

Task Order Number 08

Date: September 14, 2018

SFB Airport Master Plan Update (AMPU)
(Project Title)

(FAA AIP Number)

(WPI No.)

(State Project Number)

(Atkins Project Number)

It is agreed to undertake the following work in accordance with the provisions of the Agreement between (AUTHORITY) and Atkins (CONSULTANT) dated June 29, 2017

Scope of Service:

Atkins will provide professional services to conduct an Airport Master Plan Update in accordance with Federal Aviation Administration (FAA) and Florida Department of Transportation (FDOT) guidelines. See Attachment A for detailed scope of work.

Time of Performance:

The schedule is estimated to be 90 weeks from Notice to Proceed. Review time by the AUTHORITY, FAA, and FDOT is excluded from this estimate.

Compensation:

CONSULTANT's compensation will be based on the man-hour fee estimate in Attachment B and will be a lump sum of \$1,138,809.00 (including subconsultant fees and other direct expenses).

Agreed as to Scope of Services, Time or Performance and Compensation:

AUTHORITY:

Diane Crews

Date: 10-16-18

CONSULTANT:

David R. Larson
Atkins

Date: 9/17/18

**ATTACHMENT A
SCOPE OF WORK
AIRPORT MASTER PLAN SERVICES
ORLANDO SANFORD INTERNATIONAL AIRPORT**

I. GENERAL

The Airport Master Plan Update (AMPU) will utilize previous studies and other documents, such as the previous master plan, the most recent airport layout plan (ALP), and environmental assessments prepared for recent projects, as a starting point. The data and recommendations in these documents will be assembled, reviewed, and expanded upon as part of the AMPU process.

The project will be partially funded by the Federal Aviation Administration (FAA). Therefore, the CONSULTANT will use a planning process based upon the guidance of FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, supplemented by AC 150/5300-13A, *Airport Design*, to complete this AMPU. As such, the following activities will be addressed:

- Inventory of Existing Conditions
- Aerial Photogrammetry
- Environmental Overview
- Sustainability Planning
- Waste Management Review
- Aviation Activity Forecasts
- Demand/Capacity Analysis
- Facility Requirements
- Terminal Planning
- Airport Development Alternatives
- Final Development Alternatives
- ALP Update, including Airport Property Map/Exhibit A
- Capital Improvement Program (CIP)

The following terms are defined for used as part of this scope.

- AIRPORT – Orlando Sanford International Airport
- AUTHORITY – Sanford Airport Authority
- CONSULTANT – Atkins North America and, by extension, sub-consultants assigned tasks by Atkins North America in this scope.
- FAA – Federal Aviation Administration, Orlando ADO, or other authorized office
- FDOT – Florida Department of Transportation, Aviation and Spaceports Office

II. SCOPE OF SERVICES

The final AMPU document will be the result of an orderly series of activities based on FAA and FDOT master plan preparation guidelines. Work will be broken into major elements with specific tasks identified to fulfill the requirements of each element. For the purposes of scope definition and CONSULTANT fee development, the work has been divided into the elements and tasks detailed in the following sections. Any modifications and/or revisions to these tasks will constitute a change in the project scope and may require a revision to the compensation to be paid to the CONSULTANT. These tasks will begin once the AUTHORITY provides the CONSULTANT with a written Notice to Proceed (NTP).

ELEMENT 1: PROJECT ADMINISTRATION

Task 1.1: Project Management and Coordination

This task involves the internal management of the contract including project bookkeeping, billing, and coordination with project stakeholders. The Project Manager (PM) will be readily available to the project team and the AUTHORITY to oversee necessary project related elements. The PM will keep the AUTHORITY advised of the work progress, schedule, and anticipated review dates. The PM will be the CONSULTANT's main point of contact and will be responsible for ensuring that the Project's goals and objectives are met within the agreed upon schedule. Work under this task will include, but is not limited to, the following activities:

- a. Client coordination
- b. Invoicing and project status reports
- c. Sub-consultant coordination
- d. Product quality reviews not specifically assigned to a task
- e. Staff coordination
- f. Contract management
- g. Development of a quality control plan

Task 1.2: Coordination Meetings

Upon receipt of Notice to Proceed, the CONSULTANT will prepare for and attend a kick-off meeting to introduce the team and discuss the goals and objectives for the project. The CONSULTANT's PM and/or technical leads will attend the meeting as appropriate to perform the work. AIRPORT/AUTHORITY staff and appropriate stakeholders, as determined by the AUTHORITY, should also attend. The CONSULTANT will prepare an agenda for the meeting covering topics such as project schedule, project deliverables, communication protocols, and an overview of project objectives.

It is anticipated that regular working group meetings will be required throughout the planning process to review progress and discuss potential ways to proceed. The CONSULTANT's PM and appropriate key personnel will attend the working group meeting(s) with AIRPORT/AUTHORITY staff and relevant stakeholders, as deemed appropriate by the AUTHORITY, including the FAA. It will be the responsibility of the AUTHORITY to determine the appropriate involvement of stakeholders in these meetings. The CONSULTANT will schedule up to six formal coordination

meetings with the AUTHORITY and stakeholders at varying intervals in the master planning process. These meetings will be posted in the project schedule and can be changed upon agreement of the AUTHORITY and the CONSULTANT.

CONSULTANT deliverables for Element 1:

- Project schedule
- Agendas and materials for a project kick-off meeting
- Agenda and materials for coordination meetings
- Invoices and progress reports
- Meetings notes as appropriate

AUTHORITY responsibilities for Element 1:

- Names and contact information for key AIRPORT staff
- Completion of goals and objectives worksheet
- Invitations to stakeholders for meetings

Coordination Meetings included in Element 1:

- Meeting 1 – Project Kick-off meeting
- Meeting 2 – Review of Working Papers #1, Inventory; #2, Environmental Overview; and #3, Aviation Forecasts
- Meeting 3 – Review of Working Paper #4, Demand/Capacity, and Draft Development Alternatives
- Meeting 4 – Review of Development Concepts
- Meeting 5 – Review of Working Paper #5, Selected Development Concept and Financial Analysis
- Meeting 6 – Review of Working Paper #6, Financial Plan, and Project Phasing Schedule

ELEMENT 2: PUBLIC INVOLVEMENT

Task 2.1: Public Involvement Program

The Public Involvement Program (PIP) will follow the principles outlined in FAA AC 150/5070-6B, *Airport Master Plans*, and FAA AC 150/5050-4, *Citizen Participation in Airport Planning*. The goal of the PIP is to generate public awareness and elicit public input so the AUTHORITY can ensure the planning effort meets community needs. The PIP will be outlined and documented as an appendix to the final AMPU report.

A page on the AIRPORT's website, or other suitable public location, will be utilized to provide the public with announcements and updates related to the AMPU process. A public notice announcing the start of the AMPU will be posted to the website along with periodic updates leading up to advertised public meetings regarding the progress of the AMPU update as approved by the AUTHORITY. The CONSULTANT will provide a PDF version of information about progress on the AMPU process suitable for the AIRPORT to upload onto their website or distribute via other method as they see fit. It will be the responsibility of the AUTHORITY to upload and

maintain the information provided by the CONSULTANT. The AUTHORITY will collect and record any comments received from the public via the website and send to the CONSULTANT who will summarize them as part of the PIP documentation in the appendix to the final AMPU report.

The CONSULTANT will assist the AUTHORITY with preparing press releases or similar announcements by providing graphics and/or text as may be required. It is assumed that these graphics and/or text items will be collated from other documentation already prepare for the study and will not require significant production. Formatting and distribution of press releases or similar announcements will be the AUTHORITY's responsibility.

Task 2.2: TAC/Public Presentations

The CONSULTANT will work with the AUTHORITY to prepare for and participate in various meetings and/or presentations to involve stakeholders and interested members of the public in the AMPU process. For the purposes of scope definition, the following meetings are anticipated.

- The AUTHORITY will create a Technical Advisory Committee (TAC) to review master plan deliverables at selected points in the master plan process. The CONSULTANT will make up to three (3) presentations to the TAC at points determined by the AUTHORITY in conjunction with the CONSULTANT. The FAA ADO will be invited to participate in TAC meetings.
- The CONSULTANT will prepare and present master plan materials for up to three (3) briefings of the public. These briefings will be held as part of a regularly scheduled AUTHORITY board meeting. The AUTHORITY will make available the means for the public to submit comments after the briefings. The CONSULTANT will remain after the board meetings to be available to address questions from the public.

CONSULTANT deliverables for Element 2:

- Materials for a website or other public notification media
- Agendas and materials for coordination meetings with the TAC
- Materials for the public briefings
- Copies of presentation materials

AUTHORITY responsibilities for Element 2:

- Secure appropriate location for TAC meetings including handling any rental requirements
- Provide projection equipment, if available, or notify CONSULTANT
- Upload announcements provided by the CONSULTANT to the appropriate website(s) or public media
- Provide names and contact information for those to be assigned to the TAC
- Send invitations/meeting announcements to the TAC meetings and public briefings

Anticipated TAC Meetings included in Element 2:

- Meeting 1 – During the development of Element 6 and/or 7
- Meeting 2 – During the development of Element 8

- Meeting 3 – During the development of Element 11

Anticipated Public Presentations included in Element 2:

- Meeting 1 – At the conclusion of Elements 3, 5, and 6
- Meeting 2 – At the conclusion of Elements 7 and 8
- Meeting 3 – At the conclusion of Element 11

ELEMENT 3: INVENTORY OF EXISTING CONDITIONS

Task 3.1: Review Existing Documentation

The CONSULTANT, with assistance from the AUTHORITY, will collect existing studies, records, and information relevant to the Project, including a review of the CONSULTANT'S records for existing information about the AIRPORT. The CONSULTANT will prepare a list of data needs and present them to the AUTHORITY. It will be the responsibility of the AUTHORITY to coordinate with County agencies and local entities to obtain the information requested by the CONSULTANT. The AUTHORITY will provide the required files to include, but not be limited to the following.

- Previous AMPUs
- Previous studies and reports
- Current approved Airport Layout Plan (ALP) and property maps (including fee-simple ownership and easements)
- FAA Airport Master Records
- Traffic and parking data
- Ground transportation data
- Airfield pavement condition reports/data
- FDOT airport inspection reports
- Previous FAA and FDOT deeds, grants, and other instrumentalities
- Comprehensive operational and capital financial documents
- Operating financial information
- Tenant lease documentation
- Military tenant information/planning documents
- List of tenants
- As-built drawings of airport structures
- City planning, zoning, and public works documents
- Based aircraft counts
- Operational statistics
- Utility providers and utility usage (kW hours, water gallons per day, CF of natural gas, etc.)

The CONSULTANT will review this data for currency, accuracy, completeness, and utility to the AMPU.

Task 3.2: Inventory Airport Facilities and Services

Using information obtained from the previous task, the CONSULTANT will perform an airport facilities inventory to be comprised of a mixture of on-site and desktop review of the size, condition, age, use, configuration, and adequacy of existing airport facilities. Current airport property land uses will be analyzed and evaluated. Example facilities to be inventoried include the following.

- **Airfield Facilities:** Runway and taxiway configuration (including dimensions, pavement strength, markings, signage, lighting, navigational aids, weather reporting facilities, pilot communications services, circulation and access on the airport operational areas, aircraft rescue and fire-fighting (ARFF) facilities, non-standard conditions, and various obstruction surfaces as defined by FAA
- **Terminal Facilities:** Airside and landside components of the current terminal area, number and configuration of aircraft parking positions by aircraft size and passenger access to the terminal, distribution of space by functional use within the terminal building, facility utilization, age and condition of the terminal building, inventory and utilization assessment of parking, and available parking data
- **General Aviation Facilities:** GA terminal and management facilities; structures used for servicing, maintenance, or storage of GA aircraft; fueling facilities; ground vehicle access and parking; and airport support facilities
- **Other Facilities and Services:** Public road access, rights-of-way and easements, public facilities, parking, ground transportation providers, open areas, and non-aeronautical tenant facilities
- **Non-Aeronautical Land Uses on AIRPORT Property:** industrial parks, commercial/office structures, recreational space, government facilities

Task 3.3: Airspace Issues

Airspace structure and operational issues related to the National Airspace System (NAS) surrounding the AIRPORT will be analyzed and evaluated. This analysis will include, but will not be limited to, relevant airways, restricted airspace, controlled airspace, obstructions to air navigation, and nearby airports.

Task 3.4: Land Use and Land Use Controls

Potential incompatible land uses and developable areas near the AIRPORT will be identified based on a review and evaluation of city, county, or regional comprehensive plans, small area plans, zoning controls, sub-division regulations, and other documentation. If necessary, local planning officials will be interviewed to identify the potential for future residential, commercial, and industrial development near the AIRPORT, and particularly along the extended centerlines of the active runways. If interviews are required, the AUTHORITY shall assist in scheduling the interviews with local officials.

Task 3.5: Demographic and Economic Data

Information on the local and regional socio-economic status and potential for growth will be obtained for use in subsequent tasks. This information will include, but not be limited to, base

population for the local area, composition by age group, rate of change, historical and projected per capita income, historical and projected disposable income, employment trends by sector, industrial growth by sector, building permit information, property tax rolls, and overall value of construction in the area. The AUTHORITY will assist in the collection of this data by identifying local entities who have the requested data and coordinating with these entities to obtain this data on behalf of the CONSULTANT.

CONSULTANT deliverables for Element 3:

- CONSULTANT will conduct one on-site inventory of AIRPORT facilities
- Working Paper #1, Inventory of Existing Conditions. Using collected data, prepare a narrative with tables and graphics that describe the existing airport conditions.
- In coordination with the AUTHORITY, the CONSULTANT will assist in the collection of readily available existing information about the AIRPORT.

AUTHORITY responsibilities for Element 3:

- AUTHORITY will obtain existing official files and documents requested by the CONSULTANT
- The AUTHORITY will arrange for access to facilities for the one-day inventory on a date acceptable to the AIRPORT and the CONSULTANT
- AUTHORITY will facilitate a meeting between the Air Traffic Control Tower (ATCT) staff and the CONSULTANT
- Review and comment on Working Paper #1 within two weeks of receiving the draft document.

ELEMENT 4: AERIAL PHOTOGRAPHY

Task 4.1: Aerial Photography

The CONSULTANT will provide updated airport imagery in the form of a single, full color down shot of the airport and the immediate vicinity for the purpose of providing the AIRPORT with updated aerial photographs. The imagery will be ortho-rectified to allow for use in developing exhibits to scale. The CONSULTANT will provide up to six full-color aerial photographs of the airport and the area immediately adjacent to the airport boundary, mounted and ready for hanging. The specified size of the aerial photographs is 59.5 inches by 112 inches. The AIRPORT will be responsible for mounting the aerial photos in existing mounts.

CONSULTANT deliverables for Element 4:

- Six aerial photographs for display in the offices of the AUTHORITY.
- Image file of aerial (.jpg or similar format)

AUTHORITY responsibilities for Element 4:

- Escorting or allowing access to AIRPORT property and AOA for CONSULTANTS or CONSULTANT sub-contractors.
- Hanging the photos in existing frames

ELEMENT 5: ENVIRONMENTAL OVERVIEW

Task 5.1 - Environmental Overview

The AMPU will include a review of environmental conditions on and in the immediate vicinity of the AIRPORT per guidance in FAA Order 5050.4B, *Environmental Handbook*, and FAA Order 1050.1f, *Environmental Impacts: Policies and Procedures*. The CONSULTANT will review each area of potential environmental concern so the AUTHORITY is made aware of: 1) the level of potential impact, 2) whether further environmental study is required prior to implementation, and 3) whether the proposed improvements will comply with applicable State and Federal laws.

The first step will be to establish a baseline assessment of the current airport environmental condition. To establish this baseline, the CONSULTANT will review the following environmental conditions inside the airport boundary. The AUTHORITY will provide any existing information on environmental conditions to the CONSULTANT and coordinate with County and State entities to obtain any required data. The CONSULTANT may use readily available commercial sources of environmental data to augment information provided by the AUTHORITY.

- Air quality
- Prime and unique farmlands
- Vegetative, wildlife and endangered species (if any)
- Water resources – water quality including surface water, ground water, and floodplains
- Wetlands and biotic communities
- Section 4(f) and other environmentally sensitive public lands
- Cultural resources
- Energy supply and natural resource use
- Potential and known contamination sites
- Construction impacts, drainage and hydrology
- Recognized environmental concerns (hazardous waste, fuel storage, landfills, etc.)
- Wildlife habitats
- Existing noise contours

This effort will be based on existing information readily available from the AUTHORITY, the CONSULTANT's archives, Federal/State sources, and local/regional sources. No wetland mapping or detailed field investigations are included in this task.

Task 5.2: Airport Solid Waste Recycling and Reduction Plan

The CONSULTANT will engage the services of a subconsultant to review existing solid waste recycling, reuse, and waste reduction efforts engaged in by the AUTHORITY. Participation in city/county plans will be assessed and included as part of the AUTHORITY's plan. Participation in city/county plans will be limited to a review of readily available documentation related to waste reduction and recycling.

Under the guidance of the CONSULTANT, the subconsultant will conduct a waste walk audit over a course of 1 to 2 days, during which solid waste from all sources, landside and airside, will be visually inspected, photographed, and logged. The CONSULTANT (and the subconsultant) will NOT empty dumpsters and/or recycling bins to sort through the waste to determine a specific breakdown (percent) of waste by category.

The CONSULTANT, in conjunction with the subconsultant, will assist the AUTHORITY in developing an airport recycling, reuse, and waste reduction plan in accordance with the format and content contained in FAA Memorandum "Guidance on Airport Recycling, Reuse, and Waste Reduction Plans" dated September 30, 2014, and meeting the requirements of Section 133 of the FAA Modernization and Reform Act of 2012 (FMRA). Due to the requirements of the FAA Modernization and Reform Act, as well as PGL 12-08, this report will be included as an appendix to the AMPU, rather than part of the Environmental Overview chapter.

The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 5.3: Noise Impacts and Compatible Land Use

The CONSULTANT will prepare an assessment of existing and potential noise impacts resulting from the approved aircraft fleet mix. Noise impacts will be determined using the FAA mandated aviation environmental design tool (AEDT) software and will be based on activity levels and aircraft type for the current year, and each forecast period. Noise exposure contours depicting the 65, 70, and 75 DNL levels will be overlaid on an appropriate base map for the airport and the immediate vicinity. Both current and future contour intervals will be depicted on the appropriate drawings. The CONSULTANT will not collect original noise data or conduct any noise monitoring activities as part of this task.

Task 5.4: Sustainability Planning Overview

Prior to determining facility requirements, the CONSULTANT will facilitate an internal sustainability charrette with representatives from the various departments at the AIRPORT. The objective is to identify sustainability goals, within the four primary categories of sustainability, that are consistent with the AUTHORITY's vision and identify potential strategies for achieving them. Engaging the various departments presents a holistic approach that considers the entire AIRPORT. Conducting this effort during the facility requirements provides an understanding of what the AIRPORT desires to achieve and generates potential initiatives prior to determining development alternatives. This enables the project team to strategically incorporate initiatives into the alternatives in a cost-effective manner and ensure that the alternatives contribute to the sustainability goals. The charrette will also involve a collaborative effort to determine the criteria that will be used in the subsequent alternatives development element.

The results of the charrette will be utilized in conjunction with the FDOT *Airport Sustainability Guidebook* to develop a sustainability plan for the AIRPORT. This plan will accomplish the following tasks:

1. Identify the perceptions, goals, and priorities of the AIRPORT regarding sustainability
2. Initiate a sustainability baseline assessment
3. Analyze and select potential sustainability initiatives for the AIRPORT to pursue
4. Develop an action plan to accomplish selected initiatives
5. Formulate a simplified sustainability performance monitoring system

Throughout the development of this sustainability plan, the CONSULTANT will coordinate directly with the AUTHORITY to ensure the plan is being developed in an appropriate and scalable manner.

CONSULTANT deliverables for Element 5:

- Working Paper #2, Environmental Overview. Using collected data, the CONSULTANT will draft a formalized narrative with tables and graphics that summarize Tasks 5.1 and 5.3.
- Airport Solid Waste Recycling and Reduction Plan (Task 5.2). The plan will be a stand-alone document that can be used separately from the AMPU document but will be included as an appendix to such.
- Sustainability Charrette Report that contains recommended sustainability options.
- Sustainability Plan (Task 5.4). The plan will be a stand-alone that can be used separately from the AMPU document but will be included as an appendix to such.

AUTHORITY responsibilities for Element 5:

- Escort or allow CONSULTANT staff to access airport facilities to observe environmental conditions.
- Provide existing information on environmental conditions at the AIRPORT that are available from Federal, State, or local sources
- Provide airport information/data pertaining to sustainability including photos if available.
- Facilitate introductions to local governmental environmental staff.
- Assist in determining the location, attendance, and time for the Sustainability Charrette and make necessary arrangements if off-airport.
- Review and comment on Working Paper #2, Airport Solid Waste Recycling and Reduction Plan, the Sustainability Charrette Report, and Sustainability Plan within two weeks of receiving each draft document.

ELEMENT 6: AVIATION ACTIVITY FORECASTS

Task 6.1: Develop Information on Key Aviation Activity Drivers

The CONSULTANT will engage the services of a sub-consultant to collect and organize information regarding key aviation activity drivers. This process may include, but not be limited to, interviews with AIRPORT management, management contractors, and tenants to solicit opinions regarding satisfaction of present needs and perceived future aviation needs at the AIRPORT and in the surrounding area. AIRPORT staff, management contractors, and fixed-base-operators will be queried regarding their perceptions of aviation trends in the region and perceived economic value of the AIRPORT to the community. They will be asked about past and present AIRPORT

operational use patterns, and plans for aircraft changes in type or activity during the planning forecast period.

The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 6.2: Inventory Historical and Current Air Traffic Activity

The CONSULTANT will engage the services of a sub-consultant to analyze data on historical and current air traffic activity, including an accurate count of based aircraft provided by the AUTHORITY, existing surveys of actual traffic, and review of FAA and FDOT data. The primary goal will be to determine reasonably accurate data regarding the level of activity by foreign and domestic air carriers, as well as air taxis, including enplanements and operations, cargo volumes, numbers and types of based aircraft, numbers and types of itinerant flight operations, types of aircraft using the AIRPORT, and flight conditions (day or night, visual or instrument flight rules).

Information concerning peak hour operations, daily, monthly, and annual activity will be quantified to the extent feasible from representatives of the Air Traffic Control Tower (ATCT). The ATCT staff will also be contacted to determine what data they can share relative to instrument operations into and out of the AIRPORT in addition to the data maintained in the Traffic Flow Management System Counts (TFMSC). Data will be obtained from Airport records, Airport users, Fixed Base Operators (FBO's), and the FAA. Existing records of commercial service aviation activity, including historic monthly landing reports, will be compiled for the scheduled airlines including the following:

- Annual enplanements
- Annual enplanements for domestic and international commercial carriers
- Annual Operations
- General aviation local versus itinerant operations
- Based Aircraft Fleet Mix
- Itinerant general aviation fleet mix (to the extent available)
- Annual operations by for domestic and international commercial carriers
- Overnight parked aircraft
- Peak month enplanements
- Peak month operations

The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 6.3: Preparation of Aviation Forecasts

The CONSULTANT will engage the services of a sub-consultant to develop short- (5 years), intermediate- (10 years), and long-term (20 years) forecasts for aviation activity at the AIRPORT. These forecasts, when validated by FAA and FDOT, will be used in shaping future development

alternatives. The forecast process will review and consider previous AMPU forecasts, FAA national and regional forecasts, and FDOT forecasts to identify broad aviation trends. Those indications will be further refined by forecasts of demographic and economic factors for the surrounding area that are known to shape aviation activity, with emphasis on businesses, tourism, and related industries. Standard forecasting techniques will be employed to produce a range of forecasts for the 20-year planning horizon, and professional judgment be used to indicate preferred projections. Historic airport activity, FDOT guidelines, factors identified in the airport inventory, and a listing of local events and attractions obtained by the AUTHORITY will be used to estimate aircraft operational peaking at the AIRPORT. The forecast will be limited to the following:

- Total annual enplanements
- Annual enplanements for domestic and international commercial carriers
- Total commercial service annual operations
- Total Based Aircraft (utilizing existing airport data and industry trends)
- Based Aircraft Fleet Mix (by specific aircraft categories)
- General Aviation Activity Forecasts (total operations as well as itinerant and local splits)
- Military Operations and Fleet Mix
- Total Annual Operations
- Peaking Characteristics (general/average peak month, average day of the peak month, and peak hour of the average day characteristic)
- Categories of Operations (total local versus total itinerant, instrument activity, day/night splits, and overall aircraft operational fleet mix)
- Critical Aircraft (documentation of the existing and expected future critical aircraft)
- Aviation peaking analysis to determine the enplanements and operations for the peak month, peak day, and peak hour

The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 6.4: Coordination with FAA and FDOT

The CONSULTANT will prepare an Aviation Forecast suitable for submission to the FAA and FDOT for review and validation. The CONSULTANT will work with the AUTHORITY to submit the forecast and coordinate with the FAA and FDOT. The CONSULTANT will provide one (1) revision to the Aviation Forecast based on comments from the FAA and FDOT. The CONSULTANT will prepare for and attend one (1) meeting with representatives of the AUTHORITY, the appropriate FAA Airport District Office (ADO), and the FDOT to review the forecast. FAA and FDOT approval of the Aviation Activity Forecasts on their technical merits should be obtained before further demand-driven planning can proceed.

CONSULTANT deliverables for Element 6:

- Working Paper #3, Aviation Forecast. Using collected data, the CONSULTANT will draft a formalized narrative with tables and graphics that summarizes the work under Task 6.1 to 6.3. This will be suitable for submission to the FAA and FDOT for approval.
- Participate in one coordination meeting between the FAA/FDOT and the AUTHORITY to discuss the Aviation Forecasts
- One revision to Working Paper #3 based on comments from FAA and the FDOT.

AUTHORITY responsibilities for Element 6:

- Provide records and documentation on the number of based aircraft, air operations, and passenger statistics for the previous 10 years.
- Review and comment on Working Paper #3 within two weeks of receiving the draft document.

ELEMENT 7: DEMAND/CAPACITY AND FACILITY REQUIREMENTS ANALYSIS

Task 7.1: Analyze Airport Capacity and Delay

The demand/capacity assessment will analyze the ability of the current airfield configuration to meet forecasted demand. It will consider configuration of runways and taxiways, historical weather conditions, aircraft fleet mix, and the percentage of local touch and go operations. Results will be expressed in terms of the hourly and annual service volume of the airfield, in minutes of delay per aircraft operation, and total estimated annual delay as prescribed in FAA AC 150/5050-5, *Airport Capacity and Delay*. The CONSULTANT will engage the services of a sub-consultant to assist with this analysis. The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 7.2: Determine Design Aircraft and Airport Reference Code

An airport's "design" aircraft is the specific aircraft, or category of aircraft, with the most critical design criteria that is anticipated to regularly use the airport during the 20-year planning period. Determination of the design aircraft and role of the AIRPORT in the air transportation system will determine the selection of the Airport Reference Code (ARC), Runway Design Group (RDG) and Taxiway Design Group (TDG), and all appropriate airport design standards. The design aircraft and subsequent ARC, RDG and TDG selection for the AIRPORT will be ascertained from information generated in study Elements 2 and 5, and guidance in FAA AC 150/5300-13A, *Airport Design*.

Task 7.3: Determine Airfield and Airside Facility Requirements

Airfield and airside facility requirements to meet the short, intermediate, and long-term forecasted demand will be determined using information developed in study Elements 3 and 5, standard planning criteria, and expertise of the CONSULTANT. Analysis of runway length requirements will use FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*, and other aircraft-specific performance documents. Weather data necessary for runway analyses will

be obtained from the nearest National Weather Service station. Airfield facility requirements to be assessed include, but not limited to, the following.

- Runways (length, width, and pavement strength)
- Taxiways (width and separation requirements)
- Helicopter landing zone and hoverways, where applicable
- FAR Part 77 surfaces and other relevant runway protection surfaces (i.e., RSA, RPZ, etc.)
- Runway and taxiway lateral clearances
- Lighting and marking
- Navigational aids, communications and weather reporting systems
- ARFF requirements
- Cargo apron and facilities
- Security fencing and airfield access
- Aircraft maintenance facilities
- RON/aircraft storage aprons

Airfield facility forecast requirements will be compared to existing facilities to identify any future needs. The FAA ADO and Flight Procedures Office will be consulted regarding the feasibility and general issues relating to any instrument approaches that might be recommended for AIRPORT.

Task 7.4: Determine Terminal Requirements

The CONSULTANT will work together with a sub-consultant to identify the demand for various functional areas using FAA, ACRP, and other industry standards based on the peak hour of the peak month average day (PMAD) forecasts for the planning period or planning activity levels. The demand for the various facilities will be compared to the current capacity of the terminal component to determine facility requirements. Planning criteria will be based on the PMAD level of demand and aircraft gate utilization. The functional areas to be considered will include, but not be limited to, the following.

- Aircraft gates, gate frontage and passenger boarding bridges
- Passenger departure lounges
- Baggage claim
- Public circulation area
- Airline lease space (ticket counters, operations areas, baggage make-up area)
- Security space
- Concessions (food, gifts and news, arcades, etc.)
- Other terminal space (administration, utilities, etc.)
- Rental car facilities, including ready-return, Quick-Turn-Around facilities, and vehicle storage
- Terminal curb requirements
- Demand for vehicle parking by product type (e.g. short vs. long-term)

Based on the demand capacity assessment, terminal facility requirements to meet the planning period demands will be identified. Facility needs will be defined in terms of the various categories identified in the demand/capacity assessment with future space requirements defined, if

applicable. This assessment will also identify issues associated with the configuration and any functional issues related to component uses within the terminal and terminal area.

The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 7.5: Determine General Aviation Facility Requirements

The results of previous tasks and accepted planning criteria will be used to determine the facilities necessary to meet current and projected levels of demand for the short, intermediate, and long-term planning periods. Requirements will be expressed in terms of typical units and recommended configuration. The goal of this task is to provide adequate levels of service and operational effectiveness throughout the 20-year planning period. General aviation (GA) facility requirements to be assessed include, but is not limited to, the following:

- GA terminals and management buildings
- Transient aircraft aprons
- Based aircraft storage/tiedown ramps
- Aircraft storage hangars
- Aircraft maintenance hangars

Task 7.6: Determine Landside Facility and Access Requirements

Based on work completed in previous tasks to identify landside and roadway facilities, and the future demand and capacity of these facilities, the CONSULTANT will use industry standards and in-house airport experience to determine future requirements these facilities. This determination will be linked to forecasts of future aviation and passenger activity and the current condition of the facilities. The CONSULTANT will provide requirements in typical units that relate to each facility. The facilities to be considered include, but is not limited to, the following:

- Fuel storage and servicing areas
- Ground vehicle access
- Public and employee parking areas
- Rental car facilities
- Airport operations and maintenance structures
- Roadway signage
- Non-aeronautical facilities
- Cargo facilities
- Aviation support facilities (government owned)

Task 7.7: Property Requirements

If applicable, the CONSULTANT will identify fee-simple property acquisition or aviation easements that might be needed to ensure the safety and land use compatibility of the identified airfield requirements.

CONSULTANT deliverables for Element 7:

- Working Paper #4, Demand/Capacity Analysis. Using collected data, the CONSULTANT will draft a formalized narrative with tables and graphics that summarizes the tasks in this element.

AUTHORITY responsibilities for Element 7:

- Review and comment on Working Paper #4 within two weeks of receiving the draft document.

ELEMENT 8: AIRPORT DEVELOPMENT ALTERNATIVES

Task 8.1: Identify Airfield Facility Alternatives

Based on the airport facility requirements established in Element 7, airfield development alternatives will be formulated. These airfield alternatives may include such items as runway and taxiway changes, additions, or closures; property or aviation easement acquisition; and lighting and instrument approach capabilities needed for future demand. Existing airfield pavements will be evaluated as to condition and potential use in various airfield alternatives. Airfield alternatives will be based on scenarios for development within existing airport boundaries, or within expanded airport boundaries, and will show necessary major runway and taxiway development during the 20-year planning period, as well as required changes to infrastructure to accommodate each airfield option evaluated. This task will result in a series of overall development options. Airfield alternatives will be analyzed based on their ability to satisfy the identified facility requirements, environmental considerations, engineering factors, cost, phasing, political viability, and ease of implementation.

Task 8.2: Identify Terminal Facility Alternatives

In conjunction with the CONSULTANT, the sub-consultant will prepare terminal facility alternatives based on the terminal facility requirements. Terminal alternatives will be coordinated with alternatives developed for other facilities such as rental car facilities, parking or access, and others as needed, to accommodate the demand. Terminal alternatives will be developed based on facility requirements, environmental considerations, engineering factors, operational efficiency, costs, and overall feasibility for implementation. Terminal alternatives will also be analyzed to determine their potential for creating or adversely affecting line of sight, as well as FAR Part 77 and TERPS surfaces. Layouts of each potential alternative will be developed to include, where applicable, aircraft parking positions and terminal roadways.

Based on the findings, an evaluation matrix will be developed to compare factors for the various alternatives. These factors could include the following:

- The ability to satisfy long-term passenger and aircraft demands (e.g. gates, departure lounges, boarding bridges, gate frontage, etc.) and anticipated activity
- Ability to meet landside (curbside, parking, and rental car) demand while retaining customer convenience and operational efficiency and cost effectiveness
- Level of new construction versus incorporation and reuse of existing terminal facilities

- The ability to facilitate enhanced concessions and potential revenue production
- Maximize financial return on un-used or under-used areas within the terminal
- The ability to satisfy long-term needs of utilities and infrastructure
- Order of magnitude costs associated with each of the terminal alternatives

The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 8.3: Identify Landside and General Aviation Facility Alternatives

The forecasted demand and facility requirements will be used to develop and graphically depict up to three alternatives for facilities. This task will be conducted simultaneously with other tasks in this element, and result in a series of overall development options. Factors such as short and long-term access to the site, availability and cost of providing supporting infrastructure, existing and future airfield operational facilities, potential environmental impacts and overall developments costs, will influence the selection of alternative locations and configurations of the proposed facilities.

Task 8.4: Selection of Alternatives

The consultant will confer with the AUTHORITY to select a series of recommended development alternatives that meet 5-, 10-, and 20-year requirements, and will do so in a viable manner from a cost, phasing, engineering, and environmental perspective.

Task 8.5: Produce Refined Airport Development Concept

Refinements to the recommended alternatives will be made as deemed necessary after input is received from the AUTHORITY, FAA, FDOT, and the TAC. This task will result in the revision of individual alternatives or the combination of individual alternatives into a single “refined” development alternative for implementation. This task will identify the rationale for the refinement, and each refinement will be discussed using the same criteria used to evaluate the initial set of alternatives.

Task 8.6: Estimate Preliminary Development Costs

The CONSULTANT will engage the services of a sub-consultant to prepare preliminary cost estimates for each airport development alternative considered in Element 8. Cost data from recent construction projects in the airport vicinity, cost schedules provided by the FAA ADO and FDOT, and industry queries will be used in the process. Operating budget and other financial constraints developed in previous elements will be applied to determine the AIRPORT’s ability to implement the selected alternative. All cost estimates will be in current year constant net present value (NPV) dollars.

The CONSULTANT will coordinate efforts with the AIRPORT and the subconsultant to ensure overall goals and objectives of the Project are achieved. The CONSULTANT will review all work prepared by the subconsultant for conformity with the rest of the master plan documents.

Task 8.7: Compatible Land Use Impacts

A description of land use impacts comparing existing and planned land uses to the development recommendations of the AMPU or permits that would be required. This land use task will address airport property, plus off-airport property near and under extended runway centerlines. Off-airport land uses will be identified to determine compatibility with the operations and development of the AIRPORT.

CONSULTANT deliverables for Element 8:

- Set of graphic development concepts for Coordination Meeting 4
- Graphic depiction of selected development concept for Coordination Meeting 5
- Working Paper #5, Airport Development Concepts and Selected Airport Development Plan. Using collected data, the CONSULTANT will draft a formalized narrative with tables and graphics that summarizes the tasks in this element.

AUTHORITY responsibilities for Element 8:

- Be available for an extended Coordination Meeting 4 to review and select the preferred concepts for the AIRPORT.
- Review and comment on Working Paper #5 within two weeks of receiving the document.

ELEMENT 9: AIRPORT LAYOUT PLAN SET

Based upon decisions made during the study, an airport layout plan (ALP) set will be prepared in accordance with the guidelines presented in Advisory Circulars 150/5070-6B, *Airport Master Plans* and 150/5300-13, *Airport Design*, as well as ARP SOP 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALPs)*. The CONSULTANT may provide additional sheets that show enlarged map features where areas of a sheet are unreadable at the standard FAA scaling requirements. Wherever possible, CONSULTANT will make use of existing ALP data and drawings in preparing the updated ALP.

Task 9.1: Cover Sheet (1 drawing sheet)

A cover sheet will provide information concerning name and identifier of the AIRPORT, name of the Sponsor, FDOT and FAA project numbers, as applicable, and airport location and vicinity maps.

Task 9.2: Existing Airport Layout Plan Drawing (Includes Airport Data Sheet) (2 drawing sheets)

The Existing ALP Drawing will be updated to reflect the current airport layout as identified in this Project. Information on this portion of the ALP set will include, but not be limited to, the physical layout of the AIRPORT and of the physical facilities developed on the AIRPORT. The ALP sheet will also incorporate building and facilities data, runway protection zones, critical areas, building elevations, topography, roads, and parking areas, wind rose/wind coverage, and the airport property and aviation easement boundaries.

Task 9.3: Future Airport Layout Plan Drawing (1 drawing sheet)

The Future ALP Drawing will be updated to reflect the recommended development of future needs as identified in this Project. Information on this portion of the ALP set will include, but not

be limited to, the physical layout of the AIRPORT and of the physical facilities developed on the AIRPORT. The ALP sheet will also incorporate building and facilities data, runway protection zones, critical areas, building elevations, topography, roads, and parking areas, wind rose/wind coverage, and the airport property and avigation easement boundaries.

Existing and proposed modifications to FAA standards will be identified and delineated in a table, along with either the waiver allowing the modification, or the proposed method of addressing the modification. A table listing the modifications (existing and proposed) along with their proposed disposition will be incorporated on the ALP. Additionally, justification for requested modifications to standard will be provided in the airport plans chapter, which will be prepared in conjunction with the ALP drawing set.

Task 9.4: Terminal Area Drawing (1 drawing sheet)

The Terminal Area Drawing (TAD) depicts the area around the passenger terminal building or area designated for passenger operations. The TAD will provide a large-scale view of the terminal area so that its features are easier to distinguish. It should include the outline of the passenger terminal building, apron area (including required markings), taxilanes, gates, terminal support structures, aircraft safety areas, and other areas considered a part of the terminal's operation.

Task 9.5: Airspace Drawing (1 drawing sheet)

The FAR Part 77 surfaces associated with the ultimate AIRPORT configuration and approaches will be generated and superimposed on USGS quadrangle maps. Fifty-foot contour intervals will be shown for FAR Part 77 sloping imaginary surfaces. This sheet will depict objects violating FAR Part 77 surfaces that have not been identified on the ALP or RPZ plans and profiles. The top elevation of each obstruction will be identified on the sheet, as will the disposition of the obstruction. The dimensions of the approach surfaces and transitional surfaces will be charted. The airspace plan (FAR Part 77 Surfaces) will depict the full length of all approach surfaces.

The CONSULTANT understands that as part of this scope, an Obstacle Action Plan (OAP) may be needed if there are any existing obstacle penetrations to TERPS, Threshold Sitting Surfaces (TSS), and the Departure Surfaces.

Task 9.6: Inner Portion of the Approach Surface Drawing (7 drawing sheets)

Drawings will be provided showing the plan and profile view of the inner portion of the approach surface to the runway(s) and include a tabular listing of all surface penetrations. The drawing will depict the obstacle identification approach surfaces contained in 14 CFR Part 77, "Objects Affecting Navigable Airspace". The drawing may also depict other surfaces, including the Threshold-Siting Surface (TSS), Glideslope Qualification Surface (GQS), those surfaces associated with United States Standards for Instrument Procedures (TERPS), or those required by the local FAA office or state agency. The extent of the approach surface and the number of airspace obstructions shown may restrict each sheet to only one runway end or approach.

Runway Protection Zone (RPZ) Plans and Profiles will be prepared for each runway, depicting the existing and any future changes to the RPZs associated with the runway system. The drawing will

depict the location of roadways, structures, natural ground elevations, and other man-made or natural features with the limits of the RPZ. The drawing will also identify objects that penetrate approach surfaces or violate FAA Object Free Area (OFA) criteria. Obstructions will be listed numerically in an obstruction table for each approach, with data describing the obstruction type, top elevation, allowable elevation, amount of penetration, and proposed dispositions. Additionally, the drawing will depict the configuration of required safety areas off each runway end. Plan views will be superimposed on aerial photos or on a detailed line drawing.

Task 9.7: Runway Departure Surface Drawing (6 drawing sheets)

This drawing will depict the applicable departure surfaces as defined in Paragraph 303 of FAA AC 150/5300-13A. The surfaces will be shown for runway end(s) designated for instrument departures.

Task 9.8: Land Use Drawing (1 drawing sheet)

A Land Use Drawing for the area within the AIRPORT's boundaries will be updated based on the identified overall development concepts. Included in the drawing will be aeronautical uses, agricultural uses, and industrial/commercial development areas. A depiction of current land uses in the immediate airport vicinity will also be included. Standard classifications of land use (e.g., residential, commercial, agricultural, etc.), in addition to the identification of major noise sensitive institutional land uses, will be undertaken. The land use and information will be depicted graphically over a street layout of the airport environs showing the airport and major geographical features.

Task 9.9: Airport Property Inventory Map (1 drawing sheet)

An FAA ARP SOP 3.0 compliant Airport Property Map/Exhibit-A will be updated to reflect parcels acquired either through fee simple purchase or easements purchased by the airport with Federal, State, and local funds. The CONSULTANT will use the standards for developing Airport Property Maps/Exhibit-As located in FAA Advisory Circular 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*.

Task 9.10: Prepare Draft Airport Layout Plan Set (21 sheets)

A total of five full size draft ALP sets will also be prepared under this task. One (1) set will be sent to FDOT and one (1) set to the FAA for review. The full-size draft ALP sets transmitted to the FDOT and FAA will include a transmittal letter addressing any significant changes to the current ALP, proposed ALP, the design group for each runway, any modifications to standards including justification for the modification. The CONSULTANT will coordinate with the FAA and FDOT during the review of the ALP and maintain communication with the AUTHORITY during the review.

Task 9.11: Prepare Final Airport Layout Plan Set (21 sheets)

Upon receipt of comments from the FAA and FDOT, the CONSULTANT will address the comments and make any required revisions to the ALP set. As a final product, the CONSULTANT will provide hard copies of the ALP set suitable for signature to be distributed to the AUTHORITY, the FAA, and FDOT.

(NOTE: Due to schedules and other pressing activities, the review of the ALP set by the FAA and FDOT may take considerable time. Delays in obtaining signature approvals for the Final ALP set will not delay the completion of all other master plan elements.)

CONSULTANT deliverables for Element 9:

- Five (5) full-size hard copies and one PDF (electronic copy) of the draft ALP set will be prepared for review by the AUTHORITY (three), the FAA (one), and the FDOT (one)
- Six (6) full-size hard copies and one PDF (electronic copy) of the final ALP set will be prepared for distribution to the AUTHORITY (four), the FAA (one), and the FDOT (one)

AUTHORITY responsibilities for Element 9:

- Provide CONSULTANT with existing data not otherwise collected that is necessary to complete the ALP set
- Review and comment on the draft ALP set within three weeks of receiving the documents.
- Assist with coordinating the review with the FAA and FDOT

ELEMENT 10: FINANCIAL ANALYSIS

Task 10.1: Financial Inventory

The CONSULTANT will conduct a financial review of the AIRPORT's fiscal condition to determine the ability of the AUTHORITY to implement planned improvements. At a minimum, the following data collection items will be requested to assist with this task.

- The latest five fiscal years of existing airport expenses and revenues
- The latest budget for the AUTHORITY
- Airline Landed Weights by Aircraft Type for last five years
- A copy of all lease and concessions agreements, including signatory airlines
- Terminal building square footage leased and total
- Descriptions of concessionaires including rental car companies, restaurants, etc.
- Five-year history of passenger facility charges (PFCs) and their application to AIRPORT projects
- Airline fleet mix forecast, if available
- AIRPORT debt service schedules and an inventory of any outstanding bond issues
- Any proposed taxes collected by site, or payments-in-lieu-of-taxes (PILOTS) and/or, taxes to be paid by the AUTHORITY
- List of rates and charges for aircraft storage facilities including: conventional hangars, T-hangars, and tie-downs paved and non-paved
- List of all other rates and charges. For example: percent, or cents, charged per gallon of fuel (jet or 100 LL); landing fees; consignment fees; special events, etc.
- Organizational chart or reporting structure
- Number of employees by type/function listed for both full and part time
- Expenditures on payroll and operations
- Federal, state and local investment in capital improvements over past ten (10) years

- List of all businesses/tenants using the airport, e.g., MRO, air cargo, pilot training, corporate, medevac, etc.
- Information concerning industrial or commercial property adjacent or near to the AIRPORT
- List of all on-airport employers and aircraft tenants
- List of major corporations and notable businesses and individuals that use the AIRPORT

The forecast of airline passengers and general aviation activities will be used in the development of revenue projections. In addition, on-airport aviation businesses will be interviewed to determine their long-term plans. Another avenue of research involves AIRPORT leases. These will be examined in detail to determine future revenue streams. Several lease strategies, including best practices and general areas of advice, will be covered in this analysis. These will include such topics as indemnification, minimum standards for commercial aeronautical activities, rules and regulations, and other items as needed.

Task 10.2: Net Revenue Analysis

If all revenue enhancement options will have been considered by the alternatives analysis, the financial plan will focus on the preferred master plan recommendations. Options for revenue enhancement will be described. These may include (but are not limited to) evaluations and projections of additional airline service, new air cargo service, corporate aviation, fractional ownership, hangar development, increased flight training via high school and college programs, new or improved terminal services or amenities, new/specialty FBOs, airport property development, changes in rates and charges, and efficient use of grants. The analysis will explore new business opportunities including development/use of available AIRPORT lands.

Because commercial airline service is the largest source of revenues, it will have the greatest level of analysis in the financial plan. In this regard, the financial plan can show how differences in the rates and charges will impact the airport's bottom line. At a minimum, the financial plan will show forecast landed weights and their associated revenues, terminal space rentals, rental car concession fees, passenger facility charges, and terminal retail and food service revenues.

Expense data will be generated to include the cost of implementing revenue enhancement strategies. This will include the costs of airline service borne by the Authority, including law enforcement personnel, FAR Part 139 Certification costs (both capital and operational), and administration costs associated with airline service. Budget pro formas will be provided for a 20-year future, based on known factors and analyses including, but not limited to: inflation, development expenses, additional or less personnel, expected aircraft growth, revamped leases, contracts, and the local match on grants. These expenses will then be compared with the future revenues in a net revenue analysis.

A deliverable from the financial plan will be a software spreadsheet that permits updating and changes to assumptions in the business plan. This dynamic planning software is designed to help the AIRPORT prolong the life of the planning effort and to deal with unexpected changes to the plan.

Once the net revenue analysis is complete, the available future funds will be compared to the AIRPORT's CIP to determine how best to finance the local share of development. Financial options will be considered including debt financing, bonding, public-private partnership financing, and other means, as appropriate. In addition, capital investment options will be explored.

Task 10.3: Prepare Financial Plan

An airport financial plan, including estimates of the amount of funds available from Federal and State grant-in-aid programs, airline revenues, and general aviation revenues will be prepared to determine the net amount of capital funds required by the AUTHORITY to accomplish each proposed stage of airport improvement. Alternative financing strategies that may be available for implementing certain elements of the proposed development program will be explored. Sources of airport funds will be analyzed as to their financial implications, their use to finance proposed airport development projects, and airport operations and maintenance needs. Estimates of the magnitude and timing of any bond issues that may be required to cover the cost of airport improvements will be made. The financial plan will address the five-year initial phase, an intermediate phase, and long-term phase.

CONSULTANT deliverables for Element 10:

- Working Paper #6, Financial Analysis. Using collected data, the CONSULTANT will draft a formalized narrative with tables and graphics that summarizes the tasks in this element.

AUTHORITY responsibilities for Element 10:

- Review and comment on Working Paper #6 within two weeks of receiving the draft document.

ELEMENT 11: IMPLEMENTATION PLAN

Task 11.1: Identify Capital Projects and Programs

Using results from the working papers and the decisions reached in previous tasks, the CONSULTANT will identify capital projects and programs necessary to implement the preferred development alternative for the planning period. The CONSULTANT will prepare a table of projects and programs that include descriptions, refined cost estimates, funding eligibility, and priority. The CONSULTANT will utilize the services of a sub-consultant to populate the cost estimate section of the table consistent with Task 8.6. Once the new projects are identified and approved, the CONSULTANT will prepare a combined list of projects and programs by incorporating the AUTHORITY's current CIP list. Individual project descriptions will be prepared in a format consistent with the format used by the Joint Airport Capital Improvement Program (JACIP).

Task 11.2: Capital Improvement Funding

Using the net revenue analysis completed in Task 10.2, the available future funds will be compared to the combined list of capital projects and programs created in Task 11.1 to determine

how best to finance the local share of development. Financial options will be considered including debt financing, bonding, public-private partnership financing, and other means, as appropriate. In addition, capital investment options will be explored. The financial subconsultant will provide assistance in review of funding sources.

Task 11.3: Create Implementation Plan

The CONSULTANT will prepare a development schedule that reflects requirements developed and refined in Task 11.2 for the short, intermediate, and long-term planning horizons. Projects and development tasks within each period will be individually scheduled to be available when needed. Although the schedule will be depicted in a chronological format, the actual implementation should be tied to development and forecast “triggers”. For the airline side, these “triggers” will involve milestones in passenger enplanements. For the general aviation side, these “triggers” will involve the number of based aircraft (including jets) and general aviation operations. The CONSULTANT will identify these “triggers”, where applicable, so that the AUTHORITY can better manage funding resources.

The sub-consultant will provide the CONSULTANT with financial evaluation and review of the capital investment options related to the preparation of a development schedule that reflects requirements developed and refined in Task 11.2 for the short, intermediate, and long-term planning horizons.

As part of the schedule, the CONSULTANT will provide instructions on how to manage, update, and periodically revise the development schedule to keep it current and relevant. Funding availability and required pre-development tasks will also be considered during scheduling. The short-term development schedule will be coordinated closely with the AUTHORITY to reflect near term priorities and funding availability. Sustainability initiatives will be identified and included in the development phasing as applicable and appropriate.

CONSULTANT deliverables for Element 11:

- List of capital projects and programs derived from the preferred development alternative
- Combined list of capital projects and programs using the master plan capital projects and the existing AIRPORT CIP
- Project funding plan
- Phased project schedule

AUTHORITY responsibilities for Element 11:

- Review and comment on the list of master plan capital projects and programs within one week of receiving the draft list.
- Review and approve the combined list of capital projects and program and CIP funding plan within three weeks of receiving the documentation
- Review and comment on the implementation plan narrative within two weeks of receiving the draft document.

ELEMENT 12: FINAL DOCUMENT PREPARATION

Task 12.1: Prepare Draft Master Plan Document

The CONSULTANT will prepare a Draft Airport Master Plan Document that will integrate the Element Working Papers into a single, cohesive document that will provide all information on how the Airport Master Plan was developed and the reasons the Plan was selected. Included with the Draft Airport Master Plan Update Document will be an executive summary of the results of the master planning effort suitable for distribution to public. The CONSULTANT will provide up to eight hard copies of the Draft Document for distribution to the AUTHORITY (four), the FAA (two), and FDOT (two) for final review and comment.

Task 12.2: Prepare Final Master Plan Document

Upon receipt of comments from the AUTHORITY, FAA, and FDOT, the CONSULTANT will make reasonable modifications to the Draft Document and prepare the Final Airport Master Plan Update Document. Three bound, hard-copy Final Documents of the AMPU will be prepared for distribution: one (1) copy to the FDOT, one (1) copy to the FAA ADO, and three (3) copies to the AUTHORITY. The CONSULTANT shall retain one copy. An electronic version in PDF format will be provided to the AUTHORITY, FAA, and the FDOT.

CONSULTANT deliverables for Element 12:

- Draft master plan document in electronic PDF format suitable for review and comment by the AUTHORITY.
- Final master plan document in electronic PDF format or on a separate portable drive and three printed copies for use by the AUTHORITY, one printed copy for the FAA, and one printed copy for the FDOT. The CONSULTANT will retain one hard copy.

AUTHORITY responsibilities for Element 12:

- Review and comment on the Draft Master Plan Document within three weeks of receiving the draft document.
- Assist the CONSULTANT with obtaining review comments from the FAA and the FDOT

III. COST AND SCHEDULE

The cost and schedule of services to be delivered is a “best professional estimate” based on typical planning efforts for an airport similar to the AIRPORT. Review and approval processes of the FAA, FDOT, and Sponsor are beyond the control of CONSULTANT and may extend the schedule. Expanded or modified services that might be requested will result in increased fees and an extended schedule. Expanded or modified services that could be experienced include, but are not limited to, changes in the PIP, limited amount of existing documentation resulting in more original research, utility mapping, additional coordination services (meetings, reports, presentations, etc.), or environmental conditions encountered.

The schedule for performing the services under this Scope of Work is estimated to be 90 weeks from the date on the Notice to Proceed letter provided to the CONSULTANT. Excluded from this schedule is the review time that the AUTHORITY, FAA, and FDOT will take to review and comment on the draft ALP set. Extended review periods by any of these stakeholders may result in a request for schedule extension.

The total fee for performing this Scope of Work will be **\$1,138,809** as set forth in **Attachment B** Man-Hour Fee Estimate.

END ATTACHMENT A

ATTACHMENT B
MAN-HOUR FEE ESTIMATE
AIRPORT MASTER PLAN SERVICES
ORLANDO SANFORD INTERNATIONAL AIRPORT



Revised 7/24/18

Revised 7/24/18		PM				PLANNING			Support	Total Man-Hours
Task Description		Project Director	Sr. Admin	Sr. Planner IV	Sr. Planner III	Sr. Planner II / Sr. Eng. II	Planner II / Eng. II	Sr. Landscape Architect	Sr. Estimator	
ELEMENT 1: PROJECT ADMINISTRATION										
1.1	Project Management and Coordination	110	30		80					220
1.2	Coordination Meetings	24	24	24	72	32	32			208
ELEMENT 2: PUBLIC INVOLVEMENT/OUTREACH										
2.1	Public Involvement Program	4	8	4	12	12	24			64
2.2	TAC/Public Presentations	24	24	24	72	32	32	30		238
ELEMENT 3: INVENTORY OF EXISTING CONDITIONS										
3.1	Review Existing Documentation	2		4	8	24	32			70
3.2	Inventory Airport Facilities and Services	2		4	8	32	40			86
3.3	Airspace Issues			4	8	24	30			66
3.4	Land Use and Land Use Controls			4	8	20	28			60
3.5	Demographic and Economic Data			4	8	20	28			60
ELEMENT 4: SURVEYING AND MAPPING										
4.1	Aerial Photography	2			8		16			26
ELEMENT 5: ENVIRONMENTAL OVERVIEW										
5.1	Environmental Overview	4		4	64		24			96
5.2	Airport Solid Waste Recycling and Reduction Plan			2	18					20
5.3	Noise Impacts and Compatible Land Use	4		16	120	80	80			300
5.4	Sustainability Planning Overview	2		8	40		96			146
ELEMENT 6: AVIATION ACTIVITY FORECASTS										
6.1	Develop Information on Key Aviation Drivers			4	8					12
6.2	Inventory Historical and Current Air Traffic Activity			4	8					12
6.3	Preparation of Aviation Forecasts			8	16	16				40
6.4	Coordination with FAA and FDOT	4		8	8					20
ELEMENT 7: DEMAND/CAPACITY ANALYSIS & FACILITY REQUIREMENTS										
7.1	Analyze Airport Capacity and Delay			2	8	8				18
7.2	Determine Design Aircraft and Airport Reference Code				4	4				8
7.3	Determine Airfield Facility Requirements	8		8	24	40	40			120
7.4	Determine Terminal Requirements	4		18	32					54
7.5	Determine GA Facility Requirements	4		8	18	24	36			90
7.6	Determine Landside Requirements	4		8	18	32	48			110
7.7	Property Requirements	2		4	8	8	16			38

ATTACHMENT B
MAN-HOUR FEE ESTIMATE
AIRPORT MASTER PLAN SERVICES
ORLANDO SANFORD INTERNATIONAL AIRPORT



Revised 7/24/18

Revised 7/24/18		PM		PLANNING				Support		
		Project Director	Sr. Admin	Sr. Planner IV	Sr. Planner III	Sr. Planner II / Sr. Eng. II	Planner II / Eng. II	Sr. Landscape Architect	Sr. Estimator	Total Man-Hours
Task Description										
ELEMENT 8: AIRPORT DEVELOPMENT ALTERNATIVES										
8.1	Identify Airfield/Airside Facility Alternatives	8		20	32	40	60			160
8.2	Identify Terminal Facility Alternatives	8		8	20	18	16			70
8.3	Identify Landside and GA Facility Alternatives	8		20	32	40	72			172
8.4	Selection of Alternatives	12		24	36	24	40	40		176
8.5	Produce Refined Airport Development Concept	8		18	40	32	40	60		198
8.6	Estimate Preliminary Development Costs	8		4	12	12			16	52
8.7	Compatible Land Use Impacts	4		16	20	20	20			80
ELEMENT 9: AIRPORT LAYOUT PLAN SET										
9.1	Cover Sheet					2	8			10
9.2	Existing Airport Layout Plan Drawing				12	24	60			96
9.3	Future Airport Layout Plan Drawing				20	36	80			136
9.4	Terminal Area Drawing				20	32	76			128
9.5	Airspace Drawing				16	24	72			112
9.6	Inner Portion of the Approach Surface Drawing				20	32	80			132
9.7	Runway Departure Surface Drawing				20	32	80			132
9.8	Land Use Drawing				20	32	60			112
9.9	Airport Property Inventory Map				8	24	40			72
9.10	Prepare Draft ALP Set	8		8	16	24	40			96
9.11	Prepare Final ALP Set	8		8	12	20	32			80
ELEMENT 10: FINANCIAL ANALYSIS										
10.1	Financial Inventory	8		8	16					32
10.2	Net Revenue Analysis									0
10.3	Prepare Financial Plan	4		8	12					24
ELEMENT 11: IMPLEMENTATION PLAN										
11.1	Identify Capital Projects and Programs	8		24	30	32	40			134
11.2	Capital Improvement Funding	8		20	32	40	40		8	148
11.3	Create Implementation Plan	8		24	28	32	48			140
ELEMENT 12: FINAL DOCUMENT PREPARATION										
12.1	Prepare Draft Master Plan Document	16		32	48	60	80	36		272
12.2	Prepare Final Master Plan Document	8		12	20	20	60	24		144

ATTACHMENT B
MAN-HOUR FEE ESTIMATE
AIRPORT MASTER PLAN SERVICES
ORLANDO SANFORD INTERNATIONAL AIRPORT



Revised 7/24/18

Task Description	PM		PLANNING					Support	Total Man-Hours
	Project Director	Sr. Admin	Sr. Planner IV	Sr. Planner III	Sr. Planner II / Sr. Eng. II	Planner II / Eng. II	Sr. Landscape Architect	Sr. Estimator	
TOTAL MAN-HOURS	336	86	428	1,220	1,060	1,746	190	24	5,090
LABOR RATES - HOURLY	\$ 230	\$ 95	\$ 220	\$ 165	\$ 130	\$ 105	\$ 165	\$ 160	
SUB-TOTAL LABOR COSTS	\$ 77,280	\$ 8,170	\$ 94,160	\$ 201,300	\$ 137,800	\$ 183,330	\$ 31,350	\$ 3,840	\$737,230

REIMBURSABLE COSTS (from reimbursables tab)	\$	38,816
Airfare & Lodging	\$	4,276
Meals	\$	2,419
Rental Car	\$	700
Local Mileage	\$	3,421
Printing and Reproduction (includes aerial photography)	\$	27,000
Environmental Data Service cost	\$	1,000
SUBCONSULTANT SPECIAL SERVICES	\$	362,763
Aerial Photography	\$	30,000
Cost Estimating Support (AVCON)	\$	49,642
Forecasting and Terminal Planning (Jacobsen [Daniels] DBE)	\$	171,700
Airport Solid Waste Recycling and Reduction Plan (AEC) (DBE)	\$	25,000
Financial Plan & CIP Assistance (RAWA)	\$	86,421
TOTAL FEES - PROFESSIONAL SERVICES	\$	1,138,809