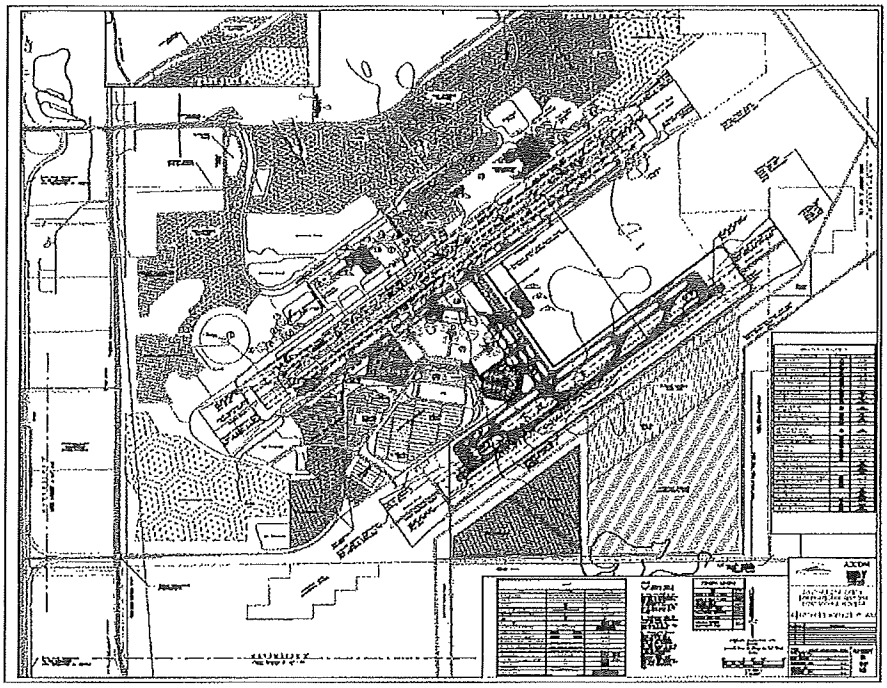
Southwest Florida International Airport
Airport Layout Plan Update

LEE COUNTY PORT AUTHORITY
Southwest Florida
International Airport



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Executive Summary

The Lee County Port Authority (LCPA) has been preparing to implement proposed projects contained within the 2004 Master Plan Update and 2004 approved Airport Layout Plan (ALP) in order to meet the future demand/capacity and facility requirements that will be necessary at RSW. As part of that preparation, the LCPA initiated the New Runway 6R/24L Program in 2007 to enhance the capacity of the existing airfield and provide the necessary facilities to support the new runway. The LCPA has recently completed the multi-year planning and design analysis for New Runway 6R/24L. As a result of the extensive alternatives analysis undertaken during this program, a slight modification to the proposed runway layout and associated facilities as depicted on the 2004 ALP was determined to provide the most flexibility for future and ultimate airport development.

The purpose of this narrative and associated ALP drawings is to provide the FAA with an Updated ALP depicting the runway layout modifications and associated support facilities that differ from the previously approved 2004 documents. The New Runway 6R/24L, Midfield taxiways and apron, a new Air Traffic Control Tower (ATCT) and new Aircraft Rescue and Fire Fighting Facility (ARFF) are the focus of this ALP Update. This is not intended to be a full master plan update, evaluating demand, capacity, land uses, facility requirements, etc. At FAA's request, this effort is merely intended to more accurately reflect the current plans for these four items to maintain FAA grant eligibility.

1.0 ALP Changes

The proposed runway configuration, Midfield taxiways and apron, ATCT and ARFF will have no additional development or environmental impacts above those already identified, reviewed, approved and mitigated for on the 2004 ALP layout. It was found in the study process that some of the potential impacts associated with the 2004 ALP layout will be reduced with the revised configuration. In addition, the 1994 Finding of No Significant Impact (FONSI) and subsequent amendments for the Proposed Runway 6R/24L Environmental Assessment (EA) and as revalidated by the FAA in a letter to the LCPA on December 20, 2007, recognizes the footprint and all environmental considerations of the proposed parallel runway as the location and geometrics shown on the 2004 ALP. The proposed layout as depicted on this 2009 ALP Update which includes a full perimeter road and security fence encompassing all airfield pavement, is within the areas previously identified on the 2004 ALP to be impacted. The FAA has concurred in a letter to the LCPA dated March 2009, that the proposed layout and shift of the runway substantially conforms to the 1994 EA/FONSI and no additional environmental analysis is needed.

1.1 New Parallel Runway 6R/24L

The proposed runway configuration depicted in this 2009 ALP Update requires an 80-foot shift to the south to increase the runway to runway centerline separation from the location shown on the 2004

ALP. This shift provides RSW with an unconstrained Group V runway and parallel taxiway and full dual parallel taxiway that will meet all foreseeable future and ultimate Group V aircraft demands as well as double-back aircraft taxiing operations as recommended by the FAA. The layout also provides sufficient space for necessary blast deflector fencing, and a perimeter road around the proposed runway and taxiway system to the midfield terminal apron. The 80-foot shift also provides ample area for future Concourse A terminal development.

The 80-foot shift of the proposed Runway 6R/24L to the south does place it closer to the adjacent high voltage transmission lines, but does not present any additional potential conflicts compared to the 2004 ALP. An analysis of the Part 77 airspace surfaces was conducted during the design process and confirmed that no penetrations exist from the FPL power lines that are located on the south side of the runway. In addition an Instrument Landing System (ILS) math modeling study was conducted as part of the design process to determine if Category I ILS operations would be attainable with the proposed runway shift. The study results indicated that Category I ILS operations can be achieved within the acceptable FAA signal interference tolerances with the FPL power lines.

Navigational aids for the new runway include Category I ILS, MALSR, a single RVR site and LLWAS equipment. Lighting components include runway centerline, touchdown zone, edge and threshold lighting, runway signage, taxiway centerline and edge lighting, runway guard lights, taxi guidance signage, wind cones, series circuits, duct systems and grounding.

The perimeter road and access roadway system is similar to that shown on the 2004 ALP. It includes a roadway loop running adjacent to the Airport Operations Area (AOA) perimeter fence and access roads leading to NAVAIDS equipment, the Midfield Terminal Complex (MTC), apron area, and to the ARFF and ATCT facilities.

1.2 Midfield Taxiways and Apron

The proposed runway and taxiway configuration includes a system of dual Group V crossfield taxiways located east of the terminal area. The crossfield taxiways provide bidirectional taxi flow between the runways and apron areas and allow aircraft at Concourse B to push back from the gates and maneuver around the apron without restrictions. A third crossfield taxiway will be necessary in the future to maintain unrestricted apron and taxiway operations to accommodate the Concourse B headhouse expansion. The present location of the future ARFF and ATCT were shifted from the 2004 ALP to accommodate the future separation standards and reserve the space necessary for the third taxiway. Additional aircraft parking apron is also planned to accommodate overnight, hardstand, and diverted aircraft if no terminal gates are available.

1.3 Air Traffic Control Tower (ATCT)

The location of the ATCT in this ALP Update differs slightly from the location depicted on the 2004 ALP. It is now north of the ARFF facility. An extensive ATCT Line of Sight Analysis and a September 2009 evaluation by the FAA Airport Facilities Terminal Integration Laboratories (AFTIL) resulted in this preferred location now shown on the 2009 ALP Update. In attendance at the September 2009 AFTIL

evaluation were representatives from the LCPA, FAA, AECOM and the RSW Air Traffic Control Tower management staff, including the tower manager. The preferred location considers the full build-out of all airfield pavements and terminal concourses and headhouses, also depicted on this ALP Update. Information regarding the proposed height and profile of the future concourse and headhouse expansions was taken from the July 2007 Terminal Expansion Evaluation Study entitled "RSW Terminal Expansion Plan for Serving 12 Million Annual Passengers", conducted by Hole Montes. The AFTIL evaluation helped determine the proposed location and height (approximately 214 feet from ground surface to top of cab) of the new ATCT that would be acceptable to the RSW tower staff to enable them to still see the tail of a commuter aircraft at the time of full terminal and airfield pavement buildout. Access to the new ATCT site will be provided via a new ARFF/ATCT connecting access road which connects to the existing perimeter roadway.

1.4 Aircraft Rescue Fire Fighting (ARFF) Facility

As part of the Parallel Runway Program a New Aircraft Rescue and Firefighting Facility (ARFF) study was conducted in 2008 to identify alternative sites for a new ARFF and provide technical analysis to ensure that a preferred site would be able to provide exceptional response to the existing airfield and future Runway 6R/24L. The preferred future ARFF site shown in the 2009 ALP Update was selected because of its proximity to both runways. It is located on the east side of the future cross-field taxiway, midway between the existing and future runways in essentially the same location as shown on the 2004 ALP with the new ARFF facility pushed slightly further to the northeast to allow room for a future crossfield taxiway. Access to the ARFF will be provided via the existing perimeter roadway and a new perpendicular ARFF/ATCT connecting access road.

1.5 2009 Existing Conditions

In addition to the revised locations of the Parallel Runway 6R/24L components, the ARFF and ATCT there are several facilities that were depicted on the 2004 ALP that have since been constructed. The following facilities were constructed under the Midfield Terminal Project and are shown to exist in this 2009 ALP Update.

- Midfield Terminal Complex and associated apron and taxiways
- Long Term Parking and the Employee Parking Lot
- Parallel Taxiway F and associated connector taxiways
- The North Ramp and demolition of the old terminal building
- Three dry detention areas located west of the future rental car area and non-aviation support areas
- Treeline/Ben Griffin Parkway

2.0 ALP Drawing Set

The ALP drawing set graphically depicts the proposed Runway configuration, including the shift of 80 feet, taxiway system configuration, new ARFF and ATCT development areas. In addition to the title sheet, the complete set of drawings (15 sheets) consists of the following:

- Airport Layout Plan
- ALP Data Tables
- Terminal Area Plan
- FAR Part 77 Approach Surfaces
- FAR Part 77 Inner Surfaces
- Runway Protection Zone Plans
- Runway Approach Zone Profiles
- Proposed Land Use Plan
- Property Maps

2.1 Airport Layout Plan

The Airport Layout Plan (ALP) (Sheet 2) is the most utilized plan sheet of the drawing set and must be accepted by the FAA for depicted projects to be eligible for Airport Improvement Program (AIP) funding. The plan has been updated in accordance with FAA AC 150/5300-13, *Airport Design* and FAA Southern Region ALP Checklist. In addition to the existing Airport layout, this updated ALP presents a 15-year and beyond program that has been developed to support the projected activity at RSW Airport. The stages of development correspond as follows: Phase I – 2010-2015; Phase II – 2016-2025, and Ultimate – beyond 2025.

As previously mentioned, the following projects have been updated in the 2009 ALP:

- New Runway 6R-24L configuration;
- Midfield Taxiways and Apron layout
- New ARFF Station site layout
- New ATCT development area
- Existing facilities shown

Other than the five items listed above, there are no changes from the 2004 ALP.

2.2 Terminal Area Plan

The Terminal Area Plan (Sheet 4) provides a more detailed depiction of the physical development associated with the midfield passenger terminal and ground access. It is presented at a larger scale than the ALP so that greater detail of the terminal area improvements can be discerned.

2.3 FAR Part 77 Approach and Inner Surfaces

The FAR Part 77 Approach Surfaces (Sheets 5 and 6) graphically depict physical objects that exist in the navigable airspace surrounding Southwest Florida International Airport. The criteria used to define objects that constitute obstructions to the safety of approaching and departing aircraft are contained in FAR Part 77, Objects Affecting Navigable Airspace. To help plan for potential future airport development, ultimate design levels were utilized during the airspace analysis. For existing Runway 6-24, there are no changes from the 2004 ALP. The specific imaginary surfaces, which should be protected from obstructions, include:

2.3.1 Primary Surface – A rectangular area symmetrically located about each runway centerline and extending a distance of 200 feet beyond each runway threshold. Width of the Primary Surface is based on the type of approach a particular runway has, while the elevation is the same as that of the runway centerline at all points. The primary surface width for the existing and proposed runways is 1,000 feet.

2.3.2 Approach Surface - This surface begins at each end of the Primary Surface (200 feet beyond the runway threshold) and slopes upward at a ratio determined by the runway category and type of approach available to the runway. The width and elevation of the inner end conforms to that of the Primary Surface while approach surface length and width of the outer end are governed by the runway category and approach procedure available. The approach to Runway 6-24 is 50:1 for the inner 10,000 feet and 40:1 for an additional 40,000 feet.

2.3.3 Transitional Surface - A sloping area beginning at the sides of the Primary and Approach Surfaces and sloping upward and outward at a ratio of 7:1 until it intersects the Horizontal Surface.

2.3.4 Horizontal Surface - A level oval-shaped area situated 150 feet above the airport elevation, extending 5,000 or 10,000 feet outward, depending on the runway category and approach procedure available. The Horizontal Surface for RSW Airport extends outward 10,000 feet.

2.3.5 Conical Surface - Extends outward for a distance of 4,000 feet beginning at the outer edge of the Horizontal Surface, and sloping upward at a ratio of 20:1.

2.3.6 Instrument Departure Surfaces - This surface is associated with instrument runways and is trapezoidal in shape with an inner width of 1,000 feet, extending 10,200 feet from the departure runway end to a width of 6,466 feet

2.3.7 One Engine Inoperative Surfaces - This is the latest surface identified in the most recent version of the Airport Design Advisory Circular. It only applies to departure runway ends supporting air carrier operations. It starts at the end of the runway and slopes upward at 62.5:1.

2.4 Runway Protection Zone (RPZ) and Approach Zone Profiles

Sheets 7, 8, 9, 10, 11, and 12 depict the RPZ's for the existing Runway 6-24 and future Runway 6R-24L. For existing Runway 6-24, there are no changes from the 2004 ALP. In addition, each runway end approaches and identified obstructions are shown in a profile view.

2.5 Proposed Land Use Plan (no change from 2004 ALP)

Sheet 13 was developed to achieve optimal utilization of land uses within the future airport boundary. Sections presented on this plan are color coded to show the various land use patterns on Airport Property. Land uses included on this plan included:

- Airfield Operations
- Airline Terminal
- Airport Support
- Environmental Compatible Land Use buffer
- Non Aviation Development Area
- Potential Future Development Area

2.6 Property Maps (no change from 2004 ALP)

Sheets 14 and 15 are intended to accurately show the airport property line and all current lease boundaries. The Property Maps not only display the existing inventory of property on the airport but also identify those tracts of land that have been recommended for future acquisition. These tracts have been identified for acquisition to allow RSW Airport the ability to ensure its future viability and capability to meet development both during the period covered under this ALP Update as well as beyond the planning horizon of this document.