Workshop Briefing Package

Airport Master Plan Update, Phase I
Fort Lauderdale-Hollywood International Airport

October 18, 2005

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A Division of Jacobs Consultancy Inc.
EXECUTIVE SUMMARY
FORT LAUDERDALE-HOLLYWOOD INTERNATIONAL AIRPORT (FLL)
MASTER PLAN UPDATE – PHASE 1

Purpose

The enclosed presentation serves as an executive summary of the findings-to-date from FLL Master Plan Update process, which is described below. This process commenced with an approved motion by the Broward County Board of County Commissioners (BOCC) on December 9, 2003. The FLL Master Plan was last updated in 1994.

Background

Since 1994, FLL’s passenger traffic has more than doubled, the mix of airlines serving the Airport has fundamentally changed, the fleet of aircraft serving FLL has improved materially, and the economics of the airline industry have become more uncertain. During this period of change, the County successfully completed investments in Airport facilities costing over $650 million. These facilities include, among other things, Terminal 1 with 18 gates, the Hibiscus Garage, the Rental Car Center and Cypress Garage, double-decking of the inbound roadway, and a new interchange between the Airport roadway system, U.S. 1, and I-595. Currently, various design efforts are underway related to the development of Concourse A and a Cruise Bus Facility, a new International Terminal to replace Terminal 4, and double-decking of the exit roadway. The County has also (1) re-initiated the federal Environmental Impact Statement (EIS) process to gain approval of the proposed extension to Runway 9R-27L (the South Runway) and (2) commenced an environmental assessment of a people-mover system that would operate between FLL and Port Everglades and an Intermodal Center east of FLL along the people-mover alignment.

Given the extent of traffic growth, airline industry changes, and the number of capital projects completed or underway, the Master Plan Update process was designed to address questions related to the potential future development of FLL beyond the projects currently under consideration. The primary purpose of an airport master plan is to develop a comprehensive site plan for potential future airport facilities and, once adopted, to preserve individual parcels for the planned uses. This approach fosters the development of an airport as an integrated operation, balances various types of facilities within an airport, and identifies what facilities would be needed to accommodate forecast demand.

The Starting Point for the Master Plan Update

Underlying the Master Plan Update effort is a forecast of increased demand and traffic at FLL, both in terms of aircraft operations and passengers. Consistent with the South Runway EIS process, the forecast of traffic underpinning the Master Plan Update is the FAA’s Terminal Area Forecast (TAF) issued in January 2005, which provides
a window through 2020. This unconstrained forecast projects an increase in passenger traffic of 44% in the forthcoming 10 years and 74% by 2020. How FLL’s forecast traffic might be accommodated is a central objective of the Master Plan Update. In addition, this Master Plan Update is designed to look over the forecast horizon to provide an understanding of the relationship between current development decisions and the potential for FLL to realize traffic levels beyond the forecast window.

The Master Plan Update process was not designed to revisit decisions already made by the County. As such, the proposed South Runway extension, as defined in the County’s Objective Statement of October 26, 2004, is defined as a “given” in the scope. In addition, the Master Plan Update scope of review excludes the identified sites for Concourse A, the Cruise Passenger Facility, the proposed International Terminal at the current site of Terminal 4, and the exit roadway improvements. These sites, therefore, are not subject to re-examination in the update.

The Master Plan Update is structured to facilitate, rather than complicate, the South Runway EIS process. Essential to the EIS process is this examination of alternatives to the proposed South Runway extension. To ensure that none of the airfield development alternatives to be considered in the EIS process are unduly precluded by the planning of new facilities, all efforts are being made to minimize or eliminate conflicts that could arise from these parallel processes. As a result, facility alternatives considered in the Master Plan Update will need to be modified in light of the airfield alternatives, once these are formally defined.

The FLL Master Plan Update Process – A Two-Phase Approach

The Master Plan Update was structured to include two phases, as follows:

- Phase 1 – This current phase is designed to complete a series of specific analytical tasks, included to address particular elements of the above referenced December 9, 2003 BOCC vote, and to develop options for FLL’s future development for consideration by the BOCC. These options are to be configured as choices, and would be used in a stakeholder outreach and a BOCC deliberation process to be included in Phase 2. Phase 1 is intended to include a presentation to the BOCC (this report), provide preliminary findings, receive feedback on these findings from the BOCC, and then finalize the options for input to Phase 2.

- Phase 2 – This phase is designed to complete the stakeholder outreach process, report the results to the BOCC, assist the BOCC in decision-making regarding the adoption of a preferred plan, and commence the implementation process for the plan once it is adopted.

The concept of presenting alternative or optional visions of FLL’s future, combined with the two-phase approach and the stakeholder outreach process, means that one should view this summary of the findings-to-date as subject to refinement and change as the Master Plan Update process proceeds.
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Existing Conditions

AIRPORT PROFILE

Passenger Terminal Complex
• 57 air carrier gates
• 11,500 structured parking stalls

Airfield Operations Area
• 9,000 North Runway 9L-27R
• 6,905 Crosswind Runway 13-31
• 5,276 South Runway

Activity in 2004
• 10.4 million enplanements
• 315,500 aircraft operations
Master Plan Update – Phase 1 Starting Point

- **Baseline Assumptions**
  - Proposed South Runway Extension
  - International Terminal 4 expansion through Phase 3
  - Concourse A
  - Exit Roadway Improvements
  - **Forecast Traffic**, per FAA’s Terminal Area Forecast for consistency with EIS

- **Other Factors Affecting the Baseline for the Master Plan Update**
  - Existing interlocal agreements and DRI approvals which followed the 1994 Master Plan Update
  - Other projects approved by the County, as reflected in the approved Airport Layout Plan including planned developments on the Sheltair leasehold
  - Compatibility with airfield alternatives being considered as part of the Proposed South Runway EIS process
Master Plan Update – Phase 1 Scope

- **Specific examinations included in the scope of work**
  - **Airfield Elements**
    - Whether or not to preserve the option of a North Parallel Runway
    - Decommissioning of the Crosswind Runway (Runway 13/31)
  - **Future Role of General Aviation at FLL**
    - Implications of reconsidering the role of General Aviation at FLL in the future
  - **Aviation Support Facilities**
    - Assessment of existing west side land use master plan

- **Other core facilities to be evaluated**
  - Number of airline gates and terminal complex configuration
  - Parking, roadway and access issues
  - Airport boundaries and land requirements
Background: Enplaned Passenger Growth at FLL

Historical
Average Annual Growth Rate 5.9%

Forecast
Average Annual Growth Rate 3.8%

Source: Historical Data—Broward County Aviation Department.
Forecast Data Federal Aviation Administration, Terminal Area Forecast, January 2005.
Background: Aircraft Operations Growth at FLL

Historical Average Annual Growth Rate 2.3%
Forecast Average Annual Growth Rate 2.4%

Total Operations

Preserving for Future North Parallel Runway *

**Benefits of preserving the option**

- Reduce expected pressure to accelerate phase-out of proposed South Runway “use restrictions”
- Provide avenue for incremental airfield capacity to accommodate projected demand traffic levels post-2020
- Ensure consistency with current EIS, which is expected to include a version of a North Parallel as an alternative to the Proposed South Runway extension

**Drawbacks to preserving the option**

- Not all of the north side functions can be relocated on FLL within existing boundaries, although all north side functions may not be deemed essential in the future
- Affects business and leasing decisions until a determination is made about developing the project

**Findings** - Advisable to preserve the future option and limit term of lease agreements on the north-side at least until:

1. South Runway Extension EIS is completed and all alternatives are fairly assessed, and;
2. The South Runway Extension, if approved, and other terminal related facilities are completed as part of a near-term development program (described later)

* Task undertaken per December 9, 2003 Board Motion
Decommissioning Crosswind Runway 13/31 *

- **Capacity** - Benefits from runway are negligible after completion of South Runway extension, given reduced length and intersections with air carrier runways

- **Operational Factors** - Weather conditions and FLL fleet mix not sufficient factors justifying retention

- **Alternative Land Uses**
  - North-south cross-field taxiway system would provide greater benefits to airfield efficiency
  - Facility development opportunities in the airport core overwhelm the airfield benefits of retention

**Findings:**

1. Goal of decommissioning the runway may be more be achievable if adopted in conjunction with a policy that preserves the option for a North Parallel Runway

2. The County’s goal of decommissioning Runway 13/31 was forwarded to FAA for consideration as part of the Proposed South Runway EIS process. However, in the event that the runway is not decommissioned through the EIS, the County may have to pursue this goal through an alternate process.

* Task undertaken per December 9, 2003 Board Motion
Future Role of General Aviation at FLL *

- FLL’s share of South Florida G.A. traffic is relatively low.
- FAA projection of FLL G.A. traffic out to 2020 does not surpass 1999 peak year.
- Operating the extended South Runway per County’s runway use program provides residual capacity to accommodate forecast levels of G.A. traffic without constraining commercial operations.
- Consolidating G.A. facilities on the west side would enhance airfield operations.
- Current financial terms for G.A. operations at FLL are more favorable to aircraft operators than at other congested large-hub airports.

**Findings: Advisable to:**

1. Set aside land area on west side for handling G.A. traffic at today’s airport-wide acreage.
2. Establish a timetable for BCAD to implement fees for G.A. operators that reflect their share of airport costs/traffic.

* Task undertaken per December 9, 2003 Board Motion.
West Side Land Use *

- The existing west side land use plan was designed to accommodate the requirements of a single occupant (Amerijet)

- Replacing the Crosswind Runway adds about 20 acres of land area for development

- Overall, there would be about 130 acres available for development on the west side, net of the Sheltair leasehold

- The site provides the County with the flexibility to accommodate different combinations of airport uses.

Findings:

- A new west side site plan should be adopted to better accommodate potential relocation of functions from the north side

- Plan should be flexible for mixed uses as demand dictates development

* Task undertaken per December 9, 2003 Board Motion
Core Facility Development Plans

- **Two time horizons defined for Master Plan Update, Phase 1**

- **Plan for the next 10 years - “Near-Term Plan”**
  - Provides facilities to accommodate 10 year growth projection consistent with:
    - County preference to build the South Runway extension
    - The provisions of previously adopted interlocal agreements and the DRI
    - Balance between airfield capacity and terminal facilities
  - Basic choices:
    - Develop terminal, parking and roadway improvements in a manner that does not preclude future development beyond a 10 year timeframe; or
    - Proceed with incremental developments without preserving potential to accommodate demand long-term

- **Plan for the 2020 horizon and beyond - “Long-Term Plan”**
  - Bundle potential long-term facilities and additional airfield capacity (e.g. North Parallel Runway) to accommodate projected demand 20 years hence
  - Plan Would guide staff on how to proceed with intermediate development over the next ten years that would preserve option for longer term development should the County wish to accommodate these
Defining Elements of a Near-Term Plan

**Adopted County Objectives Regarding Airfield Development**
- Extend South Runway
- Airfield to be operated pursuant to runway use program, as defined in Interlocal Agreements
- Pursue decommissioning of Crosswind Runway

**Resulting Airfield Demand to be Accommodated**
- 360,000 to 370,000 annual commercial aircraft operations
- The forecast 80,000 annual General Aviation operations

**Commensurate Passenger Traffic**
- Up to 17 million annual enplanements (60% greater than 2004)
- Translates to about 10 years of forecast growth in passenger activity

**Balanced Inventory of Terminal and Access Facilities**

**Terminal Facilities:**
- 15 to 22 additional gates depending on actual airfield performance
- Concourse A – 5 gates
- Terminal 4 – plus 10 gates
- Redevelopment of Terminal 3 up to 7 additional gates

**Landside Access Facilities:**
- 4,000 to 5,000 additional public parking spaces
- Roadway improvements at T2 and T3 to relieve bottlenecks
Near-Term Plan Options

A. Configures development in a manner that preserves the option for future development out to 2020 and beyond

B. Only accommodates projected traffic levels out 10-years while seeking to maintain industry low user cost

C. Only accommodates projected traffic levels out 10-years, but provides a higher level of passenger convenience
Near-Term Plan – Option A: Preserves for Future Options

**Option A features include:**

- New Concourse A and Terminal 4, as currently planned
- Redevelopment and extension of Terminal 3 to the west including an airside APM in a configuration compatible with future development
- Redevelopment of Palm Garage and roadway improvements to support near-term and potential long-term program at Terminal 3 site
- New parking at intermodal center site.
- Automated People Mover connecting from intermodal site to terminals
- Land acquisition to east of airport for development of airport to seaport APM
Near-Term Plan – Option B: Incremental Development

Option B features include:

- New Concourse A and Terminal 4, as currently planned
- Extension of Terminal 3 concourses to the west with limited passenger additional amenities
- New parking at intermodal center site
- Lower cost and lower service levels than other near-term options
Near-Term Plan – Option C: Enhanced Service Levels

Option C features include:

- New Concourse A and Terminal 4, as currently planned
- Redevelopment and extension of Terminal 3 to the west including airside APM
- Redevelopment of Palm Garage and roadway improvements to provide higher level of passenger service
- New parking at intermodal center site
- Automated People Mover connecting from intermodal site to terminals
- Higher cost than Option B but does not preserve for future development as in Option A
Elements of a Long-Term Plan

**Adopting a long-term plan would:**

- Preserve land for facilities having the potential to accommodate forecast traffic beyond 10 year time horizon
- Provide a framework for near-term decision-making regarding interim such that these are not inconsistent with future demand levels

**Additional airfield capacity could be provided in one of two ways:**

1. Phase-out use restrictions on South Runway after extension is completed, and/or
2. Develop a North Parallel Runway

**Resulting Airfield Capacity**

- 475,000 to 500,000 annual commercial aircraft operations
- A reduced level of G. A. annual operations

**Commensurate Passenger Volume**

- Up to 23 million annual enplanements (over two times the level in 2004)

**Balanced Inventory of Terminal and Access Facilities**

- Up to 15 incremental passenger gates beyond the near-term program
- 2,000 to 3,000 additional parking spaces
- Transit and intermodal access alternatives to substitute for unavoidable parking shortfalls
- Relocation of functions on north side if North Parallel Runway is pursued
- Land acquisition
- Environmental mitigation
Long-Term Plan Features

Long-Term Plan features include:

- Provides for incremental development of 15 gates for a total of 94 gates
- Centralizes international gates on westside of terminal area
- Links terminal complex together thereby providing more curb area for passenger pickup and dropoff
- Extends airside APM into midfield terminal complex.
Factors Affecting Program Affordability

- **Five core drivers of capital program affordability**
  - Pre-existing cost structure and debt outstanding
  - Willingness to charge users for cost of facilities and user acceptance
  - Cost and scale of proposed projects
  - Potential of realizing a PFC rate level increase through Congress
  - Capacity to finance program on forecast growth

- **Basic choices**
  - Sustainability of “low cost” status
  - Priorities for use of County’s PFCs
  - Business relationship with airline tenants
  - Quality of facilities, levels of service, and amenities for customers
Financial Capacity Findings: Airline Cost per Enplaned Passenger (CPE)

Observations:

- Comparison to:
  - Other large-hub airports
  - Other Florida large- and medium-hub airports
- FLL has lower CPE ($4.13) than:
  - Large-hub median ($6.43)
  - All but 1 Florida airport and 5 other large-hub airports
- Low CPE is largely a function of rate-setting method used today

Notes:
1) Reflects most recent available data (2005).
2) Excludes Luis Munoz Marin International Airport and Louis Armstrong New Orleans International Airport.
(a) At the New York airports, various terminal facilities have been funded by special facility debt and/or airline equity. Thus, published CPE numbers are lower than actual CPE once special facility debt, airline equity and O&M for terminal facilities are included. According to various published sources, the total current CPE at these airports could be as high as $50. Future CPE has yet to be determined, as CPE levels will depend on levels of investment and future traffic.
Financial Capacity Findings:
Debt per Enplaned Passenger (DPE)

Observations:

- Today FLL has lower debt per enplaned passenger ($76.64) than large-hub median ($93.36)
- Through 2011, outstanding debt will be reduced significantly
- Implementation of South Runway Extension will boost outstanding debt
- Lack of accumulated airport equity may lead to constrained debt capacity depending on program size and timing

Notes:
1) Includes general airport revenue bonds, PFC and special facility debt for terminal and parking projects. Excludes special facility debt for rental car and other facilities.
2) MWAA is the Metropolitan Washington Airports Authority, which includes Washington National and Dulles airports.
3) Excludes Port Authority of New York and New Jersey, the Puerto Rico Ports Authority and the Port of Oakland, which are multi-purpose port authorities that operate airports, seaports and other facilities that issue consolidated debt.
Financial Capacity Findings: Landing Fees

Observations:

- FLL has lower landing fee ($0.97) than:
  - Large-hub median ($2.36)
  - All but 1 Florida airport and three other large-hub airports

- Level of PFC funding for South Runway extension has a direct impact on landing fee rate and capacity to fund other elements of a development program

Notes:
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(a) At the New York airports, various terminal facilities have been funded by special facility debt and/or airline equity. Thus, published CPE numbers are lower than actual CPE once special facility debt, airline equity and O&M for terminal facilities are included. According to various published sources, the total current CPE at these airports could be as high as $50. Future CPE has yet to be determined, as CPE levels will depend on levels of investment and future traffic.
### Financing Capacity Conclusions:

**Business Arrangements with Airlines Can Change Over Time**

#### Current Airline Agreement
- Signatory airlines must approve bonds and capital expenditures paid by rates and charges.
- The airlines:
  - Get nonairline revenue credit
  - Pay all remaining costs
- Limits the County’s equity for projects

#### The County can change the future framework for Airport management
- Decide whether to have an agreement
- Match any agreement terms with County policies
  - Any airline capital approval rights
  - Keep or credit nonairline revenue
  - Change rate-setting methodology
  - County’s ability to generate and spend equity

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Next Steps

- Conduct stakeholder and public outreach initiatives from November through January
- Brief Board members on results and recommendations in 1st Quarter of 2006
- Board selects preferred plan