, and G, are critical to the safety of all flights and to the efficient operation of all air traffic control facilities. Based on the level of activity and type of operations, airports receive either a classification of B, C, D or E. Class A airspace only exists above 18,000 feet and Class G airspace is designated as uncontrolled airspace.

Because Southwest Florida International Airport has an active FAA air traffic control tower (ATCT), is serviced by a radar approach control facility, and has a significant number of instrument flight rules (IFR) operations, the RSW airspace has been designated Class C. In Class C airspace, pilots must establish and maintain two-way radio communications with the ATCT at that airport, prior to entering the Class C airspace. In addition, the aircraft must be equipped with a Mode C transponder that automatically imprints aircraft altitude information on air traffic control radars. In Class C airspace, aircraft operating under Visual Flight Rules (VFR) are typically separated from the IFR aircraft and VFR aircraft must still see and avoid other VFR aircraft.

Although Class C airspace can be tailored to meet individual airport needs, the airspace usually consists of two columns of airspace. The Class C airspace at Southwest Florida International contains no modifications to the standard airspace configuration. The inner column of airspace encompasses an area that has a 5 nautical mile radius from the Airport and extends from the surface up to 4,000 feet above the airport elevation. The outer column of airspace encompasses an area that has a 10 nautical mile radius, but begins at 1,200 feet above the airport elevation and extends up to 4,000 feet above the airport elevation. The simplest way to visualize Class C airspace is to imagine a two-layer wedding cake turned upside down and centered on the airport.

RSW is in close proximity to the Class D airspace which surrounds Page Field Airport (FMY). The Class D airspace at Page Field encompasses a single column of airspace, 5 nautical miles in radius from the surface up to 1,200 feet above the airport elevation. Class D airspace requires each pilot to establish two-way radio communication with the ATCT prior to entering the airspace and to maintain this communication while in the airspace. Although considered controlled airspace, Class D airspace does not provide any separation service to visual flight rules (VFR) aircraft. When the ATCT is closed, the airspace at the airport is designated as Class G, or uncontrolled airspace.

The Page Field Airport (FMY) also has a small portion of Class E designated airspace. Typically, this classification of airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace and is used to provide additional safety to aircraft transiting to and from the airport. The small portion of Class E airspace at Page Field provides additional controlled airspace for precision and non-precision instrument approaches to Runway 5 and the non-precision instrument approach to Runway 13. These approaches are controlled by the FAA facilities at RSW. The Page Field Class E airspace has a floor beginning at 700 feet and extends up to 17,999 feet. Only a small portion of Class E airspace is required because most of the area surrounding Page Field is encompassed by the RSW Class C airspace.

Exhibit 2-6 has been taken from the Miami Sectional Aeronautical Chart to illustrate the airspace relationships in the Fort Myers area. The two large magenta circles represent the inner and outer columns of Class C airspace for RSW. Page Field falls between these two circles. This is why the ceiling for Page Field's Class D airspace is limited to 1,200 feet. At 1,200 feet, the Class D meets the overlaying RSW Class C airspace that is more restrictive. Although difficult to see, the Class D airspace for Page Field is represented by a dashed blue circle. However, the southeast portion of that circle is missing because it meets with the inner column of Class C airspace. The Class E airspace is depicted by a wide magenta line from the outside towards the airport it serves. The small portion of Class E is located on the northwest side of the Page Field Airport and is shown by a truncated arc intersecting the outer column of Class C airspace.

2.5.2 Published Instrument Approach Procedures

There are seven published instrument approach procedures at Southwest Florida International Airport. Although pilots may have options for visual approaches, only precision and non-precision instrument approaches are published in the United States Flight Information Publication – U.S. Terminal Procedures. The primary difference between a precision and a non-precision instrument approach is that the precision instrument approaches provide some form of electronic glide slope or glide path information for vertical guidance. It is important to note that the minimum approach descent altitudes expressed in the following paragraphs are for Category C aircraft (those aircraft with approach speeds near 140 knots) as these are the most common aircraft utilizing Southwest Florida International Airport.

At RSW, the Category I ILS system for Runway 6 is one of three classifications of ILS approach systems in use at airports today. The following delineates the typical approach minimums associated with the category of ILS approaches. These minimums may be adjusted higher based on specific circumstances at each individual airport.

Exhibit 2-6

Exhibit 2-6
Aeronautical Sectional Chart

** Not to be used for navigational purposes.*

Category I	-Decision Height ≥ 200 feet -Runway Visual Range = 2,400 feet -or Runway Visual Range = 1,800 feet (with touchdown zone and centerline lighting)
Category II	-Decision Height ≥ 100 feet -Runway Visual Range = 1,200 feet
Category III	-No Decision Height or below 50 feet -Runway Visual Range = between 700 and 150 feet

The Runway 6 Category I ILS provides instrument rated pilots with a decision height of 229 feet MSL and visibility minimums of ½ mile (RVR 2,400). The approach also provides a straight-in non-precision approach utilizing the localizer only with a minimum descent altitude (similar to the precision approach decision height) of 380 feet MSL and visibility minimums of ½ mile. There is also a circle to land approach (visual approach) that provides a decision height of 500 feet MSL and visibility minimums of 1 ½ miles for aircraft with approach speeds up to 140 knots. **Exhibit 2-7** provides additional details about these approaches.

A VOR straight-in instrument approach is available to Runway 6. This approach is created by the Lee County VORTAC and requires Automatic Direction Finding (ADF) or DME equipment. This straight-in approach provides pilots with a minimum descent altitude of 360 feet MSL and visibility minimums of 1 mile. The approach also provides a circle to land approach with a 500 feet minimum descent altitude and 1½ miles minimum visibility. If the DME equipment is used, the minimum descent altitudes for both the straight-in and visual approach decreases to 330 feet and 450 feet MSL respectively. **Exhibit 2-8** provides additional details about this approach.

An NDB non-precision straight-in instrument approach is available to Runway 6. This straight-in approach provides pilots with a minimum descent altitude of 440 feet MSL and visibility minimums of ¾ mile if the RVR is 4,000 feet or more. The approach also provides a circle to land approach with a 500 feet MSL minimum descent altitude and 1½ miles visibility minimums. **Exhibit 2-9** provides additional details about this approach.

Both Runway 6 and Runway 24 have non-precision global positioning system (GPS) approaches. These approaches have a minimum descent altitude of between 380 feet MSL to 400 feet MSL for Runways 6 and 24 respectively. Runway 6 has ¾ mile visibility minimum and a 2,400 Runway Visual Range, while Runway 24 measures visibility in miles because RVR measurements are not available for this runway. Therefore the visibility minimums for Runway 24 is 1 mile for aircraft categories A, B, and C. Category D aircraft require a visibility minimum of 1¼ miles. Both approaches have a circle-to-land approach with a minimum descent altitude of 500 feet MSL with a minimum visibility requirement of 1½ miles. The GPS approaches are depicted in **Exhibits 2-10** and **2-11**.

Airport Surveillance Radar (ASR) approaches are available for both Runways 6 and Runways 24. The minimum descent altitude of 380 feet MSL and visibility requirements of ½ mile with an RVR of 2,400 feet are the same for both runways. Circle to land approaches for both runways have a minimum descent altitude of 500 feet MSL with 1½ mile visibility. The ASR approaches are depicted in **Exhibit 2-12**.

Exhibit 2-7

Exhibit 2-7

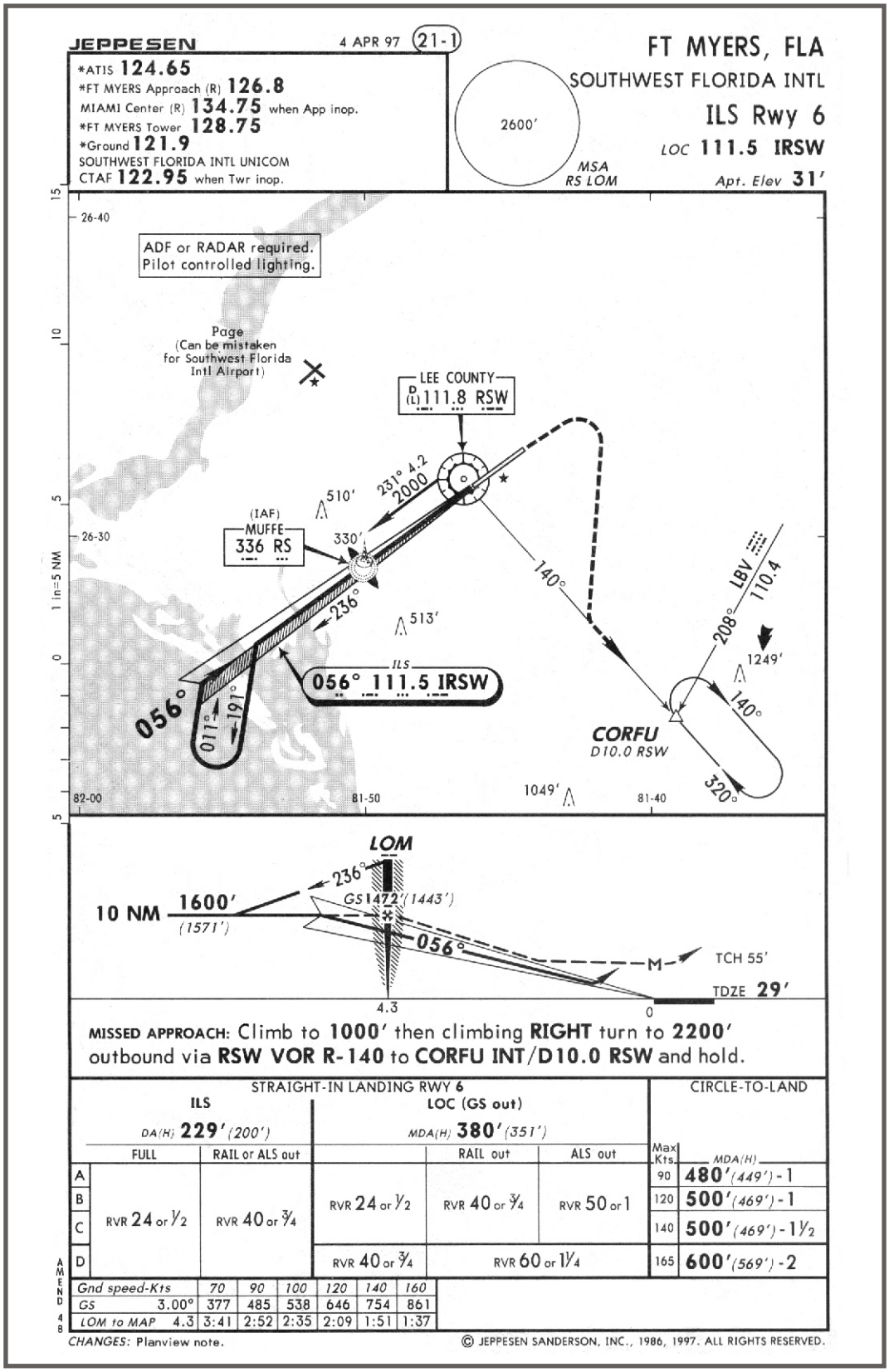
JEPPESEN
4 APR 97
21-1
FT MYERS, FLA
SOUTHWEST FLORIDA INTL
ILS Rwy 6
LOC 111.5 IRSW
Apt. Elev 31'
*ATIS 124.65
*FT MYERS Approach (R) 126.8
MIAMI Center (R) 134.75 when App inop.
*FT MYERS Tower 128.75
*Ground 121.9
SOUTHWEST FLORIDA INTL UNICOM
CTAF 122.95 when Twr inop.
2600'
MSA
RS LOM
ADF or RADAR required.
Pilot controlled lighting.
Page
(Can be mistaken for Southwest Florida Intl Airport)
LEE COUNTY
D (L) 111.8 RSW
231° 4.2
2000
510'
(IAF)
MUFFE
336 RS
330'
140°
LBV
110.4
208°
1249'
236°
513'
ILS
056° 111.5 IRSW
056°
011°
191°
140°
CORFU
D10.0 RSW
320°
1049'
26-40
26-30
82-00
81-50
81-40
1 in=5 NM
LOM
236°
10 NM
1600'
(1571')
GS 1472' (1443')
056°
M
TCH 55'
TDZE 29'
4.3
0
MISSED APPROACH: Climb to 1000' then climbing RIGHT turn to 2200' outbound via RSW VOR R-140 to CORFU INT/D10.0 RSW and hold.
STRAIGHT-IN LANDING RWY 6
ILS
DA(H) 229' (200')
FULL
RAIL or ALS out
LOC (GS out)
MDA(H) 380' (351')
RAIL out
ALS out
CIRCLE-TO-LAND
Max Kts
MDA(H)
A
B
C
D
RVR 24 or 1/2
RVR 40 or 3/4
RVR 24 or 1/2
RVR 40 or 3/4
RVR 50 or 1
RVR 40 or 3/4
RVR 60 or 1 1/4
90 480' (449') - 1
120 500' (469') - 1
140 500' (469') - 1 1/2
165 600' (569') - 2
Gnd speed-Kts 70 90 100 120 140 160
GS 3.00° 377 485 538 646 754 861
LOM to MAP 4.3 3:41 2:52 2:35 2:09 1:51 1:37
AMEND 4B
CHANGES: Planview note.
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Exhibit 2-8

Exhibit 2-8

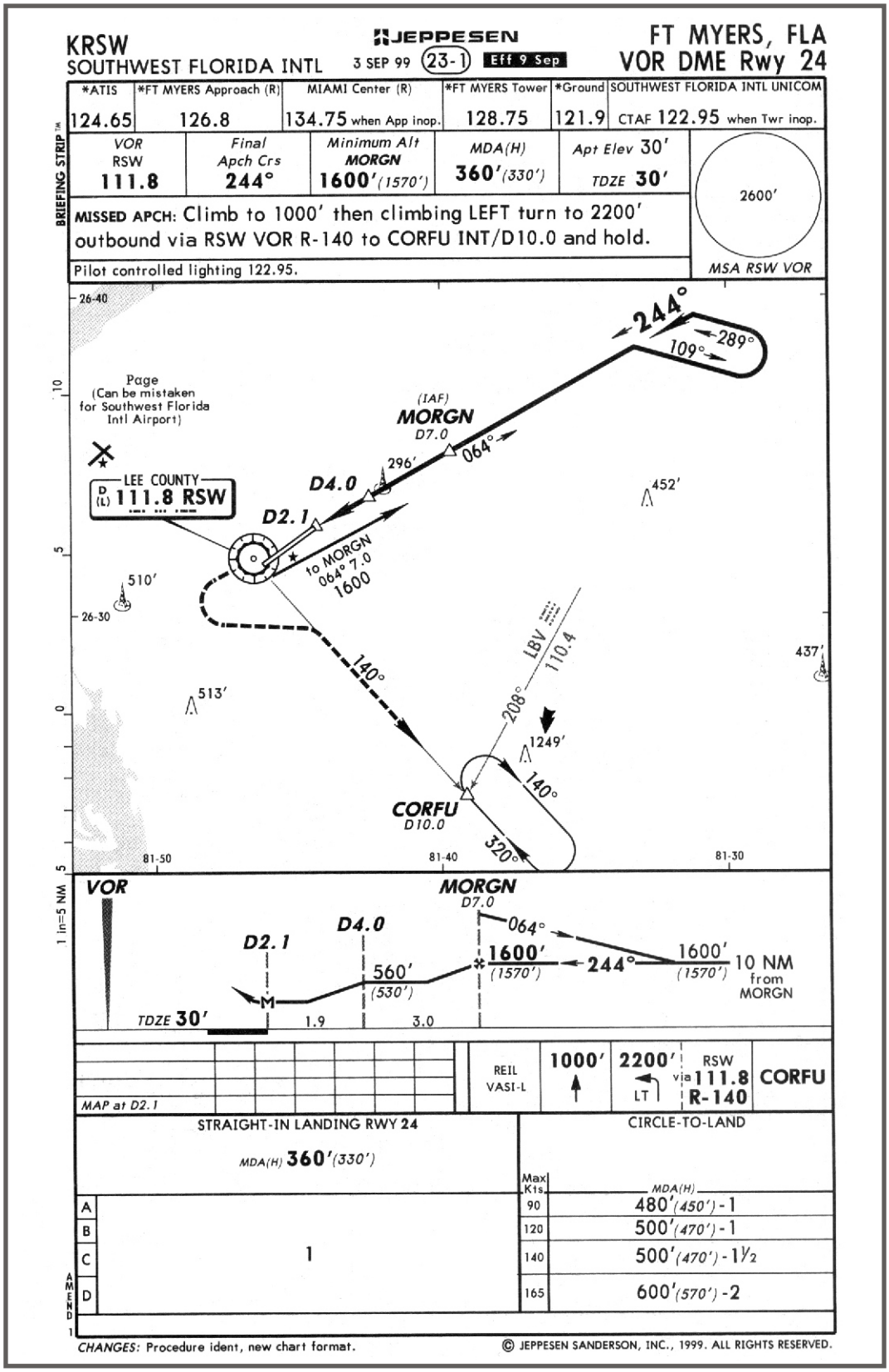
KRSW
SOUTHWEST FLORIDA INTL
JEPPESEN
3 SEP 99 (23-1) Eff 9 Sep
FT MYERS, FLA
VOR DME Rwy 24
*ATIS 124.65
*FT MYERS Approach (R) 126.8
MIAMI Center (R) 134.75 when App inop.
*FT MYERS Tower 128.75
*Ground 121.9
SOUTHWEST FLORIDA INTL UNICOM CTAF 122.95 when Twr inop.
VOR RSW 111.8
Final Apch Crs 244°
Minimum Alt MORGN 1600′ (1570′)
MDA(H) 360′ (330′)
Apt Elev 30′ TDZE 30′
MISSED APCH: Climb to 1000′ then climbing LEFT turn to 2200′ outbound via RSW VOR R-140 to CORFU INT/D10.0 and hold.
Pilot controlled lighting 122.95.
2600′
MSA RSW VOR
BRIEFING STRIP
Page (Can be mistaken for Southwest Florida Intl Airport)
LEE COUNTY
(L) 111.8 RSW
(IAF) MORGN D7.0
D4.0
D2.1
244°
289°
109°
064°
296′
452′
510′
513′
437′
1249′
to MORGN 064° 7.0 1600
140°
LBV 110.4
208°
320°
CORFU D10.0
26-40
26-30
81-50
81-40
81-30
VOR
MORGN D7.0
064°
1600′ (1570′)
244°
1600′ (1570′)
10 NM from MORGN
560′ (530′)
TDZE 30′
1.9
3.0
MAP at D2.1
REIL
VASI-L
1000′
2200′ LT
via RSW 111.8 R-140
CORFU
STRAIGHT-IN LANDING RWY 24
MDA(H) 360′ (330′)
CIRCLE-TO-LAND
Max Kts
MDA(H)
A 90 480′ (450′) - 1
B 120 500′ (470′) - 1
C 140 500′ (470′) - 1½
D 165 600′ (570′) - 2
1
AMDT 1
CHANGES: Procedure ident, new chart format.
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Exhibit 2-9

Exhibit 2-9

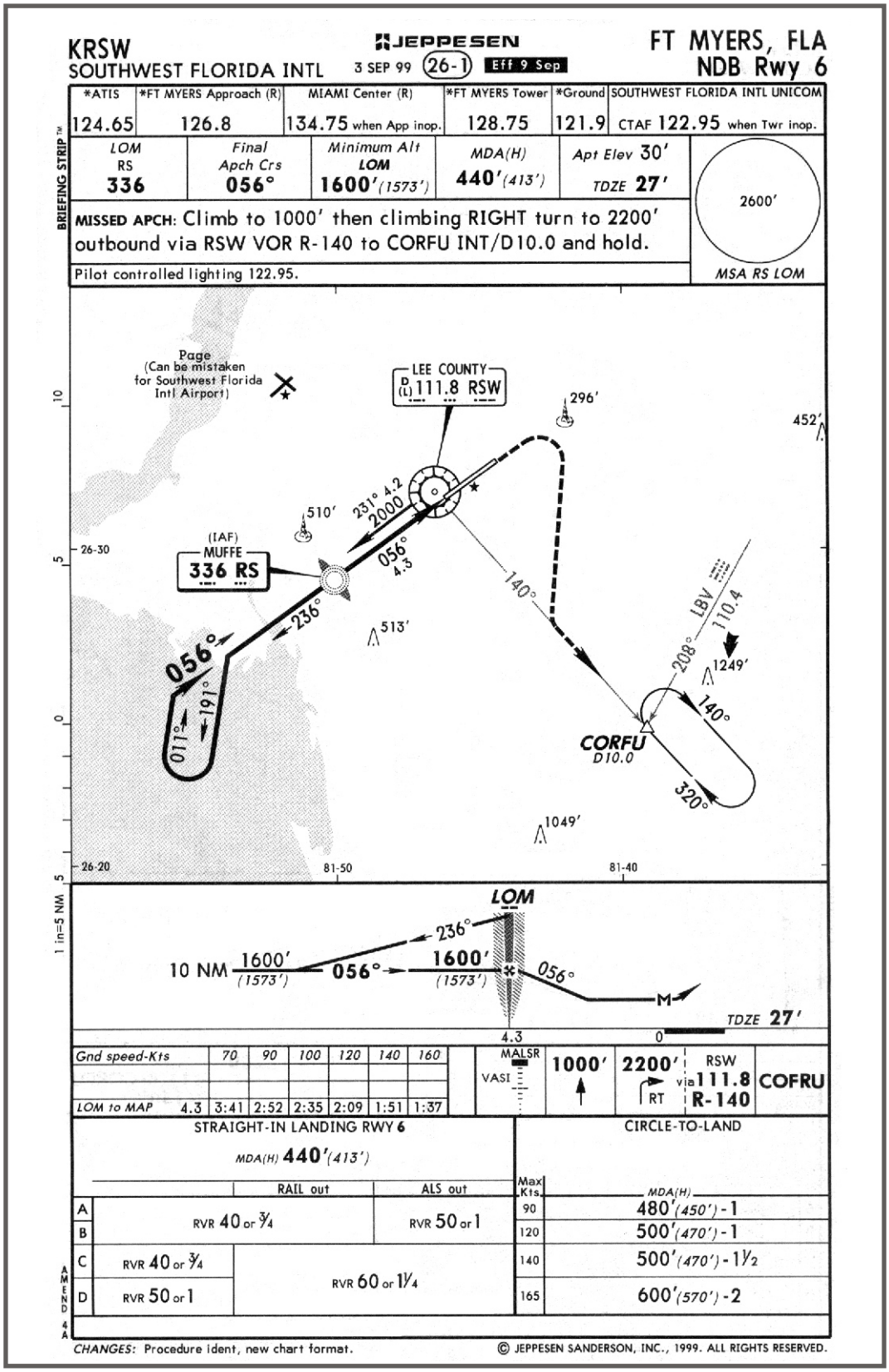
KRSW
SOUTHWEST FLORIDA INTL
JEPPESEN
3 SEP 99 (26-1) Eff 9 Sep
FT MYERS, FLA
NDB Rwy 6
*ATIS 124.65
*FT MYERS Approach (R) 126.8
MIAMI Center (R) 134.75 when App inop.
*FT MYERS Tower 128.75
*Ground 121.9
SOUTHWEST FLORIDA INTL UNICOM CTAF 122.95 when Twr inop.
LOM RS 336
Final Apch Crs 056°
Minimum Alt LOM 1600′(1573′)
MDA(H) 440′(413′)
Apt Elev 30′
TDZE 27′
2600′
MSA RS LOM
MISSED APCH: Climb to 1000′ then climbing RIGHT turn to 2200′ outbound via RSW VOR R-140 to CORFU INT/D10.0 and hold.
Pilot controlled lighting 122.95.
BRIEFING STRIP™
Page (Can be mistaken for Southwest Florida Intl Airport)
LEE COUNTY D (L) 111.8 RSW
296′
452′
510′
231° 4.2
2000
(IAF) MUFFE 336 RS
056° 4.3
140°
LBV 110.4
208°
1249′
513′
236°
056°
011°
191°
CORFU D10.0
140°
320°
1049′
26-30
26-20
81-50
81-40
1 in=5 NM
LOM
10 NM 1600′ (1573′) 056° 1600′ (1573′) 056°
236°
M
TDZE 27′
4.3
0
Gnd speed-Kts 70 90 100 120 140 160
LOM to MAP 4.3 3:41 2:52 2:35 2:09 1:51 1:37
MALSR
VASI
1000′
2200′ RT via RSW 111.8 R-140
COFRU
STRAIGHT-IN LANDING RWY 6
MDA(H) 440′(413′)
RAIL out
ALS out
A RVR 40 or 3/4
B RVR 40 or 3/4
C RVR 50 or 1
D RVR 50 or 1
RVR 50 or 1
RVR 60 or 1 1/4
CIRCLE-TO-LAND
Max Kts
MDA(H)
90 480′(450′)-1
120 500′(470′)-1
140 500′(470′)-1 1/2
165 600′(570′)-2
AMEND 4A
CHANGES: Procedure ident, new chart format.
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Exhibit 2-10

Exhibit 2-10

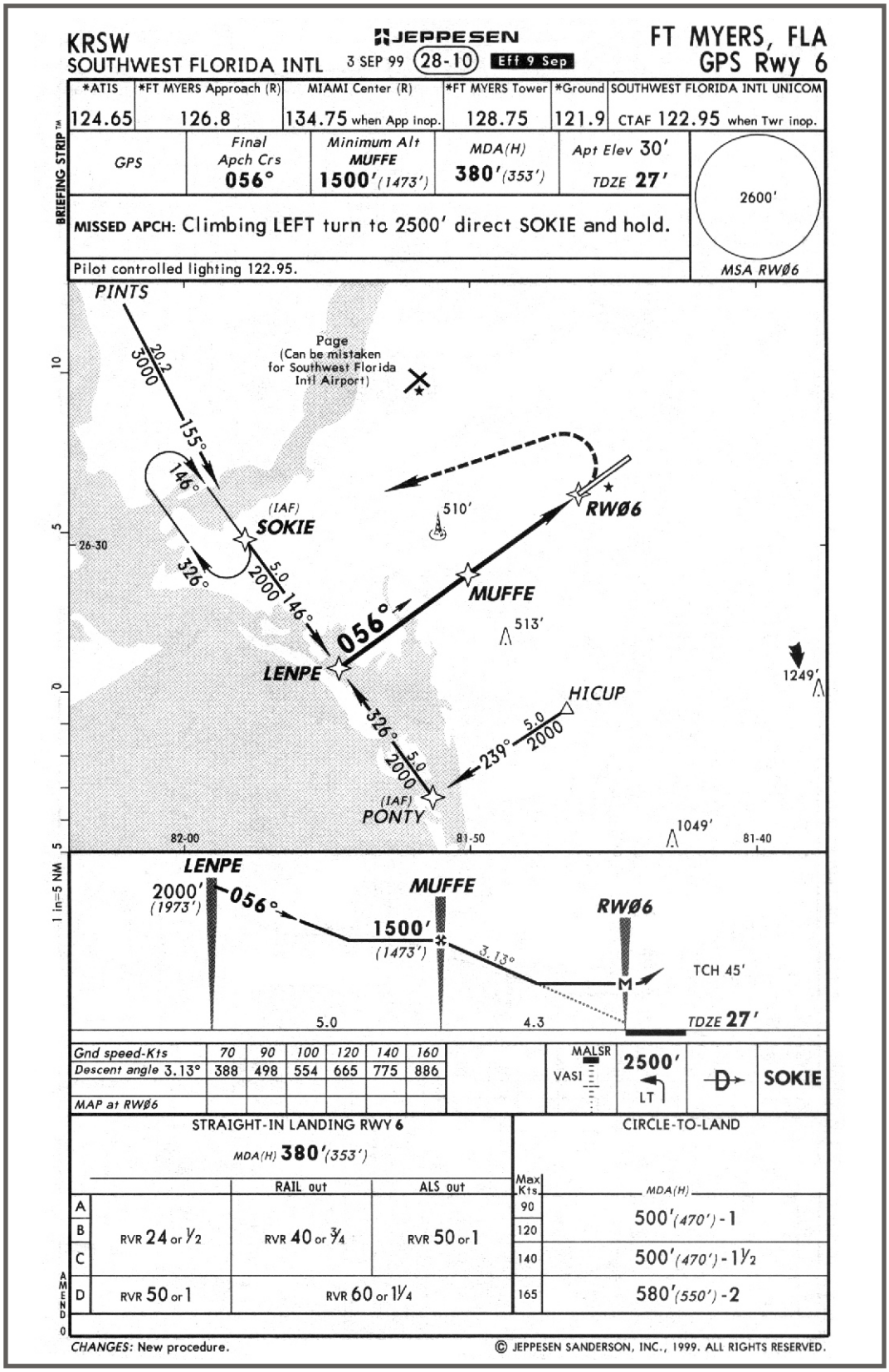
KRSW
SOUTHWEST FLORIDA INTL
JEPPESEN
3 SEP 99 (28-10) Eff 9 Sep
FT MYERS, FLA
GPS Rwy 6
*ATIS 124.65
*FT MYERS Approach (R) 126.8
MIAMI Center (R) 134.75 when App inop.
*FT MYERS Tower 128.75
*Ground 121.9
SOUTHWEST FLORIDA INTL UNICOM CTAF 122.95 when Twr inop.
GPS
Final Apch Crs 056°
Minimum Alt MUFFE 1500′ (1473′)
MDA(H) 380′ (353′)
Apt Elev 30′
TDZE 27′
2600′
MSA RWØ6
MISSED APCH: Climbing LEFT turn to 2500′ direct SOKIE and hold.
Pilot controlled lighting 122.95.
BRIEFING STRIP™
PINTS
20.2
3000
155°
146°
Page
(Can be mistaken for Southwest Florida Intl Airport)
(IAF)
SOKIE
510′
RWØ6
26-30
326°
5.0
2000
146°
056°
MUFFE
513′
LENPE
1249′
HICUP
326°
5.0
2000
239°
5.0
2000
(IAF)
PONTY
1049′
82-00
81-50
81-40
1 in-5 NM
LENPE
2000′
(1973′)
056°
MUFFE
1500′
(1473′)
3.13°
RWØ6
TCH 45′
5.0
4.3
TDZE 27′
Gnd speed-Kts 70 90 100 120 140 160
Descent angle 3.13° 388 498 554 665 775 886
MAP at RWØ6
MALSR
VASI
2500′
LT
SOKIE
STRAIGHT-IN LANDING RWY 6
MDA(H) 380′ (353′)
RAIL out
ALS out
A
B
C
D
RVR 24 or 1/2
RVR 40 or 3/4
RVR 50 or 1
RVR 50 or 1
RVR 60 or 1 1/4
CIRCLE-TO-LAND
Max Kts
MDA(H)
90
120
140
165
500′ (470′) - 1
500′ (470′) - 1 1/2
580′ (550′) - 2
AMENDED 0
CHANGES: New procedure.
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Exhibit 2-11

Exhibit 2-11

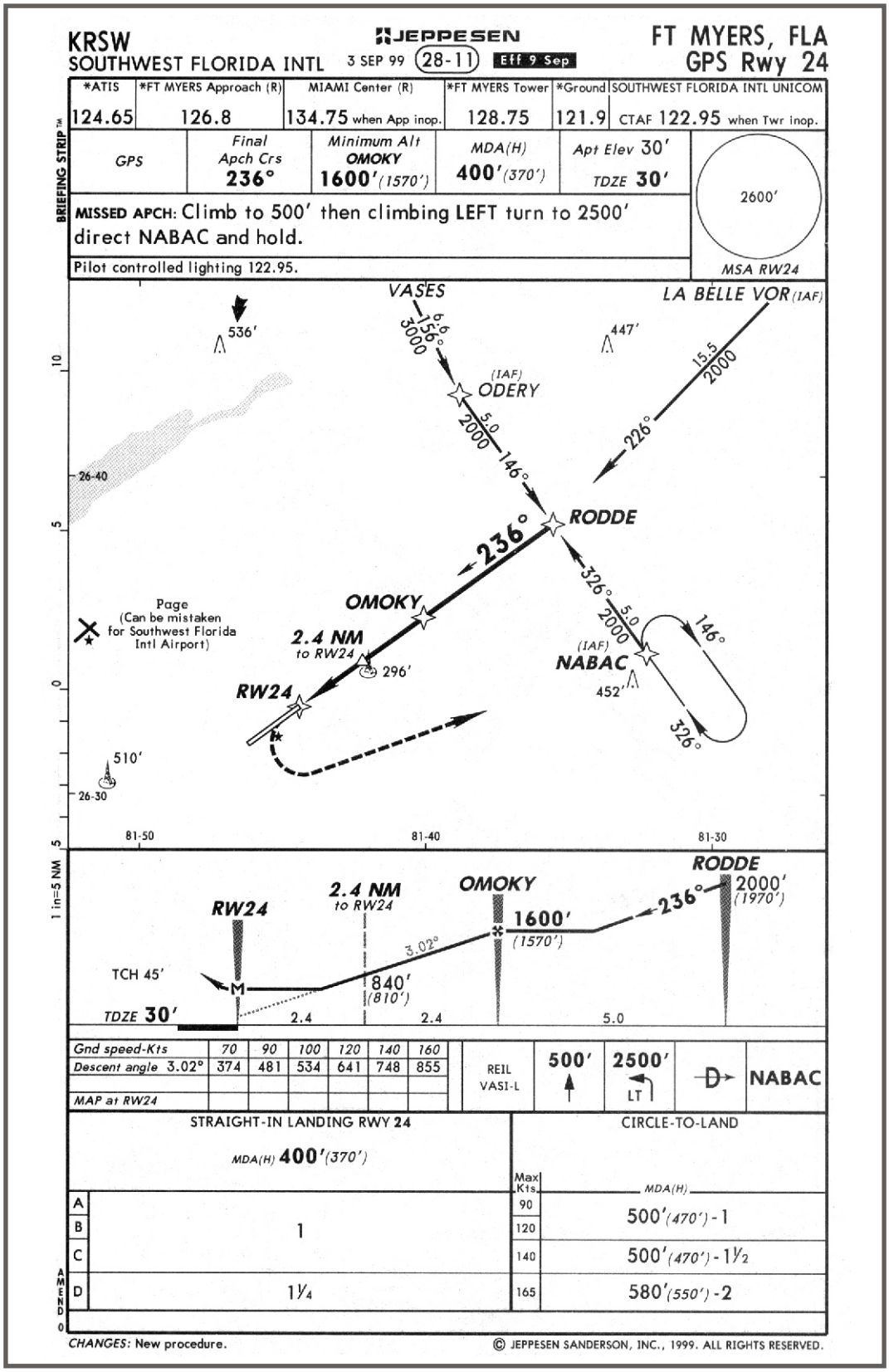
KRSW
SOUTHWEST FLORIDA INTL
JEPPESEN
3 SEP 99 (28-11) Eff 9 Sep
FT MYERS, FLA
GPS Rwy 24
*ATIS 124.65
*FT MYERS Approach (R) 126.8
MIAMI Center (R) 134.75 when App inop.
*FT MYERS Tower 128.75
*Ground 121.9
SOUTHWEST FLORIDA INTL UNICOM CTAF 122.95 when Twr inop.
BRIEFING STRIP™
GPS
Final Apch Crs 236°
Minimum Alt OMOKY 1600′ (1570′)
MDA(H) 400′ (370′)
Apt Elev 30′ TDZE 30′
2600′
MSA RW24
MISSED APCH: Climb to 500′ then climbing LEFT turn to 2500′ direct NABAC and hold.
Pilot controlled lighting 122.95.
VASES
LA BELLE VOR (IAF)
ODERY (IAF)
RODDE
OMOKY
NABAC (IAF)
RW24
2.4 NM to RW24
Page (Can be mistaken for Southwest Florida Intl Airport)
536′
447′
452′
296′
510′
26-40
26-30
81-50
81-40
81-30
1 in=5 NM
TCH 45′
TDZE 30′
3.02°
840′ (810′)
1600′ (1570′)
2000′ (1970′)
Gnd speed-Kts 70 90 100 120 140 160
Descent angle 3.02° 374 481 534 641 748 855
MAP at RW24
REIL
VASI-L
500′
2500′ LT
NABAC
STRAIGHT-IN LANDING RWY 24
MDA(H) 400′ (370′)
CIRCLE-TO-LAND
Max Kts
MDA(H)
A
B
C
D
1
1¼
90
120
140
165
500′ (470′) - 1
500′ (470′) - 1½
580′ (550′) - 2
CHANGES: New procedure.
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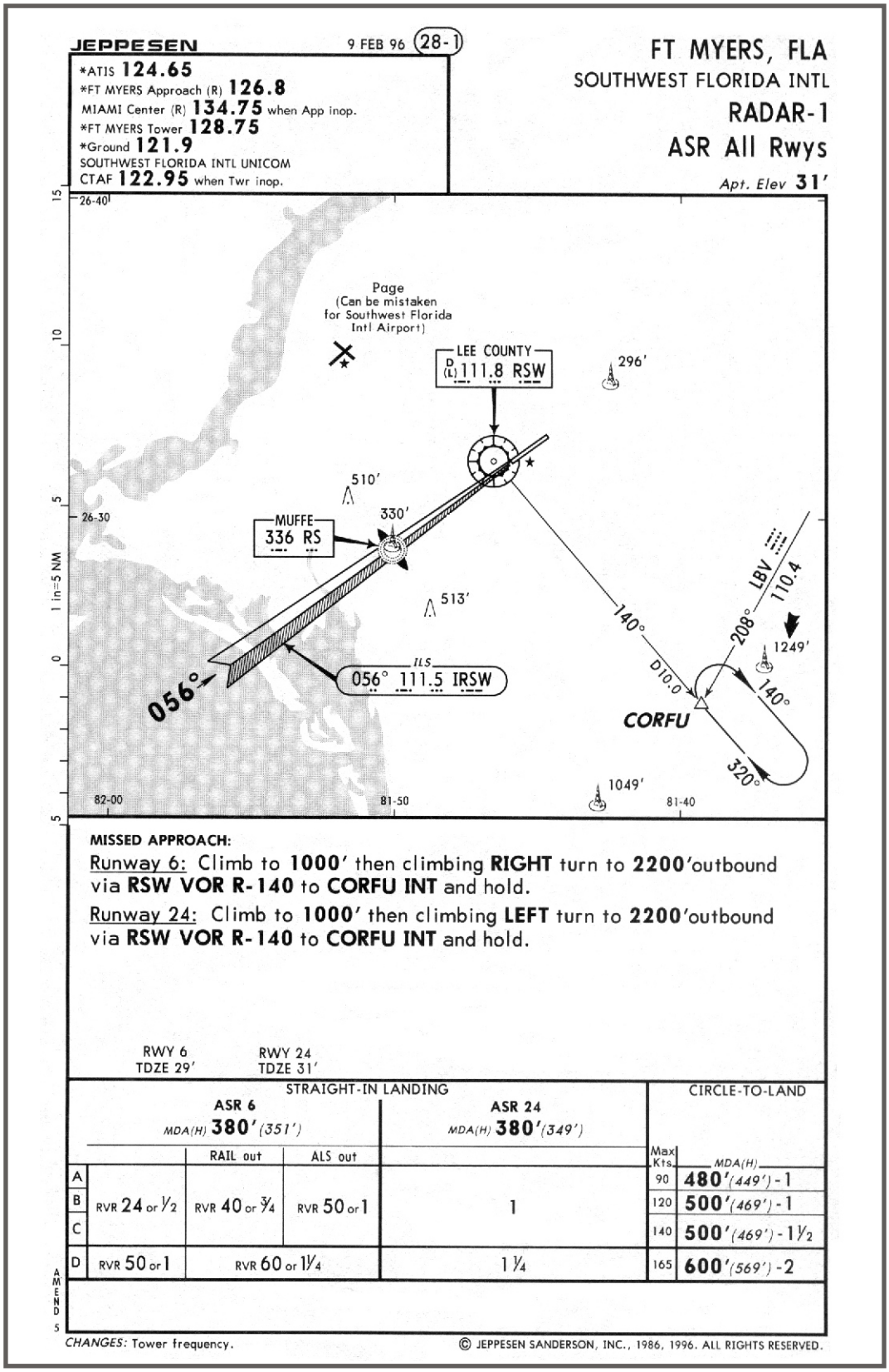
Exhibit 2-12

Exhibit 2-12


JEPPESEN
9 FEB 96 (28-1)
*ATIS 124.65
*FT MYERS Approach (R) 126.8
MIAMI Center (R) 134.75 when App inop.
*FT MYERS Tower 128.75
*Ground 121.9
SOUTHWEST FLORIDA INTL UNICOM
CTAF 122.95 when Twr inop.
FT MYERS, FLA
SOUTHWEST FLORIDA INTL
RADAR-1
ASR All Rwys
Apt. Elev 31'
Page
(Can be mistaken
for Southwest Florida
Intl Airport)
LEE COUNTY
D 111.8 RSW
296'
510'
330'
MUFFE
336 RS
513'
056°
ILS
056° 111.5 IRSW
140°
D10.0
LBV
110.4
208°
1249'
140°
CORFU
320°
1049'
26-40
26-30
82-00
81-50
81-40
1 in=5 NM
MISSED APPROACH:
Runway 6: Climb to 1000' then climbing RIGHT turn to 2200'outbound via RSW VOR R-140 to CORFU INT and hold.
Runway 24: Climb to 1000' then climbing LEFT turn to 2200'outbound via RSW VOR R-140 to CORFU INT and hold.
RWY 6
TDZE 29'
RWY 24
TDZE 31'
STRAIGHT-IN LANDING
ASR 6
MDA(H) 380' (351')
RAIL out
ALS out
ASR 24
MDA(H) 380' (349')
CIRCLE-TO-LAND
Max Kts.
MDA(H)
A
B
C
D
RVR 24 or 1/2
RVR 40 or 3/4
RVR 50 or 1
1
90
480' (449') - 1
120
500' (469') - 1
140
500' (469') - 1 1/2
RVR 50 or 1
RVR 60 or 1 1/4
1 1/4
165
600' (569') - 2
AMEND 5
CHANGES: Tower frequency.
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2.5.3 Standard Instrument Departures (SID)

A Standard Instrument Departure (SID) is an ATC coded departure procedure that has been established at certain airports to simplify clearance delivery procedures. SIDs are carried out by the pilot without vectors from ATC and are also established to assist pilots conducting IFR flight in avoiding obstacles during climb out to Minimum Enroute Altitudes (MEA). There are two SIDs at the RSW. The ALICO TWO DEPARTURE (designated (ALICO2.ALICO) and the SCUBY TWO DEPARTURE (designated SCUBY2.SCUBY) are depicted in **Exhibit 2-13** and **2-14** respectively.

2.5.4 Standard Terminal Arrival (STAR) Procedures

A Standard Terminal Arrival (STAR) is an ATC coded IFR arrival route established for application to arriving IFR aircraft destined for certain airports. The purpose of a STAR is to simplify clearance delivery and facilitate transition between enroute and instrument approach procedures. The one STAR available for use at RSW is identified as the SARASOTA THREE ARRIVAL (SRQ.SRQ3) and is shown in **Exhibit 2-15**.

2.6 AIR TRAFFIC CONTROL TOWER (ATCT)

The Air Traffic Control Tower (ATCT) at RSW and its related facilities are located approximately 2,500 feet southwest of the terminal building next to the ARFF facilities. The tower and the administration building encompass approximately 8,600 square feet. This includes 3,000 square feet of office space added on in 1998. The tower is a FAA facility with a cab floor height of 76.91 feet AGL. The RSW ATCT provides the following primary aircraft control functions for the Airport: local control, approach and departure control, and ground control operations. These services are handled through separate frequencies as shown in **Table 2-2.** In addition, the FAA facilities at RSW provide approach and departure control for Page Field, Naples, Punta Gorda, Charlotte County, Marco Island, and Immokalee airport.

TABLE 2-2
ATCT FREQUENCIES

Control Area	Frequency (MHz)
Automated Terminal Information System (ATIS)	124.65
Fort Myers Approach/Departure	126.80
Fort Myers Tower	128.75
Ground Control	121.90
Miami Center (When RSW tower is closed)	134.75
CTAF (Common Traffic Advisory Frequency)	122.95

Source: Airport Facility Directory

The tower is FAA staffed with a total of 36 air traffic controllers and 11 technicians, with two administrative personnel positions. The tower is attended by FAA personnel from 0600 hrs. to 0000 hrs. After closing hours, Miami Center provides radar coverage for IFR flight up to 3,000 feet.

Exhibit 2-13

Exhibit 2-13

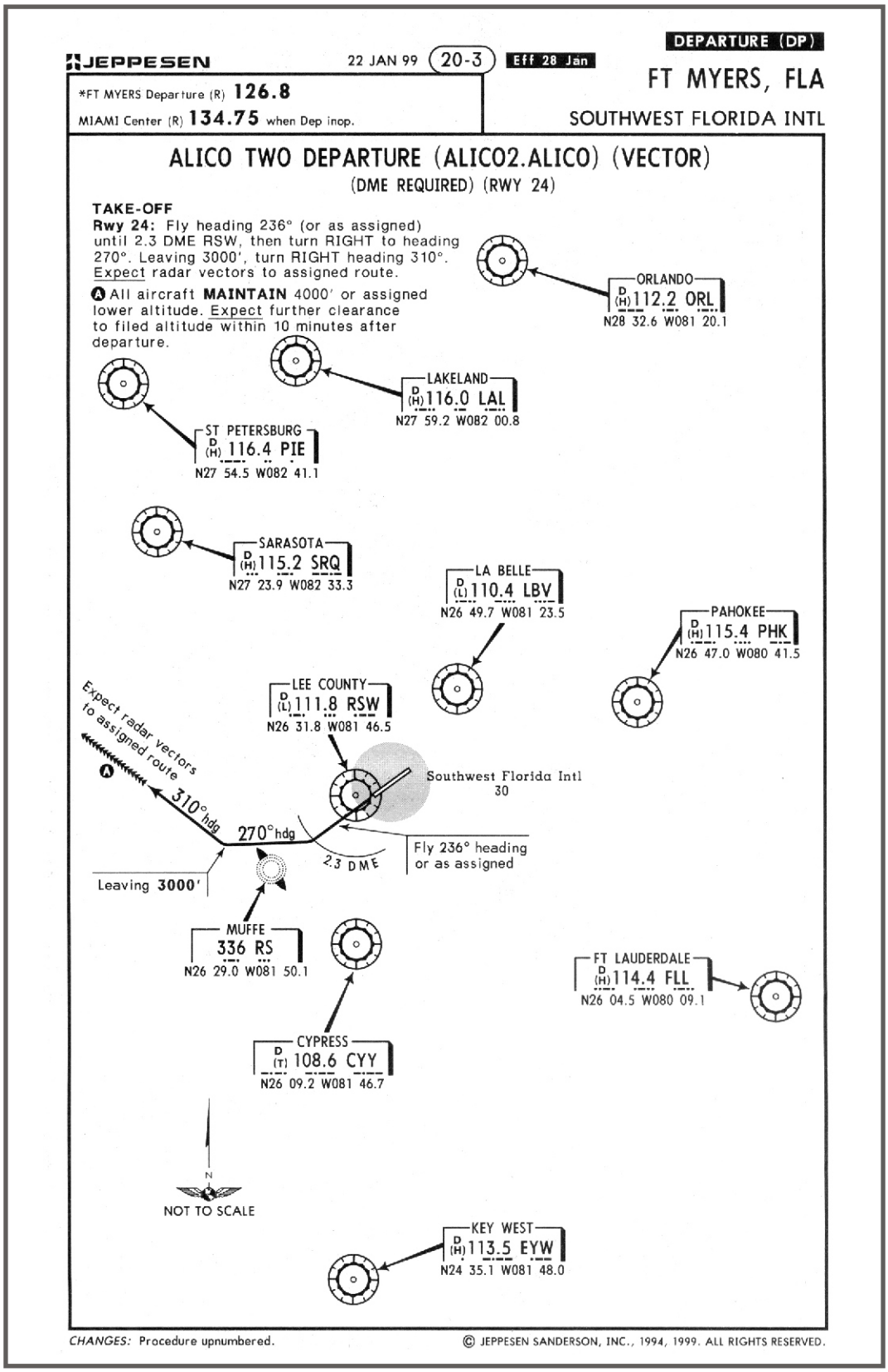
JEPPESEN
22 JAN 99
20-3
Eff 28 Jan
DEPARTURE (DP)
FT MYERS, FLA
SOUTHWEST FLORIDA INTL
*FT MYERS Departure (R) 126.8
MIAMI Center (R) 134.75 when Dep inop.
ALICO TWO DEPARTURE (ALICO2.ALICO) (VECTOR)
(DME REQUIRED) (RWY 24)
TAKE-OFF
Rwy 24: Fly heading 236° (or as assigned) until 2.3 DME RSW, then turn RIGHT to heading 270°. Leaving 3000', turn RIGHT heading 310°. Expect radar vectors to assigned route.
A All aircraft MAINTAIN 4000' or assigned lower altitude. Expect further clearance to filed altitude within 10 minutes after departure.
ORLANDO
D (H) 112.2 ORL
N28 32.6 W081 20.1
LAKELAND
D (H) 116.0 LAL
N27 59.2 W082 00.8
ST PETERSBURG
D (H) 116.4 PIE
N27 54.5 W082 41.1
SARASOTA
D (H) 115.2 SRQ
N27 23.9 W082 33.3
LA BELLE
D (L) 110.4 LBV
N26 49.7 W081 23.5
PAHOKEE
D (H) 115.4 PHK
N26 47.0 W080 41.5
LEE COUNTY
D (L) 111.8 RSW
N26 31.8 W081 46.5
Expect radar vectors to assigned route
A
310° hdg
270° hdg
2.3 DME
Southwest Florida Intl
30
Fly 236° heading or as assigned
Leaving 3000'
MUFFE
336 RS
N26 29.0 W081 50.1
CYPRESS
D (T) 108.6 CYY
N26 09.2 W081 46.7
FT LAUDERDALE
D (H) 114.4 FLL
N26 04.5 W080 09.1
N
NOT TO SCALE
KEY WEST
D (H) 113.5 EYW
N24 35.1 W081 48.0
CHANGES: Procedure upnumbered.
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Exhibit 2-14

Exhibit 2-14

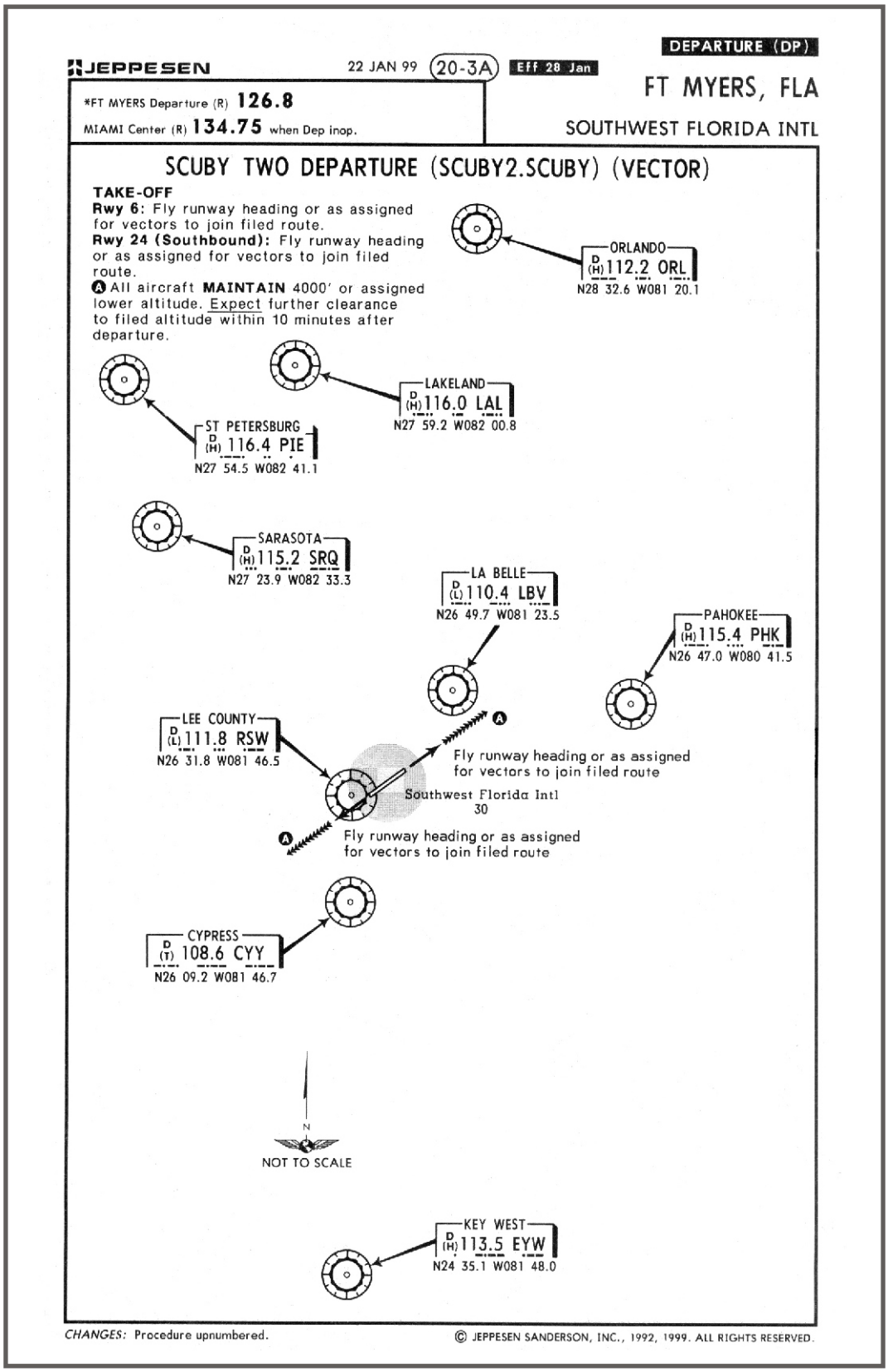
JEPPESEN
22 JAN 99
20-3A
Eff 28 Jan
DEPARTURE (DP)
FT MYERS, FLA
SOUTHWEST FLORIDA INTL
*FT MYERS Departure (R) 126.8
MIAMI Center (R) 134.75 when Dep inop.
SCUBY TWO DEPARTURE (SCUBY2.SCUBY) (VECTOR)
TAKE-OFF
Rwy 6: Fly runway heading or as assigned for vectors to join filed route.
Rwy 24 (Southbound): Fly runway heading or as assigned for vectors to join filed route.
A All aircraft MAINTAIN 4000' or assigned lower altitude. Expect further clearance to filed altitude within 10 minutes after departure.
ORLANDO
D (H) 112.2 ORL
N28 32.6 W081 20.1
LAKELAND
D (H) 116.0 LAL
N27 59.2 W082 00.8
ST PETERSBURG
D (H) 116.4 PIE
N27 54.5 W082 41.1
SARASOTA
D (H) 115.2 SRQ
N27 23.9 W082 33.3
LA BELLE
D (L) 110.4 LBV
N26 49.7 W081 23.5
PAHOKEE
D (H) 115.4 PHK
N26 47.0 W080 41.5
LEE COUNTY
D (L) 111.8 RSW
N26 31.8 W081 46.5
Fly runway heading or as assigned for vectors to join filed route
Southwest Florida Intl
30
Fly runway heading or as assigned for vectors to join filed route
CYPRESS
D (T) 108.6 CYY
N26 09.2 W081 46.7
N
NOT TO SCALE
KEY WEST
D (H) 113.5 EYW
N24 35.1 W081 48.0
CHANGES: Procedure upnumbered.
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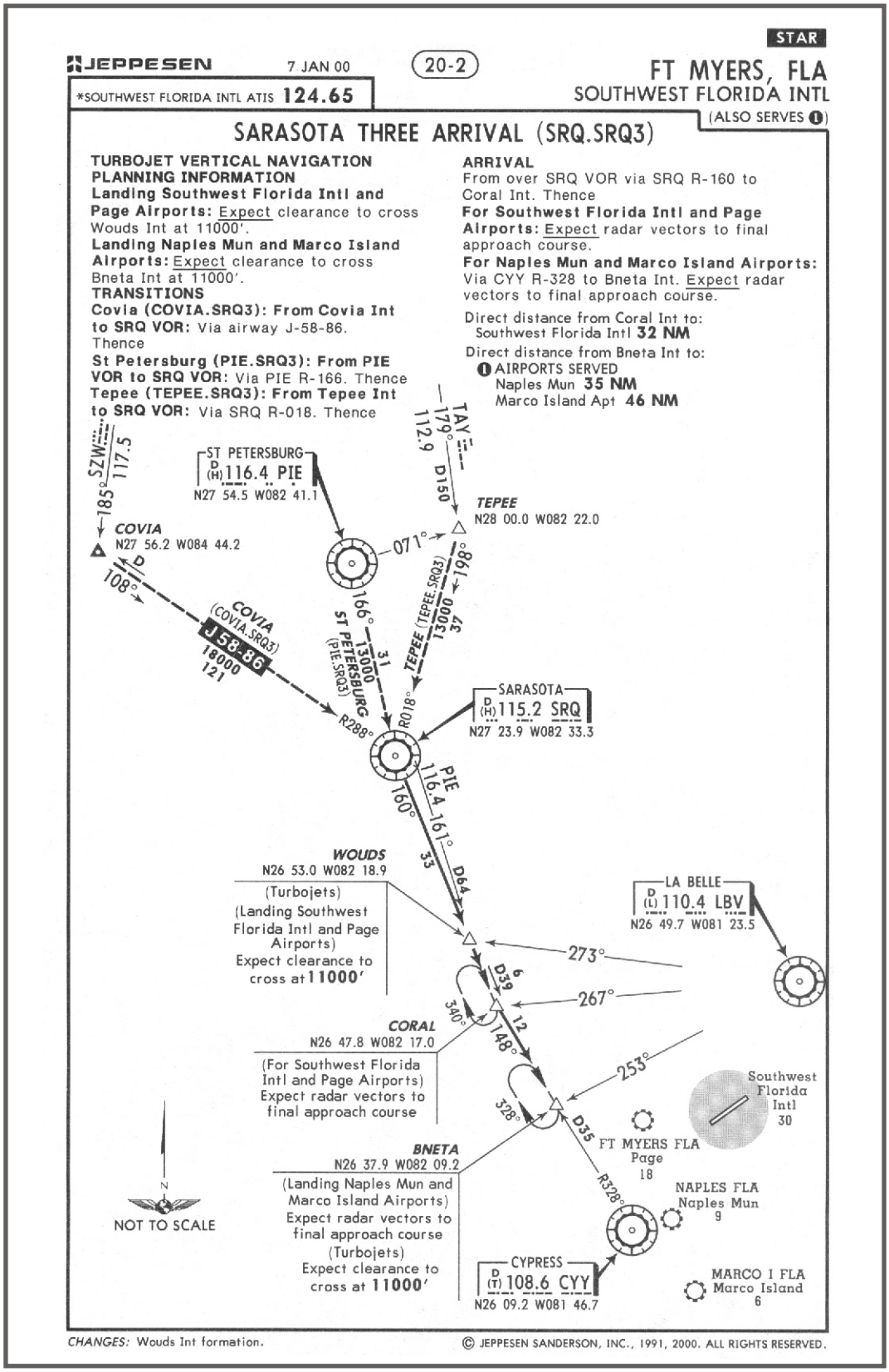
Exhibit 2-15

Exhibit 2-15


STAR
JEPPESEN
7 JAN 00
20-2
FT MYERS, FLA
SOUTHWEST FLORIDA INTL
*SOUTHWEST FLORIDA INTL ATIS 124.65
(ALSO SERVES 1)
SARASOTA THREE ARRIVAL (SRQ.SRQ3)
TURBOJET VERTICAL NAVIGATION PLANNING INFORMATION
Landing Southwest Florida Intl and Page Airports: Expect clearance to cross Wouds Int at 11000'.
Landing Naples Mun and Marco Island Airports: Expect clearance to cross Bneta Int at 11000'.
TRANSITIONS
Covia (COVIA.SRQ3): From Covia Int to SRQ VOR: Via airway J-58-86. Thence
St Petersburg (PIE.SRQ3): From PIE VOR to SRQ VOR: Via PIE R-166. Thence
Tepee (TEPEE.SRQ3): From Tepee Int to SRQ VOR: Via SRQ R-018. Thence
ARRIVAL
From over SRQ VOR via SRQ R-160 to Coral Int. Thence
For Southwest Florida Intl and Page Airports: Expect radar vectors to final approach course.
For Naples Mun and Marco Island Airports: Via CYY R-328 to Bneta Int. Expect radar vectors to final approach course.
Direct distance from Coral Int to:
Southwest Florida Intl 32 NM
Direct distance from Bneta Int to:
1 AIRPORTS SERVED
Naples Mun 35 NM
Marco Island Apt 46 NM
ST PETERSBURG
D (H) 116.4 PIE
N27 54.5 W082 41.1
TAY
179°
112.9
D150
TEPEE
N28 00.0 W082 22.0
SZW
185°
117.5
COVIA
N27 56.2 W084 44.2
D
108°
071°
166°
198°
13000
37
TEPEE (TEPEE.SRQ3)
ST PETERSBURG (PIE.SRQ3)
31
COVIA (COVIA.SRQ3)
J 58-86
18000
121
R288°
R018°
SARASOTA
D (H) 115.2 SRQ
N27 23.9 W082 33.3
PIE
116.4
160°
161°
33
D64
WOUDS
N26 53.0 W082 18.9
(Turbojets)
(Landing Southwest Florida Intl and Page Airports)
Expect clearance to cross at 11000'
LA BELLE
D (L) 110.4 LBV
N26 49.7 W081 23.5
273°
267°
6
D39
340°
12
148°
CORAL
N26 47.8 W082 17.0
(For Southwest Florida Intl and Page Airports)
Expect radar vectors to final approach course
253°
328°
D35
Southwest Florida Intl
30
FT MYERS FLA
Page
18
BNETA
N26 37.9 W082 09.2
(Landing Naples Mun and Marco Island Airports)
Expect radar vectors to final approach course
(Turbojets)
Expect clearance to cross at 11000'
R328°
NAPLES FLA
Naples Mun
9
N
NOT TO SCALE
CYPRESS
D (T) 108.6 CYY
N26 09.2 W081 46.7
MARCO I FLA
Marco Island
6
CHANGES: Wouds Int formation.
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2.6.1 Local Control

The local controller of the RSW ATCT is primarily responsible for the separation of aircraft operating within the airport traffic area and the clearance for those aircraft landing and departing on any of the active runways. This occurs on the "Fort Myers Tower" frequency.

2.6.2 Ground Control

The ground controller is responsible for the separation of aircraft and vehicles operating on the ramp, taxiways, and any inactive runway. This responsibility includes aircraft taxiing out for takeoff, aircraft taxiing into the terminal areas, and any ground vehicles operating on airport movement areas. "Fort Myers" Ground Control is responsible for coordination of traffic in all designated aircraft movement areas.

2.6.3 Approach and Departure Control (ARTCC)

Approach/Departure Control at RSW controls all arriving and departing IFR aircraft traffic. This IFR traffic control is retained until the aircraft either departs the Class C airspace, is handed over to the local controller for landing, or reports the airport in sight and the pilot cancels the IFR clearance and lands visually. On departure, (under IFR conditions with the tower operating), an aircraft may obtain IFR clearance from the RSW ARTCC after becoming airborne. The center retains control of all arriving and departing IFR traffic within its jurisdiction.

2.6.4 Automatic Terminal Information Service

Automatic Terminal Information Service (ATIS) is available to pilots operating into or out of RSW. The ATIS information provides pilots with required airport and meteorological information. This information, which is updated every time there is a significant change, is continuously broadcast on a separate frequency (124.65 MHz). The use of ATIS information greatly reduces the workload and radio time required by the air traffic and ground controllers at the airport.

2.6.5 Non-Movement Areas

The only non-movement areas at RSW are the Terminal Apron, the GA Apron, and the Cargo Apron. Taxilane B is considered part of the aircraft movement area and is not part of the terminal apron.

2.6.6 Remote Communications Outlet Transmitter

There are five (5) FAA Remote Communications Outlets (RCO) for other Southwest Florida area airports serviced by the RSW ARTCC and radar facility. These facilities help extend the

communication range of the Miami Flight Service Station to better serve the Southwest Florida area. The remote transmitters for the RCOs are located next to the RSW ARFF and Police Training Facility.

2.7 PASSENGER TERMINAL AREA

The passenger terminal facilities at Southwest Florida International Airport are located on the northwest side of the runway. Included in the terminal area are the passenger terminal building, aircraft parking apron, automobile parking facilities, and airport support areas. The following paragraphs describe these facilities in more detail.

2.7.1 Passenger Terminal

Pursuant to the Participating Airline Use Agreement, upon completion of the Midfield Terminal Complex, the current passenger terminal facilities discussed in this section will cease to be used for passenger service.

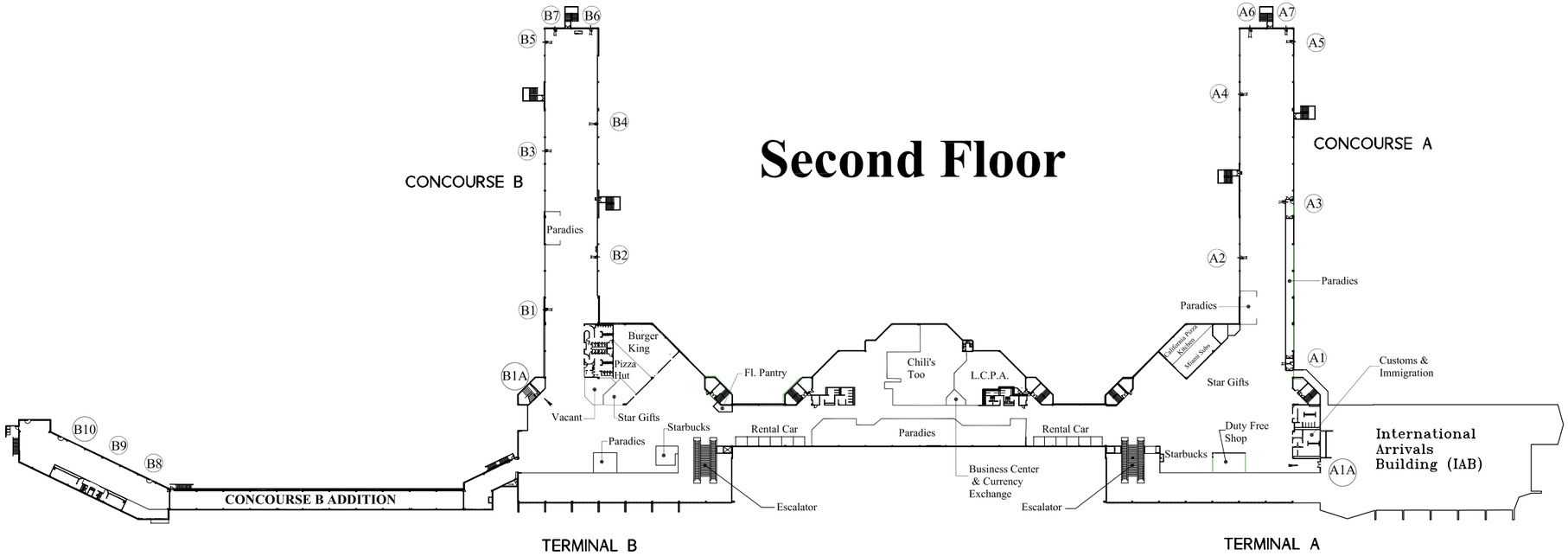
The existing passenger terminal building has a total footprint of approximately 380,915 square feet. Since the opening of the Airport in 1983, two main areas were added to the terminal. These areas include the 48,211 square foot International Arrivals Building (IAB) completed in 1993 and a 31,314 square foot Concourse B three-gate addition completed in March 1999.

The passenger terminal is a two-story structure with two main concourses extending south and perpendicular to the main terminal. The first floor of the terminal primarily consists of airline ticketing counters, the baggage claim area, and access to ground transportation. In addition, the first floor houses airline administrative offices and Lee County Port Authority offices in the Concourse B extension. The second floor contains the rental car check-in counters, concessions, public business centers, restaurants, passenger lounges and waiting areas for the 17 existing gates. Additionally, the main LCPA executive director's offices and administrative offices are located on the second floor.

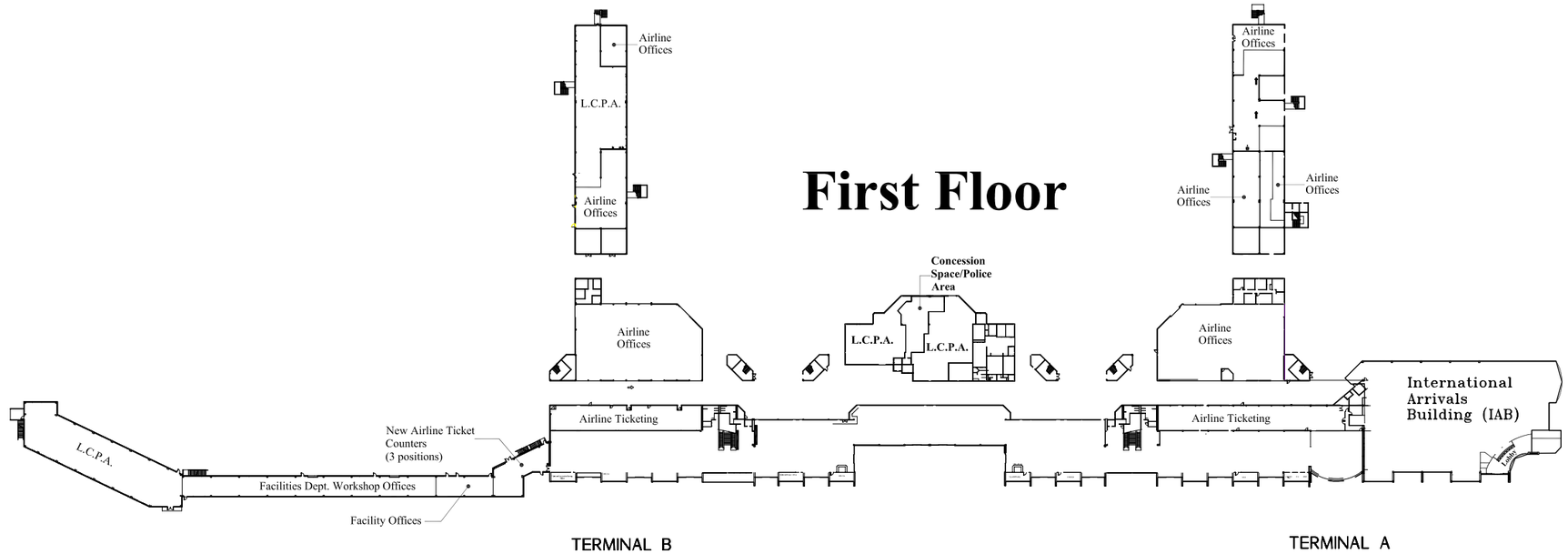
The two concourse extensions are designated Concourse A and Concourse B. Concourse A is located on the western side of the terminal and extends perpendicularly from the terminal in a southerly direction for approximately 290 feet. Concourse A includes gates A-1 through A-7 in addition to Gate A1A which accommodates commuter aircraft. Concourse B is located on the eastern side of the terminal and also extends perpendicularly for approximately 290 feet. Concourse B has gates B-1 through B-10 with Gate B1A accommodating commuter aircraft. Gates B-8 through B-10 constitute the new eastern wing of the terminal building. The terminal's basic two-floor layout and related concourses are illustrated in **Exhibit 2-16**.

Exhibit 2-16

Second Floor



First Floor



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SOUTHWEST FLORIDA INTERNATIONAL AIRPORT
FORT MYERS, FLORIDA

MASTER PLAN UPDATE

TERMINAL FLOOR PLAN

DATE:	MARCH 2004
PROJECT NO:	C06901
FILE NAME:	ALP/6901A-FL01
DESIGNED BY:	S.R
DRAWN BY:	K.P
CHECKED BY:	S.R

EXHIBIT

2-16

For a rough representation of terminal space usage, the total terminal area was categorized into the following functional areas:

- Airline Space
- Public Space
- Concessions
- Management/Administration
- Utilities
- Additional Areas (Commuter Terminal and FIS)

The square footage amounts for each of the items above are depicted in **Table 2-3**.

TABLE 2-3
BREAKDOWN OF TERMINAL SPACE USAGE

Use	Area (s.f.)	Percentage of Total
Airline Space	102,045	27%
Public Space	113,130	30%
Concessions	28,405	8%
Management/Administration	21,705	5%
Utilities	36,105	10%
Additional Areas	79,525	20%
TOTAL	**380,915**	**100%**

Source: LCPA

Each of the space classifications mentioned above is further detailed in the following sections.

Airline Space

The majority of the airlines currently serving the airport are domestic airlines, however, several international flights operate out of RSW weekly. **Table 2-4** outlines the domestic and international airlines serving RSW.

Airline space includes those areas devoted to the day-to-day operations of these airlines. At the current terminal facility, there are 102,045 square feet (or 27 percent) of airline space, which includes the ticket counter area; airline ticket and administrative offices; the baggage area including outbound, inbound, claim, and baggage service offices; gate hold-rooms; operations space; and, club rooms or customer service rooms.

TABLE 2-4
AIRLINES SERVING SOUTHWEST FLORIDA INTERNATIONAL AIRPORT

Airline	Type of Service	Terminal
Air Canada	International	A
Air Tran	Domestic	A
Air Transat	International	A
America West	Domestic	A
America West Express	Domestic	A
American Airlines/American Eagle	Domestic	A
America Trans Air (ATA)	Domestic	A

Balair/CTA	International	A
Canada 3000	International	A
Cape Air c/o Delta Air Lines	Domestic	B
Comair	Domestic	B
Condor	International	A
Continental Airlines	Domestic	B
Continental Express	Domestic	B
Delta Air Lines	Domestic	B
Florida Air	Domestic	A
JetBlue	Domestic	A
LTU International Airways	International	A
Lynx Air International	Domestic	A
Metro Jet	Domestic	A
Midwest Express	Domestic	B
Northwest Airlines	Domestic	B
Spirit Airlines	Domestic	A
Sun Country	Domestic	A
TWA	Domestic	B
United Airlines	Domestic	A
US Airways	Domestic	A

Source: LCPA, 2001

Public Space

Public space includes those areas that do not contribute to the overall revenue of the airport and are available for use by the general public. These areas include public seating, waiting areas, ticket counter queuing areas for airline and rental car ticketing, secure circulation areas (including security screening areas), general circulation areas, and restrooms. The total area occupied by public space at RSW encompasses approximately 113,130 square feet or 30 percent of the total terminal space.

Concessions

Concession space includes all revenue producing areas other than airline space. Concession areas are located throughout the terminal primarily on the second floor. Existing concession space at RSW encompasses approximately 28,405 square feet or 8 percent of the total terminal space. General concessions include items such as candy/gift shops, automatic teller machines, currency exchange, newsstands, apparel shops, baggage carts, advertising, telephone areas, and ground transportation. In terms of food and beverage, concession items may include dining rooms, coffee shops, snack bars, cocktail lounges, and restaurants.

Management/Administration

Space for management and administration includes all areas devoted to day-to-day management, operations, and administration of the Airport. This area encompasses a total of 19,410 square feet, or five (5) percent of the total area, and applies to functions such as building maintenance, management/administration offices, employee facilities, security and police facilities, and general management services (i.e. lost and found, infirmary, information, chapel, etc.).

Utilities

Utility space at the RSW passenger terminal is comprised of mechanical and electrical equipment, and space for tug and service drives. The mechanical and electric equipment space is required to distribute utilities throughout the building. The tug and services drives are used for the delivery of baggage to the baggage input belts, as well as areas for service delivery. These areas encompass a total area of 36,105 square feet or 10 percent of the total area.

Additional Areas

The additional areas in the terminal include those areas recently added to the facility to accommodate increased airport operations and the need to efficiently process international passenger flights. The two additional areas at Southwest Florida International Airport include the International Arrivals Building (IAB), which houses the Federal Inspection Service (FIS), and the eastern Concourse B extension. The IAB encompasses 48,211 square feet and the Concourse B addition encompasses 31,314 square feet. Combined, these areas encompass 79,525 square feet encompassing 20 percent of the total terminal area. The Concourse B addition houses three gates and associated holding room areas on the second floor. The first floor is used by the Facilities Department for workshops. In addition, LCPA offices are also located on the first floor, under the concourse's public waiting areas. The IAB includes all the equipment and facilities for the FIS facility. The facility also includes a commuter terminal addition.

2.7.2 Terminal Curb

The terminal curb at RSW has two full length individual curb areas each of which serves both terminal facilities. The inner curb is 5 lanes, approximately 1,000 lineal feet in length, and located immediately adjacent to the terminal entrances. This inner curb functions as both an arrivals curb and departures curb serving all private automobile traffic. The outer curb is approximately 600 feet in length, centered outside the baggage claim area. The outer curb has 2 vehicle traffic lanes and is used solely by commercial vehicles dropping off and picking up passengers at the airport. Only in the event of inclement weather conditions the taxis, shuttles and buses may use the inner curb for passenger pick up and drop off.

The inner curb serves both arriving and departing passengers and is broken into multiple sections relative to such. The departure curb area is approximately 420 lineal feet split between two separate locations. The first is located at the beginning of the inner terminal curb and the second at the far end of the inner terminal curb. This is mainly due to the location of Concourse A and Concourse B. The departure curb for each is located directly in front of the airline ticket counters that serve each of the concourses for the convenience of the traveling public. Between the two departure curbs is the single arrivals curb, approximately 300 lineal feet and is located immediately outside of the baggage claim area. Again, the location is based upon passenger convenience so checked baggage can be picked up and the passenger can walk out the doors and get into a car, taxi, shuttle, or bus and be transported to their final destination. Additionally, the inner curb has approximately 280 linear feet of curb front dedicated for the FIS facility and the international passengers.
In front of the terminal where the inner and outer curbs are located a 6 foot wide median segregates the two curb areas. Both of these curb fronts have one way circulation of traffic in a

counter clockwise direction which begins well before entering the terminal area. The terminal area is clearly marked with numerous signs.

2.7.3 Terminal Automobile Parking

Parking for both passengers and employees is provided in the terminal area. The main passenger parking lot is located directly north of the terminal building. This lot is divided into both a short-term and a long-term parking lot. The short-term parking area contains approximately 735 paved parking spaces. The long-term parking area contains a total of 1,621 paved parking spaces. There is also an economy parking lot located directly west of the terminal. This lot is reserved for longer (overnight) parking times at lesser parking rates. This lot provides for an additional 1,935 parking spaces. Additional space, approximately 86 parking spaces are reserved specifically for taxis.

The employee parking spaces are located in several areas around the terminal parking lot. The total number of spaces available for employee parking is 614 spaces. During peak times around the Thanksgiving and Christmas holidays, the employee lot becomes part of the passenger parking lot and overflow public parking is provided during peak at the Lee County Sports Complex off of 6-Mile Cypress Parkway. This facility provides for approximately 2,400 parking spaces. The employee parking lot shifts to areas further removed from the terminal. **Table 2-5** provides a breakdown of the abovementioned parking areas.

TABLE 2-5
TERMINAL AUTOMOBILE PARKING

Facility	Total Spaces
Short-term parking	735
Long-term parking	1,621
Economy parking	1,935
Employee parking	614
Total	**4,905**

Source: LCPA

Additional parking will be provided upon completion of the "East/West Parking Area Expansion Project". This project will provide additional parking areas on the eastern and western sides of the existing main public parking lot at RSW. The new parking areas, and modifications to the existing parking lot provide approximately 817 additional parking spaces. This includes an additional 403 short term parking positions, 358 long term parking positions and 56 additional employee parking positions. Other project improvements consist of one (1) additional toll plaza land and booth; two (2) additional pass-thru gates and circulation improvements from the short-term parking area; two (2) bus shelters serving the western most long-term and employee parking areas; and, barrier fencing for the expanded parking areas.

2.7.4 Terminal Access

The terminal access road system at RSW is a one-way "return loop" type system and runs in a counter-clockwise direction. The entrance to the main terminal access road at RSW is located northwest of the terminal facility and extends south from Daniels Parkway. This road is named

Chamberlin Parkway. Chamberlin Parkway has two separate roadways, one for inbound vehicular traffic and one for outbound vehicular traffic. The inbound roadway runs from west to east and provides access to the terminal curbs. The road expands to four eastbound lanes in the terminal area. The roadway then loops back in an east to west direction around the terminal parking areas and south of the rental car facilities, and then exits back into Daniels Parkway.

In addition to the main Chamberlin Parkway loop roadway, there is another entry/exit road that extends from the northeast corner of the loop roadway to Daniels Parkway. This road is named the Paul J. Doherty Parkway. This road provides access to the terminal from the northeast quadrant of the Airport and provides access to future land development areas.

2.8 LANDSIDE/SUPPORT FACILITES

The existing landside facilities at Southwest Florida International Airport are listed below and depicted in **Exhibit 2-17.**

- General Aviation/Fixed Base Operator (FBO)
- Air Traffic Control
- Rental Car Facilities
- Cargo Facilities
- Fuel Facilities
- Airport Rescue and Fire-fighting
- Maintenance Facilities
- Other Facilities

2.8.1 General Aviation/Fixed Base Operator (FBO)

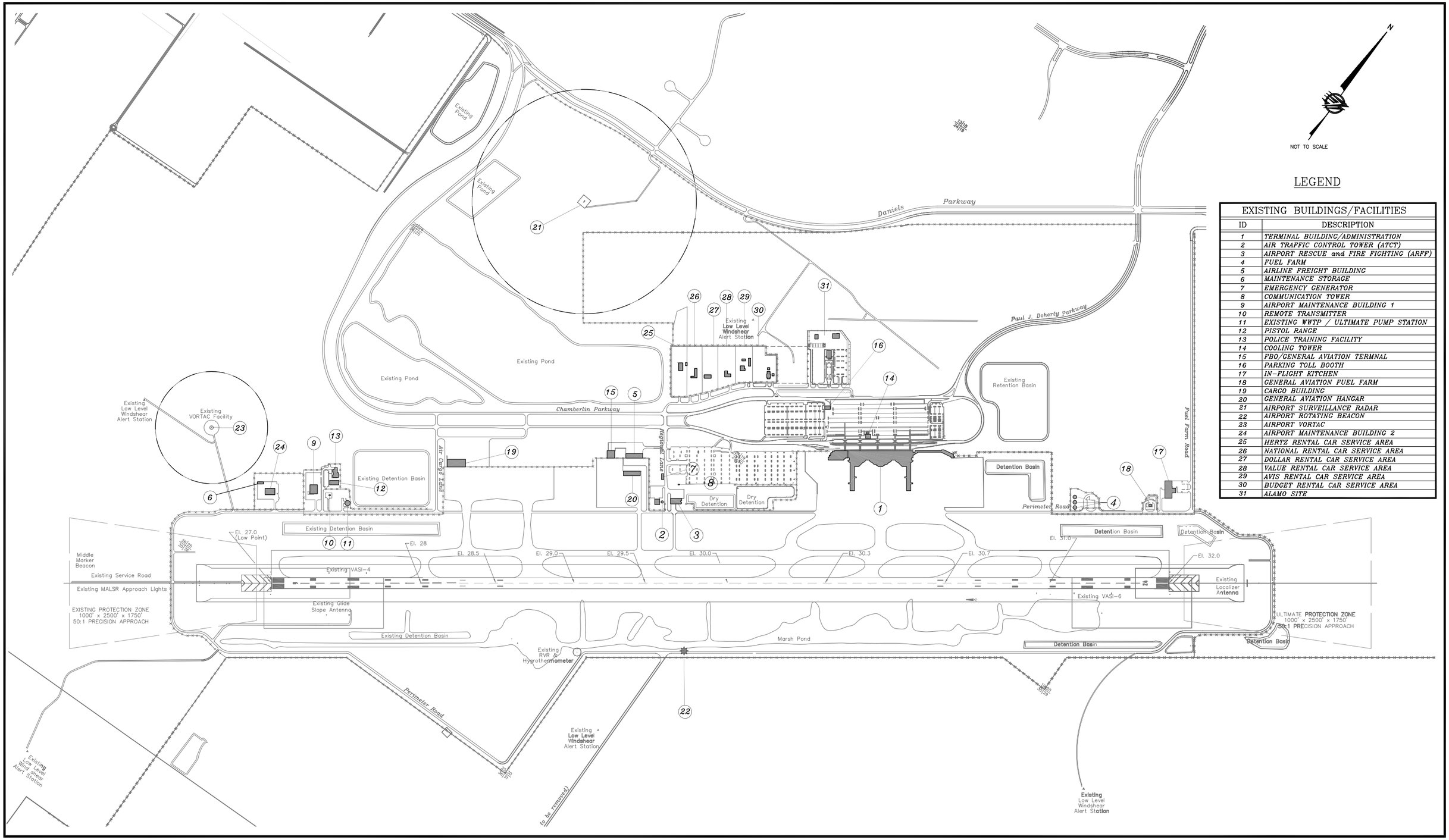
The General Aviation/Fixed Base Operator (FBO) at RSW is located on the north side of the Airport approximately 3,500 feet west of the passenger terminal. The facility is a full-service FBO providing hangar space; maintenance service for fixed-wing and helicopter aircraft; Jet A and Avgas fuel; on-call customs service; 24-hour security; pilot briefing, planning and conference rooms; and pilot supplies.

The two-story 8,000 square foot FBO building has pilot facilities and a service desk all located on the first floor and administration offices located on the second floor. The facility also includes a general aviation ramp encompassing approximately 26,000 square yards. The apron provides three sets of cable row tie-down lanes that can host a total of 25 to 30 general aviation light aircraft. Jet aircraft are usually parked in front of the FBO building and this area can accommodate up to ten jet aircraft of various sizes. Additional aircraft parking can be accommodated depending on the aircraft mix at a given time.

Initial planning is underway for the construction of a new general aviation facility some 800 feet west of the existing FBO. This new facility will include a modern terminal building and expande parking apron and hangar facilities to service corporate business jets and the general aviation aircraft community.

The existing 26,180 square foot FBO hangar was built in 1996. It is partitioned into two halves and can accommodate various types of general aviation aircraft. The hangar's primary purpose is to provide aircraft storage and support for aircraft maintenance operations.

Exhibit 2-17



LEGEND

EXISTING BUILDINGS/FACILITIES	
ID	DESCRIPTION
1	TERMINAL BUILDING/ADMINISTRATION
2	AIR TRAFFIC CONTROL TOWER (ATCT)
3	AIRPORT RESCUE and FIRE FIGHTING (ARFF)
4	FUEL FARM
5	AIRLINE FREIGHT BUILDING
6	MAINTENANCE STORAGE
7	EMERGENCY GENERATOR
8	COMMUNICATION TOWER
9	AIRPORT MAINTENANCE BUILDING 1
10	REMOTE TRANSMITTER
11	EXISTING WWTP / ULTIMATE PUMP STATION
12	PISTOL RANGE
13	POLICE TRAINING FACILITY
14	COOLING TOWER
15	FBO/GENERAL AVIATION TERMNAL
16	PARKING TOLL BOOTH
17	IN-FLIGHT KITCHEN
18	GENERAL AVIATION FUEL FARM
19	CARGO BUILDING
20	GENERAL AVIATION HANGAR
21	AIRPORT SURVEILLANCE RADAR
22	AIRPORT ROTATING BEACON
23	AIRPORT VORTAC
24	AIRPORT MAINTENANCE BUILDING 2
25	HERTZ RENTAL CAR SERVICE AREA
26	NATIONAL RENTAL CAR SERVICE AREA
27	DOLLAR RENTAL CAR SERVICE AREA
28	VALUE RENTAL CAR SERVICE AREA
29	AVIS RENTAL CAR SERVICE AREA
30	BUDGET RENTAL CAR SERVICE AREA
31	ALAMO SITE

Lee County Port Authority

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SOUTHWEST FLORIDA INTERNATIONAL AIRPORT
FORT MYERS, FLORIDA

MASTER PLAN UPDATE

EXISTING FACILITIES

DATE:	MARCH 2004
PROJECT NO:	C06901
FILE NAME:	ALP/6901N-AL01
DESIGNED BY:	F.B
DRAWN BY:	K.P
CHECKED BY:	S.R

EXHIBIT

2-17

The existing 26,180 square foot FBO hangar was built in 1996. It is partitioned into two halves and can accommodate various types of general aviation aircraft. The hangar's primary purpose is to provide aircraft storage and support for aircraft maintenance operations.

The General Aviation aircraft fuel supply comes from the FBO's fuel farm. The fuel farm is owned and operated by the FBO and is discussed in detail in the **Fueling Facilities** section.

2.8.2 Fueling Facilities

There are two fuel farms located at the Airport. Most of the commercial service airlines receive their fuel from the fueling storage and hydrant-fueling facility owned by the Lee County Port Authority and leased to a consortium of passenger airlines known as "The Fueling Airlines". The Fueling Airlines have contracted with Swissport Fueling, Inc. to operate the fuel farm and related facilities and equipment. The storage facilities are located approximately 1,000 feet east of the terminal apron's eastern edge. As of January 2001, Swissport Fueling, Inc. employed 14 personnel and operates from a 2,150 square foot (approximation) fuel farm building. The company owns three (3) 420,000 gallon Jet A fuel tanks, with additional expansion space to construct another 420,000 gallon tank. In addition, the company owns and operates three (3) fuel trucks with the following capacities:

- (2) 5,000 gallon trucks
- (1) 2,500 gallon truck
- (6) hydrant fueling carts

It should be noted that the vast majority of aircraft fueling at RSW is accomplished by use of the Swissport operated hydrant fueling system. Swissport's six (6) hydrant carts are used to deliver fuel from in-ramp parking gate hydrant fueling stations into parked aircraft. Additionally, 70,105 gallons of fuel are in the line fill.

The other fuel owner and operator is the FBO. The general aviation fuel farm is located north of the parallel taxiway on the northeast portion of the Airport approximately 3,000 feet east of the existing Airline Passenger Terminal. The FBO owns and operates four (4) 15,000 gallon Jet A fuel tanks and one (1) 12,000 gallon AvGas 100LL fuel tank. This fuel is dispensed by six (6) FBO operated fuel trucks which include:

- (1) 2,200 gallon AvGas Truck
- (1) 2,000 gallon Jet A Truck
- (1) 10,000 gallon Jet A Truck
- (1) 8,000 gallon Jet A Truck
- (2) 5,000 gallon Jet A Trucks

2.8.3 Airport Rescue and Fire-fighting (ARFF)

Facility

The Aircraft Rescue and Fire Fighting (ARFF) facility at RSW is located approximately 2,500 feet west of the passenger terminal and is located next to the air traffic control tower facility.

Southwest Florida International Airport's ARFF facilities meet a FAA ARFF Index "D" rating and have the potential to achieve an Index "E" rating as may be required by future airport expansion and air carrier utilization of increasingly larger aircraft. The RSW ARFF station is designated as "Station II", with "Station I" being located at Page Field (FMY). Station II is a 12,500 SF structure with an additional 590 SF expansion under construction at this time. There are eight (8) equipment/apparatus parking bays with four (4) having landside access and four (4) having airside access. On the west and east sides of the bays are gear lockers, storage, and work areas, and a 400 square foot mezzanine is used for storage. The living area encompasses approximately 6,700 square feet and includes offices, a locker room, employee and public restroom facilities, training room, A/V room, kitchen, bunkroom, dining and dayroom areas. The overall building condition is fair to poor and may require near future remodeling.

Parking Areas

ARFF employee and public automobile parking is located in a 10,388 square foot paved area on the north side of the building. This area provides 32 total parking spaces including two (2) handicapped spaces. The facility's total paved parking area, including ARFF vehicle landside parking in front of the apparatus/equipment bays is 4,410 square feet. On the south (airside) side of the building is an additional 4,914 square foot of paved ramp that will accommodate 12 passenger type vehicles.

Personnel

The ARFF department at RSW has both 40-hour and 56-hour/week of shift personnel. The 40-hour personnel includes the Fire Chief, the Fire Safety Enforcement Officer/Captain and one secretary. The 56-hour personnel work three (3) alternating shifts of 24-hour work days and average 56-hours per week. The 56-hour personnel are comprised of one (1) Battalion Chief, one (1) Captain and nine (9) fire fighting personnel, two (2) of which are based at Station I, Page Field Airport. Approximately 80% of the ARFF personnel are Florida State Certified EMTs (Emergency Medical Technician) with SAED (semi-automatic external defibrillators) and combi-tube qualification training endorsements.

Equipment

This section describes the equipment utilized by the ARFF department at RSW. The largest items on the equipment list consist of the ARFF vehicles. The total vehicle water storage capacity of these vehicles is 8,240 gallons. Additionally, the total fire fighting - foam storage capacity is 825 gallons and the total Halotron storage capacity is 1,000 pounds. The following is a list of ARFF vehicles utilized at Station II. Each vehicle is coded as per the ARFF station's vehicle inventory list.

Response and Firefighting Vehicles:

- CFR 220 is a 2000 General Safety Structural Pumper apparatus with a pumping capacity of 1500 gallons a minute, the water tank contains 750 gallons of water.
- CFR 221 is a rebuilt 1982 E-One Structural Pumper apparatus with a pumping capacity of 1500 gallons a minute, the water tank contains 750 gallons of water.

- CFR 400 is a 1989 Ford F-800 four wheel drive wild-land firefighting attack vehicle. It has a capacity of 740 gallons of water and 10 gallons of Class-A foam.
- CFR 901 is a 1998 Oshkosh T-1500 Rapid Intervention first out Aircraft Rescue and Firefighting emergency vehicle, which carries 1500 gallons of water 205 gallons of AFFF 3% foam and 500 pounds of Halontron chemical.
- CFR 903 is an Oshkosh T-1500 first out Aircraft Rescue and Firefighting emergency vehicle, which carries 1500 gallons of water, 205 gallons of AFFF 3% foam and 500 pounds of Halontron chemical.
- CFR 908 is an Oshkosh T-3000 first out Aircraft Rescue and Firefighting emergency vehicle, which carries 3000 gallons of water and 405 gallons of AFFF 3% foam.

Other ARFF Vehicles:

- CFR 500 is a Ford Crown Victoria used exclusively by the department Fire Chief. CFR 505 is a 2000 4 X 4 Ford Explorer used primarily by the Safety Enforcement Officer/Captain for responding to emergencies as well as general purpose use.
- CFR 520 is a 2000 4 X 4 Ford Explorer used primarily by the Station II shift Battalion Chief as a incident command vehicle, see the attached list for additional equipment.
- CFR 521 is a 1994 4 X 4 GMC Custom utility body used primary by the shift Captain, as a first in command response vehicle.
- CFR 522 is a 4 X 4 Dodge pickup truck used as a utility vehicle, not as a first in emergency response unit.

Additional ARFF equipment other than vehicles include the following:

- Wells Fargo Trailer - used for transporting large qualities of Hazardous Materials cleanup and spill containment supplies.
- Wells Fargo Trailer – used for transporting large quantities of Mass Casualty supplies and equipment.
- Utility Trailer - with an Ansul Fire Fighting Unit.

2.8.4 Air Cargo Facilities

RSW handled a total of approximately 35 million pounds of air cargo in the Year 2000. The cargo-only aircraft operated by Federal Express, United Parcel Service, and Airborne Express are handled by the Main Air Cargo Facility. Airline transported belly-haul cargo is processed through the Freight Forwarding Facility. Both these facilities are located on the north side of the Airport. The total area of air cargo processing facilities at RSW is currently 39,500 square feet and the two separate facilities are described below.

Main Air Cargo Facility

The 24,000 square foot Main Air Cargo Facility was built in 1992 and is designed for expandability to 50,000 square feet. This facility houses cargo make-up and processing areas, along with offices for Federal Express, United Parcel Service, and Airborne Express. The building has 10 cargo docks for truck supported pick-up and delivery operations. In addition,

security-cleared large trucks are allowed to enter the aircraft parking apron to facilitate cargo on-load and off-load operations.

The 69,000 square yard cargo aircraft apron has parking space for up to six (6) large cargo aircraft. The current cargo aircraft profile at RSW includes the following:

- Boeing 727 - Federal Express
- Douglas DC-9 - Airborne Express
- Boeing 757 – United Parcel Service.

The cargo apron has two connector taxiway entrances, located 800 feet apart, connecting the apron to the Runway 6-24 parallel taxiway, Taxiway A.

Passenger Airline Freight Forwarding Facility

The Freight Forwarding Facility at RSW is located just north of the FBO general aviation hangar and approximately 4,000 feet southwest of the Passenger Terminal. This 15,500 square foot structure is a common use belly-haul cargo processing facility for all the airlines. The structure is owned by the Lee County Port Authority and is leased out to tenants that include Delta Air Lines, Continental Airlines, Northwest Airlines, US Airways, TWA, United Airlines, and Aviation Ground Services, Inc. The landside portion facility includes five (5) inclined-recessed loading docks for large trucks and five (5) ground level loading docks. The southern side of the building contains eight (8) ground-level docks to support airside cargo operations. All loading docks have associated cargo bays. The following summarizes cargo dock utilization at this time:

- Delta Air Lines: One ground level dock, one recessed dock.
- Continental Airlines: One ground level dock, one recessed dock.
- Northwest Airlines: One ground level dock, one recessed dock.
- US Airways: One ground level dock.
- TWA: One ground level dock.
- United Airlines: One recessed dock.
- Aviation Ground Services: One recessed dock.

Currently, one recessed loading dock and one ground level loading dock are unassigned. This vacant cargo operating space is being temporarily utilized by Airport Terminal Services (ATS). The facility has 21 automobile parking spaces for employees and customers.

Since the new Midfield Terminal Complex project includes a Passenger Airline Freight Facility, the long-term use for the existing Freight Forwarding Facility building will probably change.

2.8.5 On-Airport Rental Car Facilities

The RSW rental car operating facilities are located approximately 200 feet north of the Passenger Terminal automobile parking area adjacent to Chamberlin Parkway, the main airport access road. Currently, there are currently six (6) car rental companies affiliated with Southwest Florida International Airport. All six companies have counters on the second floor of the Passenger Terminal building, between Concourse A and B. A list of currently affiliated on-airport rental car companies located at RSW include:

- Alamo
- Avis
- Budget
- Dollar
- Hertz
- National

The original rental car office and service facilities encompassed approximately 18 acres with each company leasing approximately three (3) acres from the Lee County Port Authority. The total area of the six rental car company office and administration buildings is 23,100 square feet.

Alamo, Budget, and Hertz have leased additional land for expansion of their facilities. In May 2001, Alamo opened a new facility on 11.9 acres of land that included 15,884 SF of administration and operations support/maintenance building space. Budget has leased five (5) acres east and immediately adjacent to it existing facilities for future expansion and Hertz has leased approximately three (3) additional acres to the rear and west of its existing facility for future expansion. As of May 2001, neither company has begun construction on these sites. During peak periods, rental car companies may, with the consent of the Authority, utilize other undeveloped areas on airport property to temporarily store vehicles on a month to month basis. With the aforementioned additions, the total car rental area encompasses approximately 38 acres and 38,984 SF of building space.

Rental car customer transportation to and from the Passenger Terminal is the responsibility of the individual rental car companies and typically involves the use of shuttle buses. As of Year 2000, the peak-season car rental fleet totaled 17,400 vehicles.

2.8.6 Other Ground Transportation

In addition to on-airport rental car companies, other ground transportation options that are available at RSW include off-airport rental car companies, taxis, hotel courtesy buses, limos, and the LeeTran bus system. Bus-type vehicles and taxis use the commercial curb in front of the terminal building for passenger pick-up and drop-off. The number and frequencies of operations by these entities varies by traffic demand and are authorized through the use of trip permits and other contracts.

2.8.7 Facilities Department

The Southwest Florida International Airport Facilities Department mission is to provide maintenance support to all LCPA owned and operated Airport facilities. The main Department administrative offices and warehouse are located on the western portion of the airfield 1.1 miles from the Passenger Terminal. The existing Facilities Department structure was constructed in 2001 and provides 11,000 SF administrative building space and 4,800 SF of covered storage area.

The Facilities Department is divided into five (5) sections with the following employment profiles:

- Terminal Section - eighteen (18) employees.
- Grounds Section – nine (9) employees.
- Airfield Section - eight (8) employees.
- Contracts Section - one (1) employee.
- Resources Section - seven (7) employees.

Terminal Section

The Terminal facility Section is responsible for maintaining the Airport's two 600-ton chillers, 26 air handlers, emergency electric generator; lighting systems; energy management systems, and all other terminal related subsystems. Terminal Section maintenance responsibilities require a 24-hour/day - 7 days/week personnel manning and response capability.

Airfield Section

The Airfield Section is responsible for maintaining the High Intensity Runway Lighting (HIRL) system, taxiway in-pavement centerline and edge lighting, airfield advisory signs, aircraft parking apron lighting, airport roadway lighting, and 1,900,000 square feet of automobile parking lot lighting.

Resource Section

The Resource Section manages the Department warehouse that is collocated with the Facilities Department Administrative offices. This effort includes the management of 2,134 line items to support 134 vehicles and specialized equipment. An Automated Maintenance Management System (AMMS) is used for work order control and time management/productivity control and monitoring.

Grounds Section

The Grounds Section is responsible for the upkeep and maintenance of 13,900 acres of Airport property, of which 6,500 acres are on-site and 6,986 acres are off-site mitigation areas. These grounds include 290 acres of lakes and waterways, 1,200 acres of turf with six irrigation systems, and 650 palm and ornamental trees. In addition, this section is also responsible for the eradication and control of exotic vegetation, mosquito control, perimeter security fence maintenance, vegetation control, and the fuel management system.

Contracts Section

The Contracts Section monitors and administers 11 separate contracts that utilize 103 personnel. This includes contracts for janitorial service, passenger boarding bridges and baggage belt maintenance, interior and exterior landscaping maintenance, parking lot management, public address system maintenance, chiller plant preventative maintenance, and pest control operations.

Of the terminal's 17 passenger boarding bridges, 10 are maintained by the Facilities Department and seven (7) are maintained by the contracting airlines.

2.8.8 Aircraft Maintenance Facilities

The Authority has entered into two agreements for aircraft maintenance facilities at the Airport. Each lease provides that the lessee construct certain facilities.

Large Aircraft Maintenance

The Authority has leased a seven (7) acre parcel to and east of the passenger aircraft parking apron. This site will be used for the eventual construction of a maintenance facility for large aircraft that will support Boeing 747 or equivalent sized aircraft. When completed, the project will include at least 20,000 square feet of office space and 75,000 square feet of hangar space. Parking areas and other permit required ancillary facilities will also be constructed.

General Aviation Jet Maintenance

As previously discussed in the section entitled **General Aviation/Fixed Base Operations (FBO)**, part of the anticipated FBO future construction includes hangar, ramp and other items required for expanded maintenance and support operations for general aviation jet aircraft. Some maintenance is already performed on the existing FBO leasehold.

2.8.9 Other Airport Facilities

Waste Water Treatment Plant

The Wastewater Treatment Facility is located on the west side of the Airport to the east of the Facilities Department buildings. The 10,000 square foot facility includes one tank that can treat 0.15 million gallons/day. The plant is owned and operated by Lee County. The plant will be converted to a pump station by 2002 and off-site treatment will be provided at a Lee County Treatment Facility. A new pump station will be built and sized to accept the increased flow associated with the new Midfield Terminal complex.

Airline Catering Facilities

There are two catering companies that service the Airport's airlines. LSG/Sky Chefs ~25,000 square foot facility is located on Airport property approximately 3,500 feet east of the Passenger Terminal. The site can be accessed by the northeast access road from Chamberlin Parkway. The other catering facility, Gate Gourmet, is located off Airport property near North Treeline Avenue.

Airport Police Department Pistol Range

The ~16,000 square foot pistol range is located across from the ARFF and Police Training Auditorium approximately one mile west from the Passenger Terminal. And is used primarily by the Airport's Security Department.

Police/ARFF Training Auditorium

The auditorium is located approximately one mile west of the Passenger Terminal and next to the pistol range. The facility encompasses approximately 8,500 SF and used for training purposes for the ARFF and police departments.

2.9 AIRPORT ACCESS

The main interstate in Southwest Florida is I-75, which runs north south through the Fort Myers area. This highway extends northward into Georgia along the western half of the Florida peninsula and southward to Naples before turning east and continuing to its terminus near Miami. According to the Florida Department of Transportation (FDOT), the section of I-75 between Alico Road and Daniels Parkway in Fort Myers is the most heavily traveled section of I-75 in Southwest Florida. RSW is located almost equidistant between these two interstate exits.

Daniels Parkway located north of the airport runs east west and intersects Chamberlin Parkway, which is currently the main access into the airport. Daniels Parkway is a six-lane divided arterial roadway with direct northbound and southbound I-75 access. In Year 2000, Daniels Parkway was extended to State Road 82 (Immokalee Road) northeast of RSW.

Treeline Avenue runs in a north-south direction parallel to I-75 and the Airport's western border. Treeline Avenue will be extended to connect Daniels Parkway to Alico Road, and expanded into a four- lane divided roadway, as part of the new Midfield Terminal development project. Alico Road runs east west and is located south of RSW and will be widened to six lanes in the future. Alico Road extends all the way to U.S. 41 (Cleveland Avenue) to the west. Additionally, it intersects I-75 and has multiple interchanges for both north and southbound interstate access.

2.10 UTILITIES

This section overviews each of the primary utilities at the Airport including electrical power, water and sanitary sewer. More detailed information will be developed as part of the Utility Mapping component of this study.

2.10.1 Electrical Power

Electrical power at RSW is provided by Florida Power and Light (FPL). The main line runs parallel to Daniels Parkway and into the Airport property in a southern direction. Four lines run south from the main Daniels Parkway line. The first three lines provide power for future facilities, and the ASR facility. The fourth line is a continuation of the main power line that runs along Daniels Parkway. It makes a 90-degree turn in a southern direction before the Paul J. Doherty Parkway exit. It then splits in eastern and western directions to provide power to all Airport facilities including the existing passenger terminal. The terminal has two electrical vaults located at the northern ends of the two concourses. A large, diesel-powered electrical power generator provides emergency power at the existing terminal. The emergency generator vault is located 350 feet north of the Passenger Terminal. In addition, several major FPL power lines that provide power to southern Lee and Collier Counties were routed around the existing runway complex during airport construction.

2.10.2 Water

Potable water lines run into the Airport from Lee County's Corkscrew Water Treatment Facility located at the corner of Alico Road and Corkscrew Road south of the Airport. The lines extend

east along Chamberlin Road and provide water to the Airport's existing terminal and eastern facilities. The line running into the Wastewater Treatment Facility and Facilities Department area continues west and turns 90 degrees south around the approach end of Runway 6 and extends further southeast. In the fiscal year of 1999/2000, the Airport consumed 22,923,002 gallons of water. An existing 30-inch waterline that crosses Airport property from south to north will be relocated as part of the Midfield Terminal project.

2.10.3 Sanitary Sewer

Sanitary sewer service exists at the Airport through the Wastewater Treatment Facility located one mile west of the terminal. The sewer line runs east to provide service to all Airport facilities, except the catering, fuel, and cargo facilities. The Wastewater Treatment Facility is scheduled to become a pump station and tied into a Lee County Wastewater Treatment Facility in Year 2002.

2.11 AIRPORT IMAGINARY SURFACES

All U.S. airports have a three-dimensional imaginary surfaces plan that identifies each airport's navigable airspace requirements as dictated by Federal Aviation Regulation (FAR) Title 14, Part 77. Part 77 establishes standards for determining obstructions and publishes the design criteria for use in constructing the imaginary surfaces profile for each specific airport. These criteria are designed to preserve safety for aircraft flight operations. The surfaces represent an imaginary "bowl" of airspace centered on the airport with long approach surfaces extending up and outward from the runway ends. The imaginary surfaces surrounding the airport are also used to analyze all existing, future or proposed tall structure construction as to their potential for creating a hazard for aircraft operating at the airport. If a structure such as a natural object (i.e. a tree) penetrates these surfaces, then it must be removed or modified. If the structure or obstacle intruding into the imaginary airspace defined by Part 77 criteria cannot be easily removed, the FAA may extend a waiver and the structure will need to be identified by either painting, installing an approved obstruction light, or both. A FAR Part 77 Imaginary Surfaces Plan is included as part of the RSW Airport Plan Set. The Lee County Port Authority has a local agreement with Lee County to help control obstacle penetrations into these surfaces. The two agencies work together to protect the airspace environment around the airport. (also see "Airport Hazard District").

2.12 AIRPORT ENVIRONMENT

Information pertaining to the airport environment of Southwest Florida International Airport is provided in the following sections. This information has been divided into the three categories, Airport Property Boundary, Land Use, and Environmental Data. Later chapters of this Master Plan Update will incorporate greater detail pertaining to these elements of RSW, including an updated Airport Property Map, Land Use Plan, and an Environmental Overview chapter.

2.12.1 Airport Property Boundary

Airport property encompasses approximately 6,498 acres within an unincorporated portion of Lee County. (See **Exhibit 2-5** for a depiction of the current and future Airport property boundary)

The Airport is located on Chamberlin Parkway, south of Daniels Parkway, approximately three miles east of Interstate 75. The northern boundary of the Airport runs along Daniels Parkway. The western boundaries run parallel to I-75 east of Treeline Avenue. The eastern and southern boundaries have no significant existing landmarks. Instead, these boundaries of the Airport property were formed by the necessary acquisition of land areas to accommodate future airport development.

2.12.2 Land Use

Lee County has assigned land use and zoning designations to property within its respective jurisdiction, including Airport lands. Existing and future land uses on and off airport property are important considerations with respect to the development of the airport and community. Compatible land use issues and considerations will be utilized in the development of later chapters in this Master Plan Update. For now, the following sections provide a brief overview of the land use features that can be found on airport property and in the areas surrounding RSW.

On Airport

There are currently eight (8) different land use categories for the 6,498 acres that make up Southwest Florida International Airport. These include:

- Airfield Operations (AO)
- Airline Terminal (AT)
- Air Cargo (AC)
- General Aviation (GA)
- Aviation Related Industry (ARI)
- Airport Support (AS)
- Undeveloped Area (UA)
- Environmental/Compatible Land Use Buffer (E/CLU)

The most prominent land uses for the airport are Airfield Operations (AO), Airport Support (AS), Undeveloped Area (UA), and Environmental/Compatible Land Use Buffer (E/CLU). The AO category of land use covers the area around the existing and known future runway footprints within the building restriction line (BRL) and the runway visibility zone (RVZ). The various BRLs for RSW are reflected on the Airport Layout Plan. Airfield Operations (AO) land is located in the center of the Airport's property and runs parallel along the runway from southwest to northwest. The majority of Airport Support (AS) areas are located to the northwest of the existing Passenger Terminal and to the southwest of Runway 6-24. The areas designated as Undeveloped Area (UA) are located on the southern portions of Airport property. The majority of UA is located southwest of the Runway and may be used for any further airport development.

Environmental/Compatible Land Use Buffer (E/CLU) areas are utilized for surface water and wetlands management. These lands have been designated accordingly and provide a buffer compatible with aircraft operations, including noise, which could adversely impact areas around the airport such as wildlife, wetlands, and other non-compatible lands. At RSW, these areas exist in three primary locations. The largest area is located on the western portion of the Airport. The second largest is located on the northeastern boundary of the Airport. The smallest designated buffer is a pond located to the south of the Airport.

Foreign Trade Zones have emerged as an important economic development tool used by many localities to attract and retain new business and industry. Both Southwest Florida International Airport and Page Field have been included in the Fort Myers Foreign Trade Zone (No. 213). A Foreign Trade Zone is a site within the United States, in or in proximity to a United States Customs Port-of-Entry, where foreign and domestic merchandise is considered to be in international commerce. Foreign or domestic merchandise may enter a Foreign Trade Zone without formal customs entry, payment of custom duties, or government excise taxes. No duties are paid on goods that are rejected, damaged, destroyed or discarded, and no duties are paid on goods that are re-exported directly from the Foreign Trade Zone.

Storage, testing, re-labeling, repackaging, repairing, assembling, and manufacturing are just a few of a number of processes that merchandise entering a trade zone may undergo. When a final product is imported into the United States from a Foreign Trade Zone, customs duties and excise taxes are only due at the time of transfer from the zone and formal entry in the United States. Zones therefore give users opportunities to realize reduced customs duties while benefiting from flexible methods of handling merchandise.

Off Airport

The designations for lands surrounding RSW that are identified in the Lee County Comprehensive Plan 2000 include:

- General Commercial (GC)
- Mixed Use (MU)
- New Community (NC)
- Airport Commerce (AC)
- Density Reduction/Groundwater Resource (DR/GR)
- Wetlands (W)
- Wetland Conservation Lands (WCL)

With the exception of relatively small Industrial Areas (IA), the land to the southwest of the airport is slated for Mixed Use (MU) planned development. Typically, Mixed Use (MU) areas adjacent to the airport have high intensity commercial and residential development. The areas directly east and south of the Airport remain undeveloped, designated as Wetlands (W), Wetland Conservation Lands (WCL) and Density Reduction/Groundwater Resource (DR/GR). These groupings of undeveloped land combine to make up the largest segment of land adjacent to the airport.

The New Community (NC) area is the second largest area surrounding the Airport and is located along Gateway Blvd. to the north of the Airport property and bordered by Immokalee Road (SR 82) to the north. The property is approximately the same size as that of the Airport.

Two of the five Industrial Areas (IA) are located approximately three miles northwest of the Airport and border I-75 to the west. Another Industrial Area (IA) is located on the northwest border of the Airport along Treeline Avenue. The remaining areas are located three and six miles southeast of the Airport along Alico Road.

There is one General Commercial area located north of the Airport. The site is very large, borders the Airport property boundary to the north and is located in the Gateway development. It extends all the way to SR 82 to the north and extends to Six Mile Cypress Parkway to the west.

2.12.3 Airport Hazard District

Southwest Florida International Airport falls under the Airport Hazard District Ordinance stipulated in Subdivision III of the Lee County Land Development Code. This Airport Hazard District was created to provide a level of protection for the airspace and zoning regulations involved with Southwest Florida International Airport, Page Field Airport, and all other existing State licensed airports and heliports (public or private) within the County's jurisdiction.

Based on the Lee County Land Development Code Section 34-1006, the specific purpose and intent of the Airport Hazard District is to:

- Promote the maximum safety of aircraft arriving and departing from county airports.
- Promote the maximum safety of residents and property within areas surrounding the county airports.
- Promote the full utility of county airports, so as to ensure the maximum prosperity, welfare, and convenience to the Lee County and surrounding county area and their residents.
- Provide building height standards within the imaginary (FAR Part 77) surfaces of the airports.
- Provide development standards for those land uses within prescribed noise zones.
- Provide guidelines for prevention of airspace obstructions and incompatible land uses in the areas surrounding the county airports.

2.12.4 Airport Noise Zones

A deciding factor in selecting the site for the Airport was that it had little noise impacts on existing development. During the late 1980's the Lee County Port Authority (LCPA) sponsored a Federal Aviation Administration FAR Part 150 Noise Compatibility Study in an effort to minimize the future impacts of aircraft noise at the facility and adjacent lands. After the approval of the Noise Compatibility Study in 1990, land use control measures, including Airport Noise Zones, were developed and adopted into the Lee County Comprehensive Plan and the Land Development Code.

The 1991 Master Plan Update initiated long term planning interest for the addition of a new parallel runway at RSW as well as a Midfield Terminal complex. An additional noise study was warranted after the completion of the Master Plan. A FAR Part 150 Noise Compatibility Study Update was completed and resulted in identifying an expanded zone to maintain off-airport land

use compatibility with the operation of this future runway. On February 1, 1995, the FAR Part 150 Update was adopted by the Board of County Commissioners and approved on November 28, 1995 by the Federal Aviation Administration.

The establishment of Airport Noise Zones for RSW were a result of FAR Part 150 studies initiated by the Airport. These zones were developed around the airport to promote land use compatibility based on aircraft noise and are maintained through the establishment of noise contours. The zones are No Noise Related Restrictions (Zone 1), No Mobile Homes (Zone 2), No Noise Sensitive Uses (Zone 3), and Airport Use Only (Zone 4). All four zones make up the Airport Noise Zone special zoning district and collectively are included as part of the local zoning ordinance.

2.12.5 Environmental Data

Construction improvement projects at the Airport will require environmental permitting through numerous agencies, each with its own criteria and focus. Future development of the Airport and the integration of environmental permitting will be critical to the success of each project. Coordination with the appropriate agencies for permitting requirements will be made as projects are funded. RSW falls under the jurisdiction of the South Florida Water Management District, Florida Department of Environmental Protection, Lee County and the U.S. Army Corps of Engineers. These agencies will review and permit all construction projects at the airport to ensure compliance with the Conceptual Permit Application for the airport.

The Environmental Overview chapter of this study will provide greater details related to the environment of the airport. This portion of the study will analyze the following topics:

- Vegetative, Wildlife, and Endangered Species
- Water Resources (including surface and ground water)
- Flood Hazards
- Air Quality
- Wetlands and Biotic Communities
- Section 4(f) Lands
- Historical and Archaeological Sites
- Energy Supply and Natural Resources
- Construction Impacts
- Drainage and Hydrology

The Environmental Overview portion of this study will also prepare an assessment of the existing and potential noise impacts at the airport.