

# ANYAIRPORT AIRPORT

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### **\*\*\* SPECIAL NOTICE \*\*\***

During the course of the action plan study, approval of certain findings and airport layout standards must be approved by the Bureau of Aviation before proceeding with the follow-on tasks. These approval milestones are contained in a box like this one. Look throughout the Scope of Work for these required approvals.

## PREFACE

Below is an example of an airport sponsor's intent. Each airport has similar and unique needs and users. Therefore, the sponsor should take time to prepare a PREFACE that presents a clear direction for the planning team, the airport, and the community it serves. To achieve this, the PREFACE must state the sponsor's vision, the long term goals for the airport and the short term objectives to be accomplished under this project

The Anyairport Airport Sponsor envisions the future of the Anywhere Airport as one of sustained activity with only minor growth during the short term (2001-2006) serving the emergency response and personal needs of the citizens of Encompassing County and/or Alpha, Bravo, and Charlie Townships.

The Sponsor's long-term goals for the Anyairport Airport are:

- Goal 1 – Meet the needs of the airport's service area
- Goal 2 – Maintain airport facilities in a manner that is consistent with industry standards
- Goal 3 – Implement a full airport zoning ordinance
- Goal 4 – Identify opportunities to enhance the economic viability of the airport

The Sponsor's short-term objectives to be accomplished under this airport action plan are:

- Objective A – Develop plan to meet all airport licensing criteria
- Objective B – Develop plan to meet all airport design standards
- Objective C – Obtain approval of airport layout plan (ALP)
- Objective D – Prepare a satisfactory Exhibit "A" Property Map
- Objective E – Prepare a satisfactory Inner Approach Surface and RPZ Control Plan

It is the desire of (Anyairport Airport Sponsor), local community leaders and the Pennsylvania Department of Transportation, Bureau of Aviation that Anyairport Airport be evaluated, through an airport action plan study, to assure that the airport and its environs are safe and efficient as well as meet the needs of the airport users and the surrounding communities. The sponsor also desires to gain the public's support of proposed improvements and afford the public an opportunity to comment on the future of the airport.

A grant to prepare the plan requires this detailed scope of work for conducting an airport action plan including an environmental inventory and overview to accomplish the intent stated in the foregoing. A comprehensive list of subtasks is contained in this document and may be used to complete the Study Design. The study design document details the work to be accomplished and serves as the source for the approved airport planning program.

# PART ONE: AIRPORT ACTION PLAN

## TASK 1.0 - PROJECT ORGANIZATION AND COORDINATION

### PURPOSE

To prepare a Study Design that focuses on a report and airport layout drawings that emphasizes airport safety, operations, maintenance, and certain improvements for the short term (years 1-5). This task consists of developing a tailored work program, schedule, and budget for the project; to provide project coordination and to solicit input through one or more Advisory Committees representing airport users, government agencies, and the general public's concerns and suggestions. The subtasks are intended to detail the work effort and should be used to assist in developing the associated costs. The Sponsor will take all concerns and suggestions under advisement, address them during the conduct of the study and integrate any resulting recommendations into the action plan report.

This work scope presents the minimum standards for an action plan, which is a scaled down version of a full airport master plan. The overall scope of work of the action plan will take a brief look at the future intermediate period (years 6-10) during Task 3, Demand Forecasts. However, as stated above, the focus for improvements will be the short term (years 1-5). No runway extensions, precision instrument approach procedure feasibility studies/design or major airport expansions/land acquisition are anticipated nor will they be studied under this project. If these elements are deemed necessary during the conduct the action plan, they will be studied in phase two of a follow-on planning project, which will extend the planning period to 20-years.

Any additional tasks (e.g., changes in airport sponsorship, force account work, field surveys, aerial photography, digital mapping, non-precision instrument approach procedure feasibility studies/design, airport surface access, etc.) may be added as supplemental tasks when approved by the Bureau of Aviation. Supplemental tasks will not be commingled with the base tasks described in this scope of work.

### METHODOLOGY

The Scope of Services contained in this document will serve as the study design for preparing the action plan and incorporates the intent of AC 150/5300-13, Airport Design, to provide the Sponsor with useful and understandable information and guidance to maintain and/or improve a safe and efficient airport. The action plan report will provide PennDOT, Bureau of Aviation (BOA) with important information needed to review and **ultimately approve** the airport layout plan (ALP). The study design sets forth the responsibilities, methods of accomplishment, and products to be delivered in preparing an action plan.

The Sponsor's planning consultant is \_\_\_\_\_(firm) and the designated project manager for the preparation of the action plan is \_\_\_\_\_(name) - (Phone xxx-xxx-xxxx, Fax xxx-xxx-xxxx, E-Mail: xxxxxxx@xxxxxxx.xxx).

The project manager will initiate and maintain coordination throughout the planning process with the Airport Sponsor, BOA, subconsultant(s); appropriate organizations and public agencies; and the committee(s) formed for this study. However, all submittals for approval must be made directly from the sponsor to the Bureau of Aviation.

A public announcement of the sponsor's intent to conduct the airport action plan will be initiated at the outset of the planning effort. The announcement will include the sponsor's vision, the long range goals

for the airport and the short term objectives of the study, outline of the study tasks, key milestones for reports and meetings, and that a Technical and Citizen Advisory Committees have been formed and will have involvement and input throughout the study process. The Sponsor will initiate a “kick-off” meeting with the Consultant, BOA, and members of the Committees near the completion of the Demand Forecast task to review the objectives and milestones of the study and the anticipated demand that will form the basis for the recommendations to follow.

The purpose of a Technical Advisory Committee (TAC) is to provide input regarding the technical aspects of the plan. A TAC, in its purest sense, does not offer an opportunity for interested citizens in the community to voice their concerns about the process or the data and information that is being used to plan the airport. The purpose of a Citizens Advisory Committee (CAC) is to appoint representatives that work along side the TAC and offer a conduit for the general public to be heard during the planning process. Under normal procedures the CAC may hold meetings within their communities or meet with civic organizations that are considered to represent the voice of the people and brief them on what is happening and take comments back to the planning team. These representatives should be people that are respected and trusted within the community

A public information program will be implemented to provide information to and opportunities to solicit comments from the general public. A minimum of three (3) meetings will be held during the study, preceded with interim reports and drawings representing the findings of the study for review and comment for that phase of the project. During the meetings, the airport sponsor and their consultant will present the findings of that phase of the planning process and state the actions necessary to complete the next stage or phase. Public comments will be solicited during the meetings.

The resulting narrative will be a comprehensive report explaining the reasoning behind, and important features of the ALP. The study report will present inventory data, aviation forecasts, facility requirements, a capital improvement plan and the ALP drawing set.

## SUBTASKS

### *1.1 Planning Session*

- a. Prior to the issuance of a grant, the airport sponsor, consultant, BOA planning representatives, and others shall meet at the airport and discuss the items to be completed as part of the planning process. A tentative scope of work will be developed and agreed upon at the meeting. The sponsor shall seek the necessary approvals of the scope of work and submit it along with a cost proposal and schedule to the Bureau of Aviation for approval and notice-to-proceed (NTP). No work beyond the Study Design is eligible for reimbursement until the sponsor receives a written NTP.
- b. Sponsor’s vision, long term goals and short term objectives will be discussed. Any special concerns or conditions effecting the airport or the planning process will also be discussed at this time.

### *1.2 Study Design.*

- c. State sponsor’s vision, long term goals for the airport and the short term objectives of this study effort. Identify previous studies and reports regarding the airport and what, if any, information can be carried forward and used in this planning effort.
- d. Prepare Draft Study Design document, including the scope of services (as developed during the planning session), project schedule and project budget for review and approval by the Sponsor and BOA.

- e. Prepare Final Study Design incorporating comments received from Sponsor's and BOA's review of Draft Study Design, project schedule and project budget and obtain approval in writing before work on any other task begins.

### ***1.3 Project Management.***

- a. Schedule a comprehensive planning session at the airport with the BOA to complete of a tentative scope of work.
- b. Ensure fully executed copy of consultant agreement including final scope of work/study design, schedule of consultant compensation, and project time schedule chart/table is submitted to BOA prior to first pay request.
- c. Identify key contact persons in various participating and affected organizations/agencies, and other interested parties.
- d. Identify concerned public interest groups.
- e. Establish a Technical Advisory Committee made up of representatives of airport sponsor, current and potential airport users, local planning offices/agencies, the Bureau of Aviation, airport management, and/or others who are intimately involved in the day to day operations of the airport both from the air side and the land side to review findings and principal recommendations for proposed airport improvements.
- f. Establish a Citizens Advisory Committee made up of representatives from other interested parties and government agencies to solicit comments regarding the needs and concerns of the public at large.
- g. Maintain coordination with appropriate organizations/agencies, groups, the Technical Advisory Committee and the Citizens Advisory Committee.
- h. Prepare monthly progress reports, including:
  - (1) Status of study progress
  - (2) Problems and solutions
  - (3) Schedule adjustments
  - (4) Completed pay requests
- f. Identify the number of meetings to be attended as requested by the Sponsor and approved by the Bureau of Aviation

### ***1.4 Public Participation/Meetings.***

- a. An initial "kick-off" meeting will be held near the end of the Demand Forecast task to describe the intent of the planning program, the basis for pursuing the concept and the main features anticipated for the airport based on the forecast demand.
- b. Conduct three public information meetings to exchange information and ideas on the study findings and direction, and solicit public comment as follows:
  - (1) A "kick-off" meeting to present and discuss historic data and current conditions of the airport and its service area, the forecasts of future activity, and the design aircraft proposed for future airport geometry;
  - (2) A meeting to discuss airport requirements and needed improvements , and present an environmental overview;

- (3) A meeting to present and discuss the recommendations of the action plan, the recommended airport layout plan (ALP), and the associated capital improvement plan.

## **TASK 2.0 - INVENTORY**

### **PURPOSE**

To collect historical and current data concerning the airport and surrounding service area, including current and potential airport users, airport facilities, aeronautical activity, land use patterns and plans, navigational aids, airspace and obstructions, socioeconomic data, and environmental concerns that influence airport operations.

### **METHODOLOGY**

The airport service area will be defined and used to determine the potential demand on the airport. A review of existing documents relating to the airport and surrounding area will be made including: existing airport layout plan and airspace plan, applicable regional aviation system plan, state aviation system plan, community plans and recent newspaper or other media articles. Discussions will be held with airport management, BOA, local planning agencies, airport tenants, and other interested parties concerning airport activity and its relationship to the airport service area.

Historical airport activity data will be obtained from FAA terminal area forecasts (TAF) and/or air traffic control tower (ATCT) counts (where applicable), 5010 reports, airport records, and valid documentation in the form of accurate counts, reasonably documented estimates, letters from aircraft owners as to their intent to use the airport, or any combination thereof that demonstrates the need. A thorough on-site inspection will be conducted of airport facilities. Extensive use will be made of applicable existing data and studies.

### **SUBTASKS**

#### ***2.1 Socioeconomic Data.***

Collect historical and projected information on socioeconomic factors in the area that would influence air transportation demand at the airport. As an alternative, this may be presented as part of the forecast section.

- a. Describe the current and future use of the airport and its role in the state system of airports.
- b. Identify the airport service area based on the role of the airport.
- c. Collect historical data on population, personal income, and employment.
- d. Investigate trends in socioeconomic factors.
- e. Describe current and future development (land use) planned for areas within the airport area of influence, generally the area within the boundaries of an airport zoning overlay.
- f. Obtain projections of changes in socioeconomic data.
- g. Evaluate the economic base of the airport service area.

Socioeconomic data is available at the following sites:

U.S. Department of Commerce, Washington, DC.

?? US Census ([www.census.gov](http://www.census.gov))

?? Bureau of Economic Analysis ([www.bea.doc.gov](http://www.bea.doc.gov))

DRI McGraw-Hill, Inc., Subsidiary of Standard and Poors ([www.dri.mcgraw-hill.com](http://www.dri.mcgraw-hill.com))

NPA Data Services, Inc. ([www.npdata.com](http://www.npdata.com))

Regional Financial Associates ([www.rfa.com](http://www.rfa.com))

WEFA, Inc. ([www.wefa.com](http://www.wefa.com))

Woods and Poole ([www.woodsandpoole.com](http://www.woodsandpoole.com))

## ***2.2 Air Traffic Activity.***

Identify past and present patterns of airport activity.

- a. Annual operations: jet, turboprop and piston airplanes; helicopters; local training (touch-and-go and low-approach) and itinerant operations by fleet mix.
- b. Annual general aviation passenger enplanements.
- c. Based general aviation aircraft by fleet mix.
- d. Number of annual instrument operations.
- e. Runway utilization percentages.
- f. Traffic pattern for each runway, standard or non-standard.
- g. Typical departure and arrival corridors.
- h. Discussion with tenants on estimated current and future activity.
- i. Cargo (small package), military, and air taxi demand/operations, if applicable.

## ***2.3 Airport Facilities and Land Use.***

Collect data on airport facilities, including airside facilities, landside facilities, and property available for future aviation and non-aviation uses.

- a. Conduct on-site inspection of all airport facilities for location and condition.
- b. Describe projects and their associated dollar amounts completed in last five years, and current projects or expected projects to be under grant during the planning period of the action plan. Include state contract, project, and agreement numbers and completion date for each project.
- c. Obtain information on the following existing and planned airport facilities: runways and taxiways, aircraft storage and parking aprons, airport instrumentation, approach aids and lighting, fuel and maintenance facilities, runway protection zones and approach surfaces, obstructions, wind coverage, automobile parking, vehicular traffic circulation, aircraft rescue and fire fighting (ARFF) facilities (if applicable), fixed base operator (FBO) areas, tiedowns, hangars, drainage, utilities, and other relevant information.
- d. Obtain the following from airport management: current airport layout plan, current utility inventory and whether or not capacity is adequate (water, sewer, gas, electric, telephone,

cable TV, fiber optics), list of tenants, tenant/leased areas map, Part 77 plan, drainage plans, and building inventory.

- e. Inventory airport equipment purchased with grant funds to include snow removal equipment and ARFF equipment, where applicable. Include year, make, model, size and condition of equipment, total cost to procure equipment and year acquired.

#### ***2.4 Airspace and Air Traffic Control.***

Review nearby airspace use (including Class B, C, D, E, and G, and TRSA airspace where applicable), airways, obstructions, navigational aids and weather patterns that influence operations at the airport.

- a. Discuss airspace and instrument approach procedures with BOA/FAA and report findings.
- b. Identify obstructions to air navigation including latest 5010 inspection report.
- c. Discuss the impacts of restricted areas, Military Operating Areas (MOA) and/or other special use areas within 10 miles that may influence the airspace and air traffic control where applicable.
- d. Discuss impact of other surrounding airports within 10 miles on utilization of airspace, if applicable.
- e. Discuss meteorological conditions and the resulting effect on air traffic operations.

#### ***2.5 Management and Financial Information.***

Collect and review available data relating to the ownership, management, and sponsor's ability to finance the future operation and improvement of the airport. This information will be presented in the first interim report but relocated to the chapter on capital improvement plan in the draft final report. This is not intended to be a thorough financial study or plan, but rather a synopsis of the funding requirements for the airport.

- a. Briefly describe the ownership (authority, county, municipality, private) of the airport and the management (owner/manager, FBO/contract) of the airport's day-to-day operations.
- b. Describe the sponsor's eligibility for federal and state funding programs, and any support from local and private funding sources.
- c. Describe leases and schedules of rates, fees and other charges that bring revenue to the airport.
- d. Review local laws and ordinances that could affect the continued operation or future improvement of the airport, especially regulations pertaining to building height restrictions, land use zoning, and activity restrictions.

#### ***2.6 Survey Questionnaires.***

Design survey questionnaires; conduct surveys and analyze survey data.

- a. Compile list of potential future aircraft owners and businesses that may be interested in basing an aircraft at the airport.
- b. Compile list of other potential future users that may be interested in using the airport when flying to the area to conduct business or for other reasons.

- c. Design survey questionnaires that will gather data identifying the airport needs of current users and the users identified in a and b above. Include blank copy of survey in an appendix of the report.
- d. Conduct surveys by using direct mailing and direct contact in the field to obtain the best data available to determine the needs of potential users.
- e. Compile data, perform statistical analysis and report the findings of the surveys to assist in identifying the future requirements for airport improvements.

### **TASK 3.0 – DEMAND FORECASTS**

#### **PURPOSE**

To establish forecasts of aeronautical activity (general aviation passenger enplanements, aircraft operations and based aircraft) at the airport for the short-term (0-5 years) and intermediate (6-10 years) planning periods; and to establish forecasts of runway/taxiway utilization and parking demands.

#### **METHODOLOGY**

General aviation airports rely principally on services provided to locally based aircraft owners who live and work in the airport's service area and/or on occupants of itinerant aircraft coming to the airport, either to visit the area for business or pleasure, or for aircraft services or both. Therefore, historic data and future projections of the service area's profile relating to the socioeconomic variables such as population, personal income and business activity are important. The ownership and operation of aircraft representing the airport's level of activity is directly related to the well being of the community it serves.

Forecasts of general aviation activity (passenger enplanements, aircraft operations and based aircraft) will be established through the review of historical local airport activity and a comprehensive survey of interested general aviation users. Techniques to be used may include regression analysis, trend analysis, market share and other appropriate statistical methods. The end-of-chapter forecast summary should be presented as shown in the forecast template attached to this scope of work. Forecasts will be compared with the socioeconomic trends described above. Airport activity forecasts will also be evaluated in relationship to national trend forecasts prepared by the FAA. Forecasts of parking requirements will be derived from forecasts for general aviation activity and annual passenger enplanements based on historical relationships and established factors.

Forecasts of aviation activity will be prepared for a 10 year period. This will provide a brief look beyond the short term (years 1-5) into the intermediate period (years 6-10) in order to identify significant events or factors that may impact the future use of the airport beyond the scope of the action plan. Any significant factors anticipated and/or identified may warrant a second phase of the planning effort continuing by taking the plan through the long range (years 11-20) planning period. Otherwise, the sponsor should prepare another action plan in 5 years.

The forecasts and identification of the design aircraft or family of aircraft must be reviewed and approved by the Bureau of Aviation before continuing with the next tasks in the planning study.

To assist the sponsor in preparing forecasts of aviation activity, the following web sites may prove useful.

?? Pennsylvania population data source (<http://pasdc.hbg.psu.edu/pasdc/>)

?? FAA 5010 Inspection Reports (<http://www.gcr1.com/5010WEB/>) Due to the time frame in which data entry was not occurring, the consultant should contact the BOA to verify that the data found here is accurate.

?? FAA APP Aviation Terminal Area Forecasts (TAF) (<http://www.apo.data.faa.gov/>)

## SUBTASKS

### ***3.1 Aviation Forecasts.***

Aviation activity forecasts will be developed, in part, on the basis of relationships found to exist between socioeconomic data for the airport service area and airport activity. Do not calculate peaking characteristics, unless delay is anticipated to be a factor in airport capacity. Contact BOA if determination of peaking characteristics is deemed necessary.

- a. Examine existing forecasts as they pertain to aeronautical activity at the proposed airport (i.e., previous airport planning forecasts, 5010 inspection reports, etc.).
- b. Review FAA aeronautical forecasts, if available.
- c. Establish forecasts of based aircraft by fleet mix.
- d. Establish forecasts of annual aircraft operations: local and itinerant including operations by current and future design aircraft.
- e. Establish forecasts of annual instrument approaches.
- f. Establish annual itinerant and local operations by future design airplane. Design airplane (or family of airplanes) is one that currently conducts or is forecasted to conduct at least 500 annual itinerant operations at the airport.
- g. Document the reasonableness and practicality of the forecasts.
- h. For transient apron, use the methodology stated in Appendix 5 of AC 150/5300-13.

### ***3.2 Vehicle Parking Forecasts.***

- a. Forecasts of vehicle parking demands will be made on the basis of aviation activity forecasts and parking inventory data. Some vehicle parking demands may be satisfied by parking in aircraft storage areas such as hangars or other areas. Forecast pilot and passenger enplanements.
- b. Forecast vehicle parking demand.

## **TASK 4.0 - FACILITY REQUIREMENTS**

### **PURPOSE**

To determine the amount of airport facilities (runways, taxiways, aprons, tiedowns, storage hangars, vehicle parking, terminal area, navigational and approach/landing aids, airport lighting, instrument approaches, etc.) needed to accommodate the airport demand forecasts over the next 5 years and to meet current design standards.

## METHODOLOGY

Airport facility requirements for the next 5 years will be determined through a comparison of aviation demand and needs with existing airport features and facilities. FAA standards documented in Advisory Circular 150-5300-13, including latest changes, and FAA and BOA Regulations will be used to determine requirements. Requirements shall be stated in the report describing those changes needed to accommodate the demand and/or to improve airport features to meet current standards. All recommendations should be deferred to the next section – Airport Action Plan. The final airport layout plan will depict the standards proposed for approval by BOA. Any modification of standards (MOS) necessary will be identified. Requests for MOS will be submitted as soon as possible for review and approval by the BOA and FAA.

The capacities of the aircraft parking areas, vehicle parking facilities, and general aviation passenger terminal, if applicable, will be determined on the basis of standards developed by PennDOT, the FAA and other industry guidelines. A full length parallel taxiway to the primary runway, if not present, should be considered at airports where annual operations are 20,000 or more.

As part of this section, the sponsor should include a few paragraphs on his/her thoughts regarding the next five year period, based on day-to-day activities, the projected forecasts, and TAC /public comment, etc. This section should provide the basis for the subsequent years of the twelve year plan and the basis for the next iteration of an Action Plan.

No runway extensions or major airport expansion are anticipated. Any need for runway extension or major airport expansion to accommodate demand identified in Task 3.0 will be carried forward to a Phase II Airport Master Plan, which may be funded under a future grant.

## SUBTASKS

### ***4.1 Airside Facility Requirements.***

Determine the need for airfield improvements. Requirements will be determined for airside facilities and support functions. Any layout dimensions or other requirements for the proposed airport reference code that do not meet current standards must be identified and addressed.

- a. New taxiways or taxiway extensions
- b. Airport lighting
- c. Non-precision instrument approaches and nav aids
- d. Runway safety areas, object free areas, object free zones, protection zones, and approach areas
- e. Taxiway safety areas, object free areas
- f. Land/easement acquisition
- g. Storage hangars
- h. Aprons, tiedowns, taxilanes (permanent and transient)

### ***4.2 Landside Facility Requirements.***

Determine terminal area needs. Requirements will be determined for landside facilities and support functions.

- a. FBO area
- b. Administration/terminal building area
- c. Access roads (on and off airport)
- d. Fuel facilities
- e. ARFF facilities or local response emergency procedures
- f. Utilities
- g. Land use requirements

### ***4.3 Utilities and Support Facilities.***

The gross demand on existing and future utilities and support systems should be assessed based on discussions with utility company representatives. Storm drainage assessment should be based on a planning level engineering study of the drainage areas, area hydrology, topography, runoff coefficients, and requirements for detention or retention. Future demands will be compared with existing facilities to assess future needs.

- a. Utilities
  - (1) Electrical Power
  - (2) Storm Drainage
  - (3) Domestic Water
  - (4) Sanitary Sewer
  - (5) Natural gas
  - (6) Telephone
  - (7) Fiber Optic/Cable TV
- b. Support systems and any other constraints, which would restrict the limits of activity at the airport should be identified.

## **TASK 5.0 - AIRPORT ACTION PLAN**

### **PURPOSE**

This task will set forth all recommendations of the plan to refine airport improvement concepts and to prepare drawings, as necessary, to include the Airport Layout Plan, Airport Airspace Plan, Inner Approach Surface and Runway Protection Zone Control Plan, Terminal Area Plan, Airport Land Use Plan, and Exhibit "A" Airport Property Map.

### **METHODOLOGY**

The proposed improvements will be further screened and altered as necessary resulting from the technical reviews and agency or public meetings. The report will be prepared documenting the findings, analyses and recommendations used to justify the action plan to develop safe and efficient airport facilities. The report will not only describe the recommended airport plan but will also identify the ancillary and support facilities, and infrastructure necessary to meet the future needs of the airport and its users. The narrative will be supported by appropriate data tables and graphs to provide understandable and useful information

to be used as a tool to guide the improvement, management and operation of the airport during the planning period.

The recommended airport layout plan will be developed and final airport plans will be produced by the Sponsor, adhering to AC 150/5070-6, Airport Master Plans, AC 150/5300-13, Airport Design, and AC 150/5100-17, Land Acquisition and Relocation Assistance for Airport Improvement Program Assisted Projects (where applicable) including latest changes. The airport plans will be prepared in electronic format acceptable to BOA in accordance with Appendix 15, Transfer of Electronic Data, of AC 150/5300-13. See task entitled Action Plan Documentation for acceptable electronic format.

The airport layout plan (ALP) will be reviewed for approval by the Bureau of Aviation at the completion of the study. Prior to the Sponsor receiving a grant for any development or land acquisition project at the airport, the project must be shown on an ALP approved by and on file with the Bureau of Aviation.

## SUBTASKS

### ***5.1 Airport Layout Plan.***

Prepare an airport layout plan in accordance with the checklist from the Bureau of Aviation's Publication 405, *Aviation Development Airport Sponsor's Guide*, edited for this action plan scope of work. The drawings will depict those features as indicated on the attached Airport Layout Plan Checklist approved and dated \_\_\_\_\_.

### ***5.2 Airport Airspace Plan. (if required)***

Prepare an airport airspace plan for all FAA Part 77 imaginary surfaces, including existing and ultimate approach slopes and any height or slope protection established by local zoning ordinance. The drawing will include those features as indicated on the attached Airport Layout Plan Checklist. This drawing may not be required if one was previously accepted and on file with BOA.

### ***5.3 Inner Approach Surface and Runway Protection Zone Control Plan.***

Prepare an inner approach surface and runway protection zone control including a plan and profile of the runway protection zones and inner approach surface areas showing the controlling obstructions therein, their top elevations and proposed disposition. The drawing will include those features as indicated on the attached Airport Layout Plan Checklist.

### ***5.4 Terminal Area Plan. (if required)***

Prepare a terminal area plan indicating existing and recommended future uses and development for general aviation aircraft storage areas, tenant areas, and ground access and vehicle and aircraft parking. The drawing will include those features as indicated on the attached Airport Layout Plan Checklist. This drawing will only be required where significant work is proposed in the terminal area.

### ***5.5 Airport Land Use Plan.***

The Airport Land Use Plan will be prepared and will indicate specific airport uses and show off-airport compatible and non-compatible land uses. The drawing will include those features indicated on the attached Airport Layout Plan Checklist.

### ***5.6 Airport Property Map.***

Prepare an Exhibit "A" Property Map to identify land owned and/or to be acquired by the airport sponsor for improvements. An Exhibit "A" must be on file at the Bureau of Aviation to satisfy grant compliance requirements. This should be composed of deed research, available mapping/surveys and field verification as required. Physical survey of boundaries generally is not required, and if included, should be done as a supplemental task. In addition to the requirements set forth in federal guidance, the Exhibit "A" will identify any land that will be included in any property tax rebate application. The drawing will include those features indicated on the attached Airport Layout Plan Checklist.

## **TASK 6.0 - CAPITAL IMPROVEMENT PLAN**

### **PURPOSE**

To prepare cost estimates for necessary airport safety, planning, maintenance and improvements.

### **METHODOLOGY**

A capital improvement plan will be prepared and supported by tabular data and narrative descriptions in the airport action plan report.

Capital cost estimates (in current year dollars) will be developed to reflect the proposed airport improvements, and will be based on the recommended airport layout plan. Cost estimates will be used as a basis for evaluating the economic feasibility of the proposed improvements.

The airport property map will encompass all real property interests necessary for airport purposes, including land for runway protection zones and airport environs compatibility. Construction cost estimates will cover the construction of required airport facilities, including runways, taxiways, airport lighting, terminal building, hangars and apron areas, parking and airport interior roadways. Estimate of Planning/Engineering/Administrative costs will be based on a percentage of the total construction and real property assumption costs.

### **SUBTASKS**

#### ***6.1 Capital Improvement Plan.***

An overall improvement program will be prepared for the airport for short-range (0-5 years) planning period.

- a. Prepare an updated, prioritized capital improvement plan for the airport.
- b. Prepare "base-year" capital cost estimates.
  - (1) Enhancing airport safety

- (2) Maintaining the airport
- (3) Procurement of airport equipment
- (4) Planning the airport's future
- (5) Assumption of real property interests
- (6) Capital construction
- (7) Planning/Engineering/Administrative Costs
- c. Estimate amount of funds, for eligible and appropriate projects, needed from Block Grant and/or Aviation Development Grant Programs, as applicable
- d. Estimate amount of funds, for other eligible and/or appropriate projects, needed from Capital Budget Grant Program or private sources, as applicable.
- e. Estimate the funds to be provided by the Sponsor.

## **6.2 BOA 12 Year Plan.**

The airport sponsor's twelve year plan will be prepared and/or updated, based on five year capital improvement plan developed in this action plan and expanded, as needed, based on anticipated improvements beyond the current planning period. Improvements shown on the twelve year plan beyond the planning period of this study will be assessed during the next action plan study. The twelve year plan will identify the proposed funding sources and will use these sources as financing techniques to leverage dollars.

*Note: Federally obligated airports should identify block grant funds for all eligible projects, with large projects being considered for possible discretionary funding. These airports should also identify up to 5 percent aviation development funds for the state match to federal projects and plan for a 10 percent or more local share for the discretionary portion of applicable projects.*

*Publicly owned airports could consider capital budget funds for non-federally eligible improvements such as terminal buildings, hangars and fuel systems*

*State obligated airports should identify aviation development funds for all eligible projects. These airports must identify in detail on the Exhibit "A" Property Map the land that will be included in any property tax rebate application.*

*Any airport can receive funding assistance from airport users/tenants or other private sources and count those funds towards the local share for any project. Funding assistance can be in the form of cash or other eligible assets.*

## **TASK 7.0 - ACTION PLAN DOCUMENTS**

### **PURPOSE**

To produce the required interim, draft and final reports and airport plan drawings.

### **METHODOLOGY**

A series of interim reports will be prepared documenting the findings, analyses and requirements for that phase or stage of the study. These reports will be disseminated to the various pertinent committees and other selected recipients, and made available to the general public, when appropriate, for review prior to certain scheduled meetings, and public information meetings. The interim reports will be incorporated into the draft final report. The study team will solicit comments on the information contained in the interim reports and will also address or incorporate these comments into the draft final report.

The final report will consolidate supporting documentation and findings developed throughout the course of the study. The report will be prepared in standard 8-1/2" x 11" format with 11" x 17" foldout exhibits as necessary. The report will incorporate appropriate graphics and be bound as requested by the Sponsor. The report submitted to BOA shall be in a 3-ring binder set up so that subsequent updates can be easily identified and incorporated into the project binder. All reports will be prepared using laser quality printers. The airport layout plan drawings will be prepared on compatible electronic media for use in preparing reports, exhibits and presentation materials. An electronic copy of the draft and final report in Microsoft Word format and an electronic copy of the ALP drawing set in MicroStation format (or fully compatible format) will be provided to the Sponsor and Bureau of Aviation. Full size reproducible drawings of the final ALP drawing set will be submitted to the Bureau of Aviation for approval and signature.

Near the end of the project the draft final report including drawings will be submitted to the Bureau of Aviation for review and comment prior to submitting the final report. The planning professional in responsible charge of the project shall certify, by signing the draft and final report and ALP, that he/she has reviewed the information being submitted for its content and accuracy and that it meets the intent and requirements of the approved scope of work.

## SUBTASKS

### ***7.1 Interim and Final Reports.***

- a. Prepare Interim Report No. 1. at end of Demand Forecasts task (\_\_\_\_ copies)
- b. Prepare Draft Final Airport Action Plan Report. (\_\_\_\_ copies)
- c. Prepare Final Airport Action Plan Report. (\_\_\_\_ copies)

### ***7.2 Airport Layout Plan Drawings.***

Prepare 24" x 36" reproducible copies of the following plans, as required in approved work program:

- a. Cover Sheet
- b. Airport Layout Plan
- c. Airspace Plan
- d. Inner Approach Surface and Runway Protection Zone Control Plan
- e. Terminal Area Plan
- f. Airport Land Use Plan
- g. Exhibit "A" Airport Property Map

Submit the following number of reports and selected drawings to the Bureau of Aviation:

- a. Interim Report No. 1. and current ALP (\_\_\_\_ copies)

- b. Draft Final Airport Action Plan Report and complete set per approved work program  
(\_\_\_\_ copies)
- c. Final Airport Action Plan Report, and complete set for approval signature. (\_\_\_\_ copies)
- d. Final ALP and FAA Form 7460 for airspace approval of airport layout footprint.  
(\_\_\_\_ copies)

## **PART TWO: ENVIRONMENTAL/LAND USE PLANNING**

### **TASK 1.0 - ENVIRONMENTAL OVERVIEW**

#### **PURPOSE**

To prepare a GIS environmental inventory and identify elements of the environment that may be affected by the improvements depicted on the airport layout plan. The effect of the airport improvement will be characterized based on information obtained during the inventory of existing conditions, environmental planning/engineering evaluation and discussions with agency representatives charged with environmental responsibility of the particular element. The level of effort is not intended to constitute an environmental assessment or environmental impact statement. It will, however, provide documentation identifying environmental elements that may need more in-depth evaluation for the BOA to make a determination as to the need for an environmental assessment/impact statement.

The environmental elements will be documented in accordance with FAA Order 5050.4A, Airport Environmental Handbook, using a level of effort commensurate with a Form B Environmental Evaluation including the 22 categories. The project manager will coordinate the environmental overview requirements with the Bureau of Aviation during the initial scoping process for the action plan work program. The environmental elements will be identified including existing conditions and impacts by order of magnitude, if any. The overview will identify elements requiring further evaluation. An electronic copy of the draft and final report in Microsoft Word format and environmental inventory in GeoMedia GIS format (or fully compatible format) will be provided to the Sponsor and Bureau of Aviation. The noise and land use compatibility elements are included in Task 2, Land Use Compatibility Overview, due to the integrated nature of other land use elements.

### **TASK 2.0 - LAND USE COMPATIBILITY OVERVIEW**

#### **PURPOSE**

Land use compatibility is an important aspect of airport planning. Increased activity at airports, historically, brings increased development around airports. This increase in community development must be coordinated with the proposed improvements at the airport to avoid incompatible land uses being in close proximity to each other. A coordinated effort can save valuable time and expenses when future land uses are designated to preclude incompatible development.

#### **METHODOLOGY**

An area of influence will be designated surrounding the airport, usually one or two miles (radius) depending on future activity. Three land use elements will be addressed including noise, height restrictions and obstructions, and safety of persons and property on the ground. These land use elements are integrated to provide guidelines for the health, welfare and safety of persons within the airport area of influence. The guidelines will address noise from aircraft operations on affected land uses, height restrictions to preclude obstructions to air operations, and limitations on population and structure densities to enhance safety of persons and property. The overview will identify elements requiring further evaluation.

The land use compatibility will include a graphic element in the environmental inventory described under Task 1.0. An electronic copy of the draft and final report in Microsoft Word format (or fully compatible format) will be provided to the Sponsor and Bureau of Aviation. The environmental and land use findings will be reviewed and approved by the Bureau of Aviation before submitting the draft final report.