



July 12, 2023

**REQUEST FOR PROPOSAL  
RP024-23**

The Gwinnett County Board of Commissioners is soliciting competitive sealed proposals from qualified firms for the **Development of Hangar Building(s) at the Gwinnett County Airport Central Basing Area** for the Department of Transportation.

Proposals must be returned in a sealed container marked on the outside with the Request for Proposal number and Company Name. Proposals will be received until **2:50 P.M. local time on August 22, 2023**, at the Gwinnett County Financial Services - Purchasing Division – 2<sup>nd</sup> Floor, 75 Langley Drive, Lawrenceville, Georgia 30046. Any proposal received after this date and time will not be accepted. Proposals will be publicly opened and only names of submitting firms will be read at 3:00 P.M. A list of firms submitting proposals will be available the following business day on our website [www.gwinnettcounty.com](http://www.gwinnettcounty.com).

A virtual pre-proposal conference is scheduled for **10:00 A.M. on August 02, 2023**, via WebEx. All vendors are strongly encouraged to attend. Vendors will be responsible for visiting the site in person at 600 Briscoe Blvd., Lawrenceville, GA 30046 and taking into consideration all existing conditions prior to submitting their proposal.

The Proposal package can be accessed through the County's website, Bids and RFPs page. [www.gwinnettcounty.com/web/gwinnett/departments/financialservices/purchasing/bidsandrfps](http://www.gwinnettcounty.com/web/gwinnett/departments/financialservices/purchasing/bidsandrfps)

**Questions** regarding proposals should be directed to Olivia Graves, [olivia.graves@gwinnettcounty.com](mailto:olivia.graves@gwinnettcounty.com), Purchasing Associate II, no later than 3:00 pm on **August 04, 2023**.

Proposals are legal and binding upon the bidder when submitted. **One unbound original, six (6) bound copies and one (1) pdf electronic thumb drive of the proposal should be submitted.**

Successful firm will be required to meet insurance requirements. The Insurance Company should be authorized to do business in Georgia by the Georgia Insurance Department and must have an A.M. Best rating of A-6 or higher and must submit any bonds required as a result of contract negotiations.

Gwinnett County does not discriminate on the basis of disability in the admission or access to its programs or activities. Any requests for reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County Government should be directed to the ADA Coordinator at the Gwinnett County Justice and Administration Center, 770-822-8165.

The written proposal documents supersede any verbal or written prior communications between the parties.

Selection criteria are outlined in the request for proposal documents. Gwinnett County reserves the right to reject any or all proposals to waive technicalities, and to make an award deemed in its best interest.

Award notification will be posted after award on the County website, [www.gwinnettcounty.com](http://www.gwinnettcounty.com) and companies submitting a proposal will be notified via email.

We look forward to your proposal and appreciate your interest in Gwinnett County.

Sincerely,

Olivia Graves  
Purchasing Associate II

# REQUEST FOR PROPOSALS (RFP)

## Central Basing Area at Gwinnett County Airport (LZU)

### SECTION I – INSTRUCTIONS

#### 1. DESCRIPTION – STATEMENT OF NEED:

- 1.1 Gwinnett County (“County”) and the Gwinnett County Airport Authority (“Authority”) invite responses to this Request for Proposals (RFP) from qualified firms (“Respondents”) desiring to finance, build, manage, and operate an aircraft hangar facility at Gwinnett County Airport – Briscoe Field (“Airport” or “LZU”). The airport is offering an approximately 11 acre parcel of land that can be sub-divided, to be leased and developed in accordance with the Proposed Airport Lease Agreement (“Lease”) appearing in Exhibit A – Sample Lease, and all other provisions of this RFP.
- 1.2 In addition to the Lease and the provisions of the RFP, proposers will also need to meet the responsibilities described below which include but are not limited to:
- A. Adherence to the Airport’s Minimum Standards (Exhibit B)
  - B. Adherence to the Airport’s Master Plan (Exhibit C)
  - C. Adherence to the Airport’s Architectural Standards (Exhibit D)
  - D. Adherence to the Federal Aviation Administration’s (FAA’s) standards for aviation use (e.g., residential, and non-aviation related retail development is prohibited), and the FAA’s Policy on Non-Aeronautical Use of Airport Hangars  
<https://www.govinfo.gov/content/pkg/FR-2016-06-15/pdf/2016-14133.pdf>
- 1.3 The County and Authority will not pay for the preparation of any information submitted by a Respondent or for the County’s and/or Authority’s use of that information.

#### 2. SCHEDULE OF EVENTS:

<b>Public Posting of RFP</b>	<b><i>July 12, 2023</i></b>
<b>Pre-Proposal Conference</b> Virtually via WebEx at:	<b><i>10:00 a.m. (EST) August 02, 2023</i></b>
<b>Site Tour</b> <b><i>the site in person at 600 Briscoe Blvd., Lawrenceville, GA 30046 and taking into consideration all existing conditions prior to submitting their proposal.</i></b>	<b><i>Vendors will be responsible for visiting</i></b>
<b>Site Address:</b> 600 Briscoe Blvd. Lawrenceville, GA 30046	
<b>Written Questions Due Date</b>	<b><i>August 04, 2023</i></b>
<b>RFP Due Date</b>	<b><i>August 22, 2023</i></b>

The County and/or Authority reserves the right to change dates and/or locations as necessary.

### 3. PRE-PROPOSAL MEETING:

A Pre-Proposal Meeting will be held virtually via WebEx on the date and time listed above in Section 2 – Schedule of Events. Vendors will be responsible for visiting the site in person at 600 Briscoe Blvd., Lawrenceville, GA 30046 and taking into consideration all existing conditions prior to submitting their proposal.

The meeting number and password for the Pre-Response Meeting is:

**Meeting number (access code):** 2349 713 4765  
**Meeting password:** aH9KrDMPq99

To join the meeting, you may visit [www.webex.com](http://www.webex.com). At the top right of the page will be a tab Join a Meeting. Click on the Join a Meeting tab. Enter the meeting number. You will then be asked to enter the meeting password.

You can also call into the meeting by dialing 1-408-418-9388.

**Meeting number (access code) is:** 23497134765##

You can also gain access via:

<https://gwinnettgov.webex.com/gwinnettgov/j.php?MTID=m5c8f637f121f5e4145e7f1db5a4282c6>

Attendance at the pre-proposal meeting or site visit (see below) is not required to submit a proposal. However, all interested Respondents are urged to attend.

### 4. SITE VISIT:

Vendors will be responsible for visiting the site in person at 600 Briscoe Blvd., Lawrenceville, GA 30046 and taking into consideration all existing conditions prior to submitting their proposal.

**Questions will not be taken while viewing the site.** The site visit is an opportunity for Respondents to see the site in person, and to develop any questions that can then be submitted in writing to the Purchasing Representative.

### 5. QUESTIONS:

All questions that arise relating to this RFP should be directed in writing via e-mail or U.S. Mail to the Purchasing Representative:

Ms. Olivia Graves, Purchasing Associate II  
75 Langley Drive, 2<sup>nd</sup> Floor  
Lawrenceville, GA 30046  
[olivia.graves@gwinnettcountry.com](mailto:olivia.graves@gwinnettcountry.com)

All questions must be received by the due date indicated in Section 2.

No informal contact initiated by Respondents on the proposed service will be allowed with members of the County or Airport Authority from the distribution of this RFP until after the closing date and time for the submission of responses. All questions concerning the RFP, or issues related to this RFP should be presented in **writing** to the Purchasing Representative.

The Purchasing Representative will answer written inquiries in an addendum and publish any addendums on the Purchasing Webpage to ensure all parties have the same information available to them.

**6. PUBLIC RECORD:**

All responses submitted in response to this RFP will become the property of Gwinnett County. All information submitted in response to this RFP will be kept confidential until final award or other public action by the Gwinnett County Board of Commissioners in accordance with the Georgia Open Records Act. By submitting a proposal, Respondent acknowledges that all hard copy and electronic documents, correspondence, and audio recordings will become part of the files subject to open records requests in accordance with the Georgia Open Records Act.

**7. RESPONDENT EXPERIENCE:**

The County and Authority encourages interested parties with a record of accomplishment in financing, building, managing, and operating an aircraft hangar facility to respond to this RFP.

**8. GENERAL INFORMATION:**

- A. Disclaimer: There is no warranty or representation as to the accuracy of the information included in this RFP. Any site plans depicted herein are illustrative and include approximations which are subject to change. It is the responsibility of the Respondent to visit the site during the timeframe specified in the notice for information.
- B. This RFP, submissions from Respondents to this RFP, and any relationship between the County/Authority and Respondent arising from or connected or related to this RFP, are subject to the specific limitations and representations expressed below, as well as the terms contained elsewhere in this RFP. By participating in the selection process, Respondents are deemed to accept and agree to these conditions. By submitting a response to this RFP, the entity acknowledges and accepts Gwinnett County's rights as set forth in the RFP.
- C. County/Authority reserves the right, in its sole discretion, without liability, to qualify or reject any or all of the RFP responses. This RFP shall not be construed in any manner to create an obligation on the part of the County/Authority to enter into any agreement, nor to implement any of the actions contemplated herein, nor to serve as a basis for any claim whatsoever for reimbursement of costs for efforts expended in preparing a response to the RFP or participating in the selection process.
- D. County/Authority reserves the right in its sole discretion to hold discussions with, to obtain information from, to request presentations from, and to conduct negotiations with, any or all Respondents that County/Authority deems appropriate. County/Authority reserves the right, as it deems its interests may require in its sole discretion, to accept or reject any or all submissions, to waive any informality, informalities or nonconformity in the submissions received, and to accept or reject any or all items in a submission.
- E. Failure to respond to any of the items required by the RFP could result in a Respondent's RFP response being rejected. In all events, County/Authority shall not be liable for any costs associated with the preparation, clarification, or negotiation of responses submitted to this RFP.

- F. A response to this RFP is not an offer to enter into an agreement with any party and cannot be accepted to form a binding contract. This document is not an offer to enter into an agreement with any party. No agreements or understandings between County/Authority and the selected Respondent(s) shall be binding until after Gwinnett's Board of Commissioners, in a public meeting, has authorized binding documents that will be executed by all appropriate parties. County/Authority reserves the right to reject any and all submittals and to waive any immaterial defects and irregularities in proposals at any time in its sole discretion.
- G. County/Authority will not reimburse any party for costs incurred in responding to this RFP, including the development of architectural or planning documents or drawings.

## **SECTION II – SCOPE OF PROPOSALS**

### **1. INTRODUCTION:**

Gwinnett County owns and operates LZU and is requesting proposals from qualified Respondents to finance, build, manage, and operate an aircraft hangar facility.

### **2. BACKGROUND:**

Gwinnett County is a cosmopolitan community in the northeast metropolitan Atlanta area that is home to a vibrant, diverse blend of people and places. It is the second most populous county in Georgia and has been one of the fastest growing counties in the United States for several decades.

LZU is a general aviation reliever airport for Hartsfield-Jackson International Airport (ATL). It is categorized by the FAA as an airport of national significance and is the second busiest general aviation airport in Georgia based on number of operations, trailing only DeKalb Peachtree (PDK) airports.

The airport is located on approximately 500 acres northeast of the city of Lawrenceville adjacent to Georgia State Route 316. The airport has a single 6,000-foot long by 100-foot-wide grooved asphalt runway with a dual wheel landing capacity of 120,000 lbs. Runway 25 has a full Instrument Landing System (ILS). The airport has an Air Traffic Control Tower that is in operation from 7:00 a.m. to 9:00 p.m. year-round.

Airport operation counts and fuel flowage numbers for the past five (5) years are contained in Exhibit E to this RFP.

### **3. SITE DESCRIPTION:**

The area available for lease is an approximately 11-acre parcel (approx. 481,172 sq. ft.) that can be subdivided for multiple hangar sites. The site is located on the North side of the airfield and has access to Taxiway Zulu via an in-place stub taxi-lane. The site also contains an existing shared central ramp area, and a stubbed in vehicle access road (See Figure 1 and Figure 2). Electric, water, phone/internet, and sewer are located up to the site (Respondent is responsible to verify location of required utilities). In addition, storm water detention for the site has already been constructed.

It is the intent of the airport to have the site developed in a horse-shoe shaped manner with hangar development bounding the central ramp area to the west, north, and east. Up to nine (9)

100 ft X 100 ft hangars can be constructed on the site. Any development that does not occupy the entire 11 acres must provide for sharing the central ramp area and taxi-lane with additional hangar tenants. It is the intent of the County/Authority to place multiple hangars on the site if any single development is not large enough to occupy the entire site.



**FIGURE 1**



**FIGURE 2**

The height of any proposed developments on these parcels will be restricted by Federal Aviation Administration (FAA) airspace-related restrictions. It is up to the Respondent to do their due diligence on the requirements. The development area is offered "as is" and in its present condition. The County and Authority make no warrants regarding the condition of the parcel(s) including, but not limited to, its soil condition or existing utilities.

#### 4. DESIGN CRITERIA

The County/Authority will not limit proposals to a specific building layout and will consider layouts or configurations that may suit the Respondent's requirements, so long as any layout makes efficient use of the available parcel and allows for additional development (if the entire parcel is not utilized). Hangar configurations may include corporate hangar(s) (minimum 10,000 sq. ft.), or multi-bay box hangars (minimum bay of 60 ft. X 60 ft.) or a combination thereto. **T-hangars will not be considered for this site.**

Hangar building(s) shall be a modern, fully enclosed, high quality, steel building(s) equipped with individual or common restrooms, interior and exterior lighting, electrical services and other amenities as required. Additional building space not allocated for aircraft storage, such as office, restrooms, or waiting areas, shall be determined by and at the discretion of the Respondent. These spaces are not included as a part of the minimum sq. ft. as referenced in the paragraph above.

The successful Respondent shall construct sufficient ramp (in addition to the existing common ramp area) to accommodate their aircraft. This ramp must adhere to the design standards contained in the most current version of FAA Advisory Circular 150/5300-13B Airport Design. The pavement design weight bearing capacity shall equal that of the largest aircraft able to occupy the proposed hangar but should not exceed the runway weight bearing capacity of 120,000 lbs. dual landing gear.

The successful Respondent shall construct an access driveway and/or deceleration lane (as required by Gwinnett Department of Transportation and/or County) and electronic security gate for personal vehicles to access the facility. Any deceleration lane or addition to the roadway outside of the airport fence is not a portion of the lease and shall be maintained in accordance with any agreement between the Respondent and the County/Gwinnett DOT. During construction and upon completion, the project shall ensure integrity of the airport security fence and boundary to prevent unauthorized persons from entering the aircraft operation area.

The hangar building(s) shall conform to the Gwinnett County Airport Architectural Standards and shall be painted in color palette acceptable to the Respondent and County/Authority.

The hangar building(s) shall conform to the latest standards for aircraft hangars as established by the National Fire Protection Association.

The successful Respondent shall construct paved auto parking as required by zoning or County building code requirements.

The successful Respondent must submit a Federal Aviation Administration (FAA) Form 7460 and receive a Determination of No Hazard from the FAA **PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES**. This requirement is to ensure the construction does not create an obstruction to air navigation, operationally impact the airport, or cause interference with any radio navigation aids.

#### 5. PERMITTED USES

The lease shall permit the successful Respondent to use the leased premises solely for the construction and operation of an aircraft hangar facility. The successful Respondent may use the leased premises for the purpose of managing, storing, maintaining (limited to preventative maintenance as defined by the FAA), and operating the Respondent's own aircraft and/or other aircraft. Stored aircraft shall be airworthy and comply with the FAA's Policy on Non-Aeronautical

Use of Airport Hangars. The successful Respondent may use the facility for general office purposes related to aircraft operations.

The successful Respondent may sublease use of the hangar(s) to third parties for aviation related purposes. Any sublease, sale, or transfer of the Lease **will require written approval by the County and Authority.**

The successful Respondent shall be responsible for and shall pay for maintenance and repair of land, structure, utilities, and facilities located upon the premises during the term of the subject Lease. The successful Respondent shall be responsible for all grass cutting, landscaping, and routine cleaning of the lease premises.

**T-hangars are NOT a permitted use on the site.**

**A fuel farm or other permanent fueling facility will NOT be considered on this site.**

**Commercial hangar facilities (e.g., maintenance facilities, flight schools, etc.) will NOT be considered for this site due to the sharing of the central ramp area and taxilane, and the lack of adequate airside access for commercial activities.**

## **6. IMPROVEMENTS TO BE CONSTRUCTED BY SELECTED RESPONDENT:**

The selected Respondent will finance, design, and construct all required utility extensions including, but not limited to, water, sanitary sewer, telephone, and electric power at no cost to the County/Authority. The selected Respondent shall be responsible for constructing improvements in accordance with plans and specifications prepared by a professional architect and/or engineering firm, which shall be reviewed and approved by the airport administration, Gwinnett County Airport Authority's Lease Committee (Lease Committee), and all appropriate building plan review agencies (e.g., Gwinnett County Planning and Development, Gwinnett County Fire Marshall, etc.).

Construction of the hangar facility shall begin within 120 days of receiving approval of the site plan from the airport administration, Lease Committee, and appropriate plan review agencies. The hangar facility shall be complete and available for occupancy no later than eighteen (18) months from the date of approval from the airport administration, Lease Committee, and appropriate plan review agencies. If a delay is expected in any of these deadlines due to supply chain issues, etc., a mutually agreeable date can be negotiated based on evidence of supply chain issues, etc.

Several different finish types for executive offices and hangar space and aircraft storage hangars are specified in the Airport Architectural Standards (**Exhibit D**). While any of the finishes specified would be acceptable, it is the desire of the County to have a single finish used in all of the hangars constructed at the site. Uniformity of building design is a key goal for the County/Authority. If more than one Respondent submits a successful proposal, the same finish may be required from all Respondents to ensure uniformity of building design. By submitting a response, Respondents acknowledge the possibility of having their exterior finishes changed to match other exterior finishes to ensure uniformity of building design.

**7. LEASE TERMS:**

The Lease is offered as a 25-year term. Up to three (3) additional 5-year renewals may be added to the lease term for a maximum term of 40 years. Any additional 5-year renewals, above the initial 25-year term, must be justified based on the improvements being made to the site or other investments being made that will benefit the airport and County/Authority to justify the additional term.

40 years is the maximum lease term, and no further extensions will be provided beyond 40 years. At the conclusion of the lease term, the leasehold and ALL improvements shall revert to County ownership.

The minimum rent offer accepted is \$0.50 per square foot per year and shall apply to the actual leasehold. The lease rate will include a Consumer Price Index increase every three (3) years, and every ten (10) years there will be a provision to have the rent set by a Market Rent Analysis.

The actual leasehold shall be determined from the successful Respondent's approved site plan and shall include all exclusive use space necessary to operate the facility. The leasehold parcel shall include, at a minimum, the following:

- a. hangar building(s)
- b. automobile parking areas
- c. landscaped areas, buffers, and or setbacks
- d. any exclusive use aircraft parking aprons
- e. any other exclusive use areas that may be required/desired.

The successful Respondent shall be responsible for and shall pay for all maintenance and repair of the land, structures, utilities, and facilities located upon the leasehold during the term of the Lease. The successful Respondent shall be responsible for all grass cutting, landscaping, trash removal, and routine cleaning of the lease premises.

The Tenant shall be responsible for all taxes and assessments to the site.

Proposer must meet the insurance requirements set forth in the Lease document. Sample insurance requirements are included for review. However, insurance requirements may vary depending on the type of activity proposed/value of aircraft being stored. Final insurance requirements will be negotiated with the highest scoring firm prior to award.

The successful Respondent will be required to certify that the hangar will serve as the Primary Home Base (as that term is defined by O.C.G.A. Section 48-5-16(e) or any code written to supersede O.C.G.A. Section 48-5-16(e)) for all aircraft parked in the hangar and to provide an explanation as to any aircraft for which such a certification cannot be made.

**8. EVALUATION CRITERIA**

The selection committee will consist of representatives from Gwinnett County, the Gwinnett Airport Authority and one (1) independent evaluator designated by the County's Purchasing Division. The proposals will be evaluated to select the Respondent that rates highest according to the criteria listed in this document. The County will evaluate all proposals based on the first five criteria; then, if necessary, may invite several of the highest scoring firms for interviews and presentations.

If interviews/presentations are necessary, the number of firms invited will be at the discretion of the selection committee. If interviews are necessary, the dates and nature of the interview requirements will then be relayed to the invited firms. The interviews and presentations will be conducted, and the selection committee will tabulate the results of the interviews with the previous scoring. The highest scoring company/companies will be determined, and the selection committee will make a recommendation of award to the Purchasing Division.

It is the intent of the County/Authority to place hangars on the entire site. If several proposals are submitted for less than the total area, it is possible that multiple awards will be made, to utilize the entire leasable area.

Gwinnett County reserves the right to negotiate price, scope, and schedule with the highest scoring firm(s). If for any reason a recommended firm cannot execute the contract, the County may select a firm with the next highest scoring proposal, etc. until an agreement is reached, and a contract is executed.

Upon the County's award of the contract, the County will present an agreement for execution to the selected Company (**Exhibit A**). If execution of this agreement with the selected Company is unsuccessful, the County will negotiate with the next highest ranked Company and so on until satisfactory agreement has been reached.

**Proposal Evaluation Criteria**

Proposals will be evaluated based on the following criteria:

<b>Criteria</b>	<b>Points</b>
Terms of Lease	20
Qualifications of the Company and business approach	15
Rent and Financial Benefits to the County	25
Site improvements	35
References	5
<b>PROPOSAL TOTAL POINTS</b>	<b>100 Points</b>
Interview (If applicable)	20
<b>Maximum Total Points</b>	<b>120 Points</b>

**9. CONTRACT AWARD INFORMATION**

If the selected Proposer(s) refuses or fails to enter contract negotiations within five (5) days after notification, then Gwinnett County may award the contract to the next highest scoring individual or company.

Gwinnett County reserves the right to negotiate with whichever Proposer(s) that it deems to best meet the needs of Gwinnett County.

Gwinnett County will notify all Proposers of award. The award, if made, is expected to be made within 60 days from the due date of the proposals.

The period of time specified above, within which award of contract may be made, is subject to extension by agreement between Gwinnett County, the concerned Proposer, and the Proposer's surety, if applicable.

Gwinnett County will make no guarantees to any Proposer until such time as the Gwinnett County Board of Commissioners approves the negotiated contract.

## 10. EVALUATION CRITERIA

### 1) Terms of Lease:

The term of the lease will be for twenty-five (25) years. Options to extend the lease beyond 25 years may be considered if site improvements and other investments justify them. If a proposal requests a term greater than 25 years, Proposers should specifically identify the site improvements, investments, and reasons the term should be extended. This justification should be provided in a narrative or other format to clearly indicate the reasons for an extended term.

Proposals asking for a term longer than 25 years but not providing justification for the additional term may be scored lower than proposals providing justification.

Forty (40) years is the maximum lease term. No term greater than 40 years will be considered.

All improvements made during the term of the lease will revert to County ownership upon termination of the lease. Therefore, proposals with shorter proposed terms may be scored higher than proposals with longer terms.

### 2) Qualifications of Company and Business Approach:

The County is seeking a qualified individual or company finance, build, manage, and operate an aircraft hangar facility at Gwinnett County Airport – Briscoe Field. Each proposer must be able to prove their ability to finance, build, manage and operate an aircraft hangar facility.

Financial ability, previous experience managing or constructing aviation facilities and/or businesses, and company officials involved in the management or construction including individual's experience in aviation will all be considered during the proposal evaluation.

Each proposal must contain adequate financial information to assure the County that proposed site improvements/construction can be completed. This should include sources of funding and a completed Proposal Questionnaire (**Exhibit F**).

Each proposer should also provide a narrative or other sources of information to demonstrate that they understand the Gwinnett County Standard and provide an explanation as to how their facility will meet that Standard.

### 3) Rent and Financial Benefits to the County:

Monthly rent should be indicated on the attached Summary Schedule. Minimum base rent is set at \$0.50 per square foot per year. In addition, the rent will be adjusted at the end of the first three-year period of the term, and every three years thereafter based on the Consumer Price Index (CPI). The rental rate will also be adjusted every 10 years based on a Market Rent Analysis.

Proposals providing the greatest amount of rent to the County will be scored higher than proposals offering the minimum base rent.

In addition to rent, the successful Respondent will be required to certify that the hangar will serve as the Primary Home Base (as that term is defined by O.C.G.A. Section 48-5-16(e)) for all aircraft parked in the hangar and to provide an explanation as to any aircraft for which such a certification cannot be made. Proposals to park higher value aircraft in the hangar(s), or a larger number of aircraft, will be scored higher than proposals with lower value aircraft or less aircraft. An estimated value of aircraft to be parked in the hangar(s) should be provided in the proposal.

**4) Site Improvements:**

Respondent acknowledges that they are leasing the area in a "as-is" condition and that all improvements, utilities, etc., will require installation/completion solely at the cost of the proposer.

Proposals should include an approximate project cost based on the proposed construction.

Respondents should provide a layout plan showing the proposed construction in relation to the layout of the parcel. Respondents are also encouraged to provide drawings or graphical depictions of proposed construction to help reviewers visualize the proposed construction.

The proposal containing the most site improvements with the least amount of modified Lease terms will be scored higher than a proposal with less improvements but more requested Lease modifications.

**5) References:**

Both personal and professional references may be provided. References should be able to provide information on financial ability of proposer to complete proposed site improvements, information on ability of proposer to successfully manage an aviation construction project, and information on proposer's previous experience in aviation and operating a business and/or hangar on an airport.

A minimum of 3 references should be provided.

**FAILURE TO RETURN THIS PAGE AS PART OF YOUR I PROPOSAL DOCUMENT MAY RESULT IN  
REJECTION OF PROPOSAL.**

**SUMMARY SCHEDULE**

Proposed Lease Terms					
Lease Term Proposed	Square Foot Rate, Per Year	Leasehold Size	Annual Rate (Square foot rate X leasehold size)	Number of Aircraft proposed to be based in leasehold	Value of Aircraft proposed to be based in leasehold
_____ Years	\$_____ per square foot per year	_____ square feet	\$_____	_____ Aircraft	\$_____
<b>Market Adjustment (if different than every 10 years provide justification)</b>			<b>CPI Adjustment (if different than every 3 years provide justification)</b>		
<b>Comments:</b>					

Vendor Name: \_\_\_\_\_

Representative Signature: \_\_\_\_\_

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**FIRM INFORMATION**

The undersigned acknowledges receipt of the following addenda, listed by number and date appearing on each:

Addendum No. #	Date

**Certification Of Non-Collusion in Proposal Preparation** \_\_\_\_\_  
(Signature) (Date)

In compliance with the attached specifications, the undersigned acknowledges all requirements outlined in the "Instructions to Proposers" and all documents referred to therein, if this proposal is accepted by the Board of Commissioners within sixty (60) days of the date of proposal opening, to negotiate an agreement for any or all of the items proposed, within the timeline specified in the proposal submittal.

**Legal Business Name** \_\_\_\_\_

**Address** \_\_\_\_\_

**Does your company currently have a location within Gwinnett County?** Yes  No

**Representative Signature** \_\_\_\_\_

**Print Authorized Representative's Name** \_\_\_\_\_

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**REFERENCES**

References to involve Private/Corporate Hangar Building(s) similar in scope and complexity to the services proposed. Said services should have been provided within the last five (5) years.

1. Airport Name \_\_\_\_\_  
Description of Building \_\_\_\_\_  
\_\_\_\_\_  
Date of Construction (Within the last five years) \_\_\_\_\_  
Building Cost \$ \_\_\_\_\_  
Client Contact \_\_\_\_\_ Telephone \_\_\_\_\_  
E-Mail Address \_\_\_\_\_

2. Airport Name \_\_\_\_\_  
Description of Building \_\_\_\_\_  
\_\_\_\_\_  
Date of Construction (Within the last five years) \_\_\_\_\_  
Building Cost \$ \_\_\_\_\_  
Client Contact \_\_\_\_\_ Telephone \_\_\_\_\_  
E-Mail Address \_\_\_\_\_

3. Airport Name \_\_\_\_\_  
Description of Building \_\_\_\_\_  
\_\_\_\_\_  
Date of Construction (Within the last five years) \_\_\_\_\_  
Building Cost \$ \_\_\_\_\_  
Client Contact \_\_\_\_\_ Telephone \_\_\_\_\_  
E-Mail Address \_\_\_\_\_

**Vendor Name:** \_\_\_\_\_



### CODE OF ETHICS AFFIDAVIT

**PLEASE RETURN THIS FORM COMPLETED WITH YOUR SUBMITTAL. SUBMITTED FORMS ARE REQUIRED PRIOR TO EVALUATION.**

In accordance with Section 54-33 of the Gwinnett County Code of Ordinances the undersigned bidder/proposer makes the following full and complete disclosure under oath, to the best of their knowledge, of the name(s) of all elected officials whom it employs or who have a direct or indirect pecuniary interest in or with the bidder/proposer, its affiliates or its subcontractors:

1. \_\_\_\_\_  
Company Submitting Bid/Proposal

- 2. Please select one of the following:
  - No information to disclose (*complete only section 4 below*)
  - Disclosed information below (*complete section 3 & section 4 below*)

3. If additional space is required, please attach list:

\_\_\_\_\_  
Gwinnett County Elected Official Name

\_\_\_\_\_  
Gwinnett County Elected Official Name

\_\_\_\_\_  
Gwinnett County Elected Official Name

\_\_\_\_\_  
Gwinnett County Elected Official Name

4. BY: \_\_\_\_\_  
Authorized Officer or Agent Signature

Sworn to and subscribed before me this

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

\_\_\_\_\_  
Notary Public

(seal)



**CONTRACTOR AFFIDAVIT AND AGREEMENT  
(THIS FORM SHOULD BE FULLY COMPLETED AND RETURNED WITH YOUR SUBMITTAL)**

By executing this affidavit, the undersigned contractor verifies its compliance with The Illegal Immigration Reform Enhancements for 2013, stating affirmatively that the individual, firm, or corporation which is contracting with the Gwinnett County Board of Commissioners has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security] to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act, in accordance with the applicability provisions and deadlines established therein.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services or the performance of labor pursuant to this contract with the Gwinnett County Board of Commissioners, contractor will secure from such subcontractor(s) similar verification of compliance with the Illegal Immigration Reform and Enforcement Act on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the Gwinnett County Board of Commissioners at the time the subcontractor(s) is retained to perform such service.

\_\_\_\_\_  
E-Verify \* User Identification Number

\_\_\_\_\_  
Date Registered

\_\_\_\_\_  
Legal Company Name

\_\_\_\_\_  
Street Address

\_\_\_\_\_  
City/State/Zip Code

BY: \_\_\_\_\_  
Authorized Officer or Agent  
(Contractor Signature)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN  
BEFORE ME ON THIS THE  
\_\_\_\_ DAY OF \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
Notary Public  
My Commission Expires: \_\_\_\_\_

<b>For Gwinnett County Use Only:</b> Document ID # _____ Issue Date: _____ Initials: _____
---

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is "E-Verify" operated by the U.S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

## **INSURANCE REQUIREMENTS**

### **Section A**

All lessees/businesses leasing land from the airport must have the following insurance coverage, no matter what type of business they provide or are involved in.

1. Statutory Workers' Compensation Insurance:
  - (a) Employers Liability:
    - Bodily Injury by Accident - \$100,000 Each Accident
    - Bodily Injury by Disease - \$500,000 Policy Limit
    - Bodily Injury by Disease - \$100,000 Each Employee
2. Auto Liability Insurance
  - (a) Not less than \$1,000,000 Limit of Liability per Occurrence for Bodily Injury and Property Damage
  - (b) Comprehensive Form Covering all Owned, Non-Owned, Leased, Hired, and Borrowed Vehicles
  - (c) Additional Insured Endorsement
  - (d) Contractual Liability
  - (e) No exclusions for Airport Exposures

If your business does not own any automobiles, you still need to carry non-owned and hired insurance.

3. Property Insurance: The lessee/business shall procure and maintain Property Insurance which provides "All Risk" coverage including earthquake and flood, collapse, transit coverage, boiler and machinery including operational testing and startup, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, resultant damage from faulty workmanship or materials or errors in design. The policy shall include no exclusion for foundations or underground pipes, tanks, or machinery. The limit of insurance will be for the amount necessary to cover 100% of building and contents on a replacement cost basis. Business Interruption should be carried at the limit determined by the Business Interruption Worksheet. Business Interruption insurance is not required if lessee is utilizing facility for non-business uses.

### **Section B**

Any Lessee/Business that would be considered non-aviation would need to carry the following insurance in addition to Section A. Examples of non-aviation lessees/businesses are restaurant, manufacturers which do not manufacturer anything for the aviation industry, contractors, automobile repair shop, life insurance office, etc.

4. Comprehensive General Liability Insurance:
  - (a) Not Less than \$1,000,000 Combined Single Limit Bodily Injury and Property Damage.
  - (b) Not Less than \$1,000,000 Combined Single Limit Bodily Injury and Property Damage for Products and Completed Operations Liability.
  - (c) Not Less than \$1,000,000 Combined Single Limit Liquor Liability for any Permittee Selling Alcoholic Beverages.
  - (d) The Following Additional Coverages Must Apply:
    - \* Additional Insured Endorsement
    - \* Contractual Liability
    - \* Broad Form Property Damage
    - \* Severability of Interest
    - \* Personal Injury
    - \* Incidental Medical Malpractice
    - \* Hostile Fire Pollution Wording
5. Umbrella Liability Insurance - Minimum \$1,000,000 Limit of Liability  
(Higher limit may be required depending on the extent of contract)
  - (a) The Following Additional Coverages Must Apply
    - \* Additional Insured Endorsement
    - \* Concurrency of Effective Dates with Primary
    - \* Blanket Contractual Liability
    - \* Drop Down Feature
    - \* Care, Custody, and Control - Follow Form Primary
    - \* Aggregates: Apply Where Applicable in Primary
    - \* Umbrella Policy Must Be as Broad as the Primary Policy

### Section C

Any Lessee/Business that would be considered aviation would need to carry the following insurance in addition to Section A. Examples of aviation leases/businesses are FBOs, air charter services, aircraft or aircraft parts manufacturers, hangar operations, aircraft fueling services, etc.

6. Airport Liability Insurance:
  - (a) Not Less than \$1,000,000 Combined Single Limit Bodily Injury and Property Damage.
  - (b) Not Less than \$1,000,000 Combined Single Limit Bodily Injury and Property Damage for Products and Completed Operations Liability.
  - (c) The Following Additional Coverages Must Apply:
    - \* Additional Insured Endorsement
    - \* Contractual Liability
    - \* Severability of Interest
    - \* Personal Injury
7. Environmental Impairment Liability (Pollution Liability):
  - (a) \$1,000,000 Limit of Liability per Occurrence for Bodily Injury and Property Damage for anyone having stationary fuel tanks, portable fuel tanks, waste oil tanks and drums of chemicals.
8. Aircraft Liability:
  - (a) Not less than \$1,000,000 Combined Single Limits Bodily Injury and Property Damage, Limited to \$100,000 per Seat Passenger legal Liability if the Business owns any aircraft.
9. Hangar keepers' Legal Liability
  - (a) Not less than a per-aircraft limit equal to the maximum value of any aircraft and a maximum limit of the total value of all aircraft while in the care, custody or control of the operator if the business stores or works on any aircraft other than its own.

**Section D**

This section applies to all lessees/businesses.

10. Gwinnett County Board of Commissioners and the Airport Authority should be shown as an additional insured on Aircraft Liability, Airport Liability, Environmental Impairment Liability (Pollution Liability), Hangarkeepers' Liability, and Automobile Liability policies that are required as above.
11. The cancellation provision should provide 30 days notice of cancellation.
12. Certificate Holder should read:

Gwinnett County Board of Commissioners

75 Langley Drive

Lawrenceville, GA 30045-6900

**and**

Gwinnett County Airport Authority

600 Briscoe Boulevard

Lawrenceville, GA 30045

13. Insurance Company, except Workers' Compensation carrier, must have an A.M. Best Rating of A-6 or higher.
14. Insurance Company shall be licensed to do business by the Georgia Department of Insurance.
15. Certificates of Insurance, and any subsequent renewals, must reference specific lease.
16. The Lessee/Business shall agree to provide complete certified copies of current insurance policy(ies) if requested by the County or Airport Authority to verify their compliance with these minimum insurance requirements.
17. All minimum insurance coverages required to be provided by the Lessee/Business will be primary over any insurance program carried by the County.
18. No Lessee/Business shall commence any work of any kind, or participate on Airport property, until all minimum insurance requirements contained in this lease have been complied with.
19. The Lessee/Business shall agree to waive all rights of subrogation against the Airport Authority, Gwinnett County, the Board of Commissioners, its officers, officials, employees, or volunteers from losses arising from the issue of this permit.
20. The Lessee shall make available to the County, through its records or records of their insurer, information regarding a specific claim. Any loss run information available from

the Lessee or their insurer will be made available to the Airport Authority or County upon request.

21. Compliance by the Lessee with the foregoing requirements as to carrying minimum insurance shall not relieve the Lessee of their liability provisions of the Permit.
22. The Lessee is to comply with the FAA, EPA, OSHA and any other laws that may apply to this Permit.
23. The Lessee shall, at a minimum, apply risk management practices accepted by the Lessee's industry.
24. The Airport Authority reserves the right to amend the minimum standards for insurance at any time, based on the increase in legal liability exposures and the availability of insurance coverages and limits.

**WINNETT COUNTY**  
**DEPARTMENT OF FINANCIAL SERVICES – PURCHASING DIVISION**  
**GENERAL INSTRUCTIONS FOR VENDORS, TERMS AND CONDITIONS**

**\*\*\*ATTENTION\*\*\***

FAILURE TO RETURN THE FOLLOWING DOCUMENTS MAY RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND AUTOMATIC REJECTION. THE COUNTY SHALL BE THE SOLE DETERMINANT OF TECHNICALITY VS. NON-RESPONSIVE SUBMITTAL:

1. FAILURE TO USE COUNTY QUOTE/BID/FEE SCHEDULE.
2. FAILURE TO RETURN OR ACKNOWLEDGE APPLICABLE COMPLIANCE/SPECIFICATION SHEETS.
3. FAILURE TO RETURN OR ACKNOWLEDGE APPLICABLE ADDENDA.
4. FAILURE TO PROVIDE INFORMATION ON ALTERNATES OR EQUIVALENTS.
5. FAILURE TO PROVIDE BID BOND, WHEN REQUIRED, WILL RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND AUTOMATIC REJECTION. BID BONDS ARE NOT REQUIRED ON ALL SOLICITATIONS. BOND REQUIREMENTS ARE CLEARLY STATED ON THE INVITATION PAGE. IF CLARIFICATION IS NEEDED, CONTACT THE PURCHASING ASSOCIATE LISTED IN THE INVITATION. **IF BONDS ARE REQUIRED, FORMS WILL BE PROVIDED IN THIS SOLICITATION DOCUMENT.**
6. FAILURE TO PROVIDE CONTRACTOR AFFIDAVIT AND AGREEMENT, WHEN REQUIRED, MAY RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND REJECTED. THE CONTRACTOR AFFIDAVIT AND AGREEMENT IS NOT REQUIRED ON ALL SOLICITATIONS. IF CLARIFICATION IS NEEDED, CONTACT THE PURCHASING ASSOCIATE LISTED IN THE INVITATION.
7. FAILURE TO PROVIDE AN ETHICS AFFIDAVIT WHEN REQUIRED, MAY RESULT IN SUBMITTAL BEING DEEMED NON-RESPONSIVE AND REJECTED. THE ETHICS AFFIDAVIT IS REQUIRED ON ALL FORMAL SOLICITATIONS OVER \$100,000.00. IF CLARIFICATION IS NEEDED, CONTACT THE PURCHASING ASSOCIATE LISTED IN THE INVITATION.

**I. PREPARATION OF SUBMITTAL**

- A. Each vendor shall examine the drawings, specifications, schedule, and all instructions. Failure to do so will be at the vendor's risk, as the vendor will be held accountable for their submittal.
- B. Each vendor shall furnish all information required by the solicitation form or document. Each vendor shall sign the submittal and print or type his or her name on the quote/bid/fee schedule. The person signing the submittal should initial erasures or other changes. An authorized agent of the vendor must sign the submittal.
- C. Fee schedule pricing should have only two decimal places unless otherwise stated. In the event of a calculation error in total price, the unit pricing prevails.
- D. Except for solicitations for the sale of real property, individuals, firms, and businesses seeking an award of a Gwinnett County contract may not initiate or continue any verbal or written communications regarding a solicitation with any County officer, elected official, employee, or other County representative other than the Purchasing Associate named in the solicitation between the date of the issuance of the solicitation and the date of the final award. The Purchasing Director will review violations. If determined that such communication has compromised the competitive process, the offer submitted by the individual, firm or business may be disqualified from consideration for award. Solicitations for the sale of real property may allow for verbal or written communications with the appropriate Gwinnett County representative.
- E. Sample contracts (if pertinent) are attached. These do NOT have to be filled out with the submittal but are contained for informational purposes only. If awarded, the successful vendor(s) will be required to execute these documents prior to County execution.
- F. Effective July 1, 2013 and in accordance with the Georgia Illegal Immigration Reform Enhancements for 2013, an original signed, notarized and fully completed Contractor Affidavit and Agreement should be included with vendor's submittal, if the solicitation is for the physical performance of services for all labor or service contract(s) that exceed \$2,499.99 (except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia). Failure to provide the Contractor Affidavit and Agreement with your submittal may result in being deemed non-responsive and automatic rejection.

**II. DELIVERY**

- A. Each vendor should state time of proposed delivery of goods or services.
- B. Words such as "immediate," "as soon as possible," etc. should not be used. The known earliest date or the minimum number of calendar days required after

receipt of order (delivery A.R.O.) should be stated. If calendar days are used, include Saturday, Sunday, and holidays in the number.

### III. EXPLANATION TO VENDORS

Any explanation desired by a vendor regarding the meaning or interpretation of the solicitation, drawings, specifications, etc. must be requested by the question cutoff deadline stated in the solicitation for a reply to reach all vendors before the deadline of the solicitation. Any information given to a prospective vendor concerning a solicitation will be furnished to all prospective vendors as an addendum to the solicitation if such information is necessary or if the lack of such information would be prejudicial to uninformed vendors. The written solicitation documents supersede any verbal or written communications between the parties. Receipt of addenda should be acknowledged in the submittal. **It is the vendor's responsibility to ensure they have all applicable addenda prior to their submittal.** This may be accomplished by contacting the assigned Purchasing Associate prior to the submittal or visiting the Gwinnett County website.

### IV. SUBMISSION OF FORMAL OFFERS/SUBMITTALS

- A. Formal bid and proposal submittals shall be enclosed in a sealed package or envelope, addressed to the Gwinnett County Purchasing Division with the name of the vendor, the date and hour of opening and the solicitation number on the face of the package or envelope. Facsimile or emailed submittals will not be considered. Any addenda should be enclosed in the sealed envelopes as well.
- B. ADD/DEDUCT: Add or deduct amounts indicated on the outside of the envelope are allowed and will be applied to the lump sum amount. Amount shall be clearly stated and should be initialed by an authorized representative.
- C. Samples of items, when required, must be submitted within the time specified and, unless otherwise specified by the County, at no expense to the County. Unless otherwise specified, samples will be returned at the vendor's request and expense, if items are not destroyed by testing.
- D. Items offered must meet required specifications and must be of a quality that will adequately serve the use and purpose for which intended.
- E. Full identification of each item submitted, including brand name, model, catalog number, etc. must be furnished to identify exactly what the vendor is offering. Manufacturer's literature may be furnished but vendor should not submit excessive marketing material.
- F. The vendor must certify that items to be furnished are new and that the quality has not deteriorated to impair its usefulness.
- G. Unsigned submittals will not be considered except in cases where it is enclosed with other documents that have been signed. The County will determine acceptability in these cases.
- H. Gwinnett County is exempt from federal excise tax and Georgia sales tax regarding goods and services purchased directly by Gwinnett County. Vendors are

responsible for federal excise tax and sales tax, including taxes for materials incorporated in county construction projects. Vendors should contact the State of Georgia Sales Tax Division for additional information. Agreements where there is a cost-plus mark-up, mark-up will not be paid on taxes.

- I. Information submitted by a vendor in the solicitation process shall be subject to disclosure after the public opening in accordance with the Georgia Open Records Act.

**V. WITHDRAWAL DUE TO ERRORS**

Vendors must give Gwinnett County Purchasing Division written notice within two (2) business days of completion of the opening stating that they wish to withdraw their submittal without penalty for an obvious clerical or calculation error. Submittal may be withdrawn from consideration if the price was substantially lower than the other submittals due solely to a mistake therein, provided pricing was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake and was due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of the submittal. The unintentional arithmetic error or omission can be clearly proven through inspection of the original work papers, documents, and materials used in preparing the submittal sought to be withdrawn. The vendor's original work papers shall be the sole acceptable evidence of error and mistake if a vendor elects to withdraw their submittal. If a quote or bid submittal is withdrawn under the authority of this provision, the lowest remaining responsive offer shall be deemed to be low bid.

No vendor who is permitted to withdraw their submittal shall, for compensation, supply any material or labor or perform any subcontract or other work agreement for the person or firm to whom the contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid or proposal was submitted.

Vendors who fail to request withdrawal by the required forty-eight (48) hours may automatically forfeit bid bond if a bond was required. Bid may not be withdrawn otherwise.

Withdrawal is not automatically granted and will be allowed solely at Gwinnett County's discretion.

**VI. TESTING AND INSPECTION**

Since tests may require several days for completion, the County reserves the right to use a portion of any supplies before the results of the tests are determined. Cost of inspections and tests of any item that fails to meet the specifications, shall be borne by the vendor.

**VII. F.O.B. POINT**

Unless otherwise stated in the request for invitation and any resulting contract, or unless qualified by the vendor, items shall be shipped F.O.B. Destination, Freight Prepaid and Allowed. The seller shall retain title for the risk of transportation, including the filing for loss or damages. The invoice covering the items is not payable until items are delivered and the contract of carriage has been completed. Unless the F.O.B. clause states

otherwise, the seller assumes transportation and related charges either by payment or allowance.

**VIII. PATENT INDEMNITY**

The vendor guarantees to hold the County, its agents, officers, or employees harmless from liability of any nature or kind for use of any copyrighted or uncopied composition, secret process, patented or unpatented invention, articles or appliances furnished or used in the performance of the contract, for which the vendor is not the patentee, assignee, or licensee.

**IX. BID BONDS AND PAYMENT AND PERFORMANCE BONDS (IF REQUIRED, FORMS WILL BE PROVIDED IN THIS DOCUMENT)**

A five percent (5%) bid bond, a one hundred percent (100%) performance bond, and a one hundred percent (100%) payment bond must be furnished to Gwinnett County for any solicitation as required in the solicitation package or document. **Failure to submit a bid bond with the proper rating will result in submittal being deemed non-responsive.** Bonding company must be authorized to do business in Georgia by the Georgia Insurance Commission, listed in the Department of the Treasury's publication of companies holding certificates of authority as acceptable surety on Federal bonds and as acceptable reinsuring companies, and have an A.M. Best rating as stated in the insurance requirement of the solicitation. **The bid bond, payment bond, and performance bond must have the proper A.M. Best rating as stated in the solicitation document.**

**X. DISCOUNTS**

- A. Time payment discounts may be considered in arriving at net prices and in award of solicitations. Offers of discounts for payment within ten (10) days following the end of the month are preferred.
- B. In connection with any discount offered, time will be computed from the date of delivery and acceptance at destination, or from the date correct invoice or voucher is received, whichever is the later date. Payment is deemed to be made for the purpose of earning the discount on the date of the County check.

**XI. AWARD**

- A. Award will be made to either the highest scoring firm (for proposals) or the lowest responsive and responsible vendor (for quotes/bids). The quality of the articles to be supplied, their conformity with the specifications, their suitability to the requirements of the County, and the delivery terms will be taken into consideration in making the award. The County may make such investigations as it deems necessary to determine the ability of the vendor to perform, and the vendor shall furnish to the County all such information and data for this purpose as the County may request. The County reserves the right to reject any submittal if the evidence submitted by, or investigation of such vendor fails to satisfy the County that such vendor is properly qualified to carry out the obligations of the contract.

- B. The County reserves the right to reject or accept any or all offers and to waive technicalities, informalities and minor irregularities in the submittals received.
- C. The County reserves the right to make an award as deemed in its best interest, which may include awarding to a single vendor or multiple vendors; or to award the whole solicitation agreement, only part of the agreement, or none of the agreement, based on its sole discretion of its best interest.
- D. In the event of proposal scores rounded to the nearest whole number result in a tie score, the award will be based on lowest cost.
- E. If proposal negotiations with the highest ranked firm are unsuccessful, the County may then negotiate with the second ranked firm and so on until a satisfactory agreement has been reached.

## **XII. DELIVERY FAILURES**

Failure of a vendor to deliver within the time specified or within reasonable time as interpreted by the Purchasing Director, or failure to make replacement of rejected articles/services when so requested, immediately or as directed by the Purchasing Director, shall constitute authority for the Purchasing Director to purchase in the open market articles/services of comparable grade to replace the articles/services rejected or not delivered. On all such purchases, the vendor shall reimburse the County within a reasonable time specified by the Purchasing Director for any expense incurred in excess of the contract prices, or the County shall have the right to deduct such amount from monies owed the defaulting vendor. Alternatively, the County may penalize the vendor one percent (1%) per day for a period of up to ten (10) days for each day that delivery or replacement is late. Should public necessity demand it, the County reserves the right to use or consume articles/services delivered which are substandard in quality, subject to an adjustment in price to be determined by the Purchasing Director.

## **XIII. COUNTY FURNISHED PROPERTY**

No material, labor or facilities will be furnished by the County unless so provided in the solicitation package.

## **XIV. REJECTION OF SUBMITTALS**

Failure to observe any of the instructions or conditions in this solicitation package may constitute grounds for rejection.

## **XV. CONTRACT**

Each submittal is received with the understanding that the acceptance in writing by the County of the offer to furnish any or all the commodities or services described therein shall constitute a contract between the vendor and the County which shall bind the vendor on his part to furnish and deliver the articles quoted at the prices stated in accordance with the conditions of said accepted submittal. The County, on its part, may order from such vendor, except for cause beyond reasonable control, and to pay for, at the agreed prices, all articles specified and delivered.

Upon receipt of a solicitation package containing a Gwinnett County "Sample Contract" as part of the requirements, it is understood that the vendor has reviewed the documents

with the understanding that Gwinnett County requires that all agreements between the parties must be entered into via this document. If any exceptions are taken to any part, each must be stated in detail and submitted as part of the vendor's submittal. If no exceptions are stated, it is assumed that the vendor fully agrees to the provisions contained in the "Sample Contract" in its entirety.

Any Consultant as defined in O.C.G.A. §36-80-28 that is engaged to develop or draft specifications/requirements or serve in a consultative role during the procurement process for any County procurement method, by entering into such an arrangement or executing a contract, the consultant agrees to abide by the current state law and: 1) Avoid any appearance of impropriety and shall follow all policies and procedures of the County, 2) Disclose to the County any material transaction or relationship pursuant to §36-80-28, that is considered a conflict of interest, any involvement in litigation or other dispute, relationship, or financial interest not disclosed in the ethics affidavit, and 3) Acknowledge that any violation or threatened violation of the agreement may cause irreparable injury to the County, entitling the County to seek injunctive relief in addition to all other legal remedies.

When the vendor has performed in accordance with the provisions of this agreement, Gwinnett County shall pay to the vendor, within thirty (30) days of receipt of any department approved payment request and based upon work completed or service provided pursuant to the contract, the sum so requested, less the retainage stated in this agreement, if any. If Gwinnett County fails to pay the vendor within sixty (60) days of receipt of a pay request based upon work completed or service provided pursuant to the contract, the County shall pay the vendor interest at the rate of ½% per month or pro rata fraction thereof, beginning the sixty-first (61<sup>st</sup>) day following receipt of pay requests. The vendor's acceptance of progress payments or final payment shall release all claims for interest on said payment.

The parties agree that this Contract shall be governed and construed in accordance with the laws of the State of Georgia.

**XVI. NON-COLLUSION**

Vendor declares that the submittal is not made in connection with any other vendor's submittal for the same commodity or commodities, and that the submittal is bona fide and is in all respects fair and without collusion or fraud. An affidavit of non-collusion shall be executed by each vendor. Collusion and fraud in submittal preparation shall be reported to the State of Georgia Attorney General and the United States Justice Department.

**XVII. DEFAULT**

The contract may be canceled or annulled by the Purchasing Director in whole or in part by written notice of default to the vendor upon non-performance or violation of contract terms. An award may be made to the next low responsive and responsible vendor, or the next highest scoring responsive and responsible proposer, or articles specified may be purchased on the open market similar to those so terminated. In either event, the

defaulting vendor (or their surety) shall be liable to the County for costs to the County in excess of the defaulted contract prices; provided, however, that the vendor shall continue the performance of this contract to the extent not terminated under the provisions of this clause. Failure of the vendor to deliver materials or services within the time stipulated on their offer, unless extended in writing by the Purchasing Director, shall constitute contract default.

**XVIII. TERMINATION FOR CAUSE**

The County may terminate this agreement for cause upon ten days prior written notice to the vendor of the vendor's default in the performance of any term of this agreement. Such termination shall be without prejudice to any of the County's rights or remedies by law.

**XIX. TERMINATION FOR CONVENIENCE**

The County may terminate this agreement for its convenience at any time upon 30 days written notice to the vendor. In the event of the County's termination of this agreement for convenience, the vendor will be paid for those services actually performed. Partially completed performance of the agreement will be compensated based upon a signed statement of completion to be submitted by the vendor, which shall itemize each element of performance.

**XX. SUBSTITUTIONS**

Vendors offering substitutions or who are deviating from the attached specifications shall list such deviations on a separate sheet to be submitted with their offer. The absence of such a substitution list shall indicate that the vendor has taken no exception to the specifications contained herein.

**XXI. INELIGIBLE VENDORS**

The County may choose not to accept the offer by an individual, firm, or business who is in default on the payment of taxes, licenses, or other monies owed to the County. Additionally, vendors or persons placed on an Ineligible Source List for reasons listed in Part 6, Section II of the Gwinnett County Purchasing Ordinance shall not be eligible to provide any commodities or services to the County during the period such person remains on the Ineligible Source List.

**XXII. PENDING LITIGATION**

An individual, firm, or business that has litigation pending against the County, or anyone representing a firm or business in litigation against the County, not arising out of the procurement process, will be disqualified.

**XXIII. OCCUPATION TAX CERTIFICATE**

Each successful vendor must have a valid Gwinnett County occupation tax certificate if the vendor maintains an office within the unincorporated area of Gwinnett County. Incorporated, out of County, and out of State vendors are required to have any and all certificates necessary to do business in any town, County or municipality in the State of Georgia, or as otherwise required by County ordinance or resolution. Vendors may be required to provide evidence of valid certificates. Out of State vendors are required to have a certificate in the Georgia jurisdiction where they receive the most revenue.

**XXIV. PURCHASING POLICY AND REVIEW COMMITTEE**

The Purchasing Policy & Review Committee has been established to review purchasing procedures and make recommendations for changes; resolve problems regarding the purchasing process; make recommendations for standardization of commodities, schedule buying, qualified products list, annual contracts, supplier performance (Ineligible Source List), and other problems or requirements related to purchasing. The Purchasing Policy & Review Committee has authority to place vendors on the Ineligible Source List for reasons listed in Part 6, Section II of the Gwinnett County Purchasing Ordinance, for a period not to exceed three (3) years.

**XXV. AMERICANS WITH DISABILITIES ACT**

All vendors for Gwinnett County are required to comply with all applicable sections of the Americans with Disabilities Act (ADA) as an equal opportunity employer. In compliance with the Americans with Disabilities Act (ADA), Gwinnett County provides reasonable accommodations to permit a qualified applicant with a disability to enjoy the privileges of employment equal to those employees without disabilities. Disabled individuals must satisfy job requirements for education background, employment experience, and must be able to perform those tasks that are essential to the job with or without reasonable accommodations. Any requests for the reasonable accommodations required by individuals to fully participate in any open meeting, program or activity of Gwinnett County should be directed to the ADA Coordinator, 75 Langley Drive, Lawrenceville, Georgia 30046, 770-822-8165.

**XXVI. ALTERATIONS OF SOLICITATION AND ASSOCIATED DOCUMENTS**

Alterations of County documents are strictly prohibited and will result in automatic disqualification of the vendor's solicitation response. If there are "exceptions" or comments to any of the solicitation requirements or other language, then the firm may make notes to those areas, but may not materially alter any document language.

**XXVII. TAX LIABILITY**

Local and state governmental entities must notify vendors of their use tax liability on public works projects. Under Georgia law, private vendors are responsible for paying a use tax equal to the sales tax rate on material and equipment purchased under a governmental exemption that is incorporated into a government construction project: excluding material and equipment provided for the installation, repair, or expansion of a public water, gas, or sewer system when the property is installed for general distribution purposes. To the extent the tangible personal property maintains its character (for example, the installation of a kitchen stove), it remains tax-exempt. However, if the installation incorporates the tangible personal property into realty (for example, the installation of sheetrock), it becomes taxable to the private vendor. See O.C.G.A. §48-8-3(2) and O.C.G.A. §48-8-63.

**XXVIII. STATE AND FEDERAL LAW REGARDING WORKER VERIFICATION**

Effective July 1, 2013 State Law requires that all who enter into a contract for the physical performance of services for all labor or service contract(s) that exceed \$2,499.99 (except

for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia) and that all who enter into a contract for public works as defined by O.C.G.A. §36-91-2(12) for the County, must satisfy the Illegal Immigration Reform Enhancements for 2013 in conjunction with the Federal Immigration Reform and Control Act (IRCA) of 1986, in all manner, and such are conditions of the contract.

The Purchasing Division Director with the assistance of the Internal Audit Division shall be authorized to conduct random audits of a vendor's or subcontractors' compliance with the Illegal Immigration Reform Enhancements for 2013 and the rules and regulations of the Georgia Department of Labor. The vendor and subcontractors shall retain all documents and records of its compliance for a period of five (5) years following completion of the contract or shall abide by the current time requirements at the time of the contract. This requirement shall apply to all contracts for all public works, labor or service contracts that exceed \$2,499.99 except for services performed by an individual who is licensed pursuant to Title 26, Title 43, or the State Bar of Georgia.

Whenever it appears that a vendor's or subcontractor's records are not sufficient to verify the work eligibility of any individual in the employment of such vendor or subcontractor, the Purchasing Director shall report same to the Department of Homeland Security and may result in termination of the contract if it is determined at any time during the work that the vendor or subcontractor is no longer in compliance with worker verification.

By submitting an offer to the County, vendor agrees that, in the event the vendor employs or contracts with any subcontractor(s) in connection with the covered contract, the vendor will secure from the subcontractor(s) such subcontractor(s)' indication of the employee-number category applicable to the subcontractor, as well as attestation(s) from such subcontractor(s) that they follow the Illegal Immigration Reform Enhancements for 2013 in conjunction with all federal requirements. Original signed, notarized Subcontractor Affidavits and Agreements must be maintained by the vendor awarded the contract.

A vendor's or subcontractor's failure to participate in the federal work authorization program as defined above shall be subject to termination of the contract. A vendor's failure to follow Gwinnett County's instruction to terminate a subcontractor that is not participating in the federal work authorization program may be subject to termination of the contract.

**XXIX. SOLID WASTE ORDINANCE**

No individual, partnership, corporation, or other entity shall engage in solid waste handling except in such a manner as to conform to and comply with the current Gwinnett County

Solid Waste Ordinance and all other applicable local, state and federal legislation, rules, regulation, and orders.

**XXX. GENERAL CONTRACTORS LICENSE**

Effective July 1, 2008: **All General Contractors must have a current valid license from the State Licensing Board for Residential and General Contractors, unless specifically exempted from holding such license pursuant to Georgia law (O.C.G.A. §43-41-17).**

**XXXI. PRODUCTS MANUFACTURED IN GEORGIA**

When contracting for or purchasing supplies, materials, equipment, or agricultural products that exceeds \$100,000.00, excluding beverages for immediate consumption, Gwinnett County shall give preference as far as may be reasonable and practicable to such supplies, materials, equipment, and agricultural products as may be manufactured or produced in this state. Such preference shall not sacrifice quality. Gwinnett County Board of Commissioners shall consider, among other factors, information submitted by the vendor which may include the vendor's estimate of the multiplier effect on gross state domestic product and the effect on public revenues of the state and the effect on public revenues of political subdivisions resulting from acceptance of an offer to sell Georgia manufactured or produced goods as opposed to out-of-state manufactured or produced goods. Any such estimates shall be in writing. **(O.C.G.A. §36-84-1).**

**XXXII. INDEMNIFICATION**

To the fullest extent permitted by law, the vendor shall, at his sole cost and expense, indemnify, defend, satisfy all judgments, and hold harmless the County, its commissioners, officers, agents, and employees from and against all claims, damages, actions, judgments, costs, penalties, liabilities, losses and expenses, including, but not limited to, attorney's fees arising out of or resulting from the performance of the work, provided that any such claim, damage, action, judgment, cost, penalty, liability, loss or expense (1) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by the negligent acts, errors by any act or omission of the vendor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless whether such claim is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any of the rights or obligations of indemnity which would otherwise exist as to any party or person described in this agreement. In any and all claims against the County, its commissioners, officers, agents, and employees by any employee of the vendor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation contained herein shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for

the vendor or any subcontractor under Worker's Compensation Acts, disability benefit acts, or other employee benefit acts.

Vendor shall also indemnify, hold harmless, insure, and defend the County for damages, losses, or expenses to the extent caused by or resulting from the negligence, recklessness, or intentionally wrongful conduct of the vendor or other persons employed or utilized by the vendor in the performance of a contract that utilizes survey services.

### **XXXIII. CODE OF ETHICS**

Vendors shall disclose under oath the name of all elected officials whom it employs or who have a direct or indirect pecuniary interest in the business entity, its affiliates, or its subcontractors. (This shall not apply to informal purchases as defined by the Purchasing Ordinance.) The vendor shall execute a Code of Ethics affidavit. Failure to submit the affidavit during the procurement process shall render the offer non-responsive.

Any business entity holding a contract with Gwinnett County that after execution of the contract or issuance of the purchase order employs, subcontracts with, or transfers a direct or indirect pecuniary interest in the business entity to an elected official shall within five (5) days disclose such fact in writing under oath to the Clerk of the Board of Commissioners. Failure to comply, or vendors submitting false information or omitting material information shall be referred to the Purchasing Policy & Review Committee for action pursuant to the Purchasing Ordinance or to the District Attorney for possible criminal prosecution. Note: See Gwinnett County Code of Ethics Ordinance E02011, Sec. 54-33. The ordinance is available to view in its entirety at [www.gwinnettcounty.com](http://www.gwinnettcounty.com).

### **XXXIV. ELECTRONIC PAYMENT**

Vendors accepting procurements should select one of Gwinnett County's electronic payment options.

- A. A vendor may select ePayables payment process which allows acceptance of Gwinnett County's virtual credit card as payment for outstanding invoices. The authorized vendor representative must send an email to: [vendorelectronicpayment@gwinnettcounty.com](mailto:vendorelectronicpayment@gwinnettcounty.com) and indicate the desire to enroll in Gwinnett County's virtual credit card payment process.
- B. A vendor may select Direct Deposit payment process and the payment will be deposited directly into an account at their designated financial institution. To securely enroll in Direct Deposit, either access your online [Vendor Login and Registration](#) on the County's web site and update the requested information on the Direct Deposit tab or mail a [Direct Deposit Authorization Agreement](#) form.

The County will send a Payment Advice notification via email for both payment types. For more information about Electronic Payments, please visit the Gwinnett County Treasury Division page or click here -> [Gwinnett County Electronic Payments](#).

**DIRECTIONS TO GJAC BUILDING FROM I-85**

Take I-85 to Georgia Highway 316 (Lawrenceville/Athens exit). Exit Highway 120 (Lawrenceville/Duluth exit) and turn right. At seventh traffic light, turn right onto Langley Drive. Cross Highway 29 through the traffic light and proceed through the roundabout. Visitors can either proceed to the front parking area on the left or to the parking deck behind the building. Click [here](#) for additional information about parking. The Purchasing Division is located on the second floor, West Wing.

FAILURE TO RETURN THIS PAGE MAY RESULT IN REMOVAL OF YOUR COMPANY FROM COMMODITY LISTING.

Buyer Initials: OG

**IF YOU DESIRE TO SUBMIT A "NO BID" IN RESPONSE TO THIS PACKAGE, PLEASE INDICATE BY CHECKING ONE OR MORE OF THE REASONS LISTED BELOW AND EXPLAIN.**

\_\_\_\_\_ Do not offer this product or service; remove us from your bidder's list for this item only.

\_\_\_\_\_ Specifications too "tight"; geared toward one brand or manufacturer only.

\_\_\_\_\_ Specifications are unclear.

\_\_\_\_\_ Unable to meet specifications

\_\_\_\_\_ Unable to meet bond requirements

\_\_\_\_\_ Unable to meet insurance requirements

\_\_\_\_\_ Our schedule would not permit us to perform.

\_\_\_\_\_ Insufficient time to respond.

\_\_\_\_\_ Other

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COMPANY NAME \_\_\_\_\_

AUTHORIZED REPRESENTATIVE \_\_\_\_\_

SIGNATURE

# RFP EXHIBIT A

LEASE AGREEMENT  
WITH  
GWINNETT COUNTY AIRPORT  
AND

---

SAMPLE

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SAMPLE

COUNTY OF GWINNETT

STATE OF GEORGIA

LEASE AGREEMENT

THIS AGREEMENT made and entered into by and among the GWINNETT COUNTY AIRPORT AUTHORITY (the "authority"), a body corporate and politic and a political subdivision and public corporation of the State of Georgia, GWINNETT COUNTY (the "County"), a political subdivision of the State of Georgia (collectively, and/or individually, "Lessor"), and \_\_\_\_\_ hereinafter referred to as "Lessee."

WITNESSETH:

WHEREAS, the County and the Authority did enter into a Management Agreement dated January 19, 2021, for the operation and maintenance of Gwinnett County Airport- Briscoe Field (the "Airport"), and wherever "Lessor" is used herein it shall be construed to mean the County and/or the Authority; and

WHEREAS, the Lessor and Lessee are mutually desirous of entering into a lease for the use and occupancy by Lessee of certain areas at the Airport;

NOW, THEREFORE, for and in consideration of the respective promises and mutual agreements made by the parties hereto hereinafter set forth, the Lessor hereby grants to the Lessee the right to use and occupy the land area at the Airport shown on Exhibit A together with all buildings, structures, improvements, additions and permanent installations now existing or hereinafter constructed and installed therein or thereon (hereinafter called the "Leased Premises") during the term of this Agreement upon the following terms and conditions, and it is hereby mutually agreed as follows:

SECTION 1

TERM

1.1 The term of this Agreement shall be for a twenty-five (25) year period commencing on \_\_\_\_\_, and expiring on \_\_\_\_\_, unless sooner terminated in accordance with the provisions hereof.

SECTION 2

LEASED PREMISES

2.1 The Leased Premises, identified as shown on Exhibit A, attached hereto and made a part hereof, consists of the following:

2.1.1 land area consisting of approximately \_\_\_\_\_ square feet, together with all buildings, structures, improvements, additions and permanent installations constructed and installed therein or thereon.

2.1.2 buildings, structures, improvements, additions, and permanent installations consisting of approximately \_\_\_\_\_ square feet.

SECTION 3

USE OF LEASED PREMISES

3.1 The Lessee shall continuously occupy and use the Leased Premises for the following purposes and for no other purpose whatsoever:

3.1.1 for the parking of automobiles and other vehicles operated by officers, employees, invitees and business visitors of the Lessee;

3.1.2 for operations offices in connection with all of the purposes authorized herein;

3.1.3 \_\_\_\_\_

3.1.4 any other activities authorized by Lessor.

3.2 Unauthorized use by Lessee of the Leased Premises or abandonment by Lessee of its authorized aviation-related use of the Leased Premises shall be grounds for termination in accordance with Section 19.

SECTION 4  
RENTS AND FEES

- 4.1 For Use and Occupancy of the Leased Premises herein granted, the Lessee agrees to pay to the Lessor during the period commencing \_\_\_\_\_, and ending \_\_\_\_\_, a monthly rent of \_\_\_\_\_.
- 4.1.1 Effective on \_\_\_\_\_, and on \_\_\_\_\_, of every three years thereafter during the remaining term, the monthly rental payable hereunder shall be adjusted by multiplying the monthly rental set forth in 4.1 above by a fraction, the numerator of which shall be the annual CPI (as hereinafter defined) published for the year most recently preceding said \_\_\_\_\_ date, and the denominator of which shall be the annual CPI published for \_\_\_\_\_, hereinafter referred to as Lessee's base year. In no event shall the monthly rental payable under this Section 4.1.1 be less than the amount set forth in 4.1 above.
- 4.2 The term CPI as used herein shall mean the Consumer Price Index for all Urban Consumers, all items, selected large cities, for Atlanta, Georgia as published by the Bureau of Labor Statistics of the United States Department for Labor, 1982-84 base =100. In the event the base year of such index is changed, the CPI shall be converted to the equivalent of the base year 1982-84 =100.
- 4.3 The monthly rent shall be paid on the first day of each month in advance at the office of the Airport Manager, at the address specified in Section 26 hereof, or at such other office as may be directed in writing by the Lessor.
- 4.4 In addition to all other rent and fees set forth in this Section, and commencing upon the effective date of the Agreement, the Lessee shall pay to the Lessor the following fees:
- 4.4.1 any other standard fees or charges that may be imposed at any time by the Lessor on operations at the Airport.
- 4.6 The fees specified in Section 4.4 shall be paid by the Lessee to the Lessor as follows: on the twentieth (20th) day of each month, the Lessee shall render to the Lessor a statement certified by the Lessee's principal financial officer showing total gallons of fuel delivered to Lessee's fuel farm for the preceding calendar month and pay to the Lessor the appropriate fuel flowage fee.
- 4.7 Upon any termination or the expiration of this agreement, the Lessee shall within twenty

(20) days after the effective date of termination or expiration render to the Lessor a statement showing total aviation fuel gallons delivered, certified by the Lessee's principal financial officer, for the monthly period in which the effective date falls and pay to the Lessor the appropriate fuel flowage fee.

4.8 Nothing contained in the foregoing shall effect the survival of the obligations of the Lessee as set forth in the Sections of this Agreement covering the survival of the Lessee's obligations.

4.9 The fees specified above shall be payable at the office of the Airport Manager or at such other office as may be directed in writing by the Lessor.

4.10 Upon the execution of this Agreement by the Lessee and delivery thereof to the Lessor, the Lessee shall also deliver to the Lessor, as a security deposit, a cashier's check, certified check, an irrevocable letter of credit from a bank insured by FDIC, or a performance bond issued by a Surety authorized to do business in the State of Georgia, in the amount \_\_\_\_\_, the approximate amount of the first years' rental. This security deposit shall remain in the possession of the Lessor during the first year of this Agreement as security for the full, faithful and prompt performance of, and compliance with, on the part of the Lessee, all the provisions, terms and conditions of this Agreement. The Lessor shall have the right to use said deposit or any part thereof in whole or partial satisfaction of any of its claims or demands against Lessee. In the event the Lessor shall so use the said deposit, or any part thereof, the Lessee shall, on demand of the Lessor and within two (2) days thereafter, deposit with the Lessor the sum necessary to maintain the amount herein set forth. If such use of the deposit is required within the first contract year, the retention of the full deposit shall be extended until a full calendar year shall have expired without demand against the deposit by the Lessor. The Lessor will return said deposit to the Lessee upon the completion of a full calendar year of no demands against the deposit, or upon termination of this Agreement, whichever shall occur first. The Lessor further reserves the right to require the Lessee to provide the same security deposit in the event that a demand against such a deposit arises after the initial deposit is returned to the Lessee as provided herein. In the event the Lessor exercises this right, the Lessee will within ten (10) days of receipt of notice from the Lessor, provide the Lessor the same security deposit as was initially required.

SECTION 5

ACCEPTANCE, CARE, MAINTENANCE

IMPROVEMENTS AND REPAIR

- 5.1 Lessee warrants that it has inspected the Leased Premises and accepts possession of the Leased Premises, as defined in Section 2, and the improvements thereon "as is" in its present condition, and subject to all limitations imposed upon the use thereof by the rules and regulations of the Federal Aviation Administration and by ordinances of the Lessor, and admits its suitability and sufficiency for the uses permitted hereunder. Except as may otherwise be provided for herein, the Lessor shall not be required to maintain nor to make any improvements, repairs restorations upon or to the Leased Premises or to any of the improvements presently located thereon. Unless caused by the sole negligence or willful misconduct of Lessor, Lessor shall never have any obligation to repair, maintain or restore, during the term of this Agreement, any improvements placed upon the Leased Premises by Lessee, its successors and assigns, provided however that Lessor assumes no obligation under this agreement to repair damage caused by public utilities under its control, including but not limited to, water and sewage service.
- 5.2 Except as otherwise provided in Section 5.1 of this Lease, Lessee shall throughout the term of this Agreement assume the entire responsibility, cost and expense, for all repair and maintenance whatsoever of the Leased Premises and all improvements thereon in a good workmanlike manner, whether such repair or maintenance be ordinary or extraordinary, structural or otherwise. Lessee shall be solely responsible for any required modifications, repairs, or renovations to the existing improvements that may be required by federal, state, and/or local laws and regulations in order for Lessee to conduct operations on the Leased Premises. Additionally, Lessee, without limiting the generality hereof, shall:
- 5.2.1 keep at all times, in a clean and orderly condition and appearance, the Leased Premises, all improvements thereon and all of the Lessee's fixtures, equipment and personal property which are located on any part of the Leased Premises.
- 5.2.2 provide and maintain on the Leased Premises all obstruction lights and similar devices, and safety equipment required by law.

- 5.2.3 repair any damage caused by the Lessee to paving, soils, water or other surfaces of the Leased Premises caused by any oil, gasoline, grease, lubricants or other flammable liquids and substances having a corrosive or detrimental effect thereon.
- 5.2.4 take measures to prevent erosion, including but not limited to, the planting and replanting of grasses with respect to all portions of the Leased Premises not paved or built upon, and in particular shall plant, maintain and replant any landscaped areas.
- 5.2.5 be responsible for the maintenance and repair of all utility service lines placed on the Leased Premises and used by Lessee exclusively, including, but not limited to, water lines, gas lines, electrical power and telephone conduits and lines and sanitary and storm sewers.
- 5.2.6 provide all necessary utilities to the Leased Premises at Lessee's sole expense.
- 5.3 In the event Lessee fails: (a) to commence to maintain, clean, repair, replace, rebuild or repaint, within a period of thirty (30) days after written notice from the Lessor to do any maintenance or repair work required to be done under the provisions of this agreement, other than preventive maintenance, (b) or within a period of ninety (90) days if the said notice specifies that the work to be accomplished by the Lessee involves preventive maintenance only; (c) or to diligently continue to complete any repairs, replacement, rebuilding, painting or repainting as required under this Agreement; then, the Lessor may, at its option, and in addition to any other remedies which may be available to it, enter the Leased Premises, after providing Lessee 24 hours notice (without such entering causing or constituting a cancellation of this Agreement or an interference with the possession of the Leased Premises by Lessee), and repair, replace, rebuild or paint all or any part of the Leased Premises or the improvements thereon, and do all things reasonably necessary to accomplish the work required, and the cost and expense thereof shall be payable to the Lessor by Lessee on demand. Provided, however, if in the reasonable opinion of the Lessor, the Lessee's failure to perform any such maintenance endangers the safety of the public, the employees or property of the Lessor or other tenants at the Airport, and the Lessor so states same in its notice to Lessee, the Lessor may, at its sole option, in addition to all other remedies which may be available to it, elect to perform such maintenance at

any time after the giving of such notice, and Lessee agrees to pay to the Lessor the cost and expense of such performance on demand. Furthermore, should the Lessor, its officers, employees or agents undertake any work hereunder, Lessee hereby waives any claim for damages, consequential or otherwise, as a result thereof except for claims for damages arising from the Lessor's sole negligence or willful misconduct. The foregoing shall in no way affect or alter the primary obligations of the Lessee as set forth in this Agreement, and shall not impose or be construed to impose upon the Lessor any obligations to maintain the Leased Premises, unless specifically stated otherwise herein.

5.4 All major repairs, constructions, alterations, modifications, additions, or replacements undertaken by the Lessee shall adhere to the architectural standards adopted by Lessor for the Airport. Plans, specifications, and specific construction timelines for all major repairs, constructions, alterations, modifications, additions, or replacements undertaken by the Lessee shall be submitted to and receive the written approval of the Airport Authority, and no such work shall be commenced until such written approvals are obtained from the Airport Authority, which approval shall not be unreasonably withheld or delayed. The Airport Authority shall advise Lessee within thirty (30) days after receipt of the written request, together with copies of the plans and specifications for the proposed major repairs, constructions, alterations, modifications, additions, or replacements in sufficient detail to make a proper review thereof, of its approval or disapproval of the proposed work, and in the event it disapproves, stating its reasons therefore.

5.5 If Lessee makes any major repairs, constructions, alterations, modifications, additions, or replacements without Lessor approval, then, upon notice to do so, Lessee shall remove the same or, at the option of Lessor, cause the same to be changed to the satisfaction of Lessor. If Lessee fails to comply with such notice within thirty (30) days or to commence to comply and pursue diligently to completion, Lessor may effect the removal or change and Lessee shall pay the cost thereof to the Lessor. Lessee expressly agrees in the making of all major repairs, constructions, alterations, modifications, additions or replacements that, except with the written consent of Lessor, it will neither give nor grant, nor purport to give or grant, any lien upon the Leased Premises or upon any improvements thereupon or which is in the process of construction or repair, nor allow any condition to exist or situation to develop whereby any party would be entitled, as a matter of law, to a lien

against said Leased Premises and improvements thereon, and Lessee will discharge any such lien within thirty (30) days after notice of filing thereof. Notice is hereby given by Lessor to all persons that no lien attaches to any such major repairs, constructions, alterations, modifications, additions, or replacements.

5.6 Notwithstanding any other provisions or terms of this Agreement, Lessee acknowledges that the Airport is subject to federal storm water regulations, 40 CFR. Part 122, for "vehicle maintenance shops" (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations and/or deicing operations that occur at the Airport as defined in these regulations and, if applicable, state storm water regulations. Lessee further acknowledges that it is familiar with these storm water regulations; that it conducts or operates "vehicle maintenance" (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and/or deicing activities as defined in the federal storm water regulations; and that it is aware that there are significant penalties for submitting false information, including fines and imprisonment for knowing violations.

5.6.1 Notwithstanding any other provisions or terms of this Agreement, Lessee acknowledges that it has taken steps necessary to apply for or obtain a storm water discharge permit as required by the applicable regulations for the Airport, including the Leased Premises operated by the Lessee. Lessee acknowledges that the storm water discharge permit issued to the Lessor may name the Lessee as co-permittee.

- 5.6.2 Notwithstanding any other provisions or terms of this Agreement, including the Lessee's right to quiet enjoyment, Lessor and Lessee both acknowledge that close cooperation is necessary to ensure compliance with any storm water discharge permit terms and conditions, as well as to ensure safety and to minimize costs. Lessee acknowledges that, as discussed more fully below, it may have to undertake to minimize the exposure of storm water (and snow melt) to "significant materials" generated, stored, handled or otherwise used by the Lessee, as defined in the federal storm water regulations, by implementing and maintaining "Best Management Practices."
- 5.6.3 Lessee acknowledges that the Airport's storm water discharge permit is incorporated by reference into this Agreement and any subsequent renewals.
- 5.7 Permit Compliance. Lessor will provide Lessee with written notice of those storm water discharge permit requirements, that are in the Airport's storm water permit, that Lessee will be obligated to perform from time to time, including, but not limited to: Certification of non-storm water pollution prevention of similar plans; implementation of "good housekeeping" measures or Best Management Practices; and maintenance of necessary records. Such written notice shall include applicable deadlines. Lessee, within seven (7) days of receipt of such written notice shall notify Lessor in writing if it disputes any of the storm water discharge permit requirements it is being directed to undertake. If Lessee does not provide such timely notice, it is deemed to assent to undertake such requirements. If Lessee provides Lessor with timely written notice that disputes such storm water discharge permit requirements, Lessor and Lessee agree to negotiate a prompt resolution of their differences. Lessee warrants that it will not object to written notice from the Lessor for purposes of delay or avoiding compliance.
- 5.7.1 Lessee agrees to undertake, at its sole expense unless otherwise agreed to in writing between Lessor and Lessee, those storm water discharge permit requirements for which it has received written notice from the Lessor. Lessee warrants that it shall meet any and all deadlines that may be imposed on or agreed to by Lessor and Lessee. Lessee acknowledges

that time is of the essence.

- 5.7.2 Lessor agrees to provide Lessee, at its request, with any non-privileged information collected and submitted to any governmental entity(ies) pursuant to applicable storm water regulations.
- 5.7.3 Lessee agrees that the terms and conditions of the Airport's storm water discharge permit may change from time to time and hereby appoints Lessor as its agent to negotiate with the appropriate governmental entity(ies) any such permit modifications.
- 5.7.4 Lessor will give Lessee written notice of any breach by Lessee of the Airport's storm water discharge permit or the provisions of this section. Such a breach is material, and if of a continuing nature, Airport may seek to terminate this Agreement pursuant to Section 19, Termination by Lessor. Lessee agrees to cure promptly any breach.
- 5.7.5 Lessee agrees to participate in any Airport-organized task force or other work group established to coordinate storm water activities at the Airport.
- 5.8 The Lessee shall be solely responsible for the proper management, storage, and disposal of hazardous substances and hazardous wastes used, generated, stored, disposed, treated, or caused to be present on the Leased Premises by the activities of the Lessee. Notwithstanding any other provision of this Agreement, the Lessee shall not treat or dispose of hazardous wastes on the Lessor's premises. The Lessee shall provide all required notices, including those mandated under right-to-know laws, of the presence or use on the Leased Premises of hazardous substances, extremely hazardous substance, or hazardous wastes, shall provide all notices to appropriate authorities and to Lessor of any releases to the environment of hazardous substances, extremely hazardous substances, or hazardous wastes, and shall obtain all permits necessary for the generation, storage, disposal, or treatment of hazardous wastes. The Lessee shall manage used oil and other petroleum products as required by Federal and state law and regulations. The Lessee shall be solely liable for the investigation, corrective action, or remediation of any release to the environment caused by the Lessee, its invitees, employees, agents, or contractors of any hazardous waste, hazardous substance, extremely hazardous substance, oil or other petroleum based substance.

- 5.9 Indemnification. Notwithstanding any other provisions of this Agreement, Lessee agrees to indemnify and hold harmless the Lessor and other tenants for any and all claims, demands, costs, (including attorneys fees), fees, fines, penalties, charges and demands by and liability directly or indirectly arising from Lessee's actions or omissions, including failure to comply with Lessee's obligations under this Section, applicable regulations, or permits, unless the result of Lessor's sole negligence. This indemnification shall survive any termination or non-renewal of this Agreement

#### SECTION 6

##### TITLE TO IMPROVEMENTS AND REPAIRS

- 6.1 Improvements erected or constructed upon the Leased Premises by the Lessee shall remain the property of the Lessee for as long as this Agreement shall remain in effect, but such improvements shall become the property of the Lessor upon expiration or termination of this Agreement, free and clear of all claims on the part of the Lessee on account of any repair or improvement work done under the terms hereof by Lessee. The vesting of title in the Lessor at the time specified is a part of the consideration for this Agreement. The Lessor shall not be liable to Lessee or Lessee's contractors or sub-Lessees for the value of any improvements constructed or located on the Leased Premises.

#### SECTION 7

##### ADDITIONAL OBLIGATIONS OF LESSEE

- 7.1 Lessee shall conduct its operations hereunder in an orderly and proper manner, considering the nature of such operation, so as not to unreasonably annoy, disturb, endanger or be offensive to others.
- 7.2 Further, Lessee shall take all reasonable measures not to produce on the Airport any disturbance that interferes with the operation by the Lessor or the Federal Aviation Administration of air navigational, communication or flight equipment on the Airport.
- 7.3 Lessee shall control the conduct and demeanor of its officers, agents, employees, and invitees and, upon objection from Lessor concerning the conduct, or

- demeanor of any such person, Lessee shall immediately take all lawful steps necessary to remove the cause of the objection.
- 7.4 Lessee shall comply with all environmental, health and safety laws and requirements and any other federal, state or municipal laws, ordinances, rules, regulations and requirements, applicable to the Leased Premises and the improvements thereon and its operations at the Airport hereunder. Lessee agrees to allow Lessor access to premises and records to investigate compliance with all applicable laws if there is reason to suspect negligence or willful non-compliance.
- 7.5 Lessee shall comply with all written instructions of the Lessor and applicable Federal, state, and local laws, ordinances, and regulations in disposing of trash, garbage and other refuse; the frequency of removal thereof from the Airport premises shall at all times be subject to the rules, regulations and approval of Lessor. All disposal of trash, garbage, refuse and wastes shall be at the expense of the Lessee.
- 7.6 Lessee shall not commit, nor permit to be done, anything which may result in the commission of a nuisance, waste or injury on the Leased Premises.
- 7.7 Lessee shall not do, nor permit to be done, anything which may interfere with the effectiveness or accessibility of the drainage system, sewerage system, fire protection system, sprinkler system, alarm system and fire hydrants and hoses, if any, installed or located on the Leased Premises.
- 7.8 Lessee shall take measures to insure security in compliance with Federal Aviation Regulations and the Airport Security Plan.
- 7.9 Lessee shall not do, nor permit to be done, any act or thing upon the Leased Premises which may constitute a hazardous condition so as to increase the risks attendant upon the operations permitted by the Agreement.
- 7.10 Lessee shall use only a working supply of flammable liquids within any covered or enclosed portion of the Leased Premises. The term "working supply" as used in this Section 7.10 shall mean the amount consumed by Lessee during any normal workday. Any other supplies of such liquids shall be kept and stored in safety containers of a type approved by the Underwriters Laboratories.
- 7.11 Except for services permitted under Section 3 hereof to be performed by Lessee or Lessee's subcontractors, Lessee shall provide prompt written notice to the Lessor of any person, firm or corporation performing aircraft maintenance work,

flight instruction of any sort, air taxi, aircraft charter or aircraft leasing of any sort on the Leased Premises for commercial purposes without a valid permit from the Lessor.

- 7.12 It is the intent of the parties hereto that noise, including but not limited to, noise caused by aircraft engine operation shall be held to a minimum. To this end the Lessee will conduct its operations in such a manner as to keep the noise produced by aircraft engines and component parts thereof or any other noise to a minimum by the use of such methods or devices as are practicable, considering the extent and type of the operations of the Lessee, but in no event less than those devices or procedures that are required by Federal, State or local law. In addition, Lessee shall use its best efforts to minimize prop or jet blast interference to aircraft operating on or to buildings, structures and roadways, now located on or which in the future may be located on areas adjacent to the Leased Premises.
- 7.13 In connection with the conduct of Lessee's business, the Lessee shall maintain in accordance with generally accepted accounting principles, consistently applied, during the term hereof, Lessee's records and books of account, recording all transactions at, through or in any way connected with the Airport which records and books of account shall be kept at all times at the Lessee's place of business at the Airport.
- 7.14 Lessee shall permit in ordinary business hours during the term hereof and for one year thereafter the examination and audit by the employees or representatives of the Lessor of such records and books of account.

## SECTION 8

### INGRESS AND EGRESS

- 8.1 The Lessee shall have the right of ingress and egress to and from the Leased Premises and the public landing areas at the Airport by means of connecting taxiways, to be used in common with others having rights of passage thereon, except when the Airport is closed to the public.
- 8.2 The use of any such roadway or taxiway shall be subject to the Rules and Regulations of the Airport which are now in effect or which may hereafter be promulgated. Lessor may, at any time, temporarily or permanently, close or consent to or request the closing of, any such roadway or taxiway and any other

way at, in or near the Leased Premises presently or hereafter used as such, so long as a reasonable means of ingress and egress as provided above remains available to the Lessee. The Lessee hereby releases and discharges the Lessor, its officers, employees and agents; and all municipalities and other governmental authorities and their respective successors and assigns, of and from any and all claims, demands, or causes of action which the Lessee may now or at any time hereafter have against any of the foregoing, arising or alleged to arise out of the closing of any street, roadway or other area, provided that a reasonable means of access to the Leased Premises remains available to the Lessee whether within the Leased Premises or outside the Leased Premises at the Airport unless otherwise mandated by safety considerations or lawful exercise of police power. The Lessee shall not do or permit anything to be done which will interfere with the free access and passage of others to space adjacent to the Leased Premises or in any streets or roadways near the Leased Premises.

- 8.3 Lessee shall not do or permit anything to be done which could or will interfere with the free access and passage of the United States of America, its officers, employees, agents, representatives and contractors to the Premises leased to the United States and shown on Exhibit B.
- 8.4 Lessee acknowledges that the Leased Premises contains a public access gate through which the general public accesses the north side of the Airport. Lessee expressly agrees that it shall not do or permit anything to be done which could or will interfere with the free access and passage of the general public through the public access gate.

#### SECTION 9

#### INSURANCE, DAMAGE OR DESTRUCTION

- 9.1 To safeguard the interest of the Lessor, the Lessee at its sole cost and expense shall procure and maintain throughout the term of this Agreement insurance protection for "all risk" coverage on the structure and improvements of which the Leased Premises is a part, to the extent of one hundred percent (100%) of the actual replacement cost thereof, with insurance companies licensed to do business in the State of Georgia. If said insurance company becomes financially incapable of performing under the terms of said policy, the Lessee shall promptly

obtain a new policy issued by a financially responsible carrier and shall submit such new policy as previously provided.

- 9.1.1 The above stated property insurance shall name the Lessor as Additional Insured, provide thirty (30) days' notice of cancellation or material change, by registered mail, to the Office of the Director, Aviation Division, DOT, and have a deductible amount not to exceed one thousand dollars (\$1,000.00) per occurrence.
- 9.1.2 The Lessee shall provide a copy of the above stated property insurance policy to the Office of the Director, Aviation Division, DOT, at least seven (7) days prior to the inception of this Agreement. Upon the failure of the Lessee to maintain such insurance as above provided, the Lessor, at its option, may take out such insurance and charge the cost thereof to Lessee with the next installment of the monthly fee due hereunder or may declare a default hereunder pursuant to Section 19 herein.
- 9.2 In the event any improvements, insurable or uninsurable, on the Leased Premises are damaged or destroyed (except damage or destruction caused by Lessee as set forth in 9.6 hereof) to the extent they are unusable by Lessee for the purposes for which they were used prior to such damage, or same are destroyed, Lessee shall promptly repair, rebuild, or replace the damaged or destroyed portion of the Leased Premises as they were immediately prior to such casualty, except for requirements of construction codes, which shall be as of the time of repair or replacement.
- 9.3 In the event of damage or destruction to any of the improvements upon the Leased Premises, the Lessor shall have no obligation to repair or rebuild the improvements or any fixtures, equipment or other personal property installed by Lessee pursuant to this Agreement. Upon the failure of Lessee to repair or rebuild the Lessor may, as agent of the Lessee, repair or rebuild such damage or destruction at the expense of Lessee which expense shall be due and payable on demand.
- 9.4 Upon completion of all the work, the Lessee shall certify by a responsible officer or authorized representative that such rebuilding and repairs have been completed, that all costs in connection therewith have been paid by the Lessee and said costs are fair and reasonable and said certification shall also include an itemization of costs. If the insurance proceeds are not sufficient, the Lessee

agrees to bear and pay the deficiency. Nothing herein contained shall be deemed to release the Lessee from any of its repair, maintenance or rebuilding obligations under this Agreement.

- 9.5 Lessee shall, at its expense, repair and replace any and all fixtures, equipment and other personal property necessary to properly and adequately continue its airport business on the airport, but in no event shall Lessee be obligated to provide equipment and fixtures in excess of those existing prior to such damage or destruction. During such period of repair or reconstruction, the rentals provided for elsewhere herein shall be proportionately abated during the period from the date of such damage, destruction or loss until the same is repaired, replaced, restored or rebuilt, provided, Lessee does not use said damaged Leased Premises or the location thereof for any purposes other than the repair or rebuilding of same. Such abatement shall not exceed the actual time required for arranging for and the doing of such work. Lessee agrees that such work will be promptly commenced and prosecuted to completion with due diligence, subject to delays beyond Lessee's control.
- 9.6 In the event the improvements on the Leased Premises are damaged or destroyed by fire or other cause by reason of any act or omission of the Lessee or its employees, this Agreement shall continue in full force and effect, notwithstanding the provisions of Sections 9.2, 9.3, 9.4 and 9.5 hereof, and the Lessee shall repair or rebuild the improvements so damaged or destroyed, at Lessee's own cost and expense, in a good workmanlike manner to the same standards existing at the time of the casualty, subject to applicable building codes existing at the time of repair or rebuilding.

## SECTION 10

### LIABILITIES AND INDEMNITIES

- 10.1 Lessor shall not in any way be liable for any cost, liability, damage or injury, including cost of suit and reasonable expenses of legal services, claimed or recovered by any person whomsoever, or occurring on the Leased Premises, or the Airport, or as a result of any operations, works, acts or omissions performed on the Leased Premises, or the Airport, by Lessee, its sublessees or tenants, or their guest or invitees.

- 10.2 Lessee agrees to indemnify, save and hold harmless, the Lessor (its officers, agents, servants and employees) of and from any and all costs, liability, damage and expense (including costs of suit and reasonable expenses of legal services) claimed or recovered, justly or unjustly, false, fraudulent or frivolous, by any person, firm or corporation by reason of injury to, or death of, any person or persons, and damage to, destruction or loss of use of any and all property, including Lessor personnel and Lessor property, directly or indirectly arising from or resulting from, any operations, works, acts or omissions of Lessee, its agents, servants, employees, contractors, sublessees or tenants, unless caused directly or indirectly by the sole negligence or willful misconduct of Lessor. Provided, however, that upon the filing with the Lessor by anyone of a claim for damages arising out of incidents for which Lessee herein agrees to indemnify and hold the Lessor harmless, the Lessor shall notify Lessee of such claim and in the event that Lessee does not settle or compromise such claim, then Lessee shall undertake the legal defense of such claim both on behalf of Lessee and behalf of the Lessor, using counsel chosen by Lessee. It is specifically agreed, however, that the Lessor at its own cost and expense, may participate in the legal defense of any such claim. Any final judgment rendered against the Lessor for any cause for which Lessee is liable hereunder shall be conclusive against Lessee as to liability and amount upon the expiration of the time for appeal.
- 10.3 In addition to Lessee's undertaking, as stated in this Section, and as a means of further protecting the Lessor, its officers, agents, servants and employees, Lessee shall at all times during the term of this Agreement obtain and maintain in effect Public Liability and Automotive Liability Insurance coverage as set forth in Exhibit C attached hereto and made a part hereof. In this connection, Lessee agrees to require its contractors doing work on the Airport, and Lessee's tenants and sublessees, to carry adequate insurance coverage, and if Lessee so desires, it may accomplish same by an endorsement to Lessee's policies to include such persons or parties as additional named insureds.
- 10.3.1 The Lessor reserves the right to increase the minimum liability insurance set forth in Exhibit C when in the Lessor's reasonable opinion the risks attendant to Lessee's operations hereunder have increased.

- 10.4 The Lessee represents that it is the owner of or fully authorized to use any and all services, processes, machines, articles, marks, names or slogans used by it in its operations under or in any way connected with this Agreement. The Lessee agrees to save and hold the Lessor, its officers, employees, agents and representatives free and harmless of and from any loss, liability, expense, suit or claim for damages in connection with any actual or alleged infringement of any patent, trademark or copyright or arising from any alleged or actual unfair competition or other similar claim arising out of the operations of the Lessee under or in any way connected with this Agreement.
- 10.5 The Lessee represents and warrants that no broker has been concerned on its behalf in the negotiation of this Agreement and that there is no such broker who is or may be entitled to be paid a commission in connection therewith. The Lessee shall indemnify and save harmless the Lessor of and from any claim for commission or brokerage made by any such broker when such claim is based in whole or in part upon any act or omission of the Lessee.

#### SECTION 11

##### RULES AND REGULATIONS

- 11.1 From time to time, Lessor may adopt and enforce rules and regulations with respect to the occupancy and use of the Airport. Lessee agrees to observe and obey any and all rules and regulations and all other Federal, State and municipal rules, regulations and laws and to require its officers, agents, employees, contractors, and suppliers, to observe and obey the same. Lessor reserves the right to deny access to the Airport and its facilities to any person, firm or corporation that fails or refuses to obey and comply with such rules, regulations or laws. Lessee hereby acknowledges receipt of a current copy of such Lessor rules and regulations. The rules and regulations shall be enforced in a uniform and non-discriminatory manner.

#### SECTION 12

##### SIGNS

- 12.1 Lessee shall have the right to install and maintain one or more signs on the Leased Premises identifying it and its operations, provided, however, the subject matter,

type, design, number, location and elevation of such signs, and whether lighted or unlighted, shall be subject to and in accordance with the reasonable written approval of the Lessor. No sign will be approved that may be confusing to aircraft pilots or automobile drivers or other traffic or which fails to conform to the architectural scheme of the Airport or meet the requirements of the Lessor, provided however, nothing herein shall excuse Lessee from complying with other governmental requirements as set forth in Section 16.

### SECTION 13

#### ASSIGNMENT AND SUBLEASE

- 13.1 Lessee covenants and agrees that it will not sell, convey, transfer, mortgage, pledge or assign this Agreement or any part thereof, or any rights created thereby, without the prior written consent of the Lessor, which consent shall not be unreasonably withheld or denied.
- 13.2 Any assignment or transfer of this Agreement, or any rights of Lessee hereunder, without the consent of the Lessor, shall entitle the Lessor at its option to forthwith cancel this Agreement.
- 13.3 Any assignment of this Agreement shall be on the conditions that the assignee accepts and agrees to all terms, conditions and provisions of this Agreement, accepts and discharges all of the covenants as Lessee hereunder, and agrees to obligations of the payment of all sums due and to become due by Lessee under the terms hereof.
- 13.4 Notwithstanding anything contained in this Section 13 to the contrary, Lessee may sublet a portion or portions of the Leased Premises to a person, partnership, firm or corporation for use that is compatible with Lessee's authorized use without the prior written consent of Lessor, but in no event shall the Lessee sublet all or any portion of the Leased Premises to a fixed base operator, or for any commercial use without the prior written consent of the Lessor.
- 13.5 No consent by the Lessor to subleasing by Lessee of portions of the Leased Premises shall in any way relieve Lessee of any of its obligations to the Lessor set forth or arising from this Agreement and a termination of Lessee's rights hereunder shall ipso facto terminate all subleases.

13.6 If the Lessee assigns, sells, conveys, transfers, mortgages, or pledges this Agreement or sublets any portion of the Leased Premises in violation of the foregoing provisions of this Section, or if the Leased Premises are occupied by anyone other than the Lessee, Lessor may collect from any assignee, sublessee or anyone who claims a right to this Agreement or who occupies the Leased Premises any charges or fees payable by it and may apply the net amount collected to the rents herein reserved; and no such collection shall be deemed a waiver by Lessor of the agreements contained in this Section nor of acceptance by Lessor of any assignee, claimant or occupant, nor as a release of the Lessee by Lessor from the further performance by the Lessee of the agreements contained herein.

SECTION 14  
CONDEMNATION

14.1 In the event that the Leased Premises or any material part thereof shall be condemned and taken by authority of eminent domain for any purpose during the term of this Agreement, rentals for that portion of the Leased Premises so taken shall be abated from the date that such portion of the Leased Premises is taken provided, however, if, in the Lessee's judgment, the remaining portion of the Leased Premises is insufficient for Lessee's operations authorized hereunder, Lessee may terminate this Agreement and all of its rights and unaccrued obligations hereunder effective as of the date of taking of the condemned portion (or effective as of any date thereafter and within ninety (90) days of the date of such dispossession) by giving Lessor thirty (30) days written notice of such termination.

SECTION 15  
NON-DISCRIMINATION

15.1 The Lessee, for it, its heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree as a covenant running with the land that in the event facilities are constructed, maintained, or otherwise operated on the Leased Premises for a purpose for which a United States Government program or activity is extended, the Lessee shall

maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

- 15.2 The Lessee, for itself, its personal representatives, successors in interest and assigns, as a part of the consideration hereof, does hereby covenant and agree as a covenant running with the land that (1) no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of the Leased Premises; (2) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the Lessee shall use the Leased Premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.
- 15.3 In this connection, the Lessor reserves the right to take whatever action it might be entitled by law to take in order to enforce this provision. This provision is to be considered as a covenant on the part of the Lessee, a breach of which, continuing after notice by Lessor to cease and desist, will constitute a material breach of this Agreement and will entitle the Lessor, at its option, to exercise its right of termination as provided for herein, or take any action that it deems necessary to enforce compliance herewith.
- 15.4 The Lessee shall include the foregoing provisions in every agreement or concession pursuant to which any person or persons, other than the Lessee, operates any facility at the Leased Premises providing service to the public and shall include thereon a provision granting the Lessor, a right to take such action as the United States may direct to enforce such covenant.

- 15.5 The Lessee shall indemnify and hold harmless Lessor from any claims and demands of third persons including the United States of America resulting from the Lessee's noncompliance with any of the provisions of this Section and the Lessee shall reimburse Lessor for any loss or expense incurred by reason of such noncompliance.

#### SECTION 16

##### GOVERNMENTAL REQUIREMENTS

- 16.1 The Lessee shall procure all licenses, certificates, permits or other authorization from all governmental authorities, if any, having jurisdiction over the Lessee's operations at the Leased Premises which may be necessary for the Lessee's operations thereat.
- 16.2 The Lessee shall pay all taxes, license, certification, permit and examination fees and excise taxes which may be assessed, levied, exacted or imposed on the Leased Premises or operation hereunder, and shall make all applications, reports and returns required in connection therewith.

#### SECTION 17

##### RIGHTS OF ENTRY RESERVED

- 17.1 The Lessor, by its officers, employees, agents, representatives and contractors shall have the right at all reasonable times after providing Lessee with 24 hours notice, to enter upon the Leased Premises for any and all purposes, provided, such action by the Lessor, its officers, employees, agents, representatives and contractors does not unreasonably interfere with the Lessee's use, occupancy, or security requirements of the Leased Premises.
- 17.2 Without limiting the generality of the foregoing, the Lessor, by its officers, employees, agents, representatives, contractors and furnishers of utilities and other services, shall have the right, at its own cost and expense, whether for its own benefit, or for the benefit of others than the Lessee at the Airport, to maintain existing and future utility, mechanical, electrical and other systems and to enter upon the Leased Premises at all reasonable times to make such repairs, replacements or alterations thereto, as may, in the opinion of the Lessor, be deemed necessary or advisable, and from time to time to construct or install over,

in or under the Leased Premises such systems or parts thereof and in connection with such maintenance use the Leased Premises for access to other parts of the Airport otherwise not conveniently accessible, provided, however, that in the exercise of such right of access, repair, alteration or new construction, the Lessor shall not unreasonably interfere with the actual use and occupancy of the Leased Premises by the Lessee. In the event that such access, repair, alteration or construction does unreasonably interfere with Lessee's use and occupancy of the Leased Premises for a period of ten (10) consecutive days or more, Lessee may terminate this Agreement by written notice to Lessor and all obligations of Lessee hereunder shall cease, unless specifically provided to the contrary herein. It is specifically understood and agreed that the reservation of the aforesaid right by the Lessor shall not impose or be construed to impose upon the Lessor any obligation to repair, replace or alter any utility service lines now or hereafter located on the Leased Premises for the purpose of providing utility services only to the Leased Premises.

- 17.3 In the event that any personal property of Lessee shall obstruct the access of the Lessor, its officers, employees, agents or contractors, or the utility company furnishing utility service to any of the existing utility, mechanical, electrical and other systems, and thus shall interfere with the inspection, maintenance or repair of any such system, Lessee shall move such property, as directed by the Lessor or said utility company, in order that access may be had to the system or part thereof for inspection, maintenance or repair. If Lessee shall fail to so move such property after direction from Lessor or said utility company to do so, the Lessor or the utility company may move it, and the Lessee hereby agrees to pay the cost of such moving upon demand, and further Lessee hereby waives any claim for damages as a result therefrom, except for claims for damages arising from the Lessor's sole negligence or willful misconduct.
- 17.4 At any reasonable time, and from time to time during the ordinary business hours, the Lessor, by its officers, agents and employees, whether or not accompanied by a prospective lessee, occupier or user of the Leased Premises, shall have the right after providing 24 hours notice to Lessee, to enter thereon for the purpose of exhibiting and viewing all parts of the same, subject to Lessee's reasonable security requirements.

- 17.5 Reasonable exercise of any or all of the foregoing rights, by the Lessor, or others under right of the Lessor, shall not be, nor be construed to be, an eviction of Lessee, nor be made the grounds for any abatement of rental nor any claim or demand for damages, consequential or otherwise, except as specifically provided to the contrary herein.
- 17.6 Lessee expressly acknowledges that the United States of America by and through the Federal Aviation Administration, its officers, employees, agents, representatives and contractors shall have the right to enter upon the Leased Premises to access its leasehold area, shown on Exhibit B for any and all purposes.

#### SECTION 18

##### ADDITIONAL RENTS AND CHARGES

- 18.1 Except as provided in Section 5.3 (b), in the event Lessee fails within thirty (30) days after receipt of written notice from Lessor to perform or commence to perform any obligation required herein to be performed by Lessee, Lessor may enter the Leased Premises (without such entering causing or constituting a cancellation of this Agreement or an interference with the possession of such Leased Premises by Lessee) and do all things reasonably necessary to perform such obligation, charging to Lessee the reasonable cost and expense thereof, and Lessee agrees to pay to the Lessor upon demand such charge in addition to other amounts payable by Lessee hereunder. Provided, however, that if in the reasonable opinion of Lessor, Lessee's failure to perform any such obligation endangers the safety of the public or employees or property of the Lessor, or other tenants of the Airport, and Lessor so states in its notice to Lessee, the Lessor may perform such obligation of Lessee at any time after the giving of such notice, and charge to the Lessee the reasonable cost and expense thereof which Lessee shall pay upon demand.
- 18.2 If the Lessor elects to pay any sum or sums or incur any obligation or expense by reason of the failure, neglect or refusal of Lessee to perform or fulfill any one or more of the conditions, covenants or agreements contained in this Agreement, or as the result of any act or omission of Lessee contrary to said conditions, covenants or agreements, Lessee hereby agrees to pay the sum or sums so paid or expense so incurred by the Lessor as the result of such failure, neglect or refusal

of Lessee, including interest, not to exceed the greater of fifteen percent (15%) per annum or the rate which is four percent (4%) per annum above the prime rate as published by the Wall Street Journal, together with all costs, damages and penalties. In such event, the total of such amounts may be added to any installment of rent thereafter due hereunder, and each and every part of the same shall be and become additional rent recoverable by the Lessor in the same manner and with like remedies as if it were originally a part of the rent provided for in this Agreement.

## SECTION 19

### TERMINATION BY LESSOR

- 19.1 In the event of a default on the part of Lessee in the payment of rents, or any other reasonable charges required by this Agreement to be paid to the Lessor, the Lessor shall give written notice to Lessee of such default, and demand the cancellation of this Agreement, or the correction thereof. If, within fifteen (15) days after the date Lessor gives such notice, Lessee has not corrected said default, and paid the delinquent amount in full, this Agreement and all rights and privileges granted hereby in and to the Leased Premises shall terminate.
- 19.2 This Agreement together with all rights and privileges granted in and to the Leased Premises shall terminate automatically, upon the happening of any one or more of the following events:
- 19.2.1 the filing of Lessee of a voluntary petition in bankruptcy, or any assignment for benefit of creditors of all or any part of Lessee's assets; or
  - 19.2.2 any institution of proceedings in bankruptcy against Lessee; provided, however, that the Lessee may defeat such termination if the petition is dismissed within thirty (30) days after the institution thereof; or
  - 19.2.3 the filing of a petition requesting a court to take jurisdiction of Lessee or its assets under the provisions of any Federal reorganization act; or
  - 19.2.4 the filing of a request for the appointment of a receiver or trustee of Lessee's assets by a court of competent jurisdiction, or the request for the appointment of a receiver or trustee of Lessee's assets by a voluntary agreement with Lessee's creditors; or

- 19.2.5 the abandonment by Lessee of the conduct of its authorized use at the Airport, and in this connection, the suspension of operations for a period of sixty (60) days will be considered abandonment in the absence of a satisfactory explanation which is accepted in writing by the Lessor.
- 19.3 Upon the default by Lessee in the performance of any covenant or conditions required to be performed by Lessee, and the failure of Lessee to remedy such default for a period of thirty (30) days after receipt from the Lessor of written notice to remedy the same or to commence to cure such default and diligently pursue such cure to completion, (except as otherwise provided in Section 5.3 (b) above) and, except default in the timely payment of any money due the Lessor, the Lessor shall have the right to cancel this Agreement for such cause.
- 19.3.1 In the event that Lessor does not exercise its right to cancel this Agreement as authorized by Section 19.3 for the unremedied default by Lessee in the performance of any covenant or conditions required to be performed by Lessee, Lessee acknowledges and agrees that Lessor will be damaged by such unremedied default. The parties agree that the injury to Lessor caused by such unremedied default will be difficult or impossible to estimate accurately, and the amount of damages set forth herein are reasonable estimates of Lessor's probable losses. Therefore, in addition to any other remedies that Lessor may have or damages that it may pursue, Lessor may charge Lessee the damages set forth herein not as a penalty, but as liquidated compensatory damages to Lessor. For each default that remains unremedied for a period of thirty one (31) or more days, Lessor may charge Lessee liquidated damages in the amount of \$ \_\_\_\_\_ for each day Lessee remains in default. In such event, the total of such damages may be added to any installment of rent thereafter due hereunder, and each and every part of the same shall be and become additional rent recoverable by Lessor in the same manner and with like remedies as if it were originally a part of the rent provided for in this Agreement.
- 19.4 Upon the default of Lessee, and the giving of notice by the Lessor to cancel this Agreement as provided for elsewhere herein, said notice of cancellation shall be final; provided however, that should the Lessor determine that Lessee is diligently remedying such default to completion, and so advises Lessee in writing, said

notice of cancellation shall be held in abeyance. If, however, the Lessor determines in its reasonable discretion that such default is no longer being diligently remedied to conclusion, the Lessor shall so advise Lessee in writing, and said notice of cancellation shall no longer be held in abeyance for any reason and shall become final without further notice to Lessee. The determination of the Lessor in this regard shall in all events be conclusive and binding upon Lessee.

19.5 Upon the cancellation or termination of this Agreement for any reason, all rights of the Lessee, tenants and any other persons in possession shall terminate, including all rights or alleged rights of creditors, trustees, assigns, and all others similarly so situated as to the Leased Premises. Upon said cancellation or termination of this Agreement for any reason, the Leased Premises, except for such personal property which may be removed from said Leased Premises as provided for elsewhere herein, shall be free of all encumbrances and all claims of Lessee, its tenants, creditors, trustees, assigns and all others, and the Lessor shall have immediate right of possession to the Leased Premises.

19.6 Failure by the Lessor to take any authorized action upon default by Lessee of any of the terms, covenants or conditions required to be performed, kept and observed by Lessee shall not be construed to be, nor act as, a waiver of said default nor of any subsequent default of any of the terms, covenants and conditions contained herein to be performed, kept and observed by Lessee. Acceptance of rentals by the Lessor under the terms hereof, for any period or periods after a default by Lessee of any the terms, covenants and conditions herein required to be performed, kept and observed by Lessee shall not be deemed a waiver or estoppel of any right on the part of the Lessor to cancel this Agreement for any subsequent failure by Lessee to so perform, keep or observe any of said terms, covenants or conditions.

## SECTION 20

### TERMINATION BY LESSEE

20.1 In addition to any other right of cancellation or termination herein given to Lessee, or any other rights to which it may be entitled to by law, equity or otherwise, as long as Lessee is not in default in payment to Lessor of any amounts due Lessor hereunder this Agreement, Lessee may cancel this Agreement and thereby

terminate all of its rights and unaccrued obligations hereunder, by giving Lessor written notice upon or after the happening of the following events:

- 20.1.1 issuance by a court of competent jurisdiction of an injunction which in any way substantially prevents or restrains the use of the Leased Premises, or any part thereof necessary to Lessee's use on the Airport, and which injunction remains in force for a period of at least thirty (30) days after the party against whom the injunction has been issued has exhausted or abandoned all appeals or one hundred twenty (120) days whichever is shorter, if such injunction is not necessitated by or issued as a result of an act or omission of Lessee; or
- 20.1.2 the assumption by the United States Government, or any authorized agency thereof, of the operation, control or use of the Airport and its facilities, or any substantial part thereof, in such a manner as substantially to restrict Lessee from use of the Leased Premises for a continuous period of at least ninety (90) days.

## SECTION 21

### SURRENDER AND RIGHT OR RE-ENTRY

- 21.1 Upon the cancellation or termination of this Agreement pursuant to any terms hereof, Lessee agrees peaceably to surrender up the Leased Premises to the Lessor in the same condition as they are in at the time of the commencement of the term hereof, and as they may hereafter be repaired and improved by Lessee; save and except, (a) such normal wear and tear thereof as could not have been prevented by ordinary and usual repairs and maintenance, (b) obsolescence in spite of repair, and (c) damage to or destruction of the leasehold improvements for which insurance proceeds are received by the Lessor. Upon such cancellation or termination, the Lessor may re-enter and repossess the Leased Premises together with all improvements and additions thereto, or pursue any remedy permitted by law for the enforcement of any of the provisions of this Agreement, at Lessor's election. Furthermore, upon such cancellation or termination, and for a reasonable time thereafter (not exceeding thirty (30) days after such cancellation or termination, and for which period Lessee will pay to the Lessor current lease rentals), or during the term of this Agreement, if Lessee is not in default in rentals

or any other charges or obligations due the Lessor, Lessee shall have the right to remove its personal property, fixtures and trade equipment which it may have on the Leased Premises, provided that Lessee repairs all damages that might be occasioned by such removal, and restores the building and site to the condition above required.

## SECTION 22

### SERVICES TO LESSEE

- 22.1 Lessor covenants and agrees that during the term of this Agreement it will operate the Airport for the use and benefit of the public, including Lessee; provided, however, that the Lessor may prohibit or limit any given type, kind, or class of aeronautical use of the Airport if such action is necessary for the safe operation of the Airport or necessary to serve the civil aviation needs of the public. The Lessor further agrees to use its best efforts to maintain the runways and taxiways in good repair. Lessor agrees to keep in good repair hard-surfaced public roads for access to the Leased Premises. Lessor also agrees to maintain its water and sanitary sewer facilities in areas designated for utilities or easements adjacent to the Leased Premises for access thereto by Lessee in accordance with Lessor Ordinances governing same.
- 22.2 Lessee will contract with and obtain all required permits from the appropriate Lessor Departments for any utility services provided by Lessor, paying any required connection fees including those to be paid by owners and all such services will be provided at rates and on terms and conditions established by the Lessor.
- 22.3 Lessee will also contract with the furnishers of all other utilities for the furnishing of such services to the Leased Premises and shall pay for all water, gas, electricity, sanitary sewer service, other utilities, telephone, burglary and fire protection services furnished to the Leased Premises.

## SECTION 23

### SURVIVAL OF THE OBLIGATIONS OF THE LESSEE

- 23.1 In the event that the Agreement shall have been terminated in accordance with a notice of termination as provided in Section 19 hereof, all the obligations of the Lessee under this Agreement shall survive such termination, re-entry, regaining or

resumption of possession and shall remain in full force and effect for the full term of this Agreement, and the amount or amounts of damages or deficiency shall become due and payable to Lessor to the same extent, at the same time or times, and in the same manner as if no termination, re-entry, regaining or resumption of possession had taken place. Lessor may maintain separate actions each month to recover the damage or deficiency then due or at its option and at any time may sue to recover the full deficiency less the proper discount, for the entire unexpired term of the Agreement.

23.2 The amount of damages for the period of time subsequent to termination (or re-entry, regaining or resumption of possession) on account of the Lessee's rental obligations shall be the sum of the following:

23.2.1 the amount of the total of all unpaid installments thereof payable prior to the effective date of termination except that the credit to be allowed for the installment payable on the first (1st) day of the month in which the termination is effective shall be prorated for the part of the month the Agreement remains in effect on the basis of the total days in the month;

23.2.2 an amount equal to all expenses incurred by Lessor in connection with regaining possession, restoring the Leased Premises, acquiring a new lease for the Leased Premises, legal expenses (including but not limited to attorney's fees), putting the Leased Premises in order, maintenance and brokerage fees;

23.2.3 an amount equal to any deficiency for the remaining term of this Agreement, computed in accordance with the provisions of Section 23.1.

#### SECTION 24

##### USE SUBSEQUENT TO CANCELLATION OR TERMINATION

24.1 The Lessor, upon termination or cancellation pursuant to Section 19 hereof, may occupy the Leased Premises or may enter into an agreement with another lessee and shall have the right to permit any person, firm or corporation to enter upon the Leased Premises and use the same. Such use may be of part only of the Leased Premises or of the entire Leased Premises, together with other premises, and for a period of time the same as or different from the balance of the terms and conditions the same as or different from those set forth in this Agreement.

- 24.2 Lessor shall also, upon said termination or cancellation, or upon re-entry, regaining or resumption of possession, have the right to repair and to make structural or other changes in the Leased Premises, including changes which alter its character and the suitability thereof for the purpose of the Lessee under this Agreement, without affecting, altering or diminishing the obligations of the Lessee hereunder, provided, that any structural changes shall not be at Lessee's expense.
- 24.3 In the event either of use by others or of any actual use and occupancy by Lessor, there shall be credited to the account of the Lessee against its survived obligations hereunder any net amount remaining after deducting from the amount actually received from any lessee, licensee, permittee or other occupier in connection with the use of the said Leased Premises or portion thereof during the balance of the term or use and occupancy as the same is originally stated in this agreement, or from the market value of the occupancy of such portion of the Leased Premises as Lessor may itself during such period actually use and occupy, all expenses, costs and disbursements incurred or paid by Lessor in connection therewith. No such use and occupancy shall be or be construed to be an acceptance of a surrender of the Leased Premises, nor shall such use and occupancy constitute a waiver of any rights of Lessor hereunder. Lessor will use its best efforts to mitigate damages to Lessee under this section.

#### SECTION 25

##### LIMITATION OF RIGHTS AND PRIVILEGES GRANTED

- 25.1 Except for the exclusive right of Lessee to possession of the Leased Premises, no exclusive rights at the Airport are granted by this Agreement and no greater rights or privileges with respect to the use of the Leased Premises or any part thereof are granted or intended to be granted to the Lessee by this Agreement, or by any provision thereof, than the rights and privileges expressly and specifically granted hereby.

#### SECTION 26

##### NOTICES

- 26.1 All notices, consents and approvals required or desired to be given by the parties hereto shall be sent in writing, and shall be deemed sufficiently given when same

are received by the United States Mail or if undelivered, the date of postmark, sufficient postage prepaid, registered or certified mail, return receipt requested or hand delivered, addressed to the recipient at the address set forth below:

To Lessor: Airport Manager  
Gwinnett County Airport Briscoe Field  
600 Briscoe Boulevard  
Lawrenceville, GA 30046  
and

To Lessee: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

26.2 Such addresses shall be subject to change from time to time to such other addresses as may have been specified in written notice given by the intended recipient to sender.

SECTION 27

HOLDING OVER

27.1 No holding over by Lessee after the termination of this Agreement shall operate to extend or renew this Agreement for any further term whatsoever; but Lessee will by such holding over become the tenant at will of Lessor. After written notice by Lessor to vacate such premises, continued occupancy thereof by Lessee shall constitute Lessee a trespasser.

27.2 Any holding over by Lessee beyond the thirty (30) day period permitted for removal of personal property and fixtures without the written consent of the Lessor shall make the Lessee liable to the Lessor for damages equal to 125% of the rent and fees provided for herein and which were in effect at the termination of this Agreement.

27.3 All insurance coverage that Lessee is required under the provisions hereof to maintain in effect shall continue in effect for so long as Lessee, or any of Lessee's sublessees or tenants occupy the Leased Premises or any part thereof.

SECTION 28

INVALID PROVISIONS

- 28.1 The invalidity of any provisions, articles, paragraphs, portions, or clauses of this Agreement shall have no effect upon the validity of any other part or portion hereof, so long as the remainder shall constitute an enforceable Agreement.

SECTION 29

MISCELLANEOUS PROVISIONS

Remedies to be Nonexclusive.

- 29.1 All remedies provided in this Agreement shall be deemed cumulative and additional, and not in lieu of, or exclusive of, each other, or of any other remedy available to the Lessor, or Lessee, at law or in equity, and the exercise of any remedy, or the existence herein of other remedies or indemnities shall not prevent the exercise of any other remedy.

Non-Waiver of Rights.

- 29.2 The failure by either party to exercise any right, or rights accruing to it by virtue of the breach of any covenant, condition or agreement herein by the other party shall not operate as a waiver of the exercise of such right or rights in the event of any subsequent breach by such other party, nor shall other party be relieved thereby from its obligations under the terms hereof.

Force Majeure.

- 29.3 Neither party shall be deemed in violation of this Agreement if it is prevented from performing any of its obligations hereunder by reason of labor disputes, acts of God, acts of the public enemy, acts of superior governmental authority or other circumstances for which it is not responsible or which is not in its control provided, however, that this section shall not excuse Lessee from paying the rentals herein specified.

Non-liability of Individuals.

- 29.4 No director, officer, agent or employee of either party hereto shall be charged personally or held contractually liable by or to the other party under any term or provision of this Agreement or of any supplement, modification or amendment to this Agreement because of any breach thereof, or because of his or their execution or attempted execution of the same.

Quiet Enjoyment.

29.5 The Lessor covenants that as long as Lessee is not in default of any provision of this Agreement, Lessee shall and may peaceably and quietly have, hold and enjoy the Leased Premises exclusively, except as provided in Section 8, to it during the term hereof unless sooner canceled as provided in this Agreement.

General Provisions.

29.6 Lessee shall not use, or permit the use of, the Leased Premises, or any part thereof, for any purpose or use other than those authorized by this Agreement.

29.7 This Agreement shall be performable and enforceable in Lawrenceville, Georgia, and shall be construed in accordance with the laws of the State of Georgia.

29.8 This Agreement is made for the sole and exclusive benefit of the Lessor and Lessee, their successors and assigns, and is not made for the benefit of any third party.

29.9 In the event of any ambiguity in any of the terms of this Agreement, it shall not be construed for or against any party hereto on the basis that such party did or did not author the same.

29.10 All covenants, stipulations and agreements in this Agreement shall extend to and bind each party hereto, its legal representatives, successors and assigns.

29.11 The titles of the several articles of this Agreement are inserted herein for convenience only, and are not intended and shall not be construed to affect in any manner the terms and provisions hereof, or the interpretation or construction thereof.

29.12 Nothing herein contained shall create or be construed to create a partnership between the Lessor and the Lessee or to constitute the Lessee an agent of the Lessor. The Lessor and the Lessee each expressly disclaim the existence of such a relationship between them.

SECTION 30

SUBORDINATION CLAUSES

30.1 This Agreement is subject and subordinate to the following:

30.1.1 Lessor reserves the right to develop and improve the Airport as it sees fit, regardless of the desires or view of Lessee, and without interference or

hindrance by or on behalf of Lessee, provided, Lessee is not deprived of the use of or access to the Leased Premises.

30.1.2 Lessor reserves the right to take any action it considers necessary to protect the aerial approaches to the Airport against obstruction, together with the right to prevent Lessee from erecting or permitting to be erected any building or other structure on the Airport which, in the opinion of the Lessor, would limit the usefulness of the Airport or constitute a hazard to aircraft.

30.1.3 This Agreement is and shall be subordinate to the provisions of existing and future agreements between Lessor and the United States relative to the operation or maintenance of the Airport, the execution of which have been or may be required as a condition precedent to the obtaining or expenditure of Federal funds for the benefit of the Airport.

30.1.4 During the time of war or national emergency, Lessor shall have the right to lease all or any part of the landing area or of the Airport to the United States for military or naval use, and if any such lease is executed, the provisions of this Agreement insofar as they may be inconsistent with the provisions of such lease to the Government, shall be suspended, but such suspension shall not extend the term of this Agreement. Abatement of rentals shall be determined by the Lessor in proportion to the degree of interference with Lessee's use of the Leased Premises.

30.1.5 Except to the extent required for the performance of any obligations of Lessee hereunder, nothing contained in this Agreement shall grant to the Lessee any rights whatsoever in the airspace above the Leased Premises other than those rights where subject to Federal Aviation Administration rules, regulations and orders currently or subsequently effective.

#### SECTION 31

#### ENTIRE AGREEMENT

31.1 The Agreement consists of Sections 1 to 31, inclusive, and Exhibit A, Exhibit B, and Exhibit C.

31.2 It constitutes the entire Agreement of the parties hereto and may not be changed, modified, discharged or extended except by written instrument duly executed by

the Lessor and the Lessee. The parties agree that no representations or warranties shall be binding upon the Lessor or the Lessee unless expressed in writing in this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year written above.

Attest \_\_\_\_\_

BOARD OF COMMISSIONERS

GWINNETT COUNTY

BY: \_\_\_\_\_

Nicole L. Hendrickson, Chairwoman

GWINNETT COUNTY AIRPORT

AUTHORITY

Attest \_\_\_\_\_

BY: \_\_\_\_\_

Signed, sealed and delivered  
in the presence of:

LESSEE

Attest \_\_\_\_\_

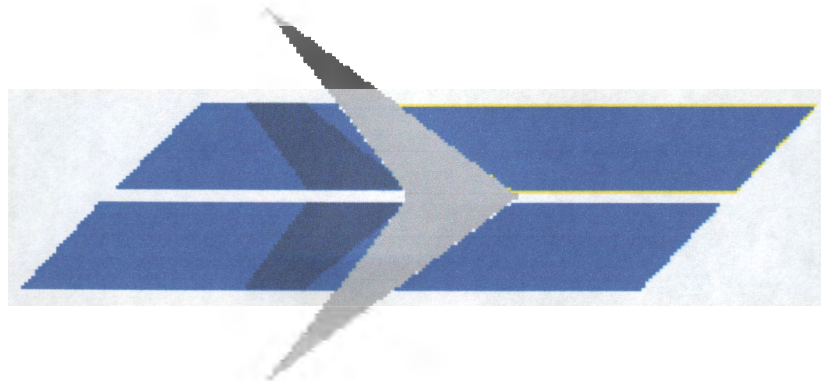
\_\_\_\_\_, President

BY: \_\_\_\_\_

NOTARY PUBLIC

# RFP Exhibit B

MINIMUM STANDARDS  
FOR  
COMMERCIAL AERONAUTICAL ACTIVITIES  
AT  
GWINNETT COUNTY AIRPORT



Adopted September 13, 2007

MINIMUM STANDARDS  
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## INTRODUCTION

The Gwinnett County Airport Authority being authorized to manage and promulgate rules and regulations for the overall operation of airport activities under the Gwinnett County Airport Authority – Management Agreement dated February 7, 2001, (attachment 1) does hereby establish the following Policy for the Minimum Standards:

The Minimum Standards are intended to be the threshold entry requirements for those wishing to provide commercial aeronautical services to the public and to insure that those who have undertaken to provide commodities and services as approved are not exposed to unfair or irresponsible competition. These Minimum Standards were developed taking into consideration the aviation role of the Gwinnett County Airport, facilities that currently exist at the Airport, services being offered at the Airport, the future development planned for the Airport and to promote fair competition at Gwinnett County Airport. The uniform application of these Minimum Standards, containing the minimum levels of service that must be offered by the prospective service provider, relates primarily to the public interest and discourages substandard entrepreneurs, thereby protecting both the established aeronautical activity and the Gwinnett County Airport patrons.

This document applies to all commercial aeronautical activities conducted at Gwinnett County Airport. It does not apply to governmental organizations, non-commercial aeronautical activities, or auxiliary governmental organizations such as the Civil Air Patrol (CAP).

## **1. DEFINITIONS**

**Advanced – Aviation Training Device (AATD)** – any personal computer-based aviation training device or any AATD, as they are defined in FAA Advisory Circular AC 61-126, or any other FAA publication intended to replace AC 61-126, which is approved and/or authorized by the FAA to log instrument flight experience, to provide instrument proficiency checks, to provide instrument rating practical tests, and to log up to a maximum of 20 hours towards an instrument rating. An official letter from FAA shall be required to substantiate that a device qualifies as an AATD.

**Aeronautical Activity** – any activity or service conducted at the Airport that involves, makes possible, or is required for the operation of aircraft, or which contributes to or is required for the safety of such operations. These activities include, but are not limited to, air taxi and charter operations, aircraft fueling, aircraft storage, flight training, aircraft rental, aircraft sales, aircraft repair and maintenance, and any other activities, which because of their relationship to the operation of aircraft can appropriately be regarded as an “aeronautical activity.”

**Aircraft** – any device used or designed for navigation of flight in the air including, but not limited to, an airplane, sailplane, glider, helicopter, gyrocopter, ultra-light, balloon, or blimp.

**Air Charter or Taxi** – the commercial operation of providing air transportation of person(s) or property for hire by either on a charter basis or as an air taxi operator.

**Airframe and Power Plant Maintenance** – the commercial operation of providing airframe and power plant services, which includes service, the repair, maintenance, inspection, constructing, and making of modifications and alterations to aircraft, aircraft engines, propellers and appliances including the removal of engines for major overhaul as defined in 14 CFR Part 43. This category of service also includes the sale of aircraft parts and accessories.

**Airframe and Powerplant Mechanic (A&P)** – a person who holds an aircraft mechanic certificate with both airframe and powerplant ratings as authorized and described in 14 CFR Part 65.

**Aircraft Fuel** – all flammable liquids composed of a mixture of selected hydrocarbons expressly manufactured and blended for the purpose of effectively and efficiently operating an internal combustion, jet, or turbine engine.

**Aircraft Owner** – a person or entity holding legal title to an aircraft, or any person having exclusive possession of an aircraft. In order to determine whether a person has exclusive possession of an aircraft the overall use of the aircraft will be considered (i.e., a person operating an aircraft for one flight may have exclusive use of the aircraft during the flight but

not exclusive possession of the aircraft.)

**Aircraft Parking and Storage Areas** – those hangar and apron locations of the Airport designated by the Airport Director for the parking and storage of aircraft.

**Aircraft Rental** – the commercial operation of renting or leasing aircraft to the public for compensation.

**Aircraft Sales** – the sale of new or used aircraft through brokerage, ownership, franchise, distributorship, or licensed dealership.

**Airport Director** – the duly appointed Director or the Director's designee.

**Attended** – an employee of the commercial operation is present on the business site.

**Avionics Sales and Maintenance** – the commercial operation of providing for the repair and service, or installation of aircraft radios, instruments and accessories. Such operations may include the sale of new or used aircraft radios, instruments and accessories.

**Building** – any improvement made to Airport property. All buildings shall be compatible to the material and design of the newer basic structures on the airport. For the purposes of these Minimum Standards building shall include all the improvements made to a leased area, if the commercial operator is a lessee. If the commercial operator is a sublessee, building shall include all the improvements made to a leased area that is available for use by the sublessee, and is not exclusively leased to a different person/entity (i.e., restrooms used by all tenants in a building shall meet the requirements set forth in the standards).

**Commercial Aeronautical Activity** – the conduct of any aspect of a business, concession, operation, or agency providing goods or services to any person for compensation or hire, including exchange or services, whether or not such objectives are accomplished. An activity is considered a commercial activity regardless of whether the business is nonprofit, charitable, or tax-exempt. A commercial business activity that involves, makes possible, or is required for the operation of aircraft, or which contributes to or is required for the safety of aeronautical operations.

**Commercial Operator (Operator)** – a person, firm, corporation, or other entity, which makes possible, or is required for the operation of aircraft, or which contributes to, or is required for the safe conduct and utility of aircraft operations, the purpose of such activity being to generate and/or secure earnings, income, compensation, and/or profit, whether or not such objectives are accomplished.

**Commercial Self-Service Fueling** – fueling of an aircraft by the pilot using commercial fuel pumps installed for that purpose. The fueling facility may or may not be attended by the vendor, which may be a fixed base operator or an airport sponsor/operator that is exercising its right to sell fuel.

**Employee** – a person who is hired by another to perform a service for wages or salary and is under the other’s control and who receives an Internal Revenue Service Form W-2 Wage and Tax Statement. Any person who does not receive an Internal Revenue Service Form W-2 is considered an Independent Contractor.

**Exclusive Right** – a power, privilege, or other right excluding or debarring another from enjoying or exercising a like power, privilege, or right. An exclusive right can be conferred whether by express agreement, by the imposition of unreasonable standards or requirements, or by any other means. Such a right conferred on one or more parties, but excluding others from enjoying or exercising a similar right or rights, would be an exclusive right.

**Federal Aviation Administration (FAA)** – the Federal Aviation Administration as established in 1967 within the Department of Transportation of the United States government that has the responsibility of promoting safety in the air, by both regulation and education.

**Federal Aviation Regulations (FAR)** – the Federal Aviation Regulations as published by the FAA that governs the operation of aircraft, airways, and airmen. Compliance with the FARs is mandatory. In 1996, all references to the FARs were changed to “14 CFR” (Title 14 of the Code of Federal Regulations).

**Fixed Base Operator (FBO)** – a full service commercial operator who is authorized to engage in the primary activity of aircraft refueling (selling fuel) and secondary activities including: airframe and power plant maintenance, flight training, aircraft rental, aircraft charter or air taxi, avionics sales and service, and aircraft storage/hangar(s) rental.

**Flight Training** – the commercial operation of instructing pilots in dual and solo flight, in fixed or rotary wing aircraft, and related ground school instruction as necessary to complete a FAA written pilot’s examination and flight check ride for various categories of pilots licenses and ratings. Flight training is divided into two separate categories for the purposes of the Minimum Standards: Unlimited FAR Part 61/FAR Part 141 Flight Training and Limited FAR Part 61 Flight Training.

**Flight Training Device (FTD)** – An airplane Flight Training Device (FTD) is a full scale replica of an airplane’s instruments, equipment, panels, and controls in an open flight deck area or an enclosed airplane cockpit, including the assemblage of equipment and computer software programs necessary to represent the airplane in ground and flight conditions to the extent of the systems installed in the device; is found to meet the criteria outlined in AC 120-45A, or any subsequent publication of the FAA intended to replace AC 120-45A; and in which flight training events or flight checking events are accomplished.

**Flying Club** – a non-commercial and nonprofit entity organized for the purpose of providing its members with any number of aircraft for their personal use and enjoyment. *Aircraft must* be vested in the name of the flying club owners on a pro-rata share, and the club may not derive greater revenue from the use of the aircraft than they cost to operate, maintain, and replace the aircraft.

**Fueling or Fuel Handling** – the transportation, sale, delivery, dispensing, storage, or draining of fuel or fuel waste products to or from aircraft, vehicles, or equipment.

**Fuel Storage Area** – any portion of the Airport designated temporarily or permanently by the Gwinnett County Board of Commissioners, the Gwinnett County Airport Authority, or their designee as an area in which aviation or motor vehicle gasoline or any other type of fuel or fuel additive may be stored or loaded.

**Hazardous Material** – any substance, waste, or material which is toxic, explosive, corrosive, flammable, infectious, radioactive, carcinogenic, mutagenic, or otherwise hazardous, and is or becomes regulated as a hazardous material by any governmental authority, agency, department, commission, board, or agency.

**Independent Contractor** – a person who is paid by another to perform services but does not receive an Internal Revenue Service Form W-2 Wage and Tax Statement.

**Independent Operators** – a commercial operator offering a single aeronautical service but without an established place of business on the airport.

**Land** – an area of the earth inclusive of improvements, bodies of water, and natural or man-made objects. For the purposes of these Minimum Standards land shall include all the area contained in a lease agreement, if the commercial operator is a lessee. If the commercial operator is a sublessee, land shall include all the area contained in the leaseholder’s lease agreement that is available for use by the sublessee (areas already encumbered by other businesses, uses, etc., shall be excluded from the land available for use by the sublessee).

**Lessee** – any person or entity that is a party to a written contract between the Gwinnett County Board of Commissioners and/or the Gwinnett County Airport Authority, which specifies the terms and conditions under which the person/entity may occupy and operate from certain Airport facilities and/or property.

**Master Lease Holder** – any person or entity that is a party to a written contract between the Gwinnett County Board of Commissioners and the Gwinnett County Airport Authority for a period of time greater than five years, which specifies the terms and conditions under which the person/entity may occupy and operate from certain Airport facilities and/or property.

**Minimum Standards** – the qualifications or criteria, which may be established by the Airport owner or any designated agent, as the minimum requirements that must be met by businesses engaged in on-airport aeronautical activities for the right to conduct those activities.

**Permanent Aviation Facility** – a building placed on airport property, by a Master Lease Holder, subject to the terms and conditions of a Master Lease.

**Person** – an employee, independent contractor, volunteer, firm, or other entity that participates in a commercial aeronautical activity.

**Preventive Aircraft Maintenance** – maintenance that is not considered a major aircraft alteration or repair and does not involve complex assembly operations as listed in 14 CFR Part 43 (attachment 3 hereby incorporated by reference), except for Item 22 in the Regulation. Item 22 involves the replacement of prefabricated fuel lines, and shall, for purposes of these regulations, be considered a major aircraft repair.

**Self-Fueling** – the fueling of an aircraft by the owner of the aircraft or the owner's employee.

**Self-Service** – aircraft refueling, repair, preventative maintenance, towing, adjustment, cleaning, and general services performed by an aircraft owner or his/her employees on his/her aircraft with resources supplied by the aircraft owner.

**Shall** – indicates a mandatory requirement.

**Should** – indicates a recommendation or that which is advised but not required.

**Specialized Aviation Service Operation (SASO)** – a commercial aeronautical business that is authorized to offer a single or limited service according to established Minimum Standards. Examples of a SASO include, but are not limited to, the following commercial aeronautical activities: flight training, aircraft maintenance, air charter or taxi, aircraft sales, avionics maintenance, aircraft rental, and sales, and aircraft storage.

**Sublease** – a written agreement, approved by the Airport, stating the terms and conditions under which a third party operator leases space from a Lessee for the purpose of providing aeronautical services at the Airport.

**Tenant** – an individual, corporation, firm, partnership, association, organization, and any other group acting as an entity, to conduct business on the Airport. Tenant includes a trustee, receiver, assignee or similar representative.

**Though-the-Fence Operation** – an arrangement that the airport sponsor may at times enter into to permit access to the public landing area by independent operators offering an aeronautical activity or access to aircraft based on land adjacent to, but not part of, the airport.

**Vehicle Parking Area** – any portion of the Airport designated and made available temporarily or permanently by the Master Lease Holder of the area in question and the Airport Director for the parking of vehicles.

**2. GENERAL CONDITIONS:**

- A. Lessees shall arrange for suitable and required space, structures or facilities, each to be permanent, fire resistant, and compatible to the material and design of the newer basic structures on the airport.
- B. All plans, specifications, architectural designs and landscaping shall require written approval of the Airport Authority.
- C. All such tenants shall conduct their activities and render their services in a safe, responsible and efficient manner and shall be solely responsible for all acts of their agents and/or employees and shall save and hold Gwinnett County Airport Authority and Gwinnett County their officer, agents and employees harmless from any acts of the Lessee, its agents, employees and invitees.
- D. No one shall be permitted to operate an aeronautical business activity at the airport without either: 1) a fully executed lease agreement incorporating these minimum standards and the airport's rules and regulations, or 2) a fully executed sublease agreement that has been approved in writing by the Airport Authority and which incorporates these minimum standards and the airport's rules and regulations, or 3) a current letter of authorization issued by the Airport Director and which incorporates these minimum standards and the airport's rules and regulations.
- E. All tenants shall abide by and comply with the airport's Storm Water Pollution Prevention Plan, and all State and County Laws and Ordinances, Rules and Regulations of the Federal Aviation Administration and the Department of Transportation.
- F. Lessees shall not sublease or assign any portion of their leased premises without the prior written approval of Gwinnett County Airport Authority and, when approved, such subletting or assignment shall be subject to all of these minimum standards.
- G. Tenants, in the operation and use of the airport, will not on the grounds of race, color or national origin, discriminate or permit discrimination against any person or group of persons in any manner prohibited by Title 49, CFR, Part 21.

Gwinnett County Airport Minimum Standards

- H.** All Lessees operating an aeronautical business shall carry the insurance coverages as specified in their fully executed lease agreement with the Gwinnett County Board of Commissioners and/or the Gwinnett County Airport Authority. All sub-lessees and persons operating under a letter of authorization shall carry the insurance coverages specified in attachment 2, hereby incorporated by reference.
- I.** Lessee shall begin payment of rent on their Leasehold on the effective date of their Lease.
- J.** All aeronautical activities shall demonstrate financial stability and business ability in general aviation related to their proposed activities to the satisfaction of the Gwinnett County Airport Authority.
- K.** All tenants shall abide by and comply with the airport's Airport Security Plan (ASP) and all Federal, State, and County Laws, Ordinances, Rules and Regulations, and Directives pertaining to aircraft and airport security. This shall include, but not be limited to, maintaining positive control of all access points to the airport, installing automated gates at all vehicle access points, actively participating in the Airport COPS program, and providing 24 hour emergency contact information.

### **3. AIRCRAFT CHARTER AND/OR TAXI:**

Any party desiring to engage in the charter of aircraft to the public must provide as a minimum the following:

- A. **LAND.** A minimum area of 30,000 square feet to provide for a building, aircraft tie down area, and paved automobile parking.
- B. **BUILDINGS.** A minimum of 4,000 square feet of building space, properly lighted and heated, which shall include office space, public lounge, restroom facilities, and public use telephone.
- C. **TAXIWAYS.** Provide necessary taxiway access to public taxiway and runways.
- D. **PERSONNEL.** At least two (2) persons having current commercial pilot certificates with instrument ratings and ratings appropriate for the type of aircraft to be flown.

### **4. AIRCRAFT RENTAL:**

Any party desiring to engage in aircraft rental must provide for repair services necessary to meet any warranties for the type of aircraft for which rental privileges are granted. Have available at least three (3) aircraft and must provide, at a minimum, the following:

- A. **LAND.** A minimum area of 30,000 square feet to provide space for a building, display area, paved apron and paved automobile parking.
- B. **BUILDING.** A minimum area of 4,000 square feet of building space, properly lighted and heated, which shall include office space, public lounge, restroom facilities and public telephone.
- C. **PERSONNEL.** At least one (1) full-time employee, having current ratings appropriate for the types of aircraft to be rented.
- D. **AIRCRAFT APRON.** Provide a sufficient square footage of hard-surface apron for aircraft parking.
- E. **AUTOMOBILE PARKING.** Provide sufficient paved area for parking of automobiles.

## 5. AIRCRAFT SALES:

Any party desiring to engage in aircraft sales, either new or used, must provide for, on site, a minimum stock of spare parts and provide repair services necessary to meet any warranties for the type of aircraft for which sales privileges are granted (during the sales guarantee only), or provide the customer with a written agreement specifying where such parts and service may be obtained and must provide, at a minimum, the following:

- A. **LAND.** A minimum area of 30,000 square feet on which to provide space for a building, display area, paved apron and paved automobile parking.
- B. **BUILDING.** A minimum internal area of 4,000 square feet of building space, properly lighted and heated, which shall include office space, public lounge, restroom facilities and public telephone.
- C. **PERSONNEL.** At least one (1) full-time employee, having current ratings appropriate for the types of aircraft to be demonstrated.
- D. **AIRCRAFT APRON.** Provide a sufficient square footage of hard-surface apron for aircraft parking.
- E. **AUTOMOBILE PARKING.** Provide sufficient paved area for parking of automobiles.

## 6. AIRFRAME AND POWER PLANT REPAIR:

Any party desiring to engage in repair of aircraft on the airport must provide as a minimum the following:

- A. **LAND.** A minimum land area of 43,560 square feet on which to provide space for a building, temporary parking of aircraft, and paved automobile parking for customers and employees.
- B. **BUILDINGS.** A minimum of 10,000 square feet of building space, 2,000 square feet of which shall include heated office space, storage, public lounge, restroom facilities, and a public use telephone. A minimum of 8,000 square feet of hangar space for maintenance and sufficient storage of aircraft, parts, and equipment.
- C. **PAVED AREAS.** A paved ramp consisting of at least 20,000 square feet to provide temporary storage and parking of aircraft.

- D. **PERSONNEL.** At least two (2) full time employees properly certificated by the Federal Aviation Administration to perform airframe or powerplant repair. At least one (1) of these employees must be appropriately certified an I.A.

**7. FIXED BASE OPERATORS:**

- A. **LAND.** A minimum area of ten (10) acres (435,600 square feet) to provide for buildings, paved automobile parking, dispensing equipment, and paved tie down area necessary to accommodate a variety of general aviation aircraft.
- B. **BUILDINGS.** A minimum of 50,000 square feet of building space, to include 6,000 square feet of heated office space, restroom facilities, public lounge, pilots' lounge, and public use telephones, and; a minimum of 44,000 square feet of hangar space.
- C. **PAVED AREAS.** A paved aircraft parking and tie down ramp of at least 200,000 square feet, and sufficient paved area for the parking of automobiles.
- D. **PERSONNEL.** An adequate number of properly trained persons shall be on duty during the required hours of operation for fuel dispensing. The office shall be attended by an employee 24 hours per day, 7 days a week.
- E. **AIRCRAFT SERVICE EQUIPMENT.** Emergency starting equipment and appropriate fire extinguishers along with adequate ground support equipment shall be provided to meet the needs of aircraft that normally use the airport.
- F. **REQUIRED SERVICES.** Provide the following:
- Tie down and hangar storage for general aviation aircraft (itinerant and local).
  - Have available for sale aviation gasoline, jet fuel, oils and lubricants of kinds and grades customarily sold to general aviation aircraft
  - Major maintenance and repair of general aviation aircraft, engine and avionics,
  - Maintain an adequate inventory of aircraft parts and accessories to maintain, repair and service general aviation aircraft.
- G. **OTHER SERVICES PERMITTED BY FBO.**
1. Sale of new or used aircraft.
  2. Aircraft rental.
  3. Flight training.
  4. Aircraft charter and air taxi.
  5. Sightseeing flights.

6. Aerial survey, photography and mapping services.
7. Avionics sales and service.

## **8. FLIGHT TRAINING:**

Any party desiring to engage in flight training must provide a minimum of the following:

- A. **LAND.** A minimum area of 30,000 square feet to provide space for a building, aircraft tie down area, and paved automobile parking.
- B. **BUILDINGS.** A minimum area of 4,000 square feet of building space, which shall include at least 2,000 square feet of heated office space, public lounge, classrooms, restroom facilities and public telephone.
- C. **TAXIWAYS.** Provide necessary taxiway access to public taxiways and runways.
- D. **PERSONNEL.** At least two (2) persons properly certificated by the FAA as flight instructors, one (1) of which must hold a CFII, and both must possess additional ratings to cover the type of training offered, and be a certificated ground school instructor.
- E. **AIRCRAFT AND AUTOMOBILE PARKING.** Provide a minimum of 15,000 square feet of hard surface apron for aircraft parking with proper catch basins and drains, and a minimum of 4,500 square feet of paved area for parking of automobiles.
- F. **AIRCRAFT.** Have available for use in flight training, either owned or under written lease which gives exclusive use of the aircraft to the flight school, a sufficient number of aircraft properly certified and airworthy to handle the proposed scope of the training operation, but not less than three (3) aircraft, at least one of which must be equipped for and capable for use for instrument flight training.

For the purposes of this section an FAA approved Flight Training Device (FTD), or an FAA approved Advanced Aviation Training Device (AATD), as defined in this document, may be used in lieu of one of the required aircraft (i.e., not less than three aircraft OR not less than two aircraft and one FAA approved FTD or AATD).

- G. **SECURITY.** Identify and comply with all Department of Homeland Security and/or Transportation Security Administration (TSA) regulations concerning flight instruction, including providing correspondence either to or from the local TSA office, with a copy to be kept by the Airport Director's office, showing that

the TSA is aware of the flight school's operations. Comply with the Airport Security Plan.

- H. **EXCEPTION.** An operator who provides rotary wing flight training only, will comply with the provisions of this section except that authorization will be granted, upon written request, to effect a 60% reduction in the space requirements and a reduction in the required number of aircraft to two (2).

## **9. FLYING CLUB:**

The following requirements pertain to all flying clubs desiring to base their aircraft on the airport:

- A. Each flying club organization must be a non-profit corporation or partnership. Each member must have an equal share in the ownership of the aircraft or be a member of the corporation.
- B. The club may not derive greater revenue from the use of its aircraft than the amount necessary for the actual use of operation, maintenance and replacement of its aircraft.
- C. The club will file and keep current with the Airport Authority, a complete list of the club's membership and investment share held by each member.
- D. No one other than bona fide club members shall use the aircraft for rental. No one shall use the club aircraft for hire, charter or air taxi.
- E. Each aircraft owned by the flying club must have aircraft liability insurance of not less than the amount specified in Attachment 2 of this document.

## **10. FUEL STORAGE FACILITIES:**

Any party desiring to utilize and construct a fuel storage facility at Gwinnett County Airport must be a full-service fixed base operator or be limited to self-fueling operations only, which excludes, but is not necessarily limited to resale, share costs, co-operatives, etc. and must provide as a minimum the following:

- A. Be a Master Leaseholder in good standing.
- B. Construct a minimum permanent aviation facility of not less than 18,000 square feet. Have a minimum fuel storage capacity of 10,000 gallons. This self-fueling privilege shall require annual fuel usage of at least 50,000 gallons of jet fuel, or 50,000 gallons of Avgas.

Gwinnett County Airport Minimum Standards

- C. Construct a minimum permanent aviation facility of not less than 12,500 square feet and not more than 17,999 square feet. Have a minimum fuel storage facility of 10,000 gallons. This self-fueling privilege shall require annual fuel usage of at least 75,000 gallons of jet fuel, or 75,000 gallons of Avgas.
- D. To operate a flight school, flight school operations shall not engage in commercial leasing of airplanes, charter rentals, or any other business. Construct a minimum permanent aviation facility of not less than 12,500 square feet. Have a minimum fuel storage facility of 10,000 gallons. This self fueling privilege shall require annual fuel usage of at least 35,000 gallons of jet fuel, or 35,000 gallons of Avgas.
- E. Compliance with National Fire Protection Agency, Federal Aviation Administration, Environmental Protection Agency, Georgia EPD, and County Rules and Regulations in regard to fuel handling storage and storage and delivery.

For the purposes of these minimum standards permanent aviation facility shall be a single hangar facility with attached office space meeting the applicable size requirements.

**11. MISCELLANEOUS OPERATORS:**

Miscellaneous operators are commercial aviation operators offering any aeronautical activity not covered in Sections 2-10 of these Minimum Standards. Such activities include, but are not limited to:

Sightseeing Flights, Crop Dusting and other Agricultural Applications, Banner Towing and Aerial Advertising, Aerial Photography and Survey, Aerial Fire Fighting, Power Line and/or Pipeline Patrol, or any other operations approved by the Airport Director.

- A. **LAND.** No minimum amount of land is required to be leased.
- B. **BUILDINGS.** No minimum space is required to be leased.
- C. **PAVED AREAS.** Provide sufficient paved ramp area for the storage and parking of aircraft, equipment, vehicle parking for customers and employees.
- D. **PERSONNEL AND EQUIPMENT.** All personnel and equipment utilized in the miscellaneous operator's operation shall be appropriately certificated by the FAA and any/all other applicable regulating agencies.
- E. **INSURANCE.** Insurance requirements will be determined on a case-by-case basis by the County's Risk Management Division based on the inherent risk involved in the proposed miscellaneous operation. Miscellaneous operators shall provide proof of insurance meeting the requirements set forth in attachment 2 and

any other requirements set forth by the County's Risk Management Division, prior to beginning any commercial operations.

## **12. TEMPORARY SPECIALIZED AVIATION SERVICE OPERATOR (TSASO)**

Aircraft operators using the Airport may require specialized assistance with the maintenance of their Aircraft and/or flight training. When assistance is not available on the Airport through an existing approved commercial aeronautical service provider due to the specialized nature of the maintenance and/or flight training requirements, or if the flight instruction is to be carried out in an aircraft owned by the aircraft operator (proof of which shall be submitted if required by the Airport Director), the Airport Director may allow an Aircraft operator to solicit and utilize the services of a qualified entity to provide said services.

- A. **LAND.** No amount of land can be leased, as the TSASO operation is temporary in nature.
- B. **BUILDINGS.** No minimum space is required to be leased, however, any maintenance activities must be accomplished in an area not subject to rainfall or that contributes to storm water runoff (i.e., must be accomplished inside a hangar, or building). The Temporary Specialized Aviation Service Operator shall not have a permanent presence on the airport, (i.e., office space) or scheduled office hours of operation. Services will be provided on an as-needed basis.

No signs shall be posted on the airport identifying the TSASO, as it is temporary in nature.

No advertising shall be posted for a TSASO, as it is temporary in nature. Advertising includes, but is not limited to, printed ads in newspapers, trade journals, or magazines, radio advertisements, television advertisements, or web sites showing the services available. Any advertising for a TSASO, or any signs posted at the airport identifying the TSASO shall automatically eliminate the temporary nature of the business, and shall require that the business meet all the requirements of either Section 6 – Airframe and Powerplant Repair or Section 8 – Flight Training, whichever is appropriate for the business that has placed a sign and/or advertisement.

- C. **PAVED AREAS.** No minimum amount of paved area must be leased.
- D. **PERSONNEL AND EQUIPMENT.** Equipment shall be adequate to properly support the services being provided. To qualify for this category, the Temporary Specialized Aviation Service Operator shall not have any employees or contract

labor and will be the sole provider of the service. The Temporary Specialized Aviation Service Operator shall be licensed or certified under the appropriate governmental requirements for the service being provided and shall provide the Airport Director with a copy of any appropriate licenses or certificates as part of the Temporary Specialized Aviation Service Operator Letter of Authorization Process.

All aircraft used for flight training by a TSASO shall be dual equipped aircraft that meet the FAA requirements for commercial operations, and the TSASO operator shall be present for the supervision of all student flights.

- E. **LETTER OF AUTHORIZATION.** Prior to commencing any work at the airport the Temporary Specialized Aviation Service Operator must have the Aircraft Owner/Operator submit a request to the Airport Director on behalf of the TSASO requesting a 60-day Letter of Authorization for maintenance or a 180-day Letter of Authorization for flight instruction.

The request for a Letter of Authorization shall be accompanied by copies of any appropriate licenses or certificates required for the work proposed to be performed. The request shall also be accompanied by evidence of insurance coverage as required in attachment 2 of these Minimum Standards.

Aircraft operators requiring after-hour or weekend service by a TSASO must give notice to the Airport Director prior to the TSASO engaging in activities on the airport.

Aircraft operators are responsible for assuring compliance with all Airport Rules and Regulations and the Airport Security Plan by the TSASO while on the airport.

The 60-day Letter of Authorization, or 180-day Letter of Authorization may be renewed. Renewal shall be subject to the TSASO's compliance with all terms of the Letter of Authorization and these minimum standards. All renewals will be issued by the Airport Director and then presented to the Airport Authority at their next regularly scheduled meeting for ratification. If the Authority does not ratify a renewal, the renewed Letter of Authorization is voided effective on the next business day following the regularly scheduled meeting.

Prior to issuance of a Letter of Authorization from the airport for flight instruction, the flight instructor must show evidence of complying with all Department of Homeland Security and/or Transportation Security Administration (TSA) regulations concerning flight instruction, including providing correspondence either to or from the local TSA office, with a copy to be kept by the Airport Director's office, showing that the TSA is aware of the flight training operations.

### **13. COMPLIANCE/ENFORCEMENT/APPEALS:**

- A.** Failure to comply with these requirements shall be a violation of airport minimum standards, and the Airport Authority and/or the Gwinnett County Board of Commissioners may take any action deemed advisable for each occurrence.
- B.** These requirements are effective with the date of adoption by the Gwinnett County Airport Authority.
- C.** Anyone wishing to allege a violation of these requirements or to challenge the Airport Director's interpretation of these standards may submit their complaint/challenge to the Airport Director in writing or verbally. In order to ensure that full investigation of the complaint/challenge is accomplished, the complaint/challenge should include the name and contact information of the person filing the complaint/challenge, and as much information as possible about the complaint/challenge.
- D.** After receiving a complaint/challenge, the Airport Director shall conduct a full investigation into the matter. The results of the investigation shall be communicated to the complainant/challenger within 30 days of the original complaint/challenge.
- E.** If the complainant/challenger disagrees with the Airport Director's determination, or if a complainant/challenger is not notified of a determination within 30 days, the complainant/challenger may request reconsideration from the Gwinnett County Airport Authority by making a request for reconsideration to the Airport Director or by making a request for reconsideration at a regularly scheduled Gwinnett County Airport Authority meeting during the Public Comment portion of the meeting agenda.
- F.** After receiving a request for reconsideration the Airport Authority will refer the matter to the Airport Authority's Lease Committee for review. The Lease Committee will then schedule a meeting to discuss the matter (a Reconsideration Meeting). The person requesting reconsideration shall be allowed to attend this Reconsideration Meeting if they desire. The Lease Committee will provide a report to the Airport Authority at the next regularly scheduled meeting of the Authority that immediately follows the Reconsideration Meeting. The report from the Lease Committee shall not be more than 90 days after the original request for reconsideration.
- G.** If the person requesting reconsideration does not agree with the Lease Committee's determination they must submit a written notice to the Deputy Director of Gwinnett County's Department of Transportation at 75 Langley Drive,

Gwinnett County Airport Minimum Standards

Lawrenceville, GA 30045 within 10 days of the Lease Committee's report. Upon receiving the written notice, the Deputy Director shall direct the Airport Director to put an action item under new business for the Airport Authority to act upon at their next regularly scheduled meeting. The determination of the Airport Authority shall be final.

**14. AMENDMENTS:**

These minimum standards may be supplemented and amended by the Gwinnett County Airport Authority from time to time and in such manner and to such extent, as the Authority may deem proper.

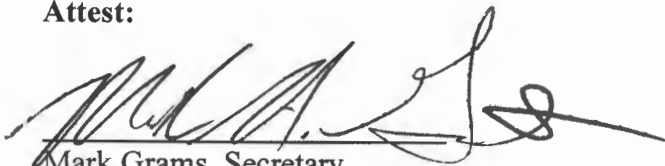
**15. ADOPTION OF MINIMUM STANDARDS:**

**Gwinnett County  
State of Georgia**

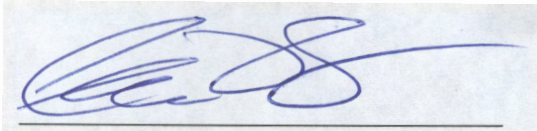
IN WITNESS WHEREOF, the Gwinnett Airport Authority has hereunto set their hands and seal this 13<sup>th</sup> day of September, 2007, in adoption of the above written Minimum Standards.

**Gwinnett County  
Airport Authority**

Attest:



Mark Grams, Secretary  
Gwinnett County Airport Authority



Eric "Tip" Cape, Chairman  
Gwinnett County Airport Authority

MINUTE BOOK 2001

001133

COUNTY OF GWINNETT,

STATE OF GEORGIA.

MANAGEMENT AGREEMENT

THIS AGREEMENT made and entered into this 7 day of Feb., 2001, by and between GWINNETT COUNTY, a political subdivision of the State of Georgia, as party of the first part, (hereinafter referred to as the "County"), and The GWINNETT COUNTY AIRPORT AUTHORITY, of the State of Georgia, as party of the second part, (hereinafter referred to as the "Authority").

WITNESSETH:

WHEREAS, the County and Authority are authorized by the Constitution and Laws of the State of Georgia to enter into an agreement for the management and operation of the Gwinnett County Airport; and

WHEREAS, the County and the Authority have previously entered into such a management agreement dated October 18, 1988, as amended on July 9, 1993, which management agreement has expired by its terms; and

WHEREAS, in consideration of the growth of Gwinnett County and the rapid development of the Gwinnett County Airport, the parties hereto desire to enter into a new management agreement which sets forth their respective duties and obligations for the benefit of the Gwinnett County Airport and the citizens of Gwinnett County

NOW, THEREFORE, for and in consideration of the sum of TEN DOLLARS (\$10.00), the receipt and sufficiency of which are hereby acknowledged, and the mutual

MINUTE BOOK 2001

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promises of the parties hereto, the parties hereby enter into the following management agreement:

1.

The Authority does hereby agree to manage the facilities and operations located on the Gwinnett County Airport, the boundaries of which are described in Exhibit "A" attached hereto and incorporated herein by reference.

(A) The Authority shall be authorized to enter into contracts, sub-contracts, leases, sub-leases, agreements and permits including aircraft tie-down agreements, for the operation and maintenance of the airport premises, provided, however, that any such contract, sub-contract, lease, sub-lease, agreement or permit, including any renewal of same, which has a term in excess of four years shall be approved by the County prior to its effective date. The Authority shall follow County purchasing guidelines where applicable. All such contracts entered into by the Authority shall be subject to funds allocated by the County and available in the Airport Operating Fund.

(B) The Airport Authority and the County shall jointly approve all contracts and agreements which concern the application for or the expenditure of Federal Aviation Administration or other United States Government grant funds. The County shall, in cooperation with the Authority, invite, receive, open, tabulate, review and award all bids in connection with such agreements and contracts in accordance with County purchasing ordinances and Federal requirements.

(C) The Authority shall be authorized to make recommendations to the County for an individual for employment as airport manager. The airport manager, when so employed, shall be a County employee of the Department of Transportation.

(D) The Department of Transportation shall, in conjunction with the Authority and other County departments, annually prepare a budget for the operation of the Gwinnett County Airport, which shall be submitted first to the Authority for review and

-2-

001125

MINUTE BOOK 2001

recommendations and then to the County. The submittal of the budget to the County shall be accompanied by any formal recommendations of the Authority. The County shall appropriate such funds as the Board of Commissioners, in its sole discretion, shall deem necessary.

(E) The Authority shall consider to make recommendations to the County on all long-range plans and policy guidelines for the overall growth and development of the Gwinnett County Airport. The Authority may promulgate rules and regulations for the overall operation of airport activities.

(F) The Authority and airport manager shall set the fee schedules for Airport revenue operations subject to the approval of the County.

2.

The term of the within agreement shall be from the date of the execution of this agreement through December 31, 2010. Either party may terminate this agreement for any reason by giving one hundred eighty (180) days advance written notice.

3.

The use of the airport facilities by the Authority, and its lessees and assigns, shall be subject to all rules and regulations as are presently established by the Authority or as may hereafter be established. The Authority shall comply with all rules and regulations as established by the Federal Aviation Administration.

4.

The Authority agrees to remit to the County treasury on a monthly basis the revenues collected by the Authority from the T-hangars, tie-down leases, maintenance hangars, and other leased premises for deposit in the airport operating fund, which funds shall be used for payment of airport debts and/or operations.

3-

MINUTE BOOK 2001  
5.

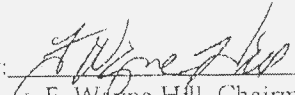
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In the event of any conflict between the language of this Agreement and the acts which created the Authority, the parties hereto specifically intend and agree that language of this Agreement shall prevail.

IN WITNESS WHEREOF, the parties hereto have executed these presents the day and year first above written.

GWINNETT COUNTY, GEORGIA

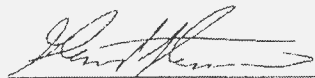
Attest:

By:   
F. Wayne Hill, Chairman

  
Brenda Maddox, Clerk

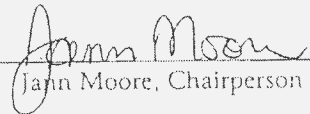
Executed by authority granted at a Meeting of the Board of Commissioners held on the 6<sup>th</sup> day of February, 2001.

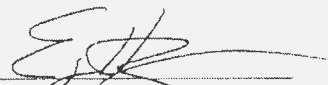
APPROVED AS TO FORM  
Gwinnett County Law Department

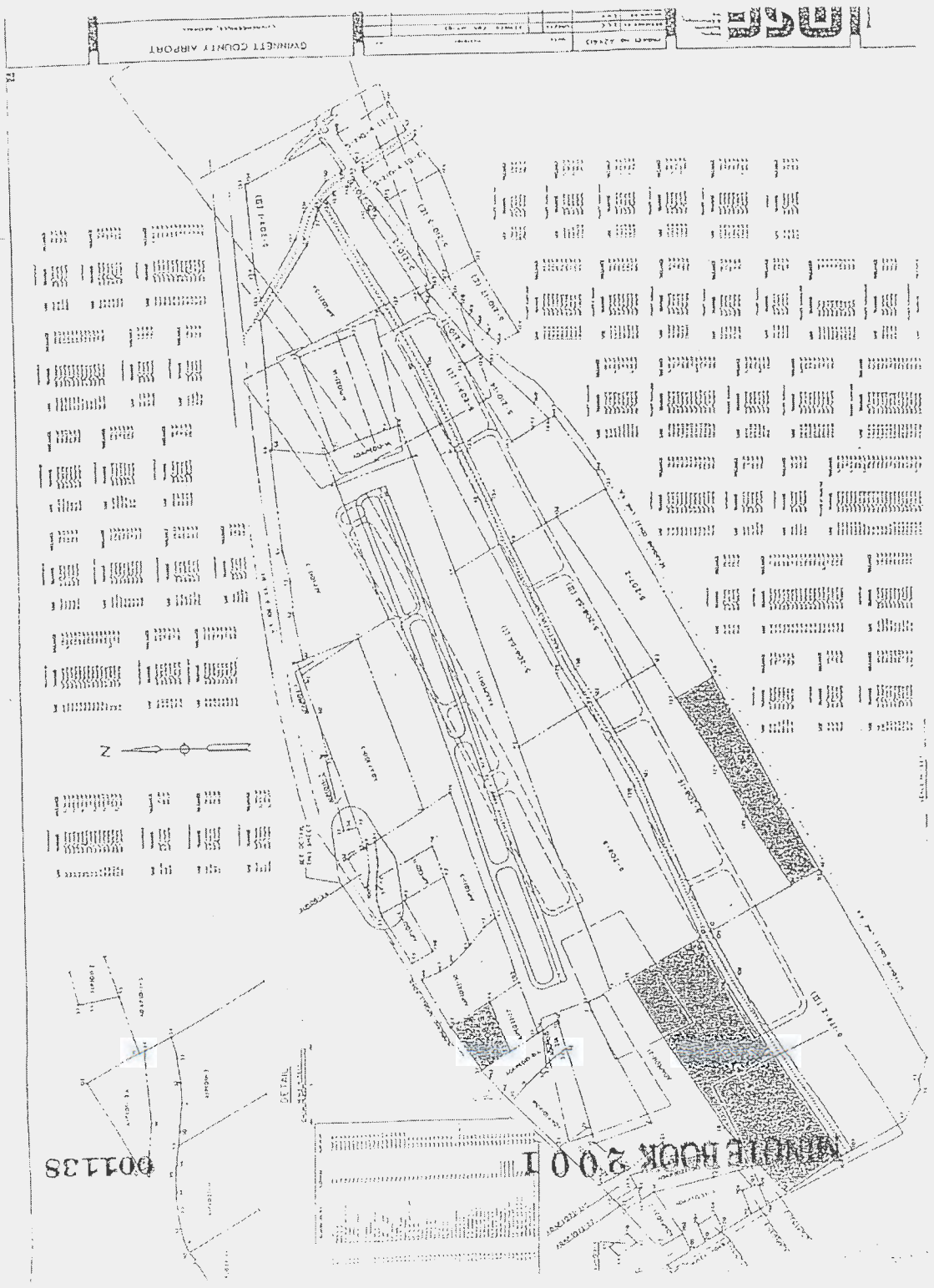
  
Glenn P. Stephens  
Senior Assistant County Attorney

GWINNETT COUNTY AIRPORT  
AUTHORITY

Attest:

By:   
Jann Moore, Chairperson

  
Emory Geiger, Secretary



## ATTACHMENT 2

1. Statutory Workers' Compensation Insurance shall be carried for any person, corporation, partnerships, or other as required by Georgia law with commercial operations at the airport. Persons, corporations, partnerships, or others not required to carry Workers' Compensation insurance must sign a Gwinnett County release. In addition, if you are required to carry Workers' Compensation you must include:
  - (a) Employers Liability:
    - Bodily Injury by Accident - \$100,000 each accident
    - Bodily Injury by Disease - \$500,000 policy limit
  - Bodily Injury by Disease - \$100,000 each
2. Premises Liability Insurance for all persons, corporations, partnerships or others with commercial operations and must include:
  - (a) Not less than \$1,000,000 Combined Single Limit Bodily Injury and Property Damage
  - (b) Not less than \$1,000,000 Combined Single Limit Bodily Injury and Property Damage for Products Liability if you sell, repair, manufacturer, or distribute products
  - (c) The following additional coverages must apply:
    - \* Additional Insured Endorsement
    - \* Contractual Liability
    - \* Severability of Interest
    - \* Personal Injury
3. Aircraft Liability for any persons, corporations, partnerships, or others who own, non-own, lease, borrow, or hire an aircraft.
  - (a) Not less than \$1,000,000 Combined Single Limits Bodily Injury and Property Damage, Limited to \$100,000 per Seat Passenger legal Liability.
4. Environmental Impairment Liability (Pollution Liability) for anyone having stationary fuel tanks, portable fuel tanks, waste oil tanks and drums of chemicals.
  - (a) \$1,000,000 Limit of Liability per Occurrence for Bodily Injury and Property Damage.

Gwinnett County Airport Minimum Standards

5. Hangarkeepers' Legal Liability for any persons, corporations, partnerships, or others who have aircraft which are the property of others and are in the care, custody or control of the person, corporation, partnership, or other as a bailee.
  - (a) Not less than a per-aircraft limit equal to the maximum value of any aircraft and a maximum limit of the total value of all aircraft while in the care, custody or control of the operator.
6. Gwinnett County Board of Commissioners and the Airport Authority should be shown as an additional insured on Aircraft Liability, Premises Liability, Hangarkeepers' Liability, Environmental Impairment Liability and Automobile Liability policies that are required.
7. The cancellation provision should provide a 30-day notice of cancellation.
8. Certificate Holder should read:

Gwinnett County Board of Commissioners  
75 Langley Drive  
Lawrenceville, GA 30045-6900

and

Gwinnett County Airport Authority  
600 Briscoe Boulevard  
Lawrenceville, GA 30046
9. Insurance Company, except Workers' Compensation carrier, must have an A.M. Best Rating of A-6 or higher.
10. Insurance Company shall be licensed to do business by the Georgia Department of Insurance.
11. Certificates of Insurance, and any subsequent renewals, must be current and on file with the Airport Manager.
12. All minimum insurance coverages required will be primary over any insurance program carried by the County, only as respects operations of insured.
13. The person, corporation, partnership or other shall agree to waive all rights of subrogation against the Airport Authority, Gwinnett County, the Board of Commissioners, its officers, officials, employees, and volunteers from losses arising from the issue of this permit.
14. All accidents involving insurance claims must be reported to the County. If the County

Gwinnett County Airport Minimum Standards

- requires any information on coverage or a particular claim then the person, corporation, partnership or other must provide copies of policies or loss runs.
15. Compliance by the person, corporation, partnership or other with the foregoing requirements as to carrying minimum insurance shall not relieve the person, corporation, partnership or other of their liability provisions.
  16. The person, corporation, partnership or other is to comply with the FAA, EPA, OSHA and any other laws that may apply to them when entering the airport.
  17. The person, corporation, partnership, or other shall, at a minimum, apply risk management practices accepted by their industry.
  18. The Airport Authority reserves the right to amend the minimum standards for insurance at any time, based on the increase in legal liability exposures and the availability of insurance coverages and limits.

# RFP EXHIBIT C

Gwinnett County Airport  
Briscoe Field

# AIRPORT MASTER PLAN



Final Report



**PAII**  
Project Team

Pegasus Associates International, Inc.

# ***GWINNETT COUNTY AIRPORT***

## ***MASTER PLAN***

*Prepared for*

**GWINNETT COUNTY AIRPORT AUTHORITY**

**AND**

**GWINNETT COUNTY DOT**

*Prepared by*

**PAII** Project Team

Pegasus Associates International, Inc.

CDM

PBS&J

Precision Planning, Inc.

Street Smarts, Inc.

Photo Science, Inc.

October 2006

Updated July 2008

Updates November 2008

Final February 2009

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## **APPENDECIES**

A-1	<i>Air Traffic Statistics Update</i>
A-2	<i>Archaeological Reconnaissance Report</i>
A-3	<i>Ecological Reconnaissance Report</i>

## ***1.0 EXECUTIVE SUMMARY***

### ***1.1 AIRPORT MASTER PLAN BACKGROUND***

Gwinnett County Airport lies near the Alcovy River basin and as such, has several streams and drainage courses which cross airport property. Recent environmental projects for the airport conducted in conjunction with the completion of Taxiway "B" suggested that the increasing demands of water quality measures could impact the future development at the airport. Since approximately 1985, the Airport Layout Plan (ALP) has included a parallel runway as a potential future capacity enhancing development. The original location of the parallel runway on the ALP placed it essentially on top of one of the major drainage courses through the airport. The recent studies suggested a potential for significant environmental impacts with the construction of the runway in the original location.

Following the completion of Taxiway B, the Airport Administration elected to conduct an update of the Airport Master Plan to include a more detailed look at the various issues associated with the conveyance of stormwater through the property, review of environmental regulations which a potential project would be expected to meet, as well as a review of long-term options for the development of the airport. The review of the long-term options included a review of the parallel runway placement as well as possible alternatives to the original location which may be considered by the county.

### ***1.2 AIRPORT ACTIVITY***

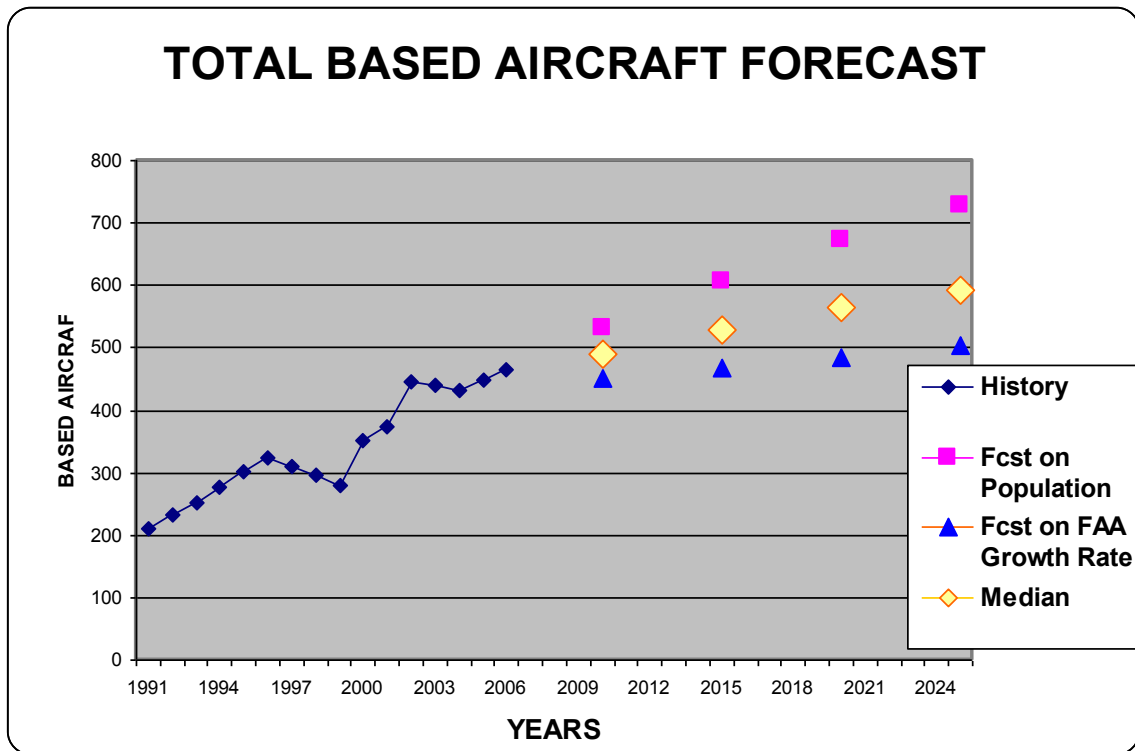
The need for a parallel runway is dependent on the existing and expected level of aircraft operations (takeoffs and landings) at the airport. Gwinnett County Airport is the fourth busiest airport in the state and the Atlanta Metro Area. Airport activity reached its current high point of 115,300 operations in calendar year 1999 but suffered decreasing traffic falling to approximately 90,000 in 2003 given the events of 9/11/2001 and the following downturn in the economy. With the improving economic conditions in 2004, the number of operations reached 108,159 but again returned to a decrease in 2005 to a total of 96,365 operations. The number of based aircraft has shown a marked increase over the last eleven years from 251 units in 1993 to 432 units in 2004 to 466 reported in the Summer of 2006.

Given that the airport is located in one of the most economically active corners of the metro area, there is every expectation for continued growth in both based aircraft and operations. Two forecasting methodologies were utilized to forecast the future based aircraft for the airport. One method was a regression analysis based on historic and forecast population for Gwinnett County. The population regression resulted in an aggressive forecast of based aircraft growth. The second method used was based on the national forecasts produced by the FAA utilizing annual rates of growth for the various segments of the general aviation fleet. The FAA rate of growth forecasts resulted in a lower overall rate of growth for the Gwinnett County Airport fleet.

An analysis of the two forecasts suggested that based on current activity and the rate at which older aircraft are being replaced in the fleet, the FAA forecast represented a reasonable lower range of expectations for Gwinnett County Airport based aircraft in the future. The population forecast model suggested that the economy and gains in population in Gwinnett County had been strong in the past and current forecasts remain strong. Therefore, assessing the future needs of the airport against a low forecast of future needs might not provide an accurate picture of the needs.

Using the population model as an upper range forecast and the FAA growth rate model as the lower range, a median forecast was produced for based aircraft. The mid-range forecast projects that based aircraft at the airport will increase from the current 432 recorded in 2004 to over 590 by the year 2025 – presuming facilities are available to accommodate the aircraft. This forecast is illustrated in Exhibit 1-1.

Exhibit 1 – 1

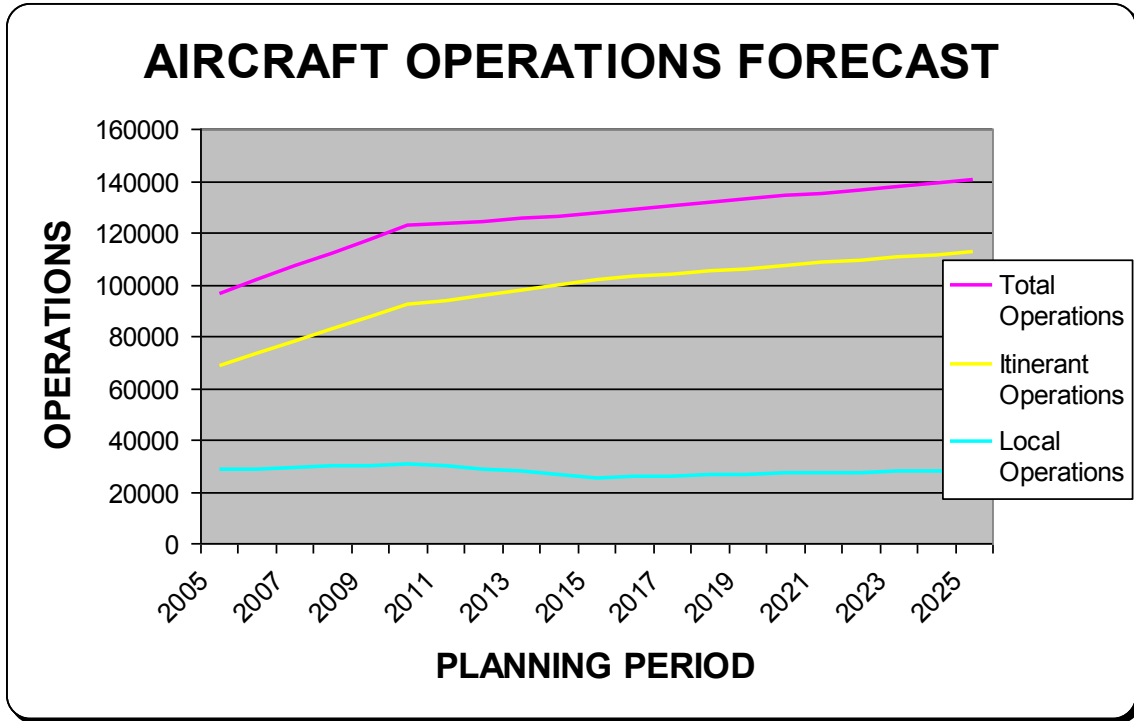


Source: PAll Project Team Analysis

Both Gwinnett County Airport and national data indicate that the business and corporate traffic at the upper end of the general aviation fleet has been in recent years and remains the fastest growing portion of the fleet. Jet aircraft are expected to grow from 35 units representing 8.1 percent of the current based aircraft at the airport to 92 aircraft representing 15.5 percent of the based aircraft fleet in the year 2025.

Aircraft operations will grow in conjunction with the based aircraft. The largest single category of operations is expected to be conducted by single engine aircraft well into the future. However, as with based aircraft, jet operations are expected to increase from some 21 percent of total operations to 35 percent by the year 2025.

Exhibit 1 - 2



Source: PAII Project Team Analysis

### 1.3 AIRPORT FACILITY DEMAND / CAPACITY

An analysis of current facility use indicates an almost exclusive use of hangars for the higher end general aviation aircraft and a strong demand for hangars among single engine owners. This demand for hangar space at Gwinnett County Airport is consistent with use patterns at many metropolitan area and high use airports. In addition to numerous hangars on the airfield, Gwinnett County Airport has extensive areas of aircraft parking aprons used by transient and tied-down aircraft. The airport facility forecast of demand versus existing facility capacity suggests that the demand for hangar space will almost immediately exceed the current capacity, even including the new facilities currently under construction.

The facilities forecast suggests the need for an additional 19 conventional hangars of 100' by 100' size which would be expected to accommodate some 80 aircraft and approximately 45 T-hangar units. If the additional hangar units are constructed, the

airport would house some 430 aircraft in hangars by the year 2025. However, there is currently insufficient space on the current airport property to construct the required number of new hangars.

There does appear to be sufficient apron space to meet the demand. The analysis also indicates that the amount of apron space devoted to transient aircraft parking and servicing is less than the forecasting methodology suggests should be available currently. However, many operators have the ability to relocate aircraft during heavy traffic periods and may use portions of the apron normally utilized for based aircraft for transient parking. It is also suggested that the overall use of an apron area may change over time as the need arises.

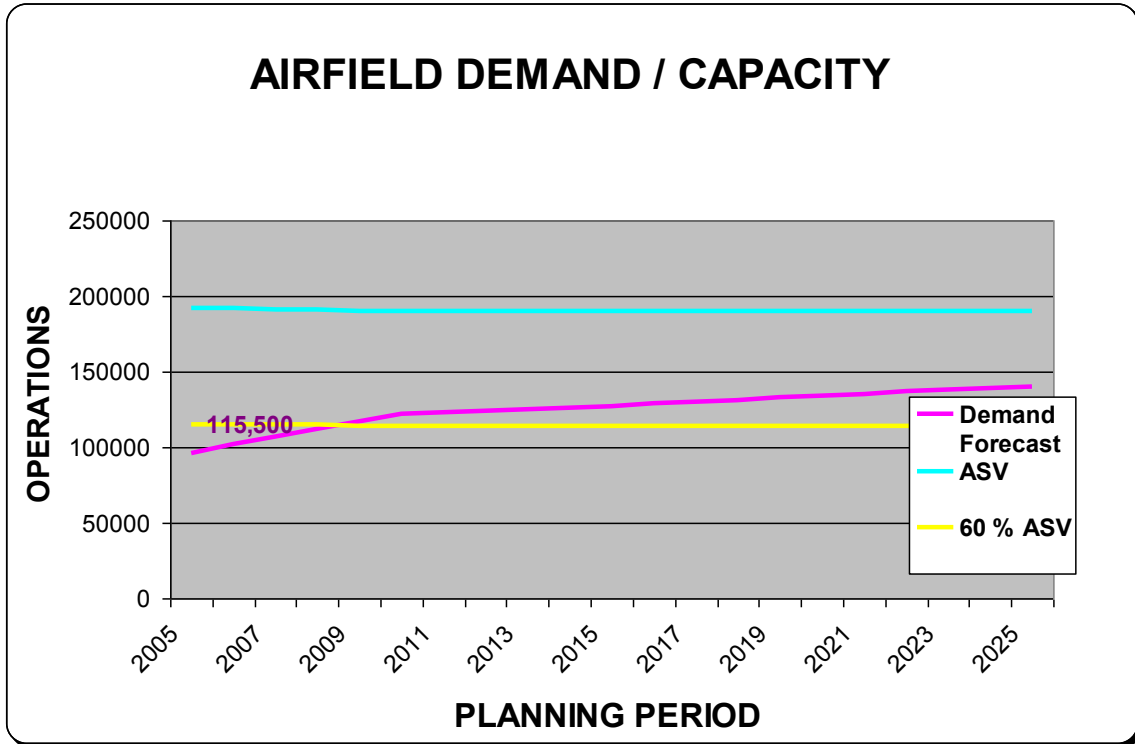
The analysis of the existing apron area's ability to serve future demand is based on the apron as it presently exists on the airport. It is likely that the future development of the parallel runway as shown on the Airport Layout Plan or any alternatives to the present location of the parallel runway as presently shown will reduce the amount of apron currently available on the north side of the field.

## ***1.4 AIRPORT OPERATIONAL DEMAND / CAPACITY***

The operational capacity of the runway system is measured according to its "throughput" capacity. The runway system can accept only so many aircraft takeoffs and landings per hour based on FAA's air traffic control rules and regulations. These rules dictate: 1) how closely an aircraft may takeoff behind another, and 2) how close a second aircraft may land behind either a departing aircraft or landing aircraft. At airports such as Gwinnett County where there is a wide range of aircraft types from small single engine to much larger and sophisticated business jets, the separation requirements may be more restrictive than at large air carrier airports where the traffic is essentially the same category.

In addition to the determination of the hourly throughput capacity, the FAA capacity methodology includes factors for converting the hourly capacity to an annual capacity based on reasonable use patterns. The annual number is more often utilized at general aviation airports for considering demand / capacity questions. The annual number is known as the Airport Service Volume (ASV).

The annual demand / capacity values are useful when compared with the FAA's standards which consider that an airport operating at 60 percent of its current capacity should begin planning to add additional capacity and that the additional capacity should be in place by the time the airport reaches 80 percent of the ASV. Gwinnett County Airport is on the threshold of meeting the 60 percent criteria at this time. The operational demand / capacity relationships are illustrated in Exhibit 1- 3.



Source: PAII Project Team Analysis

### **1.5 STORMWATER ANALYSIS OVERVIEW**

The analysis of stormwater conditions indicates that currently there are approximately 122,700 cubic yards of floodplain storage volume on airport grounds for a 100-year storm event in the existing condition [i.e., with no other improvements/construction having been completed]. The analysis also indicates that approximately 75 percent of the total stormwater flow exiting the airport comes onto the airport from off-site areas.

Any development which placed fill material in the floodplain would have to provide for an equal amount of floodplain compensation as mitigation elsewhere. In addition to replacing any floodplain storage capacity consumed by the construction of any alternative, the actual construction of additional impervious surfaces will require additional stormwater detention for any area disturbed by the construction.

The stormwater analysis included a review of the demand / capacity relationship for the several major pipes and culverts on the airport. The results of the analysis indicated that the major culvert which carries the water under much of the eastern half of the field does not have the capacity to handle the demand which would be

generated by a 100 year storm event under existing conditions therefore generating a de facto detention pond on airport.

Stormwater related environmental issues to be faced by any alternative include stream bank buffer intrusion, stream destruction (through the use of culverts), potential wetland destruction, and the provision of additional capacity for detention stemming from airport development.

## ***1.6 RUNWAY ALTERNATIVES***

The Airport Layout Plan (ALP) has included a 3,500 foot parallel runway since approximately 1985 when the planning for the now main runway was conducted. Due to changes in stormwater environmental regulations as well as other factors, there are concerns that the original location of the parallel runway would face severe difficulty in getting environmental approval. Therefore, this master plan update is to investigate the extent to which the original location of the parallel runway would face insurmountable difficulties from water quality factors (stormwater, stream bank buffer, wetlands, etc.) and whether there may be reasonable alternatives to the original location.

The original location of the parallel runway would require some 45,000 cubic yards of floodplain compensation in addition to the destruction some 1,600 linear feet of stream bank buffer measuring 50 feet wide on either side of the stream.

The combination of stormwater detention issues and potential destruction of a significant amount of stream bank buffer appeared sufficient to justify a review of potential alternatives to the original location of the parallel runway. Any environmental assessment going forward would be required to include the impacts associated with a no-build alternative compared with the build alternatives. The alternatives reviewed include the following:

- **Alternative One** – A 3,500 foot runway in the original location.

The runway location in this alternative is separated 700 feet north of the existing main runway as measured from centerline to centerline. The west end of the runway is approximately 1,400 feet east of the west edge of the Taxiway Z platform. See Exhibit 1 – 4.

- **Alternative Two** – A 4,400 foot runway constructed by converting the new Taxiway Z to a runway and including a new parallel taxiway.

The runway location in this alternative is separated approximately 950 feet north of the main runway (as measured from centerline to centerline) with the west edge of the 300 foot runway safety area at the edge of the current Taxiway Z platform. The runway extends east to the point where the 300 foot safety area is contained on the current airport platform. See Exhibit 1 – 5.

- **Alternative Three** – A 5,000 foot runway constructed by converting the new Taxiway Z to a runway and including a new parallel taxiway.



Exhibit 1 - 4  
**Alternative One - 3,500' Parallel Runway**

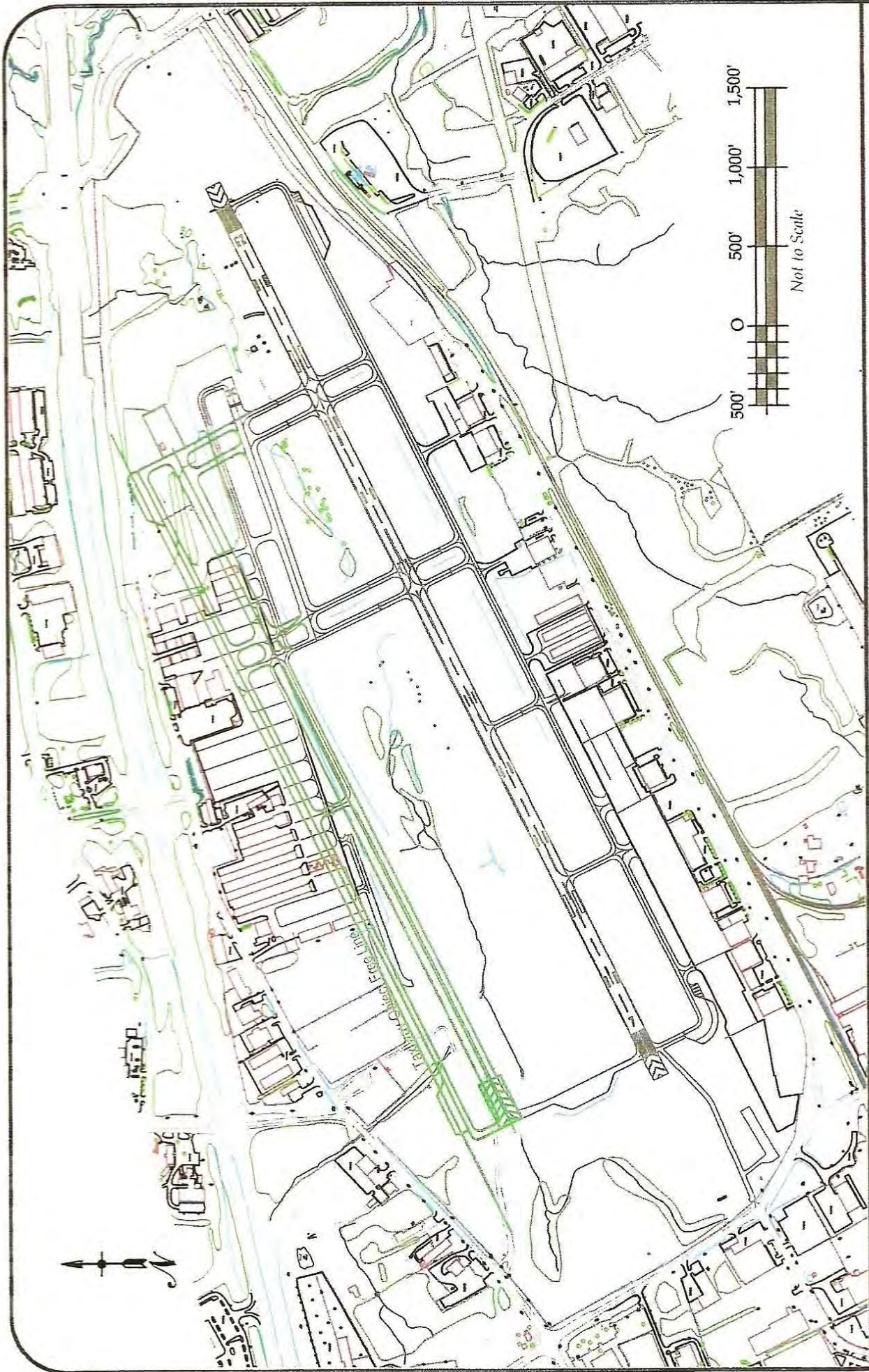


Exhibit 1 - 5  
**Alternative Two - 4,400' Parallel Runway**

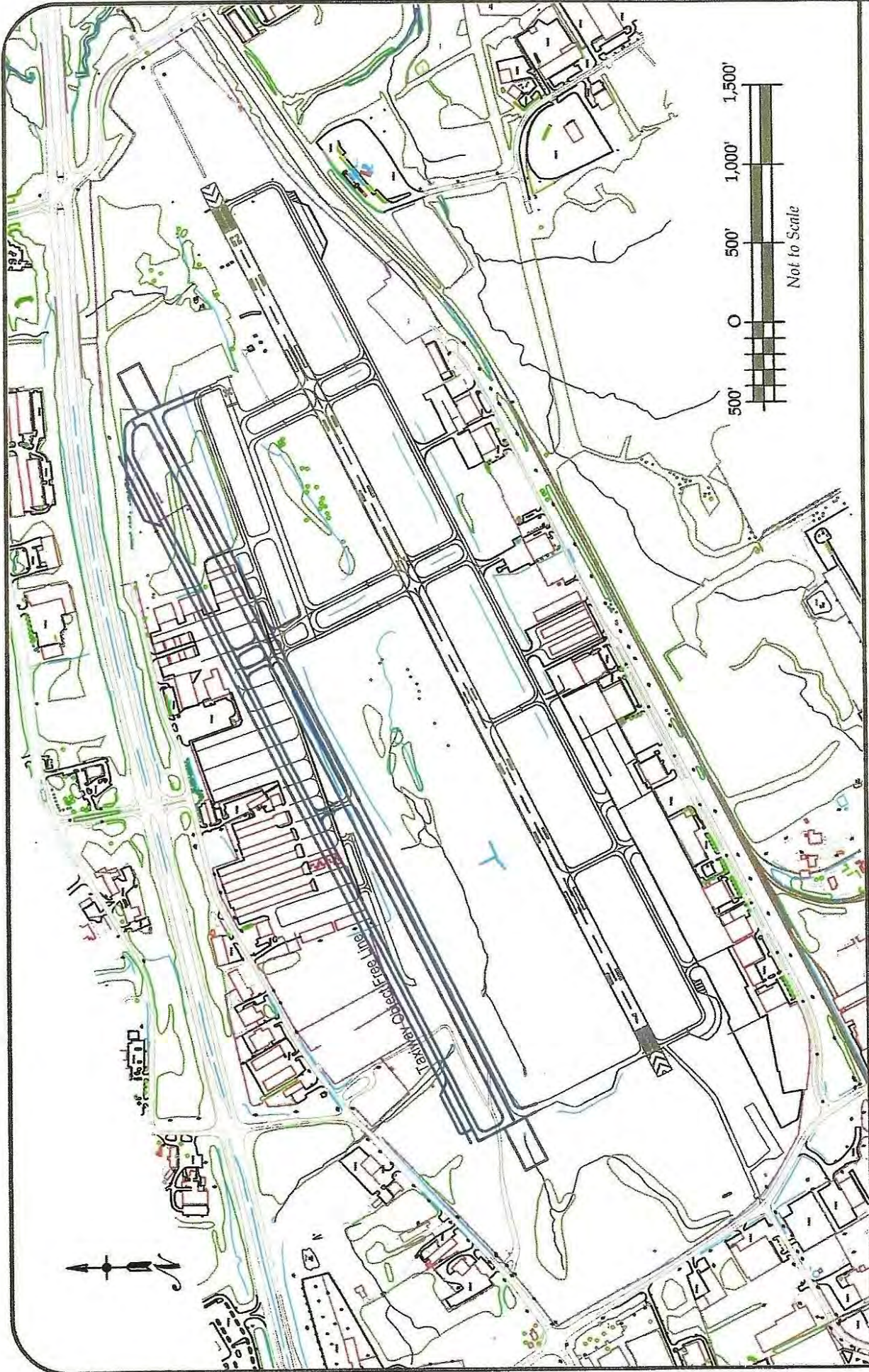


Exhibit 1 - 6  
Alternative Three - 5,000' Parallel Runway

The runway location in this alternative is also separated approximately 950 feet north of the main runway (as measured from centerline to centerline) with the west edge of the runway at the edge of the current Taxiway Z (formerly Taxiway B) platform. This runway location and length requires additional fill and construction to the west to provide the 300 foot safety area as well as additional fill to the east to provide the same safety area. See Exhibit 1- 6.

## ***1.7 ON - AIRPORT BASING AREA ALTERNATIVES***

The review of runway development alternatives noted above suggested that the current north side basing area might well be impacted by the runway development. In addition, the forecast of long-range traffic suggests that additional basing area facilities may be required in the future.

The review of basing area improvement options for Gwinnett County Airport indicated that such options are essentially limited to the north side of the airport since the south side along Briscoe Boulevard is either developed or under development plans. The current review in conjunction with the review of environmental factors and runway alternatives suggests there are areas within the airport property on the north side of the field which are available for additional basing area facility development.

**Existing Basing Facilities** - The possibility of developing a parallel runway as discussed above may have a significant impact on the north side basing facilities depending on the alternative chosen. As summarized below:

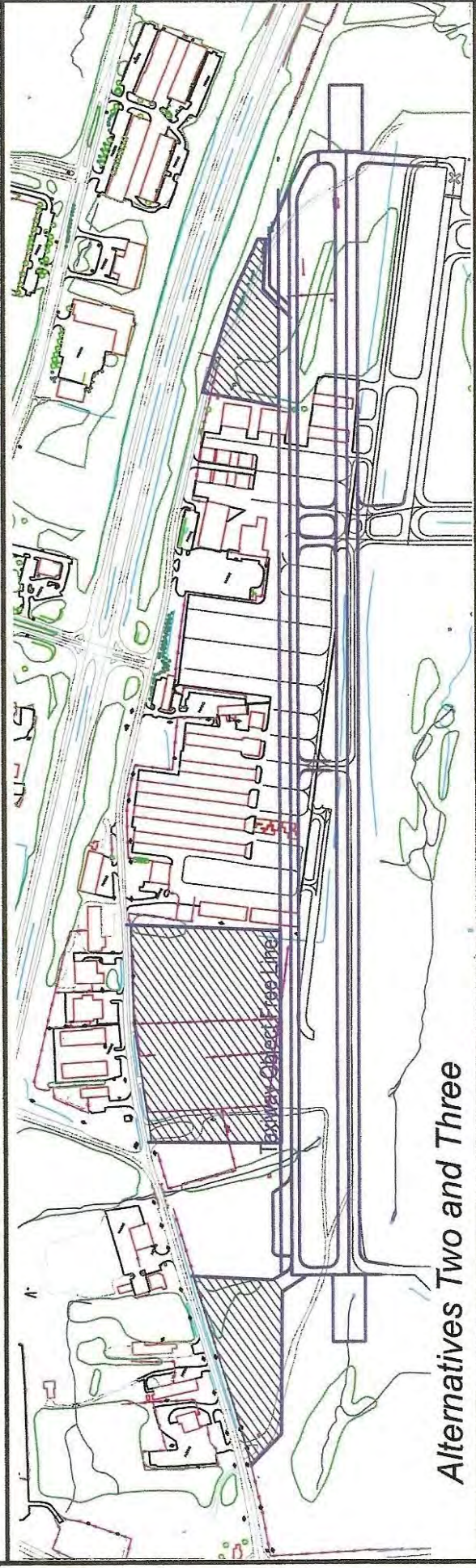
*Runway Alternative One* – The 3,500 foot parallel runway would have a limited adverse impact on existing facilities. The two 8 unit T-hangars owned by the County would have to be removed / relocated but no other facilities would be affected.

*Runway Alternatives Two and Three* – Both of these alternatives would have an impact on current basing area facilities due to the additional distance required from the current Taxiway B as converted to Runway 7L – 25R and the accompanying new parallel Taxiway B (relocated) with the accompanying taxiway object free area which would extend further to the north encroaching into the basing facilities. Due to the alignment of a new runway parallel versus the alignment of SR 316, the east end of the north side basing area is more impacted than is the west end. Alternatives Two and Three will require the same removal / relocation of the County owned T-hangars as well as one of the County owned 12,000 sf hangars leased by Hawthorne and as many as two of the 50' X 60' hangars in the EAA complex. While the relocation / removal of the building currently used by Hawthorne Aviation as a terminal building is not absolutely required, it will also be impacted since the taxiway object free line will lie some 50 feet from the front corners of the building.

**New Basing Facilities** – As noted above, there are portions of the Northside Basing Area which may be developed for additional aircraft basing facilities. The runway alternatives will have a similar effect on the undeveloped areas as on the current facilities noted above. There are two on - airport areas potentially available for future development as described below and generally illustrated by Exhibit 1 - 7.



*Alternative One*



*Alternatives Two and Three*

*Exhibit 1 - 7*

**Potential Northside Basing Facilities Areas**

*East of Landmark Aviation* – The area east of Landmark Aviation as bounded by the runway / taxiway environment and SR 316 may be developed to accommodate additional FBO facilities, T-hangars, or corporate hangars. As with all basing area options, runway Alternative One has less impact on the area than Alternatives Two and Three.

*Central Area* – The Central portion of the Northside Basing Area essentially consists of the land area where the DOT maintenance barn stood on Airport Road. The area lies immediately west of the EAA area.

## **1.8 OFF - AIRPORT BASING AREA ALTERNATIVES**

It is noted in Section 1.3 above that the current airport site does not have the space available to develop the forecast need of hangar facilities. Combining the airport needs with GDOT plans to develop HOV lanes on SR 316 which will have a significant effect on airport access as well as surface traffic in the airport area raises the possibility of potential airport use of currently off – site areas between the airport and SR 316. These areas are described below:

*North Central Area* – The North Central Area generally describes the area lying adjacent to the airport consisting of approximately 8 acres between Airport Road and SR 316 as illustrated in Exhibit 1 – 8. Acquisition of this area would allow the area to be served by the same taxiway system which will serve the Central Area described above. The acquisition and use of this area will require the relocation of Airport Road.

*Northwest Area* - The Northwest Area generally describes the area bound by Hosea Road on the west, SR 316 on the north and Hurricane Shoals Road on the south and east. The area consists of approximately 40 acres. Acquisition of this area would provide the airport with needed additional space for hangar development as well as a low-lying area to be utilized as a flood plain compensation area. This area is also illustrated in Exhibit 1 – 8.

## **1.9 ALTERNATIVES SUMMARY**

The three runway alternatives under consideration have distinctively different benefits for airport operations as well as somewhat different environmental impacts. Conclusions which may be drawn from the study include the as following:

- The parallel runway as originally planned would face significant obstacles in obtaining environmental approval for items dealing with stormwater and water quality issues.
- Alternatives (Alternatives Two and Three) to the original proposal (Alternative One) appear to be available and reasonable alternatives for consideration.



Exhibit 1 - 8

**Potential Northside Off - Airport Basing Facilities Areas**



**PAII**  
Project Team  
Pegasus Associates International, Inc.

- Alternative One requires 45,000 CY of floodplain compensation which is 6 times greater than Alternative Two and 5 times greater than Alternative 3. Alternative One would require the destruction of some 1,600 linear feet of stream bank buffer on both sides of the stream. The other alternatives buffer impact would be limited to crossing the stream.
- Alternative One would serve single engine and light multi-engine traffic. Alternative Two would serve the same traffic in addition to many of the turbo-props which may operate on the field. Alternative Three would serve the same single engine, light multi-engine and turbo-prop traffic in addition to having the capability to serve many light and mid-weight business jets which might operate on the airport. In any case where the main runway was closed to traffic, the longer the parallel runway the greater the portion of traffic which could still operate on the airport.
- Noise contours prepared using the FAA's Integrated Noise Model indicated little difference between the no - build and the build condition for Alternative Two as well as Alternative Three. The comparison of the no - build with Alternative Three indicates the longer parallel runway allows the spreading of the traffic and slightly reduces the projected impact on residential land uses. (See Section 5.6.6)
- Noise contours run to asses the potential impact from strengthening the runway to accommodate high end general aviation jets showed virtually no change in noise levels. (See Section 5.7)
- The airport has limited space upon which to develop additional aircraft basing areas as well as being limited in its ability to handle stormwater on airport. Without the acquisition of additional land, the airport will be limited it its ability accommodate the forecast of aircraft basing needs. Without additional area to accommodate flood plain compensation the areas planned for additional basing facilities may be restricted.
- Alternative One (3,500 foot runway) is estimated to cost approximately 12 percent more than Alternative Two (4,400 foot runway) and approximately 7 percent more than Alternative Three (5,000 foot runway) but has significantly less capability to serve the traffic.

## **1.10 AIRPORT MASTER PLAN RECOMMENDATIONS**

The overall airport master plan as presented on the Airport Master Plan graphic (See Exhibit 7 - 1) is recommended to include the following elements:

- Alternative Three, the 5,000 foot parallel runway based on current Taxiway Z (formerly Taxiway B).

- A replacement for and extension of Taxiway Y (formerly Taxiway X) to allow access from the Northside Basing area to existing Runway 25. The selection of an alternative other than the original runway allows the development of this taxiway.
- Strengthening of the existing main runway to a weight bearing capacity of 100,000 pounds dual wheel classification.
- The acquisition and development of the North Central Basing Area land immediately adjacent to the airport north of Airport Road.
- The acquisition and development of the Northwest Basing Area located between Hurricane Shoals Road and SR 316 and bounded by Hosea Road on the west.

## ***2.0 EXISTING AIRPORT FACILITY***

### ***2.1 AIRPORT LOCATION***

Gwinnett County Airport - Briscoe Field is one of the Atlanta Metropolitan Area's busiest and most important general aviation airports. The airport serves the northeastern portion of the Atlanta area, Gwinnett County, and much of the area in the I - 85 corridor. The airport is the most important general aviation airport between I - 285 in the metro area and the Georgia - South Carolina state line. The airport also serves as a reliever for Hartsfield - Jackson International Airport. The reliever function allows the airport to serve virtually all types of general aviation aircraft and preserves the capacity of the air carrier airport for the air carrier traffic. Gwinnett County Airport plays a large role in the air transportation system for the Atlanta Metro Area and the economy of the greater Gwinnett County area.

The airport lies along Georgia Highway 316, also known as University Parkway, at the northeast corner of the City of Lawrenceville. University Parkway is a heavily traveled route between the Atlanta Metropolitan Area and the University of Georgia complex in Athens.

### ***2.2 AIRPORT ENVIRONS***

Noting the above location, the airport is essentially bounded on all sides by transportation facilities. SR 316 lies to the north along with the airport access road, Airport Road. Cedars Road lies to the east while Hosea Road forms the western boundary of the airport. The south boundary is formed by a rail line.

The airport also lies near the headwaters of the Alcovy River, which lies just east of Cedars Road, and serves as the passage way for several significant stormwater drainage streams. The overall area is characterized by rolling terrain with significant differences in topographic elevation. Although there are currently areas of significant vegetative cover, much of the surrounding area is characterized by a moderate level of light industrial and commercial development. The area is illustrated by Exhibit 2 - 1.

The current Gwinnett County 2020 Land Use Plan Map indicates that the area around the airport is expected to remain largely light Industrial, commercial and institutional/public space. The Gwinnett County jail as well as county facilities adjacent to the airport property and south of the railroad tracks is considered institutional / public space. There are also other county facilities in the area as well. The airport itself is classified as transportation/communication/utilities as is a portion of the area between the airport and Highway 29 to the south. The land use classifications noted above in the immediate environs of the airport are generally considered to be compatible with airport operations.

Beyond the immediate environs of the airport the land use plan indicates an expectation for generally residential development. The area from northeast through



Exhibit 2 - 1

# Gwinnett County Airport Environs



southeast is generally expected to be low residential while the more heavily developed areas to the west include areas of medium density interspersed with the low density residential. Exhibit 2 – 2 illustrates a portion of the 2020 land use plan in the vicinity of the airport.

### ***2.3 GROUND ACCESS AND TRANSPORTATION***

As noted above, Gwinnett County Airport essentially lies in a multi-modal transportation corridor. The airport lies immediately along SR 316 not far from the I-85 corridor from the Atlanta Metro Area to the Georgia – South Carolina state line. In addition the south boundary of the airport abuts a high activity rail line.

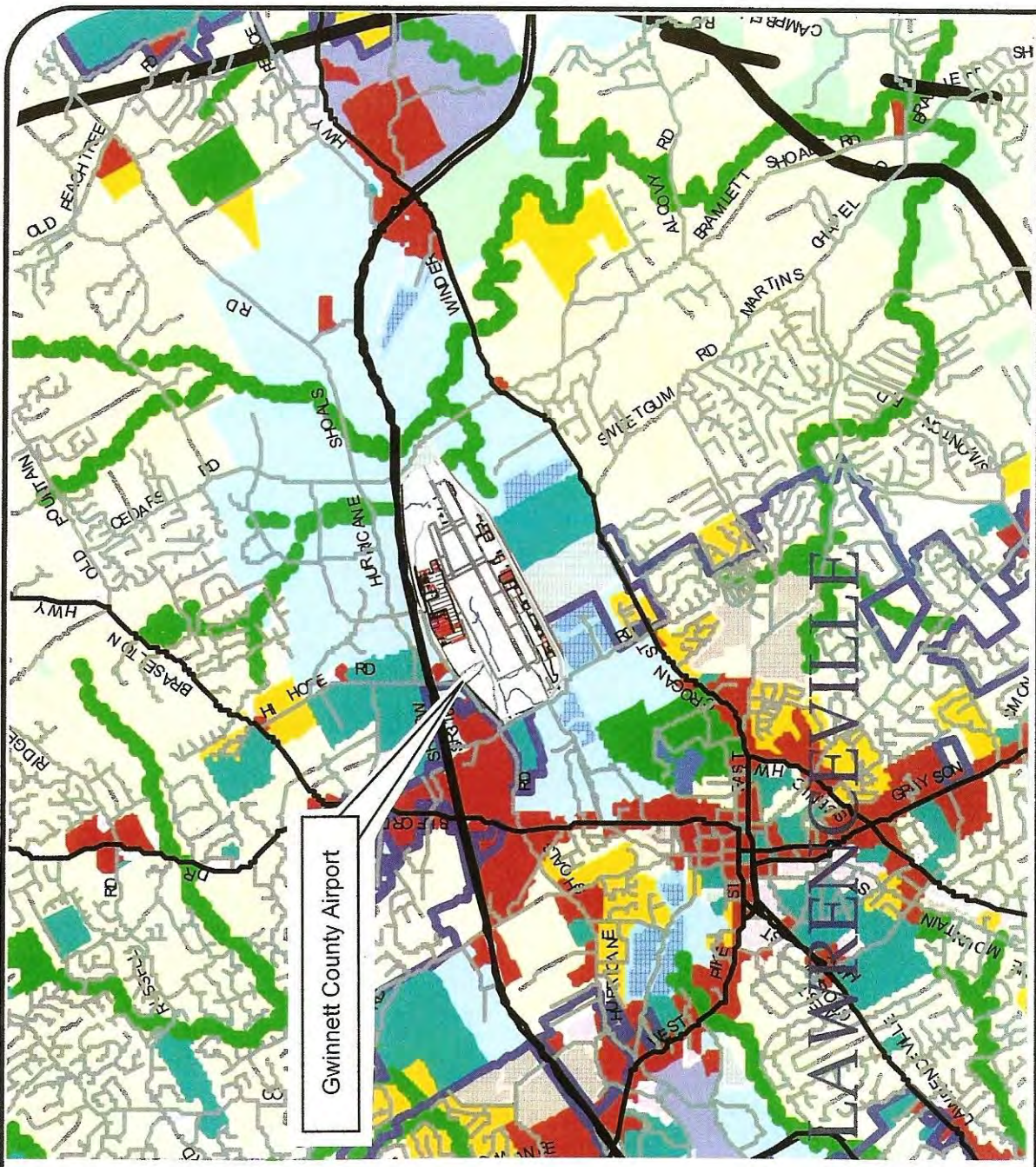
SR 316 is a four lane divided with median high activity arterial route utilized by thousands of commuters daily. The portion of the road from I - 85 to Lawrenceville – Suwannee Road is limited access with the portion east of Lawrenceville – Suwannee consisting of four lane controlled access.

Given the level of traffic on the route, several different plans have been considered for expanding the capacity of SR 316. In previous years, Georgia DOT had under study the expansion of SR 316 to limited access with collector/distributor roads along the side of the highway. That planning was not finalized by GDOT but a similar plan was under consideration by a private consortium to upgrade SR 316 to a limited access toll road. However, at this writing, that proposal has been withdrawn.

GDOT now has under consideration the development of High Occupancy Vehicle (HOV) lanes with intersection improvements on SR 316 from I – 85 to terminate at Progress Center Avenue. The continuation of Progress Center Avenue across SR 316 currently becomes the entrance connector to Airport Road which serves as one of the airport's entrances off SR 316. GDOT held public information meetings in the Summer of 2006 to brief the public on current plans for the HOV project. While it is understood that some change in plans is still possible as the program moves forward, as currently shown by GDOT, the HOV lane construction will have the possibility of major changes for the airport area traffic and access to the airport specifically.

Draft documents for the potential HOV projects would convert the intersection at High Hope / Hurricane Shoals and SR 316 from an at-grade intersection with a traffic light to a grade separated intersection with no access to SR 316. The bridge structure would be slightly realigned from the current roadway alignment and would be a “west facing” interchange for HOV lanes only. Single occupancy vehicles will not be able to exit SR 316 at Hurricane Shoals. Traffic entering SR 316 westbound at Hurricane Shoals will only be allowed to enter if they are HOV qualified.

The current HOV project plans call for Hosea Road's access to SR 316 to be terminated. A cul-de-sac turnaround would be constructed on Hosea Road prior to SR 316. The HOV project would also terminate Progress Center Avenue's access to SR 316 by closing the entrance / exit at Progress Center. The same would be the case for Airport Road entrance / exit to SR 316 directly across from Progress Center Avenue.



**Legend**

- AGRICULTURE
- RURAL RESIDENTIAL
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- MIXED-USE REDEVELOPMENT
- INSTITUTIONAL/ PUBLIC
- PARK CONSERVATION & RECREATION AREAS
- WATER
- TRANSPORTATION/ COMMUNICATION/UTILITIES
- COMMERCIAL/ RETAIL
- OFFICE/ PROFESSIONAL
- OFFICE/ DISTRIBUTION/ TECHNOLOGY
- LIGHT INDUSTRIAL
- HEAVY INDUSTRIAL
- MUNICIPAL BOUNDARIES
- PROPOSED ROADS
- 100YEAR FLOOD PLAIN STREAMS (FEMA)

Source:

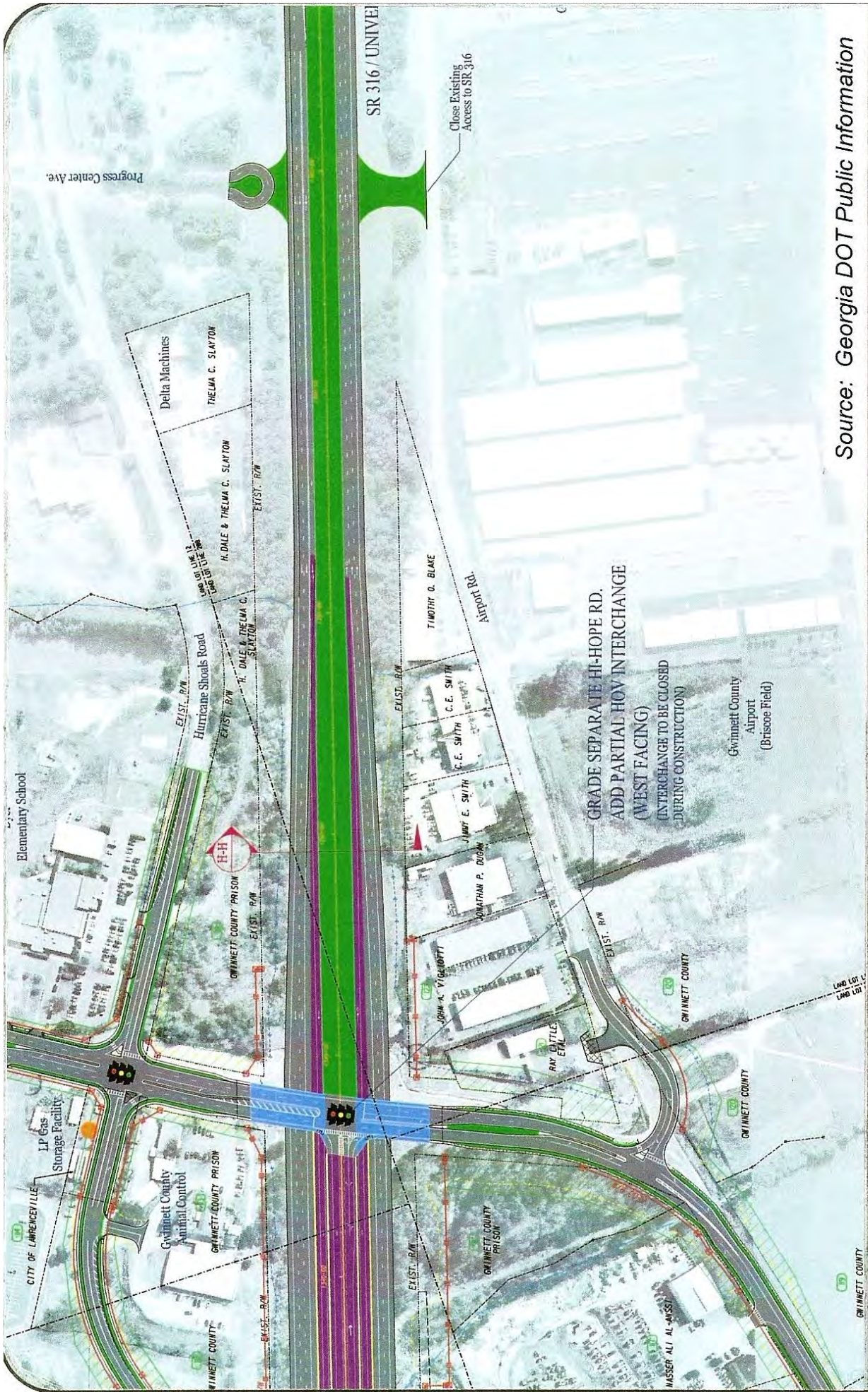
Gwinnett County Planning

Exhibit 2 - 2

**Airport Area 2020 Land Use Plan**



**PAII**  
Project Team



Source: Georgia DOT Public Information



Exhibit 2 - 3  
 Potential SR 316 Roadway Improvements

The area and HOV project are generally illustrated by Exhibit 2 – 3. The HOV project will have a substantial effect on Gwinnett County Airport access since the project will close all current airport access points off SR 316. Traffic will be required to use alternate routes exiting 316 at either SR 120 or Cedars Road and using surface streets for access to the airport. In addition, it is considered likely that the HOV project will alter surface traffic patterns and volumes of traffic in the area since surface street traffic will not have access to SR 316.

While plans for the project are still under development, it is believed the project is slated to begin in the 2009 – 2010 timeframe.

## ***2.4 ENVIRONMENTAL REGULATION***

Environmental regulation will always play a very large role in any airport development but perhaps not more so than for Gwinnett County Airport. While any development will be subject to all of the expected categories per the National Environmental Policy Act (NEPA), local and state water quality regulations will play a large role due to the stormwater drainage streams which traverse the airport. The body of regulations expected to guide further airport development was enumerated in the *Working Paper No. 1, CURRENT ENVIRONMENTAL REQUIREMENTS OVERVIEW*, October 2004, PAI Project Team. Working Paper No. 1 is attached hereto by reference.

## ***2.5 AIRPORT FACILITY USE***

Gwinnett County Airport consists of a single 6,000 foot by 100 foot runway with a full parallel taxiway on the south side and a partial parallel on the north side of the runway. The complex is served by a system of connecting taxiways. Aircraft basing and servicing facilities are also located on both the north and south sides of the airfield. The general airfield facilities are illustrated by Exhibit 2 – 1.

Gwinnett County Airport is the most capable airport in the northeastern portion of the state. Not only does it have the longest runway in the area, it also has a full instrument landing system (ILS) and medium intensity approach lights with the runway alignment indicator lights (MALSR). Minimums on the ILS approach require a ceiling of 200 feet and ½ mile visibility. With these facilities, the airport serves a wide range of aircraft from small single engine aircraft to essentially all of the aircraft types normally associated with the business and corporate aircraft fleet.

Activities on the airfield include the following:

- Corporate Hangars housing private companies

- Fixed Base Operators providing service to based and transient aircraft
- T-Hangar operators
- Flight Training Schools
- Various types of Aircraft Maintenance
- Aircraft Sales

The airport facilities presently consist of approximately 34 conventional type hangars of various sizes and approximately 157 T-hangars. Additional conventional hangars and T-hangars are under construction as of this writing. The airport also has considerable area available for aircraft parking and tie down. Corporate hangars generally have their own parking and maneuvering aprons while large portions of the aprons are available for public use. The public use aprons serve both transient aircraft visiting the airport as well as numerous aircraft based at the airport.

## ***3.0 AIRPORT ACTIVITY AND REQUIREMENTS***

### ***3.1 EXISTING AVIATION ACTIVITY***

Since the previous Airport Layout Plan Update was completed in the Summer of 2000, significant changes have occurred in the world and in the general aviation industry overall. The events of 9/11/2001 changed the aviation industry and the changes are expected to continue into the foreseeable future. In addition to the changes occasioned by the World Trade Center tragedy, the downturn in the United States economy and prolonged recovery period have also had an effect on the aviation industry overall and general aviation specifically.

These effects can be seen in the recent year's aviation statistics for Gwinnett County Airport. From a high of 115,000 operations reported by Gwinnett Tower for the year 1999, Tower activity has dropped every year until the year 2004 showed a bit of a rebound only to be followed by a decrease in 2005 as well as year to date in 2006.

Gwinnett County Airport activity continues to mirror other airports in the Atlanta metro area and, to a large extent, active general aviation airports in major communities across the nation. In the past decade, as a category, business jet aircraft had the highest rate of increase followed by other turbine powered aircraft (single and multi-engine turboprops). For the nation as well as at Gwinnett County Airport, single engine aircraft continue to be the largest single category although growth of this segment of the aircraft fleet is low if not flat. While the General Aviation Revitalization Act of 1994 paved the way for a resurgence of the general aviation manufacturing industry, the piston powered general aviation fleet is aging significantly and a number of aircraft are retired from the fleet annually. This effectively works against the number of newly manufactured aircraft in the fleet to keep the growth rate of the active fleet low.

Business and corporate use of general aviation has been increasing significantly over the past decade or more. Due to security interests following the events of 9/11 and the rise of fractional ownership, many corporations are turning to general aviation for broader use. In their report FAA AEROSPACE FORECASTS, Fiscal Years 2004 - 2015, March 2004, the FAA indicates that after being introduced to corporate flying through a fractional ownership program, some users have established their own flight departments. Business and corporate aviation are expected to remain a strong component of general aviation activity in the foreseeable future.

## **3.2        *BASED AIRCRAFT ACTIVITY ANALYSIS AND FORECASTS***

### **3.2.1      *CURRENT BASED AIRCRAFT***

Gwinnett County Airport management has periodically had surveys performed to determine the number of aircraft based on the airport. The most recent surveys conducted in 2004 and 2006 produced the following results:

	2004	2006
Single engine aircraft	324	329
Multi-engine (reciprocating) aircraft	46	44
Multi-engine (turboprop) aircraft	11	34
Jets (including turbojets and turbofans)	35	32
Helicopters	16	27
Total Based Aircraft	432	466

Source: Airport Management Records, Spring 2004, updated in Summer 2006

Note: Single engine turbo-props are counted as single engine

This inventory includes those aircraft truly based at the airport but does not include aircraft which are temporarily located at the airport for maintenance or in a sales only inventory. In addition to those based at the airport or temporarily there for maintenance, there are also a number of transient aircraft (aircraft which are not based at Gwinnett County Airport) which visit the airport daily.

### **3.2.2      *BASED AIRCRAFT HISTORY***

Gwinnett County Airport management records provide considerable history of based aircraft over the past decade. The records were compiled through previous master plan efforts as well as activity through the Airport Manager's office although surveys were not taken every year. Exhibit 3 - 1 contains based aircraft information for the years noted.

The information illustrates an increase of 141 aircraft units over a 10 year period representing a compound growth rate of approximately 3.7 percent annually for total based aircraft. The rate also takes into consideration the slight drop in total aircraft from 2002 to 2004. Individual aircraft types comprising the total grew at differing rates with

single engine aircraft increasing some 81 percent over the period from 1993 to 2004 while jets, which had become a fixture at the airport by 1996, increased 3 times over the same period.

EXHIBIT 3 - 1

**BASED AIRCRAFT HISTORY**

**Gwinnett County Airport – Briscoe Field**

	1996	2000	2002	2004	2006
Single engine	264	277	347	324	329
Multi-engine*	44	47	38	46	44
Turboprop	-	14	14	11	34
Jets	10	14	31	35	32
Helicopters	7	0	17	16	27
Total	325	352	447	432	466

\* Includes reciprocating and turboprop engines through 1996

Source: Gwinnett County Airport Management Records, available years.

**3.2.3 THE STATE OF GENERAL AVIATION**

Over the past twenty years or so, from approximately the time the “new” (current) runway was being planned, general aviation in the United States has changed significantly but at no time has the state of aviation in general been as turbulent as the period since 9/11. (General aviation is the term applied to all aeronautical activity except military and air carrier (air line) activity. General aviation activity includes all of the corporate and business aviation activity, training activities, personal aircraft operations, emergency services (police, lifeflight helicopters), agricultural activities and other similar activities.)

The greatest period of manufacturing activity actually occurred in the timeframe leading up to the 1980’s. According to the General Aviation Manufacturers Association (*GAMA*), U.S. general aviation aircraft shipments were at their peak in 1978 with 17,811 aircraft shipped. Due to a number of issues and questions including the price of fuel, the overall economy, and product liability questions, the number of units began to fall significantly to the point of only 928 units being shipped in 1994. Since that time, the number of units produced has grown slightly with 2,816 units reported shipped in 2000. Given the

economy since 2000, the number of units has decreased to 2,137 units having been produced in 2003.

The growth beginning in 1995 may be traced to the overall strength of the economy in the mid- to late 1990's as well as to the General Aviation Revitalization Act of 1994 (GARA) which provided a measure of product liability relief for the general aviation manufacturers. As a result, the general aviation industry began to show signs of revitalization; however, in the period from approximately 1985 to today the industry underwent a significant change and that change is reflected in the current based aircraft fleet for Gwinnett County Airport. As a general statement, while the piston powered portion of the general aviation fleet was suffering a precipitous drop in units delivered, the turboprop and jet fleets were remaining relatively consistent in units delivered. A comparison of the deliveries over time is contained in Exhibit 3 - 2.

EXHIBIT 3 - 2

**NEW U.S. MANUFACTURED GENERAL AVIATION AIRPLANE SHIPMENTS \***

	<b>1984</b>	<b>1989</b>	<b>1994</b>	<b>1999</b>	<b>2003</b>
Single engine	1,620	1,023	444	1,634	1,519
Multi-engine	371	87	55	114	71
Turboprop	271	268	207	239	163
Jets	169	157	222	517	384
Total	2,431	1,535	928	2,504	2,137

\*Does not include helicopters

Source: General Aviation Manufacturers Association, *General Aviation Statistical Databook*.

The snapshots of information for the selected years illustrate the development of the trend toward larger and faster aircraft in the general aviation fleet. Both *GAMA* and the National Business Aviation Association (*NBAA*) report extensive business usage in the higher categories of aircraft. The strength of corporate and business aviation in the overall economy is evidenced by the table above. In 1984 turboprops represented 11 percent of the deliveries while jets represented 7 percent. By 1994, the lowest year of total deliveries, turboprops represented 22 percent of total deliveries while jets represented 24 percent. At that point, almost half of the aircraft delivered were the upper end of the general aviation fleet. What is most notable is the tremendous drop in multi-engine piston aircraft.

By 1999 the single engine fleet had returned to the 1984 level while multi-engine piston aircraft had doubled over the 5 year period from 1994 to 1999 but remained only slightly more than 25 percent of the 1984 levels. By 1999 also, the economy was strengthening and fractional ownership was appearing. Jet deliveries had increased to 517 and represented over 20 percent of the total. Turboprops remained relatively level in the number of units but dropped to approximately 10 percent of the total units delivered.

A more complete picture of the general aviation industry and the general aviation operations within the U.S. includes the addition of general aviation aircraft imported into the U.S. from other locations. A number of high end turboprops and jets have either foreign manufacturers or combined efforts with U.S. firms. A snapshot of this market is as follows in Exhibit 3 - 3. Note the number of jet aircraft imported in 2002.

### EXHIBIT 3 -3

#### U.S. CIVIL AIRPLANE IMPORTS FROM THE WORLD

	1995	1999	2002
Single engine	117	162	223
Multi-engine	7	4	29
Jet (10,000- 33,000 lbs.)	72	239	343
Other (including turboshaft)	63	27	2
Totals	261	432	597

Source: General Aviation Manufacturers Association, *General Aviation Statistical Databook* reporting information from the Aerospace Industries Association.

The picture of high end aircraft usage in general aviation is further supported by data from the National Business Aviation Association (NBAA). The NBAA promotes professional operations of member aircraft. The NBAA member fleet totals 9,560 aircraft as contained in the *NBAA Business Aviation Fact Book 2002*. The NBAA fleet is generally considered to represent the upper end of the general aviation business market. It is also recognized that there are numerous companies and individuals which utilize aircraft for business purposes and which are not members of the NBAA. However, the make up of the NBAA member fleet further supports the supposition that general aviation is moving into jet and turboprop aircraft. A listing of the NBAA fleet is contained in Exhibit 3 - 4.

EXHIBIT 3 - 4

**NBAA MEMBER AIRCRAFT FLEET**

	Number of Aircraft	Percentage
Jets	5,369	56.2
Turboprop	1,969	20.6
Multi-engine	800	8.3
Single engine	803	8.4
Helicopters	619	6.5
Total	9,560	100.0

Source: *NBAA Business Aviation Fact Book 2002*, National Business Aviation Association, Inc.

Taken together, the current based aircraft distribution, the information from *GAMA* and the information from the *NBAA*, the data supports the industry observations that the upper end of the general aviation fleet is the fastest growing and is expected to remain as such. The latest version of the FAA's *Aerospace Forecasts Fiscal Years 2004 - 2015* notes that "There appear to be two separate general aviation economies: turbojet aircraft follow one market pattern; while piston, turboprop, rotorcraft and experimental aircraft follow a separate 'growth' pattern."

**3.2.4 ANALYSIS OF CURRENT BASED AIRCRAFT**

As noted above, a significant change in the composition of based aircraft at Gwinnett County Airport has also occurred over the period since 1991 for which records are available. The years of 1996 and 2006 are compared as follows in Exhibit 3 - 5.

Comparing the based aircraft reported for 1993 versus that of the current inventory reveals that single engine aircraft still make up three quarters of the based aircraft on the airport. The number of single engine aircraft recognizes that Gwinnett County Airport was the primary beneficiary of the closing of Stone Mountain Airport in the mid-1990's. The number of turbine powered aircraft now constitutes over 10 percent of total based aircraft including the 35 based business jets. The first based business jet was noted in the based aircraft count for the year 1992.

EXHIBIT 3 - 5

**COMPARISON OF BASED FLEET COMPOSITION**

	1993	TYPE PERCENT OF TOTAL	2006	TYPE PERCENT OF TOTAL
Single engine	264	81.2	329	70.6
Multi-engine	44	13.5	44	9.4
Turboprops	-	-	34	7.3
Jets	10	3.1	32	6.9
Rotor	7	2.2	27	5.8
Total	325	100.0	466	100.0

Source: Gwinnett County Airport Management Records  
PAII Project Team Analysis

During the period from 1996 to 2006 piston-powered multi-engine aircraft have remained remarkably stable at Gwinnett County Airport given the trend in this category nationwide noting the information presented above as to the state of the industry and the number of units of multi-engine aircraft produced over the past 15 to 20 years. As noted in the *GAMA* data above, very few units of multi-engine aircraft were produced over a lengthy period. Anecdotal information in the industry suggests that multi-engine owners are trading either up or down. As the larger single engine aircraft are manufactured with redundant systems some owners prefer the operating cost of a single engine. Others prefer the additional speed and reliability of the turboprop engines and are moving to multi-engine turboprops as well as the newer category of single engine turboprops.

Based jets at Gwinnett County Airport, while representing a significant change from the 1996 time period, are also considered to be within the character of the overall changes in general aviation and the Gwinnett market. As illustrated by Exhibit 3 - 1, a significant change in the rotor activity occurred between 2004 and 2006. The number of helicopters on an airport can fluctuate widely as new helicopter operators' move onto the field or off.

### **3.2.5 FORECAST METHODOLOGIES**

There are several statistical and forecasting techniques utilized in the aviation industry for forecasting aviation activity of all types. The techniques used for general aviation airports vary widely based on the location of the airport and the general population of the airport's service area. Gwinnett County Airport serves quite a large geographic area in the Northeast Metro Atlanta market. The airport serves the greater Gwinnett County area in addition to much of the area in the University Parkway corridor as well as the I-85 corridor to the state line. Gwinnett County Airport is a major reliever airport with a significant runway and instrumentation to serve virtually the entire general aviation fleet of aircraft. The airport is in the company of three (3) other directly comparable airports in the metro area including DeKalb-Peachtree Airport, Fulton County Airport, and McCollum Field in Cobb County. Falcon Field in Peachtree City and Tara Field in Hampton provide service further on the fringe of the metro area while Winder Airport provides additional service between Gwinnett County and Athens.

Traffic statistics for Gwinnett County Airport indicate the airport to serve a very wide range of traffic including the upper end of the general aviation fleet. The based aircraft include GIVs, a number of different models of the Citation and Lear Jet, as well as Hawkers and Beech Jets. Models of the Challenger have also been based at the airport in the recent past as well as a mix of training and personal traffic along with single and multi-engine aircraft engaged in extensive business usage. The airport serves the economy for air transportation services for a wide area.

Airport plans usually provide forecasts of aviation activity into the future in order to estimate the types and amounts of facilities needed to satisfy the forecast demand. As noted above, there are several techniques which may be utilized in forecasting the traffic as described below.

- **Trend Analysis** – Trend analyses may be completed by several methods but all essentially evaluate the relative increase or decrease of an activity over time. To forecast from a trend line suggests that the forecaster generally expects external factors to act in the future similar to the past. External factors may include the relative strength of the economy, weather, and so forth.
- **Regression Analyses** – Regression analyses are similar to trend analyses but evaluate the activity of a dependent variable or activity based on the activity of an independent activity. Stated differently, activity 2 reacted a particular way because activity 1 changed. Regression analyses may utilize single or multiple independent variables to describe the activity of a dependent variable. While regression analyses are extensively used for data analysis, their use as a forecasting tool is dependent on the availability of forecast for the independent variables. Population is often used as an independent variable for forecasting based aircraft.

- **Market Share** – A market share analysis evaluates how one airport is doing versus all of the other airports in a particular market such as the Atlanta Metro Area, the State of Georgia, or perhaps the area which makes up the Southern Region of the FAA. This methodology assumes the local airport is going to continue to track against the “market” as it has done in the past, or be better or worse. This approach also requires a forecast for the “market.” In a reasonably closed system such as the metro area, changes in market or movement of aircraft within a market may occur due to external factors. For example, the placement of large hangars and many more jet aircraft at one airport may cause smaller aircraft to relocate to other airports, or as in the case of Stone Mountain Airport, the closure of an airport.
- **Rate of Change** – A rate of change forecast presumes that a particular item is going to increase or decrease at a particular rate. The rate may be expressed in a percent increase or decrease annually, a number of units annually and so forth. While rate of change forecasts may be used in any number of ways, they are often used in situations where future activity is expected to differ from the past trend of activity.

There may also be other statistical forecasting methods used depending on the set of data and circumstances surrounding the airport in question. Forecasts may also be prepared as micro or macro forecasts. Micro forecasts are more colloquially known as “bottom up” versus macro or “top down.” A bottom up forecast is developed primarily on the grass roots activity.

A top down forecast is most often a distribution (or market share) to the local airport from a forecast for a broader area. An example of this type of forecasting is that often used in airport system forecasting. A typical “system” may be defined as all of the airports in the Atlanta Metro Area. The airports operate in a “system” with each airport serving a particular role. The “top down” forecast for a system would include a forecast for the system as a whole as well as a distribution forecast to each airport in the system.

In most areas, the strength of the regional and local economies is a key determinant in the activity at the local airport and that premise appears to hold true for the Gwinnett County Airport market.

### ***3.2.6 BASED AIRCRAFT FORECAST***

**Methodology Discussion** –Forecasting methodologies require an accurate stream of data upon which to base trend or statistical analyses. The fluctuations in activity statistics in both the general aviation industry overall as well as in individual airport systems often contribute to a low historic correlation between aviation activity and independent variables because of the difficulty of isolating socio-economic factors which determine activity and support levels for individual airports. As an example, the closure of Stone Mountain Airport caused a redistribution of based aircraft in the metro system and a gain of based aircraft for Gwinnett County Airport specifically, but did not occasion a change in population factors.

Based aircraft activity at Gwinnett County Airport has continued to increase through time as evidenced by the above tables. An examination of the increase of total

based aircraft over time indicates a strong correlation between the growth of total based aircraft and the passage of time. The historic data indicates that the total based aircraft have doubled since 1992 during a period in which Gwinnett County was often among the fastest growing counties in the nation. Maintaining the rate of growth since 1991 into the future would appear unlikely as the county's rate of growth begins to moderate as the county changes to urban from rural. Forecasting off a trend over time assumes that the same factors are going to be in place in the future as were in the past. This would include the growth of population and socio-economic factors. Information from Gwinnett County indicates population grew some 70 percent over the decade of the 90's but the growth rate is forecast to slow to approximately 40 percent over the decade of the 2000 - 2010 and to 25 percent over the decade from 2010 - 2020 according to the Gwinnett County Department of Financial Services, Forecast and Research Division.

In addition to the maturation of the growth in Gwinnett County, the changes in the world since 9/11 suggest additional changes in the future. The FAA produces detailed forecasts for the fleet of aircraft and operations for the nation based on many variables including the overall state of the economy and the production of Gross National Product. The most recent edition of the *FAA Aerospace Forecasts Fiscal Years 2004 - 2015*, recognized that significant changes are occurring in general aviation.

The FAA rate of change forecast is provided for the separate categories of aircraft and aggregated to a total for the fleet based on the expectations for growth of the various components. Based on events since the 1999 - 2000 period in the economy and in various military actions, the FAA forecast rates of growth, as applied to Gwinnett County Airport, produce a very low growth for based aircraft. Therefore, three methods of forecasting are employed to produce a target forecast for the airport. These methods are described as follows.

**Trend / Regression Based on Population** - Based on the correlation produced by the growth trend of total based aircraft over time in years, a similar regression analysis of total based aircraft versus population growth from 1991 to 2005 also conducted. That analysis also produced high correlation values of **.93**. Population forecasts were obtained from the Gwinnett County Department of Financial Services, Forecasting and Research Division, August, 5, 2003 for the period from 2000 to the year 2025. Over the twenty years of the forecast period, Gwinnett County total population increases from 596,652 in the year 2000 to 1,130,852 for the year 2025. As might be expected, the forecast of total based aircraft based on population forecasts produced a strong growth forecast as shown in Exhibit 3 - 6.

This forecast would produce a growth rate of nearly 70 percent and nearly 300 additional aircraft over the 21 years of the ALP update horizon. While an average growth of approximately 15 aircraft per year seems possible given the growth of the County, it would also appear to be very strong in view of the more conservative approach taken by the FAA.

**Growth Rate Forecast** - The FAA forecasts recognize the substantial change brought to the general aviation industry by the fractional ownership programs. These programs allow an individual or company to make use of an aircraft jointly with several others and it makes the use of jet aircraft more affordable for a wider portion of the economy. In their analysis,

EXHIBIT 3 – 6

**TOTAL BASED AIRCRAFT FORECAST ON POPULATION**

<b>Year</b>	<b>Population *</b>	<b>Total Based Aircraft</b>
2000 (Actual)	596,652	352
2005	726,103	453
2010	841,937	532
2015	949,850	605
2020	1,050,357	673
2025	1,130,852	728

Source: Population Forecasts – Gwinnett County Department of Financial Services, Forecast and Research Division, 8/5/2003;  
 \*Population values between 2000 and 2025 interpolated for forecasts;  
 Correlation coefficient for historic based aircraft vs. population - .93;  
 Pegasus Associates International, Inc. Analysis

the FAA assumes a continuation of the expansion of the fractional programs to bring new users into the market. Again, noting that the FAA sees two different markets in general aviation, while the total general aviation fleet is expected to grow at a very moderate rate of 1.2 percent per year over the short- to intermediate-term period (through 2015), jet aircraft are expected to be the fastest growing category while single engine aircraft have a positive but very low growth rate. Rotorcrafts are also expected to have a very low growth rate while multi-engine turboprops are expected to grow at a rate slightly higher than the fleet overall. Multi-engine piston aircraft are expected to decline at 0.5 percent per year which is a rate of decline higher than several of the growth rates.

The growth rates contained in the FAA’s most recent forecast for the years 2004 – 2015 have been revised downward from the same forecasts presented in the FAA’s 2001 – 2012 publication. The downward revision reflects the aftereffects of the World Trade Center tragedy as well as the soft economy. The growth rates from the most recent publications were used as the basis for assessing the future aircraft demand for Gwinnett County Airport.

Since the FAA growth rates are provided by type and aggregated to a total, Exhibit 3 - 7 illustrates the forecast by aircraft type. The annual growth rates were derived directly from the FAA’s long-range forecasts. In the years through 2015, the rates are taken from the *FAA Aerospace Forecasts Fiscal Years 2004 – 2015*. The *FAA Long-Range Aerospace Forecasts Fiscal Years 2015, 2020, 2025, and 2030; Office of Policy and Plans, June 2003* was consulted for years beyond 2015. There are small differences between the documents since the shorter range (2004 – 2015) document was updated

as of March 2004. The shorter range forecast recognizes the significant increase in jet activity because of the fractional ownership, the advent of the new category of light sport aircraft, and the expected advent of micro jets. The document also recognizes the decline in the expectation for multi-engine piston aircraft, but expects the overall fleet to increase slightly with new aircraft replacing aircraft which will retire from the system. The FAA growth rates may be a bit optimistic in the very short run due to an expectation that the recovery from the recession in the early years of the new century would have returned the U.S. to a strong economy by the year 2005. The forecast of based aircraft produced by growth rates is contained in Exhibit 3 - 7.

Exhibit 3 - 7 illustrates that over the 21 year period from 2005 to the year 2025 the airport is forecast to have an increase of nearly 70 based aircraft. This low growth rate forecast is contrasted to the 300 based aircraft achieved by the regression forecast based on Gwinnett County's forecast population. For the year 2025, the two forecasts produce a difference of 225 aircraft. Given that the Atlanta Metropolitan Area overall and Gwinnett County specifically have strong economies and even in the face of the current economy forecasts for the area remain strong, the application of the FAA growth rates for

EXHIBIT 3 - 7

**BASED AIRCRAFT FORECAST BY GROWTH RATES**

Aircraft Types	2010	<i>Growth Rate %</i>	2015	<i>Growth Rate %</i>	2020	<i>Growth Rate %</i>	2025
Single Engine	330	<i>1.015</i>	335	<i>1.013</i>	339	<i>1.013</i>	344
Multi-Engine Recip	46	<i>.997</i>	46	<i>.995</i>	46	<i>.995</i>	45
Turboprop	12	<i>1.05</i>	13	<i>1.05</i>	14	<i>1.05</i>	15
Jets	47	<i>1.21</i>	56	<i>1.20</i>	68	<i>1.20</i>	81
Rotor	17	<i>1.03</i>	17	<i>1.025</i>	18	<i>1.025</i>	18
Total	451		467		484		503

Source: FAA Growth Rate Forecasts, "FAA Aerospace Forecasts Fiscal Years 2004 – 2015", March 2004, "FAA Long-Range Aerospace Forecasts Fiscal Years 2015, 2020, 2025, and 2030, Office of Policy and Plans, June 2003"  
PAII Project Team Analysis

the country overall may provide a low range forecast. Similarly, the application of a totally unconstrained forecast based on population growth would also appear to be unlikely. These forecasts do, however, appear to offer reasonable upper and lower limits for unconstrained forecasts for the airport. Again, the unconstrained forecast presumes that the factors which have produced the historic growth will remain viable in the future including adequate facilities to accommodate the growth. Whether facilities to accommodate the growth can be developed on the airport will be determined during the alternatives analysis.

Recognizing that the two forecasts noted above may provide upper and lower expectations for future growth, a single forecast is more useful for facility planning than is a range. Therefore, for purposes of producing a planning forecast for Gwinnett County Airport, a modified median forecast for total based aircraft is proposed. The modification to the median is that over the 20 year period of the forecast, the median value of total based aircraft will be reduced 10 percent less than the actual median of the forecasts recognizing that as markets mature, the growth rate tends to slow. The 10 percent reduction of the median value recognizes those 20 years hence, the Gwinnett County economy will be significantly different than it is now. Exhibit 3 - 8 contains a comparison between the forecasts for total based aircraft.

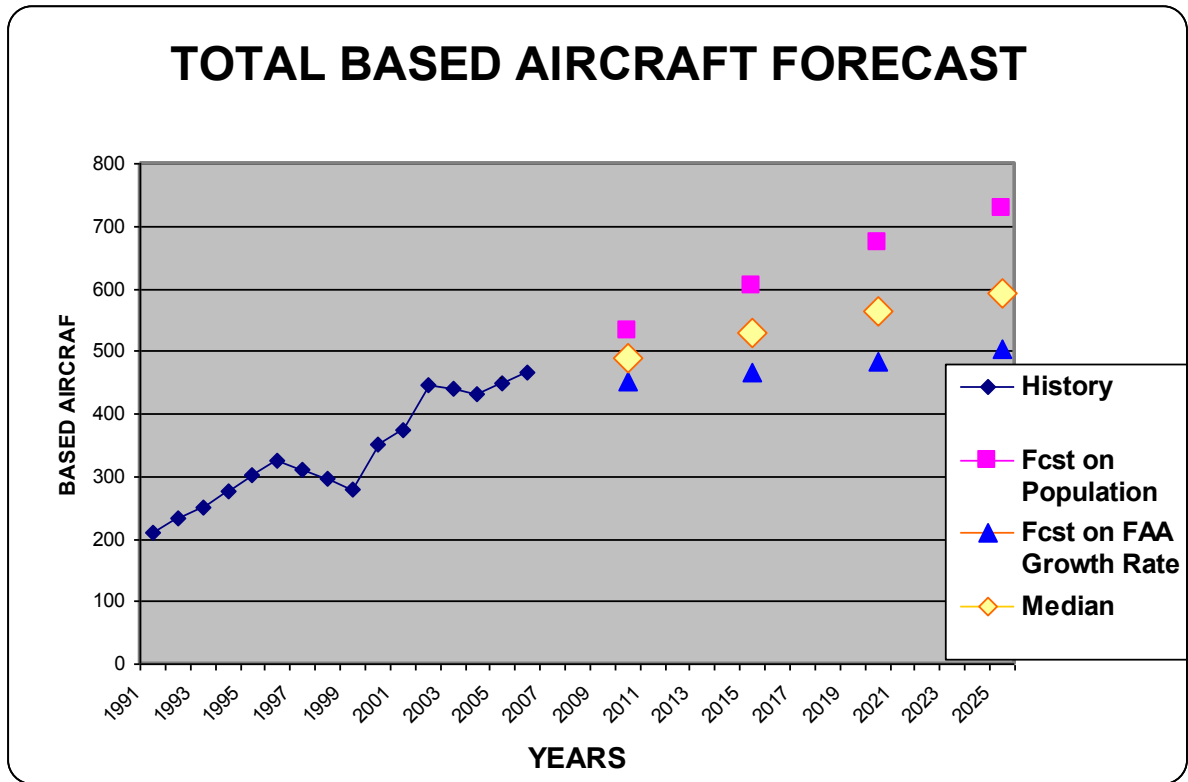
EXHIBIT 3 - 8

**COMPARISON OF FORECASTS FOR TOTAL BASED AIRCRAFT**

<b>Year</b>	<b>Forecast Based on Population</b>	<b>Forecast Based on Growth Rates</b>	<b>Median Planning Forecast</b>
2006 (Actual)			466
2010 (Forecast)	532	464	490
2015	605	467	530
2020	673	484	565
2025	728	503	593

Source: PAII Project Team Analysis

The planning forecast as contained in Exhibit 3 - 8 shows a growth of some 127 aircraft between 2006 and 2025. This level is a bit more than double the growth derived by the low forecast and a bit more than half of the additional aircraft produced by the high forecast. These forecasts are illustrated in Exhibit 3 - 9.



Source: PAII Project Team Analysis

**Future Based Aircraft Fleet** – The general aviation fleet of the future as well as the based aircraft fleet for Gwinnett County Airport may look a lot like the existing fleet in terms of the aircraft making up the fleet. As noted in the above discussion, jet aircraft are expected to be the fastest growing general type in the fleet and FAA’s forecast expects that the piston single engine aircraft will remain the single largest category. By fact of the sheer numbers of the starting point, single engine aircraft will remain the dominant aircraft type based at Gwinnett County Airport. Whether piston or turbine powered, the single engine aircraft will serve many needs. There will remain a training need, single engine aircraft will still serve personal transportation needs, and single engine aircraft will continue to serve a large business function.

Included under the category of single engine aircraft are the single engine turboprop aircraft now on the market. While the dominant type may be single engine, these very high end business singles as well as cargo / utility singles may well see significant growth within the single engine category. These include aircraft manufactured in the United States as well as overseas.

In addition, there are new aircraft coming to the market. Several of the new aircraft are faster than the older models and are made of composites. Product refinement is

continuing in the jet fleet as well. In addition to operating economy, new jets are distinctly quieter than the old models. There are a number of new categories expected in the future including “micro” (smaller) jets and very light sport single engine aircraft.

The overall general aviation jet fleet is also expected to have increasing numbers of larger aircraft which may be reflected in the Gwinnett County Airport based aircraft fleet. The airport has had larger general aviation jets, including Gulfstream IV’s and Challengers, based at the airport with numerous visits by these and larger aircraft. It is entirely likely that additional larger jets will be based at the airport in the future since it is known that similar aircraft are based elsewhere in the Atlanta area and the airport continues to get inquiries from aircraft operators wishing to base at the airport. One recent inquiry was for a Global Express. It is also entirely likely that larger aircraft will continue to visit as transient aircraft. These aircraft include the upper end of the Gulfstream fleet such as the G-V, the Bombardier Global Express, and potentially the Boeing Business Jet (BBJ).

In 2025 the general aviation fleet will remain similar to the current fleet but the rate of change in avionics, redundant systems, economy of operation, and engines types will change at a faster rate than the last 20 years.

Exhibit 3 - 10 contains the forecast of based aircraft by aircraft category. This forecast is produced from the Median Planning Forecast, the current based aircraft fleet, and the FAA’s forecast of future general aviation fleet growth. The forecasts were prepared by utilizing the differentiation of aircraft types as contained in Exhibit 3 – 5 expanded by the growth rates by category of aircraft types as described in Exhibit 3 – 7. Minor rounded was used as necessary to bring the total based aircraft in line with the control total of the median planning forecast. This forecast will be used in assessing facility needs.

### ***3.3 AIRCRAFT OPERATIONAL ACTIVITY ANALYSIS AND FORECASTS***

#### ***3.3.1 AIRCRAFT OPERATIONS DEFINED***

The term aircraft operations, quite often shortened to operations, means the movement of the aircraft on the airport in takeoff and landing activities. There are several different types of movement on and around the airport which are defined as follows.

**Takeoff / Departure** – Takeoff and departure are generally synonymous terms describing the initial ground run of the aircraft accelerating to the speed of liftoff. The term departure may also be applied to the aircraft’s flight track over the ground while maneuvering in the area or leaving the area. A takeoff counts as one operation.

**Landing / Arrival** – Landing and arrival are generally the opposite of the takeoff or departure – meaning to arrive at the airport and land. A landing counts as one operation.

**Touch and Go** – An operation of the aircraft generally including both a landing and a takeoff. This exercise is often used in training operations in which the aircraft makes an approach, lands, and rather than stopping, reapplies power to achieve takeoff speed. Since a touch and go is both a landing and a takeoff, a single touch and go counts as two operations.

Exhibit 3 - 10

**GWINNETT COUNTY AIRPORT - BRISCOE FIELD**

**MEDIAN PLANNING FORECAST OF BASED AIRCRAFT**

		2006*		2010		2015		2020		2025	
Aircraft Categories	Number of Aircraft	Percent of Based Fleet	Number of Aircraft	Percent of Based Fleet	Number of Aircraft	Percent of Based Fleet	Number of Aircraft	Percent of Based Fleet	Number of Aircraft	Percent of Based Fleet	
<b>Single engine</b>	<b>323</b>	69.3%	<b>331</b>	67.6%	<b>348</b>	65.7%	<b>372</b>	65.8%	<b>379</b>	63.9%	
<b>Multi-engine Piston</b>	<b>44</b>	9.4%	<b>37</b>	7.6%	<b>35</b>	6.6%	<b>35</b>	6.2%	<b>33</b>	5.6%	
<b>Multi-engine Turboprop</b>	<b>40</b>	8.6%	<b>46</b>	9.4%	<b>50</b>	9.4%	<b>52</b>	9.2%	<b>53</b>	8.9%	
<b>Jets</b>	<b>32</b>	6.9%	<b>46</b>	9.4%	<b>65</b>	12.3%	<b>72</b>	12.7%	<b>92</b>	15.5%	
<b>Helicopter</b>	<b>27</b>	5.8%	<b>30</b>	6.1%	<b>32</b>	6.0%	<b>34</b>	6.0%	<b>36</b>	6.1%	
<b>TOTAL</b>	<b>466</b>	100.0%	<b>490</b>	100.0%	<b>530</b>	100.0%	<b>565</b>	100.0%	<b>593</b>	100.0%	
	*Existing										
Source: Median Planning Forecast for Total Based Aircraft											
Airport Management Records for Existing Based Aircraft											
FAA Aerospace Forecast Fiscal Years 2004- 2015, March 2004											
FAA Long-Range Aerospace Forecasts Fiscal Years 2015, 2020, and 2025, Office of Aviation Policy and Plans, June 2003											
PAII Project Team Analysis											

**Low Approach** - In certain training activities, especially instrument training, an aircraft may make an instrument approach to the airport and rather than landing as in a touch and go, the aircraft remains in the air and transitions from the arrival portion of the activity to the departure portion. A low approach counts as two operations. A variation of the Low Approach used in training activities is a practice Missed Approach where the aircraft on the instrument approach ceases the approach before reaching the airport and returns to the beginning point for the approach. Stopping the approach prior to the aircraft reaching the runway allows the Air Traffic Control Tower (ATCT) to release a departure without undue delay.

**Missed Approach** – A true missed approach is occasioned when an aircraft on an instrument approach in instrument weather conditions reaches the minimums for the approach (designated in cloud ceiling and visibility requirements) and the pilot does not see the runway and cannot land. The aircraft is then required to execute a missed approach. The aircraft may attempt another landing, hold for the weather to clear above minimums, or proceed to an alternate location.

**Local Operations** – Local operations are those conducted by aircraft which remain in the traffic pattern at the airport.

**Itinerant Operations** – Itinerant operations are those in which the aircraft leaves the local traffic pattern for another destination after departure or arrives from somewhere other than the local traffic pattern. Training operations conducted by aircraft based at Gwinnett County Airport which depart the pattern to do training exercises at another location are counted as itinerant operations.

**Transient Operations** – Transient operations are arrivals and departures by aircraft which are not based at the airport.

**Instrument Operations** – Aircraft may fly on VFR (visual flight rules) or IFR (instrument flight rules) flight plans. An instrument operation is an arrival or departure by an aircraft on an instrument flight plan regardless of the weather.

**Instrument Approaches** – Aircraft operating on an IFR flight plan must transition from the enroute portion of the flight to the landing operation by conducting an instrument approach such as the ILS approach to the runway. The final portion of an instrument arrival is considered to be an instrument approach if the weather at the final approach fix is below VFR minimums. If the weather is above VFR minimums the approach is considered an instrument operation.

**Operations Definition Discussion** – The number of takeoffs and landings, or operations, define how busy a particular airport may be. The number of operations is used as a measuring stick for several different portions of the airport activity and will be used throughout the master plan update to describe activities on the airport as well as airport needs.

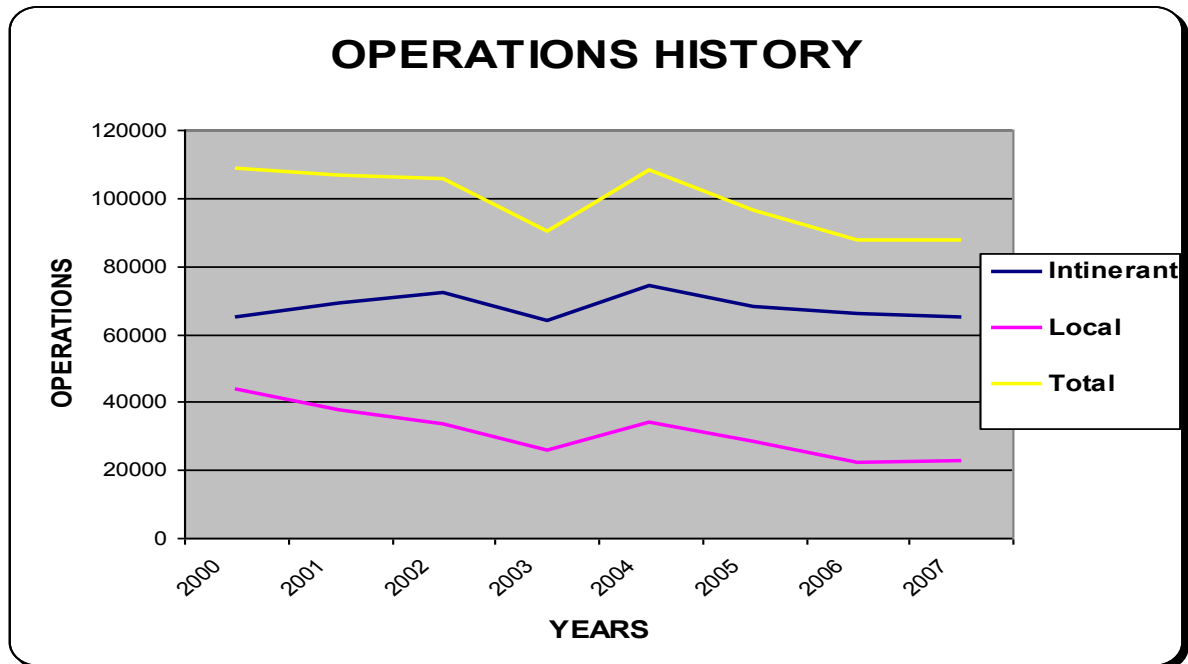
### 3.3.2 OPERATIONS HISTORY

Gwinnett County Airport is one of the busiest airports in the state serving general aviation operations. In terms of total general aviation operations for the year 2002 (FAA APO website Traffic Statistics), Gwinnett County was fourth in the state behind DeKalb – Peachtree, McCollum Field in Cobb County, and Fulton County Airport. As measured by itinerant operations, Gwinnett County was a strong third behind DeKalb Peachtree and Fulton County. That level of itinerant activity is indicative of a strong local economy and business climate. The operational history of the airport is shown in Exhibit 3 – 11.

The table indicates the historic air taxi, general aviation and military traffic utilizing the airport for the noted years. The category of instrument operations indicates that portion of the itinerant operations conducted by aircraft on an instrument flight plan. The difference between the instrument operations and the total operations would indicate the number of aircraft operations conducted according to visual flight rules.

At many general aviation airports the character of the traffic and type of service the airport provides the local community is often denoted by the relationship between itinerant and local operations. Aircraft involved in air transportation services usually conduct itinerant operations while the local operations are most often indicative of local flight training and proficiency flights and maintenance flights. The contribution of each to the total operations for the airport over time illustrate changes in the airport’s service as well as possibly changes in the underlying economic structure of the area. In the following chart, Exhibit 3 – 12, the number for each category (itinerant or local) is illustrated as well as the total which is the sum of both categories. See Appendix A-1 for an update on traffic data.

Exhibit 3 – 12



Source: Airport Management Records  
PAII Project Team Analysis

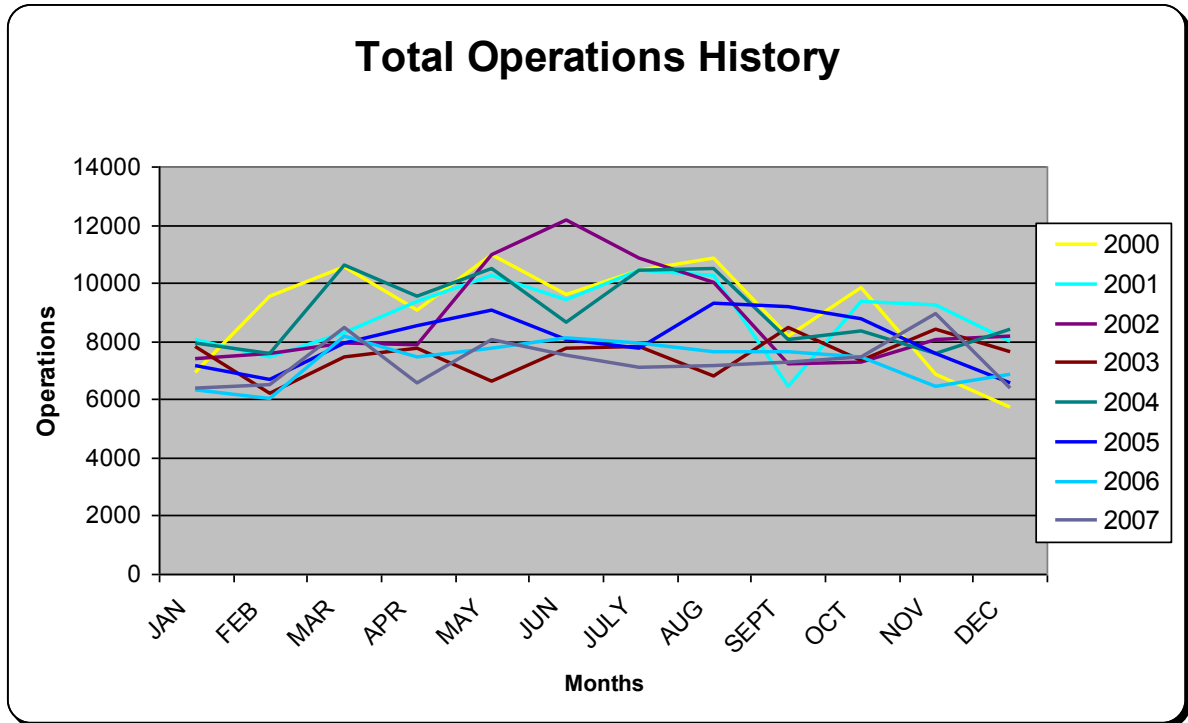
EXHIBIT 3 – 11 LANDSCAPE TABLE FROM EXCEL BAC BY CATEGORY

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The graphic illustrates the decrease in total operations from the high point recorded in 1999 by the tower through the significant drop in all categories of activity in 2003. The decrease in total operations generally parallels the downturn in the nation's economy over the same period. What is not as obvious is the fairly significant change also taking place between the itinerant and local operations on the airport. In 1998, 54 percent of the operations were itinerant, 46 percent local. The itinerant percentage increased every year to reach a high point of over 71 percent in 2003 with 29 percent local. Given that 2003 saw a significant decrease in overall operations, the data would suggest that the training and local traffic was more affected by the downturn in the economy than the activity by those aircraft operating in air transportation such as business and corporate flights.

One of the questions which arise in many locations is that of seasonality or the level of activity throughout the year. While the activity can be affected on a month to month basis by the economy as well as weather, there is often a similar pattern from year to year. Exhibit 3 - 13 illustrates the total operations by month for the several years shown. What is very obvious from the graph is the significant decline in traffic in the year 2003 and that traffic was lower through out the year. The graph illustrates an expected pattern of lower traffic in the winter months with generally higher traffic in the summer months. What is not explained is what appears to be a reasonably large decline in September to be replaced by a return to higher levels in October.

Exhibit 3 - 13



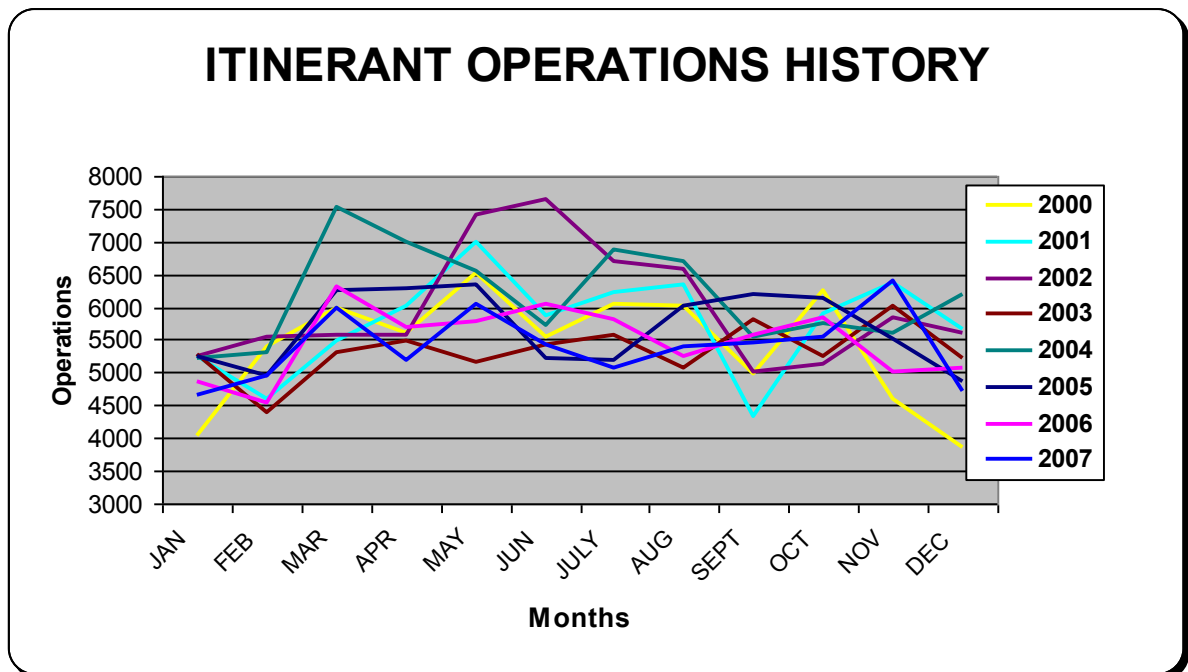
Source: Airport Management Records  
PAII Project Team Analysis

**Total Operations Discussion** - As noted, there are any number of factors which affect the total number of itinerant and local operations in any particular month including the relative strength of the economy, special events and weather. On a month to month basis, the itinerant and local operations are often affected by different factors and may increase or decrease from the previous month differently. Both itinerant and local operations may increase in any month, both may decrease, or one may increase and the other decrease. The following discussion reviews the trends for both itinerant and local operations at Gwinnett County Airport.

**Itinerant Operations** - As noted above, the itinerant operations are those takeoffs destined to terminate elsewhere or landings by aircraft which originated their takeoff elsewhere. Since the itinerant operations now account for approximately 70 percent of the total operations on the airport, the month to month increase or decrease of itinerant operations defines the traffic levels for the airport.

The itinerant traffic history exhibits monthly variations. Exhibit 3 - 14 illustrates a similar monthly pattern to that shown for total traffic. The year 1999 had a very strong summer time period while 2004 illustrated an extremely strong March.

Exhibit 3 – 14

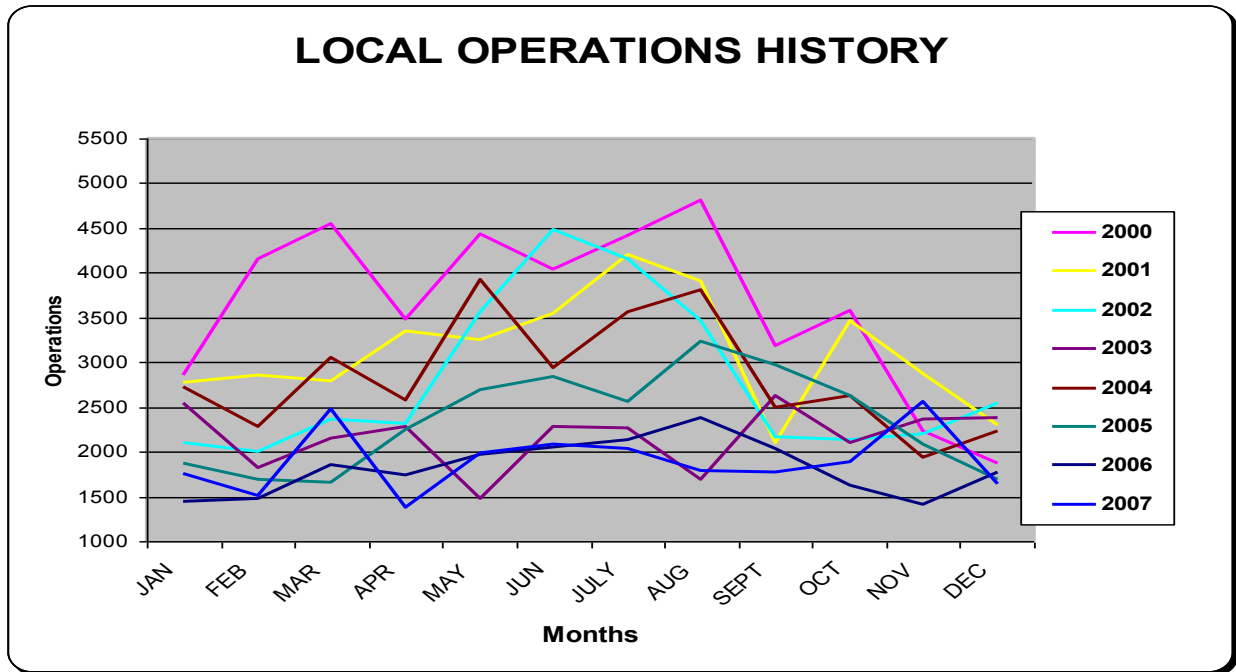


Source: Airport Management Records  
PAII Project Team Analysis

**Local Operations** – Local operations at Gwinnett County Airport illustrate wide fluctuations in the levels of operations from year to year. The fluctuations are so wide to suggest little hint of a true pattern. It is notable that while 1999, 2000, and 2004 illustrated similar curves, the year 2003, with its significant decline in traffic, was fairly counter cyclical. The overall trend suggests that local operations tend to have a low spring, increasing to an above average position in the summer, and falling off sharply during the late months of the year (holiday season).

Local operations, as illustrated in Exhibit 3 - 15 are usually generated by or subject to different factors than are the itinerant operations. Local operations at Gwinnett County Airport are essentially all touch and go or low approach operations which suggests some type of training. The training may be basic or some level of proficiency training. Given that local operations tend to be some type of training, the number of local operations at Gwinnett can be influenced by the type and amount of itinerant traffic. With the mix of traffic ranging from high speed jets to small training aircraft, the operational speed differences are significant. There are occasions where the air traffic control tower suspends local operations if there is heavy in or outbound high speed traffic. This factor can also affect the number of operation at the airport.

Exhibit 3 - 15

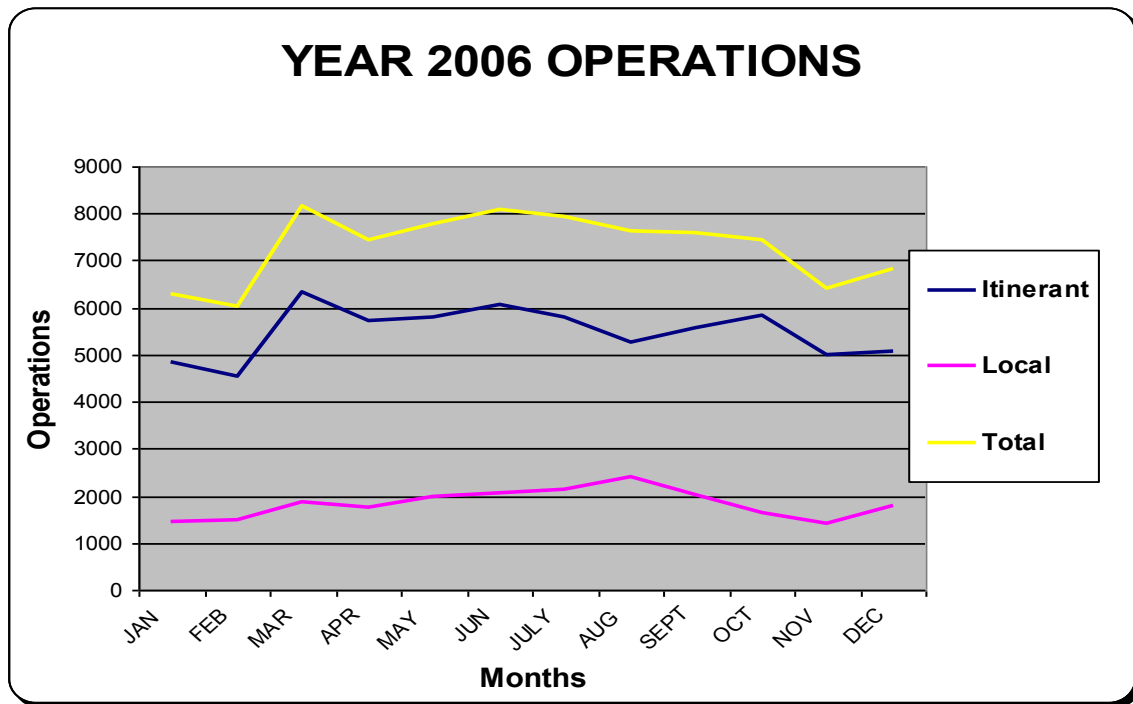


Source: Airport Management Records  
PAII Project Team Analysis

**Itinerant / Local Operations Discussion** – Itinerant operations have been steadily increasing as a percentage of total operations since 1998 to a high of 71.1 percent in 2003 decreasing slightly to 68.4 percent in 2004 but returning to 70.8 percent in 2005. The steady increase in itinerant operations follows the economic status of Gwinnett County over all as developing from a bedroom community to a community with many jobs at home generating travel demands on residents as well as a destination point for visitors doing business in Gwinnett County. At the same time, the rise of itinerant operations at Gwinnett County Airport may well have also caused a redistribution of operations from other airports which previously used Gwinnett County Airport for training activities. The busier Gwinnett County Airport is the less attractive it is as a training destination for pilots wishing to shoot touch and go landings due to the potential delays.

Exhibit 3 - 16 illustrates the total operations by month for 2005 traffic. The graphic illustrates the relative position of the itinerant and local operations and their contribution to the total operations.

Exhibit 3 - 16



Source: Airport Management Records  
PAII Project Team Analysis

**Instrument Operations** – Instrument operations are generally a function of itinerant operations and vary with the class of airport and the types of traffic. Instrument approaches are a function of the level of instrument operations and weather. An instrument approach is only recorded when an aircraft on an instrument flight plan is making an instrument approach to the airport and the initial approach fix is in instrument

meteorological conditions. Exhibit 3 - 17 illustrates the annual instrument operations expressed as a percentage of itinerant operations.

The operational fleet as well as the based aircraft fleet at Gwinnett County Airport is changing as has been noted. The larger general aviation turboprop and jet aircraft operate on instrument flight plans almost exclusively. It is extremely rare for a jet not to operate on an instrument flight plan even for very short flights at low altitudes. As the fleet mix continues to get heavier, the instrument operations percentage of itinerant operations is expected to increase as well.

**Operations Summary** – Gwinnett County Airport exhibits the attributes of a major metropolitan area general aviation airport. The statistical information above describes the airport's operation. The airport is certainly a business oriented airport with training activity. Portions of the locally generated training activities may be conducted elsewhere and practice instrument approaches are conducted by aircraft from other airports as well.

#### EXHIBIT 3 - 17

### INSTRUMENT OPERATIONS AS A PERCENT OF ITINERANT OPERATIONS

Year	Itinerant Operations	Instrument Operations	Instrument Operations As Percentage of Itinerant Operations
1998	58,463	11,844	20.3
1999	63,990	13,232	20.6
2000	64,843	13,907	21.4
2001	69,037	17,839	25.8
2002	71,857	17,436	24.3
2003	63,987	16,165	25.2
2004	73,997	18,665	25.2
2005	64,617	18,612	28.8
2006	65,774	18,003	27.4
2007	64,828	17,736	27.3

Source: Airport Activity Statistics  
Pegasus Associates International, Inc. Analysis.

### **3.3.3 FORECAST BACKGROUND**

There are several ways in which aircraft operations may be forecast. The number of operations conducted at any given airport in any given year is a function of many factors or generators. These may include the number and types of based aircraft, the weather, the strength of the local economy, special events in the area, and any number of similar activities.

Like based aircraft, there are several statistical methods which may be used in forecasting aircraft operations but, also like based aircraft, all methods require appropriate data to be used as the independent variable. An additional method which may be used is the number of operations generated by each based aircraft. The range of operations per based aircraft (OPBA) varies according to the types of traffic the airport handles and the general operating circumstance of the airport.

**Trend Analysis / Regression Analysis** - As discussed previously, trend analyses over time are essentially regression analyses with time being the independent variable. In addition to time, other factors may be used such as population. In examining the potential for trend / regression analyses to provide reasonable and logical forecasts, several items were noted. Population was used as an independent variable for regression analyses considering total based aircraft.

The population data contained in the Section 3.2.5 above shows strong continued growth whereas the aircraft operations history has shown a variable if not negative trend. These data would produce a regression with a low correlation and the forecasting technique is considered unreliable in this case.

**Operations Per Based Aircraft** - Operations per based aircraft (OPBA) is a measure often used in forecasting operations for general aviation. While not every aircraft based on the airport is expected to generate the average number of operations it does provide a measure of overall activity at the airport.

The OPBA factor is used as a forecasting tool without modification or it may be used considering a trend of the activity on the airport. The OPBA for Gwinnett County Airport, as illustrated by Exhibit 3 - 18, is considered moderate when compared to other similar airports.

The data indicates that the OPBA for Gwinnett County Airport is certainly "moderate to low" for an airport serving a like role. The data suggests that a number of aircraft at Gwinnett County Airport have home field utilization rates on the low side of average which recognizes how the aircraft at the airport are used. In addition to the utilization rates, i.e., a number of the aircraft may be flown very little; other factors may enter into the equation including the problem of traffic pattern speed incompatibility between jet aircraft and training aircraft. During heavy periods of jet traffic, the tower may halt touch and go operations and training aircraft from Gwinnett County Airport may conduct touch and go practice at other area airports.

EXHIBIT 3 - 18

**OPERATIONS PER BASED AIRCRAFT HISTORY**

	BASED AIRCRAFT	OPERATIONS	OPBA
2000	352	108,430	308
2001	373	106,421	285
2002	447	105,345	235
2003	440*	89,965	204
2004	432	108,159	250
2005	445*	96,365	216
*Estimated		Six year Average	250

Source: Gwinnett County Airport Management Records  
PAII Project Team Analysis

**FAA National Forecasts** - In combination with the FAA national forecast for a significant increase in the number of jets and higher end aircraft in the general aviation fleet and their discussions with aircraft manufacturers and aviation trade organizations, the FAA also expects a slight increase in aircraft utilization across the board after significant declines in the recession years and post 9/11. The FAA publications note that one of the determinants of utilization of a particular aircraft is the age of the aircraft. As the aircraft age, the utilization rate decreases and much of the current general aviation fleet is aging.

As a 2006 update to previous information, the FAA expects the total general aviation utilization as measured by hours flown to increase at an annual rate of 3.2 percent annually through 2017. Possibly more significant than the total increase is the expectation for turbine powered aircraft. The utilization for turbojet aircraft is expected to rise at 6.4 percent per year with turboprops being relatively stable. Jets are expected to constitute the largest increase growing at an average annual rate of 10.2 percent over the period buoyed by the expected increase in micro jet activity. This is contrasted to single engine piston aircraft which are now expected to grow at 1.2 percent per year with multi-engine pistons expected to grow at 1.1 percent annually. For the piston aircraft, the update for 2006 now expects a positive rate of growth versus a previously negative rate of growth.

Aircraft operations are loosely correlated to hours flown across the fleet. The more an aircraft is operated during the year, generally the more operations it will conduct. The statement presumes that all other things remain equal – trip lengths remain about the same, and the aircraft is used in the same general manner. In this context, the aircraft does not necessarily generate more operations per hour of flight but more hours of flight yield more operations. There is also a wide variability of operations generated per flight hour among the various uses of aircraft. As an example, a training aircraft may generate 4 – 6 operations per flight hour while an aircraft used by a business for reasonably long trips might generate .5 operations per flight hour. The FAA expects the number of operations nationally to decline slightly in 2006 to be followed by improvement in 2007 and by an average 2 percent per year increase through 2017. In the 2006 update, FAA does note that general aviation activity nationally is not expected to reach pre- 9 / 11 levels until 2014.

**Operations Per Based Aircraft Forecast** - As noted above, there are basically two forecasting methodologies utilizing OPBA. That of maintaining the OPBA factor as a constant throughout the forecasting period or that of modifying the factor based on a trend or other circumstances. While recognizing the utilization of the aircraft at Gwinnett County Airport and the OPBA generated on the airport, there is an overall national expectation that general aviation activity will increase somewhat. However, there is no clear indication that the OPBA factor will change or how much it may change over the period of the forecast for Gwinnett County Airport. Exhibit 3 - 18 indicates that the OPBA history is variable over the period of reliable data – showing a considerable decrease from the period of 2000 – 2003 with a moderate recovery in 2004 followed by a decrease for 2005. The table also illustrates the six year OPBA average of 250.

In the specific case of Gwinnett County Airport the decrease in OPBA from 2000 to 2005 may be a number of factors including the increase in fuel costs, weather is always a variable, and possibly the changing character of the aircraft based at the airport. Gwinnett County Airport's service pattern places the airport at the fringe of the metropolitan area and although the area has seen dramatic growth, the airport's history includes it serving as a "further out" airport serving some aircraft and operations which were pushed off other airports due to congestion and / or economics. Based on expectations for strong economic and population growth in the county and a reasonably strong forecast of based aircraft, some of the aircraft currently at Gwinnett County Airport may get economically "pushed out" again to further outlying airports. In such case the general trend is for the aircraft which leave to be replaced by newer aircraft. More business oriented aircraft versus training or personal aircraft usage may also retard the growth in the OPBA. Given the expected trend, the OPBA rates are held to the average for the first five years decreasing slightly in the longer term as illustrated in Exhibit 3 - 19.

It is entirely possible that the OPBA will expand rather than retard as shown for the planning period. Many other airports have an OPBA well advanced of Gwinnett County Airport's present number. Given the based aircraft forecast above, even a modest increase in OPBA would result in a significant increase in operations. As an example, an OPBA increase to 275 for 2010 would generate over 134,700 operations while an increase to 300 in 2025 would generate nearly 178,000 operations.

**Itinerant / Local / Instrument Operations Forecast** - The split between itinerant and local operations has become increasing itinerant as measured from the 1998 through

**TOTAL OPERATIONS FORECAST**

	BASED AIRCRAFT	OPBA	OPERATIONS
Forecast			
2010	490	250	122,500
2015	530	240	127,200
2020	565	237	133,900
2025	593	237	140,500

Source: Gwinnett County Airport Management Records  
 FAA Directive on Forecasts  
 PAll Project Team Analysis

2005 timeframe. As shown by Exhibit 3 - 20, local operations have shown the largest change. The decrease in local operations as a percentage of total operations is indicative of the total activity on the airport becoming more corporate and business oriented. In addition, there are indications that portions of the training activity have moved to other airports.

At most general aviation airports there is expected to remain some level of demand for local operations as pilots conduct training exercises to remain current even with little actual training taking place at the airport. However, as the business and corporate itinerant operational need increases, the local operations generally decrease. In the specific case of Gwinnett County Airport, the combination of a single runway and a wide mix of aircraft types would tend to limit the number of local operations. In addition, the forecast increase in total operations and the expected increases in the upper end of the general aviation fleet suggest that local operations will decrease as a percent of total over time. These are shown as follows.

EXHIBIT 3 – 20

**TOTAL OPERATIONS FORECAST**

	ITINERANT OPERATIONS	PERCENT	LOCAL OPERATIONS	PERCENT	TOTAL OPERATIONS
Actual					
1998	58,463	54.4	49,055	45.6	107,518
1999	63,990	55.5	51,355	44.5	115,345
2000	64,843	59.8	43,587	40.2	108,430
2001	69,037	64.9	37,384	35.1	106,421
2002	71,857	68.2	33,488	31.8	105,345
2003	63,987	71.1	25,978	28.9	89,965
2004	73,997	68.4	34,162	31.6	108,159
2005	68,199	70.8	28,166	29.2	96,365
Forecast					
2010	91,900	75.0	30,600	25.0	122,500
2015	101,800	80.0	25,400	20.0	127,200
2020	107,100	80.0	26,800	20.0	133,900
2025	112,400	80.0	28,100	20.0	140,500

Source: Gwinnett County Airport Management Records  
PAII Project Team Analysis

**Operational Fleet Mix Forecast** - The estimation and forecast of the number of aircraft operations conducted by the various categories of aircraft operating on the airport is called the operational fleet mix. The determination of the fleet mix is an important component of runway capacity calculations. In many of the calculations of fleet mix, the traffic is divided into the categories of fixed-wing airplanes and helicopters because helicopters generally do not operate in the fixed-wing traffic patterns. Therefore, they do not consume a portion of the airport's fixed-wing capacity.

The overall fleet mix involved a multi-step process based on data collected during the airport data collection phase of work as well as information from the air traffic control tower. These steps are generally described as follows:

- 1) Interviews with Tower personnel indicated jet traffic is estimated to be approximately 20 - 25 percent of total traffic.
- 2) Helicopter operations account for approximately 20 percent of *local* operations. While fixed wing operations take place on the runway, helicopter operations may be conducted to non-operating areas. The rotor operations to non-operating areas are not counted in the Tower counts for operations. Operations by rotor wing aircraft to air operating areas (taxiways, runways) are counted in the total.
- 3) Based on expectations for utilization factors contained in FAA forecasting documents and an assessment of the aircraft operating from Gwinnett County Airport, a level of OPBA was distributed to the various categories to achieve the distribution of activity noted in items 1 and 2 above. The aggregate was adjusted as necessary to maintain the control total operations for the year as contained in Exhibit 3 - 20 above.

Exhibit 3 - 21 contains the forecast of aircraft operations by aircraft category.

## **3.4 FACILITIES REQUIREMENTS**

### **3.4.1 BASING FACILITIES**

**Background** - This master plan is intended to evaluate the potential of the airport site and environs to support future activity given current environmental requirements. While the forecast of aviation activity defines expectations for the types and levels of future activity, that activity must be translated into the types and amounts of facilities to support the forecast level of demand. It should be noted, however, that the unconstrained forecast of aviation demand and facilities indicates a potential *demand* for service presuming the facilities to support the demand can be developed for the airport. Due to any number of real world constraints which may include costs/funding and environmental approvals in addition to space availability, it is possible that not all needs will be met by the airport.

**Basing And Ground Handling Facilities** - Exhibit 3 - 22 contains a listing of the facilities required to accommodate the forecast of based and transient aircraft. There are a number of factors which affect the development of basing capacity on the field as follows:

- Corporate Hangars - Gwinnett County Airport has 36 corporate / FBO conventional type hangars on the airport (as opposed to T-hangars). A number of hangars may be sized to accommodate several aircraft but due to corporate requirements may handle fewer although some of the corporate hangars may be joint use with another firm.

**GWINNETT COUNTY AIRPORT - BRISCOE FIELD**

**OPERATIONS BY FLEET MIX**

Aircraft Categories	2005*			2010			2015			2020			2025		
	Number of Aircraft	Operations	Operations Percent by Type	Number of Aircraft	Operations	Operations Percent by Type	Number of Aircraft	Operations	Operations Percent by Type	Number of Aircraft	Operations	Operations Percent by Type	Number of Aircraft	Operations	Operations Percent by Type
<b>Single engine</b>	<b>332</b>	58,100	60.3%	<b>331</b>	62,928	49.0%	<b>348</b>	62,773	45.7%	<b>372</b>	64,675	43.5%	<b>379</b>	62,197	38.4%
<b>Multi-engine Piston</b>	<b>47</b>	8,845	9.2%	<b>37</b>	9,465	7.4%	<b>35</b>	6,277	4.6%	<b>35</b>	7,450	5.0%	<b>33</b>	4,850	3.0%
<b>Multi-engine Turboprop</b>	<b>12</b>	3,900	4.0%	<b>46</b>	13,507	10.5%	<b>50</b>	13,701	10.0%	<b>52</b>	14,074	9.5%	<b>53</b>	14,033	8.7%
<b>Jets</b>	<b>37</b>	20,720	21.5%	<b>46</b>	27,600	21.5%	<b>65</b>	35,704	26.0%	<b>72</b>	38,717	26.1%	<b>92</b>	48,746	30.1%
<b>Large Aircraft**</b>		1,835			4,968			8,212			11,615			15,600	
<b>Heavy Aircraft***</b>		204			828			1,985			3,097			5,850	
<b>Helicopter</b>	<b>16</b>	4,800	5.0%	<b>30</b>	9,000	7.0%	<b>32</b>	8,745	6.4%	<b>34</b>	8,984	6.0%	<b>36</b>	10,674	6.6%
<b>TOTAL</b>	<b>444</b>	96,365	100.0%	<b>490</b>	128,296	95.5%	<b>530</b>	137,397	92.6%	<b>565</b>	148,612	90.1%	<b>593</b>	161,950	86.8%

\* Estimated Based Aircraft and Operations by Type - Actual Total Operations

\*\* Large General Aviation Aircraft - greater than 40,000 pounds maximum certificated takeoff weight (definition used by the FAA's ASDI model)

\*\*\*Heavy General Aviation Aircraft - greater than 60,000 pounds maximum certificated takeoff weight (definition used by this study for pavement issues)

Source: Median Planning Forecast for Total Based Aircraft  
 Total Operations Forecast  
 PAII Project Team Analysis

Exhibit 3 - 22

**GWINNETT COUNTY AIRPORT - BRISCOE FIELD**

**Basing Facilities Demand**

Facility Type	2005(1)	2010	2015	2020	2025
	Existing				
<b>HANGAR DEMAND</b>					
Conventional Hangar Demand (100' X 100')	35	41	45	50	54
Conventional Hangar Area (SF)	360,000	410,000	450,000	500,000	540,000
Conventional Hangar Maneuvering Area (SY)	40,000	45,600	50,000	55,600	60,000
T-Hangar Units	161	214	231	262	266
<b>ADDITIONAL HANGAR UNITS NEEDED</b> (Number Required Beyond Existing)					
Conventional		6	10	15	19
T - Hangars		54	71	102	106
<b>APRON</b>					
Tie-Down Apron (SY)	118,000	45,300	55,000	55,000	55,000
Transient Apron (SY)	45,000	45,300	50,000	53,000	55,000
Net Total Apron Needed (SY)		0	0	0	0

NOTES:

- 1) Space allocation is estimated for existing conditions
- 2) Future conventional hangar maneuvering area includes an amount equal to the hangar space for the maneuvering of aircraft around the hangar. The maneuvering area is not part of any other movement area.
- 3) Apron tie-down includes Group I taxilanes, transient apron space includes Group II taxilane requirements.

Source: PAll Project Team Analysis

- Initial Hangar Construction – When the hangars were initially constructed, they were constructed with future growth in mind; therefore, some hangars may have excess capacity at the present time.
- Individual Hangars – Numerous concerns desire to have their own hangar rather than having their aircraft hangared by one of the FBOs.
- T-Hangars – All T-hangars developed on the airport in recent years have been developed by firms as a hangar business. The hangar businesses rent / lease the hangar units to aircraft owners. The T-hangars are also developed on a ground lease from the Airport.

Price Sensitivity / Latent Demand – General aviation aircraft owners often shop for the most economic/efficient situation for their aircraft. Individual decisions are often made based on the cost of basing at a closer airport versus the time / access cost and basing costs at a second airport. Therefore, there may well be aircraft based at other area airports due to price sensitivity which might be based at Gwinnett County Airport if price were not a consideration.

The projection of hangar needs is based on the type of activity and the space use on the airport at the present for the initial years and move toward a more efficient use of space in the latter portions of the planning period. Throughout the period 100 percent of based jets, turboprops, multi-engine aircraft and helicopters are presumed to be hangared although a portion of the multi-engine aircraft are presumed to be hangared in T-hangars. Sixty-five percent of the single engine aircraft are presumed to be hangared in the early portion of the planning period increasing to 70 percent by the end of the period. While most aircraft are significant investments, high-end single engine aircraft represent a significant investment and few owners desire to tie-down the higher end singles on an open ramp. It is also expected as some of the older aircraft drop out of the fleet and are replaced by new aircraft that more owners will desire hangars as opposed to open ramp parking. With the future single engine fleet expected to include new upper end piston as well turbo-prop aircraft the demand for hangars is expected to remain strong. Using the above formulas, approximately 80 percent of the based aircraft are hangared.

Presently Gwinnett County Airport may have a slightly higher percentage of single engine aircraft hangared in the conventional type hangars than expected due to the presence of the EAA hangars as well as other smaller hangars. Single engine aircraft tend to be hangared in T-hangars although it is not unknown for corporations to own larger aircraft as well as single engine aircraft or for single engine aircraft to be hangared in a larger hangar by an FBO. While Gwinnett County Airport has a significant amount of apron area, there is little evidence of strong demand for apron tie-down space. There are, however, continuing calls for hangar space.

Thirty-five percent of the single engine aircraft are presumed to require tie-down space on an apron in the early portion of the planning period decreasing to 30 percent by the end of the period. Presently at Gwinnett County Airport the vast majority of tied-down aircraft are lower-end / older single engine aircraft.

The basing facility needs are forecast without regard to what agency or group would build the facilities. Generally, all hangars at the airport have been developed by private concerns on land owned by the Airport and leased by the hangar developer. Most of that considered to be public use apron has been developed by the airport with grant monies from the FAA. Aprons serving individual corporate hangars have been developed by the hangar developers and are not considered to be public use space.

Given that some of the corporate hangars may include more than one firm or may have subtenants, no distinction is drawn between those hangars operated by FBOs and corporate hangars. Rather, the number of conventional hangars shown to be in demand in Exhibit 3 - 22 is the number of 100' x 100' hangars required to satisfy the demand based on the demand formula. The actual number may change due to different sized hangars being constructed. The exhibit illustrates the number of hangars required to satisfy the demand for hangared space and the number of hangars required beyond the number of hangars presently existing.

The conventional hangars also require a movement area outside the hangar for the repositioning of aircraft or maintenance items required to be completed outside of a building. For the purpose of the space requirements, the apron maneuvering area is estimated at 100 percent the size of the hangar area. Given site conditions as well as individual design and need, that area might change in any given circumstance.

Apron tie-down locations include the space for the aircraft as well as the space required for taxilanes. A similar amount of taxilane space would be required for T-hangars.

The facilities noted above are generally those required to accommodate the based aircraft. Transient aircraft, visitors to the airport, are generally parked and serviced by the fixed base operators on apron space specifically designated for the visiting aircraft. In many cases, there is little distinction between the space set aside for transient as opposed to that designated for based aircraft. In most cases, the FBO will allocate the space based on demand.

Calculations of present ramp area usage indicate some 118,000 square yards of apron space generally used as public tie-down space and some 45,000 square yards used for transient aircraft parking. These facilities requirements based on the allocation and usage patterns noted above suggest that the strength of the hangar demand will reduce the demand for apron tie-downs but that the demand for transient space will become greater in future years. Therefore, while Exhibit 3 - 22 indicates a future demand for transient apron space, it is quite possible that the use of portions of the area now devoted to based aircraft tie-downs will be changed to transient space.

### ***3.4.2 PAVEMENT STRENGTH***

Gwinnett County Airport currently has a pavement strength rating of 45,000 pounds single wheel capacity and 60,000 pounds dual wheel capacity. As noted in the aircraft forecast sections above, the airport has current operations by heavier aircraft and is

expected to see a strong demand by heavier general aviation aircraft. The demand by heavier aircraft is forecast to rise through the planning period.

The heavier aircraft in the general aviation fleet currently include the Gulfstream V (G-V), the Global Express, and the Boeing Business Jet (BBJ). These aircraft all have maximum gross take off weights above 90,000 pounds on dual wheels. The G-V has a gross take off weight of 91,000, the Global Express of 98,000, and the BBJ (which is a Boeing 737) of well over 100,000 pounds dual wheel.

There are several other aircraft, primarily in the Gulfstream series above the current 60,000 pounds but less than 90,000. As an example the G-350 has a gross take off weight of some 70,900 pounds while the G-450 has a gross weight of 73,900.

Current estimates are that approximately 1 percent of the jets operating at Gwinnett County Airport are over the current 60,000 dual wheel weight bearing rating of the runway. At the current level of estimated operations that is over 200 operations per year. The level of demand for pavement strength of approximately 100,000 pounds dual wheel rating is forecast to increase to over 1,300 operations by the year 2010. By 2020 the number of heavier jet operations over 60,000 is expected to exceed 3,800 and over 5,800 by 2025. See Appendix A – 1 for an update on heavy aircraft statistics.

### ***3.5 AIRFIELD CAPACITY ANALYSES***

#### ***3.5.1 AIRFIELD CAPACITY BACKGROUND***

The ability of the airfield's runway and taxiway system to accommodate the aircraft operational demand is defined by FAA methodology in the assessment of the airfield's operational capacity. Unlike other capacity methodologies which define capacity as a measure of congestion or delay or "level of service," the FAA methodology is a general "throughput capacity" model based on the number of takeoffs or landings which can be accommodated by the airfield system in one hour, on an annualized basis recognizing factors such as the mix of traffic, weather, and airfield geometrics. From the hourly throughput capacity, operational factors allow for the computation of an Annual Service Volume (ASV) which allows an annualized evaluation of the airfield's ability to accommodate the annual demand. The definition of demand in excess of capacity may also be translated into hours of delay which carry real and economic cost. The methodology recognizes that at that level where annual demand is equal to annual service volume, all aircraft would experience approximately 2.5 minutes of delay. As annual demand exceeds the ASV the amount of delay rises sharply. As an example, an airport operating 10 percent over ASV with 150,000 operations per year would have approximately 4.5 minutes of delay per aircraft or 11,250 hours of delay per year. If each hour of delay were valued at \$150 the costs of the annual delay in this example would approach \$1,690,000.

The "throughput capacity" referenced above is based on the FAA regulations set for the clearing of aircraft for takeoff and landing operations given the requirements of air traffic control (ATC) procedures. These regulations recognize the separation requirements for

aircraft taking off behind departing aircraft, aircraft arriving behind departing aircraft, wake turbulence behind arriving or departing large aircraft and similar items.

### ***3.5.2 GWINNETT COUNTY AIRFIELD CAPACITY***

At Gwinnett County Airport as with a number of general aviation airports in high activity metropolitan areas, the hourly throughput capacity of the airport can vary considerably depending on the activity. As shown in the operational demand and forecast, Gwinnett County Airport' jet traffic is currently in excess of 20 percent of total operations and even higher when only fixed wing operations are considered. In any number of busy periods through the year the hourly jet traffic percent of the fixed wing traffic is considerably higher. In such cases, the Air Traffic Control Tower (ATCT) has, on occasions, suspended touch and go or low approach training operations. With a strong component of both single engine aircraft and jet operations at Gwinnett County Airport the differential in operating speeds is significant and requires expanded spacing between aircraft. In any number of cases it may also require additional spacing between aircraft due to wake turbulence. In such cases as noted above, the hourly throughput capacity is going to be significantly less than an hour with only small aircraft operating with a high number of touch and go operations.

Another factor affecting the throughput capacity of the airfield is the runway crossing problem. Given that there is no north side parallel taxiway to reach the takeoff position for Runway 25, the substantial portion of the airport's 432 based aircraft based on the north side of the field must cross the runway to reach the parallel taxiway on the south side of the runway. Each aircraft based on the north side of the field crosses the runway once for each itinerant departure when using Runway 25. Many of the smaller aircraft can land and turn off at either Taxiway E or D which alleviates a runway crossing. Should the aircraft landing Runway 25 not make Taxiway D and destined for the north side, exiting at Taxiway C-1 would result in an additional runway crossing. Aircraft landing / rolling out very long can now exit north bound on Taxiway B without creating an additional crossing of the runway.

The opening of Taxiway B from the north side basing area to the 7 (west) end of the runway now provides access to all of the aircraft based on the north side without a runway crossing. Landing to the east on Runway 7, the first exit taxiway to the northside basing area is Taxiway D which is approximately 3,200 feet from the Runway 7 threshold. Since many of the north side based aircraft are single and smaller multi-engine aircraft which, under ordinary circumstances, would be prepared to exit the runway before reaching Taxiway D or E, these aircraft have the potential to create either additional runway crossings or extended runway occupancy times by taxiing on the runway to reach Taxiway D or E.

The importance of the above discussion is that runway crossings by aircraft or vehicles interrupt the flow of traffic or the "throughput" capacity on the runway. Therefore the capacity of the runway is reduced by the factor of the crossings or extended runway occupancy times. While operations on both runways are affected by crossings, Runway 25 operations are considered to be affected the most since every aircraft taxiing from the north side must cross the runway to get to the 25 end of the runway. Runway 25 is also

has the highest utilization. In assessing the actual capacity of the runway system, both the crossing problem and differential speed issue must be taken into account. Factors in the determination of throughput capacity are as follows:

- Runway 25 – a deduction of 10 percent of throughput capacity due to crossings,
- Runway 7 – a deduction of 5 percent of throughput capacity due to crossings / extended runway occupancy times (considered to be less severe than for Runway 25),
- Both runways – a deduction of 2 percent for high differential speeds (which have caused the tower to suspend touch and go operations on occasions,
- Runway utilization – Runway 25 – 65 percent, Runway 7 – 35 percent,
- Weather conditions – VFR – 89 percent, IFR – 11 percent
- Hourly arrival / departures – 50 / 50
- Touch and go – 30 percent
- Jet operations – 22 percent

Utilizing the above factors, the runway capacity is as follows:

- Raw throughput capacity VFR– 76 operations per hour (Figure 3-3, AC 150-5060-5)
- Touch and go and Aircraft Mix factor – 1.20
- Raw throughput capacity IFR – 58 operations per hour (Figure 3-43, AC 150-5060-5)
- The resultant weighted hourly throughput capacity is 79.1 (use 80) operations per hour.

In order for capacity calculations to be useful for most general aviation airports the hourly capacity numbers are converted to the Annual Service Volume (ASV) numbers which recognize annual, monthly, and daily use patterns. While the capacity of the runway to accommodate traffic remains relatively the same over a 24 hour day, few operations occur in the middle of the night. The ASV methodology recognizes an annual effective capacity based on monthly and hourly use patterns.

Using the weighted hourly capacity and the methodology for annual use factors, Gwinnett County Airport currently has an ASV (Annual Service Volume) of 195,200. Given that all other factors remain the same, the expected increase in the percentage of jet traffic will cause the ASV to decrease somewhat. It is entirely likely that the increase in jet traffic in

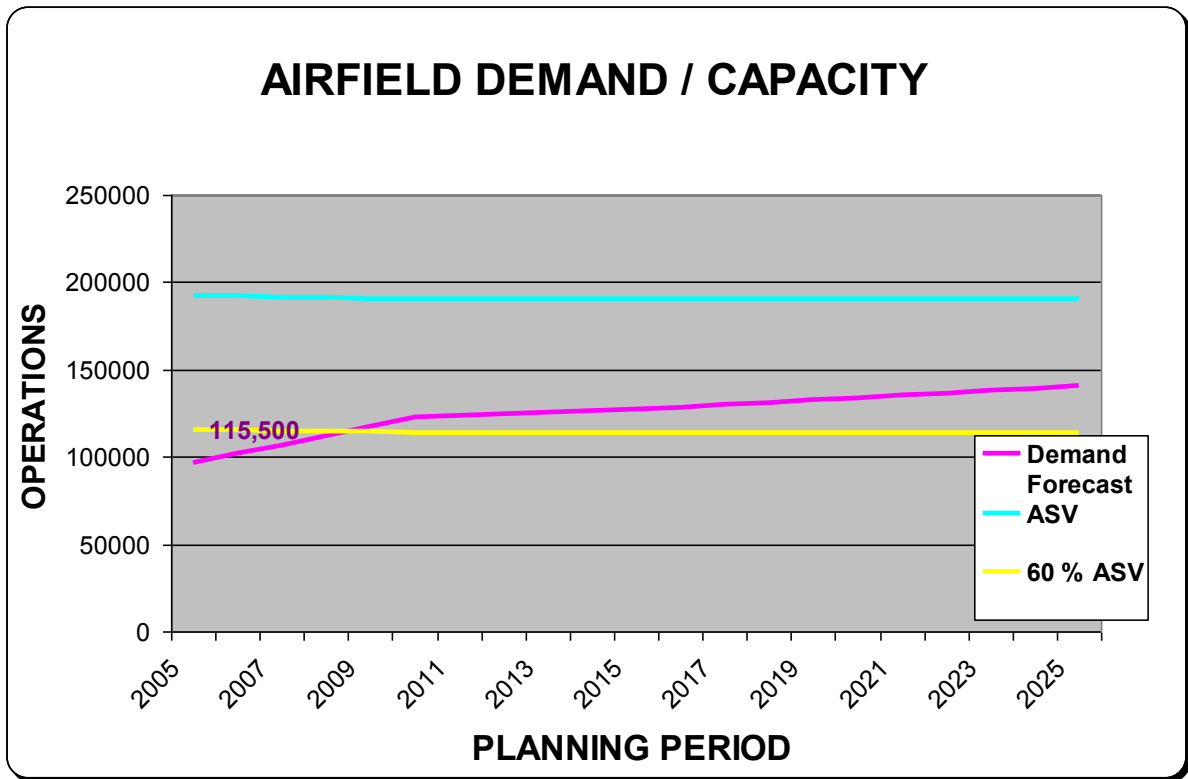
the 2005 – 2010 period will lower the ASV to 190,000 by 2010. Therefore, for the purposes of demand / capacity calculations an average of 192,500 ASV will be used.

### 3.5.2 GWINNETT COUNTY AIRFIELD DEMAND / CAPACITY

In many cases the actual level of the ASV is of little consequence and a round number is often used. However, FAA planning criteria indicates that at 60 percent of ASV an airport should begin planning activities to expand capacity and the capacity relief should be in place by the time the demand reaches 80 percent of the current capacity. At present, the airport is on the threshold of reaching the 60 percent level of ASV as it has been for a number of years. The recent downturn in traffic forestalled the need for additional capacity but the recent rebound of 2004 is indicative of the remaining demand for additional future capacity.

At current traffic levels and using the ASV of 192,500 the airport is currently operating at 56 percent of capacity. Should the airport achieve the forecast of 115,440 operations for the year 2005, it will be operating virtually at the 60 percent capacity of 115,500. The runway demand / capacity relationship is illustrated in Exhibit 3 – 23

Exhibit 3 - 23



Source: PAII Project Team Analysis

## ***4.0 STORMWATER IMPACTS***

### ***4.1 EXISTING STORMWATER ISSUES***

As identified previously, the handling and effects of stormwater on the airport have become increasingly important considerations in the planning and development of airport facilities. In addition to providing drainage for the airport property, two major and one minor water courses flow through the airport providing drainage for a large portion of the drainage basin in which the airport lies.

The effects of new regulations as well as recalculation of floodplains were brought more into focus with the Phase 2 extension of Taxiway B. In the same general timeframe as the taxiway extension project, the County produced a draft revision to the FEMA flood maps illustrating a large floodplain on-airport where none had existed in the previous maps. The effect of the revised FEMA map would essentially require the airport to limit development in greater portions of the airport than previously required.

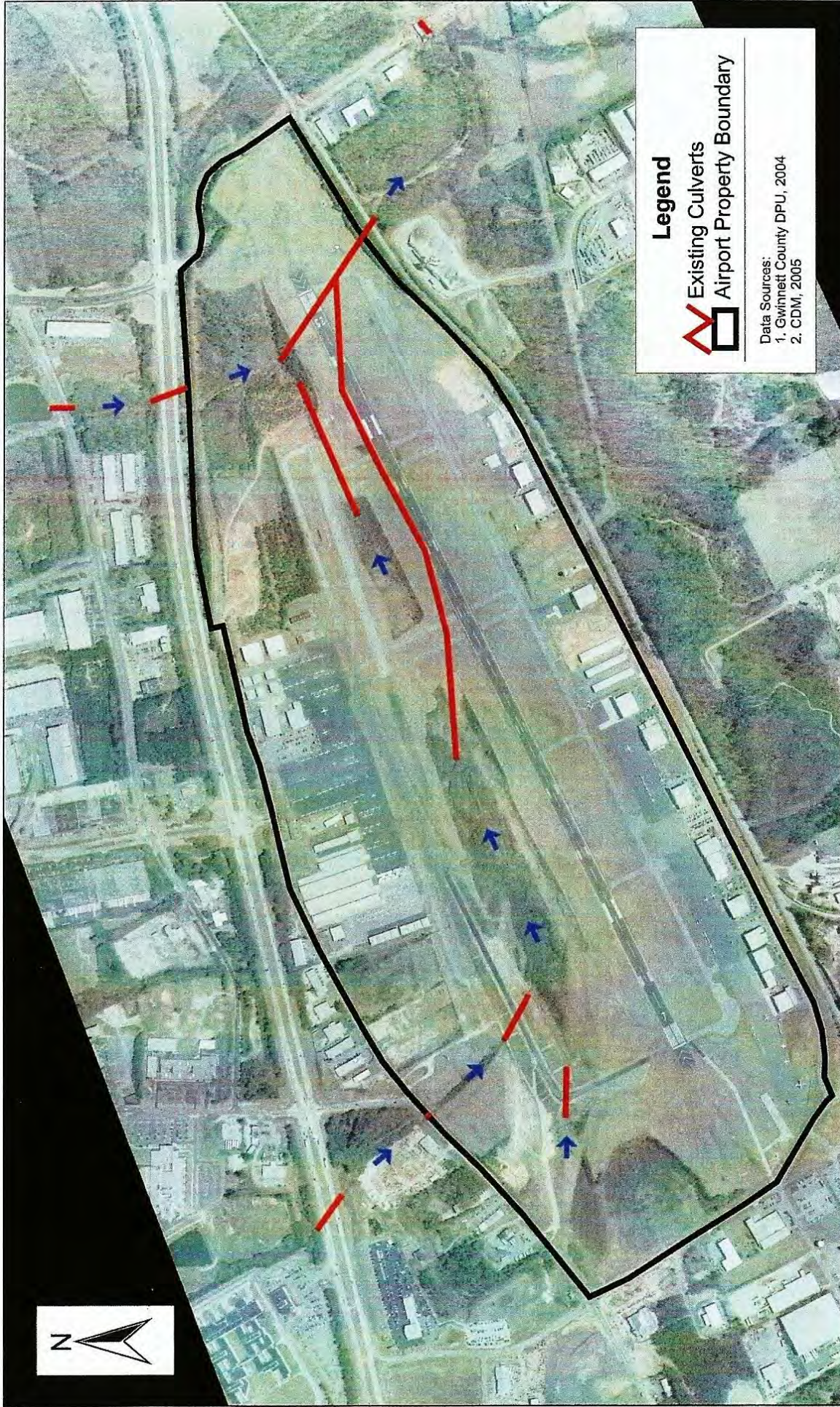
Subsequent to the initial draft revision of the FEMA flood map, a major storm washed out the culvert under Cedars Road south of the airport. The County replaced the 96 inch corrugated culvert with a double 10 foot by 10 foot concrete culvert. A subsequent draft of the FEMA flood maps showed a reduced on-airport floodplain. However, floodplains remain a factor in future development.

The Taxiway B project also had impacts to stream bank buffers and wetlands which had to be addressed as well as overall stormwater issues. While any new development would have to address all of the stormwater issues, the FAA has published guidance for airport development concerning wildlife attractants which essentially requires measures which conflict with those required for stormwater control. This combination of factors raised questions as to whether the parallel runway which has been carried on the Airport Layout Plan since approximately 1985 could be built as shown. The following analyses are intended to examine the potential effects of the stormwater issues on the development of a possible parallel runway.

### ***4.2 STORMWATER FLOW DEMAND / CAPACITY ANALYSES***

#### ***4.2.1 ON-AIRPORT CULVERT SYSTEM***

**The Culvert System** - Exhibit 4 - 1 illustrates the on-airport culvert system as well as the culverts in the immediate area which feed the on-airport system. As will be seen, major stormwater flows enter the airport system from the area near the jail, crossing under SR 316 and Hurricane Shoals Road. This flow is joined by stormwater from off-



**Legend**  
 Existing Culverts  
 Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPU, 2004  
 2. CDM, 2005



**Exhibit 4-1**  
**Stormwater Flow Direction**

**CDM**

airport to the west of and crossing under Hosea Road at the western end of the airport in two locations. One is piped from the industrial area and one from the Fire Services facilities at the corner of Hosea and Hurricane Shoals Roads. The other major flow is from the detention pond adjacent to the Ricoh production plant in the Progress Center (called Ricoh Lake for this report) which also crosses under SR 316 at the east end of the airport.

The two major culvert systems are joined under the eastern end of the runway and continue south to exit south of the railroad tracks. From the downstream end of the culverts the stormwater travels in an open channel to exit under Cedars Road through the new 10' by 10' box culvert. Passing under Cedars Road, the stormwater joins the flow of the Alcovy River.

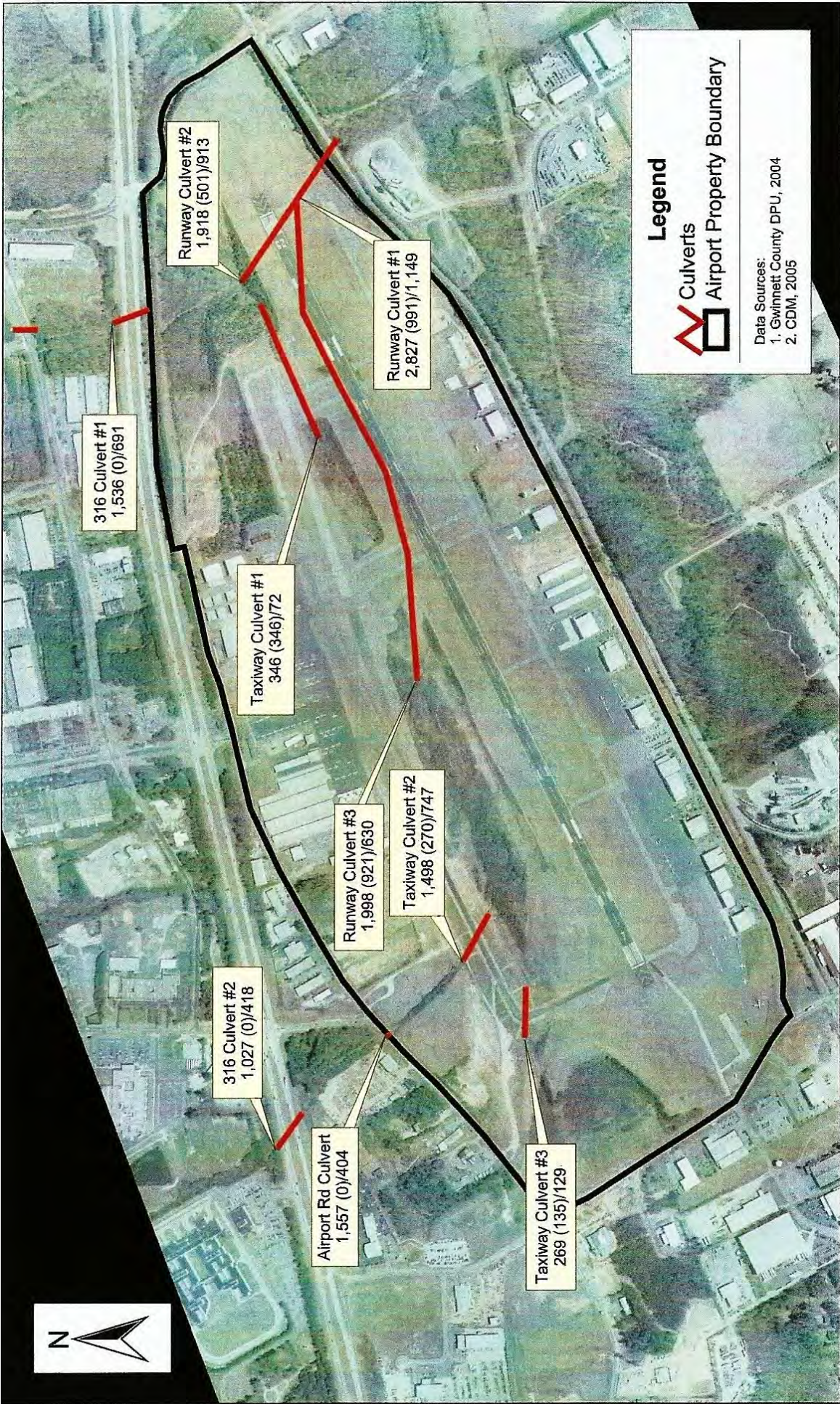
The FAA guidance on wildlife attractants suggests limitations on detention ponds as well as recommended shapes for any on-airport ponds found to be necessary. In recognition of all above factors, the investigation of stormwater was designed to specifically differentiate between the water coming onto the airport from off-airport sources and the water generated on-airport.

#### ***4.2.2 CULVERT SYSTEM DEMAND / CAPACITY***

The stormwater flow through the airport was evaluated to provide indications of stormwater demand and the capacity of the various culverts to handle the demand. Exhibit 4 – 2 illustrates the demand / capacity relationships for the on-airport system and the culverts in the immediate area contributing to the on-airport flow for the existing 100 year storm demand. The following notes accompany the graphic.

- **Demand** – First number in figure annotation, is the peak flowrate approaching the upstream face of the culvert expressed in cubic feet per second. This is NOT the peak flowrate going through the culvert. Rather it is the peak flow that wants to get into the culvert.
- **Airport Demand** – Second number in figure annotation (number in parentheses) is the peak flowrate of the on-airport-generated portion of the total runoff approaching the upstream face of the culvert.
- **Capacity** – Third number in figure annotation, equals the maximum flowrate that can go through the culvert before water starts to back up higher than the crown of the culvert on the upstream end. For the purposes of this analysis the capacity is assumed to be as noted above although it is recognized that each culvert is capable of flowing more than the stated capacity once water starts to back up behind the culvert and create more driving head.

The comparison of the demand generated by the 100 year storm in existing conditions versus the capacity of the existing system indicates that all culverts and pipes are undersized to accommodate the demand. The demand numbers also indicate that the



**Legend**

Culverts

Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPU, 2004  
 2. CDM, 2005



**Exhibit 4-2**  
**Demand-Capacity Flows**  
**Existing 100-year Storm**

Numbers in callouts represent:  
 Total Demand (Estimated Airport Demand)  
 Culvert Capacity

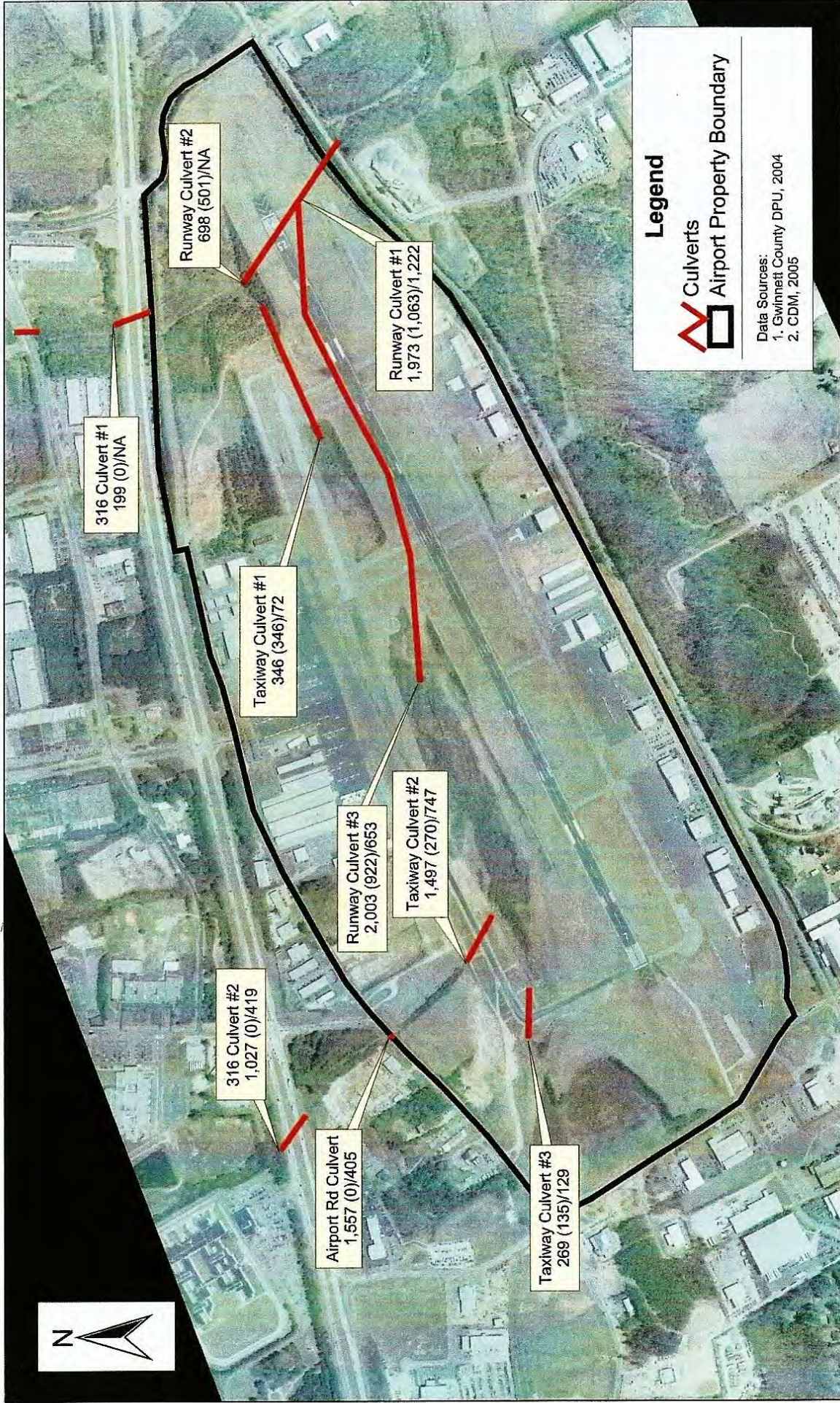
NA = Culvert capacity is Not Applicable (culvert does not flow full during event)



off-airport demand is substantially greater than on-airport demand with the exception of Taxiway Culvert # 1 which serves only on-airport locations. The indication of demand in excess of capacity means the stormwater will back up or pond behind the culvert higher than the culvert crown.

Early suggestions were made to the effect that the flow of stormwater from Ricoh Lake was of such magnitude as to effectively “block” or limit the water from the west side of the airport from entering the culvert exiting the airport. The effect of this potential “block” was to create back ups or ponding in the center and western portions of the airport. This premise was tested by essentially modeling the same conditions but shutting off the flow of stormwater from Ricoh Lake. Exhibit 4 - 3 illustrates the resulting demand / capacity relationship with no flow from Ricoh Lake. Factors under this case are as follows:

- The “No Ricoh Lake” scenario represents no flow coming out of Ricoh Lake and into the airport’s drainage system. Only a small drainage area upstream of Highway 316 contributes flow onto the airport via 316 Culvert #1. All flows coming onto the airport from 316 Culvert #2 and Airport Rd Culvert remain unchanged from existing conditions in this scenario.
- In the No Ricoh scenario, demand flows at Runway Culvert #3 and upstream of that culvert only slightly increase from existing conditions. This is due to the fact that there is no backwater caused by water coming from Ricoh Lake into the Runway Culvert system, and the western side of the airport can therefore drain more freely at slightly higher flowrates. A comparison of demand numbers between the two scenarios illustrates that eliminating Ricoh Lake flows has little effect on the flows on the western side of the airport.
- Demand flows on the eastern side of the airport are expectedly lower under the No Ricoh scenario.
- On-airport-generated demand flows represent a higher percentage of total demand flows in Runway Culverts #1 and #2 for the No Ricoh scenario because much less off-airport flow is coming down from the north.
- On-airport-generated demand flows on the western side of the airport are not affected by eliminating Ricoh Lake flows.
- The capacity of Runway Culverts #1 and #3 increase slightly in the No Ricoh scenario. This is because the capacity is defined in terms of “real-world” conditions, which include backwater affects from downstream water levels. Without the additional water coming from Ricoh Lake, there is less backwater created at the downstream end of the culvert system and therefore the Runway Culverts have slightly more capacity with the same upstream driving head.
- SR 316 Culvert #1 and Runway Culvert #2 have an “NA” label for their capacity in the Exhibit 4 - 3. This is because capacity is defined at the point where the water level at the upstream end of the culvert exceeds the top of the culvert, and



**Legend**

 Culverts

 Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPU, 2004  
 2. CDM, 2005



**Exhibit 4-3**  
**Demand-Capacity Flows**  
**Existing 100-year Storm**  
**No Flows from Ricoh Lake**  
**CDM**

Numbers in callouts represent:  
Total Demand (Estimated Airport Demand)  
 Culvert Capacity

NA = Culvert capacity is Not Applicable (culvert does not flow full during event)



neither of these two pipes was completely inundated during this simulation. Therefore, both pipes are flowing under capacity, as defined.

- With the exception of Runway Culvert #3, culvert capacities on the western side of the airport are not affected by eliminating Ricoh Lake flows.
- The No Ricoh scenario generates a slightly smaller floodplain just upstream of Runway Culvert #3 (the long culvert). Further upstream from this point, there are no effects of eliminating Ricoh Lake on the floodplain.

Since the analysis suggests that the flow from Ricoh Lake creates some degree of additional minor flooding at the face of Runway Culvert #3, both the flood stage elevation and the flow rates were compared. Exhibits 4 - 4 and 4 - 5 illustrate the flood stage and the flow rate under the two conditions. These are described as follows;

- Exhibit 4 - 4 shows that the water depth at the entrance of Runway Culvert #3 reaches approximately 2 feet higher under existing conditions than it does under No Ricoh conditions. The stage also stays higher for a slightly longer period of time under existing conditions, due to the backwater in the Runway Culvert system caused by Ricoh lake flows. The difference of time is less than one (1) hour, however.
- **Note** - the flows illustrated in Exhibit 4 - 5 are actual flows through Runway Culvert #3. Therefore the peaks of these graphs are not equal to the Demand numbers presented in the Demand-Capacity figures, since the demand is calculated as the peak flowrate that reaches the front of the culvert and *wants* to get into the culvert. The flow comparison graph is comparing the peak flows that are actually *able* to get into the culverts.
- Exhibit 4 - 5 shows that Runway Culvert #3 is able to pass more water under the No Ricoh scenario, again because there is less backwater being created in the Runway Culvert system. This graph also shows that the No Ricoh peak passes more quickly than the existing peak, although the difference is again less than 1 hour.

### **4.2.3      *CULVERT SYSTEM DEMAND / CAPACITY CONCLUSIONS***

Conclusions derived from an examination of the results of the analysis are as follows:

- The entire system of culverts is undersized for the existing 100 year storm flow and in essence creates backups and detention ponding on-airport. The data show that the culverts under SR 316 and Hurricane Shoals are also undersized creating backups in those areas as well.

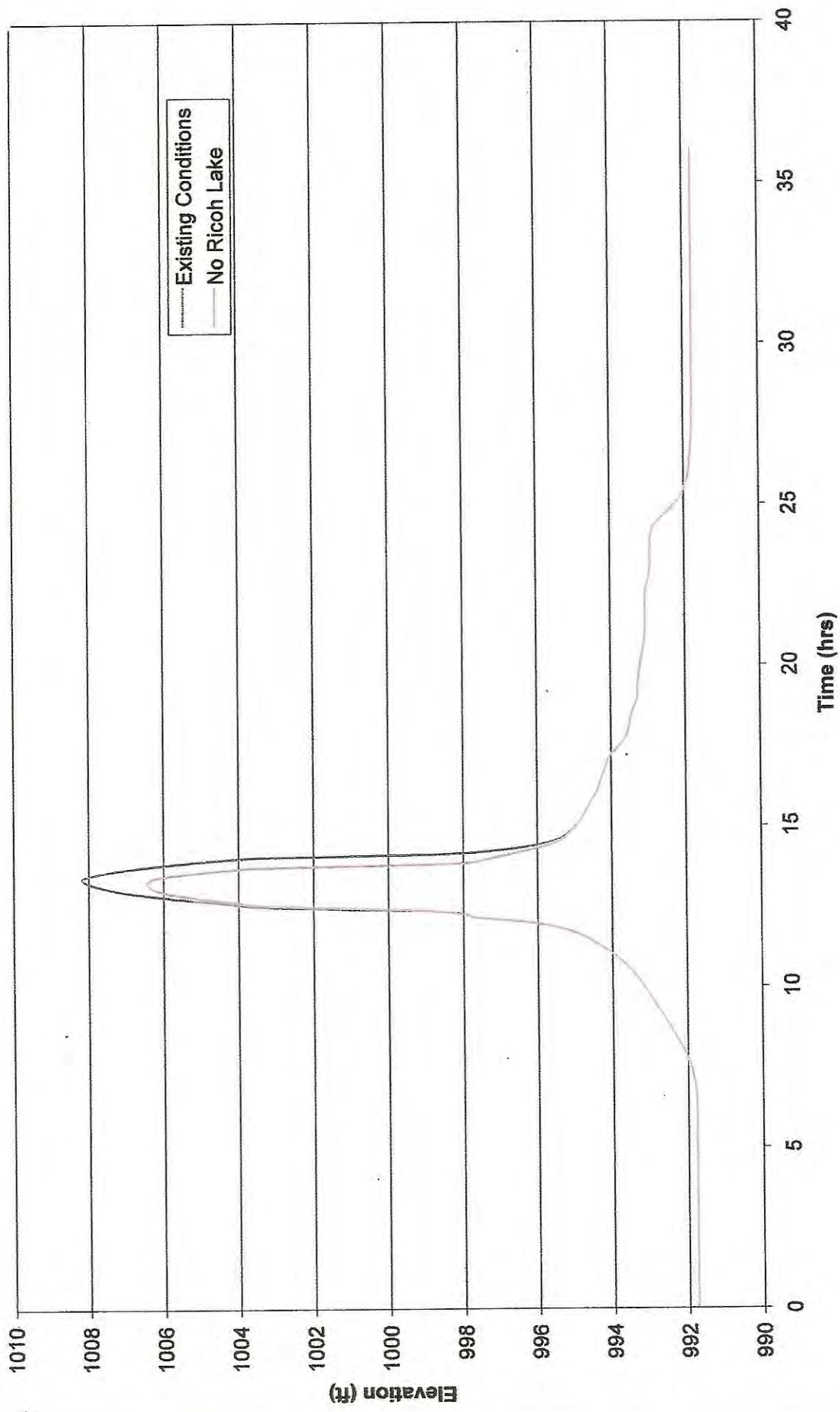


Exhibit 4 - 4  
 Stage Comparison: Upstream End of Culvert #3  
 CDM

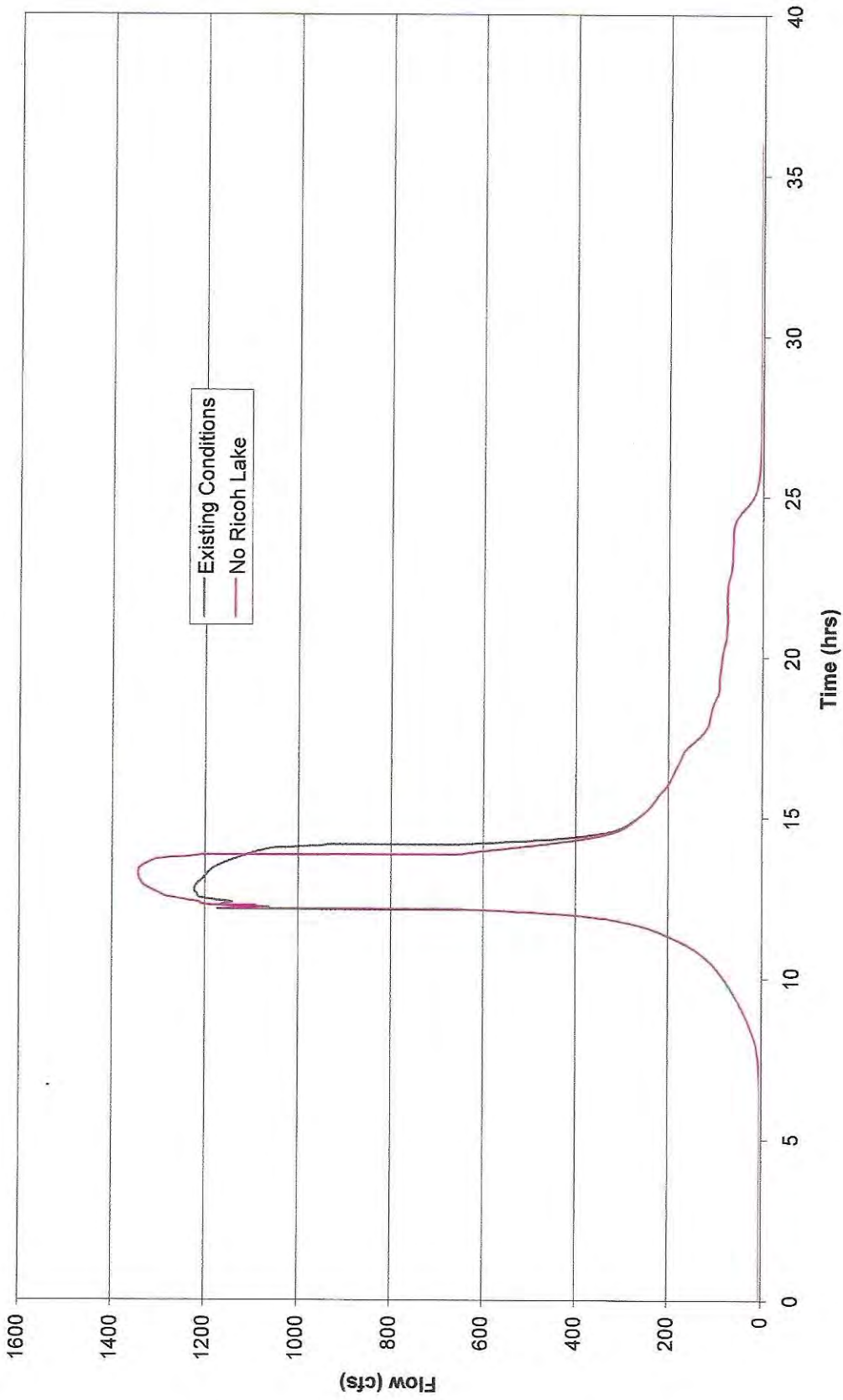


Exhibit 4 - 5

### Flow Comparison: Runway Culvert #3

CDM

- The off-airport flow of stormwater through the airport constitutes the major portion of the stormwater demand (approximately 75 percent is from off-airport sources).
- While the stormwater flow from Ricoh Lake has an effect on the ability of Runway Culvert #3 to carry the water, the amount of reduction in flow has little practical effect. Therefore, the ability of the Runway Culvert # 3 to carry the stormwater is limited by the size of the culvert itself.
- Demand in excess of capacity at Runway Culvert # 3 will cause ponding between the existing runway and taxiway.

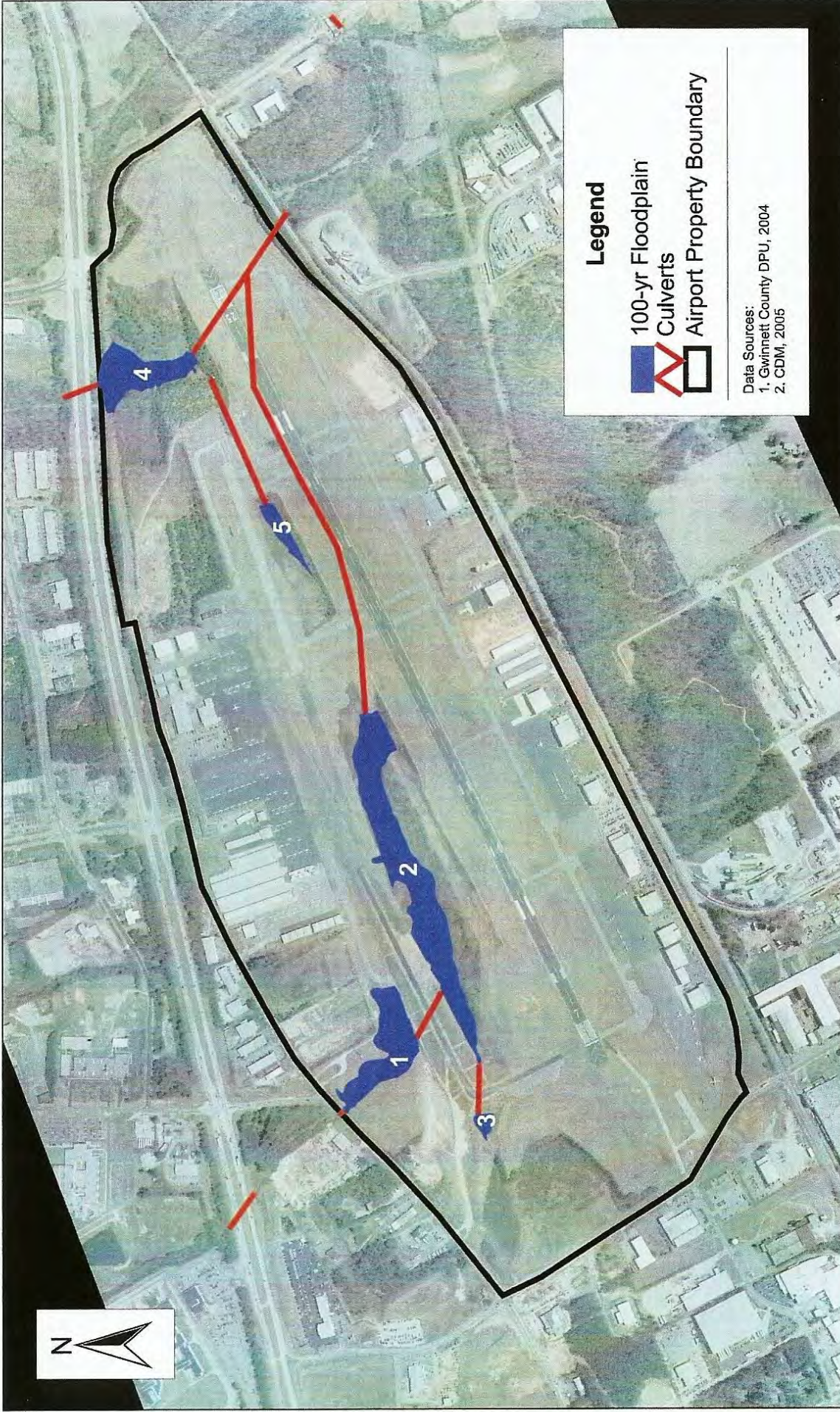
### **4.3 ANALYSIS OF DETENTION / STORAGE REQUIREMENTS**

#### **4.3.1 EXISTING FLOODPLAINS**




Currently there are approximately 122,700 cubic yards of floodplain volume on airport grounds in the existing condition 100-year storm event. Exhibit 4 - 6 shows the extents of the 100-year floodplain on the airport. The floodplain volume and percent generated on-airport is broken down by location in Exhibit 4 - 7

Exhibits 4 – 6 and 4 – 7 continue to illustrate the airport's difficulty with stormwater. Both show that the airport is currently being utilized for stormwater storage even though approximately 75 percent of the water is coming on airport from off-airport sites. In the case of floodplain number 4 on the east side of the airport, almost 90 percent of the water is simply flowing straight through the airport. The major flood area number 2 lies in the area adjacent to the main runway and between the runway and Taxiway B. This is the original location of the previously planned parallel runway.

Floodplain volume that is filled must be replaced with an equal amount of storage created elsewhere in the system, either on or off airport grounds. Any proposed runway alternative which would involve placing fill in some of these floodplains would have to also propose storage volume alternatives. It should be noted that only approximately 25% of the total volume of stormwater runoff from the 100-year storm that flows off of the Airport at the Airport's outfall is generated on Airport grounds. The other approximately 75% of the runoff volume is generated off site and flows onto the airport. Therefore, a representative estimate of the 100-year floodplain volume that would have to be provided for on airport grounds is 30,700 cubic yards (25% of 122,700).



**Legend**

-  100-yr Floodplain
-  Culverts
-  Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPU, 2004  
 2. CDM, 2005

2000 Feet



**Exhibit 4-6**  
**On-Airport 100-Year Floodplains**

**CDM**



**PAII**  
 Project Team

Pegasus Associates International, Inc.

## Exhibit 4 – 7

### Existing 100-Year Floodplain Breakdown

Floodplain ID	Location Description	Volume (cu yd)	Generated On-Airport
1	Between Airport Rd Culvert & Taxiway Culvert #2	10,500	17%
2	Between Taxiway Culvert #3 & Runway Culvert #3	81,000	37%
3	Upstream of Taxiway Culvert #3	1,300	57%
4	Between 316 Culvert #1 & Runway Culvert #2	24,900	13%
5	Upstream of Taxiway Culvert #1	4,800	90%

Source: PAII Project Team; CDM Analysis, 2005

### 4.3.2 FUTURE WATER QUALITY / DETENTION

Gwinnett County stormwater regulations include a provision for providing detention for both water quality and quantity. The regulations require that the first 1.2” of rainfall be captured and detained for 24 hours as a water quality measure. A recent ruling by the U.S. Army Corps of Engineers (USACE) has provided further restrictions in how that measure is met. The Corps has ruled that “waters of the U.S” (i.e., the airport streams) may not be used to achieve water quality. In other words, on-stream detention may not be used to achieve water quality; therefore, some type of additional treatment will have to be employed to meet water quality standards.

**Note:** Information from the EPA and USACE previously indicated that on-stream detention of any type will not be allowed except for instances where there is no other practical alternative. A recent update indicates that due to a Supreme Court case the USACE is reluctant to clarify the rule in general. The effect for Gwinnett County Airport is that if on-line detention for water quantity is not allowed, area required for detention may impact the area available for aircraft basing facilities.

Information from Gwinnett County indicates that existing facilities are essentially “grandfathered” but that any new development will have to meet the water quality and detention requirements. In meeting the regulations, the development will have to provide for detention for only the area being disturbed unless the disturbed area is greater than 50 percent of the property in which case detention must be provided for the entire airport site. The area considered for development of a parallel runway as well as potential terminal areas is well less than 50 percent of the airport property; therefore, detention will have to be provided for the areas being disturbed.

As the next section will identify, there are issues on floodplain compensation as well as detention of stormwater from the development of any alternative. As a practical matter, water quality as well as quantity detention stemming from a development project may not be detained above the project area – meaning it must be detained downstream of the project area. Floodplain compensation – storage capacity provided elsewhere because of filling in the floodplain - may be provided upstream of the project site.

Based on the Soil Conservation Service TR-55 method for estimating runoff amounts, the three alternatives under consideration generates a range of approximately 26,100 to 27,200 cubic yards of detention for the parallel runway/taxiway system and the Northside Terminal Area options under consideration.

### ***4.3.3 FUTURE FLOODPLAIN STORAGE CAPACITY***

Stormwater regulations and the FAA’s Wildlife Management regulations tend to conflict rather than to compliment each other. The major detention areas noted above in Exhibit 4 – 6 indicate that largest concentration of detention is between the existing runway and Taxiway B. According to FAA’s wildlife management guidelines, detention ponds should not be provided near operational areas.

Information provided in Section 4.2.2 above indicates that the capacity limitations in the cross-field culvert will continue to cause ponding / flood backups in the center of the field as long as the water is allowed to run on airport and under the taxiway at a rate higher than can be accommodated by the cross-field culvert. While a potential detention pond at Cedars Road (on land recently purchased by the County) would provide storage, based on the information above, it would not provide a reduction in any of the ponding / flooding upstream of the cross-field taxiway.

## ***4.4 REGULATORY CONSIDERATIONS***

Some water-related regulations will affect a potential project regardless of which runway alternative is selected. Gwinnett County is a member of the National Flood Insurance Program (NFIP), which is regulated by FEMA. Because a potential project will likely involve placing fill in the 100-year floodplain, the sponsor will be responsible for reporting the effects of filling the floodplain to FEMA. Depending on whether or not changes are expected to the floodplains, base flood elevations, or floodway limits as a result of the proposed project, FEMA requires one of two courses of action to be taken:

1. A No-Rise Certificate request and approval if no adverse impact is anticipated, or
2. A Conditional Letter of Map Revision (CLOMR) and LOMR process if any floodplains, base flood elevations, or floodway limits changes are expected.

As part of the environmental assessment (EA) that will necessarily accompany the design of the new runway, the sponsor will also have to assess the significance of the floodplain encroachment as defined in Executive Order 11988 and DOT Order 5650.2. *Under FAA Order 5050.4B (currently published in draft form), the EA will also have to justify why the proposed project is located in the floodplain and show maps and analyses to validate the assessment of the encroachment significance, as well as provide proposed mitigation measures.*

In compliance with the National Pollutant Discharge Elimination System (NPDES), the Airport currently operates under *General Permit No. GAR100001 for Stand Alone Projects*. Under this permit, the Airport will have to revise its Stormwater Pollution Prevention Plan (SWPPP) to include the new parallel runway. A separate NPDES Construction Permit must be obtained from the Georgia Environmental Protection Division (EPD) to cover construction activity associated with the proposed project. The application for this permit must be accompanied by an Erosion, Sedimentation and Pollution Control Plan.

Gwinnett County Department of Public Utilities mandates that a Land Disturbance Permit be obtained for any clearing, grubbing, or grading activities. This permit application must also be submitted with an erosion and sedimentation control plan that meets the standards of the Georgia Erosion and Sedimentation Act of 1975 as amended. The plan must include narratives, maps and drawings, land-disturbing activity schedules, and other supportive data necessary to present a complete understanding of the proposed land-disturbing activity, as described in EPD rules Chapter 391-3-7-.04. The State has granted Gwinnett County issuing authority for land disturbance permits.

## **4.5            *STREAM BANK BUFFER ISSUES***

There are approximately 1,600 linear feet of stream between the culverts in the area of floodplain number 2 as illustrated in Exhibit 4 – 6. Development of a parallel runway as originally planned would impact virtually all of that area. Currently the Georgia Environmental Protection Division's stream bank buffer requires a protected area 25 feet wide on either side of the stream. In addition, Gwinnett County stormwater regulations require an additional 25 feet of buffer on those streams which feed one of the designated water supply watersheds. The Alcovy River is one of the designated water supply watersheds thereby requiring a 50 foot buffer on each side of the stream as well as a 75 foot setback for impervious surfaces. Therefore, a variance must be obtained from the County for any activity that is to occur within this buffer, including clearing and grading for the purpose of providing compensatory floodplain storage (such as the area between Airport Road and Taxiway B).

For any buffer variance, the sponsor must submit a variance application and provide evidence that impacts to the buffer have been avoided or minimized to the fullest extent practicable. The County will consider granting a stream buffer variance only in the following cases:

- The project involves the construction of a structure that, by its nature, must be located within the buffer (such as a detention pond or dam); or
- The project involves construction of paved recreational foot trails and viewing areas, providing that impacts to the buffer are minimal; or
- The proposed land disturbing activity within the buffer will receive a permit from the USACE under Section 404 of the federal Water Pollution Control Act Amendment of 1972, and the USACE has received a mitigation plan to be implemented (Land disturbing activities in the buffer that are outside the USACE's jurisdiction must be mitigated separately); or
- The buffer intrusion is mitigated using the procedure established in the Gwinnett County Storm Water Design Manual.

As outlined in the Gwinnett County Storm Water Design Manual, a variance applicant may achieve stream buffer mitigation with one of two options: on-site mitigation or in-lieu fee mitigation. The County has established a Stream Buffer Mitigation Bank for this purpose. If an applicant is unable to perform sufficient on-site mitigation to mitigate buffer impacts, the applicant may pay a fee to the Gwinnett County Storm Water Capital Project to achieve mitigation.

## **5.0 ASSESSMENT OF AIRSIDE ALTERNATIVES**

### **5.1 DETERMINATION OF ALTERNATIVES**

The Airport Layout Plan (ALP) has included a 3,500 foot parallel runway since approximately 1985 when the planning for the now main runway was conducted. Due to changes in stormwater regulations as well as other environmental factors, there are concerns that the original location of the parallel runway would face considerable difficulty in receiving environmental approved and permitting. Therefore, the Environmental Scoping Study investigated the extent to which the original location of the parallel runway would face insurmountable difficulties from water quality factors (stormwater, stream bank buffer, wetlands, etc.) and whether there may be reasonable alternatives to the original location.

In any full environmental assessment conducted as per FAA Order 5050.4A or Order 1050.1E the alternatives to be considered would require an examination of the case of the build as well as the no-build conditions. The FAA also takes particular interest in the examination of alternatives to the proposed action when reviewing environmental documents.

#### **PARALLEL RUNWAY ALTERNATIVES**

- **Alternative One** – A 3,500 foot parallel runway in the original location

**Benefit and Potential Utilization** – This runway location was planned at the time of limited jet activity at Gwinnett County Airport and high activity by small single engine and multi-engine aircraft. The primary purpose of this runway would be to provide additional capacity to meet the demand for the small aircraft in training activities as well as itinerant operations. This runway would be expected to serve a portion of the single engine and light multi-engine aircraft with virtually no turboprop or jet activity. Some portion of the single engine and multi-engine activity would remain on the south (existing main) runway. The forecast in Section 3, Exhibits 3 – 10 and 3 – 21 indicate the substantial number of single engine operations.

- **Alternative Two** – A 4,400 foot parallel runway constructed by converting the new Taxiway B to a runway and including a new parallel taxiway.

**Benefit and Potential Utilization** – This alternative would serve single engine and multi-engine traffic in addition to a portion of the turboprop traffic. Some degree of small jet traffic is also possible. Overall utilization would include portions of the turbo-prop traffic and essentially all of the business jet traffic on the south (existing) runway, a portion of the turbo-prop traffic on the (new) north runway, a portion of the light single engine and multi-engine traffic on the south runway, with a likely greater portion on the north (new) runway. (Ref: AC 150/ 5325-4B – *Runway Length Requirements for Airport Design*, July 1, 2005) Given that the

southside of the field is virtually built out, any hangar development will be on the northside of the field; therefore, corporate hangar development on the northside is expected to place additional higher category aircraft on the northside requiring greater runway capability from the parallel runway. The 4,400 foot runway under this alternative would provide additional capability and potentially greater balance between the traffic on the two runways.

- **Alternative Three** – A 5,000 foot parallel runway constructed by converting the new Taxiway B to a runway and including a new parallel taxiway.

**Benefit and Potential Utilization** – The longer parallel runway under this alternative provides a substantial increase in the airport’s ability to serve existing and future traffic. Due to the additional capability, this alternative provides for a more even split of traffic on the two runways. The 5,000 foot length would serve the single engine and multi-engine traffic, the turboprop traffic and small and medium jets while the heavier business jets would be expected to prefer the longer existing runway. The longer length of the parallel runway under this alternative would also provide a redundant capability to allow a high percentage of aircraft to continue to operate should the main runway be closed for any reason. Had the capability of a 5,000 foot runway been available during the reconstruction of the primary runway it would have negated the difficulties the airport tenants and operators faced during the construction.

Section 3, Exhibits 3 – 10 and 3 – 21 indicate the substantial forecast increase in jet traffic as well as turboprop. In 2010 36 percent of fixed wing aircraft operations are jet and turboprop. The percentage increases to 41 by 2015 and 48 by 2025. While these operations could all be handled on the existing runway, the development of the northside basing area would mean that jets based on the northside would have extended taxiing patterns to reach the southside runway.

- **No – Build Alternative** - The no-build alternative presumes no parallel runway development although other airfield development may occur. The airport achieves no airside or air traffic benefit from not developing one of the parallel runway options.

## **ADDITIONAL AIRSIDE OPTIONS**

- **Runway Strengthening** – As noted in Section 3, the existing runway has a weight bearing capacity of 60,000 pounds dual wheel rating. The runway currently has a small number of operations by aircraft greater than 60,000 pounds gross take off weight and should be strengthened to 100,000 pounds dual wheel capacity.
- **Replacement Taxiway “Y”** – The current Taxiway “Y” is a portion of the old closed runway which connects the northside basing area to Taxiways D, E, F, and G for access to / from the runway and Taxiway W on the southside of the runway. The selection of either parallel runway Alternative Two or Three or a no-build condition will allow the development of a new Taxiway Y east to provide a north side connector to the existing end of Runway 25. The primary and substantial benefit

of this taxiway will be to reduce the runway crossings by aircraft on the northside taxiing to the southside to get to Runway 25.

**Alternatives Selection Summary** - The numbering of the alternatives is simply for the sake of identification and includes no presumption of any factor being better or worse than any other alternative. Section 4.0 above outlines a portion of the considerable obstacles to be overcome in developing a parallel runway as originally planned. Given the severity of water based environmental factors faced by the original location, the additional parallel runway alternatives were selected for comparative review. The overall airport and its environs were reviewed to determine if any other alternative beyond those noted above would be reasonable to include in the investigation.

While the original location of the parallel runway as contained in Alternative One lies inside Taxiway B (toward the existing main runway), Alternatives Two and Three would include the expansion of the current Taxiway B to runway standards and the addition of a new parallel taxiway outside of Taxiway B. The north side of the airfield contains the original aircraft basing area on the airport and currently houses a large number of aircraft. Alternatives Two and Three will have some effect on the basing area as currently laid out. Any runway location to the north of the current Taxiway B (toward SR 316) which would have been outside of Taxiway B would have: 1) consumed a large portion of the northside basing area with virtually no area available to replace the basing area consumed by the runway; and 2) left the current Taxiway B as an active taxiway. Therefore, while Alternatives 2 and 3 consider converting the existing Taxiway B to a runway and building a new parallel taxiway, no other alternatives were considered practical on the north side due to existing site constraints.

On the south side of the field there is essentially no room for a parallel runway between the existing runway and the property line given all of the large hangars along Briscoe Boulevard. The railroad track limits further expansion to the south as well as the continuing industrial / commercial development between the railroad tracks and Highway 29. Therefore, no south side alternatives were considered reasonable.

Given that Gwinnett County Airport is essentially land locked by surrounding roads, a major highway and a railroad, few other options other than those noted appear reasonable.

## **5.2            *NATURAL ENVIRONMENT EFFECTS***

Any project such as the construction of a parallel runway would require a full environmental assessment conducted under NEPA guidelines. Past environmental work on the airport has provided an indication of natural environment expected conditions – such as potential wetlands as well as the potential for archaeological effects. The studies in the past have concentrated on the north and northwest portions of the airport. In order to an indication of expected natural environment conditions on the eastern portion of the airport where a possible parallel runway would be developed, the PAII Project Team performed a walk over of the area by qualified

natural scientists and archaeologists. Their reports are contained in Appendix 1- Environmental Reports.

To summarize the reports – there were no endangered species of flora or fauna, wetlands were found in the immediate vicinity of the streams in the area. There may be some potential for archaeological finds along some of the stream banks but there were no indications of any major factors which would stop the development of any of the alternatives.

### ***5.3 HUMAN ENVIRONMENT EFFECTS***

The effect of airport expansion projects on the human environment is just as important as the effect on the natural environment. In most cases, the prime determinant of the effect of expansion projects on the human environment is the effect of aircraft noise on sensitive land uses. These effects are described below.

#### ***5.3.1 AIRCRAFT NOISE COMPATIBILITY CRITERIA***

**Compatibility Criteria** - According to NEPA and FAA environmental criteria, the evaluation of the effect of aircraft noise as well as other environmental categories is measured by the effect on or status of the environment without versus with the project. Therefore, the environmental effect of aircraft noise is measured by the effects of the build project versus the no-build conditions at the same point in time. The effect of aircraft noise is also judged by the effect on various land uses. As an example, industrial and commercial land uses are considered to be more tolerant of aircraft noise than is residential land use. Exhibit 5 – 1 contains the noise and land use compatibility table from FAA Part 150 – Airport Noise Compatibility Planning.

**Noise Metric** - Aircraft noise is measured in A weighted decibels or dBA. The FAA has determined that the Day Night Level (DNL) methodology of describing aircraft noise is the standard to be used in evaluating aircraft noise. The DNL methodology presumes the daytime activity begins at 7:00 a.m. and concludes at 10:00 p.m. Nighttime is from 10:00 p.m. to 7:00 a.m.

The DNL measure is a 24 hour weighted average of aircraft sound which is dependent on the number of takeoffs and landings by the various aircraft based on a full year's activity. The measure also recognizes that nighttime aircraft noise is more disturbing than daytime; therefore, the measure adds a 10 dBA penalty to the nighttime aircraft operations.

EXHIBIT 5 - 1  
**FAA Land Use Compatibility**  
**With Yearly Day-Night Average Sound Levels**

<i>Land Use</i>	Below 65 DNL	65-70 DNL	70-75 DNL	75-80 DNL	80-85 DNL	Over 85 DNL
<b><i>Residential</i></b>						
Residential, other than mobile homes and transient lodgings	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient Lodgings	Y	N(1)	N(1)	N(1)	N	N
<b><i>Public Use</i></b>						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental Services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
<b><i>Commercial Use</i></b>						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail-building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade-general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
<b><i>Manufacturing and Production</i></b>						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
<b><i>Recreational</i></b>						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in Parentheses refer to notes.

\*The designations contained in this table do not constitute a Federal determination that any use of land covered by the program is acceptable or unacceptable under Federal, State, or local law. The responsibility for determining the acceptable and permissible land uses and the relationship between specific properties and specific noise contours rests with the local authorities. FAA determinations under Part 150 are not intended to substitute federally determined land uses for those determined to be appropriate by local authorities in response to locally determined needs and values in achieving noise compatible land use.

**Key to Table 6-12:**

SLUCM = Standard Land Use Coding Manual.

Y (Yes)=Land Use and related structures compatible without restrictions.

N (No)=Land Use and related structures are not compatible and should be prohibited.

NLR = Noise Land Use Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35=land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dB must be incorporated into design and construction of structure.

**Notes for Table 6-12:**

(1)-Where the community determines that residential or school uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5, 10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. However, the use of NLR criteria will not eliminate outdoor noise problems.

(2)-Measures to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(3)-Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal noise level is low.

(4)-Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal live is low.

(5)-Land use compatible provided special sound reinforcement systems are installed.

(6)-Residential buildings require an NLR of 25.

(7)-Residential buildings require an NLR of 30.

(8)-Residential buildings not permitted.

Source: FAR Part 150, Airport Noise Compatibility Planning and AC 150/5020-1 Noise Control and Compatibility Planning for Airports, Appendix I

**Aircraft Noise Classification** – Aircraft noise has been an aircraft / airport environmental issue for a number of years. In recognizing that the FAA began classifying aircraft noise to recognize the level of noise produced by the various aircraft. Begun a number of years ago, the aircraft at the time were described as noise Stage I. New criteria was developed for newly manufactured aircraft as Stage II and then to Stage III. Currently any aircraft being built must meet the Stage III requirements. Most of the aircraft built in recent years meet the Stage III requirements although there are still some Stage II general aviation jets in the fleet as allowed by regulation. Most of the Stage II aircraft are older aircraft which are starting to drop out of the fleet. The forecast of operations considered in the base year noise model runs include some operations by the Lear Jet model 24. Those operations were reduced from 5 percent in the base year to 3 percent in the year 2015 and to 1 percent by the year 2025. It is entirely likely, however, that those aircraft will be out of the fleet beyond 2015. By federal regulation Stage II air carrier aircraft stopped operating in the United States in the year 2000 but the prohibition only applied to aircraft with a gross takeoff weight of over 75,000 pounds. At the time there were few general aviation jets which met that criterion.

Stage III aircraft are considerably quieter than Stage II aircraft. The remaining portion of the aircraft noted above is Stage III.

### ***5.3.2 AIRPORT AREA LAND USE***

**Existing Land Use** - There are a variety of land uses surrounding the Gwinnett County Airport, as displayed with the base year noise contours. The majority of the land east of the airport is undeveloped or zoned for transportation, communication and utility usage. South of the airport is predominantly heavy industrial areas and institutional and/or public lands. Undeveloped regions are to the southeast of the airport and a park is to the southwest. Single family residential areas are located primarily to the west of the airport. Light industrial areas are mostly to the north and west of the airport.

**Future Land Use** - According to Gwinnett County's 2020 Land Use Plan as illustrated with the 2015 and 2025 noise contours, portions of the current residential areas located southwest of the airport will be converted into light industrial uses. A portion of the area currently zoned as low density residential is expected to transition into commercial/retail. Additionally, current high density single family residences a bit further west from the airport are expected to transition into a medium density single family area.

**Land Use Source** – All land use information was provided by Gwinnett County as contained on the Gwinnett County website. While Gwinnett County was the source for the information, it should be noted that portions of the airport area are within the City of Lawrenceville. The existing land use map from the Gwinnett County 2020 Land Use

Plan is used as the base for the Base Year 2005 noise contour. The future land use as available for the year 2020 was used for all future year noise contours.

### ***5.3.3 AIRCRAFT FLIGHT TRACKS AND ATC OPERATIONS***

**Current Airspace Operations** - Gwinnett County Airport has a single runway with air traffic controlled by an air traffic control tower essentially during daylight operating hours. While airport operations without an operating control tower are structured according to FAA air traffic regulations, operations with an operating control tower may be a bit more flexible.

Visual Flight Rule (VFR) traffic patterns for non-towered airports usually require an aircraft to enter the traffic pattern on the downwind leg of the pattern and fly a racetrack pattern to a base leg and to a final approach leg as illustrated in Exhibit 5 – 2. With exception of entering the pattern, all turns are to the left in the standard traffic pattern. If officially designated, traffic patterns can be to the right.

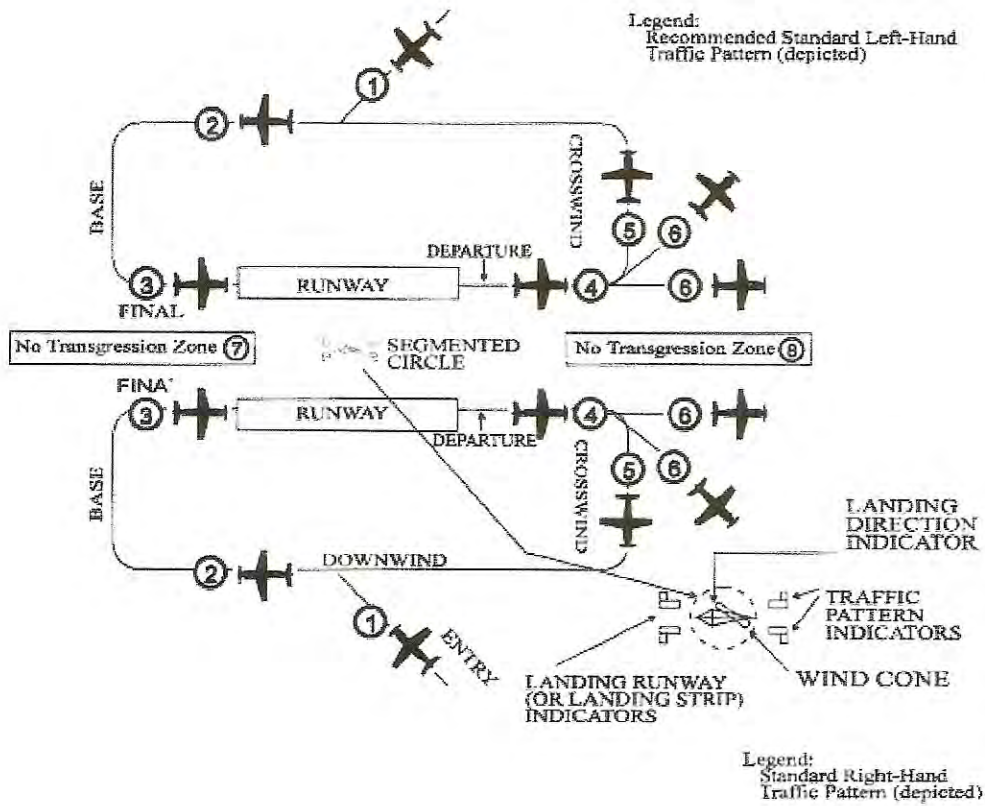
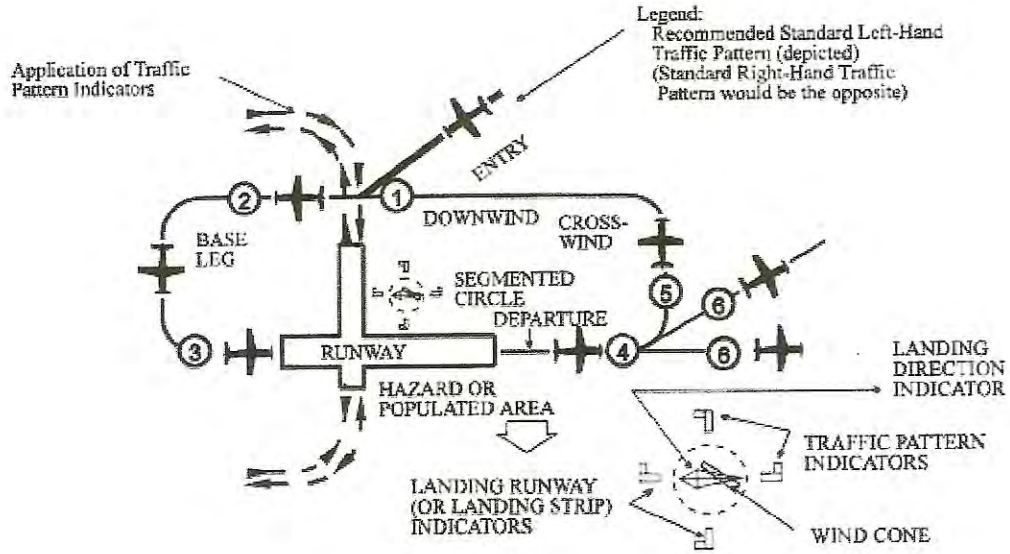
With an operating control tower the patterns are generally as described above with the addition that the Tower may authorize entry on the base leg as well as straight in approaches. In addition, the Tower may authorize right traffic for traffic approaching the airport from the direction opposite the normal traffic pattern side of the airport.

Instrument Flight Rule (IFR) traffic is usually straight-in on an instrument approach. The approaches are designed by the FAA based on a number of potential navigational aids including Global Positioning System (GPS) and all have a final segment of various lengths which is straight-in to the runway. Gwinnett County Airport has an Instrument Landing System (ILS), Non-directional beacon (NDB), and GPS approaches to Runway 25 and VOR/DME and GPS approaches to Runway 7. Even if the weather is actually

VFR aircraft approaching on an instrument flight plan may well fly the entire approach. In certain circumstances the Tower may request that the pilot fly a “visual approach” which may shorten the final approach flight track.

In current practice, air traffic at Gwinnett County Airport the Tower utilizes both left and right traffic to both Runway 7 and Runway 25. Jet traffic is predominately straight in and straight out except as assigned after departure headings by Atlanta departure control. Aircraft east bound off Runway 7 may initially head southeast until transferred to enroute control. Aircraft north or west bound off Runway 7 may receive immediate turns to stay within the departure control boundary. Departures off Runway 25 are also given headings after departure but are less affected by airspace restrictions.

Exhibit 5 – 3 illustrates the flight tracks for current Runway 7 operations while Exhibit 5 – 4 illustrates similar flight tracks for Runway 25 operations. The flight tracks are based on FAA regulations, standard flight tracks, and discussions with the Gwinnett County Airport Tower Chief. It should be noted, however, that the flight tracks shown generally represent the center area of the flight track. Larger and faster aircraft may operate on a slightly larger flight track while smaller and slower aircraft may operate on a smaller track. The actual path over the ground is also influenced by weather conditions.



Source: FAA - Airman's Information Manual

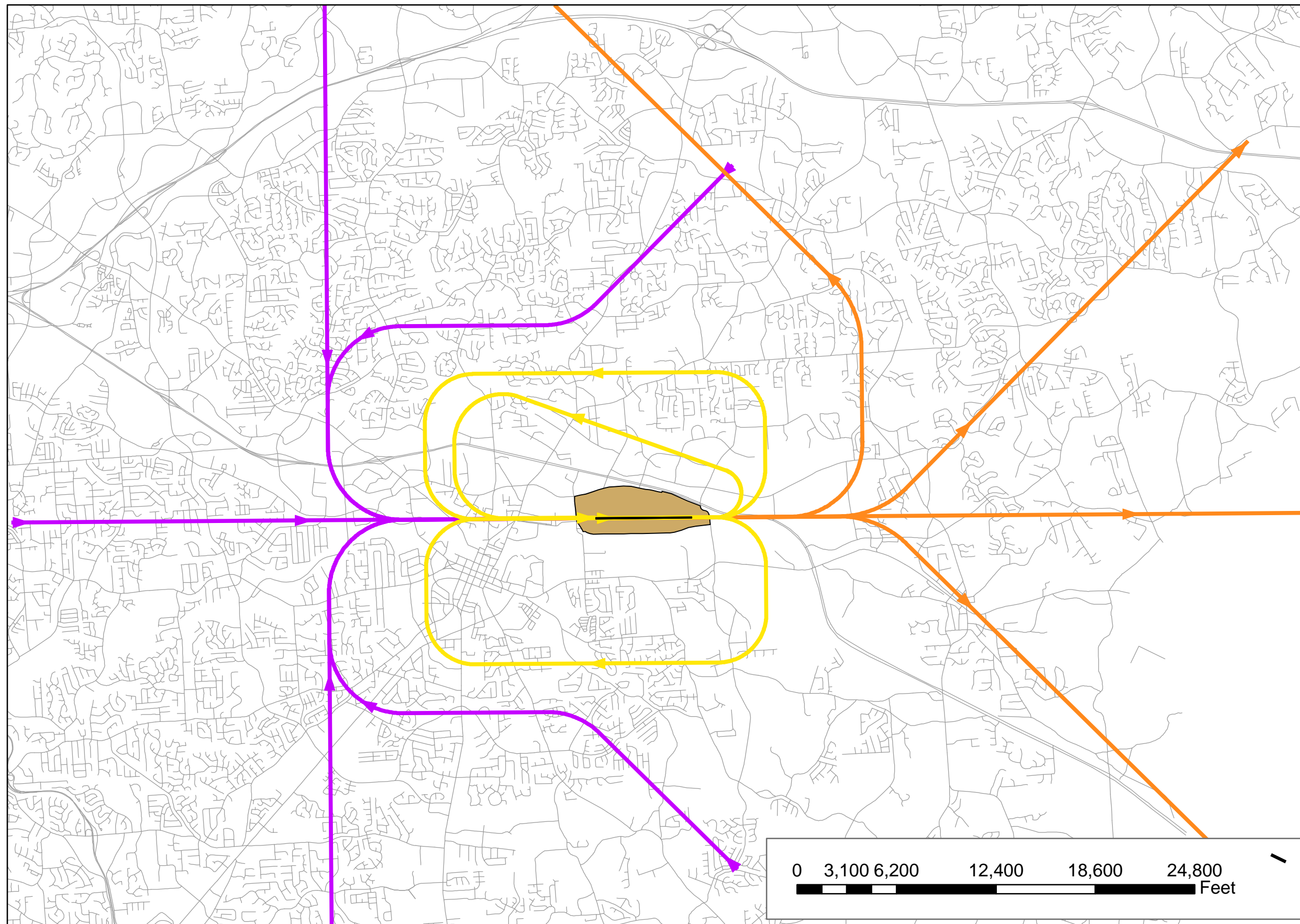
Exhibit 5 - 2

FAA Standard Traffic Patterns



# Gwinnett County Airport

## Airport Master Plan



### Flight Track Legend

- Existing Airport Runway
- Airport Property Boundary
- Roadways
- Runway 7 Flight Tracks**
  - Arrivals
  - Departures
  - Touch and Gos

Exhibit 5-3  
Runway 7 Flight Tracks

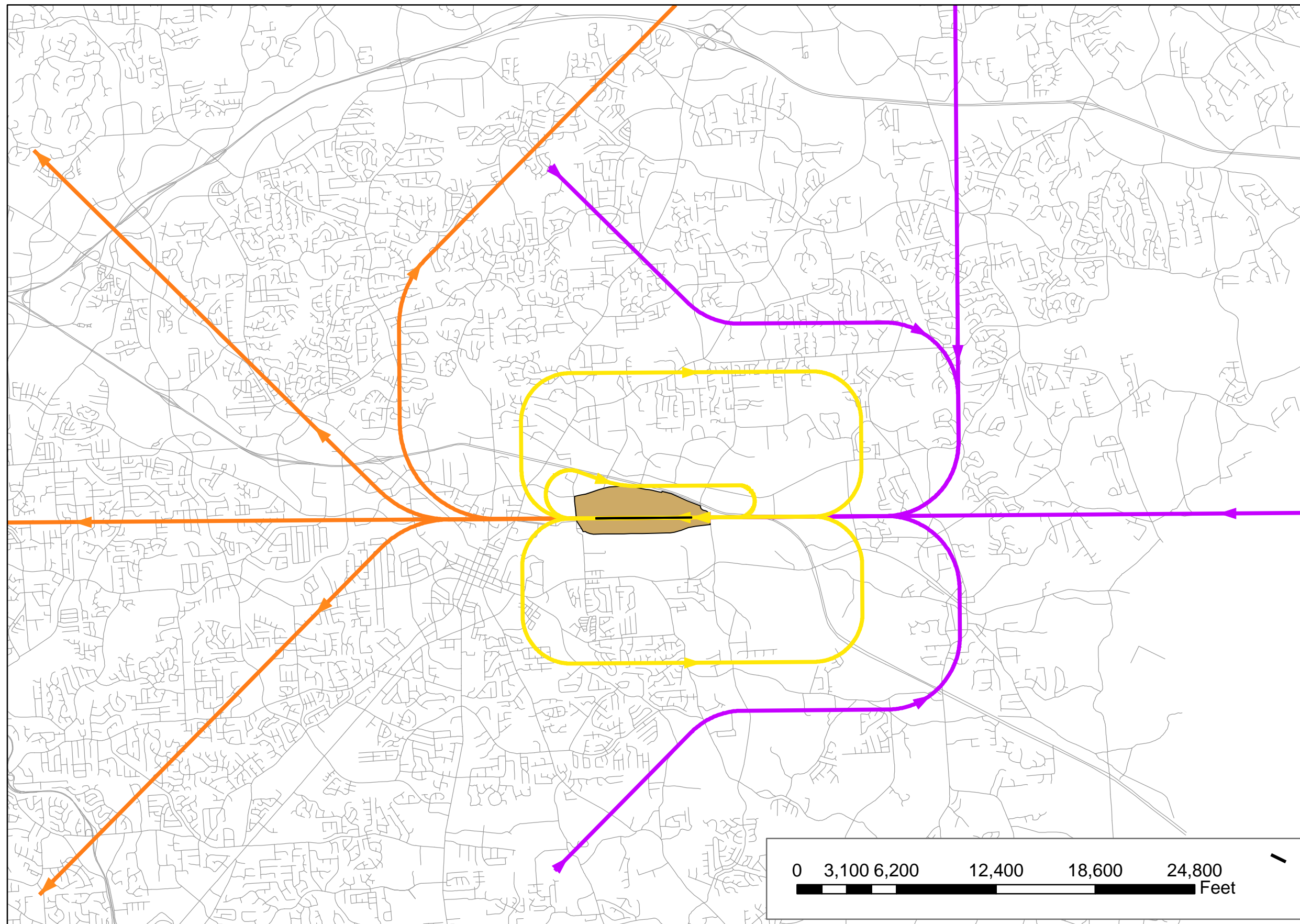
Data Sources: Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005;  
PAII, CDM, 2006





# Gwinnett County Airport

## Airport Master Plan



### Flight Track Legend

- Existing Airport Runway
- Airport Property Boundary
- Roadways
- Runway 25 Flight Tracks**
- Arrivals
- Departures
- Touch and Gos

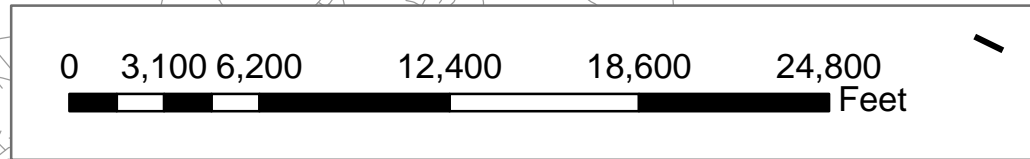


Exhibit 5-4  
Runway 25 Flight Tracks

Data Sources: Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006



In addition to the various aircraft operating on various flight tracks, two operating conditions are constant for all flight tracks for the base year as well as the future cases. These are:

- Day / night split – all operations are based on 95 percent day operations and 5 percent nighttime operations.
- Runway utilization / direction of operation – meteorological conditions as well as area traffic conditions are such that the airport currently operates approximately 90 percent westbound or on Runway 25 and 10 percent eastbound or Runway 7.

**Future Activity** - Future air traffic activity and flight tracks will remain largely the same with the possible introduction of a parallel runway. Given that the airport now has traffic patterns on both the north and south sides of the airport that activity is expected to remain in the future with the exception that northside traffic will utilize the new parallel runway and the southside traffic will utilize the currently existing runway. One difference will be that the northside patterns may be moved slightly further north due to the separation between the runways. Exhibit 5 – 5 and 5 – 6 illustrate the flight tracks with a parallel runway.

The traffic on the various flight tracks will change with the respective alternative. As an example, under the 3,500 foot and 4,400 foot parallel runway option, there is no jet traffic on the north side flight tracks. Under the 5,000 foot option, there is jet loading on both the north and south side flight tracks.

### ***5.3.4 AIRCRAFT NOISE MODEL OPERATIONS***

The FAA Integrated Noise Model version 6.2 was used to determine the extent of fixed-wing aircraft noise for the base year and several alternative conditions. The base year was 2005 and based on the activity levels for that year. The parallel runway alternatives were compared for the activity levels for the year 2015 as the timeframe in which a runway could be available and for the year 2025 to consider the effects of greater activity.

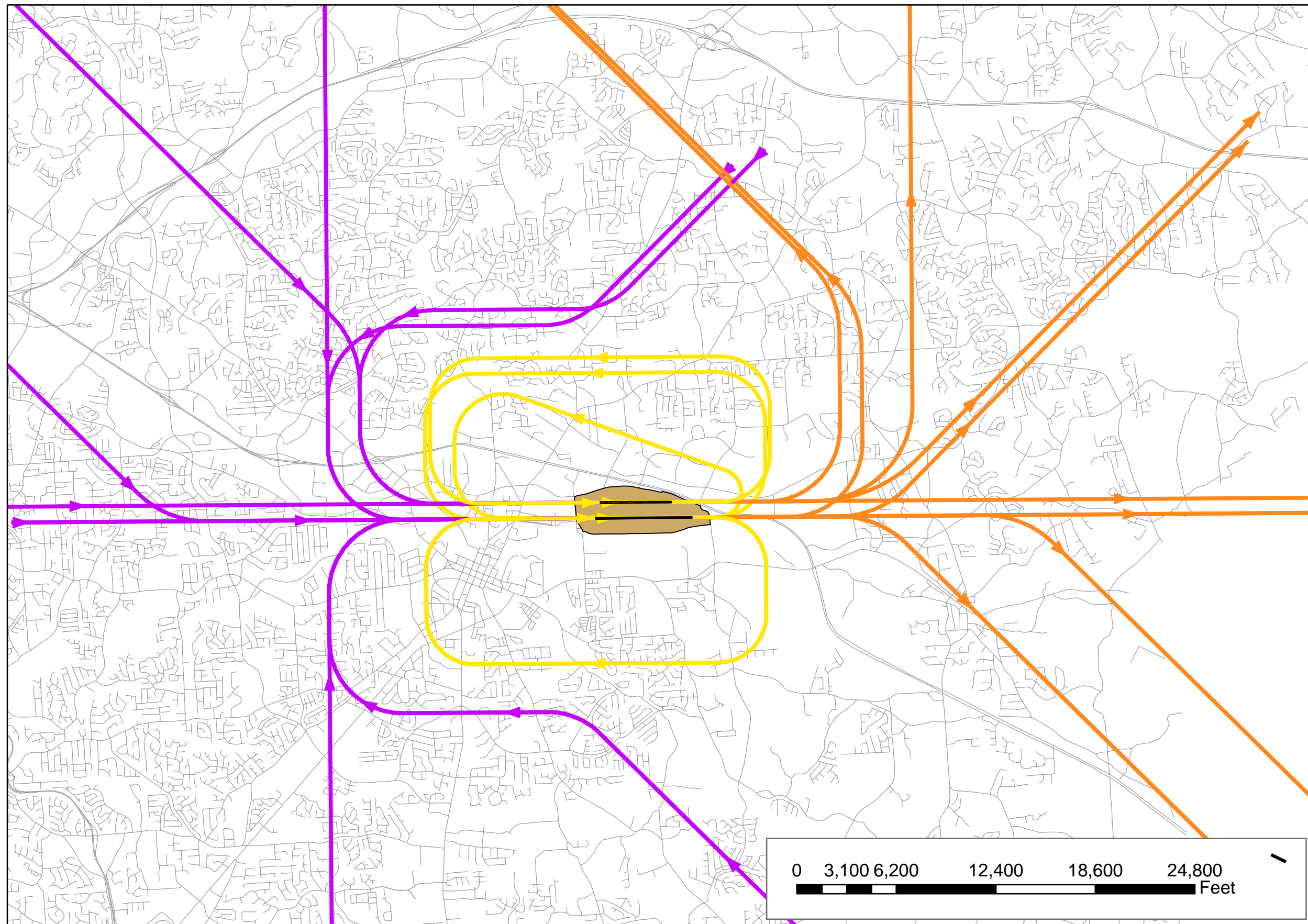
The noise model requires a considerable amount of data including operations by the various aircraft considered to be in the fleet, the number of operations on each flight track the aircraft operate on, and the day night split of activity. The model produces a contour which links points of the same DNL value desired. The model runs were completed for the 65, 70, and 75 DNL levels corresponding to the compatibility table in Exhibit 5 – 1. Helicopters operate generally outside the fixed-wing flight tracks and generally closer to the airport such that the noise is contained within the noise produced by fixed-wing aircraft. The helicopter activity elsewhere on the airport would not influence the fixed-wing runway alternatives and are not included in the model runs.

FAA criteria specifies that a significant change in noise level is a change of 1.5 DNL from the condition at any point in time without the project to the same point in time



# Gwinnett County Airport

## Airport Master Plan



### Flight Track Legend

- Existing Airport Runway
- Proposed Runway
- Airport Property Boundary
- Roadways
- Runway 7L/R Flight Tracks**
- Arrivals
- Departures
- Touch and Gos
- Runway 7 Flight Tracks**
- Arrivals
- Departures
- Touch and Gos

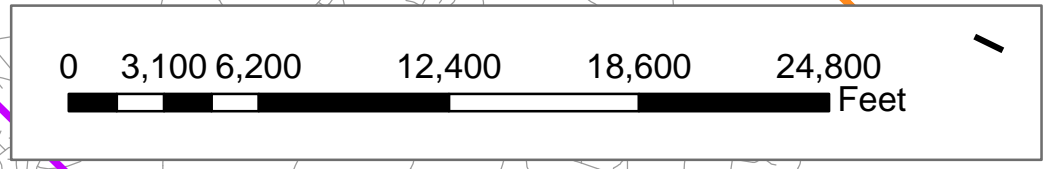


Exhibit 5-5  
Runway 7L/R Flight Tracks

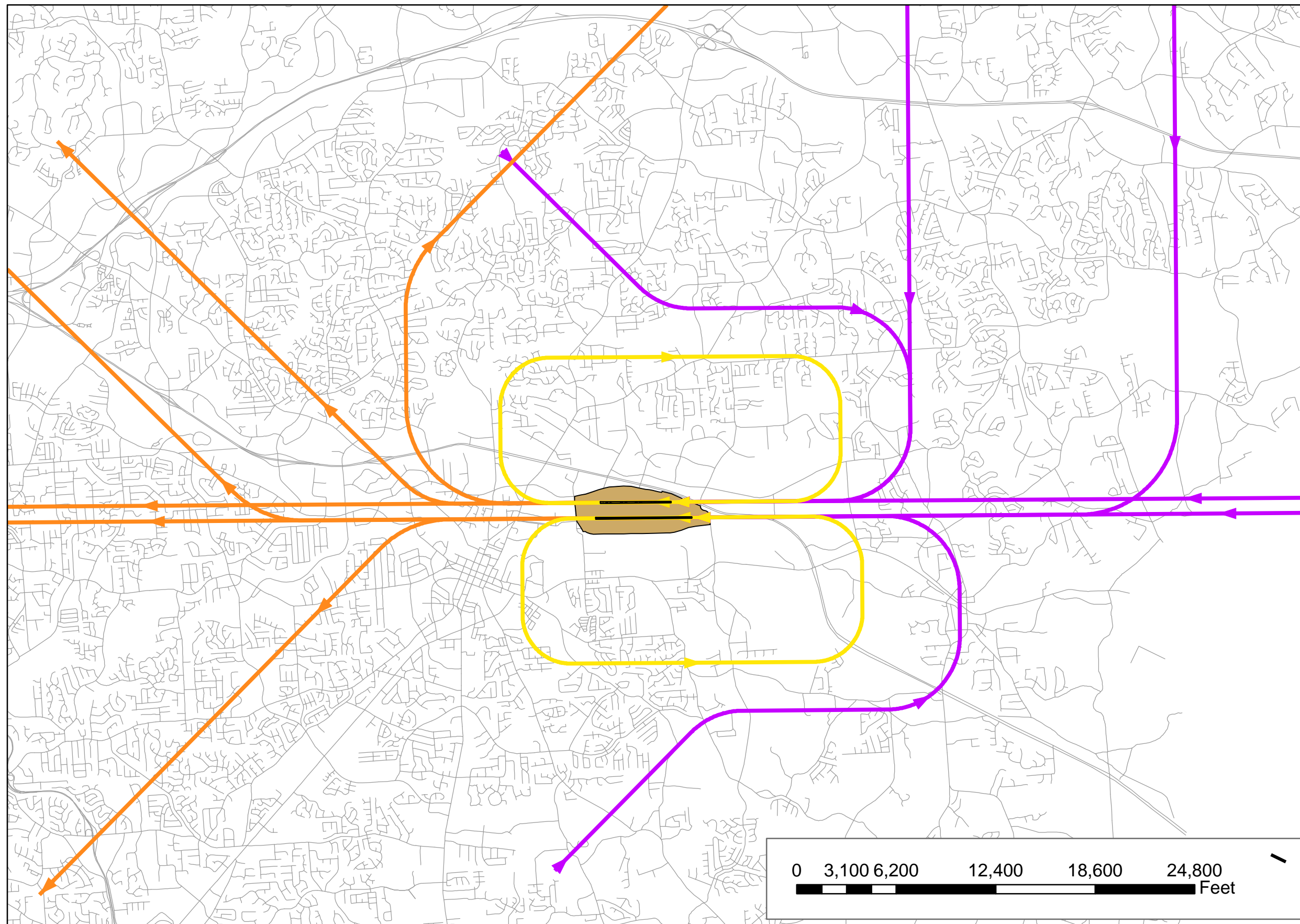
Data Sources: Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005;  
PAII, CDM, 2006





# Gwinnett County Airport

## Airport Master Plan



### Flight Track Legend

- Existing Airport Runway
- Proposed Runway
- Airport Property Boundary
- Roadways

### Runway 25L/R Flight Tracks

- Arrivals
- Departures
- Touch and Gos

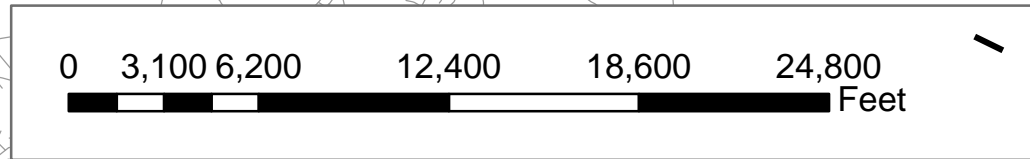


Exhibit 5-6  
Runway 25L/R Flight Tracks

Data Sources: Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006



with the project. While expansion or contraction of the contour may be seen over maps, the model also will produce numeric DNL values for a specific point on the ground. Specific points were established on all four sides of the airport in order to determine the numeric point value change between the no-build and build condition for any year. The contours and representative grid point value will be presented for each condition in the description of the various alternatives.

### **5.3.5 BASE YEAR NOISE CONTOURS**

The Base Year noise contours were run utilizing the flight tracks noted above, operational activity for 2005, and the conditions below as follows:

	<b>Existing Runway 7 / 25</b>
Runway	6,000'
Runway Utilization	10 % / 90 %
Day / Night	95 % / 5 %
Fixed Wing Aircraft*	100 %

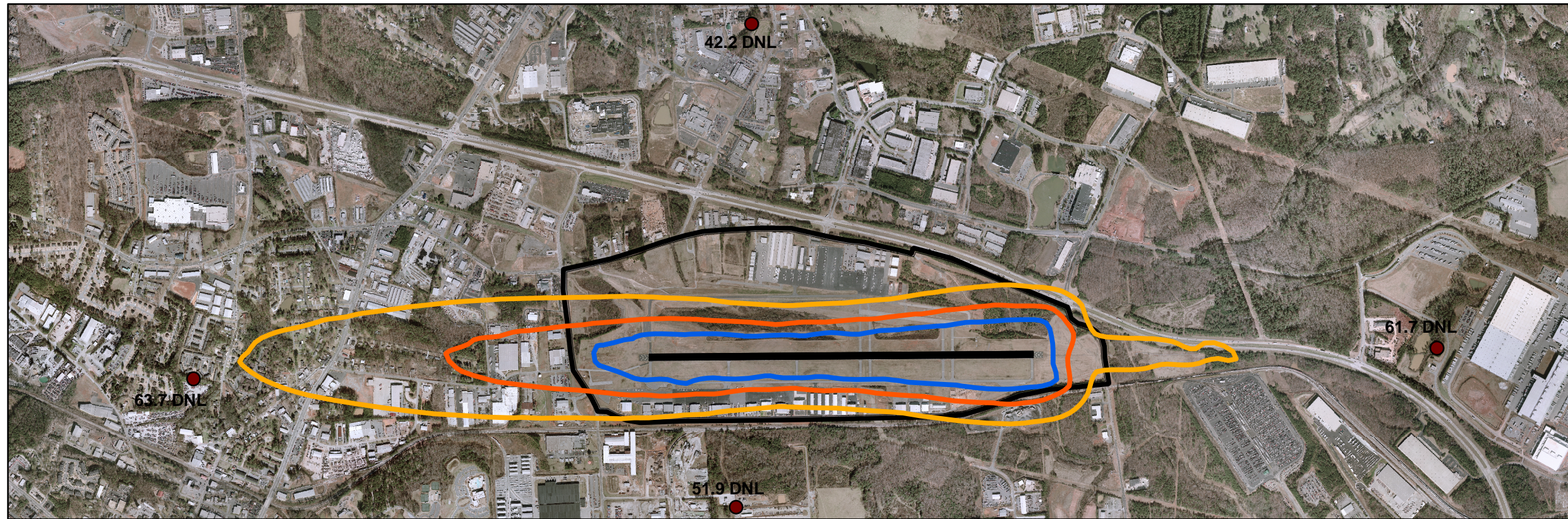
Source: PAII Project Team Analysis and Summary

Exhibit 5 - 7 illustrates the noise contour for the base year over the aerial photo as well as over the 2005 land use.

The base year 65 DNL noise contour overlies a portion of the residential land use west of the airport. The total area of the 65 DNL contour is less than 1 square mile (0.837 nm). The area overlying the residential area is 0.041 nm as illustrated in Exhibit 5 - 8.

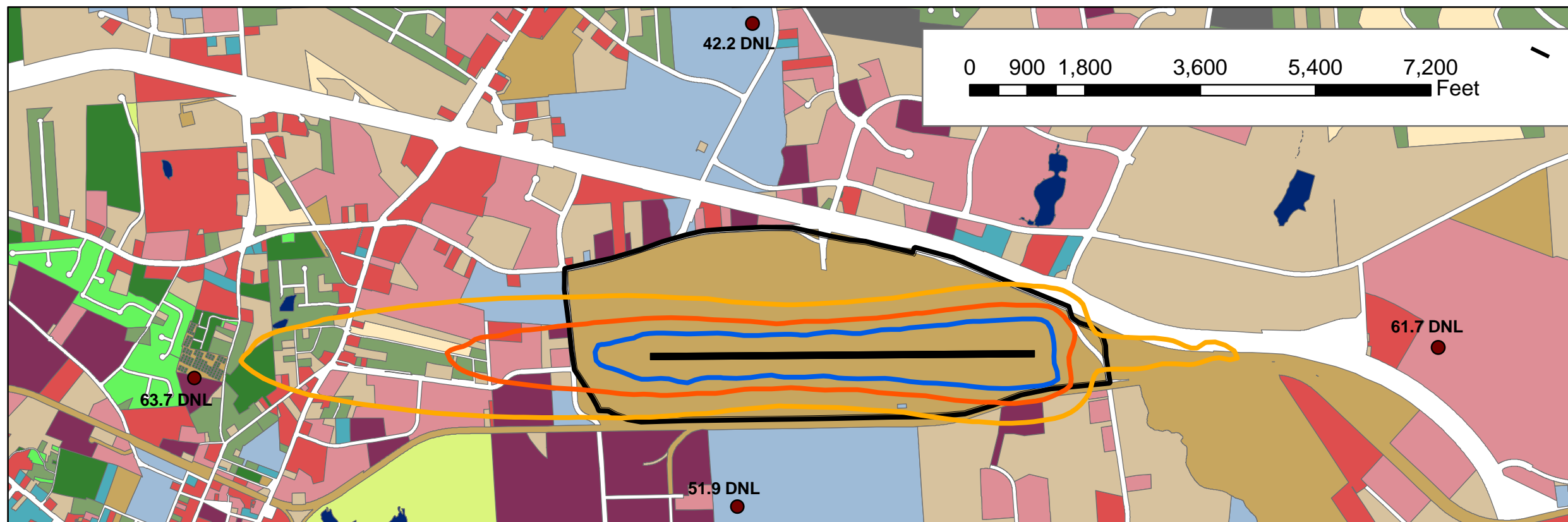
# Gwinnett County Airport

## Airport Master Plan



### Noise Contour Legend

- Airport Property Boundary
- Base Year 2005 Airport Runway
- Base Year 2005 Grid Points
- BY 2005 Noise Contours**
- DNL 65
- DNL 70
- DNL 75



### Existing Land Use Legend

- Agriculture
- Commercial/Retail
- Estate
- High Density SF Residential
- Heavy Industrial
- Institutional/Public
- Low Density SF Residential
- Light Industrial
- Medium Density SF Residential
- Office/Professional
- Park, Recreation, Conservation
- Transportation, Communication, Utilities
- Undeveloped
- Water

Data Sources: 2005 Existing Land Use Map from the Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006

Exhibit 5-7  
Base Year 2005 Existing Land Use

EXHIBIT 5 - 8

**BASE YEAR 2005 NOISE CONTOUR**

**TOTAL AREA AND RESIDENTIAL AREA COVERAGE**

DNL Contour	Total Area of Coverage	Residential Area Under Contour
65	0.837	0.041
70	0.387	0.005
75	0.198	0.000

Note: Area in measured in square nautical miles

Source: FAA Integrated Noise Model, PAll Project Team analysis

***5.3.6 ESTIMATES OF PROBABLE COST***

Estimates of probable cost are provided for each of the alternatives. The estimates for the alternatives are based on a planning level of detail and include a number of factors. The estimates would be revised as the timing of projects becomes clearer and engineering studies are completed. The estimates are as follow:

- **Earthwork** - All parallel runway alternatives include considerable amounts of earthwork with a large portion of the fill material having to be brought into the site. Where available, on-site material was used in the runway development. This includes material above an expected grade east of Landmark Aviation and any excess material above and expected grade in the Central Basing Area. The timing and sequencing of construction activities on the airport will determine whether these materials will be available and how they will be handled.
- **Environmental** – Environmental costs include payments made to wet banks, buffer banks, stream banks, earthwork for floodplain compensation and detention, and similar costs.
- **Drainage** – Drainage costs includes the construction of culverts, piping, and similar structures as required for each alternative.
- **Paving** – In calculating the amount of paving required, credit was recognized for the paving available on Taxiway Z (formerly Taxiway B) .
- **Lighting** – Lighting for the runway and taxiways is provided.
- **Basing Area Facilities** – Basing area facilities are estimated based on the airport providing site preparation to a rough grade for facility development areas as well

as general access taxiways and general access basing site roadways. Individual companies would be expected to enter into a ground lease with the airport upon which the company would construct hangars, aprons, and auto parking to serve their facilities. The estimates include a general allowance for trunk line utilities to serve the area but not individual facilities. Such service would be the responsibility of the facility developer. Environmental costs will also be the responsibility of the facility developer.

Facility development costs for Alternatives Two and Three, both of which are based on Taxiway Z and encroach somewhat into the East and Central Basing Areas do not contain allowances for the possibility that the relocation of hangars or infringement on lease areas may raise additional cost issues. Any such costs will be determined in the future.

- **Allowance for Construction Mobilization and Contingency** – Estimates for individual items above are based on unit costs times the units expected. Construction contracts will also have mobilization. In addition, a contingency factor is added to the cost. The mobilization and contingency factor is 30 percent of the construction cost for the alternative.
- **Engineering Design, Testing, and Observation** – All projects will have engineering, geotechnical and materials testing, and construction administration and project inspection / observation. These costs are estimated at 20 percent of the construction cost for the purpose of these estimates.
- **Environmental Assessment** – All projects will require some type of environmental clearance. These range from complex for a parallel runway project to more simple for the runway strengthening project. An allowance of 5 percent of the construction cost is used as an indication of potential environmental assessment costs,
- **Land Acquisition** – Land acquisition costs for landside expansion is based appraised values for the land in question from the Gwinnett County website, Tax Appraiser's data for land and building costs for individual parcels. Additional appraisals will be required at the time of expected purchase.
- **Estimate Conditions** – These costs are estimated at a planning level in 2006 constant dollars. They are also subject to wide swings in the future given the volatility in fuel prices and materials costs, changes in environmental regulations, sequencing of projects, and details of preliminary engineering and testing.

## **5.4 PARALLEL RUNWAY ALTERNATIVE ONE – 3,500’ ORIGINAL LOCATION**

### **5.4.1 AIRFIELD GEOMETRIC CONSIDERATIONS**

Exhibit 5 – 9 illustrates the location for the 3,500 foot runway for Alternative One. As noted, the runway lies inside Taxiway B and essentially on top of the area considered to be environmentally sensitive. This runway is located 700 feet from the main runway, as measured from centerline to centerline, which is the minimum distance allowable for parallel runways as defined by current FAA guidelines.

The 3,500 foot runway would serve primarily small single and multi-engine aircraft. Some turboprop aircraft might also use the runway but many of the larger turboprops may be limited by the accelerate / stop distance requirement. Therefore, larger aircraft would still be required to cross the parallel runway as well as the main runway on the way to Runway 25. Aircraft taxiing to / from Runway 7 would not cross either runway.

### **5.4.2 EFFECT ON EXISTING FACILITIES**

As noted in Exhibit 5 – 9 the extension of Taxiway B to the east would require the removal / relocation of the two 8 unit T-hangars. Although planning is underway to relocate the Automated Weather Observing System (AWOS), should it still be in its current location, it would have to be relocated as part of the project as well. Following construction, this alternative would have the least effect on existing facilities.

### **5.4.3 EFFECT ON AIRCRAFT OPERATIONS**

The construction of this alternative would have the potential to disrupt much of the activity on the north side of the field for the period of construction. Located in the internal portion of the field, access to the site would impact access to the cross field taxiways as well as the basing area at some point during the construction.

This alternative will require a large culvert to be constructed in the center of the field as well as thousands of cubic yards of fill material. Access to the area for the construction of the culvert will require that Taxiway B either be closed to aircraft traffic or that a flagman would have to be utilized to allow trucks and aircraft to cross. It would appear that the culvert could be built with the cross field taxiways (D, E, F, & G) operating. Truck traffic could utilize a haul road from the turnaround area near the creek passing alongside the EAA basing area and crossing Taxiway B at a location which would allow access to the center of the field.

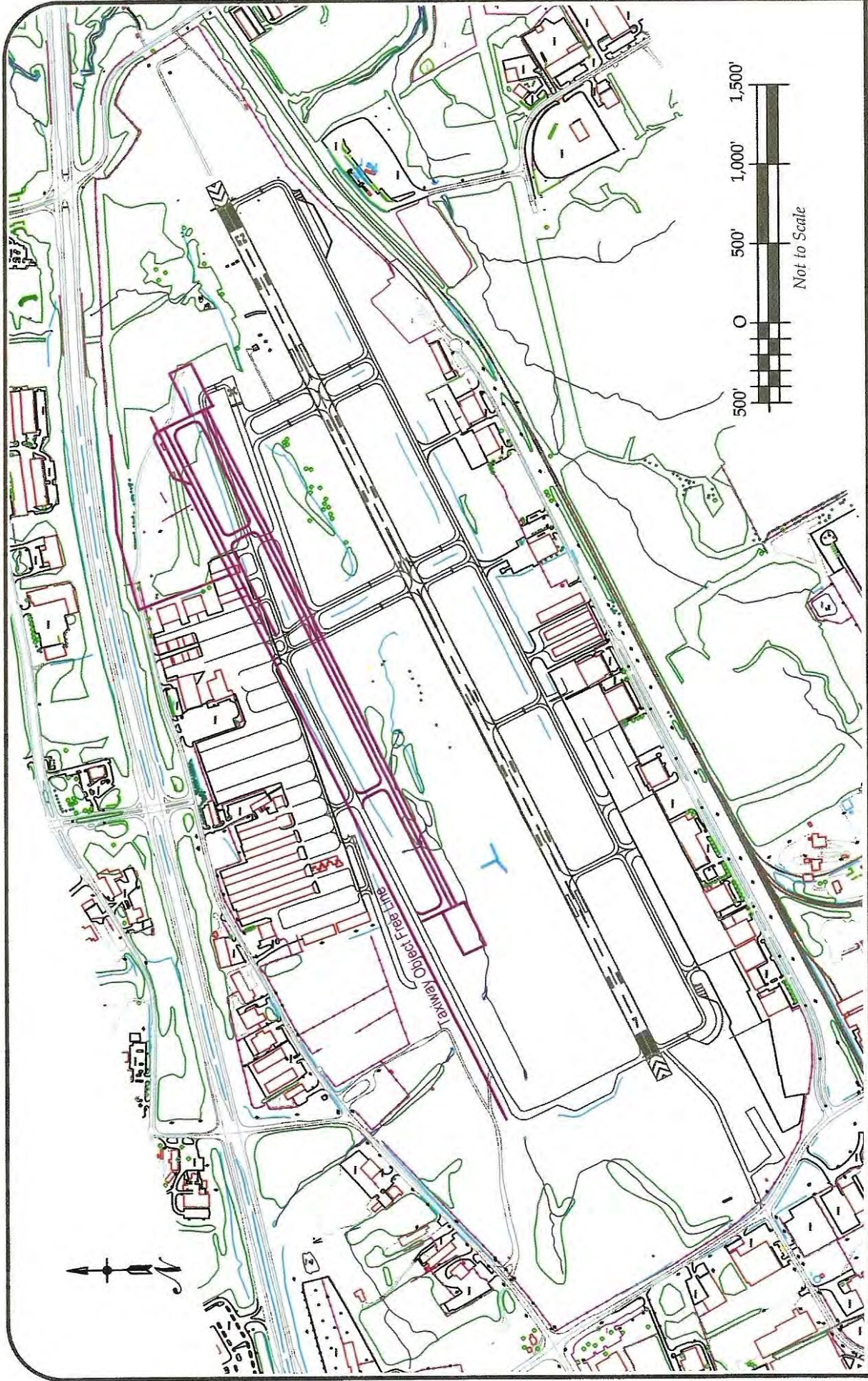


Exhibit 5 - 9  
Alternative One - 3,500' Parallel Runway

The same route could also be utilized for the fill operations to bring the western portion up to the required grade. After that section was up to grade, the operation could change to the east side of the field. Access to the eastern portion of the Alternative One runway would be easily achieved although Taxiways F and G would be taken out of use during that construction.

In obtaining and placing a large amount of fill there would be significant truck traffic under any alternative. Based on an examination of the airport topography it would appear a possibility that there could be considerable truck traffic on Airport Road while material from the east side of the airport east of Landmark Aviation was cut and moved to the west side in the fill operation. This activity would be approximately the same for either alternative. The removal of material from the east side would also prepare the remaining area for terminal area basing activities.

For this alternative, during the construction at the intersection of the parallel runway and Taxiways D and E, the only access for aircraft from the north side to Runway 7 – 25 would be via the western section of Taxiway B. Under detailed construction phasing in future work, it might be possible to place temporary taxiways in service to provide additional access.

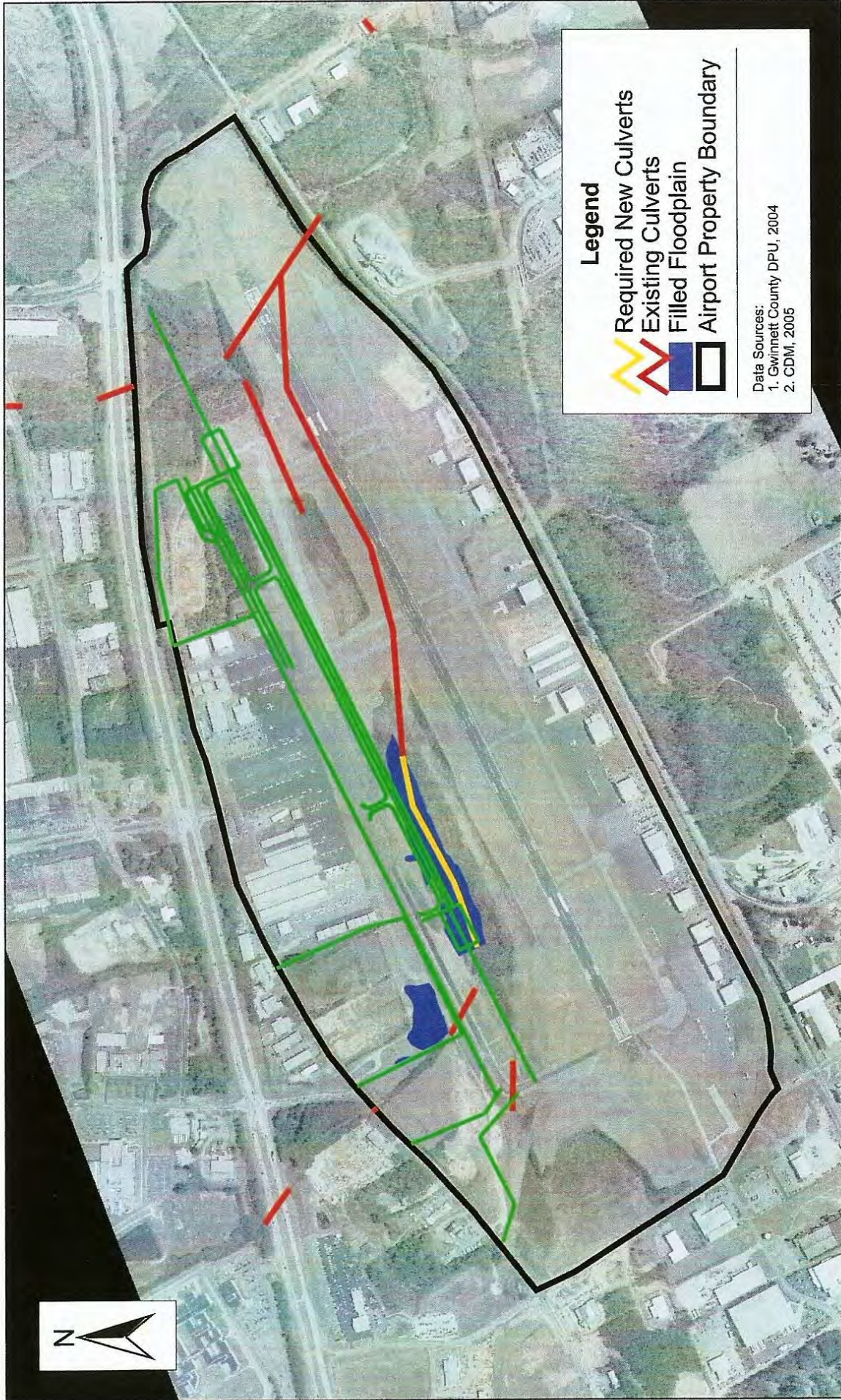
The construction of this alternative will have a major impact on northside operations.

#### **5.4.4      *STORMWATER ISSUES AND CONCERNS***

**Stormwater Detention** - Exhibit 5 – 10 illustrates the culvert additions required under this alternative. As noted in the exhibit, the major stormwater improvement is the 1,290 foot extension to the main cross-field culvert. The culvert and fill required for the runway construction also displace some 45,000 cubic yards of stormwater floodplain storage volume which must be replaced elsewhere.

Along with the replacement of the floodplain storage, this alternative would require approximately 27,000 CY of additional detention due to the new development with some 11,300 CY of that being water quality detention. Both the water quality and project related detention must be downstream of the project. For this alternative which essentially fills the center field detention area, the only area reasonably available for detention would be south of the airport. Approximately 2/3 of the detention volume would come from the west side of the airport and enter the culvert system in the area of Hurricane Shoals Creek passing under Taxiway B. Based on expected grading, the other approximately 1/3 would appear to flow to the east and enter the drainage system in the area of Cedars Road just south of SR 316.

A detention area south of the airport would constitute an on-stream detention area which would require the approval of the USACE as well as possibly other agencies. The USACE has indicated that water quality detention may not be performed on-line in



**Legend**

-  Required New Culverts
-  Existing Culverts
-  Filled Floodplain
-  Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPU, 2004  
 2. CDM, 2005

2000 Feet



**Exhibit 5-10**  
**Runway Alternative 1 Impacts**  
**CDM**

“waters of the U.S.”; therefore, the water quality detention would have to be provided adjacent to the project site.

**Stream Bank Buffer** – The construction of Alternative One will affect or destroy some 1,600 linear feet of stream bank buffer on both sides of the stream. Current EPD regulations require a 25 foot buffer along the stream. Gwinnett County stormwater regulations require an additional 25 feet, for a total of 50 feet on each side for tributaries to the Alcovy River which is a water supply source.

**Wetlands** – The actual delineation of wetlands would be conducted as part of an Environmental Assessment; however, previous work in the area indicated that between the main culvert under Taxiway B and the cross-field culvert (labeled Runway Culvert # 3) wetlands were primarily restricted to the stream banks. The development of this alternative would have the greatest impact on wetlands.

**Regulatory Review** – A full environmental assessment of this project would require U.S. Army Corps of Engineers approval as well as Georgia EPD approval. Gwinnett County approval would be required for the additional 25 feet of stream bank buffer on either side of the creek.

#### ***5.4.5 NATURAL ENVIRONMENT EFFECTS***

The construction of the 3,500 foot runway under Alternative One would have a significant impact on wetlands, stream bank buffers, and detention. The environmental walkover conducted in conjunction with the master plan did not determine there to be additional factors of interest in the runway impact area although further studies would be required as part of an environmental assessment.

#### ***5.4.6 HUMAN ENVIRONMENT EFFECTS***

In the preliminary analysis of the alternatives conducted during the Environmental Scoping Study, the stormwater based environmental circumstances made it unlikely that Alternative One would be developed. In addition, since the runway would be usable by small aircraft only the noise impacts would be limited. Therefore, noise contours were not prepared for Alternative One.

#### ***5.4.7 RUNWAY DEVELOPMENT COSTS***

Costing for the runway located in the original position includes several items not included in the other alternatives costing. These items include a major culvert and several payments to various environmental banks for wetlands and stream buffer impact mitigation. The costs shown for the runway are shown in current 2006 dollars and are based on utilizing cut and fill material as it may be available on the airport, Should the construction be in a timeframe or sequence which would not allow the contribution of on-site material to be used the cost would change accordingly. The estimate of probable construction costs are shown in Exhibit 5 – 11.

EXHIBIT 5 - 11

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**  
**ALTERNATIVE ONE - 3,500 FOOT PARALLEL RUNWAY**

Earthwork	251,196 CY	\$2,805,158
Hangar Demolition	2	\$ 3,000
Environmental	Multiple Items	\$1,484,247
Drainage	Major items	\$1,918,055
Paving	42,844 SY	\$1,572,985
Lighting		\$ 130,907
Mobilization and Contingency		\$ 2,374,306
Engineering Design, Testing, and Observation		\$1,582,870
Environmental Assessment		\$ 395,718
	Total Alternative One	<b>\$12,267,246</b>

Source: PAII Project Team Estimates of Probable Construction Costs

**5.5 PARALLEL RUNWAY ALTERNATIVE TWO - 4,400' ALTERNATIVE LOCATION AND LENGTH**

**5.5.1 AIRFIELD GEOMETRIC CONSIDERATIONS**

Alternative Two considers expanding the recently completed west section of Taxiway B into a runway and constructing the east portion as a runway. In addition, Alternative Two includes a new parallel taxiway located north [toward the basing area] from the parallel runway. The potential alternative of expanding Taxiway B into a runway stemmed from reviewing the taxiway for possible limited use while the main runway was closed during the recent pavement rehabilitation project. While that use was not approved by the FAA since the taxiway did not meet runway specifications for width of pavement as well as safety area, the question was raised as to whether expanding the

taxiway would a prudent alternative to the original location (as in Alternative One) which was expected to face increased environmental concerns from stormwater regulations.

Alternative Two, illustrated in Exhibit 5 – 12 was specifically planned to lie within the framework of Taxiway B. On the west end, the west end of the runway safety area was placed at the edge of the top of embankment. This placement did not require additional fill in the area of one of the streams on airport nor the extension of the 60 inch pipe. Proceeding to the east, the new location of the runway would stop short of requiring significant fill material to construct the runway safety area required on the east end of the runway. The resulting runway length is 4,400 feet.

The driving principle behind expanding the taxiway is that all development activity would be conducted on the north side of the current taxiway thereby having minimal impact on the area considered to be environmentally sensitive between the existing runway and taxiway.

## ***5.5.2 EFFECT ON EXISTING FACILITIES***

The runway itself will have little impact different from that noted in Alternative One for the completion of the east section of Taxiway B. The new parallel taxiway, however, will have an additional impact on the existing basing facilities on the north side of the field. The greater impact on facilities will be to those on the east end of the runway.

The new taxiway would be located 240 feet north of the runway (measured from centerline to centerline). This distance is the same distance between the runway and taxiway in Alternative One as well as Alternative Three. As shown by Exhibit 5 - 12, the taxiway and the taxiway object free line would require the relocation of one of the 12,000 sf hangars owned by the Airport and operated by Landmark Aviation as well as two of the 50 X 60 foot hangars owned by the Experimental Aircraft Association (EAA). Most of the port-a-port hangars would be displaced from the current location as would the two 8 unit T-hangars owned by the county and located adjacent to the large hangar noted above.

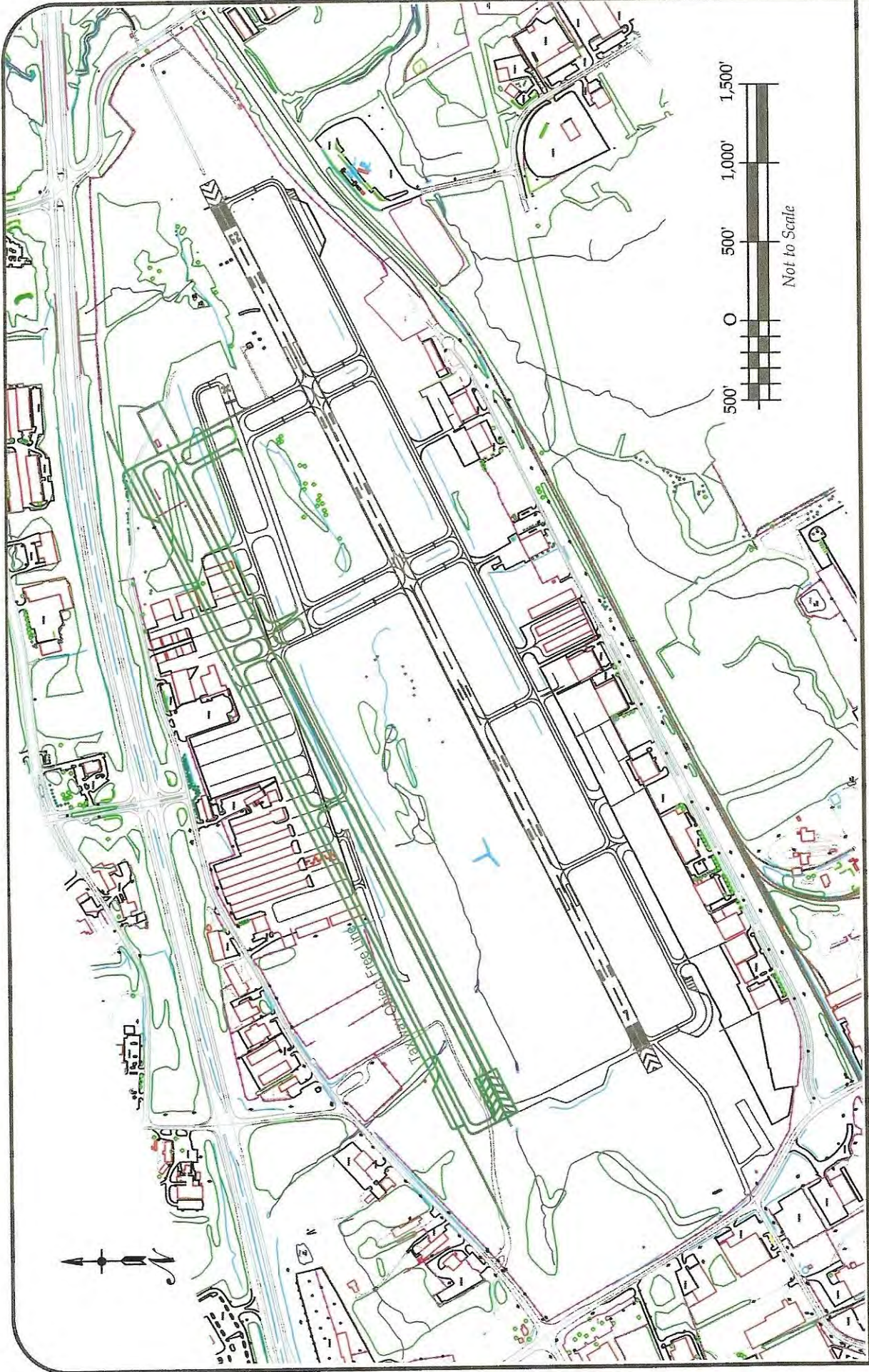


Exhibit 5 - 12  
**Alternative Two - 4,400' Parallel Runway**

Under this alternative (as with Alternative Three) an area of approximately 30,000 square yards of pavement currently used for taxiing and basing of aircraft would be converted to the new taxiway and the taxiway object free area. In addition, the taxiway object free line would lie some 50 feet from the front corners of the building Landmark Aviation currently uses as a terminal / operations building. Potential options for replacing the lost terminal area capacity due to the new parallel taxiway are presented in general concept in Section 6.0.

### **5.5.3 EFFECT ON AIRCRAFT OPERATIONS**

As with Alternatives One and Three, the process of constructing the 4,400 foot runway of Alternative Two would have an impact on aircraft operations on the north side of the field. By design in this alternative, all construction activities would occur on or to the north side of the current Taxiway B. The conversion of the current taxiway to a runway would involve expanding the width of the "platform" upon which the runway would sit. Therefore, fill materials will have to be placed and compacted on the north side of the taxiway to broaden the taxiway to meet the wider runway specifications. The majority of the fill operation will occur from the western most existing connector taxiway between the apron and Taxiway B to the west end of the runway. It is conceivable that portions of the work could proceed with Taxiway B remaining in operation. The culvert under the taxiway would have to be extended and it is possible that work could proceed with the taxiway in operation. However, at some point in time, the western section of Taxiway B would have to be closed during the placement of fill materials.

After the taxiway "platform" is broadened and converted to a runway platform, it is also possible that Taxiway B could return to service while the new / replacement taxiway fill material is being placed and until paving operations were to begin. Such details would be determined during the engineering design process. Prior to any of the dirt work proceeding for either end of the runway, the hangars noted above would have to be relocated.

Because the new taxiway would lie outside the runway, as opposed to Alternative One, much of the work on both ends of the runway and taxiway could proceed with minimal interruptions to the flow of traffic from the north side to the runway and taxiways on the south side. Taxiing patterns on the apron would have to be adjusted, but for much of the time the runway and taxiway were under construction, Taxiways D and E would be accessible. Taxiways F and G and current Taxiway Y would be usable for most of the time the new runway and new parallel taxiway were under construction.

On the east end of the runway, virtually all of the construction could take place with little impact on airport operations with the exception of relocating and / or removing the hangars. The excess material removed from the site east of Landmark would be trucked to the west end of the runway to be used as fill material. As with Alternatives One and Three, this activity would require truck activity on Airport Road.

## **5.5.4      *STORMWATER ISSUES AND CONCERNS***

**Stormwater Detention** – Exhibit 5 – 13 illustrates the stormwater culvert extensions required under this alternative. Since all of the work of this alternative will be completed north of the current Taxiway B, the long extension of the cross-field culvert is not required. This alternative requires an extension of the double 8' X 7' culvert under Taxiway B by approximately 210 feet.

This Alternative Two would not impact the major detention / flood area between the runways and would have little impact on that area. The primary stormwater / floodplain impacts from this alternative are to pond number 1 as illustrated by Exhibit 4-6. The fill required primarily for the new parallel taxiway and the fill which would be required for potential basing area development on the old DOT maintenance barn site would require the filling of approximately 6,200 cubic yards of floodplain storage volume. This amount of storage would have to be provided for elsewhere.

As with Alternative One, this alternative would require approximately 26,000 CY of detention volume including some 11,000 CY of water quality detention due to the new construction associated with this alternative and the Northside Basing Area development options. The detention would have to be provided downstream of the project site.

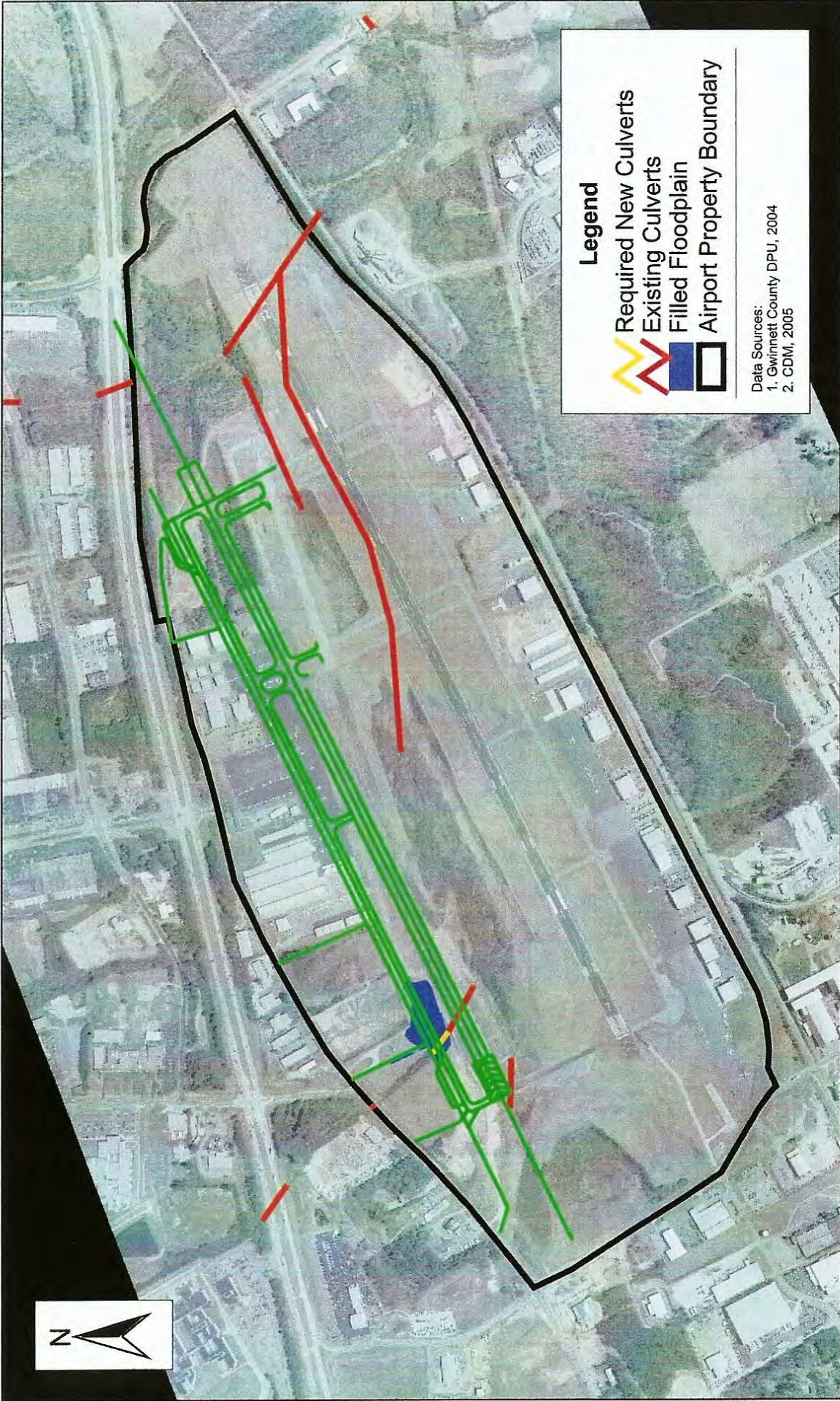
**Stream Bank Buffer** – The extension of the culvert under Taxiway B to provide for the expanded runway platform and the taxiway platform would impact the stream bank buffer on Cedars Creek as did the construction of Taxiway B. In contrast to Alternative One which would lie along side of or on top of the stream, the impacts of Alternative Two (as well as Alternative Three) come from crossing the stream. Roads to include taxiways and runways are generally provided with an exemption to the stream bank buffer requirements for more or less direct crossings of streams and generally receive more favorable consideration.

**Wetlands** – Wetland surveys conducted in conjunction with the Taxiway B environmental investigations indicated that wetlands along the section of the stream from Taxiway B to Hurricane Shoals Road were essentially limited to the stream bank. Therefore minimal impact to wetlands would occur with the construction of the taxiway but any wetlands encountered would have to be mitigated.

**Regulatory Review** - A full environmental assessment of this project would require U.S. Army Corps of Engineers approval as well as Georgia EPD approval.

## **5.5.5      *NATURAL ENVIRONMENT EFFECTS***

As with the other alternatives, this alternative would require a complete environmental assessment according to the requirements of NEPA. It should be noted that in updated FAA environmental assessment guidance documents, the analysis of alternatives has taken on increased prominence. In a full environmental assessment, it is likely that all alternatives under study in this project would be analyzed in addition to



**Legend**

-  Required New Culverts
-  Existing Culverts
-  Filled Floodplain
-  Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPU, 2004  
 2. CDM, 2005



**Exhibit 5-13**  
**Runway Alternative 2 Impacts**  
**CDM**

the no – build alternative. Any master plan or environmental assessment going forward would be expected to include a public involvement program as well a full analysis of all impact categories outlined in FAA Order 5050.4A and FAA Order 1050.1E.

The development of the 4,400 foot runway will extend to the east slightly more than the 3,500 foot runway. The environmental walkover did not determine there to be any items of significant concern since the runway development would not impact the streams at the east end of the airport. The environmental assessment for the construction of this alternative would have to complete wetland delineation as well as archaeological studies.

### **5.5.6 HUMAN ENVIRONMENT EFFECTS**

For this Alternative Two as well as Alternative Three noise contours were run for the no-build condition as well as the build condition for the years 2015 and 2025. For the no-build condition the only change from 2015 to 2025 was the traffic level. The aircraft operating on each of the flight tracks was held constant as were the other parameters. The differences for the build condition were that the traffic operating on the north side of the airport would be operating on the parallel runway while the aircraft and flight tracks associated with the south side of the airport would remain on the main runway as illustrated below.

Exhibits 5 – 14 and 5 - 15 illustrate the no-build versus Alternative Two noise contours for 2015 and 2025. The no-build condition in each of the graphics is the same.

	<b>Existing Main Runway 7R / 25L</b>	<b>New Parallel Runway 7L / 25R</b>
Runway	6,000'	4,400'
Runway Utilization	10 % / 90 %	10 % / 90 %
Day / Night	95 % / 5 %	95 % / 5 %
Fixed Wing Aircraft		
Single Engine Aircraft	25 %	75 %
Multi-engine Aircraft	40 %	60 %
Turbo-prop Aircraft	60 %	40 %
Jet Aircraft	100 %	0 %

Source: PAII Project Team Analysis and Summary

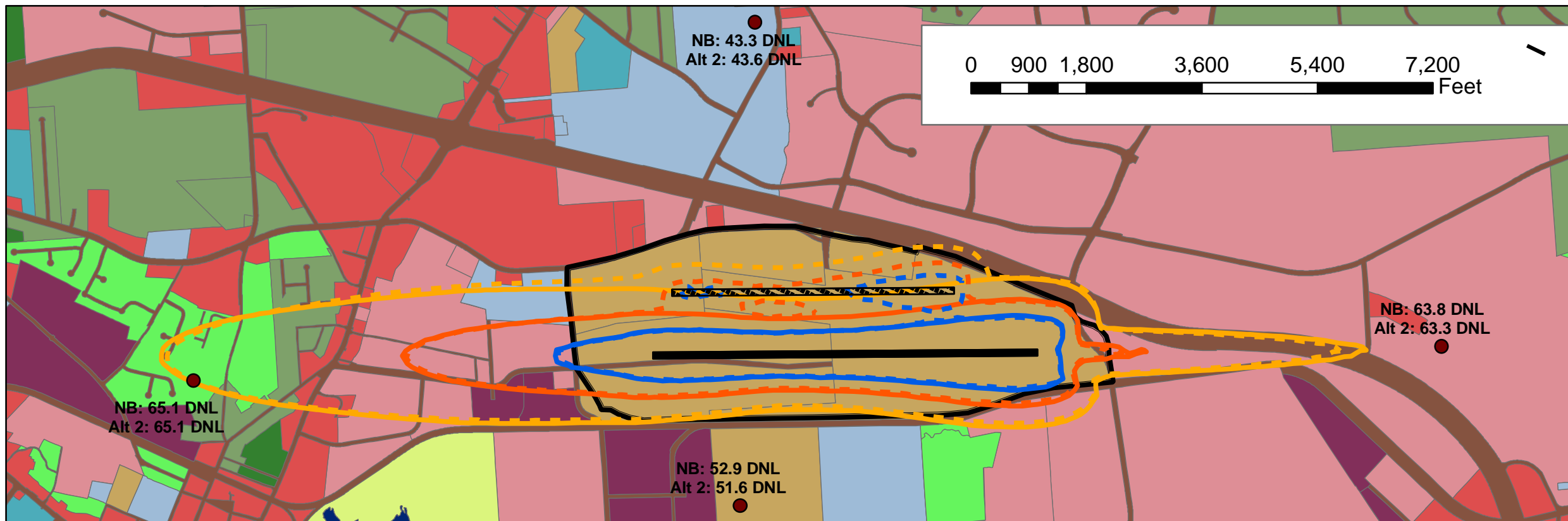
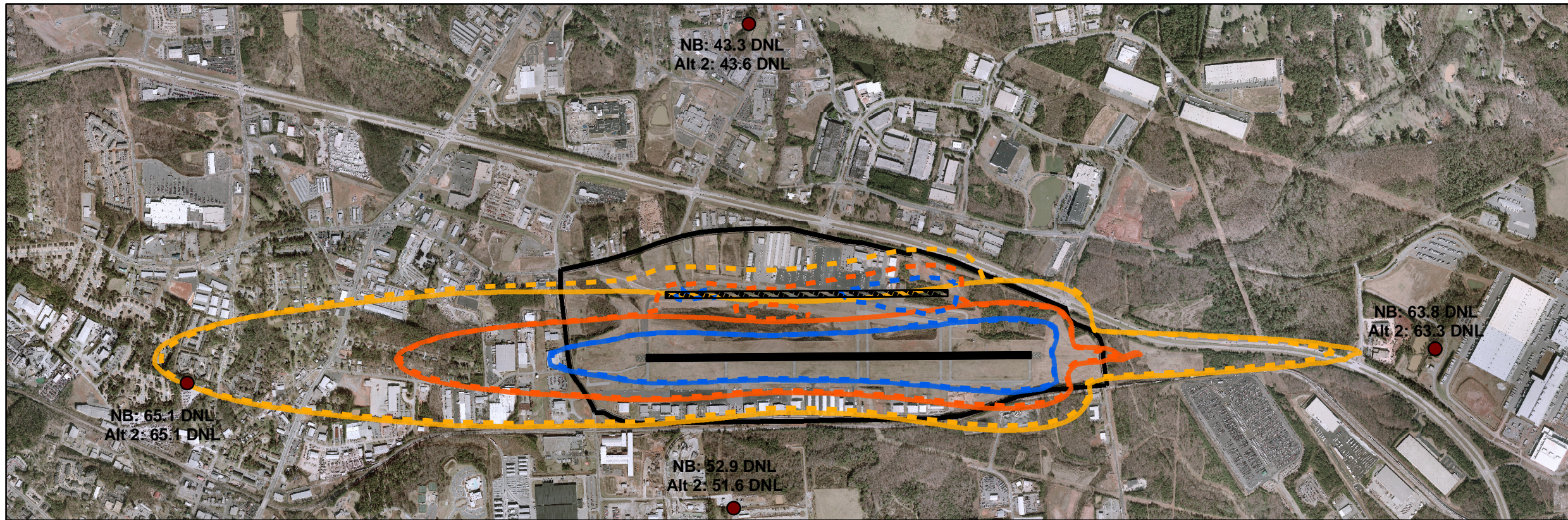


# Gwinnett County Airport

## Airport Master Plan

### Noise Contour Legend

- Airport Property Boundary
- Alternative 2 2015 Airport Runway
- No Build 2015 Airport Runway
- Alternative 2 2015 Grid Points
- Alternative 2 2015 Noise Contours**
  - DNL 65
  - DNL 70
  - DNL 75
- No Build 2015 Noise Contours**
  - DNL 65
  - DNL 70
  - DNL 75



### 2020 Future Land Use Legend

- Commercial/Retail
- High Density SF Residential
- Heavy Industrial
- Institutional/Public
- Low Density SF Residential
- Light Industrial
- Medium Density SF Residential
- Office/Professional
- Park, Recreation, Conservation
- Right of Way
- Transportation, Communication, Utilities
- Water

Exhibit 5-14  
2015 No Build vs. Alternative 2

Data Sources: 2020 Future Land Use Map from the Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006



# Gwinnett County Airport

## Airport Master Plan

### Noise Contour Legend

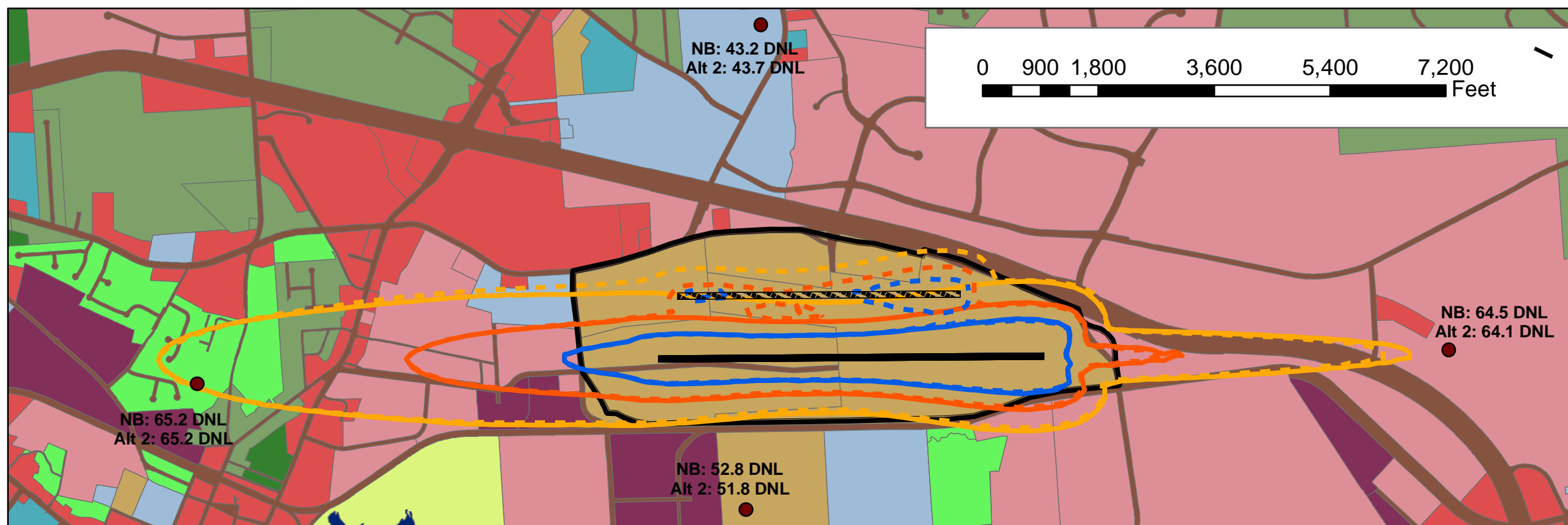
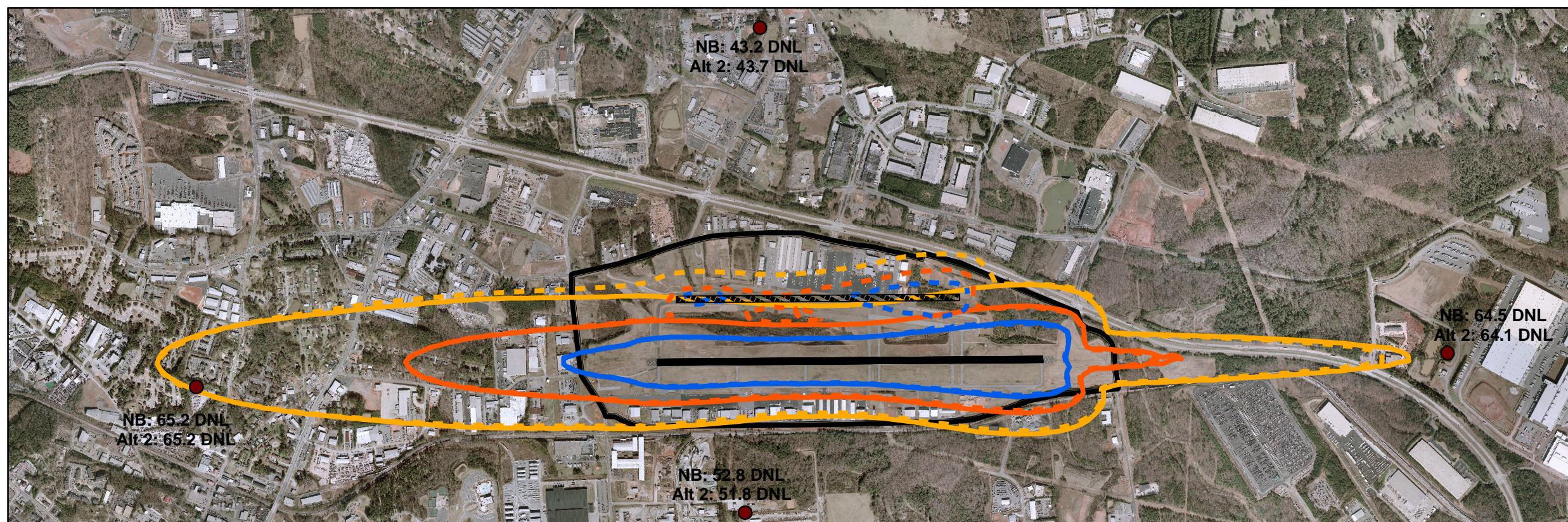
- Airport Property Boundary
- Alternative 2 2025 Airport Runway
- No Build 2025 Airport Runway
- 2025 Grid Points

### Alternative 2 2025 Noise Contours

- DNL 65
- DNL 70
- DNL 75

### No Build 2025 Noise Contours

- DNL 65
- DNL 70
- DNL 75



### 2020 Future Land Use Legend

- Commercial/Retail
- High Density SF Residential
- Heavy Industrial
- Institutional/Public
- Low Density SF Residential
- Light Industrial
- Medium Density SF Residential
- Office/Professional
- Park, Recreation, Conservation
- Right of Way
- Transportation, Communication, Utilities
- Water

Exhibit 5-15  
2025 No Build vs. Alternative 2

Data Sources: 2020 Future Land Use Map from the Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006

The comparison of the No - Build versus the Alternative Two contour for both 2015 and 2025 shows little change from the no - build to the build case with the exception of an area on the northeast corner of the airport. The existing primary runway (7R / 25L) portion of the contour shows no difference between the No - Build contour and the Alternative Two contour since the jet traffic is all retained on the existing main runway. The addition of the 4,400 foot parallel runway, which has the traffic mix as noted above, some 950 feet north of the existing runway, does provide an expansion of the noise contour in the area of the runway. For 2015 as well as 2025 the expansion of the 65 DNL contour on the northeast corner of the airport remains on the airport or over SR 316. The calculation of area of coverage and specific point values contained in Exhibit 5 - 16 indicate that Alternative Two with the addition of a 4,400 foot parallel runway would have little effect on the noise conditions around the airport.

EXHIBIT 5 - 16

**NO - BUILD AND ALTERNATIVE TWO NOISE CONTOUR**

**TOTAL AREA AND RESIDENTIAL AREA COVERAGE**

<b>2015 No - Build</b>			<b>2015 Alternative Two</b>		
DNL Contour	Total Area of Coverage	Residential Area Under Contour	DNL Contour	Total Area of Coverage	Residential Area Under Contour
65	1.041	0.092	65	1.119	0.089
70	0.460	0.000	70	0.536	0.000
75	0.225	0.000	75	0.245	0.000

Specific point values:

West	65.1	DNL	West	65.1	DNL
South	43.3	DNL	South	43.6	DNL
East	63.8	DNL	East	63.3	DNL
North	52.9	DNL	North	51.6	DNL

EXHIBIT 5 – 16 Continued

2025 No - Build			2025 Alternative Two		
DNL Contour	Total Area of Coverage	Residential Area Under Contour	DNL Contour	Total Area of Coverage	Residential Area Under Contour
65	1.052	0.094	65	1.140	0.095
70	0.457	0.000	70	0.537	0.000
75	0.220	0.000	75	0.241	0.000

Specific point values:

West	65.2	DNL	West	65.2	DNL
South	43.2	DNL	South	43.7	DNL
East	64.5	DNL	East	64.1	DNL
North	52.8	DNL	North	51.8	DNL

Note: Area in measured in square nautical miles

Source: FAA Integrated Noise Model, PAll Project Team analysis

### **5.5.7 RUNWAY DEVELOPMENT COSTS**

The estimate of probable construction costs for Alternative Two is shown in Exhibit 5 – 17. These costs have the same basis as Alternative One in that they are in 2006 constant dollars and make use of on-site materials to the extent available, Should the timeframe for runway construction or sequencing not allow the use of on-site materials the costs would change accordingly.

EXHIBIT 5 - 17

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**

**ALTERNATIVE TWO - 4,400 FOOT PARALLEL RUNWAY**

Earthwork	276,238 CY	\$2,868,848
Hangar Relocation / Demolition	5	\$ 233,000
Environmental	Multiple Items	\$ 1,053,181
Drainage	Major items	\$ 547,101
Paving	59,172SY	\$2,170,429
Lighting		\$ 239,626
Mobilization and Contingency		\$ 2,133,655
Engineering Design, Testing, and Observation		\$ 1,422,437
Environmental Assessment		\$ 355,609
	Total Alternative Two	<b>\$ 11,023,886</b>

Source: PAII Project Team Estimates of Probable Construction Costs

**5.6 PARALLEL RUNWAY ALTERNATIVE THREE-5,000'  
ALTERNATIVE LOCATION AND LENGTH**

**5.6.1 AIRFIELD GEOMETRIC CONSIDERATIONS**

The runway placement for Alternative Three is essentially the same for Alternative Two with the exception that the western threshold of the runway is placed at the western edge of the current Taxiway B pavement with the blast pad and safety area extending further to the west. On the east end, the runway safety area is moved further east to form the 5,000 foot runway. On both the west and east ends the safety area would

require additional fill material to achieve proper grade than would be required for Alternative Two. The layout of Alternate Three is illustrated in Exhibit 5 – 18.

### **5.6.2 EFFECT ON EXISTING FACILITIES**

Given that Alternative Three is based on building on the existing Taxiway B as is Alternative Two, the effect on existing facilities is essentially the same as Alternative Two. The runway itself will have little impact different from that noted in Alternative One for the completion of the east section of Taxiway B. The new parallel taxiway under both alternatives, however, will have an additional impact on the existing basing facilities on the north side of the field. The greater impact on facilities will be to those on the east end of the runway.

The new taxiway would be located 240 feet north of the runway (measured from centerline to centerline). This distance is the same distance between the runway and taxiway in Alternative One as well as Alternative Three. As shown by Exhibit 5 – 18, the taxiway and the taxiway object free line would require the relocation of one of the 12,000 sf hangars owned by the Airport and operated by Landmark Aviation as well as two of the 50 X 60 foot hangars owned by the EAA. The port-a-port hangars would be displaced from the current location as would the two 8 unit T-hangars owned by the county and located adjacent to the large hangar noted above.

Under this alternative (as with Alternative Two) an area of approximately 30,000 square yards of pavement currently used for taxiing and basing of aircraft would be consumed by the new taxiway location and would no longer be in service as apron. In addition, the taxiway object free line would lie some 50 feet from the front corners of the building Landmark Aviation currently uses as a terminal / operations building. Potential options for replacing the lost terminal area capacity due to the new parallel taxiway are presented in Section 6.0.

### **5.6.3 EFFECT ON AIRCRAFT OPERATIONS**

The effect of Alternatives Two and Three on aircraft operations are essentially the same. The discussion is repeated here for convenience.

As with Alternatives One and Two, the construction process of the 5,000 foot runway of Alternative Three would have an impact on aircraft operations on the north side of the field. By design in this alternative, all construction activities would occur on the north side of the current Taxiway B. The conversion of the current taxiway to a runway would involve expanding the width of the “platform” upon which the runway would sit. Therefore, fill materials will have to be placed and compacted on the north side of the taxiway to broaden the facility to meet the runway specifications. The majority of the fill operation will occur from the western most existing connector taxiway between the apron and Taxiway B to the west end of the runway. It is conceivable that portions of the work could proceed with Taxiway B remaining in operation. The culvert under the taxiway would have to be extended and it is possible that work could proceed with the

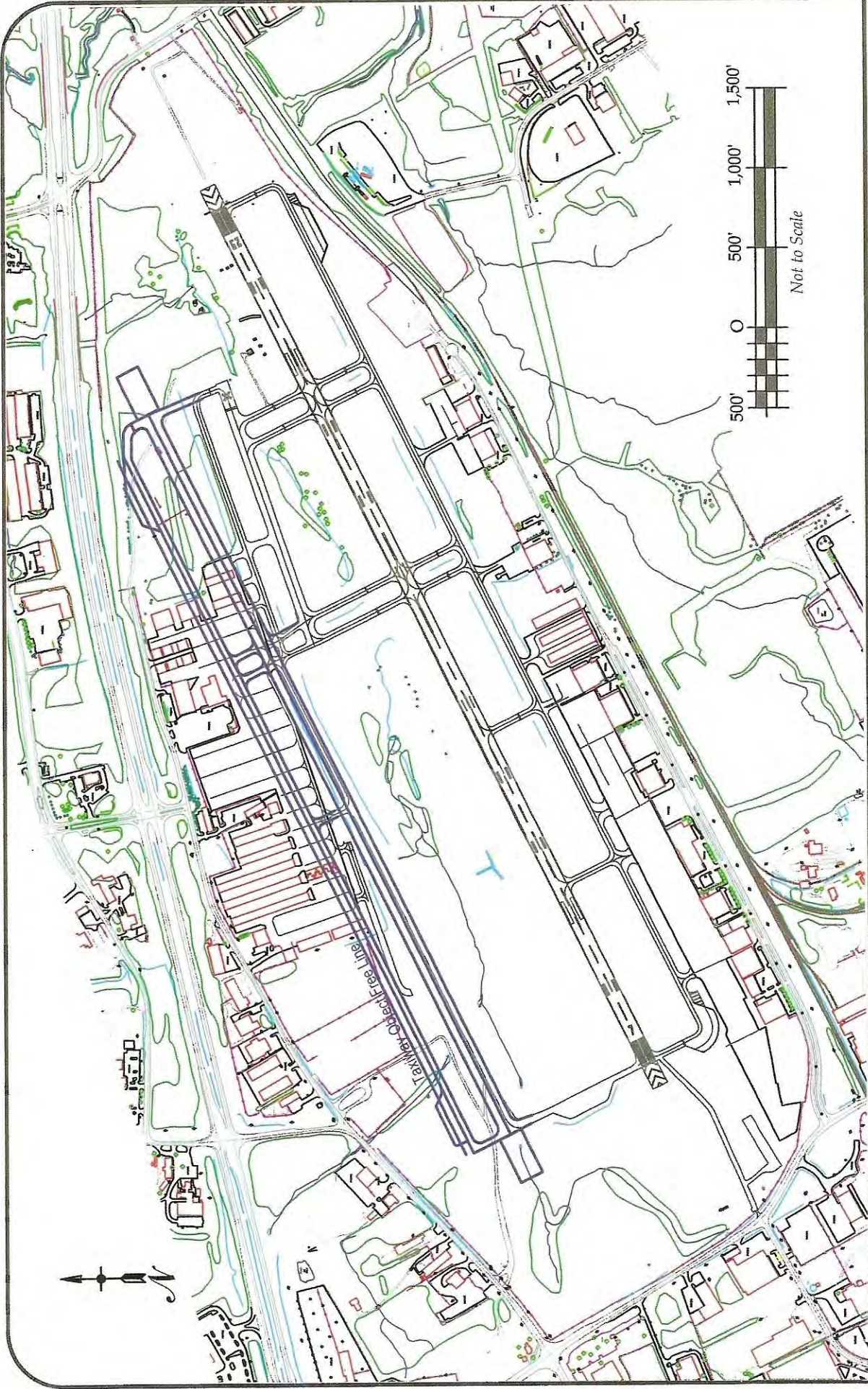


Exhibit 5 - 18  
Alternative Three - 5,000' Parallel Runway

taxiway in operation. However, at some point in time, the western section of Taxiway B would have to be closed during the placement of fill materials.

After the taxiway “platform” is broadened and converted to a runway platform, it is also possible that Taxiway B could return to service while the fill material for the new/replacement parallel taxiway is being placed and until paving operations for the runway were to begin. Such details would be determined during the engineering design process. Prior to any of the dirt work proceeding for either end of the runway, the hangars noted above would have to be relocated.

Because the new taxiway would lie outside the runway, as opposed to Alternative One, much of the work on both ends of the runway and taxiway could proceed with minimal interruptions to the flow of traffic from the north side to the runway and taxiways on the south side. Taxiing patterns on the apron would have to be adjusted but for much of the time the runway and taxiway were under construction, Taxiways D and E would be accessible. Taxiways F and G and current Taxiway Y would be usable for most of the time the new runway and new parallel taxiway were under construction.

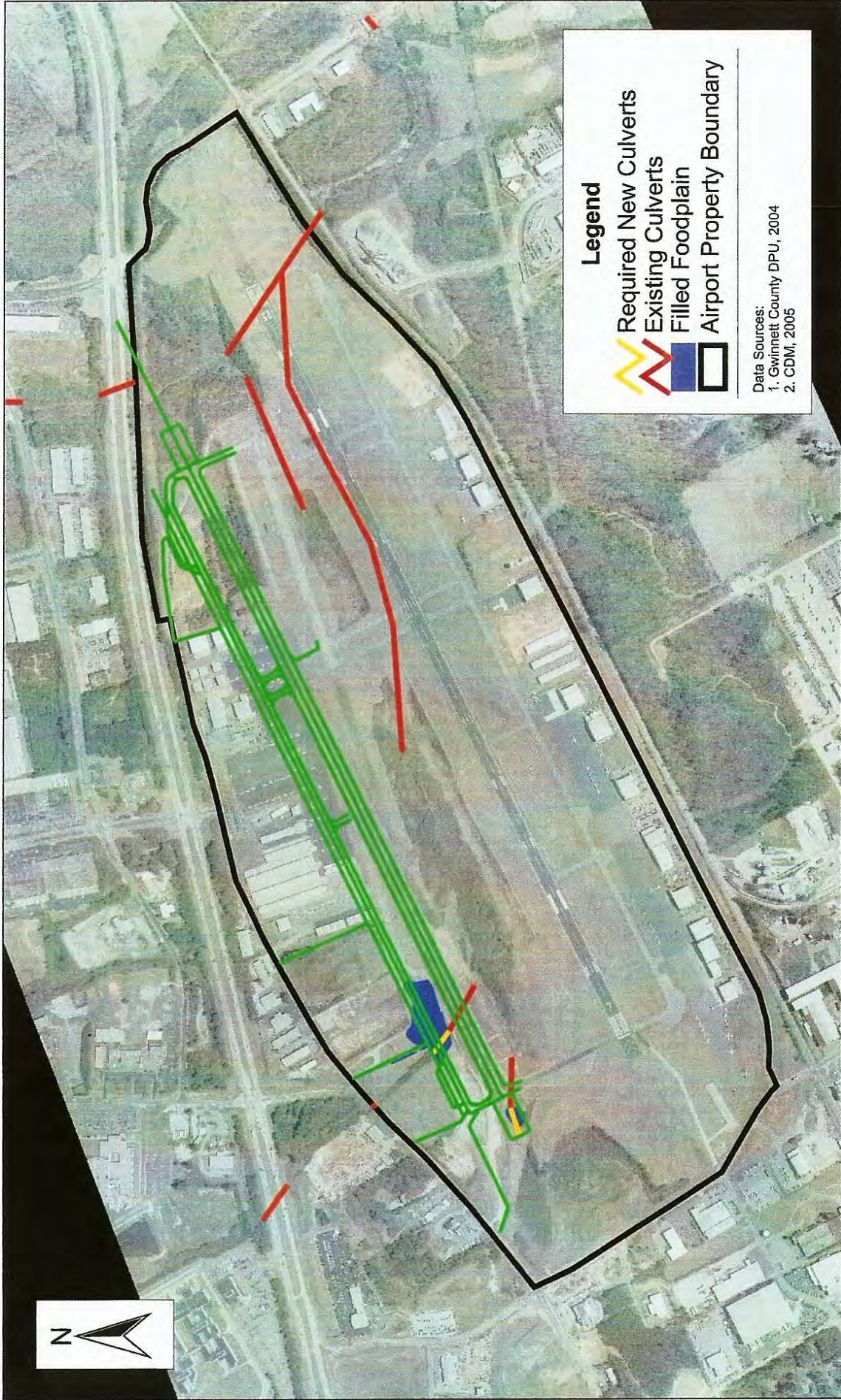
On the east end of the runway, virtually all of the construction could take place with little or no impact on airport operations with the exception of relocating and /or removing the hangars. The excess material removed from the site east of Hawthorne would be trucked to the west end of the runway to be used as fill material. As with Alternatives One and Three, this activity would require truck activity on Airport Road.

#### ***5.6.4 STORMWATER ISSUES AND CONCERNS***

**Stormwater Detention** – Exhibit 5 – 19 illustrates the stormwater culvert extensions required under this alternative. Since all of the work of this alternative will be completed north of the current Taxiway B, the long extension of the cross-field culvert is not required. This alternative requires the same extension of the double 8' X 7' culvert under Taxiway B by approximately 210 feet as was the case for Alternative Two. In addition, Alternative Three requires an extension of the 60 inch RCP under the west end (at the curve) of Taxiway B.

This Alternative Three would not impact the major detention / flood area between the runways and would have little impact on that area. The primary stormwater / floodplain impacts from this alternative is to pond number 1 as illustrated by Exhibit 4 – 6. The fill required primarily for the new parallel taxiway and the fill which would be required for potential basing area development on the old DOT maintenance barn site would require the filling of approximately 7,300 cubic yards of floodplain storage volume. This amount of storage volume would have to be provided for elsewhere.

This Alternative Three also requires approximately 27,000 CY of detention volume downstream of the project site with approximately 11,500 CY consisting of water quality detention. Presuming the airport to have little opportunity to develop off-line detention, the quantity detention would have to be met downstream of the airport or



**Legend**

-  Required New Culverts
-  Existing Culverts
-  Filled Foodplain
-  Airport Property Boundary

Data Sources:  
 1. Gwinnett County DPJ, 2004  
 2. CDM, 2005



**Exhibit 5-19**  
**Runway Alternative 3 Impacts**  
**CDM**

reduce the area available for aircraft basing. The water quality detention would have to be met off-line of the streams.

**Stream Bank Buffer** – The extension of the culvert under Taxiway B to provide for the expanded runway platform and the taxiway platform would impact the stream bank buffer on Cedars Creek as did the construction of Taxiway B. In contrast to Alternative One which would lie along side of or on top of the stream, the impacts of Alternative Three (as well as Alternative Two) come from crossing the stream. Gwinnett County has the authority to exempt road (or taxiway) crossings from stream bank buffer requirements. Therefore, this alternative would have no impact on the stream bank buffer.

**Wetlands** – Wetland surveys conducted in conjunction with the Taxiway B environmental investigations indicated that wetlands along the section of the stream from Taxiway B to Hurricane Shoals Road were essentially limited to the stream bank. Therefore minimal impact to wetlands would occur with the construction of the Taxiway.

**Regulatory Review** - A full environmental assessment of this project would require U.S. Army Corps of Engineers approval as well as Georgia EPD approval.

## ***5.6.5 NATURAL ENVIRONMENT EFFECTS***

As with the other alternatives, this alternative would require a complete environmental assessment according to the requirements of NEPA. It should be noted that in updated FAA environmental assessment guidance documents, the analysis of alternatives has taken on increased prominence. In a full environmental assessment, it is likely that all alternatives under study in this project would be analyzed in addition to the no – build alternative. Any master plan or environmental assessment going forward would be expected to include a public involvement program as well a full analysis of all impact categories outlined in FAA Order 5050.4A and FAA Order 1050.1E.

The development of the 5,000 foot runway will extend to the east approximately 300 feet more than the 4,400 foot runway. The environmental walkover did not determine there to be any items of significant concern since the runway development would not impact the streams at the east end of the airport. The environmental assessment for the construction of this alternative would have to complete wetland delineation as well as archaeological studies.

The additional 300 foot extension to the west more than the 4,400 foot runway will require additional fill as well as the extension of the 60 inch drainage pipe. The area is known to have some degree of wetlands which will be fully delineated during an environmental assessment.

### **5.6.6 HUMAN ENVIRONMENT EFFECTS**

For this Alternative Three noise contours were run for the no-build condition as well as the build condition for the years 2015 and 2025. For the no-build condition the only change from 2015 to 2025 was the traffic level. The aircraft operating on each of the flight tracks was held constant as were the other parameters. The differences for the build condition were that the traffic operating on the north side of the airport would be operating on the parallel runway while the aircraft and flight tracks associated with the south side of the airport would remain on the main runway. Exhibits 5 – 20 AND 5 - 21 illustrate the no-build versus Alternative Two for 2015 and 2025. The no-build condition in each of the graphics is the same.

	<b>Existing Main Runway 7R / 25L</b>	<b>New Parallel Runway 7L / 25R</b>
Runway	6,000'	5,000'
Runway Utilization	10 % / 90 %	10 % / 90 %
Day / Night	95 % / 5 %	95 % / 5 %
Fixed Wing Aircraft		
Single Engine Aircraft	35 %	65 %
Multi-engine Aircraft	50 %	50 %
Turbo-prop Aircraft	50 %	50 %
Jet Aircraft	65 %	35 %

Source: PAII Project Team Analysis and Summary

The comparison of the No – Build versus the Alternative Three contour for both 2015 and 2025 shows a distinct shift in the build contour versus the no – build. In the case for Alternative Three the traffic, including the jet traffic, is more evenly divided between the two runways as noted above. Therefore, the reduction of a portion of the jet traffic on the existing main runway and the introduction of jet traffic on the new parallel runway approximately 950 feet north of the existing runway reduced the length of the contour versus the no – build but broadened the contour to the parallel runway side slightly. The predominate portion of the broadened contour is over light industrial or commercial land use. The area over residential land uses decreases slightly.

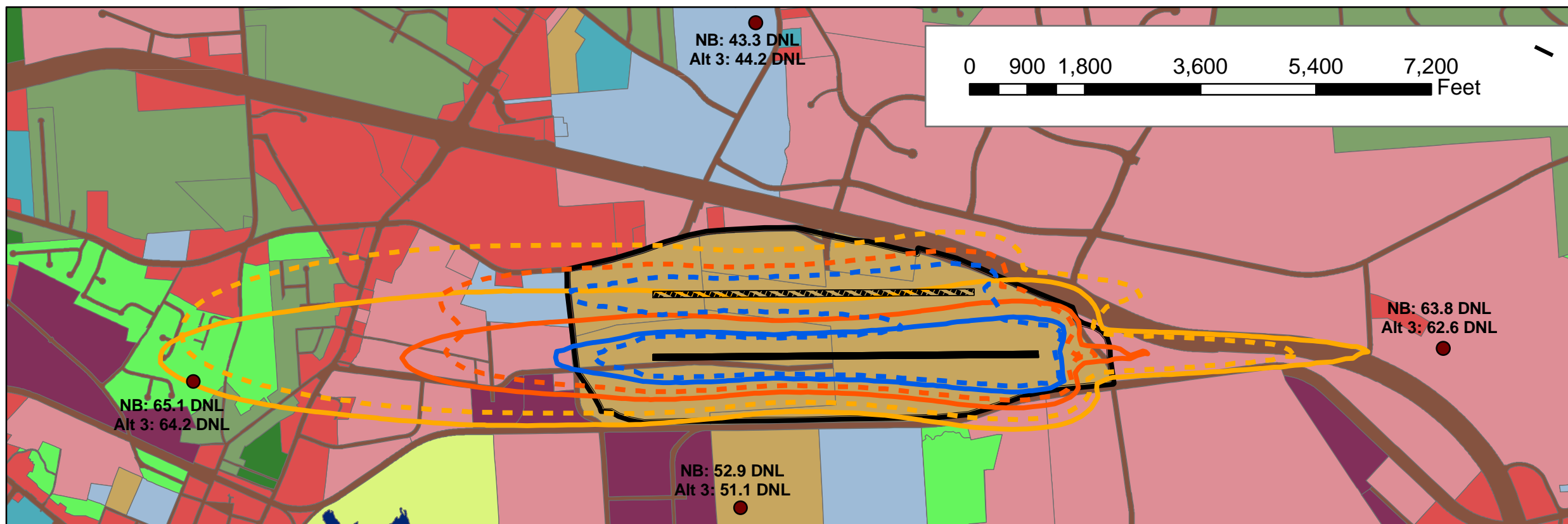
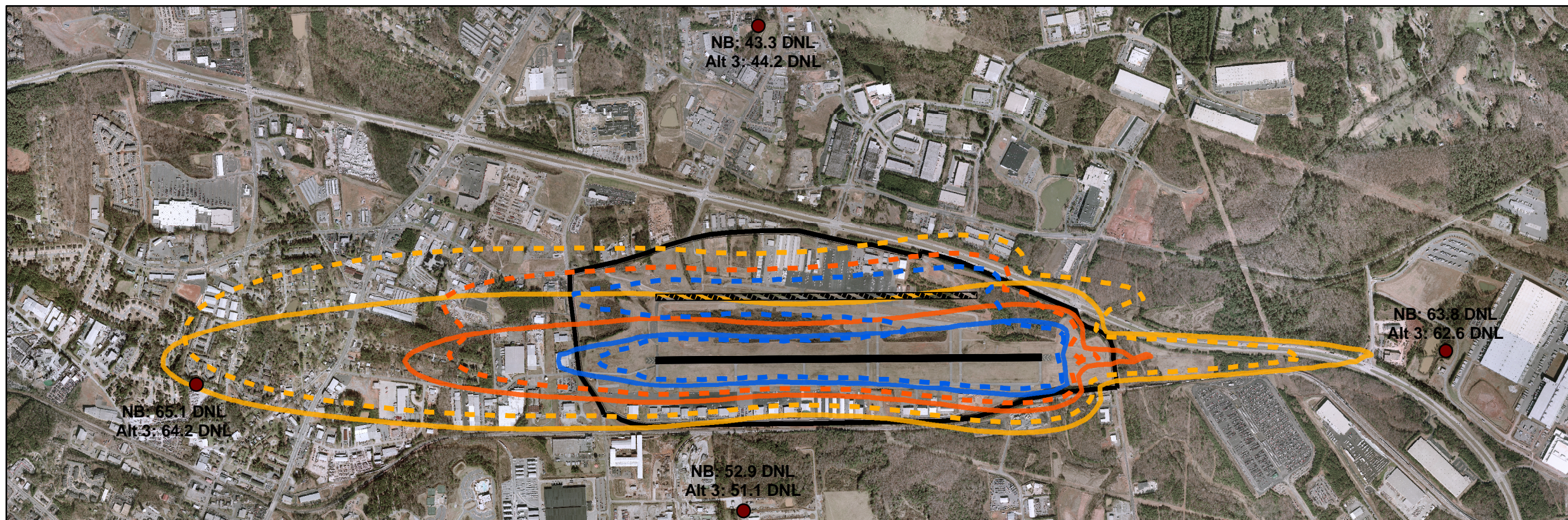


# Gwinnett County Airport

## Airport Master Plan

### Noise Contour Legend

- Airport Property Boundary
- Alternative 3 2015 Airport Runway
- No Build 2015 Airport Runway
- 2015 Grid Points
- Alternative 3 2015 Noise Contours**
  - DNL 65
  - DNL 70
  - DNL 75
- No Build 2015 Noise Contours**
  - DNL 65
  - DNL 70
  - DNL 75



### 2020 Future Land Use Legend

- Commercial/Retail
- High Density SF Residential
- Heavy Industrial
- Institutional/Public
- Low Density SF Residential
- Light Industrial
- Medium Density SF Residential
- Office/Professional
- Park, Recreation, Conservation
- Right of Way
- Transportation, Communication, Utilities
- Water

Exhibit 5-20  
2015 No Build vs. Alternative 3

Data Sources: 2020 Future Land Use Map from the Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006



# Gwinnett County Airport

## Airport Master Plan

### Noise Contour Legend

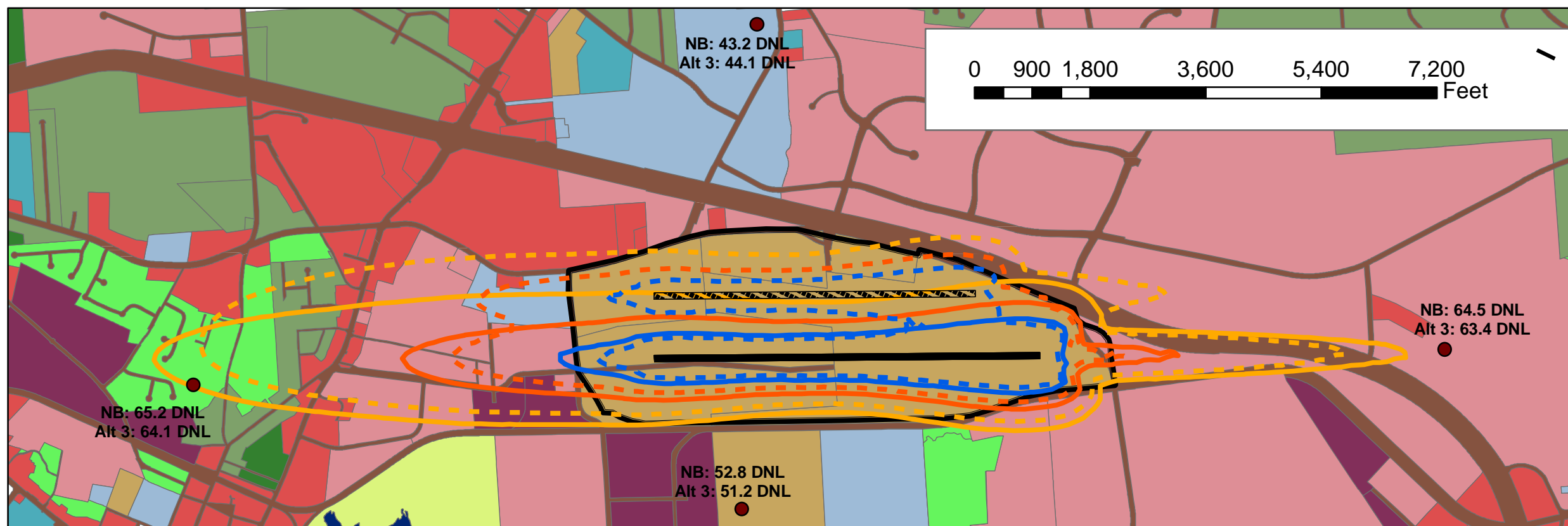
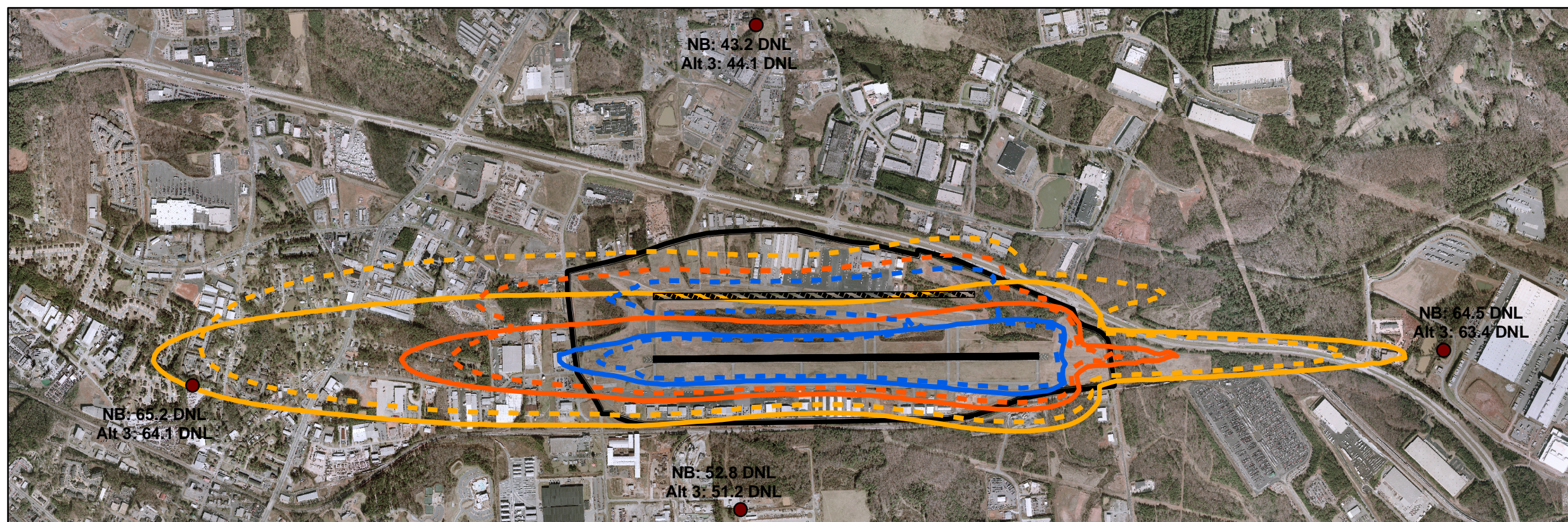
- Airport Property Boundary
- Alternative 3 2025 Airport Runway
- No Build 2025 Airport Runway
- 2025 Grid Points

### Alternative 3 2025 Noise Contours

- DNL 65
- DNL 70
- DNL 75

### No Build 2025 Noise Contours

- DNL 65
- DNL 70
- DNL 75



### 2020 Future Land Use Legend

- Commercial/Retail
- High Density SF Residential
- Heavy Industrial
- Institutional/Public
- Low Density SF Residential
- Light Industrial
- Medium Density SF Residential
- Office/Professional
- Park, Recreation, Conservation
- Right of Way
- Transportation, Communication, Utilities
- Water

Exhibit 5-21  
2025 No Build vs. Alternative 3

Data Sources: 2020 Future Land Use Map from the Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006

In addition, the four points used to assess specific numerical change indicate that the addition of the 5,000 foot parallel runway reduces the DNL values for the traffic levels of 2015. For 2025 traffic levels three of the four points show reductions in noise level with the exception of the point located some 4,000 feet north of the runway which shows 0.9 DNL rise; however, the area is over industrial land use and the level of noise is over 20 DNL below the level of significance. The numeric values confirm that the addition of the 5,000 foot parallel runway would have little impact on the aircraft noise patterns. The results of the analyses are contained in Exhibit 5 – 22

EXHIBIT 5 – 22

**NO – BUILD AND ALTERNATIVE THREE NOISE CONTOUR**

**TOTAL AREA AND RESIDENTIAL AREA COVERAGE**

<b>2015 No - Build</b>			<b>2015 Alternative Three</b>		
DNL Contour	Total Area of Coverage	Residential Area Under Contour	DNL Contour	Total Area of Coverage	Residential Area Under Contour
65	1.041	0.092	65	1.254	0.103
70	0.460	0.000	70	0.646	0.000
75	0.225	0.000	75	0.324	0.000

Specific point values:

West	65.1	DNL	West	64.2	DNL
South	52.9	DNL	South	51.1	DNL
East	63.8	DNL	East	62.6	DNL
North	43.3	DNL	North	44.2	DNL

<b>2025 No - Build</b>			<b>2025 Alternative Three</b>		
DNL Contour	Total Area of Coverage	Residential Area Under Contour	DNL Contour	Total Area of Coverage	Residential Area Under Contour
65	1.052	0.094	65	1.212	0.084
70	0.457	0.000	70	0.608	0.000
75	0.220	0.000	75	0.298	0.000

EXHIBIT 5 - 22 Continued

Specific point values:

West	65.2	DNL	West	64.1	DNL
South	52.8	DNL	South	51.2	DNL
East	64.5	DNL	East	63.4	DNL
North	43.2	DNL	North	44.1	DNL

Note: Area measured in square nautical miles

Source: FAA Integrated Noise Model, PAll Project Team analysis

### ***5.6.7 RUNWAY DEVELOPMENT COSTS***

The estimate of probable construction costs for Alternative Three is shown in Exhibit 5 - 23. These costs have the same basis as Alternatives One and Two in that they are in 2006 constant dollars and make use of on-site materials to the extent available, Should the timeframe for runway construction or sequencing not allow the use of on-site materials the costs would change accordingly.

EXHIBIT 5 - 23

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**

**ALTERNATIVE THREE - 5,000 FOOT PARALLEL RUNWAY**

Earthwork	305,559 CY	\$ 3,210,800
Hangar Relocation / Demolition	5	\$ 233,000
Environmental	Multiple Items	\$1,075,326
Drainage	Major items	\$ 601,301
Paving	63,433 SY	\$2,326,722
Lighting		\$ 263,327

Exhibit 5 – 23 continued

Mobilization and Contingency	\$ 2,313,143
Engineering Design, Testing, and Observation	\$ 1,542,095
Environmental Assessment	\$ 385,524
Total Alternative Three	<b>\$ 11,951,238</b>

Source: PAII Project Team Estimates of Probable Construction Costs

## ***5.7 STRENGTHEN RUNWAY 7 - 25***

### ***5.7.1 EFFECT ON AIRCRAFT OPERATIONS***

Strengthening the existing 6,000 foot runway has virtually all beneficial effects on the airport both short - term and long - term, The only difficulty is that associated with closing the runway for the construction of the strengthening which would consist basically of overlaying the existing runway with additional asphalt. Without an additional runway, the airport would be closed for some period during that construction.

With the exception of closing the airport for periods during the construction of the strengthening project, there is no other effect on airport operations from strengthening the runway. The substantial benefit is that Gwinnett County Airport would be able to handle the larger general aviation aircraft used by major corporations without damaging the runway pavement.

### ***5.7.2 NATURAL ENVIRONMENT EFFECTS***

The strengthening project would take place on the existing runway, therefore, there would be no impacts on the natural environment stemming from the strengthening project.

### **5.7.3 HUMAN ENVIRONMENT EFFECTS**

Noise model runs were completed to assess the effect of strengthening the runway to allow for additional operations by heavier aircraft. The process required the assessment of a no-build case versus a build case. The case study was conducted as follows:

- Build Case - The forecast of aircraft operations (as contained in Section 3) for all aircraft is an unconstrained forecast based on suitable facilities being available to accommodate the aircraft. As noted earlier, the forecast for the year 2015 is based on 8 percent of the jet activity consisting of the heavier jet operations.
- No-Build Case - The no-build case presumed the heavier aircraft for the year 2015 would be restricted to the 1 percent of jet activity which exists in the base year of 2005.
- Noise Model Runs - Noise model runs were conducted for the year 2015 with all other aircraft operations remaining the same with the exception of the number of heavy jet operations as described above. In the no-build case, the difference between the 8 percent and 1 percent of heavy jet operations were redistributed to other jet categories.

The results of the model runs show virtually no change in noise from the additional heavy jet aircraft since recent jets meet the Stage III noise standards. Exhibit 5 – 24 illustrates the no-build versus the build noise contours. Numerical point values changed by 0.1 DNL which is effectively no change. Therefore, there is no noise impact stemming from the strengthening of the existing runway.

### **5.7.4 RUNWAY DEVELOPMENT COSTS**

Costs for the runway strengthening project consist primarily of preparing the surface and the application of an asphaltic concrete strengthening course. Planning level estimates suggest that a 4 inch course of asphalt would be required to reach the 100,000 pound dual wheel capability. The costs also include strengthening the connector taxiways to the aircraft hold lines. Since those taxiways will require strengthening in the future as well, accomplishing that strengthening at the same time will keep the runway closures to a minimum. The costs for this item are contained in Exhibit 5 – 25.

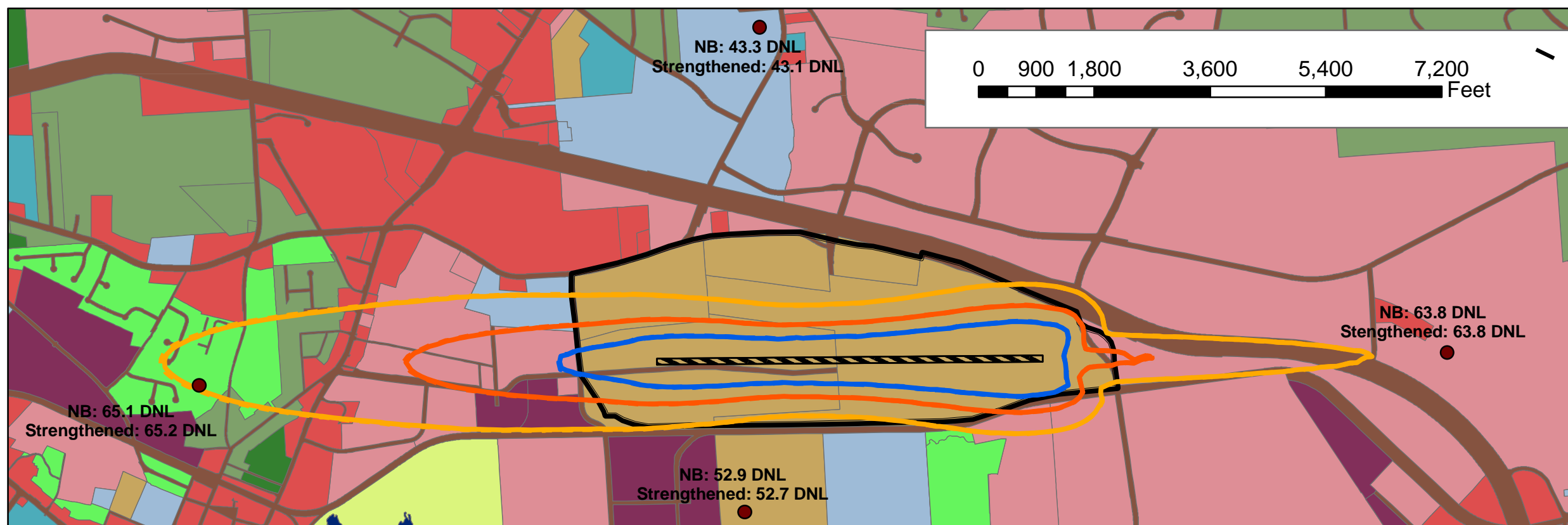
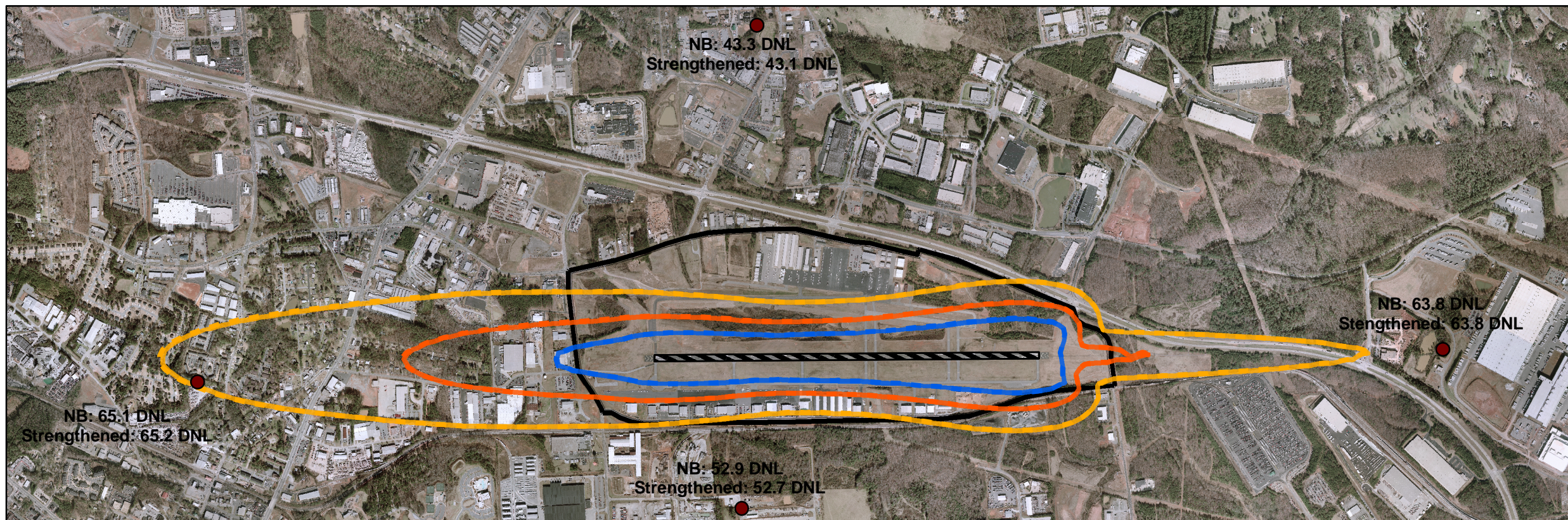


# Gwinnett County Airport

## Airport Master Plan

### Noise Contour Legend

- Airport Property Boundary
- 2015 Build for Strengthening Runway
- 2015 Grid Points
- 2015 Build for Strengthening Noise Contours**
- DNL 65
- DNL 70
- DNL 75
- No Build 2015 Noise Contours**
- DNL 65
- DNL 70
- DNL 75



### 2020 Future Land Use Legend

- Commercial/Retail
- High Density SF Residential
- Heavy Industrial
- Institutional/Public
- Low Density SF Residential
- Light Industrial
- Medium Density SF Residential
- Office/Professional
- Park, Recreation, Conservation
- Right of Way
- Transportation, Communication, Utilities
- Water

Data Sources: 2020 Future Land Use Map from the Gwinnett County 2020 Land Use Plan, GIS Digital Data, 2005; PAII, CDM, 2006

Figure 5-24  
2015 No Build vs. Build for Strengthening

EXHIBIT 5 – 25

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**

**STRENGTHEN EXISTING RUNWAY 7 - 25  
And  
TAXIWAY “W” SAFETY AREAS\***

Surface Milling	66,667 SY	\$ 133,334
Paving	66,667 SY	\$1,344,600
Grooving and Marking		\$ 186,668
Connector Taxiways to Safety Areas	15,022 SY	\$ 276,405
Mobilization and Contingency		\$ 582,302
Engineering Design, Testing, and Observation		\$ 388,201
Environmental Assessment		\$ 97,050
	Total Runway Strengthening	<b>\$3,008,560</b>

\*Formerly Taxiway “A”

Source: PAll Project Team Estimates of Probable Construction Costs

**5.8 REPLACEMENT TAXIWAY “Y”**

**5.8.1 AIRFIELD GEOMETRIC CONSIDERATIONS**

Access to the 25 end of the existing runway has been needed since the runway was developed but the placement of the parallel runway in the original location and the glide slope critical area prevented a northside parallel taxiway from being constructed. The possibility of a new parallel runway location or a no-build condition allows the consideration of a northside parallel runway to serve Runway 25. Exhibit 5 – 26 illustrates the partial parallel taxiway outside the glide slope critical area between the runways, presuming the development of a parallel runway. Should a parallel runway not be developed the location of the northside parallel taxiway would remain in the same location as shown.



Exhibit 5 - 26  
**Future Taxiway "Y" Location**

### **5.8.2 EFFECT ON AIRCRAFT OPERATIONS**

Construction of the replacement and extended taxiway would affect the current Taxiway Y (portion of the old runway) during construction. Taxiways D, E, F, and G would be closed while portions of the work were completed. The eastern portion beyond Taxiway G could be completed without affecting the airfield operation.

The construction of replacement Taxiway Y will have a substantial benefit to the airport operation with minimal effect on operations during construction.

### **5.8.4 STORMWATER ISSUES AND CONCERNS**

The construction of the replacement and extension of Taxiway Y will have little effect on the stormwater handling on airport. Since the taxiway is a replacement and much of the pavement it is replacing is wider than the new taxiway, there should be credit for returning the old area to pervious a surface. The part of the extension beyond the current paved area will require hydraulic analysis as part of the engineering documents to determine detention requirements, if any. The culvert under the end of the runway will require an extension to support the taxiway fill material.

### **5.8.5 NATURAL ENVIRONMENT EFFECTS**

The construction of a replacement and extension of Taxiway Y will require a new culvert to tie to the culvert under the end of the runway. In addition fill material will be required for the area beyond the end of the old runway. The culvert extension as well as the filling of the area in the immediate vicinity of the stream will encounter wetlands which will require mitigation. The stream bank buffer will also be encountered but the taxiway will cross more or less perpendicular to the stream and be classified as a road crossing which is usually exempt. The construction of the taxiway will require an environmental assessment.

### **5.8.2 HUMAN ENVIRONMENT EFFECTS**

This taxiway is a replacement and extension of an existing taxiway. It's purpose is to facilitate movement of aircraft on the airport. The construction of this taxiway will not allow heavier aircraft to operate on the airport or encourage a greater number of operations. Noise from the ground movement of aircraft is masked by takeoff and landing noise. Therefore, there is not a human environment effect from the construction of Taxiway Y.

### **5.8.3 TAXIWAY DEVELOPMENT COSTS**

Taxiway Y (formerly Taxiway X) will be placed on level ground generally over the existing taxiway for much of its length but the eastern third will encounter steep terrain which will have to be filled. The taxiway will also require an extension to culvert which conveys the water from the Progress Center under the east end of the runway. The estimates of probable construction costs are contained in Exhibit 5 – 27.

#### EXHIBIT 5 – 27

#### SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS

#### TAXIWAY “Y” REPLACEMENT AND EXTENSION

Earthwork	128,700 CY	\$ 1,567,544
Environmental	Multiple Items	\$ 50,000
Drainage	Major items	\$ 272,400
Paving	17,100 SY	\$ 627,228
Lighting		\$ 81,000
Mobilization and Contingency		\$ 779,451
Engineering Design, Testing, and Observation		\$ 519,634
Environmental Assessment		\$ 129,909
	Total Taxiway Y	<b>\$4,027,166</b>

Source: PAII Project Team Estimates of Probable Construction Costs

## **5.9 SUMMARY OF COSTS**

Following is a restatement of the cost of the various alternative and airfield improvements presented above.

### **SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**

#### **ALTERNATIVE ONE - 3,500 FOOT PARALLEL RUNWAY**

Earthwork	251,196 CY	\$2,805,158
Hangar Demolition	2	\$ 3,000
Environmental	Multiple Items	\$1,484,247
Drainage	Major items	\$1,918,055
Paving	42,844 SY	\$1,572,985
Lighting		\$ 130,907
Mobilization and Contingency		\$ 2,374,306
Engineering Design, Testing, and Observation		\$1,582,870
Environmental Assessment		\$ 395,718
	Total Alternative One	<b>\$12,267,246</b>

## ALTERNATIVE TWO - 4,400 FOOT PARALLEL RUNWAY

Earthwork	276,238 CY	\$2,868,848
Hangar Relocation / Demolition	5	\$ 233,000
Environmental	Multiple Items	\$ 1,053,181
Drainage	Major items	\$ 547,101
Paving	59,172SY	\$2,170,429
Lighting		\$ 239,626
Mobilization and Contingency		\$ 2,133,655
Engineering Design, Testing, and Observation		\$ 1,422,437
Environmental Assessment		\$ 355,609
	Total Alternative Two	<b>\$ 11,023,886</b>

### ALTERNATIVE THREE - 5,000 FOOT PARALLEL RUNWAY

Earthwork	305,559 CY	\$ 3,210,800
Hangar Relocation / Demolition	5	\$ 233,000
Environmental	Multiple Items	\$1,075,326
Drainage	Major items	\$ 601,301
Paving	63,433 SY	\$2,326,722
Lighting		\$ 263,327
Mobilization and Contingency		\$ 2,313,143
Engineering Design, Testing, and Observation		\$ 1,542,095
Environmental Assessment		\$ 385,524
	Total Alternative Three	<b>\$ 11,951,238</b>

Source: PAII Project Team Estimates of Probable Construction Costs

**STRENGTHEN EXISTING RUNWAY 7 - 25  
And  
TAXIWAY "W" SAFETY AREAS\***

Surface Milling	66,667 SY	\$ 133,334
Paving	66,667 SY	\$1,344,600
Grooving and Marking		\$ 186,668
Connector Taxiways to Safety Areas	15,022 SY	\$ 276,405
Mobilization and Contingency		\$ 582,302
Engineering Design, Testing, and Observation		\$ 388,201
Environmental Assessment		\$ 97,050
	Total Runway Strengthening	<b>\$3,008,560</b>
*Formerly Taxiway "A"		

**TAXIWAY "Y" REPLACEMENT AND EXTENSION**

Earthwork	128,700 CY	\$ 1,567,544
Environmental	Multiple Items	\$ 50,000
Drainage	Major items	\$ 272,400
Paving	17,100 SY	\$ 627,228
Lighting		\$ 81,000
Mobilization and Contingency		\$ 779,451
Engineering Design, Testing, and Observation		\$ 519,634
Environmental Assessment		\$ 129,909
	Total Taxiway Y	<b>\$4,027,166</b>

Source: PAII Project Team Estimates of Probable Construction Costs

## ***6.0 ASSESSMENT OF LANDSIDE OPTIONS***

### ***6.1 BACKGROUND***

As of this writing, basing area improvement options for Gwinnett County Airport are essentially limited to the north side of the airport. The south side along Briscoe Boulevard is either developed or under development plans. There are areas within the airport property on the north side of the field which are available for additional basing area facility development.

The possibility of developing a parallel runway as discussed in Section 5 will have an impact on the north side terminal facilities. The degree of impact will depend on the alternative chosen. As summarized below:

**Runway Alternative One** – The 3,500 foot parallel runway would have a limited adverse impact on existing facilities. The two 8 unit T-hangars owned by the County would have to be removed / relocated but no other facilities would be affected.

**Runway Alternatives Two and Three** – Both of these alternatives would have an impact on current basing area facilities due to the additional distance required from the current Taxiway Z (formerly Taxiway B) as converted to Runway 7L – 25R and the accompanying new parallel Taxiway Z (relocated) with the accompanying taxiway object free area which would extend further to the north encroaching into the basing facilities. Due to the alignment of a new runway parallel to the alignment of the existing runway versus the alignment of SR 316, the east end of the north side basing area is more impacted than is the west end. Alternatives Two and Three will require the same removal / relocation of the County owned T-hangars as well as one of the County owned 12,000 sf hangars leased by Landmark Aviation and as many as two of the 50' X 60' hangars in the EAA complex. While the relocation / removal of the building currently used by Landmark Aviation as a terminal building is not required, it will also be impacted since the taxiway object free line will lie some 50 feet from the front corners of the building.

There are potential options available for use / development of portions of the north side basing area to be impacted by the runway alternatives. The facility requirements forecast suggests a need for numerous additional hangar facilities of both conventional and T-hangar types. Some of the conventional hangars are expected to be corporate facilities while some may be erected for use by the FBO.

For comparison of alternatives and future development costing purposes, the analysis is based on the airport developing rough grade hangar site areas for lease to prospective hangar developers / tenants. Planning for the area also includes the Airport constructing access taxiways and roadways. The concept used by the airport currently is that hangar buildings are developed by companies or individuals leasing ground space from the airport and does not constitute a cost to the airport.

As a brief discussion of the general possibilities for hangars, there are at least three ways in which the various areas can be used. A fourth would be a combination of the various means. These are generally described as follow:

- FBO Type Conventional Hangar – Conventional hangar is the general term given to the large multi-aircraft hangars on the airfield. In general circumstance the FBO may develop a hangar for a single tenant or park a number of different aircraft for multiple owners in the hangar. The hangar is usually developed by the FBO on land leased from the airport. Given that the FBO serves the flying public, portions of the FBO area (aprons and taxilanes for T-hangars) may be eligible for FAA and state funding. These hangars are typically used for storage of aircraft and/or aircraft maintenance. Conventional hangars may also have office and shop space added external to the hangar area.
- Corporate Type Conventional Hangar – Corporate hangars are generally built by one or more corporations or partners for their own use and do not offer services to the public. Corporate hangars may range from relatively small hangars to hangars that rival any developed by an FBO depending on the flight department needs. In the Atlanta area, there are corporate flight departments with extensive fleets. Corporate hangars may also be used for aircraft storage and maintenance and may also have associated space for offices and / or shops.
- T-Hangars – T-hangars are come in various sizes and are used for smaller aircraft although some sizes will hold multi-engine aircraft as well as turboprops. T-hangars are commonly developed / constructed by FBO's, hangar developers, or by the airport sponsor. An individual or corporation may also develop a series of T-hangars and use one or two for their own needs. Currently at Gwinnett County Airport the T-hangars are all provided by a development company with the exception of the two eight unit hangars which are located adjacent to Landmark Aviation and owned by the county.

The several areas available for potential northside basing area development are discussed as follows.

## ***6.2 ON-AIRPORT NORTHSIDE BASING OPTIONS***

### ***6.2.1 NORTHSIDE BASING AREA EAST OPTIONS***

**Alternative One** - For purposes of reporting and discussion, the Northside Basing Area East is considered to be the area of the Landmark Aviation lease area and the area to the east of Landmark which is under Landmark's right of first refusal. The area is illustrated generally by Exhibit 6 – 1 which also illustrates the impact of Alternative One's 3,500 foot runway on the area. The graphic illustrates the taxiway object free line passing through the county T-hangars which would have to be removed or relocated. There would be no other effect on northside basing area facilities since the

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SPLIT GRAPHIC SHOWING 1 VS 2 & 3

runway lies inside the existing lines established by Taxiway B with the exception of actual construction activities. Alternative One would allow the continued use of approximately 4.7 acres of existing terminal apron area and approximately 7.5 acres of potentially developable space versus Alternatives Two and Three which would consume the area above for taxiway and taxiway object free area.

**Alternatives Two and Three** - The same Northside Basing Area East with the impacts imposed by Alternatives Two and Three is also illustrated by Exhibit 6 – 1. The graphic illustrates the taxiway object free line which passes through the southern 12,000 sf hangar as well as the location of the two county owned T-hangars lying inside the object free line. The graphic also illustrates the impact of the location of the parallel taxiway under this option and the proximity to Landmark Aviation’s terminal facility. The 50 feet of distance between the object free line and the corners of the terminal facility leaves little room for any aircraft activity.

**Note:** Under either of the potential runway/taxiway options there may be options available for updating the facilities and layout of the Northside Basing East area.

**Basing Area East Development Costs** – Basing Area East development costs are somewhat different from those of the Central or Northwest areas since the area is largely developed and Landmark Aviation holds a right of first refusal on the property. Another factor is that in costing the runways the excess material from the site east of Landmark would be used in runway construction and would, therefore, prepare the site to rough grade conditions for hangar development. Therefore, no costs are shown for the development of the area.

## ***6.2.2      NORTHSIDE BASING AREA CENTRAL OPTIONS***

The central area of the Northside Basing Area, for purposes of this report, is considered to be the area from the Hawthorne Aviation lease area to Hurricane Shoals Creek as it makes its way from Hurricane Shoals Road to the taxiway culvert. This area is generally illustrated by Exhibit 6 – 2 and includes a number of separate activities including flight schools, T-hangars, and the EAA area. Also included in this definition is the area of the old DOT maintenance barn on Airport road lying west of the EAA area.

**Alternative One** – Given the current location of Taxiway B and that the runway would lie inside of Taxiway B under this alternative, there would be essentially no adverse impact on facilities under Alternative One beyond the current status. It would appear that there are few capacity improvements which could be made in the central portion of the Northside Terminal Area beyond the now vacant area of the old DOT maintenance barn with the possible exception of space to allow the development of two additional T-hangars at the ends of the two eastern most buildings in the T-hangar complex. It appears that one unit could house 8 aircraft but the eastern most would be restricted to possibly 6 small aircraft due to the proximity of Airport Road and the driveway into the old airport administration building.

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The general site area of the old DOT maintenance barn consists of some 20 acres under this alternative. The area would be suitable for corporate or T-hangar development or possibly a combination of the two. Portions of the area would have to be dedicated to both aircraft access as well as roadway access.

**Alternatives Two and Three** - Given that the taxiway is moved some 240 feet further north under Alternatives Two and Three than under Alternative One, the potential development area is limited by the taxiway object free line. The new location of the taxiway object free line will also require the relocation of at least two of the EAA hangars. Exhibit 6 – 2 also illustrates the proximity of the object free line and the affected EAA hangars.

Under Alternatives Two and Three, the same two smaller T-hangars ( one possible 8 unit and one possible 6 unit) could be added to the existing hangar complex as under Alternative One. These additions are not runway alternative dependent. Under Alternatives Two and Three the area of the old DOT maintenance barn would be reduced to approximately 14 acres.

Given the discussion in Section 6.1 above, the area of the central portion of the Northside Terminal Area could be configured for corporate hangars, FBO type conventional hangars, or for T-hangars. Depending on the options elected, the site might well require a central core taxiway system as well as road access to potential sites. It is expected that development options will be selected in greater detailed planning. The estimates of probable construction costs are illustrated in Exhibit 6 – 3.

EXHIBIT 6 – 3

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**

**CENTRAL BASING AREA**

**On – Airport Site**

Earthwork (Portion used in runway est.)	72,500 CY	\$ 435,000
Environmental		\$ 60,000
Paving - Taxilanes	5,450 SY	\$ 199,906
Paving – Access Roadways	3,850 SY	\$ 147,840
Lighting		\$ 36,540
Utilities	LS	\$ 68,450
Mobilization and Contingency		\$ 284,321

## EXHIBIT 6 – 3 Continued

Engineering Design, Testing, and Observation	\$ 189,547
Environmental Assessment	\$ 47,387
Total Central Area On-Airport	<b>\$1,468,991</b>

Source: PAII Project Team Analysis

### **6.2.3      *NORTHSIDE BASING AREA WEST OPTIONS***

The western portion of the Northside Terminal Area is considered to be a relatively small area west of Hurricane Shoals Creek and just east of the Colonial Pipeline easement area. The potentially developable area consists of approximately 5 acres. The area is limited by the pipeline location, Hurricane Shoals Road, and the floodplain area around the creek. Under Alternative One the area could be enlarged slightly beyond the 5 acres noted; however, the terrain slopes in the area would require significant increases in fill material. As illustrated by Exhibit 6 – 4 the area available is limited by the runway / taxiway object free areas or by the flight path and extended runway protection zones (for Alternative One). The size of the area would appear to limit the use to either one or possibly two corporate hangars or T-hangars.

### **6.3            *OFF-AIRPORT NORTHSIDE BASING OPTIONS***

#### **6.3.1        *BACKGROUND***

As described in Section 3.2, the GDOT HOV lane project is expected to have a substantial effect on the local street traffic in the vicinity of the airport. Airport access via Hosea and Airport Roads directly off SR 316 will be terminated and access via Hurricane Shoals will be restricted to HOV traffic to or from the west only. Traffic on SR 316 from the east will have to exit either at Cedars Road or SR 120 and use surface streets to get to the airport. Single occupant vehicles from the west will have to exit SR 316 at SR 120 and use surface streets to get to the airport. In addition to the airport access being changed, access to the businesses located on the north side of Airport Road will change significantly as well.

In view of the circumstances of the ground access changes in the area as well as the need of a minimum of 19 corporate type hangars of 10,000 sf each and a minimum of 45 additional T-hangar units in the future for hangar storage, the question of acquiring additional land for the airport arose. For the planning team, the question became the degree to which any adjacent property could be utilized.

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The existing roads in the area divide the potential new airport use area into two segments – 1) the portion east of Hurricane Shoals Road and between Airport Road and SR 316, and 2) the portion between Hurricane Shoals Road and SR 316 east of Hosea Road and west of Airport Road. These areas are illustrated by Exhibit 6 – 5. Use of these areas will be discussed as follows.

### ***6.3.2 NORTH CENTRAL BASING AREA***

In order to utilize the land area north of Airport Road for aircraft basing purposes the current Airport Road will have to be relocated. The GDOT HOV project is currently showing a rework of the intersection of Hurricane Shoals / Hi – Hope Road at Airport Road. A potential concept for the relocation of Airport Road is illustrated by Exhibit 6 – 6. The actual area available for hangar development would depend on the final alignments of the roadways in the HOV project; however, it is considered likely that several hangars could be developed in the area and would access the runway system through a connection to the taxiways to be constructed with the development of the Central Basing Area. This area consists of some 8 acres. While this area would tie into the Central Basing Area directly, the lead time in developing the area will include the time require to acquire the property.

The estimates of probable construction costs for the North Central area are contained in Exhibit 6 – 7.

### ***6.3.3 NORTHWEST BASING AREA***

The Northwest Basing Area is considerably larger than that of the North Central Basing Area consisting of some 40 acres. The area varies in elevation with part being very low along the primary drainage channel through the airport to area at a similar elevation to the airport facilities. As with the North Central Basing Area, in order to utilize the area for aircraft basing facilities, Hurricane Shoals Road would have to be relocated. In concept, the road could be relocated from the end of Hosea Road (to be closed at SR 316) along the SR 316 right of way to tie back into Hurricane Shoals at the bridge to be constructed over 316 as part of the HOV project. Any relocation of Hurricane Shoals Road would be dependent on finalized plans for the HOV project.

The area would require access taxiways from the runway / taxiway system. Depending on the timing of any development, taxiways to / from the Northwest Basing Area could tie into the existing Taxiway Z or into a relocated Taxiway Z serving a parallel runway. The area could serve corporate hangars, T-hangars, FBO activities and potentially other basing needs which may arise. The low lying area adjacent the stream may also be utilized for stormwater purposes. The area is illustrated by Exhibit 6 – 8 and the estimate of probable construction costs is contained in Exhibit 6 – 9.

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EXHIBIT 6 - 7

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS**

**CENTRAL BASING AREA - OFF SITE**

Land Acquisition	8 AC	\$4,000,000
Demolition		\$ 50,000
Earthwork	77,856 CY	\$ 467,136
Environmental		\$ -
Paving - Taxilanes	5,220 SY	\$ 191,470
Lighting		\$ 20,600
Utilities		\$ 61,069
Relocate Airport Road		
Paving	15,600 SY	\$ 599,040
Earthwork	20,800 CY	\$ 124,800
Exhibit 6 - 7 Continued		
Mobilization and Contingency		\$ 454,234
Engineering Design, Testing, and Observation		\$ 302,823
Environmental Assessment		\$ 75,706
	Total Central Area Off-Airport	<b>\$6,346,878</b>

Source: PAII Project Team Estimates of Probable Construction Costs

BLANK FOR EXHIBIT 6 - 8 LAYOUT OF NW TERM AREA

EXHIBIT 6 - 9

**SUMMARY OF ESTIMATES OF PROBABLE CONSTRUCTION COSTS  
NORTHWEST BASING AREA**

Land Acquisition	40 AC	\$9,000,000
Demolition		\$ 50,000
Earthwork	73,565 CY	\$ 441,390
Environmental		\$ 30,000
Paving -		
Taxilanes	13,300 SY	\$ 487,844
Access Roadways	5,040 SY	\$ 193,536
Lighting		\$ 89,300
Utilities		\$ 61,069
Relocate Hurricane Shoals Road		
Paving	8,880 SY	\$ 340,992
Earthwork	11,840 CY	\$ 71,040
Double 8 X 5 box culvert		\$ 135,685
Mobilization and Contingency		\$ 570,257
Engineering Design, Testing, and Observation		\$ 380,171
Environmental Assessment		\$ 95,043
Total Northwest Area Off-Airport		<b>\$11,946,327</b>

Source: PAII Project Team Estimates of Probable Construction Costs

## ***7.0 ALTERNATIVES ASSESSMENT AND MASTER PLAN RECOMMENDATION***

### ***7.1 SUMMARY COMPARISON OF RUNWAY ALTERNATIVES***

The three runway alternatives under consideration have distinctively different benefits as well as costs for airport operations. The original emphasis on the work concentrated on stormwater issues which remain central issues to the airport's development but later work in the master planning process has developed additional concepts for both airside and landside development. The single activity which will set the direction for much of the development which will follow is the selection of the parallel runway alternative or the no-build. The following summary comparison of the alternatives

#### ***7.1.1 ALTERNATIVE ONE - 3,500 FOOT RUNWAY***

**Alternative Benefit** – The primary benefit of this alternative is to provide additional runway capacity to accommodate small single engine and multi-engine reciprocating engine aircraft. This alternative would retain all jets and a major portion of the turbo-props on the existing runway. This runway would not serve as a suitable alternate runway when the main runway was down for maintenance.

**Alternative Costs** - There are a number of costs of this alternative. The location of this alternative in the primary stormwater conveyance area would require the destruction of wetlands, stream bank buffers, and stream impacts all of which are translated to dollar costs. This alternative would also have the potential to be more disruptive to northside operations during construction.

Alternative development costs for the 3,500 foot runway - **\$12,267,246**

#### ***7.1.2 ALTERNATIVE TWO - 4,400 FOOT RUNWAY***

**Alternative Benefit** – There are a number of benefits to this alternative. First, the runway is designed so that all work will be done out of the sensitive environmental area of the primary stormwater drainage area in the center of the airfield. Secondly, the 4,400 foot runway will serve all of the single engine aircraft and light multi-engine aircraft as well as virtually all of the turbo-props. This alternative would serve as an alternate for some 75 percent of the traffic should the main runway be down. Thirdly, this alternate would provide the same if not greater airfield capacity as would Alternative One.

**Alternative Costs** - Since this alternative was designed to stay out of the environmental areas to the extent possible, the costs associated with this development are primarily the construction costs. This alternative would, however, require the relocation of approximately 3 hangars and the conversion of some 30,000 square

yards of existing apron area to runway / taxiway area. This alternative (as well as Alternative Three) would also require the renegotiation or realignment of the current Landmark Aviation lease area; however, those costs are unknown at this time.

Alternative development costs for the 4,400 foot runway - **\$11,023,886.**

### ***7.1.3 ALTERNATIVE THREE – 5,000 FOOT RUNWAY***

**Alternative Benefit** – This alternative has all the benefits of Alternative Two with the addition of serving a much wider range of aircraft. The 5,000 foot length would serve and estimated 75 percent of the jet fleet in addition to all of the other aircraft. Should the main runway be down for maintenance this alternative would serve more than 90 percent of the traffic on the airport.

Depending on basing area alternatives chosen for development, this runway would also provide a substantially shorter taxi distance for any aircraft based in the Northwest Basing Area to include many of the jets expected to be housed in the area.

**Alternative Costs** – This alternative has the same costs at Alternative Two with the addition of slightly greater construction costs due to the additional length. This alternative was also designed to stay out of the environmental area and due to the location of the parallel taxiway would cause less disruption to the northside operations than Alternative One. Costs of this alternative also include the conversion of approximately 30,000 square yards of existing apron and taxiway area into taxiway as well as requiring the renegotiation or realignment of Landmark Aviation's lease area. Those costs are unknown at this time.

Alternative development costs for the 5,000 foot runway - **\$11,951,238.**

### ***7.1.4 NO – BUILD ALTERNATIVE***

**Alternative Benefit** – Benefits accruing from not building one of the alternatives noted above tend to fall into two groups. Those having to do with the airport and those having to do with the community as follows:

Benefits to the Airport:

- Not building one of the parallel runway options would not consume the land area required by the one of the parallel runways. As noted above either Alternative Two or Three would consume some 30,000 square yards of current apron and taxiway area and require the relocation of several hangars. Not building either alternative would allow the use of a greater portion of the East Basing area which is currently undeveloped.
- Not building either Alternative Two or Three would mean that the hangars noted above would not require relocation.

- Not building either of the alternatives would mean that the environmental impacts associated with the runway alternatives would not be encountered. The further development of basing areas would still encounter environmental impacts for those areas.

Benefits to the Community:

- One shared benefit from not building one of the parallel runway alternatives to be shared by the community would be no environmental impacts irrespective of how small the impacts might be.
- Not building a parallel runway would mean that the local funds required in conjunction with any parallel runway development would not be required.

**Alternative Costs** – The costs associated with any benefit may ultimately be measured in dollars but at this point in consideration may be viewed as qualitative as well as quantitative.

Costs to the Airport:

- Costs to the airport from not building the expansions including one of the parallel runway options will mean that the airport may not serve the area demand at some point in the future. The costs to airport users will be a significant increase in delay costs. As airports get more congested the delay rises at a steep rate. Actual costs of delay include the cost of the delayed aircraft per minute and the time cost of pilots and passengers,

Costs to the Community:

- The cost of not meeting the demand for airport services is an economic cost to the community. It would mean that the costs of doing business in Gwinnett County (arising from increased delay at the airport) would increase and it could also provide a chilling effect on economic development activities.

## ***7.2 RECOMMENDED AIRSIDE DEVELOPMENT***

### ***7.2.1 PARALLEL RUNWAY DEVELOPMENT***

Gwinnett County Airport is one of the more important general aviation airports in the Atlanta Metro Area. The airport serves the economic and air transportation needs of numerous companies in the Northeast Metro Area. Gwinnett County remains a high growth area and is developing its own commercial / industrial base. The airport is also somewhat hampered by having only one runway which affects numerous tenants and users whenever the main runway is closed for any reason. Therefore, the PAII Project Team’s recommendation for parallel runway development is Alternative Three

- the 5,000 foot parallel runway developed on the existing Taxiway Z (formerly Taxiway B).

In addition to the 5,000 foot runway, it is further recommended that the runway be provided with bi-directional instrument approaches of high quality. While the runways are too close to allow fully simultaneous instrument approaches in instrument meteorological conditions, the parallel runway would again provide a back-up to the main runway. The recommended Long - Range Airport Master Plan is illustrated by Exhibit 7 - 1.

## ***7.2.2 RUNWAY STRENGTHENING DEVELOPMENT***

It is also the recommendation of the PAII Project Team that the existing runway be strengthened to 100,000 pounds dual wheel weight. The noise runs showed no change in noise levels stemming from a higher level of activity by heavier general aviation aircraft. Again, in keeping with the economic development of Gwinnett County, the heavier aircraft currently use the airport in limited numbers but are expected to present a significant demand in the near future. Many of the nation's larger companies are operating the larger aircraft and should not be denied access to Gwinnett County Airport.

## ***7.2.3 TAXIWAY "Y" DEVELOPMENT***

The PAII Project Team also recommends the development of the Taxiway Y (formerly Taxiway X) replacement and extension. Given the recommendation for the 5,000 foot parallel runway situated on and north of the existing Taxiway Z (formerly Taxiway B), the elimination of the short parallel runway from the master plan allows the development of northside access to the existing Runway 25. This development will eliminate a portion of the crossing problems for the runway.

## ***7.3 RECOMMENDED LANDSIDE DEVELOPMENT***

### ***7.3.1 EAST BASING AREA DEVELOPMENT***

Given the recommendation for the development of the 5,000 foot parallel runway, the east basing area would be expected to undergo some transition due the location of the new parallel taxiway serving the new runway and the taxiway object free line. It is expected that the area east of Landmark Aviation would be graded to meet the runway grade as part of the runway project. The preparation of the site would allow development of the area directly. The undeveloped area east of Landmark would house additional hangars including a limited number of conventional storage hangars, corporate hangars, and / or T-hangars.

### **7.3.2 CENTRAL BASING AREA DEVELOPMENT**

The Central Basing Area consists of two parts – the area west of Astron and the EAA hangars where the DOT maintenance barn once stood, and the possibly new area north of Airport Road. The recommendations are as follows:

- **Central Basing Area** – The PAll Project Team recommends moving expeditiously to develop hangar development sites on the Central Basing Area. Since development of the area will result in filling of some minor portions of the flood plain, it is further recommended that the required environmental documents also be pursued at the earliest opportunity.
- **North Central Basing Area** – (across Airport Road) The PAll Project Team also recommends the acquisition of the area between Airport Road, SR 316, and Hurricane Shoals Road for the purpose of developing an extended Central Basing Area. The development of this area would require the relocation of Airport Road. The acquisition of the area will also require environmental clearance. It is recommended this clearance be pursued at the earliest opportunity.

### **7.3.3 NORTHWEST BASING AREA DEVELOPMENT**

The PAll Project Team also recommends the long-term master plan for Gwinnett County Airport include the acquisition of the area between SR 316 and Hurricane Shoals Road east of Hosea Road to become the Northwest Basing Area. The development of the Northwest Basing Area would first require the acquisition of the area. Given the amount of land (approximately 40 acres) the acquisition of the area would be expected to take some time before actual development of the area could begin; however, the low-lying portion of the area may be required earlier to serve as an airport stormwater use area.

The acquisition and development of the Northwest Basing Area is required to provide the facilities as to meet the forecast need.

## **7.4 AIRPORT CAPITAL IMPROVEMENT PROGRAM**

### **7.4.1 CIP BACKGROUND**

The recommendations above, if approved, set the long – term direction for the airport’s growth to serve the Gwinnett County aviation and economic demand. Portions of the recommended master plan facilities may not be developed until late in the 20 year planning period; however, the airport has current needs which must be planned as well. The FAA and GDOT Office of Aviation Programs require the airport to submit a five year improvement plan which is updated annually.

## **7.4.2 CAPITAL IMPROVEMENTS PROGRAM**

The Airport Capital Improvement Program is contained in Exhibit 7 – 2. The CIP includes the long – range development items as well as other infrastructure and security needs of the airport. The timing of development items will be reviewed annually and changes are expected as funding is accelerated or delayed for any individual item.

EXHIBIT 7 - 2

**GWINNETT COUNTY AIRPORT**

**CAPITAL IMPROVEMENT PROGRAM**

YEAR CY	PROJECT DESCRIPTION	PROJECT COSTS			
		TOTAL	FEDERAL	STATE	LOCAL
	All costs in 2006 dollars				
2007	Installation of Fencing around Critical Equipment	\$30,000		\$15,000	\$15,000
	Obstruction Removal*	\$300,000	\$285,000	\$7,500	\$7,500
	Animal Control / Security Fence*	\$260,000	\$247,000	\$6,500	\$6,500
	Runway Strengthening Environmental Assessment	\$97,000	\$92,150	\$2,425	\$2,425
	Environmental - install aircraft wash racks, compass rose	\$35,000	\$33,250	\$875	\$875
2008	Airport 24 hour Security Presence				\$40,000
			\$0	\$0	\$0
	Upgrade Gates to Proximity Cards	\$100,000	\$95,000	\$2,500	\$2,500
			\$0	\$0	\$0
	Installation of Ramp Lighting	\$500,000	\$475,000	\$12,500	\$12,500
			\$0	\$0	\$0
	Runway / Taxiway Safety Area Strengthening Engineering Design	\$194,000	\$184,300	\$4,850	\$4,850
			\$0	\$0	\$0
	Installation of CCTV system	\$40,000			\$40,000
	Construct aircraft wash racks, compass rose	\$75,000	\$71,250	\$1,875	\$1,875
	Taxiway Y Environmental Assessment	\$130,000	\$123,500	\$3,250	\$3,250
	Central Basing Area Environmental Assessment	\$50,000	\$47,500	\$1,250	\$1,250
	Central Basing Area Engineering Design	\$75,000	\$71,250	\$1,875	\$1,875

YEAR CY	PROJECT DESCRIPTION	TOTAL	FEDERAL	STATE	LOCAL
2009	Retrofit Ground Floor of ATCT Building	\$75,000	\$71,250	\$1,875	\$1,875
	Redundant Power Source for ATCT	\$50,000	\$47,500	\$1,250	\$1,250
	Taxiway Y, D, E, F & G Strengthening Engineering Design	\$260,000	\$247,000	\$6,500	\$6,500
	Runway / Taxiway Safety Area Strengthening Construction	\$2,717,500	\$2,581,625	\$67,938	\$67,938
	Central Basing Area Construction	\$870,000	\$826,500	\$21,750	\$21,750
2010	Installation of Fencing along Cedars Road	\$100,000	\$95,000	\$2,500	\$2,500
	Land Acquisition Reimbursement - Cedars Stormwater Area	\$3,450,000	\$3,277,500	\$86,250	\$86,250
	Taxiway Y Construction (Portion)	\$1,825,000	\$1,733,750	\$45,625	\$45,625
	Environmental Assessment North Central Basing Area	\$50,000	\$47,500	\$1,250	\$1,250
	Land Acquisition - Northwest Stormwater handling area	\$1,500,000	\$1,425,000	\$37,500	\$37,500
2011	Installation of Barriers around Fuel Storage Tanks	\$75,000	\$71,250	\$1,875	\$1,875
	Taxiway Y, D, E, F & G Strengthening Construction	\$1,825,000	\$1,733,750	\$45,625	\$45,625
	Taxiway Z (formerly A) Strengthening Construction	\$165,000	\$156,750	\$4,125	\$4,125
	Land Acquisition - North Central Basing Area	\$2,000,000	\$1,900,000	\$50,000	\$50,000
	Land Acquisition - North Central Basing Area	\$2,000,000	\$1,900,000	\$50,000	\$50,000

YEAR CY	PROJECT DESCRIPTION	TOTAL	FEDERAL	STATE	LOCAL
2015	Environmental Assessment - Parallel Runway	\$375,000	\$356,250	\$9,375	\$9,375
	Engineering Design North Central Basing Area	\$150,000	\$142,500	\$3,750	\$3,750
	Construction North Central Basing Area	\$1,500,000	\$1,425,000	\$37,500	\$37,500
	Engineering Design - Parallel Runway	\$700,000	\$665,000	\$17,500	\$17,500
	Parallel Runway Construction	\$5,100,000	\$4,845,000	\$127,500	\$127,500
	Parallel Runway Construction	\$5,100,000	\$4,845,000	\$127,500	\$127,500
2020	Environmental Assessment - Northwest Basing Area	\$100,000	\$95,000	\$2,500	\$2,500
	Land Acquisition - Northwest Basing Area	\$4,000,000	\$3,800,000	\$100,000	\$100,000
	Land Acquisition - Northwest Basing Area	\$4,000,000	\$3,800,000	\$100,000	\$100,000
	Engineering Design - Hurricane Shoals Road Relocation	\$75,000	\$71,250	\$1,875	\$1,875
	Hurricane Shoals Road Relocation	\$600,000	\$570,000	\$15,000	\$15,000
	Northwest Basing Area Construction	\$1,350,000	\$1,282,500	\$33,750	\$33,750
2025					

***GWINNETT COUNTY AIRPORT***

***MASTER PLAN***

***APPENDIX A-1***

## APPENDIX A – 1

### AIR TRAFFIC STATISTICS UPDATE

#### GWINNETT COUNTY AIRPORT - BRISCOE FIELD

##### ***BACKGROUND***

Since the initial publication of the Gwinnett County Airport – Briscoe Field Airport Master Plan in October of 2006 additional aircraft operational data have become available. The data shows that the airport had experienced a gradual decline from 1999 with a more pronounced decline in 2003. The 2003 period was followed by a substantial rebound in 2004 of a 20.2 percent increase over the 2003 traffic levels but again fell some 10.9 percent to the 2005 levels.

In the intervening period since 2005 the American economy has continued to falter somewhat leading to a continuation of annual decreases in total aircraft activity for the years 2006 and 2007 according to the Gwinnett Air Traffic Control Tower data. The first six months of 2008 have shown the traffic to be very slightly ahead of the 2007 level. In addition, the itinerant traffic as a percent of total traffic has remained in the mid to low 70 percent for the years noted above. For the year 2006 with the strongest total traffic, the itinerant traffic was 75 percent of total while it had dropped to 71 percent for the first six months of 2008. Exhibit A – 1 – 1 illustrates the updated air traffic statistics.

##### ***CRITICAL AIRCRAFT UPDATE***

Section 3.4.2 contains a discussion concerning the weights of aircraft currently operating at Gwinnett County Airport as well as those expected in the future. Newly available information through the GDOT Office of Aviation programs contains information by specific aircraft type operating at Gwinnett County Airport. The information is taken from FAA air traffic records for operations conducted by aircraft operating on an instrument flight rules (IFR) flight plan. The information does not include aircraft operating in visual conditions. Given that virtually all jet aircraft operate on IFR flight plans, the information is presumed to include virtually all jet activity.

Since the data includes numerous operations by a wide variety of aircraft types, the FAA's methodology for the ***"Determination of Equivalent Annual Departures by the Design Aircraft"*** as contained in FAA Advisory Circular 150/5320 – 6D was utilized. The information was classified into ten different weight classifications from 15,000 pounds gross weight to 100,000 pounds. The newly available information confirmed the use of the airport by heavier aircraft as reported in Section 3.4.2 as noted above. The data also confirmed well over 200 operations by aircraft weighing over 60,000 pounds. Given the potential for continued future use by the heavier aircraft, the calculations in determining the equivalent annual departures were based on the use by 100,000 pound aircraft. The methodology produced 245 equivalent operations by the 100,000 pound aircraft for the year 2006. Should a lower weight have been used, such as 90,000 for an example, the number of equivalent operations would have increased.

EXHIBIT A - 1 - 1

**TOTAL OPERATIONS UPDATE**

	ITINERANT OPERATIONS	PERCENT	LOCAL OPERATIONS	PERCENT	TOTAL OPERATIONS
Actual					
2000	64,843	59.8	43,587	40.2	108,430
2001	69,037	64.9	37,384	35.1	106,421
2002	71,857	68.2	33,488	31.8	105,345
2003	63,987	71.1	25,978	28.9	89,965
2004	73,997	68.4	34,162	31.6	108,159
2005	68,199	70.8	28,166	29.2	96,365
2006	65,774	75.0	21,902	25.0	87,676
2007	64,828	73.9	22,879	26.1	87,707
<i>2008*</i>	<i>31,633</i>	<i>71.2</i>	<i>12,776</i>	<i>28.8</i>	<i>44,409</i>
	<i>*Data for the first six months of 2008</i>				

Source: Gwinnett County Airport Management Records  
PAI Project Team Analysis

***GWINNETT COUNTY AIRPORT***

***MASTER PLAN***

***APPENDIX A - 2***

July 24, 2006

Mr. Gordon Jackson  
Pegasus Associates International, Inc.  
1536 Dunwoody Village Parkway, Suite 150  
Dunwoody, GA 30338

**RE: Archaeological Reconnaissance of Three Tracts Adjacent to the Gwinnett County Airport, Gwinnett County, Georgia**

Dear Mr. Jackson:

On July 19, 2006, staff from Edwards-Pitman Environmental, Inc. (EPEI) performed an archaeological reconnaissance of three potential expansion areas adjacent to Gwinnett County Airport. This letter report presents the results of this reconnaissance-level survey.

Background research showed that there are two previously identified archaeological sites within a 2-km radius of the project area. Site 9GW307 is a historic house site that was recommended ineligible for the National Register of Historic Places (NRHP). Site 9GW327 is a house site of some type; its eligibility recommendation would have to be checked during a visit to the State Archaeological Site Files at the University of Georgia in Athens.

A total of three tracts was visited by EPEI; one is on airport property, and two are located on property owned and maintained by other county offices. Areas were assigned arbitrary designations based on the order in which they were visited; please see Figure 1 for their locations.

Area 1. This area is located northeast of the runway and adjacent to SR 316. Area 1 is divided by an effluent stream and has been disturbed along its north edge by the construction of SR 316 and the installation of a powerline. Both the east and west sides of the area contain uplands, sideslopes, and bottomlands along the creek. The upland area of the western portion has been heavily impacted by road and weather station construction. Large portions of the eastern section have been cleared for vehicular traffic and numerous push-piles are seen along the woodline of the upland area. The bottomlands along and adjacent to the creek do not appear to have had the same modification as the uplands and may retain some contextual integrity for archaeological resources.

Area 2. This area is located on county property north of the airport and is managed by the Gwinnett County Prison. An unnamed creek flows through the area. West of the creek, the landscape has been heavily modified. East of the creek a sewer line easement has greatly modified the terrain. Vegetation in this area consists of mixed hardwoods. The area defined by the sewer line easement in the west, High Hope Road in the east, and SR 316 in the north may contain intact archaeological resources.



Area 3. This area is located on county property southeast of the airport. A large creek flows through the area and is defined by a large wooded upland flanked by light industrial development. The upland portion of the area appears to have experienced significant soil erosion, but it is not clear whether the erosion is widespread. As this is a wooded upland above a sizable creek, it is possible that cultural material may be present in some locations. Certain locations along the creek contain outcroppings of what appears to be metagraywacke/schist. These outcroppings are large enough to provide shelter or a location for rock art, and should be considered potential locations for archaeological resources.

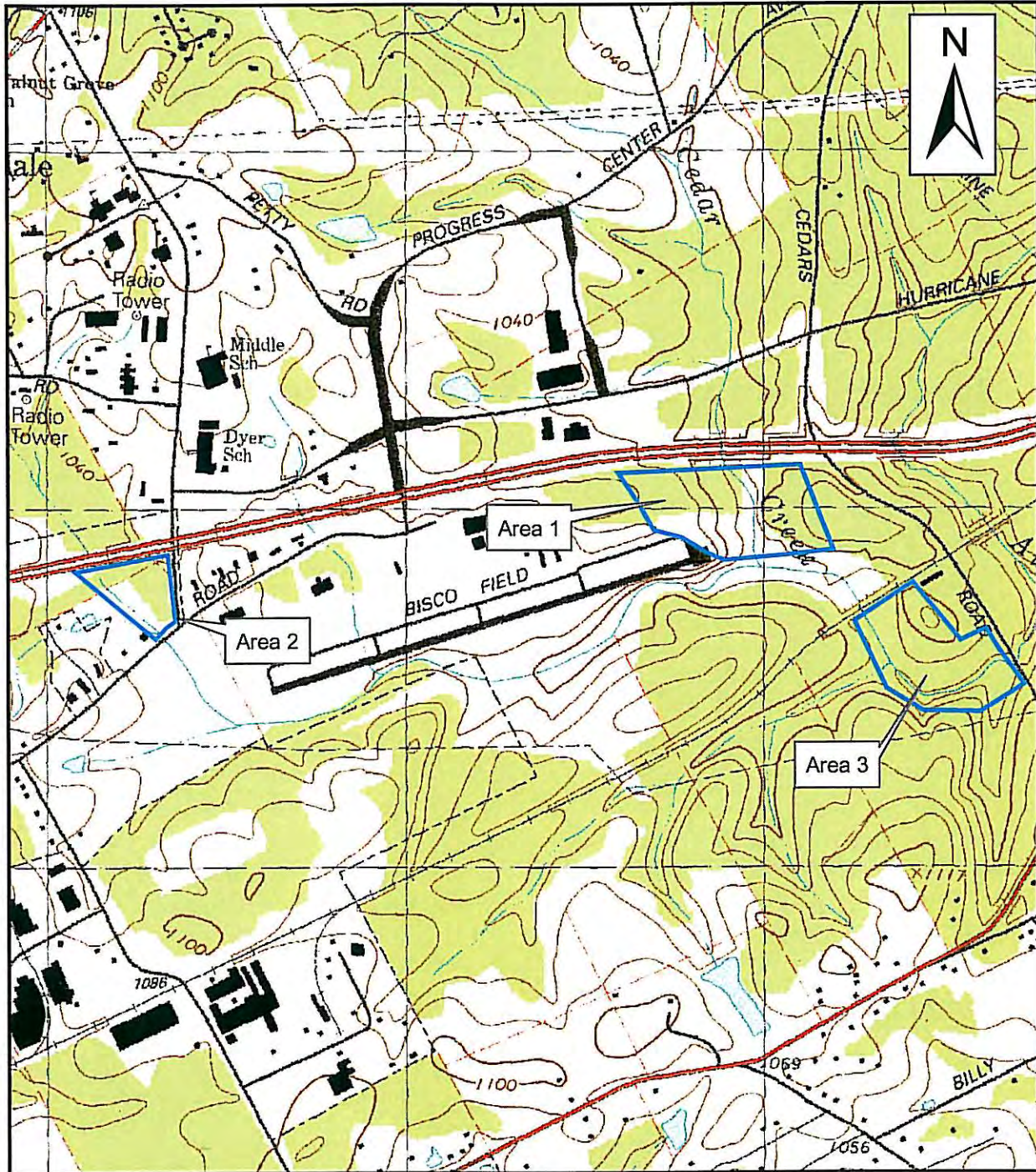
In summary, at least portions of all three areas would require additional archaeological work in the form of systematic shovel testing. This work could potentially identify intact archaeological sites.

If you require further assistance or have any questions, please feel free to contact me at (770) 333-9484 or by e-mail at [lpietak@edwards-pitman.com](mailto:lpietak@edwards-pitman.com). We would be happy to complete a Phase I archaeological survey of the three areas if you decide to continue with this project.

Sincerely,

A handwritten signature in black ink that reads "Lynn Marie Pietak".

Lynn Marie Pietak, Ph.D.  
Senior Archaeologist



**Figure 1.**  
**Project Location Map**  
 Archaeological Reconnaissance of  
 Three Tracts Adjacent to the Gwinnett County Airport



Source: Lawrenceville, GA Quadrangle/  
 USGS 7.5' Series (Topographic)



***GWINNETT COUNTY AIRPORT***

***MASTER PLAN***

***APPENDIX A - 3***

July 24, 2006

Mr. Gordon Jackson  
Pegasus Associates International, Inc.  
1536 Dunwoody Village Parkway, Suite 150  
Dunwoody, GA 30338

**RE: Ecological Reconnaissance of Three Tracts Adjacent to the Gwinnett County Airport, Gwinnett County, Georgia**

Dear Mr. Jackson:

This letter report summarizes the ecology findings for the above referenced project. On July 19, 2006, Jonathan Sell – Senior Ecologist of Edwards-Pitman Environmental, Inc. (EPEI) performed the preliminary ecological survey of select locations in and around the Gwinnett County Airport in Gwinnett County, Georgia. The survey included surveying for jurisdictional waters of the US (i.e. wetlands, streams, and open waters) protected species and their habitat, and noting vegetative communities within the select locations. This letter report is intended to provide Pegasus Associates International, Inc. with preliminary information concerning locations of jurisdictional waters of the US for future management purposes.

Three areas were visited by EPEI, one was located on airport property, and two were located on property owned and maintained by other county offices. Areas were assigned arbitrary designations based upon the order in which they were visited (Figure 1 – Project Locations)

*Area 1* This area is located on the northeast section of the airport adjacent to SR 316. Three vegetative communities occurred within this area: a hardwood forest, a pine/hardwood forest, and an old field community. Two jurisdictional waters of the US were located within this area: a perennial stream channel and a forested wetland adjacent to the stream (Figure 2 – Waters of the US). The stream was a somewhat impaired stream that was 15 – 20 feet wide with 4 – 5-foot high somewhat unstable banks. Water depth was 0.5 – 1.5 feet deep and flowed over a sand, silt, and gravel substrate. The adjacent wetland was seasonally inundated and dominated by tree species that included red maple (*Acer rubrum*), tulip poplar (*Liriodendron tulipifera*), and river birch (*Betula nigra*). The dominant herbaceous vegetation included jewelweed (*Impatiens capensis*), Virginia bugleweed (*Lycopus virginicus*), arrow arum (*Peltandra virginica*), false nettle (*Boehmeria cylindrica*), and tearthumb (*Polygonum sagittatum*).

*Area 2.* This area is located on county property north of the airport and is managed by the Gwinnett County Prison. Two vegetative communities occurred within this area: a hardwood forest and a pine/hardwood forest. One jurisdictional water of the US was located within this area: a perennial stream (Figure 2 – Waters of the US). The stream was 8 – 10 feet wide with 3 – 4-foot high stable banks. Water depth was 1 – 1.5 feet deep and flowed over a sand and gravel substrate

*Area 3.* This area is located on county property southeast of the airport. Two vegetative communities occurred within this area: a hardwood forest and a pine/hardwood forest. Three jurisdictional waters of the US were located within this area: two perennial streams and one intermittent stream (Figure 2 – Waters of the US). Stream #1, unnamed tributary to Cedar Creek, was an intermittent stream that was 3 – 4 feet wide with 2 – 3-foot high stable banks. Water depth was 6 inches and flowed over a sand substrate. Stream #2, Cedar Creek,



was perennial stream that was 25 – 30 feet wide with 6 – 8-foot high moderately stable banks. Water depth was 0.5 – 2 feet deep and flowed over a sand, gravel, cobble, and bedrock substrate. Stream #3, unnamed tributary to Cedar Creek, was a perennial stream that was 6 – 7 feet wide with 3 – 4-foot high stable banks. Water depth was 0.5 – 1 foot deep and flowed over a sand, cobble, and bedrock substrate.

#### Protected Species Survey

A preliminary survey for state and federally protected species potentially occurring in Gwinnett County was also conducted during the field survey. No state or federally protected species listed by the US Fish and Wildlife (USFWS) or the GA Department of Natural Resources (GADNR) were observed during the field survey and no suitable habitat for the species was present. The species listed by these agencies as occurring or potentially occurring in Gwinnett County are: bald eagle (*Haliaeetus leucocephalus*), bluestripe shiner (*Cyprinella callitaenia*), bay star-vine (*Schisandra glabra*), black-spored quillwort (*Isoetes melanospora*), golden seal (*Hydrastis canadensis*), granite rock stonecrop (*Sedum pusillum*), piedmont barren strawberry (*Waldsteinia lobata*), and pool sprite snorkelwort (*Amphianthus pusillus*). The USFWS and GADNR web pages for Gwinnett County protected species are attached.

#### Section 404 Permitting

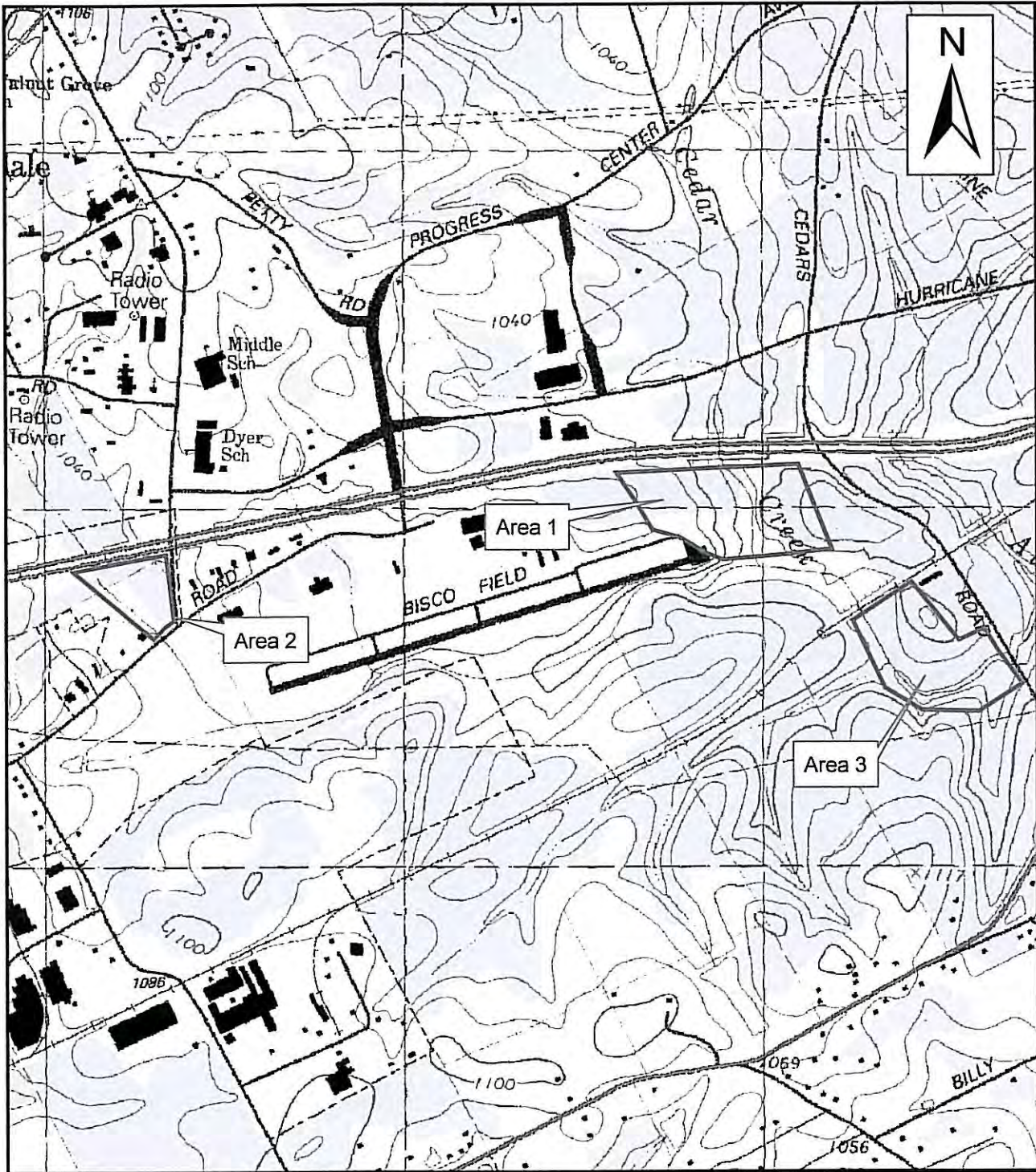
The development of the three areas surveyed would require a Section 404 permit from the US Army Corps of Engineers (USACE) if the identified jurisdictional waters of the US would be impacted by any development activity. In general, a Nationwide Permit would be applicable for impacts to the streams and wetlands providing that the impacts are within the impact limits of the Nationwide permits. The maximum impact limit to individual streams and wetlands under a Nationwide Permit is 300 linear feet and 0.5 acre, respectively.

The use of Nationwide Permits would require the submittal of a Pre-Construction Notification (PCN) if any of the following conditions occur: more than 0.1 acre of wetland is filled, 100 linear feet or more of intermittent is impacted (including stream banks), or any impact to a perennial stream. An Individual Permit would be required for individual stream impacts greater than 300 linear feet and/or 0.5 acre of impact to an individual wetland.

Thank you for the opportunity to provide services for Pegasus Associates International, Inc. on this project. Please contact me or Dave Pearce at 770-333-9484 if you have any questions or require additional information.

Sincerely,  
Edwards-Pitman Environmental, Inc.

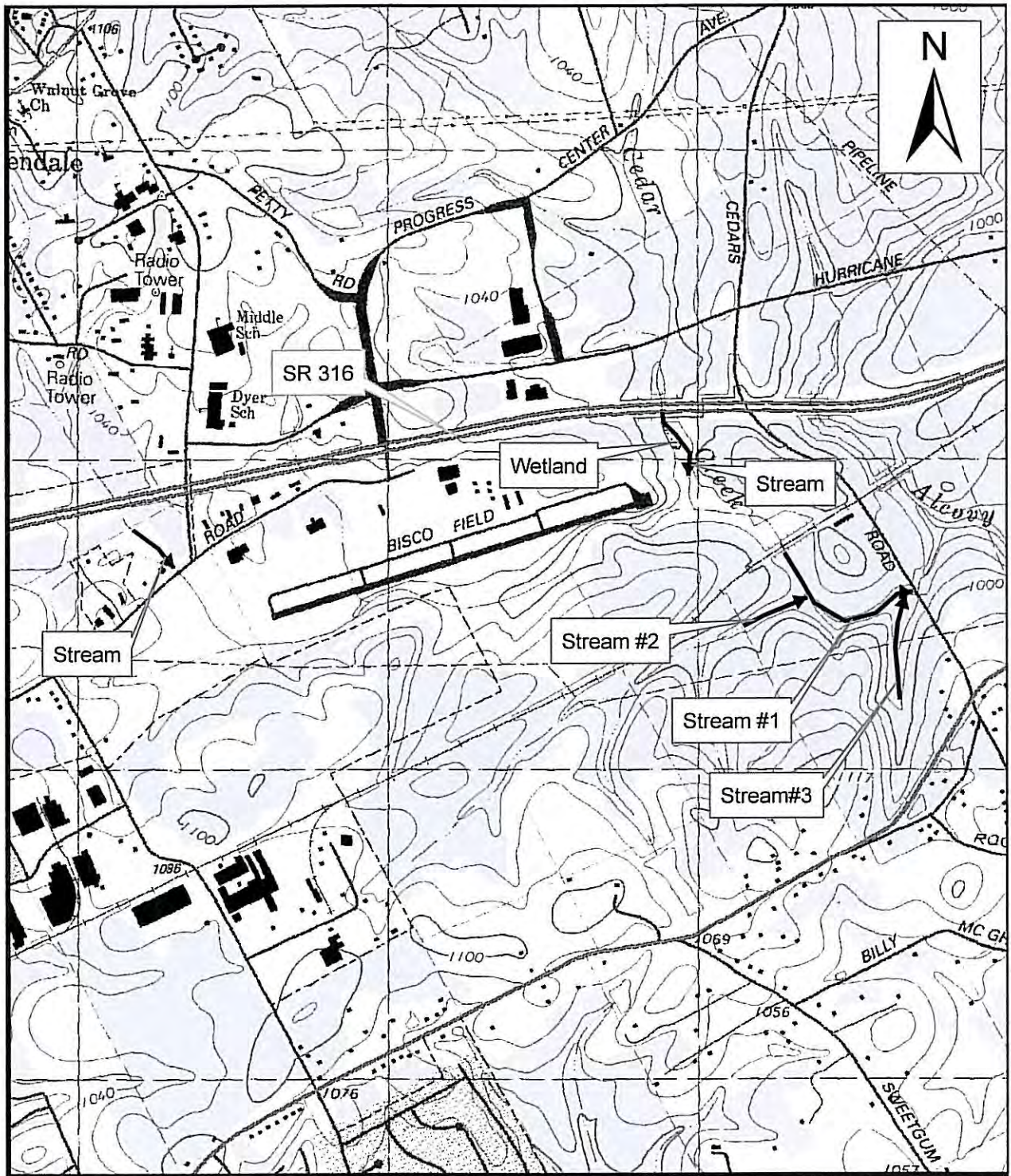
Jonathan A. Sell  
Senior Ecologist  
Attachments



**Figure 1**  
**Project Location**  
 Preliminary Ecological Survey of  
 Three Locations in and Adjacent to the Gwinnett County Airport

Source: Lawrenceville, GA Quadrangle/  
 USGS 7.5' Series (Topographic)

0      1,000      2,000      4,000  
 Feet



**Figure 2**  
**Water of the US**

Preliminary Ecological Survey of  
 Three Locations in and Adjacent to the Gwinnett County Airport

Source: Lawrenceville, GA Quadrangle/  
 USGS 7.5' Series (Topographic)



Listed Species in Gwinnett County (updated May 2004)				
Species	Federal Status	State Status	Habitat	Threats
<b>Bird</b>				
<b>Bald eagle</b> <i>Haliaeetus leucocephalus</i>	T	E	Inland waterways and estuarine areas in Georgia	Major factor in initial decline was lowered reproductive success following use of DDT. Current threats include habitat destruction, disturbance at the nest, illegal shooting, electrocution, impact injuries, and lead poisoning.
<b>Fish</b>				
<b>Bluestripe shiner</b> <i>Cyprinella callitaenia</i>	No Federal Status	T	Brownwater streams	
<b>Plant</b>				
<b>Bay star-vine</b> <i>Schisandra glabra</i>	No Federal Status	T	Twining on subcanopy and understory trees/shrubs in rich alluvial woods	
<b>Black-spored quillwort</b> <i>Isoetes melanospora</i>	E	E	Shallow pools on granite outcrops, where water collects after a rain. Pools are less than 1 foot deep and rock rimmed.	Quarrying that destroys granite outcrops is the major threat. Other threats include vehicle traffic, littering, fire building, vandalism, and cattle eutrophication/trampling on outcrops. Genetic integrity is threatened due to hybridization with <i>I. piedmontana</i> .
<b>Golden seal</b> <i>Hydrastis canadensis</i>	No Federal Status	E	Rich woods and cove forests in the mountains	
<b>Granite rock stonecrop</b> <i>Sedum pusillum</i>	No Federal Status	T	Granite outcrops among mosses in partial shade under red cedar trees.	
<b>Piedmont barren strawberry</b> <i>Waldsteinia lobata</i>	No Federal Status	T	Rocky acedid woods along streams with mountain laurel; rarely in drier upland oak-hickory-pine woods	
<b>Pool Sprite, Snorkelwort</b> <i>Amphianthus pusillus</i>	T	T	Shallow pools on granite outcrops, where water collects after a rain. Pools are less than 1 foot deep and rock rimmed	

## Locations of Special Concern Animals, Plants and Natural Communities in Gwinnett County, Georgia

"US" indicates species with federal status (Protected, Candidate or Partial Status). Species that are federally protected in Georgia are also state protected.

"GA" indicates Georgia protected species.

Find details for the species below on our special concern lists for [animals](#) and [plants](#).

Date of information - 10/22/2004

### Animals

No animals listed in Gwinnett county.

### Plants

- *Aesculus glabra* Ohio Buckeye
- US · *Amphianthus pusillus* Pool Sprite
- *Amsonia ludoviciana* Louisiana Blue Star
- *Aster avitus* Alexander Rock Aster
- US · *Aster georgianus* Georgia Aster
- GA · *Cypripedium acaule* Pink Ladyslipper
- GA · *Cypripedium parviflorum var. pubescens* Large-flowered Yellow Ladyslipper
- *Eriocaulon koernickianum* Dwarf Pipewort
- *Fimbristylis brevivaginata* Flatrock Fimbry
- GA · *Hydrastis canadensis* Goldenseal
- US · *Isoetes melanospora* Black-spored Quillwort
- GA · *Melanthium woodii* Ozark Bunchflower
- *Panax quinquefolius* American Ginseng
- GA · *Schisandra glabra* Bay Starvine
- GA · *Sedum pusillum* Granite Stonecrop
- GA · *Waldsteinia lobata* Piedmont Barren Strawberry

### Natural Communities

No natural communities listed in Gwinnett county.

NOTE: This is a working list and is constantly revised ([see element occurrence data disclaimer](#)). For the latest changes, acknowledgment of numerous sources, interpretation of data, or other information connected with this list, please contact:

Greg Krakow - Data Manager  
 Georgia Department of Natural Resources  
 Wildlife Resources Division  
 Georgia Natural Heritage Program  
 2117 U.S. Highway 278 S.E.  
 Social Circle, Georgia 30025-4714  
 Phone: (770)918-6411  
 Fax: (706)557-3033  
 Click [here](#) to send e-mail

# Design & Development Guide

(Architecture and Building Design Standards V.3)

Gwinnett County, GA  
Gwinnett County Airport-Briscoe Field

## Development Manual

Issue Date: February 10, 2022



Gwinnett

Submitted By:

**Michael Baker**  
INTERNATIONAL

**DESIGN AND DEVELOPMENT GUIDE**  
**Gwinnett County Airport-Briscoe Field**

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**END OF DDG Table of Contents**

# I. INTRODUCTION

## A. Definitions:

AHJ: Authority Having Jurisdiction

Airport: Gwinnett County, GA Airport- Briscoe Field

ALP: Airport Layout Plan

CBP: U.S. Customs and Border Protection

CIP: Capital Improvements Program

City: City of Lawrenceville, Georgia

Contractor: The prime contractor employed by the County, the Airport, a Leasee, or Developer, or an Airport tenant to construct new facilities or revise existing facilities

County: Gwinnett County, Georgia

Director: The Director of Gwinnett County Airport

DDG: The Airport Design and Development Guide

EPA: U.S. Environmental Protection Agency

FAA: Federal Aviation Administration of the United States

FCC: Federal Communications Commission

GCP&D: Gwinnett County Department of Planning and Development

GDLR: Georgia Department of Licensing and Professional Regulation Boards

GaDOT: Georgia Department of Transportation

LPDD: City of Lawrenceville Planning and Development Department

NPDES: National Pollutant Discharge Elimination System

OSHA: U.S. Occupational Safety and Health Administration EPA: U.S. Environmental Protection Agency

Owner: Assigned Airport Representative(s) with decision authority delegated by the Director

Owner's Representative: Airport Staff assigned as liaison between Leasee, or Developer, and Owner

Tenant: Lease holder representative for space or property at the Airport

Leasee, or Developer, / Design Professional: Tenant representative or consultant (typically a licensed architect or engineer) responsible for project design, permitting and ensuring compliance with all applicable codes and regulations

Sub / Subcontractor: Contractors (frequently trade-specific) employed by the prime contractor to construct certain portions of a construction project

TSA: U.S. Transportation Security Administration

UDO: Unified Development Ordinance

Gwinnett County Airport Design and Development Guide (DDG)-Development Manual is a set of standards, guidelines, and design criteria for development, design, construction, and renovations implemented at the Airport to ensure airport developments meet the Gwinnett Standard.

These architectural and building design standards shall be applied to airport construction or improvement on or within Gwinnett County Airport – Briscoe Field boundaries. These design standards are used by Gwinnett County Board of Commissioners and/or Gwinnett County Airport Authority as its basis for beginning the approval process for any construction on the Airport. All construction must meet current adopted Building Codes, Gwinnett County (County) and/or City of Lawrenceville (City) Ordinances, and National Fire Prevention Association (NFPA) requirements. In cases of conflict between these standards and County/City codes or regulations, the more stringent provisions shall apply unless specifically addressed within the terms of any written agreement with the County and the Airport.

Where during the implementation of these standards a conflict arises between these standards and any Ordinance of Gwinnett County (or the City of Lawrenceville for Airport projects located within the City), the provision of Gwinnett County or City ( for Airport projects located within the City) Ordinances shall prevail.

The DDG includes aesthetic, functional, regulatory, and technical site development and facility design standards and processes established by the Gwinnett County Borad of Commissioners and the County Airport Authority. Consultants, tenants, and/or design professionals shall comply with the DDG and incorporate these standards when developing project work designs at the Airport.

Products, means, and materials meeting the criteria are to be investigated and utilized whenever possible. These standards do not preclude other design approaches if a particular standard does not apply or if it presents functional or aesthetic difficulties. A variance may be requested by submitting a written request for consideration on a case-by-case basis through the Owner's Representative.

The County, or the Airport, shall consider and may grant a variance to these design guidelines, conditions, and restrictions. Request for variance must include a full explanation as to why these codes or requirements cannot be fully met.

These standards have been developed to facilitate the short-term and long-term goals for future development of the Gwinnett County Airport. These goals are varied but include: 1) ensuring a high quality of design; 2) promote design consistency throughout the development; and 3) protect the long-term values of the development. It is the Purpose of these standards to compliment the Gwinnett County Airport Master Plan by unifying the Airport Master Plan concepts during the implementation phases of the aviation and non-aviation related land use developments.

The manual will serve as the structure for controlling the development, performance, and aesthetic standards. These standards are to be strictly adhered to and do not alleviate the Leasee, or Developer, from other necessary regulatory responsibilities.

These standards have been written with flexibility to allow for a wide range of land use categories, adoption for a wide variety of site sizes, locations, and infrastructure improvements.

The manual will afford Gwinnett County control over the development of the Airport to assure the long-term integrity of the development. Further objectives of these standards include:

- Promote measures that will assure airport safety and security are properly addressed.
- Promote efficient use of land to minimize environmental impacts.
- Assure compatibility of the development proposed by the various uses.
- Designate and maintain appropriate corridors for utilities, public access to various airport facilities and controlled airside access (if available).
- Provide adequate separation between buildings and public right-of-ways.
- Provide ample off-street parking with appropriate landscaping to screen vehicle and equipment storage.
- Minimize to the maximum extent possible conflicts with applicable regulations of the Federal Aviation Administration, Georgia Department of Transportation, Gwinnett County, and the various other agencies having jurisdiction.

Requests for information and assistance regarding these development standards and the application of these objectives to the proposed development should be directed to the Airport.

All Leasees, or Developers/owners leasing property within the Airport must have, prior to placing any parcel of land into use, written authorization from Gwinnett County.

No use of the land shall be permitted which is offensive by reason of odor, fumes, dust, smoke, noise, or pollution, or which is injurious to a building or person on the land or on neighboring property or which is in violation of any governmental statutes or regulations.

## **END OF INTRODUCTION**

## **II. PERMITS, CODES, AND REGULATIONS**

Gwinnett County Ordinances, Codes and Regulations along with those of the various other agencies apply, to a greater or lesser extent, to all construction and development on the Airport.

Development approval by Gwinnett County (or the City of Lawrenceville for Airport projects located within the City) does not guarantee the proposal will be permitted or otherwise approved for any intended use or purpose, or that required regulatory development permits or approvals can be obtained.

All pertinent requirements of public agencies must be adhered to in the development of Gwinnett County Airport property, and all plans must be routed through the permitting/approval process of Gwinnett County (or the City of Lawrenceville for Airport projects located within the City). Prior to development each Leasee, or Developer, must verify the current code requirements, as they may be amended from time to time. These Airport Development Standards outlined in the DDG may be more restrictive than local land use regulations, site development standards, landscape requirements, or in other matters. In every case in which these standards are at variance with public agency requirements, the more restrictive regulations will govern.

Acquisition of all required regulatory permits and approvals, including construction permits and development approval by Gwinnett County (or the City of Lawrenceville for Airport projects located within the City), are the sole responsibility of the Leasee, or Developer, proposing a particular development. The consequences of failure to obtain required approvals or permits shall rest solely with the Leasee, or Developer.

Federal agencies, including the FAA, TSA, FCC, CBP, US Public Health Service, OSHA, and EPA, all have specific requirements for design, construction, and operations at this Airport.

Accessibility standards are required by the Americans with Disabilities Act (ADA) and are enforced by the U.S. Department of Justice. Other State of Georgia agencies which may have jurisdiction include the Georgia Environmental Protection Division (EPD) and Georgia Department of Natural Resources. Given the Airport's location within Gwinnett County (and the City of Lawrenceville), any project located on the Airport property is also subject to ordinances, codes, policies, standards, and design criteria required by the County (or the City of Lawrenceville for Airport projects located within the City) . Regulations of Gwinnett/Newton/Rockdale County Health Department may also apply.

Design and construction shall be compliant with the latest adopted editions of the referenced codes, publications, and manuals, including all revisions effective at the time the project is submitted for permitting, unless specifically indicated otherwise.

Manuals adopted by the County (or the City of Lawrenceville for Airport projects located within the City) establish drainage, environmental, transportation, and utilities criteria and standards. Standard specification manuals have also been adopted.

The listing of regulatory agencies in the DDG is not to be considered complete; the Leasee, or Developer, is responsible for identifying and complying with all permitting and code requirements.

The DDG is the primary guideline for development of all facilities at the Airport. Gwinnett County, State of Georgia, and Federal regulatory agencies' requirements shall take precedence whenever they are more stringent and/or in conflict with this Manual.

Development approval by the Airport and Gwinnett County (or the City of Lawrenceville for Airport projects located within the City) is required prior to the undertaking of any site improvements, construction or installation including clearing, grading, paving, signs, walls, fences, and drainage facilities, as well as lighting, building structures, landscaping and all alterations considered external to a building. This approval shall be in writing and shall become part of the file for each individual development. Although Gwinnett County shall not be responsible for monitoring or otherwise administering the actions of the various other jurisdictional agencies, copies of all permit applications and approvals shall be forwarded to the County and/or to the Airport.

## **A. Airport Design Review Policy and Procedures**

Proposed changes at the Airport by lease holders, proposed lease holders, or Developer's shall be compliant with Airport DDG requirements. The process for submitting proposed changes shall be as directed by the Gwinnett County Board of Commissioners and/or the Gwinnett County Airport Authority.

Gwinnett County Capital Improvement Program (CIP) projects are excluded from application for changes procedures because design documents are reviewed through a different process.

Maintenance work or repairs which are approved by the Airport or done under the terms of the Lease Agreement are also excluded unless they will significantly alter the appearance or function of a facility or affect airport operations. However, maintenance work is not excluded from compliance with applicable permitting regulations.

### **1. The Airport Construction Inspections**

The Airport's authorized representatives may inspect construction sites for the purpose of determining compliance with the terms and requirements of the DDG, the Airport's policies, or regulatory requirements. Construction work may be inspected or re-inspected any time.

### **2. Changes in the Scope of Work**

Changes in the work during construction (via RFI's or ASI's) shall be carefully documented by the Design Professional and brought to the attention of the Owner's Representative prior to proceeding with those changes. The Owner's Representative will review the proposed changes and furnish comments to the Design Professional within one week of receipt of the change proposal. Work related to the change of scope shall not commence until the Owner's Representative has given explicit approval to do so.

Changes shall include all modifications, additions, deletions, substitutions,

or variations between the contract documents and the work. Changes incorporated into the work shall be accurately reflected in the job site drawings and the "as-builts."

Changes shall conform to the terms and provisions of the DDG.

## **B. Gwinnett County (or the City of Lawrenceville for Airport projects located within the City) Construction Permits**

All requirements for Gwinnett County (or the City of Lawrenceville for Airport projects located within the City) construction activities are applicable at the Airport, including, but not limited to, site development permits, building permits, and trade permits.

No occupancy of any building shall be permitted before the building is completed and a certificate of occupancy is issued.

In addition to Airport guidelines, policies, and standards, a development is subject to the provisions of the latest edition of the Gwinnett County (of City of Lawrenceville) Development Ordinances and Regulations , and

Building Codes, (and where Airport projects are located within the City of Lawrenceville, the latest edition Development Regulations and Ordinances of the City), including adopted amendments and related publications for both AHJs.

Design Professionals are encouraged to consult with Gwinnett County's Department of Planning and Development Staff (or the City of Lawrenceville's Planning and Development Department Staff for Airport projects located with the City) early in the design process in order to minimize potential difficulties during project work, design, or construction.

Inspections, reviews, fees, testing, and permits required for design and construction in Gwinnett County, (or the City of Lawrenceville when Airport projects are located within the City) and State of Georgia, are the responsibility of the Leasee, or Developer.

In preparing the Airport master plans, assumptions were made regarding configuration of developments, including those which would not be constructed prior to the first flights. The estimated impervious cover of those developments was included in the master plan calculations.

As required, the Design Professional must coordinate through the Airport's Representative to determine how accurately the master plan assumptions anticipated the facilities under design. Variances from these assumptions are to be highlighted for Gwinnett County (or City for Airport projects located within the City of Lawrenceville) plan reviewers in the AHJ permit process, and mitigation measures may be necessary to compensate for these variations.

## **C. Environmental Guidelines and Regulations**

The County is committed to being environmentally-responsible. Facility development

at the Airport must meet appropriate community standards of environmental sensitivity.

All Airport development shall conform to the specific regulatory requirements of applicable State and Federal Agencies pertaining to threatened and endangered plant and animal species that may be present at any site proposed for development. Specifically, the requirements of the Georgia Department of Natural Resources shall be adhered to during the development

All construction at the Airport shall align with the County's commitment to sustainability and environmental responsibility. Design Professionals shall incorporate sustainable principles and provisions into each construction project, where these reasonably may apply or are required by the building code. A Sustainable Design Check List of possible design and operation procedures for consideration is provided within the Appendix of the DGG. A copy of the check list with the sustainable objectives of the proposed development shall be submitted with the plans for approval by the Airport.

### **1. Erosion and Sedimentation Controls**

Any construction projects which involve excavation, backfill, or disturbance of the existing ground will require erosion and sedimentation control measures.

The Design Professional shall provide temporary and permanent erosion and sedimentation control plans, narrative, and details in the construction documents in accordance with local, state, and federal requirements.

### **2. Storm Water Pollution during Construction**

When applicable, any development disturbing the Airport land surface shall submit a Notice of Intent (NOI) under the National Pollutant Discharge Elimination System (NPDES) rules regarding storm water discharges from construction activities.

The Airport has interpreted these requirements to mean that both the landowner - who does not retain day to day control of the site storm water discharge - and the Tenant - who does - shall submit NOIs.

The Design Professional and the Owner's Representative shall coordinate the required submittals.

### **3. Storm Water Pollution from Industrial Activities**

The Airport is to be included in the NPDES Multi-Sector General Permit.

In the Airport developments where storm water runoff is subject to industrial permit requirements, the Design Professional and/or Tenant may obtain permit by submitting an NOI referencing the Airport permit number or may obtain separate coverage and develop a project-specific Storm Water Pollution Prevention Plan (SWPPP).

The SWPPP for the Airport, as an operating airport, does not include developments which are separately permitted and covered.

#### **4. Wetlands and Floodplain Areas**

Federal regulations control the development and use of land that is designated as either floodplain areas or wetlands to avoid environmental hazards and/or to protect environmentally sensitive areas from encroachment by development.

#### **5. Noise**

Local, State and Federal regulations control the development and use of land at the Airport and the latest the Airport Master Plan has information relevant to proposed land developments at the Airport.

The Leasee, or Developer, shall fully coordinate noise impacts of any proposed changes at the Airport with the Owner's Representative and all local, state, and federal authorities, including but not limited to the FAA and Gwinnett County.

#### **6. Asbestos / Hazardous Materials**

All Leasees, Tenants, or Developers, that will use, handle, store, display or generate hazardous materials as that term may be defined under state or federal law (i.e., materials that are ignitable, corrosive, toxic or reactive) shall do so in accordance with the statutes, rules, and regulations of local, state, and federal governmental authorities.

The outside storage of hazardous materials or hazardous waste shall be prohibited.

The following list includes, but is not limited, those commonly occurring waste types that have the potential of being hazardous. Additions to this list may be made based on the discretion of the County.

- Waste pesticides.
- Washing and rinsing solutions containing pesticides.
- Empty pesticide containers.
- Spent toxaphene solutions or sludges from dipping.
- Spent pesticide solutions or sludges other than toxaphene from dipping.
- Dust containing heavy metals.
- Washing and rinsing solutions containing heavy metals.
- Wastewater treatment sludges containing heavy metals.
- Waste ink.
- Ignitable paint wastes containing flammable solvents (flash point less than 140 degrees F),

- Liquid paint wastes containing heavy metals (cadmium, chromium, mercury, or lead).
- Spent solvents.
- Still bottoms from the distillation of solvents.
- Filtration residues from dry cleaning operations.
- Cyanide wastes.
- Strongly acidic or alkaline wastes.
- Spent plating wastes.
- Waste ammonia.
- Photographic wastes.
- Ignitable wastes (flash point less than 140 degrees F).
- Wastewater sludges containing pentachlorophenol, creosote, or arsenic.
- Waste formaldehyde.
- Lead-acid batteries.
- Waste explosives.
- Waste oil.
- Other ignitable, corrosive, reactive and EP toxic, as these waste types are defined in 40 CFR 261.21, 261.22, 261.23 and 261.24.

Buildings where significant amounts of hazardous materials or hazardous wastes, as generally defined above, are to be used, displayed, handled, generated, or stored shall be constructed with impervious floors, without drains, to ensure containment and facilitate cleanup of any spill or leakage. The temporary or permanent storage of hazardous materials shall be in a facility with impervious floor and side walls adequate to contain the hazardous materials.

The outside storage of hazardous materials or hazardous waste shall be prohibited.

All hazardous waste generators shall contract with a licensed public or private hazardous waste disposal service or processing facility and the County shall be provided copies of the following forms of documentation of proper hazardous waste management practices:

- a hazardous waste manifest.
- a shipment to a permitted hazardous waste management facility, or,
- a confirmation of receipt of materials from a recycling or a waste exchange operation.

The generation of hazardous effluent shall be prohibited unless adequate facilities, approved by the County and the Georgia Environmental Protection Division (EPD) and the Metropolitan North Georgia Water Planning District (Metro Water District) are constructed, and used by tenants generating such effluent.

Hazardous sludge materials generated by effluent pretreatment shall be disposed of in a manner approved by the U.S. Environmental Protection Agency and the Georgia Environmental Protection Division (EPD).

Proper on-site handling and temporary storage procedures for all hazardous waste that may be generated on site shall be identified in accordance with local, regional, state, and federal hazardous waste programs,

Reasonable access to facilities shall be provided for monitoring by the County and all applicable regulatory agencies.

Hazardous spill contingency plans shall be developed and approved as indicated below for all industrial parcels prior to beneficial occupancy of the leasehold development.

- The plan shall be submitted to the Airport Director and the Georgia Environmental Protection Division (EPD) (if applicable) for review and approval prior to development of any industrial leaseholds.
- Upon approval, the plan shall be submitted to the Airport, the EPD and the Metro Water District and the County Department of Planning and Development (or the City of Lawrenceville for Airport projects located within the City) . In addition, a copy of the approved plan shall be submitted to the Airport Director with documentation indicating regulatory approval.

This plan shall be implemented immediately in the event of any future spills.

Incorporation of any asbestos-containing materials (ACM) in design or construction at the Airport is prohibited. Forms documenting the non-use of ACM before and after project design (Design Consultant's responsibility) and before and after construction (Contractor's responsibility) shall be submitted for the Owner's project files, as required by the Owner's Representative.

The use of CFCs is limited to refrigerant use in accordance with local, state, and federal guidelines. Lead components shall not be included in the assemblies of domestic water systems.

#### **a. Removal**

If the Leasee, or Developer, detects the potential for use or disturbance of ACM or other hazardous materials during a project, immediate notification of the Owner's Representative is required.

ACM abatement and disposal shall only be accomplished by personnel specifically qualified in asbestos handling and shall be performed in accordance with all local, state, and federal requirements.

The removal of other potentially hazardous materials, including but not limited to, lead paint, Polychlorinated Biphenyls (PCBs),

Chlorofluorocarbons (CFCs), pesticides, etc., may be necessary prior to or during facility construction.

The proper identification, handling, removal, and disposal of hazardous materials are the sole responsibility of the Leasee, or Developer, and shall only be accomplished by qualified personnel and be performed in accordance with all local, state, and federal requirements.

**b. Hydrocarbons and Other Hazardous Materials**

All storage and distribution systems for hydrocarbons and other hazardous materials at the Airport, with the exception of natural gas, shall be constructed above ground to reduce the potential for environmental contamination. In addition, containment may be required.

Such installations shall comply with all applicable codes and industry standards and shall be installed in accordance with all local, state, and federal requirements.

**c. Minimizing Deleterious Effects on the Environment**

Local, state, and federal regulatory agencies have established air and water quality standards which are in effect at the Airport. Hazardous materials, whether a primary product such as fuel, fertilizer or motor oil, or a secondary product such as residue on paved vehicle parking areas, shall be handled responsibly.

Filtration, containment, or treatment may be required before materials are released into the environment. The Leasee, Tenant or Developer, is responsible for providing all necessary equipment and/or systems for compliance with all Authorities Having Jurisdiction (AHJ).

**d. Wash Facilities**

The conservation of water resources is of great importance at the Airport. Any Leasee, Tenant, or Developer's proposed wash facility shall provide water treatment systems required by local, state, and federal regulations.

**e. Waste and Sustainability**

Any Leasee, proposed Leasee, or Developer's facilities shall include provisions for participation in the refuse recycling and sustainability programs, as coordinated with, and approved by, the Airport's Representative.

Any construction project on the Airport that includes more than 5,000 square feet of new, added, or remodeled floor area shall comply with Gwinnett County Ordinances regarding construction and demolition

recycling rules).

#### **D. Federal Aviation Administration (FAA)**

Design and construction shall be in accordance with all applicable FAA design standards criteria, as set forth in FAA Advisory Circulars (ACs) and Federal Aviation Regulations (FARs).

The latest edition ACs may be obtained from the Federal Aviation Administration, U.S. Department of Transportation at:

[www.faa.gov/regulations\\_policies/advisory\\_circulars](http://www.faa.gov/regulations_policies/advisory_circulars)

Refer to Section III. General Airport Development Considerations for information regarding height restrictions.

#### **E. U.S. Customs and Border Protection (CBP)**

The Department of Homeland Security – CBP is authorized to control the entrance and clearance of aircraft arriving in and departing from the United States and to inspect the crews, passengers, baggage, stores, and cargo carried thereon.

CBP enforces a large array of different laws for other agencies in protecting the borders of the United States. Any development of an international facility shall meet all U.S. Customs rules and regulations.

#### **F. Public Health Agencies**

The design and construction of projects that affect a food or beverage handling service at the Airport will be reviewed by Local, County, State, and Federal regulatory health agencies as appropriate.

#### **G. Accessibility Standards**

All projects at the Airport shall equally accommodate persons with disabilities, as provided for in the Americans with Disabilities Act (ADA) latest edition.

#### **H. Federal Communications Commission (FCC)**

All projects at the Airport shall comply with any applicable FCC rules and regulations. All types of proposed wired and wireless communication systems shall be coordinated with the Owner's Representative and will be designed to ensure they do not interfere with any Air Traffic Control Tower transmissions.

### **END OF PERMITS, CODES AND REGULATIONS**

### **III. GENERAL AIRPORT DEVELOPMENT CONSIDERATIONS**

The use of the Airport property shall remain consistent with the aesthetic and functional standards of The Airport. These standards derive from The Airport Layout Plan (ALP) of the Airport (latest version) and The Airport Master Plan (latest version). Federal, State, and Local (County or City) statutes and regulations also apply and may restrict development.

#### **A. Professional Licensing Requirements**

All Design Professionals signing and sealing drawings and project manuals (bid specifications) on behalf of the Lessee, or Developer, shall be currently licensed for their respective disciplines in the State of Georgia.

#### **B. Leased Property Restrictions**

Where the Airport development includes work to be owned, operated, and maintained by Gwinnett County, transfer of responsibility shall be by means of a document setting forth the facilities and conditions of acceptance.

As requested by the Owner's Representative, the Design Professional may be required to submit documents which may indicate lease lines, building setback lines, building frontage lines, and/or surveys conducted by a Registered Professional Land Surveyor for a particular area.

Landscape features, paving, and other pertinent features affecting development or operations will be included whenever possible.

All improvements shall be limited to within the boundaries of the leasehold, except for the required utility extensions and access roadways. Any proposed improvements which significantly impact areas outside of the project sponsor's leasehold – especially those which may affect other leaseholders – must be approved the Airport prior to commencement of the project design.

#### **C. Public Access**

The primary mission of the Airport is the efficient and safe movement of passengers and their property to and from aircraft and flight operations. All facilities in which public activity occurs shall meet all requirements for public accessibility and safety.

#### **D. Height Restrictions**

Per FAR Part 77, structures and objects within designated areas are height- restricted to prevent interference with air navigation, flight and navigation surfaces, radar shadowing, and the requirement that air traffic controllers be able to see all aircraft operating pavement under the control of Air Traffic Control personnel.

The Design Professional shall submit FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, to the Owner's Representative at least 60 calendar days prior to the scheduled start of construction activities. FAA approval of the 7460 is required prior to issuance of the notice to Proceed (NTP).

#### **E. Noise**

Facilities within The Airport may be subjected to average noise exposure from airport operations in excess of 65 dB. Activities sensitive to excessive noise are discouraged within these areas, and structures accommodating noise-sensitive uses must be sound-insulated in accordance with applicable codes and/ or standards.

Since the leaseholds are subject to noise levels associated with the Airport, noise abatement building construction techniques are required for office buildings and other buildings where people are located inside for a substantial portion of the workday.

#### **F. Security**

All Leasees, or Developers shall be aware of the specific Airport security requirements. TSA and federal security regulations require that access to the Air Operations Area (AOA) be strictly controlled, and the design and operation of all airport facilities shall not permit access to the AOA by unauthorized persons.

Improvements and operations within 10 feet of an AOA fence are severely limited. Written approval of the Owner's Representative is a prerequisite to improvements and/or operations in this area.

All persons performing work at the Airport shall be familiar with security measures and be aware that substantial fines may be assessed for violations of the security provisions of the Airport. The Gwinnett County Police Department and/or the City of Lawrenceville Police Department has jurisdiction on Airport property.

The Airport reserves the right to install, or to have installed, security devices including, but not limited to, security fencing, gate controls, video cameras, magnetic card readers and associated electronics and power sources within the project limits of any development on the Airport.

The Airport Security Plan is maintained by the Airport Director, and questions about plan provisions may be submitted to the Airport for review and response, as required.

#### **G. Minimum Insurance Requirements During Construction:**

It is incumbent on the Leasee, or Developer, to assure that its construction contractor has sufficient insurance provided by a reliable insurance company authorized to do business in the State of Georgia to protect the interests of the County. These insurance requirements shall not relieve or limit the liability of the Leasee, or Developer, or construction contractor. The County does not in any way represent that these types or amounts of insurance are sufficient or adequate to protect the Leasee, or Developer, or construction contractor's interests or liabilities but are merely minimums. No insurance is provided by the County to cover Leasee, or Developer, or contractor(s). Prior to the

issuance of a building permit, the Leasee, or Developer, shall provide the County with documentation acceptable to the County that its contractor has satisfied the following minimum requirements:

## 1. General Requirements

- a Leasee, or Developer, shall require that each contractor take out and maintain insurance of such types and in such amounts as are necessary to cover his responsibilities and liabilities on each leasehold development and shall require all his subcontractors to carry similar insurance. The Airport, Airport Authority, and the Gwinnett County Board of Commissioners shall be listed as additional insured entities within the Leasee's or the Developer's insurance policy.
- b No contractor or subcontractor shall commence work until he has obtained all insurance required by this Section and/or any Lease Agreement and such insurance has been approved by the County. In the event that a contractor's insurance, or any portion of it should lapse, the Leasee, or Developer, shall immediately require its contractor to suspend operations until such time as adequate coverage is reinstated.
- c Each contractor shall file with the County a Certificate of Insurance. Any certificate submitted and found to be altered or incomplete will be returned as unsatisfactory. If requested by the County, contractor through the Leasee, or Developer, shall furnish the County with true copies of each policy required of the contractor or its subcontractors.

## 2. Coverage

**Insurance under this Section shall, as a minimum, include the following coverage:**

- 1. Statutory Workers' Compensation Insurance
  - (a) Employers Liability:
    - ✓ Bodily Injury by Accident - \$100,000 each accident
    - ✓ Bodily Injury by Disease - \$500,000 policy limit
    - ✓ Bodily Injury by Disease - \$100,000 each employee
- 2. Commercial General Liability Insurance
  - (a) \$500,000 limit of liability per occurrence for bodily injury and property damage
  - (b) The following additional coverage must apply:
    - ✓ 1986 (or later) ISO Commercial General Liability Form
    - ✓ Dedicated Limits per Project Site or Location (CG 25 03 or CG 25 04)
    - ✓ Additional Insured Endorsement (Form B CG 20 10 with a modification for completed operations or a separate endorsement covering Completed Operations)
    - ✓ Blanket Contractual Liability

- ✓ Broad Form Property Damage
- ✓ Severability of Interest
- ✓ Underground, explosion, and collapse coverage
- ✓ Personal Injury (deleting both contractual and employee exclusions)
- ✓ Incidental Medical Malpractice
- ✓ Hostile Fire Pollution Wording

3. Auto Liability Insurance

- (a) \$500,000 limit of liability per occurrence for bodily injury and property damage
- (b) Comprehensive form covering all owned, non-owned, leased, hired, and borrowed vehicles
- (c) Additional Insured Endorsement
- (d) Contractual Liability

4. Umbrella Liability Insurance - \$1,000,000 limit of liability

- (a) The following additional coverage must apply
  - ✓ Additional Insured Endorsement
  - ✓ Concurrency of Effective Dates with Primary
  - ✓ Blanket Contractual Liability
  - ✓ Drop Down Feature
  - ✓ Care, Custody, and Control - Follow Form Primary
  - ✓ Aggregates: Apply Where Applicable in Primary
  - ✓ Umbrella Policy must be as broad as the primary policy

5. Gwinnett County Board of Commissioners AND the Gwinnett County Airport Authority should be shown as an additional insured on General Liability, Auto Liability and Umbrella Liability policies.

6. The cancellation should provide 10 days' notice for nonpayment and 30 days' notice of cancellation.

7. Certificate Holder should read:

Gwinnett County Board of  
Commissioners  
75 Langley Drive  
Lawrenceville, GA 30046-6935

And

Gwinnett County Airport Authority  
600 Briscoe Boulevard  
Lawrenceville, GA 30046

8. Insurance Company, except Worker' Compensation carrier, must have an A.M. Best Rating of A- 5 or higher. Certain Workers' Comp funds may be acceptable by the approval of the Insurance Unit. European markets including those based in London and domestic surplus lines markets that operate on a non-admitted basis are exempt from this requirement provided that the contractor's broker/agent can provide financial data to establish that a market is equal to or exceeds the financial strengths associated

with the A.M. Best's rating of A-5 or better.

9. Insurance Company should be licensed to do business by the Georgia Department of Insurance.
10. Certificates of Insurance, and any subsequent renewals, must reference specific bid/contract by project name and project/bid number.
11. The Contractor shall agree to provide complete certified copies of current insurance policy (ies) or a certified letter from the insurance company (ies) if requested by the County to verify the compliance with these insurance requirements.
12. All insurance coverages required to be provided by the Contractor will be primary over any insurance program carried by the County.
13. Contractor shall incorporate a copy of the insurance requirements as herein provided in each and every subcontract with each and every Subcontractor in any tier, and shall require each and every Subcontractor of any tier to comply with all such requirements. Contractor agrees that if for any reason Subcontractor fails to procure and maintain insurance as required, all such required Insurance shall be procured and maintained by Contractor at Contractor's expense.
14. No Contractor or Subcontractor shall commence any work of any kind under this Contract until all insurance requirements contained in this Contract have been complied with and until evidence of such compliance satisfactory to Gwinnett County as to form and content has been filed with Gwinnett County. **The Acord Certificate of Insurance or a preapproved substitute is the required form in all cases where reference is made to a Certificate of Insurance or an approved substitute.**
15. The Contractor shall agree to waive all rights of subrogation against the County, the Board of Commissioners, its officers, officials, employees, and volunteers from losses arising from work performed by the contractor for the County.
16. Special Form Contractors' Equipment and Contents Insurance covering owned, used, and leased equipment, tools, supplies, and contents required to perform the services called for in the Contract. The coverage must be on a replacement cost basis. The County will be included as a Loss Payee in this coverage for County owned equipment, tools, supplies, and contents.
17. The Contractor shall make available to the County, through its records or records of their insurer, information regarding a specific claim related to any County project. Any loss run information available from the contractor or their insurer relating to a County project will be made available to the County upon their request.
18. Compliance by the Contractor and all subcontractors with the foregoing requirements as to carrying insurance shall not relieve the Contractor and all Subcontractors of their liability provisions of the Contract.
19. The Contractor and all Subcontractors are to comply with the Occupational Safety

and Health Act of 1970, Public Law 91-956, and any other laws that may apply to this Contract.

20. The Contractor shall at a minimum apply risk management practices accepted by the contractors' industry.

### **3. Indemnity**

The Leasee, or Developer, and contractor shall indemnify and hold harmless the Airport, the Airport Authority and the Gwinnett County Board of Commissioners and their elected officials, employees and volunteers from and against all claims, losses and expenses, including legal costs, arising out of or resulting from, the performance of any agreement with the County, or the Airport, provided that any such claims, damage, loss or expense is attributed to bodily injury, sickness, disease, personal injury or death, or to injury to or destruction of tangible personal property including the loss or loss of use resulting therefrom and is caused in whole or in part by any negligent act or omission of the Leasee, or Developer, or contractor.

**END OF GENERAL AIRPORT DEVELOPMENT CONSIDERATIONS**

## **IV. GENERAL AIRPORT DESIGN STANDARDS**

Development shall follow the applicable sequences and processes established in the complete set of documents comprising the DDG. Project-specific information, especially which relate to variations in development requirements due to site or program constraints, shall be coordinated with the Owner's Representative. Examples of Airport preferred development aesthetics and building materials are found in Section VII - Building Design Standards.

### **A. Glare**

Airport operations require maximum visibility for communications and safety. Building designs shall control solar glare within and without. Glazed surfaces shall not have reflective glass. Maximum reflectivity of exterior surfaces is not to exceed 20%. Interior glare shall not disturb Airport operations.

### **B. Acoustics**

The acceptability of noise levels depends upon the development program. Exterior noise from aircraft, vehicles, and equipment, and interior noise from building systems and equipment shall be included in any analysis and design.

### **C. Aesthetics**

Architectural designs will be evaluated by the Airport in terms of the sensitive integration of form, textures, and colors with the particular landscape and topographical character of each site.

Colors, textures, exposed aggregate, and other details must be reviewed by the Airport and approved by the County as a part of the plans submitted by the Leasee, or Developer, during the site plan review process. The suggested color includes Gwinnett County blue. There shall be no obligation or requirement for the County to approve any proposed material. Building materials that produce glare or other effects that are hazardous to aircraft operation shall not be permitted. The color palette shall be approved by the County and the Airport, prior to color selections by the Leasee, or Developer,

A consistency of construction and visual interpretation is described in these guidelines. The intent is to establish broad-based relationships and criteria to unify aesthetic and technical elements of airport structures. Specific building design is not provided. These guidelines provide a basis for evaluation of new designs for construction.

Airport aesthetics have been established and it is intended that the nature and character of the County and the building exterior examples be expressed throughout the site. Building materials should be selected for durability, ease of maintenance, and for their relationship to the structure and its intended use. Building materials shall be locally sourced whenever possible.

The Airport has functional requirements for all projects. Public access and convenience, and federally mandated security requirements are primary. Each development is to incorporate the functional requirements of that specific program, as well as those of The Airport.

All building systems shall be highly efficient over the intended life cycle. Energy should be conserved, and operational and maintenance requirements minimized. Systems shall be based upon aesthetic, climatic, and environmental conditions of the North Georgia and Gwinnett County areas.

#### **D. Building Orientation and Architectural Detail**

Distinct entrances for users shall be provided. Building footprints shall be presented on the site plan. The building on each site shall be oriented to minimize public view of service docks and overhead doors.

The building, or any component thereof, shall be oriented to preclude it from becoming an obstruction to a clear line of sight from the proposed Air Traffic Control Tower (ATCT) to any portion of the air operations area. The Leasee, or Developer, shall submit a scaled plan that depicts the status of any impact on the ATCT's clear line of sight for approval by the County.

Passive solar design considerations are encouraged. Some aspects of passive solar design which may be considered in the planning are noted below:

- Orientation and location of the building on a site.
- Massing of buildings or building parts to create shadows for reducing heat gain and wind velocities which affect infiltration during the winter months.
- Configuration of the building to incorporate such features as interior courtyards or clustering of parts of the building.
- Amount, location and shading of windows.
- Use of vestibules to reduce infiltration at the entrance.
- Natural ventilation is encouraged and can be achieved by proper orientation of the building and appropriate location of windows, etc.
- A higher level of architectural detail is encouraged for building entries.

Paving, lighting, and site architectural features are recommended to further entrance the entrance detail.

#### **E. Architectural Finishes, Exterior**

The Design Professional shall submit to the Owner's Representative a complete exterior material colors and finishes board (in physical form - digital material boards are insufficient) for Owner review and comments. A location plan shall be provided, and all materials and finishes included in the submittal shall be identified and located thereon. Representative examples of Airport preferred buildings and their exterior aesthetics are included in Section VII - Building Design Standards.

##### **1. Walls and Fascia**

All wall surfaces subject to damage from materials handling, equipment, or vehicles shall be of durable, low-maintenance, impact-resistant materials.

Examples of acceptable materials include stone, masonry, and flat metal panel systems.

Non reflective glazed windows, storefront, or curtain wall systems within the Airport boundaries may be used. Storefront systems, and individual windows in opaque walls shall meet aesthetic, energy, and functional standards, and provide high quality performance for their life- cycle. The tinting of the glass shall be “gray tone”, or blue and shall be subject to the approval of the Airport and the County. Metal frames for all new windows, storefronts, or curtain wall systems should be painted with a UV resistant PFVD (Kynar) paint system or supplied with an anodized aluminum finish with a UV protected seal or coating.

Subject to written approval through the Owner's Representative, daylighting glazing may be permitted. Sloped or horizontal glazing systems will not be permitted.

The following types of building materials may be approved by the Airport and the County:

**a. Exterior walls:**

(1) FBO, Office and Industrial Buildings or portions of building containing offices:

- (a) Tilt up or precast concrete panels.
- (b) Precast concrete with exposed granite aggregate
- (c) Stucco
- (d) Smooth and Split Face Exposed Aggregate Block
- (e) Vertical ribbed metal panels with PVFD (Kynar); color to match Airport Standards

(2) Incidental type buildings or Aircraft Hangars including Maintenance Hangars:

- (a) Same as paragraph 1(a) of this above, or as otherwise approved.
- (b) Metal walls for aircraft hangars only are acceptable, but other materials may be approved.

(3) Warehouse space:

- (a) Same as paragraph 1(a) of this Section, or as otherwise approved.
- (b) A minimum of 10 feet of block or other material in combination with metal may be approved.

**b. Exterior Fascia:**

- (1) Split face or fractured face (exposed aggregate) concrete masonry
- (2) Flush profile metal panels
- (3) Painted stucco.

## **2. Roofs**

A Class A, Factory Mutual approved roof system with a minimum of 20 year, no-dollar-limit manufacturer's warranty is required.

A "Cool Roof" system (as defined by the U.S. Energy Department) should be incorporated where possible.

Acceptable systems may include KEE single ply roof membranes with closed cell insulation substrate or standing seam interlocking metal. Exposed materials shall be light-colored for solar reflectance, but must not produce significant glare, which could adversely affect aircraft operations. Roofing materials shall be resistant to aircraft fuels and UV degradation and finish fading.

Roof-mounted equipment and roof penetrations should be avoided unless necessary. Where roof-mounted equipment is necessary, the equipment shall be screened for visual compatibility in such a way as to allow for proper maintenance of equipment, and roof protection pads shall be provided where foot traffic is anticipated.

Since roofs are highly visible from aircraft using the Airport, roofs shall be attractively designed and constructed. Signs, lettering, designs, or other graphics shall not be placed, painted, or otherwise located on roofs. Roofs shall not be constructed of materials that are reflective or create glare. Roofs shall not be white in color unless approved by the County.

### **F. Architectural Finishes, Interior**

All finishes shall be durable, low-maintenance, and fire-resistant. A complete interior materials colors and finishes board (in physical form - digital materials boards are insufficient) shall be submitted to the Owner's Representative during design. All materials and finishes included in the submittal shall be identified and located thereon. Materials for public and non-public areas shall be clearly delineated.

### **G. Equipment**

All exterior equipment shall be screened from view of the general public or otherwise made discreet and must be approved through the Owner's Representative.

### **H. Security**

The integrity of The Airport-wide security system must be maintained. The Owner's Representative will assist the Leasee, or Developer, in coordinating project-specific design, construction, and operations security requirements, which will vary with location and operation.

### **I. Signage and Graphics**

Any publicly displayed signage (including logos, and promotional or advertising

signage) will be allowed only when included in design documents reviewed and approved through the Owner's Representative - and then only when compatible with the Airport aesthetics and any adopted signage standards for the airport. Airport approval is required prior to any sign installation.

In general, signage and graphics will be designed in harmony with the architecture of the leasehold improvements and other signage and development on the Airport.

Only those signs that conform to the Zoning Ordinances of Gwinnett County (or the City of Lawrenceville's Zoning Ordinances for Airport projects located within the City), and with the Airport Signage Standards will be approved. No sign will be erected until plans, elevations, sections, details, and specifications have been reviewed and approved.

All signs shall be maintained in a safe and attractive condition so as to preserve the aesthetic qualities established for the Airport.

If illuminated, signs must not create glare or block views.

## **J. Lighting**

Energy-efficient lighting shall be specified.

### **1. Interior**

Interior lighting of all Airport developments shall provide for the efficient and safe performance of all functions within that facility.

### **2. Exterior**

Exterior lighting shall be shrouded and not create a glare hazard to aircraft operations.

## **K. Refuse**

The Leasee, or Developer, shall be responsible for design and construction for trash handling devices, containers, and visual screening. Refer to Section IX Civil and Site Work Standards for additional requirements regarding refuse.

Exterior trash receptacles shall include a closed top to reduce blowing trash, limit overflow, and protect the contents from weather. Visual screening of all waste receptacles shall be provided by Leasee, or Developer, or Tenant as approved by the Airport.

Trash and recycling collection and removal services are the responsibility of the Leasee, or Developer.

## **L. Roadways and Pavement**

Roadway and pavement designs, as well as other civil engineering work, are addressed in the DDG Section VIII, Civil and Site Work Standards.

## **M. Landscaping**

Development, including landscaping, shall conform to the County's Ordinances and Regulations (or City of Lawrenceville's Ordinances and Regulations for Airport projects located within the City) and shall be approved by Gwinnett County. All landscaping design shall complement the Airport's requirements outlined in the DDG.

Landscaping shall be appropriate to the primary airport operations. Landscaping and irrigation systems required for a particular development shall generally be constructed within the lease lines of that development.

The Leasee, or Developer, is responsible for meeting the requirements of the Code, Ordinances or Regulations, whether modified or not, through coordinated construction documents.

Additional landscape and irrigation work requirements are included in the DDG Section VIII, Civil and Site Work Standards.

## **END OF GENERAL AIRPORT DESIGN STANDARDS**

## **V. GENERAL AIRPORT CONSTRUCTION GUIDELINES**

The Design Professional shall ensure that on-site activity by construction contractors does not begin before insurance requirements, pertinent permits, and security clearances are obtained by the contractor.

No work shall commence without a Notice-to-Proceed (NTP) issued by the designated Owner's Representative.

### **A. General Coordination**

Work hours may be restricted to prevent interference with normal airport activities or to meet other airport concerns. Based on a list of parties affected by the proposed construction and identified by the Owner's Representative, coordination with tenants affected by each project shall be provided by the Owner's Representative.

Restrictions on work hours, as approved by the Owner's Representative, are to be included in the construction documents. Contractors will be required to comply with provisions of the DDG and the work hours approved by the Airport.

For operations on public roadways and the landside portion of the Airport, the contractor shall provide the Owner's Representative and other appropriate agencies with a traffic control plan per Gwinnett County requirements.

The operation of all ground equipment, mobile or stationary, required for construction, repair, or any other purpose within the limits of County property shall be governed as follows:

1. All equipment and materials when not in use or, about to be installed shall be stored on the leasehold or in a location approved for this purpose by the Airport Director.
2. All equipment on the airside of any leasehold, whether or not it is in use, shall be properly marked with yellow, or orange and white checkered flags of a size not less than 2 feet square during the day and with amber electric flasher lights at night, or as otherwise instructed. No equipment shall be parked within 750 feet of the centerline of any runway or within 250 feet of the centerline of any taxiway, unless specifically authorized by the Airport. Equipment parked on the airfield area shall be kept to an absolute minimum and restricted to equipment actually used or needed for the work under progress. Prior to erecting cranes on site a FAA 7460 application shall be filed for the crane, in addition to the building.
3. Parking areas for Contractor equipment, supplies, materials, and employee vehicles will be as established by the Airport Director or as indicated on the plans.
4. Contractor shall conform to the requirements of the Airport Director as to the placement, type and service of special barricades, obstruction and hazard marking and lighting devices used to identify danger areas.

5. Neither equipment nor personnel shall use any runway, taxiway, or apron for the purpose of hauling materials or access to the work, unless approved by the Airport Director. Authorized equipment operating on any hard surface is limited to that equipment with pneumatic tires. Prior to use of any hard surface, permission shall be obtained from the Airport Director. All drivers shall be instructed to be alert for aircraft and to follow routes designated for vehicular traffic. All vehicles will be clearly marked to identify owner. No privately- owned vehicle will be operated on runways or taxiways.
6. Prior to initiation of operations which will require the crossing of any hard surface used by aircraft, the Contractor shall assure himself that a signalman, with visual or radio contact with the Air Traffic Control Tower (if applicable), or capable of monitoring air traffic, is on duty at the site of the crossing to regulate traffic. Moving aircraft have priority over all other traffic on the field. Only equipment equipped with pneumatic tires shall be allowed to cross paved areas. It shall be the responsibility of the Contractor to keep paved surfaces free of any material at all times that might drop from moving vehicles while crossing paved areas.
7. Hauling across Runway Protection Zones of any runway will not be permitted, unless authorized by the Airport Director.
8. Contractor must agree to permit only his bona fide employees and those of his subcontractors' access during actual hours of work.

## **B. Pre-Construction Conference**

In addition to pre-construction conferences required by others, the Owner's Representative requires a pre-construction conference to be conducted by the Design Professional for each project, no less than one week prior to the scheduled start of on-site activities.

The pre-construction conference shall be attended by representatives of the Design Professional, the Contractor, and Airport staff. The agenda, date, and time shall be coordinated through the Owner's Representative.

## **C. Airport Construction Safety**

Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work.

Contractor shall comply with all applicable laws and regulations of any public body having jurisdiction for safety of persons or property. Contractor shall erect and maintain all necessary safeguards for the safety and protection of personnel and property.

Contractors will be required to comply with provisions of Airport's requirements for Hot Work and Fire Alarm-Sprinkler impairment whenever construction work may affect or interact with the Airport's or other Airport facility fire alarm and fire sprinkler systems.

## **1. Aircraft Operations Area Requirements**

For work performed on the airfield, the contractor shall adhere to all federal, state, and local construction safety regulations.

All materials and equipment, when not in use, shall be placed in approved areas where they will not constitute a hazard to aircraft operations and not penetrate clearance surfaces defined in Federal Aviation Regulation Part 77 (14 CFR Part 77).

## **2. Clean-up**

For construction within the AOA, operational safety requires additional clean up and restoration measures. Debris resulting from work on the airfield must be continuously removed during the course of the work. Debris from work on runways, ramps, or active taxiways shall be vacuum swept prior to opening this area to aircraft traffic.

Prior to the end of contractor's shift work on the airfield, the Contractor shall coordinate with the Airport's Representative to have inspected for debris or safety violations any runway, taxiway or ramp area that has been either closed for work or used as a crossing point or haul route.

The debris shall be cleaned up to the satisfaction of Airport personnel prior to opening the area to aircraft traffic. The inspection time shall be mutually agreeable and coordinated to allow timely opening of the area.

## **3. Existing Airfield Lighting Systems**

The contractor shall provide advance notice of at least fourteen (14) Airport business days when requesting to initiate work anticipated to interfere with existing airfield lighting, and thirty (30) working days advance notice for work anticipated to interfere with navigational systems.

Any service and/or system interruption shall be done in accordance with the specifications and with the approval of the Airport's Representative.

## **4. Airfield Work Communications**

Construction activities shall not be permitted within the Runway Protection Zones (approach areas of the runways) or within the Runway Safety Areas of an active runway without prior coordination with the Airport's Representative.

Contractor's vehicles or personnel shall not enter or cross active runways, active taxiways, or clear zones without the express permission of the Control Tower or Ground Control, depending on the location of the work.

Communication with the Tower shall be made primarily on the Airport

communication frequency provided through the Airport's designated construction representative. The standard phonetic alphabet is used in aviation and use of CB "Citizens band Radio" language or jargon is prohibited.

No equipment or personnel shall proceed onto any active runway or active taxiway until the Airport Air Traffic Control Tower (Tower) has granted permission by radio to proceed to those areas.

In instances where the Airport Operations officials deem it necessary for a representative to act as a radio controller and escort, the contractor shall not proceed onto any active runway or taxiway without the designated escort.

## **5. Traffic Control**

For operations on the AOA, the contractor shall furnish, at contractor expense, flag personnel in radio communication with Tower personnel to control traffic in accordance with airport regulations, unless directed otherwise.

All contractor vehicles that are required to cross runways, ramp areas, taxiways, and aprons shall do so under the direct control of competent flag personnel. All aircraft traffic on runways, ramp areas, taxiways, and aprons shall have priority over contractor vehicles.

The Owner's Representative shall be notified at least 45 days prior to any road or parking restriction; runway, taxiway, or aircraft apron closure or restriction; or any activity which may hinder or restrict normal airport operations and access.

More specific notification policies may be noted elsewhere regarding any proposed construction activities.

## **6. Hazardous Area Markings**

Open trenches, excavations, stockpiled material, or other hazardous areas within which no part of an aircraft may enter, shall be indicated by the use of barricades, supplemental flags, and lights shall be in accordance with FAA Advisory Circular 150/5370-10H (latest edition).

The intensity of the supplemental lights and the spacing for the barricades, flags, and lights must adequately delineate the hazardous area. Provisions shall be made for 24 hour/day, 7 day/week, maintenance of all hazardous area lighting and barricades.

## **7. Welding/Cutting/Open Flame**

Five calendar days prior to each on-site welding, torch cutting, or open flame operation, the Owner's Representative shall be contacted for a welding permit. Welders shall be properly certified for the type of welding to be performed.

No welding, torch cutting, or open flame operations shall be permitted in any hangar when the hangar is occupied by aircraft. Open flame work shall not be conducted in the vicinity of aircraft parking positions when these parking positions are occupied by aircraft.

No open flames and/or lighted flame devices shall be permitted within seventy-five (75) feet of any aircraft parking area.

#### **D. Job Supervision**

Each Airport project job site shall have on-site at all times a construction supervisor who speaks fluent English. The name and 24-hour, on-site and off-site contact information for the designated supervisor shall be furnished to the Owner's Representative.

The supervisor shall have the authority to respond to any requests or directions of the Owner's Representative. The supervisor is responsible for the safety, security, and cleanliness of the work site at all times.

#### **E. Temporary Utility Connections**

The acquisition and termination of all temporary utility services for the construction period is the responsibility of the Design Professional and shall be coordinated with the appropriate utility company.

#### **F. Haul Routes**

Haul routes at the Airport shall be developed by the Design Professional in coordination with the Owner's Representative and identified in the Construction Contract documents. Deviations from the indicated route(s) during construction require written authorization from the Owner's Representative.

Dust control and removal of debris along the routes shall be specified by the Design Professional and provided by the Leasee, or Developer. It shall be the Design Professional's responsibility to coordinate the off-site haul routes (State highways, County roads, or Airport streets) with the appropriate, respective authorities.

Haul routes on the Airport site shall be continuously maintained by the Leasee, or Developer, during the period of their use and restored to original or better condition at the conclusion of the hauling operation. All existing property, including turf outside of areas designated for improvement, which is disturbed or damaged by the construction operations shall be restored to the satisfaction of the Owner's Representative.

Haul route "BEFORE" and "AFTER" conditions shall be photographically documented by the Leasee, or Developer.

When it is necessary to cross curbs, sidewalks, or other assets, the Contractor shall make reasonable efforts to protect those assets from damage. The Contractor shall immediately repair any damaged roads, curbs, sidewalks, or other assets at no cost to the Airport.

## **G. Temporary Buildings, Partitions, and Displays**

The use of temporary buildings is restricted to the construction phase of a project. All such buildings shall be removed from the Airport at the conclusion of the construction phase. Restoration of the area to original or better condition, as deemed by the Owner's Representative, shall be completed in a timely manner.

Temporary dust control partitions shall be installed around all construction work areas within occupant spaces.

These partitions shall fully enclose the work from floor to ceiling and provide a dust free environment beyond. Partitions may consist of gypsum wall board or other approved materials, on metal or wood studs, finished and painted on the "public" side, as required by the Tenant or the Airport representative in public buildings.

Except for a standard construction project sign, all signs, displays, or company identification may be approved by the Airport's Representative in public Airport facilities.

## **H. Clean-Up**

Each construction site shall be cleaned of all debris and trash at the end of each workday. The contractor shall provide suitable trash containers with latch-type lids, fastened to secure the contents.

All trash containers shall be emptied, and interior spaces of construction sites within Airport facilities shall be swept clean at the close of each business day. All trash and debris shall be disposed of at an approved off-airport site in accordance with EPA, state, and local environmental protection regulations.

At the end of each work period, the contractor shall secure all loose equipment and material to prevent potential weather-related damage. The Contractor shall be responsible for monitoring weather reports and taking precautions based on the worst weather forecast.

Should the Airport issue an emergency weather warning, the contractor shall immediately remove, tie-down, or otherwise secure any object which could conceivably damage property or personnel.

## **I. Record Drawings and Specifications**

All construction drawings shall be provided in AutoCAD (latest version) and electronic pdf format. Project deliverable requirements are referenced that comply Georgia CADD standards.

All drawings shall utilize Gwinnett County Airport Coordinate System (NAD 83). Record project drawings and specifications acceptable to the Owner's Representative are required prior to final acceptance of each project.

An accurate record of actual site and building construction performed, shall be provided as a CADD record copy (electronic file), a pdf file, a full-size paper record copy, and a neatly marked-up copy of the project manual. Information shall include exact locations of actual work - especially, any work that is concealed, such as underground utilities or in-wall wiring, fire suppression systems, security systems, irrigations systems.

A marked-up set of the Airport-project permit documents, accurately reflecting approved changes to the work, are to remain at the site to be available for review throughout the construction period, and to reflect the current status of the work at any time.

As-built drawings in CADD, pdf, and full-size paper formats shall be provided to the Owner's Representative no later than ninety (90) calendar days after completion of construction. These documents shall be for the exclusive use of the Airport, the Leasee or Developer, should retain a copy of these documents for their specific use and needs.

The Airport will be responsible for updating the Airport Layout Plan (ALP).

## **END OF GENERAL AIRPORT CONSTRUCTION GUIDELINES**

## **VI. GEOTECHNICAL DESIGN STANDARDS**

Geological conditions vary and no warranty for the site conditions is expressed or implied. The Leasee's or Developer's Design Professional shall have qualified professionals prepare the geotechnical report and the recommendations made by the geotechnical engineer hired by the Leasee or Developer's Design Professional review.

### **A. Subsurface Investigations**

The Design Professional's Geotechnical Engineer shall follow all Airport, FAA, Federal, State, and Local guidelines during all field operations.

Any indications of soil/groundwater contamination shall be made known to the Owner's Representative immediately. Work shall cease in the affected area until the site condition has been investigated and resolved.

Proposed drilling locations shall be submitted to the Owner's Representative prior to commencement of drilling activities for review.

### **B. Foundation Design Criteria**

The Design Professional shall employ a qualified professional engineer licensed in the State of Georgia to provide a foundation design for the intended structure. This engineer shall have available the results of the Design Professional's Geotechnical Engineer's investigation.

#### **1. Structure Types**

The Design Professional - Engineer shall ensure the building structure is appropriate for the foundation type selected in regard to the stresses and differential movement likely to be experienced due to the soils at this location.

#### **2. Foundation Types**

The Design Professional - Engineer shall investigate the alternative foundation types suitable for the soil conditions and the proposed building type.

#### **3. Design Criteria**

The foundation criteria will typically be that found in the Building Code, as well as recommendations provided by the Design Professional - Geotechnical Engineer. The Design Professional - Engineer shall identify on the drawings the floor, column, and pier bearing/friction loads designed for the assumed differential movement to be withstood by the building foundation and system, the deflection limits designed within.

### **C. Groundwater Control Criteria**

The Design Professional - Engineer shall investigate and confirm the existing groundwater conditions at the building site and provide a plan for both temporary control of the water during construction and permanent control of the water to prevent deterioration of the building, the adjacent pavements, and the surrounding facilities.

### **D. Protection of Adjacent Structures and Facilities**

The Design Professional - Engineer shall prepare plans for locations where proposed construction will endanger other facilities. These may consist of other foundations, roads, buried or overhead utilities, Navigational Aids (NAVAIDS), drainage system components or conveyances, airfield pavements, and temporary installations (such as other construction).

The Design Professional - Engineer shall require the contractor(s) to install and maintain proper protection in any situation where other facilities are identified as likely to be endangered during construction, or when this is discovered in the field.

No blasting will be allowed. No unusual vibration or noise shall be allowed to unduly disturb adjacent operations or occupied spaces due to construction activities or use of the new facility or related activities.

**END OF GEOTECHNICAL DESIGN STANDARDS**

## **VII. BUILDING DESIGN STANDARDS**

Airport facilities are subject to all federal, state, local, and Airport requirements depending on the location and nature of the development. The Airport's Representative will advise the Design Professional of Airport specific construction requirements and information required to be incorporated into the Construction Project Manual.

### **A. Building Criteria**

#### **1. Hangar Buildings:**

A primary building is an aircraft hangar with use as addressed in the lease.

Stand- alone non hangar buildings are not permitted within the airport perimeter fence unless for aeronautical use and approved by County.

Outbuildings may be permitted as an ancillary to the primary building. An outbuilding must be attached or in near proximity to the primary building. Such outbuildings must be directly related to the operation of the primary building and will be limited to office(s), storage area, or related work area.

The portion of the building adjacent to the public roadway shall be the front of the building.

Minimum bulk hangar size is 50 x 50 feet (2,500 square feet). Minimum T-hangar construction is 5 units per side (minimum of 10 units per building).

Any hangar must have a concrete floor; any building must have finished flooring.

Any hangar constructed shall meet all State and Gwinnett County Storm Water rules, regulations, ordinances and laws, and the Leasee shall have sole responsibility to maintain any required detention ponds, oil water separators, etc.

Hangars/buildings shall meet all appropriate fire codes for the proposed use of building.

No residential occupancy is permitted.

Maximum building height shall be dictated by the airport's imaginary surfaces but shall never exceed . the Part 77 Standards. New construction will require a Federal Aviation Administration (FAA) Form 7460 be submitted to FAA for review. Submittal of the approved Form 7460 to the Airport Director's office is required prior to beginning construction on the airport.

Since roofs are highly visible from aircraft using the Airport, roofs shall be attractively designed and constructed. Signs, lettering, designs, or other graphics shall not be placed, painted, or otherwise located on roofs.

Roof materials shall be non-reflective, not create glare, and be of a neutral color that is complimentary to the required building color palette as discussed below.

## **2. Hangar/Building Characteristics:**

At least one restroom with at least one toilet is required for any stand-alone hangar/outbuilding development whether for personal or commercial use. The restroom shall be Americans with Disabilities Act (ADA) compliant as required by local/state building code.

Hangar/building materials shall be a pre-engineered metal building, with metal siding. The front of the building (facing the street) shall have an entrance way and/or office space constructed with brick, stucco, stone veneer or related material as approved by the Board of Commissioners and/or Gwinnett County Airport Authority. Airport preferred examples of entrance way/office space construction and exterior materials are shown in the sample building photographs included within this document.

Hangar/building materials that produce glare or other effects that are hazardous to aircraft operation shall not be permitted.

Hangar/building colors shall be Gwinnett County “Blue” sky tones, using blues as the primary color and greys, and whites for accents. Final color palette shall be approved by the Airport Authority’s Lease Committee PRIOR to beginning construction.

The location of outside storage areas and materials used for screening shall be a part of the site plan submitted by Leasee. All materials used for screening shall be opaque and the same as or similar to the main or primary building or by installation of berms and landscaping acceptable to the Airport, County, and/or City.

Any above ground fuel tanks shall provide for secondary containment of not less than 115% of the maximum storage capacity of all fuel tanks present. Above ground fuel tanks shall also be located inside the airport perimeter fence, or individually fenced to prevent unauthorized access. Fuel containment shall be in accordance with FAA regulations and the County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located in the City), NFPA and the Building Code.

Any exterior equipment shall be enclosed or screened so as to be an integral part of the architectural design and not in public view. Large pieces of equipment shall be located at ground level.

Any hangar or building abutting or a part of the Airport Operation Area (AOA) is also considered part of the security fence system. Such hangar or building shall provide the only entrance through the security fencing unless approved

by the airport. In addition, Leasee shall provide a chain link fence without gates separating the airside and the landside with not less than 6 feet chain link and three strands of barbed wire between buildings to the property line to establish a security perimeter. If landscaping screening is provided, it shall be located on the landside and no closer than 6 feet from the fence and maintained in a manner to preclude overgrowth of the security fence. Refer to the DGG Section IV Civil and Site Work Standards for additional requirements regarding fencing.

Adequate lighting required for both airside and landside shall be uniform in style and shall be constructed so as to not inhibit the night vision of the Air Traffic Control Tower, pilots operating on the airport, pilots operating in the vicinity of the airport, or vehicles utilizing the public roadways.

## **B. Site Work**

Additional site work information is located in the DDG Section IX, Civil and Site Work Standards and additional building requirements are located in the DDG Section IV, General Airport Design Standards of this Manual.

### **1. Setbacks and Lease Site Boundaries**

The County and the Airport will determine setback distances for construction based on FAA advisory circulars and/or regulations, the most recent FAA approved Airport Layout Plan and other County regulations that may be enacted from time to time. No part or portion of any building shall be erected, constructed, or extended into any setback area. No building construction equipment or materials shall be staged, placed, or operated in a manner that impedes the movement of aircraft along taxi lanes or taxiways or encroaches into a safety or object free areas without the prior permission of the County.

The minimum building setback shall be 25 feet from any adjacent ground lease boundary, unless approved by the Airport and must comply with the Building Code and NFPA required fire rated assembly separation requirements.

Minimum building separation requirements shall be complied with as set forth by the current-State of Georgia and local AHJ-adopted version of the National Fire Protection Agency (NFPA) 409, *Standard on Aircraft Hangars*, irrespective of ground lease boundary line location.

Adjoining hangars sharing a common center wall shall be built by the same Leasee, and shall be fire rated, where required to be rated by NFPA the local building code, or the local Fire Marshall. Not sure about the ‘sharing’ a common center requirement

### **2. Planters, Trash/Recycling Receptacles, and Street Furniture**

Planters, trash/recycling receptacles, and street furniture shall be as submitted and approved by the Airport.

### **3. Chain-Link Fence and Gates**

All fencing and gates shall meet the current applicable FAA Advisory Circular unless approved or directed otherwise by the Owner's Representative.

Airside: Security fencing shall comply with FAA specifications for chain link fence. The fence separating the airside and the landside shall be chain link not less than 6 feet high and topped with 3 strands of barbed wire. The barbed wire shall be slanted away from the airside at a 45-degree angle. A landscaped screening shall be provided and located no closer than 10 feet from the fence. The screen shall be maintained in a manner to preclude overgrowth of the security fence.

All other leasehold fencing shall be concrete, masonry or poly galvanized chain link. A 10-foot landscape border screening the chain link fence shall be placed on the public side of the fence.

Wood and polyvinyl fencing is not permitted.

Under no circumstances will Leasee, or Developer's fences be located on lands other than those leased by the Leasee, or Developer. Fences shall be provided, as needed, to prevent uncontrolled access from landside areas to airfield areas (if applicable).

All fences shall be designated on any site plan as to the location and type.

### **4. Utility Meters and Service Lines**

The Design Professional shall make application, submit for reviews, pay fees, and comply with construction and maintenance requirements of each utility company for both temporary and permanent service.

The location of all buried or otherwise hidden utility structures, including pull boxes or spare conduits, shall be accurately recorded in the Record Drawings, which shall be turned over to the Airport's Representative.

### **5. Utility Corridors**

Protection of utility corridors is required during construction and operation. No structure or landscaping is to be installed within the metes and bounds of the utility corridors.

Paving may be installed provided utility lines below are sleeved in accordance with requirements of the service provider.

Modifications to the utility corridor, including locating paving within the corridor, are to be accurately documented by the Design Professional with each utility company and with The Airport. Survey information, including

metes and bounds, is required for any reconfiguration of the corridor.

## **6. Fire Protection**

Flow and pressure testing shall be specified by the Design Professional - Engineer and performed by the contractor according to the standards of Gwinnett County Fire Department and Factory Mutual. Systems shall be in accordance with the requirements of Section VII, Mechanical, Electrical, & Plumbing Building Systems.

## **C. Concrete Structures**

### **1. Cast-in-Place Concrete**

At a minimum, all cast-in-place concrete work, including forming, placement, and finishing, shall be performed in accordance with the American Concrete Institute (ACI) and applicable national standards.

Floor slabs shall be level within a tolerance of 1/8-inch in 10-feet. Pitch to drains in planes shall be true to the same tolerance.

### **2. Precast Concrete**

At a minimum, all precast architectural concrete shall be designed and constructed in accordance with the ACI, ASTM, and all applicable national standards.

Precast concrete sample panels shall be required in the construction contract for all precast concrete work in a development, reviewed and approved by the Owner's Representative, and shall illustrate the quality, color, and texture of the final surface finish.

## **D. Masonry**

Acceptable masonry products include brick, concrete masonry units, and stone. The finish and color shall be approved by the Owner's Representative. ASTM standards are acceptable for mortars and grouts.

## **E. Metals**

Installation work shall adhere to requirements as noted below:

### **1. Structural Steel**

All structural steel shall conform to all applicable national standards.

## **2. Light-Gauge Metal Framing**

The gauge and spacing of metal framing members shall equal or exceed the recommendations of the wall or ceiling sheathing materials manufacturer.

## **3. Handrails and Guardrails**

Design and construction shall comply with all requirements of the building codes and accessibility standards. Welding work shall comply with American Welding Society (AWS) standards. Returns with closed ends at wall-mounted handrails shall be provided.

## **F. Thermal and Moisture Protection**

### **1. Manufactured Metal Wall Panels**

Manufactured metal panel systems and profiles are subject to approval by the Owner's Representative. Wall panels shall be no less than 22 gauge.

### **2. Metal Roof and Soffit Panels**

Manufactured metal roofing systems and profiles are subject to approval by the Airport's Representative and must be installed by a contractor certified by the respective roofing manufacturer.

## **G. Doors and Windows**

Installation work shall comply with requirements noted below.

### **1. General**

In the interest of safety, vision panels shall be provided in all locations unless security of the operation dictates otherwise.

### **2. Metal Doors and Frames**

Exterior doorways shall be constructed of hollow metal doors and frames. Frames subject to wet conditions shall be galvanized.

### **3. Flush Wood Doors**

Interior wood doors shall be solid core wood construction.

### **4. Overhead Doors**

Overhead doors and grilles, sectional, rolling, or coiling, shall be equipped with a safety stop and a manual override, if the operators are motorized. Exterior sectional doors and grilles shall be galvanized metal.

## **5. Aluminum Entrances and Storefront**

When storefront is permitted, it shall be equipped with extra-heavy-duty hardware. Storefront assembly design shall be for heavy-duty use.

## **6. Aluminum Windows**

Exterior windows shall be fixed glass is acceptable other. Polycarbonate glazing is not permitted. Insulation of windows to reduce noise transmission and energy efficiency shall be incorporated. All windows and glass surfaces and shall be non-reflective glass. The tint shall be per the DGG requirements.

No aluminum window shall be installed in a metal frame unless the installation incorporates a design to prevent galvanic action. Kynar coatings shall be used for all exterior window frames.

## **7. Door Hardware**

Keying shall be compatible with the Airport seven pin removable core keying system and shall be coordinated through the Owner's Representative. All key systems are part of the Airport security system and are subject to review by the Airport security personnel.

## **H. Interior Finishes**

Finish work shall comply with requirements noted below:

### **1. Tile / Resilient Flooring**

The acceptable grade is commercial or industrial.

### **2. Acoustic Panel Ceilings**

White, acoustic panels, two feet by four feet, set in an exposed grid are preferred. Concealed spline ceilings are prohibited.

### **3. Carpet**

Adhesive-backed, non-padded, tiled carpet is preferred.

### **4. Paint**

Only low-VOC paint is acceptable. No lead content will be allowed. Paint colors shall be approved by the Airport.

## **I. Specialties**

Specialty work shall comply with requirements noted as follows:

### **1. Signage and Graphics**

Signage and graphics at the Airport shall be designed and constructed in accordance with the following and as reviewed, approved, and/or directed by the Airport.

- a.** All building signage required by County, State, and Federal regulations and accessibility standards shall be specified by the Design Professional. This includes interior and exterior signage..
- b.** All site signage within the lease or project limits is to be specified by the Design Professional based on the Airport standards and approved through the Airport's Representative.
- c.** Where identification of an operation or business beyond the lease line and at, or near, the access-way or roadway thereto is agreed between the Leasee, or Developer, and the Owner's Representative to be desirable, proposed prototypical signage shall be provided by the Leasee, or Developer.
- d.** No corporate logo signage will be permitted beyond the lease lines. The proposed signage location, utilities, and associated work shall be approved in writing by the Owner's Representative prior to fabrication. The Leasee, or Developer, shall be responsible for maintenance of such signage.
- e.** All public building signage shall conform to Airport signage and graphics standards.
- f.** Signage or graphic identification of food service or lease spaces on the exterior of buildings is strictly controlled. Location, size, color, materials, and type of any signage proposed by a Leasee, or Developer, or operator of such space shall be clearly represented in design submittals to be submitted for approval by the Airport.

### **2. Fire Extinguishers and Accessories**

Design Professional shall specify recessed or semi-recessed fire extinguisher cabinets, except in warehouse or storage facilities. In exterior locations, warehouse or storage facilities, surface-mounted cabinets or mounting brackets are allowed. Fire extinguishers for use in electrical and IT/Data rooms shall be halon type fire extinguishers or an extinguisher that will not be harmful to electrified equipment.

### 3. Loading Docks

Loading dock work shall comply with requirements noted below.

**Bumper and Leveler:** Loading docks shall be equipped with dock bumpers. Safety bells or chimes for hydraulic dock levelers in motion shall be required. Exposed metal of bumpers shall be galvanized steel.

**Dock levelers:** Safety devices required include toe guards, cross-traffic support safety stops, support mechanism for unit in an elevated position, maintenance strut, and free fall.

All truck loading docks and areas shall be visually screened from public view. No loading docks or areas shall be permitted on the fronts of buildings except for warehouse operations with proper screening approved by the County. Trucks are prohibited from using common passage service roads for access to loading docks and/or area. It shall be the Leasee, or Developer's responsibility to provide adequate off-street parking for trucks awaiting access to loading areas or docks.

All loading areas shall be designed to enable all truck maneuvering to occur in the Leasee, or Developer's parking area, not on the street system.

Open storage in loading areas is prohibited. Loading areas shall be identified on any site plan. Standard turning radius shall be required for specific truck sizes intending to use loading areas.

**EXAMPLE 1:**



**BRICK CLADDING WITH STUCCO EXTERIOR & STANDING SEAM METAL ROOF**

**EXAMPLE 2:**



**CONCRETE STUCCO EXTERIOR WITH LINEAR GLASS & ARCH'D ROOF**

**EXAMPLE 3:**



**CONCRETE STUCCO EXTERIOR & ARCH'D ROOF & COVERED DROP OFF**

**EXAMPLE 4:**



**BRICK VENEER & STUCCO ACCENT WITH COVERED ENTRY**

**EXAMPLE 5:**



**HORIZONTAL METAL SIDING WITH ACCENTS TO DEFINE OFFICE AREA**

**EXAMPLE 6:**



**HORIZONTAL METAL SIDING WITH GLASS AND CANTILEVERED ELEMENTS**

**END OF BUILDING DESIGN STANDARDS**

## **VIII. BUILDING MECHANICAL, ELECTRICAL, PLUMBING STANDARDS**

### **A. General**

Mechanical, Electrical, and Plumbing (MEP) systems for building construction and renovations at the Airport shall be designed to be constructed, installed, and operated safely and in compliance with requirements of authorities having jurisdiction.

These systems shall fully address the comfort and use needs of the building Owner and occupants in an energy-efficient and sustainable manner that minimizes impact on the environment.

All electrical and telecommunication transmission lines on the Leasee's parcel shall be installed and maintained underground.

All mechanical equipment shall be housed within the building when possible. When roof-mounted equipment is required, it must be concealed by parapet walls taller than the tallest piece of roof mounted equipment. Plumbing vents are the only non-screened roof penetrations allowed.

Any exterior mechanical or electrical equipment, satellite dishes or other large pieces of equipment, shall be screened so as to be an integral part of the architectural design and not in public view.

All electrical installations will conform to the National Electric Code, the Building Codes and Gwinnett County Ordinances and requirements (or the City of Lawrenceville for projects located within the City).

All hangar buildings will be submitted to the Local Fire Marshall for a written determinization of any required fire sprinklers or fire suppression systems. All maintenance hangars shall be fire sprinklered. All building separations and fire sprinkler requirements shall be installed in accordance with the latest NFPA Standards and the Building Code.

All mechanical equipment shall be housed within the building when possible. When roof mounted equipment is required, it must be concealed by parapet walls sufficient to screen the equipment but no more than 42". Such parapet does not count against building height restriction but shall be subject to compliance with the Airport's imaginary surfaces. Plumbing vents are the only non-screened roof penetrations allowed.

### **B. Miscellaneous**

Lead or asbestos-containing materials (ACMs) shall not to be specified or installed. Roof-mounted equipment shall be avoided for ease-of-maintenance and security purposes. Refer to the DGG Section II for more information regarding Hazardous Materials.

### **C. Communications, Life-Safety, and Security Systems**

Both wired and wireless telecommunications systems installed at the Airport shall be compatible with existing systems.

Systems design and proposed installations shall be fully coordinated with the Airport information requirements and current infrastructure. This includes, but is not limited to, voice, data, security, alarm, fire protection, and entertainment television systems.

### **D. Water Conservation**

Water conservation measures shall be incorporated in all developments. These measures may include the use of water- saving plumbing devices, drought resistant native vegetation for landscaping, limited irrigation during drought conditions, and all requirements of the Building Code, or the County Ordinances and Regulations for Airport projects located within the City.

**END OF BUILDING MECHANICAL, ELECTRICAL, PLUMBING STANDARDS**

## **IX. CIVIL AND SITE WORK STANDARDS**

### **A. General**

In the design of civil and (flat) site work the Leasee, or Developer, is required to continue the parameters established by preceding facilities, which have been the subject of review and permit by Authorities Having Jurisdiction (County, State and Federal agencies). There are specific areas which require such attention including, but not limited to the following:

1. Erosion and sedimentation control, both temporary and permanent: This requires an awareness of the potential to pollute existing drainage-ways with construction-related run-off and the design of temporary measures to mitigate such damage. Further, it is required that permanent erosion control is incorporated into the design of disturbed areas by the introduction and maintenance of native and adapted grasses.
2. Storm Water Drainage: Design for storm water drainage issues requires data on the capacities of existing systems to determine where the need for on-site detention of run-off is necessary. Consistent with the concern for erosion and sedimentation control, is that of water quality (WQ).

The Design Engineer shall determine at an early stage whether it is necessary to incorporate WQ ponds into the run-off logistic. In general, the major storm water outfalls from the Airport have incorporated WQ facilities; however, in the event that other outfalls are utilized, this concern shall be addressed.

3. Sub-grades: Care should be taken by the Design Professional Engineer to ensure that pavement base thicknesses are adequate to resist loading requirements and geological requirements, and compliance with the Georgia DOT requirements and standards.
4. Americans with Disabilities Act (ADA): All facilities on the Airport are subject to the provisions of the ADA, both in public areas and employee areas.

### **B. Apron Pavements**

Taxi lanes shall be designed to comply with all design standards set forth in FAA Advisory Circular AC 150/5300-13A (latest edition) – Airport Design (or any other publication issued by the FAA to supersede AC 150/5300-13A). Gwinnett County Airport is an Airport Design Group (ADG) II airport. As such, standards used from AC 150/5300-13A (latest edition) shall meet the ADG II standards as a minimum (ADG III or ADG IV standards may be used at the Tenant’s discretion and may be required if the Airport Design Group changes).

In addition to the hangar, an apron shall be designed so that any aircraft capable of being parked in the designed hangar can be pulled completely out of the hangar without encroaching on any adjacent taxiway(s) or taxi lane(s) or blocking the ingress/egress of other aircraft.

Under no circumstances shall required apron/ramp areas encroach into the taxi lane or taxiway objective free area (TOFA) except for the entrance pavement.

Airside pavement shall have a compatible look and performance as to any airport taxi lanes/taxiways/apron to which it may abut. All leasehold pavements must be of sufficient quality and weight bearing capacity for the aircraft to be parked on the leasehold.

Landside pavement shall have a compatible look and performance as to any street/driveway pavement it shall abut.

All pavements shall be designed for a minimum 20-year life. Airside (pavements within the Airport Operating Areas) shall use FAA standards for the aircraft expected to be parked. Landside (pavements outside the Airport Operating Areas) shall meet equivalent axle load projections, or any other standard specified by Gwinnett County Department of Transportation Director or his/her designee.

Any permitted airside vehicle access routes are to be a minimum of 12 feet wide.

Taxilanes within hangar areas provided by the County are generally designed to accommodate an aircraft with a wingspan no greater than forty-nine (49) feet. Facilities designed for larger wingspan aircraft shall provide direct access to taxiways, unless otherwise approved by the County and the Airport, or designee, subject to grant assurances provided to the FAA and FAA regulations, specifically the FAA Advisory Circular 150/5300-13A.

Entrance pavement is required from the hangar door to the taxi lane or taxiway, shall be at least twenty (20) feet wide.

All required apron/ramp areas shall be constructed to remain outside the taxi lane or taxiway object free area except for the entrance pavement noted above.

Apron space between the hangar and the adjacent taxi lane or taxiway shall be sufficient to support the proposed use and potential future use of the hangar. The design of the apron is subject to review and approval by the County and the Airport.

All airside leasehold pavements must be of sufficient quality and weight bearing capacity for the largest aircraft that could be hangared on the leasehold and shall be designed for a minimum twenty (20) year life ( or the terms of the lease) using any applicable current FAA standards. Due to potential for creation of foreign object debris, pervious pavements shall not be permitted for use on the airside of airport property. Any pavement areas required to be rehabilitated for a new lease shall be the responsibility of the Leasee.

Any improvements to the existing pavements, or infrastructure, proposed by the Leasee shall be permitted and approved by the County and the Airport, prior to construction.

## **C. Roadways**

Roadway design and construction shall conform in general to the provisions of Gwinnett County Department of Planning and Development standards and shall meet or exceed the Georgia Department of Transportation (GDOT) Standards.

Design shall provide a 20-year life for identified traffic type and frequency. The special needs of airport development may override the commercial and residential minimum standards.

Horizontal geometry of the Airport is defined in The Airport Layout Plan.

### **1. Pavements**

In general, all road pavements shall be of flexible design, incorporating asphalt wearing surfaces, an asphalt base course, and a granular or crushed rock base. The top eight-inches, at a minimum, of sub-grade is required to be lime-stabilized and compacted in accordance with GDOT specifications. The use of proprietary geo-grid is permitted and may, in certain circumstances, permit a reduction in the required depth of base.

Both lime-stabilization and road base shall extend a minimum of 18 inches beyond the outside edge of the pavement, curb, or sidewalk, whichever is the greater.

Traffic lanes in parking lots and other areas of heavy vehicular traffic shall comply with the roadway design standards.

### **2. Curbs and Gutters**

Spill and catch designs shall be applied where appropriate in super- elevated or cross-hung road sections.

### **3. Sidewalks**

Where sidewalks are required, they shall conform to the ADA regulations and the Gwinnett County Department of Planning and Development standards. Gwinnett County approved sidewalk ramps and crosswalks shall be installed at intersections and other areas of high pedestrian traffic. Handicap ramps shall be located at all pedestrian crossings through curbs and at handicapped parking spaces. All sidewalks shall be designed in accordance with the requirements of the County.

Sidewalks shall be permitted only to provide for internal circulation on leasehold property. Additional sidewalks may be approved based on a showing of necessity if required to accommodate pedestrian traffic between leaseholds.

Sidewalks shall be designed, and pedestrian roadway crossings located to minimize pedestrian/vehicle conflicts and to provide adequate sight distance

for both the pedestrians and the vehicle drivers. Proper warning signs and special markings shall be provided if deemed necessary by the County.

#### **4. Driveways**

Where the lease line is off set from the roadway, the Leasee, or Developer, shall be responsible for the construction of vehicular access driveways. Protection of all buried utilities, including sleeving of pipes and conduits beneath the driveways, and continuity of drainage conveyances, is the responsibility of the Leasee, or Developer.

Driveway design shall be consistent with the most stringent pavement design within the project area and provide turn out radii consistent with Gwinnett County standards, except that the radii shall be no less than 25 feet. In driveways subject to tractor-trailer or large truck traffic, the radii shall be no less than 50 feet.

Onsite vehicular circulation should follow a clear hierarchy to provide:

- Proper ingress and egress based on projected traffic volume.
- Ease of orientation for visitors.
- Clear sense of arrival.
- Sight distance.

The width and number of driveways for a parcel or leasehold shall be determined by the type of use to which the leasehold is put, and the volume of traffic projected to use the driveway(s). In general, driveways will conform to the requirements of Gwinnett County.

Access and egress points shall be designed to minimize hazards, inconvenience, and congestion by providing simple circulation patterns and ample stacking room.

No access points shall lead directly into a parking bay. Instead, access shall lead into distribution roads which in turn feed into parking bays.

Landscaping or commercial signs located within an island in a driveway may be approved by the County. Landscaping shall not block sight distance or pose a traffic hazard.

The Leasee, or Developer, shall be responsible for all arrangements and agreements with adjacent property owners when joint use driveways or internal cross easements are permitted by the County. Said agreements shall be in writing and subject to the approval of the County.

Permits: A permit to work within any public right-of-way will be required for all driveways constructed on County owned and maintained roadways. All building plans submitted for permits shall show all existing and proposed

driveways, including any required acceleration/ deceleration or left- turn lanes. The County shall review all such building plans on both County and State roadways.

A separate permit from GDOT will be required for all driveways on State roads.

Driveway permits will not be issued and access to a parcel will be denied unless a site plan showing the existing or proposed development is submitted or other documents submitted indicating the proposed usage of the driveway and parcel.

## **5. Lighting**

Roadway lighting shall conform to the Gwinnett County Department of Planning and Development standards (or City of Lawrenceville standards if development is within City limits) , County Ordinances and Building Code requirements (or City Ordinances and Codes if applicable). Lighting support columns that are in parking areas shall have an extended concrete foundation shaft.

## **6. Embankments**

The Airport roadway embankment slopes which are not mechanically stabilized shall not exceed five (horizontal) to one (vertical). Embankments with slopes less than three (horizontal) to one (vertical) require mechanical stabilization.

Acceptable stabilization means vary with the conditions and location. Dry stack, geo-grid, and other mechanical stabilization methods are acceptable, depending on these factors.

## **D. Parking Areas**

On-street parking is not allowed at the Airport. Gwinnett County Development Ordinances and Regulations, (or the City of Lawrenceville’s Development Ordinances and Regulations for Airport projects located within the City) apply to all areas of the Airport, except where variances have been granted or alternative compliance allowed in the interest of aviation safety and continuous long-term occupancy; The design of all parking areas shall comply with Development Ordinances and Requirements at a minimum.

Sufficient parking shall be provided on the leasehold for each Leasee’s, Tenant’s or Developer’s employees, patrons, and visitors.

### **1. Layout & Configuration**

All parking must be identified in site plan.

Parking shall not be established or designated within the Air Operations Area.

Parking shall not be established or designated along the front of a building if the front of the building is on the airside of the Airport.

Vehicle parking spaces quantities and type shall be as required by the County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located in the City) and ADA regulations and shall be sized and marked in accordance with requirements outlined within the current County Land Development Code.

All parking areas shall have car stops or curbs placed at least five feet from the closest sidewalk, hangar, or building.

All parking areas shall be setback at least 10 feet from the Leasee's lease lines.

Commercial use of a hangar must comply with the quantity, sizing, and marking of ADA parking spaces outlined within the current County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located in the City), the Building Code and ADA Regulations . Handicapped parking spaces will be located in areas convenient to building entrances. The number and dimensions of spaces so provided shall be consistent with ADA regulations.

No parking shall be permitted on or adjacent to streets or driveways. All parking areas shall be paved and marked.

Parking in areas between buildings and roads shall be acceptable if these are designated on the site plan as parking areas, are screened from roadways by landscaping and/or berms.

Electric vehicle charging stations shall be provided at parking lots, where required by the Gwinnett County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located within the City).

## **2. Lighting**

The Leasee, or Developer, is required to illuminate parking areas to provide a safe secure environment. All security lighting shall have photocells for automatic turn-on during poor visibility and nighttime hours. Lights shall be shielded and adjusted to light intended areas only.

Reflectors shall be designed to minimize upward light scatter. Lighting mounted on buildings for area lighting security purposes may be acceptable, with the Owner's Representative's approval.

Plans for lighting shall be submitted by the Leasee, or Developer, to the County and Airport for approval. Lighting in parking areas shall be a uniform style throughout the development.

Where pedestrian walkways are not adequately illuminated by street lighting or parking lot lighting, uniform walkway lights shall be used consistent with the style and design of the street lighting system.

Lighting poles in parking lots shall be located within parking medians or islands.

Any plaza, courtyard, terrace, or other exterior pedestrian area adjacent to buildings or incorporated as part of the individual site plan shall use lighting compatible with the lighting styles of the walkway and parking areas.

All lighting shall be restricted to down lighting or shielded. Such lighting shall be restrained in design and levels of illumination so as not to be a hazard to Airport operations or interfere in future air traffic control tower operations.

If so, requested by the County to resolve a question of interference, the Leasee, or Developer, shall submit a signed and sealed drawing and photometric analysis provided by a registered lighting engineer.

The illumination levels and foot candle requirements for parking lots, site development and walkways shall be in accordance with the Gwinnett County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations if within City limits), which set minimum and average levels of illumination. A photometric analysis shall be submitted to the Airport and the County for approval.

All aircraft apron lighting shall be designed and constructed in accordance with current FAA Advisory Circulars.

### **3. Pavement**

All pavements where heavy traffic, heavy trucks, and delivery vehicles will travel must meet at least the minimum design standards for roadways. This includes traffic lanes in parking lots. Minimum paving for private vehicle parking is not acceptable in these areas.

In circumstances where heavy truck maneuvering is planned, an eight- inch minimum thickness of reinforced Portland Cement Concrete (RPPC) paving surface is required. This includes areas where containerized waste is located.

The standard construction and material specifications of Gwinnett County shall be used for roadway, driveway, and parking lots for all non-aviation related aircraft operational areas. Those prepared by the Federal Aviation Administration shall be used for aircraft operational areas.

All airfield pavement design shall conform to the relevant FAA Advisory Circulars for pavement design, using as the design aircraft the most critical aircraft proposed to be used over the life of the development.

#### **4. Employee and Visitor Surface Parking**

At a minimum all parking space pavement shall consist of a two-inch asphalt layer over an eight-inch aggregate base with a minimum eight- inch lime stabilized sub-grade. Vehicular circulation aisles shall be perpendicular to the building entrance facade and stalls shall be at 90 degrees to the circulation aisles.

Parking spaces shall be designed at right angles to the horizontal access of the building wherever possible. Exceptions to this layout may include loading areas and ADA-compliant accessible stalls. Parking stalls shall be 10 feet wide by 18.5 feet deep.

### **E. Drainage**

Installation and maintenance of water quality structures or devices (such as grease traps, oil-water separators, filtration beds, areas of containment, etc.) required by Gwinnett County, the Building Code or the Health Department shall be the responsibility of the Lessee, or Developer.

All leasehold development shall satisfy the drainage and retention and/or detention requirements of Gwinnett County, the Georgia Environmental Protection Division (EPD), and the Metropolitan North Georgia Water Planning District (Metro Water District).

Specific requirements for each leasehold area should be coordinated with each regulatory agency early in the development of site engineering. This coordination should include a conceptual drainage plan which outlines the impact of the proposed development.

#### **1. Storm Water Drainage**

Design requirements for water quality, erosion and sedimentation control, spoil storage, drainage and grading, land use, and demolition shall comply with the County's Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located within the City), and the Airport's Storm Water Pollution Prevention Plan (SWPPP) and the Metropolitan North Georgia Water Planning District (Metro Water District).

Assumptions were made regarding the configuration of the Airport facilities prior to their construction. The Lessee, or Developer, must coordinate through the Owner's Representative to determine the effect of those assumptions on the Lessee, or Developer's proposed facilities.

All work associated with modifications, additions, or deletions to the

infrastructure systems at the Airport shall be the responsibility of the Leasee, or Developer.

Design documents prepared by the Leasee, or Developer, shall incorporate calculations for a two-year, a 25-year, and a 100-year rain event, although the development shall comply with the County's requirements for a design based on the 25-year event.

A drainage plan shall be submitted indicating pre-development stormwater flow, contours/elevations of the proposed development site, and elevations of adjacent property or parcels.

Drainage shall not negatively impact adjacent properties or leaseholds and shall flow into the Airport's natural or developed master drainage system. Expansion, or improvements of the master drainage system to accommodate any new development, or hard surface areas, shall be the lease holder's responsibility, unless agreed to in writing by the Airport.

The elevation of the lot shall not be changed so as to materially affect the drainage pattern of the surrounding lots.

Drainage from roofs shall not create erosion or affect adjacent properties or leaseholds. Perimeter roof drainage with gutter, downspouts and splash blocks shall be required. If down spouts are tied-in to the master Storm Water system, then clean outs shall be installed within 5'-0" minimum of the down spout. A roof drainage and a soil erosion control plan shall be indicated on plan submittal.

Oil interceptors shall be installed as part of the building floor drainage-system at all facilities performing aircraft maintenance. Grease traps are required for restaurants and food service facilities.

## **2. Curb Inlets**

Curb inlets shall be of the recessed type. The length of the inlet(s) shall be designed to prevent overflow of the curb face and determined in conjunction with hydraulic calculations to determine the design event inflow.

## **3. Area Inlets**

Drop inlets shall be allowed in special circumstances. Use of the grate included in the detailed diagram is limited to areas of restricted pedestrian access. Where pedestrian traffic is likely (e.g., in parking lots), gratings specified by the Leasee, or Developer, are subject to approval on a case-by-case basis.

## **4. Storm Drains**

Storm drains shall be designed in accordance with the criteria set out in Gwinnett County's Drainage Criteria Manual. Precast concrete pipes, with 0-ring joints shall be used throughout.

## **5. Manholes**

Manhole covers shall be round and comply with the detailed diagrams included with the Gwinnett County Department of Planning and Development standards and Department of Water Resources. Manhole covers shall be capable of supporting the traffic loading anticipated.

## **F. Water and Wastewater**

Water and wastewater systems design shall comply with County water and wastewater utility requirements. All materials proposed for use shall be approved by the County and/or listed on the current Quality Products List.

Each Leasee, or Developer, shall outline in writing its requirements for potable water and sanitary sewer service at the proposed leasehold location.

If potential service is available through the County, the Leasee, or Developer, shall submit a written request for service. This request shall include, but not necessarily be limited to, the following types of information:

- a. An estimate of the quantities of potable water and sanitary sewage that the system will be required to handle. All calculations on which these estimates were based shall also be submitted.
- b. Any special requirements such as minimum potable water pressure or peak rates of sewage flow that the Leasee expects to be accommodated.
- c. The composition of any sanitary sewage including the method and anticipated efficacy of the pretreatment industrial type waste by the Leasee.

If potable water and/or sanitary service is not available through the County, the Leasee, or Developer, shall submit a plan indicating the proposed source of potable water and method proposed for disposing sanitary sewage and industrial wastes.

Final details for the installation of the facilities required to provide potable water and dispose of sanitary and industrial type wastes shall be subject to all applicable local, state, and federal regulatory requirements. The lessee shall provide the County with a copy of all permits and/or approvals issued any agency with jurisdiction.

A copy of all permits obtained by the Leasee, or Developer, at the date of site plan submission, shall be submitted along with the site plan. Any permit for which approval is pending shall be so identified and submitted immediately following issuance.

All development constructed on property owned or controlled by the County shall fully conform to the requirements of the Airport and all applicable regulatory agencies.

## **G. Utilities**

Extension and maintenance of all utilities to the facilities shall be the financial responsibility of the Leasee or Developer.

All plan submittals shall include sufficient detailed information on all utility designs and design loads. Plan submittals shall indicate above ground utilities such as, but not limited to, back flow preventers, condensers, and transformers. Sewer, gas, water, electric, and communication utilities shall be located underground.

All electrical wiring shall be in conduit and placed underground from the electrical power source to hangars or buildings.

Septic tanks are not authorized for use on the Airport.

All building water supplies shall be potable water and connected to the County water system. Fire hydrants shall be provided as required by the County or local Fire Marshall.

Work shall not commence until approval has been received by the County and all permits have been received by the Leasee or Developer.

The Leasee shall be responsible to restore all areas disturbed during the utility installation including pavement, landscaped and grass areas.

Utility right of way corridors are available for service connections along the public roads located near the Airport. A sub-surface utility survey should be conducted by the Leasee or the Developer, prior to design and construction.

The Leasee, or Developer, is responsible for coordinating with each utility company and the County Planning Department, the information, materials, and fees necessary for temporary or permanent service connections. Design, construction, and maintenance of utilities from the point of connection at the corridor to the point of service are the sole responsibility of the Leasee, or Developer,

All underground utilities installed by the Leasee, or Developer, shall be marked with magnetic tape to provide surface detection capability.

## **H. Landscaping**

A landscape and irrigation plan shall be prepared and submitted to the Airport and County in accordance with these standards. All landscaping shall conform to Gwinnett County Ordinances and Regulations (or the City of Lawrenceville Ordinances and Regulations for Airport projects located with the City).

Landscaping within the Air Operations Area for non-building and non-pavement areas shall have as a minimum natural ground covering and is limited to grass or very low-lying vegetation for unpaved areas. For safety reasons no trees or shrubbery shall be permitted within the air operations area (within the airport security or perimeter fence.)

At least 20% of the total gross land area of a development site shall be landscaped and can include grass or ground cover for the calculation. The landscaped areas shall be located on the site in such manner as to maximize preservation of existing trees with priority given to specimen trees (if any exist). Such landscaping should not be on the airfield side of any hangar or building construction that is not accessible by the public.

Landscaping shall not block sight distance or pose a traffic hazard.

Landscaping within the Airport Operation Area for non-building and non-pavement areas shall have as a minimum natural ground covering and is limited to grass or very low-lying vegetation for unpaved areas. No trees or shrubbery shall be permitted within the Airport Operation Area (within the Airport security or perimeter fence.), or that may contribute FOD (leaves or shedding elements) into the AOA.

Low shrubbery shall be required at the public side of the building and perimeter of the automobile parking lots and dumpster enclosures.

All landscaping shall be irrigated on an automatic timed system, with in line filters at the irrigation pump. All landscaped and sodded areas shall be provided with 100% coverage by an automatic underground irrigation system. Sod and landscape areas shall be on separate zones.

All landscaped areas shall include pine straw type mulch; no bark, or stone, mulch shall be allowed.

All gross-land area of a development site that is not paved or building shall be landscaped and can include grass or ground cover. The landscaped areas outside the AOA (outside the Airport perimeter fence) shall be located on the site in such a manner as to maximize preservation of existing trees with priority given to specimen trees. Such landscaping should not be on the airfield side of any hangar or building construction that is not accessible by the public.

Landscaping shall not block sight distance or pose a traffic hazard.

All grass, trees, and shrubbery must be kept in good appearance at all times. If the Lessee or Leasee, or Developer, fails to maintain these areas the County and the Airport reserves the right to maintain or remove them at an additional cost to the Lessee. Maintenance of all landscaping and irrigation systems shall be the responsibility of the Leasee, or Developer. All landscaped and sodded areas will be maintained in accordance with the approved plan and maintenance will be enforced.

Plant materials used in conformance with the provision of this section shall equal the standards of the County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located within the City) and other amendments thereto for the highest quality available. Plant materials must be selected

for interest, structure, texture, color, and ultimate growth in harmony with and complementary to the building and other materials.

Landscaping items shall not be greater than 2.5 feet in height when located within the line of sight required to maintain adequate sight distance at all intersections, horizontal curves, driveways, and pedestrian crossings.

All trees used in landside landscaping shall have a minimum trunk diameter of 4 inches and shall have a minimum unobstructed clear height of 7 feet from the sidewalk or roadway surface to the bottom of the branches. Trees that have a drip line which protrudes over the roadway surface shall have a minimum unobstructed clear height of 14 feet from the roadway surface to the bottom of the branches.

## **I. Refuse & Sanitation**

The Leasee, Tenant, or Developer, shall comply with all County Ordinances and Regulations (or City of Lawrenceville Ordinances and Regulations for Airport projects located in the City) and the Building Code standards and requirements for Refuse disposal and Sanitation requirements.

The dumpster locations shall be indicated on the site plan to be submitted for approval by the County and the Airport.

Where necessary, dumpster enclosures shall be constructed at the rear of a structure/site and should be enclosed, and screened from public view, with an opaque wall constructed similar to, the primary building structure and have gates made of painted-galvanized metal tubing on pipe supports with steel pipe-hinges, with vertical slat louvers, and gate posts. All steel components shall be galvanized and painted. Dumpster enclosures shall be screened with landscaping material acceptable to the County. No dumpster enclosures shall be constructed at the front/street side of the building.

All dumpsters and trash bins shall be equipped with a closable lid.

All dumpster enclosures shall include a hose bibb for wash down of the pavement.

All dumpster slabs shall be constructed of eight (8) inch reinforced and sealed concrete and sloped to drain.

Six (6) inch galvanized pipe bollards, concrete filled and radiused capped shall be installed at the back of the dumpster and at the front of the dumpster pad to protect the dumpster enclosure gates.

Restaurant or food service dumpsters shall meet all County Health Department regulations.

Tank type grease interceptors shall be below ground, or under sink type interceptors, where allowed by the County Health Department and State and County Storm Water AHJ. All barrel type grease containers shall be fully concealed and screened.

## **J. Fencing and Gates**

Refer to Section VII Building Design Standards for requirements for the site and security fencing.

**END OF CIVIL and SITEWORK STANDARDS**

## **X. MAINTENANCE**

### **A. Paved Areas**

Pavement surfaces, sidewalks and plazas shall be kept cleaned and washed frequently and as required per seasonal demand. Parking lots shall be kept free of debris and leaves per seasonal demand. Cracks, joints, and other openings in the pavement surfaces shall be repaired promptly.

### **B. Lawn Maintenance**

Lawns and other ground cover shall be kept well-trimmed at all times. Procedures for fertilizing, trimming, and weed control shall be set on timely basis and adhered to. Removal of leaves shall be done within a reasonable time range during the fall season. Catch basins and other drainage collection points shall be cleaned regularly. A regular schedule for pesticide control and groundskeeping shall be maintained.

### **C. Trees and Other Plants**

Seasonal fertilizing, annual pruning and cutting dead branches shall be done as required. Extra care shall be taken for the new planting in their initial stage of establishment on the site.

### **D. Watering**

All plants shall be watered weekly during the growing season. Lawn areas shall be watered as required to produce healthy lawns especially during the summer months.

### **E. Building Maintenance Cleaning**

To ensure the quality standards projected for the development, all buildings shall be well maintained and clean at all times. Provision of services shall be made for necessary cleaning of masonry and washing and polishing of metals, particularly at the main entrances. Broken glass, damaged windows, light poles, and lamps shall be repaired or replaced promptly. Building exteriors that have painted surfaces that are faded or discolored shall be repainted to match the color standard approved by the Airport, with a UV resistant paint.

### **F. Equipment Storage**

Storage of all maintenance equipment shall be within buildings or well screened. It shall not be visible from access roads, common open spaces, or adjacent lots.

### **G. Radiation and Electrical Emissions**

No activities shall be permitted that emit dangerous radioactivity beyond enclosed areas. There shall be no electrical disturbance adversely affecting the operation at any point of any equipment other than of the creator of such disturbance.

## **H. Other Nuisance Characteristics**

No noise, odors, vibration, smoke, air pollution, liquid or solid wastes, heat, glare, dust, or other such adverse influences shall be permitted that will in any way have an objectionable effect upon adjacent or nearby property. All wastes shall be disposed of in a manner that is not dangerous to public health and safety, nor will damage public waste transmission or disposal facilities.

**END OF MAINTENANCE**

## **SUPPLEMENTAL APPENDICES**

**(Available Upon Request)**

The following documents are made part of the Airport DDG by reference:

- A. Sustainable Design Check List (Reference)

**END OF DDG - Design Review Guidelines Manual**

# RFP Exhibit E

## Gwinnett County Airport - Briscoe Field (LZU) Aircraft Operations

### INSTRUMENT OPERATIONS

### ITINERANT

### LOCAL

### TOTAL YEARLY OPERATIONS

YEAR	Instrument				Itinerant				Local			(Instrument + Itinerant + Local)
	AT	GA	MI	Total	AT	GA	MI	Total	CIVIL	MI	Total	
2018	4,132	12,580	11	<b>16,723</b>	392	32,244	58	<b>32,694</b>	49,033	48	<b>49,081</b>	<b>98,498</b>
2019	3,918	13,206	25	<b>17,149</b>	194	42,914	44	<b>43,152</b>	66,958	26	<b>66,984</b>	<b>127,285</b>
2020	2,743	9,974	10	<b>12,727</b>	141	37,348	27	<b>37,516</b>	51,207	8	<b>51,215</b>	<b>101,458</b>
2021	3,536	12,626	15	<b>16,177</b>	142	42,392	32	<b>42,566</b>	55,059	8	<b>55,067</b>	<b>113,810</b>
2022	3,582	14,463	38	<b>18,083</b>	271	40,066	54	<b>40,391</b>	60,371	8	<b>60,379</b>	<b>118,835</b>

In 2020 Runway 7/25 was partially or fully closed from August 31 to October 9th for a Runway Rehabilitation Project  
 In November 2020 Runway 7/25 had two full weekend closures to complete the Runway Rehabilitation Project.

**Gwinnett County Airport - Fuel Flowage Report - 2022**

2022	<u>Airflow Leasing (UK/USA)</u>		<u>LZU Holdings</u>		<u>Aircraft Specialists</u>		<u>James Justice</u>		<u>Rajan Holdings</u>		<u>Gwinnett Aero</u>		<u>High Roller</u>	
	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas
January	8,024			0	105,321	8,254	0		15,040	0	38,167	17,036	7,673	0
February	15,894			8,225	111,963	16,242	7,500		7,499		22,578	8,511	7,545	
March	22,821			7,985	134,926	8,005	7,500		7,497		38,055	16,878	15,000	
April	14,850			7,899	143,457	7,967	0		7,485		29,933	7,964	7,637	
May	14,897			8,047	134,094	8,061	0		7,485		37,714	16,357	7,500	
June	14,843			8,046	111,299	8,022	0		7,921		45,733	8,366	14,845	
July	22,229			7,840	125,528	8,047	0		7,422		30,545	16,105	7,408	
August	14,837			7,821	155,608	8,050	0		7,920		29,868	8,364	14,844	
Sept.	22,278			8,034	126,194	8,046	0		7,920		29,868	16,789	0	
October	14,925			7,896	127,573	7,883	0		7,467		37,291	8,502	7,448	
November	14,973			8,030	141,724	8,143	0		7,995		29,936	16,985	7,463	
December	14,990			0	142,680	8,135	0		0		30,057	8,094	7,495	
Totals	195,561	0	0	79,823	1,560,367	104,855	15,000	0	91,651	0	399,745	149,951	104,858	0
		195,561		79,823		1,665,222		15,000		91,651		549,696		104,858

**2022 Yr. Totals:**

Jet 2,367,182  
 Avgas 334,629  
 Total 2,701,811

2021	<u>Airflow Leasing (UK/USA)</u>		<u>LZU Holdings</u>		<u>Aircraft Specialists</u>		<u>James Justice</u>		<u>Rajan Holdings</u>		<u>Gwinnett Aero</u>		<u>High Roller</u>	
	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas
January	15,085		0	0	75,652	3,997	6,509		7,565	0	38,615	16,423	7,707	0
February	8,037		0	7,967	60,608	8,029	0		0		30,340	8,549	7,651	
March	15,018		0	7,937	127,129	8,577	404		7,571		127,129	8,577	7,651	
April	21,977			0	113,041	7,969	0		0		30,236	15,967	7,654	
May	12,934			7,897	105,544	15,839	7,500		7,553		0	8,411	7,569	
June	14,871			7,840	112,805	7,782	0		7,509		37,857	16,691	7,650	
July	14,849			0	134,845	8,062	8,001		7,508		7,508	0	7,628	
August	23,743			7,826	118,770	8,266	0		0		37,731	8,341	7,419	
Sept.	15,853			7,843	107,658	8,386	0		0		0	16,798	7,375	
October	1,391			0	118,316	15,968	0		14,989		14,902	8,422	7,451	
November	14,501			8,142	111,440	16,159	8,000		0		14,989	16,913	7,492	
December	15,993			7,943	134,488	8,008	7,500		0		37,510	8,445	7,667	
Totals	174,252	0	0	63,395	1,320,296	117,042	37,914	0	52,695	0	376,817	133,537	90,914	0
		174,252		63,395		1,437,338		37,914		52,695		510,354		90,914

**2021 Yr. Totals:**

Jet 2,052,888  
 Avgas 313,974  
 Total 2,366,862

**Gwinnett County Airport - Fuel Flowage Report - 2020**

	<u>Airflow Leasing (UK/USA)</u>		<u>LZU Holdings</u>		<u>Aircraft Specialists</u>		<u>James Justice</u>		<u>Rajan Holdings</u>		<u>Gwinnett Aero</u>		<u>High Roller</u>	
	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas
2020														
January	30,083		0	16,023	83,121	7,937	11,056		7,532	0	23,027	16,546	7,305	0
February	30,086		0	0	68,186	12,008	8,661		0		30,640	8,430	7,656	
March	22,525		0	15,583	90,726	7,950	6,537		3,494		18,173	8,475	7,646	
April	37,258			7,694	52,784	7,959	1,771		0		10,705	8,459	0	
May	15,091			7,912	67,636	7,909	2,110		0		15,244	16,266	0	
June	15,034			7,861	74,859	7,831	12,028		0		30,057	8,353	7,593	
July	20,943			7,859	84,983	11,785	7,599		0		30,325	7,665	0	
August	11,150			7,888	89,659	7,822	13,471		7,438		30,009	16,734	7,223	
Sept.	0			0	22,411	0			0		0	0	0	
October	14,968			0	30,192	3,965	1,711		7,530		22,870	16,728	7,452	
November	15,116			7,983	90,545	7,906	4,934		0		22,679	8,448	7,649	
December	22,170			7,974	92,449	16,026	7,105		7,555		2,704	30,668	0	
Totals	234,424	0	0	86,777	847,551	99,098	76,983	0	33,549	0	236,433	146,772	52,524	0
	234,424			86,777	946,649		76,983		33,549		383,205		52,524	

**2020 Yr. Totals:**

Jet	1,481,464
Avgas	332,647
Total	1,814,111

Runway 7/25 was partially or fully closed from August 31st to October 9th for a Runway Rehabilitation Project  
 Runway 7/25 had two full weekend closures (Friday 9 p.m. to Monday 7 a.m.) for the Runway Rehabilitation Project in Nov.

**Gwinnett County Airport - Fuel Flowage Report - 2019**

	<u>Airflow Leasing (UK/USA)</u>		<u>LZU Holdings</u>		<u>Aircraft Specialists</u>		<u>James Justice</u>		<u>Rajan Holdings</u>		<u>Gwinnett Aero</u>		<u>High Roller</u>	
	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas	Jet	Avgas
2019														
January	22,586			7,510	113,610	8,244	30,237		0	0	30,299	8,000	7,540	0
February	30,262			7,902	98,719	8,021	22,763		7,520		35,919	6,517	7,578	
March	22,661			16,057	91,024	15,915	30,166		0		7,601	15,916	0	
April	15,608			7,953	110,097	8,003	37,715		0		19,116	8,404	15,086	
May	26,276			15,725	105,567	15,710	22,621		0		15,087	7,907	0	
June	37,378			7,800	82,768	7,858	22,567		0		22,570	8,298	7,539	
July	28,671			15,698	60,002	7,854	22,345		7,503		22,343	8,315	7,511	
August	20,141			7,853	82,671	15,662	22,419		0		22,621	16,680	7,650	
Sept.	20,052			15,670	75,087	16,193	22,533		0		22,515	7,866	7,516	
October	29,188			7,936	97,702	7,847	15,050		7,448		30,076	16,714	7,667	
November	21,555			7,944	82,937	15,883	14,472		0		37,684	7,968	7,650	
December	22,551			7,985	90,860	8,029	15,079		0		22,720	8,009	7,581	
Totals	296,929	0	0	126,033	1,091,044	135,219	277,967	0	22,471	0	288,551	120,594	83,318	0
	296,929			126,033	1,226,263		277,967		22,471		409,145		83,318	

**2019 Yr. Totals:**

Jet	2,060,280
Avgas	381,846
Total	2,442,126



**FAILURE TO RETURN THIS PAGE AS PART OF YOUR PROPOSAL DOCUMENT MAY RESULT IN REJECTION OF PROPOSAL.**

**PROPOSAL QUESTIONNAIRE (Exhibit F)**

All information requested in this Questionnaire to accompany proposal must be furnished by the proposer and should be submitted with the proposal. All statements must be complete and accurate. Omission of information or inaccurate or misleading information may be cause for rejection of the proposal.

1. Print the present legal name, address, and telephone number of the Proposer and the Proposer's contact person.

Legal Name\_\_\_\_\_

Address\_\_\_\_\_

Contact person's name\_\_\_\_\_

Telephone number\_\_\_\_\_ Facsimile number\_\_\_\_\_

E-mail address\_\_\_\_\_

2. In the event this proposal is accepted, list below the legal name of the business/individual exactly as it will appear on the lease document, and the address at which the business/individual will elect to receive notices.

Name\_\_\_\_\_

Address\_\_\_\_\_

Attn: \_\_\_\_\_

3. The above legal entity will be doing business under the following fictitious/dba name (if applicable).

4. The proposer intends to carry on the business as a (n):

\_\_\_ Partnership

\_\_\_ Joint Venture

\_\_\_ Corporation

\_\_\_ L.L.C.

\_\_\_ Or other (If other explain below:

\_\_\_\_\_

\_\_\_\_\_

**FAILURE TO RETURN THIS PAGE AS PART OF YOUR PROPOSAL DOCUMENT MAY RESULT IN REJECTION OF PROPOSAL.**

5. If the Proposer is a partnership or a joint venture, a copy of the Partnership or Joint Venture Agreement should be submitted with proposal and provide the following information:

Name (all parties) of Partnership	Address	Share
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a. Partnership formed or to be formed: \_\_\_\_\_

b. Date of organization: \_\_\_\_\_

c. General or Limited Partnership (if applicable): \_\_\_\_\_

6. If the proposer is a corporation, or if a partner listed in section 5 above, is a corporation provide the following information:

a. Date of incorporation: \_\_\_\_\_

b. State where incorporated: \_\_\_\_\_

c. If incorporated in a state other than Georgia, is the proposing corporation authorized to do business in Georgia? \_\_\_\_\_

d. Provide the corporation's Article of Incorporation.

e. Name, address, and the amount of stock held by the following officers (attach additional sheets as necessary).

**President**

\_\_\_\_\_  
(Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Amount of Stock)

**Vice President**

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(Name)

---

(Address)

---

(Amount of Stock)

**Secretary**

---

(Name)

---

(Address)

---

(Amount of Stock)

**Treasurer**

---

(Name)

---

(Address)

---

(Amount of Stock)

**Other Officers**

---

(Name)

---

(Address)

---

(Amount of Stock)

---

(Name)

---

(Address)

---

(Amount of Stock)

f. Name, address, and shares of stock held by each member of the Board of Directors of the Corporation.

**Chairperson**

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(Name)

---

(Address)

---

(Shares of Stock)

**All other members**

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(Name)

---

(Address)

---

(Shares of Stock)

---

(Name)

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(Address)

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(Shares of Stock)

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(Name)

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(Address)

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(Shares of Stock)

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(Name)

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(Address)

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(Shares of Stock)

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(Name)

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(Address)

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(Shares of Stock)

7. If Proposer is a L.L.C. provide name, address, title of the managing member(s) and all other parties of the L.L.C.

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(Name)

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(Address)

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(Title)

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(Name)

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(Address)

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(Title)

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(Title)

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(Name)

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(Address)

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(Title)

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(Name)

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(Address)

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(Title)

8. What is the extent and duration of your experience in general aviation and/or construction of similar facilities?

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9. Submit a list of locations at which you have operated, constructed, and managed similar facilities.

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10. Attach the names, addresses, and telephone numbers of at least three references that can attest to your financial ability to carry out the proposed construction, your technical ability to construct the proposed structure, and personal references:

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone number \_\_\_\_\_ Email: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone number \_\_\_\_\_ Email: \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Telephone number \_\_\_\_\_ Email: \_\_\_\_\_

The undersigned hereby certified to the truth and accuracy of all statements, answers, and representations made in this questionnaire, including all supplementary statements attached hereto. The County is authorized to contact references given herein and it is understood and agreed that the County will initiate any other investigative processes deemed necessary to determine the financial responsibility and experience of the Proposer.

Legal Name of Proposer \_\_\_\_\_

Corporate Seal (if applicable)

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_