Atlanta Regional Airport
Falcon Field

# AIRPORT LAYOUT PLAN
## Final Report

Peachtree City Airport Authority


**MAY 2022**

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# I. Introduction

In airport planning, it is important to define the historic, present, and future character of the airport's environs. Past and present conditions are readily determined, while selecting future scenarios is more difficult.

In order to provide guidance for the future development of the Atlanta Regional Airport - Falcon Field (FFC), the Peachtree City Airport Authority directed the preparation of an Airport Layout Plan update. This study complies with Federal Aviation Administration (FAA) Advisory Circular 150/5070-6B *Airport Layout Plans* and examines the existing conditions of the airport, forecasts airport growth and determines the facilities required to satisfy that growth during the next 20 years, analyzes alternative ways of satisfying projected needs, selects an implementation plan, and develops a funding approach. This Airport Layout Plan helps define the future role of the airport.

This introduction defines the geographic study area, describes the major land use, details important community facilities, describes the transportation system, and outlines the natural environment in the airport's vicinity.

## Background and Environment

The Atlanta Regional Airport - Falcon Field is on the western edge of Fayette County within Georgia's Piedmont region. Founded in 1968, the airport is situated ~3 miles southeast of Peachtree City's central business district. Fayette County spans ~200 square miles, and the airport's area is ~313 acres. Atlanta Regional Airport - Falcon Field continues to grow and improve. Some of the recent projects to enhance the airport and serve the community include:

2009 – Replace Localizer & Crack Seal Apron
2009 – Construct Corporate Apron
2014 – Runway/Apron Overlay
2015 – Install Perimeter Fencing
2017 – Rehabilitate Taxiway Lighting
2018 – Extend Utilities to Hangar Area C (Local Funding)
2019 – Replace ODALS RWY 31 and Upgrade Rotating Beacon (Local Funding)
2019 – Environmental Assessment for Clearing/Obstruction Removal
2021 – Planterra Ridge Golf Course Tree/Obstruction Removal (Local Funding)
2021 – Crack Seal, Seal Coat North Apron and Lower Tie Down Ramp (Local Funding)

Peachtree City is situated in the Atlanta Metropolitan Area. The population in this area has significantly increased and has been among the top five metropolitan areas in the United States for net migration. Population estimates from 2020 show Fayette County with approximately 115,000 people; however, a population of almost 2 million people within the southern portion of the Atlanta Metropolitan Area will be referenced as the study area for this report. The Transportation and Warehousing Industry is the most impactful job source in the area, and the county's proximity to the City of Atlanta make it an ideal destination for residents and visitors. Fayette County and the Atlanta Metropolitan Area is a unique market area, and as such, the airport realizes some unique challenges and needs that will be addressed further within this document.

The Georgia Department of Transportation (GDOT) undertook a statewide study titled *2020 Statewide Airport Economic Impact Study* to determine the economic worth of all publicly owned airports in the state. This study determined that airports support annual economic activity of $73.7 billion to the state and support 450,500 jobs. The study reported that the Atlanta Regional Airport - Falcon Field was estimated to have a $96,491,300 total direct annual economic impact on the surrounding area.

During the formation of this report, the COVID-19 pandemic caused significant changes to the economy and aviation industry. Although the effects of COVID-19 are still prevalent, the Atlanta Regional Airport - Falcon Field has fully recovered from this industry-wide travel anomaly and expects business to continue steadily increasing. With this expectation, this plan, in the form of a report and plan set, will provide the Peachtree City Airport Authority direction for development of the airport over the 20-year planning period.

The key issues to be recognized in this plan include:

- Recognition of the needs, goals, and objectives of the Atlanta Regional Airport - Falcon Field and the community it serves, and development of a plan that is compatible and acceptable to both parties.
- Recommended development that meets the functional requirements of the area considering the future need to expand or modify the airport.

Planning studies are established to prepare development concepts for individual airports. While the Federal Aviation Administration mandates the general approach and format, the success of the project depends largely on the goals and objectives, both explicit and implicit.

This study aims to provide the airport users and the citizens of the Atlanta Regional Airport - Falcon Field service area with a first-class aviation facility that will continue to be an asset to the community by continuing to provide a critical "gateway" to the area's economic growth and access to the National Airspace System (NAS). To achieve this, there are several explicit goals

and objectives to meet, including:

### Access

- Provide the community with equitable access to air transportation opportunities at FFC.
- Plan the necessary facilities to encourage aviation accessibility.

### Convenience

- Provide amenities and a pleasing environment to the FFC's users.
- Plan and locate facilities in a rational arrangement that is easily understood.
- Provide for the flexibility that is necessary to meet the community's needs.

### Safety

- Maintain public safety as the primary consideration.
- Plan the facility to minimize, to the extent practical, potential conflicts.
- Provide a system to respond to mishaps.

### Compatibility

- Foster compatibility between the airport and adjacent land uses.
- Keep adverse environmental impacts to a minimum.

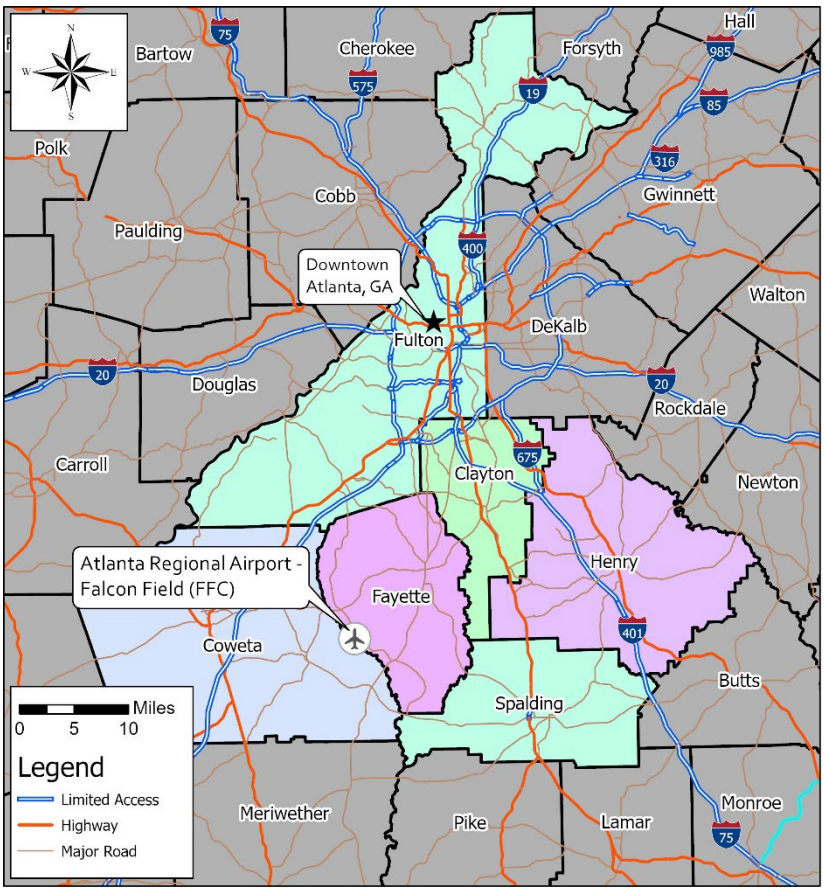
### Efficiency

- Plan flexible, logical expansion as the need may arise.
- Practice efficient and economic use of public funds.
- Obtain maximum transportation benefits for the level of feasible investment.

## Study Area Characteristics

The defined study area for this Airport Layout Plan includes Clayton County, Coweta County, Fayette County, Fulton County, Henry County, and Spalding County (1,822 square miles combined). The established airport elevation is 807.7 feet, and the airport is approximately 30 miles southwest of the downtown Atlanta, GA. **Figure I.1** depicts the geographic vicinity of FFC. While the study area for his Airport Layout Plan has been defined as the counties listed above, the airport may affect portions of other surrounding counties – particularly Douglas and Pike Counties. These counties do not have a public-use airport, so residents must travel across county lines to find service, thereby creating a larger area of impact for FFC.

**Figure I.1: Atlanta Regional Airport - Falcon Field Vicinity Map**




***Source**: WK Dickson & Co., Inc., 2021*

I-20, I-75, and I-85 are the main interstates that run through the study area and provide connection to the nationwide road network. The total service area lies in central Georgia. The airport is located within the city limits of Peachtree City and is approximately ten statute miles east of I-85, a key corridor throughout the entire state.

The Hartsfield - Jackson Atlanta International Airport (ATL), which is approximately 18 miles northeast, provides the nearest commercial airline service to Atlanta Regional Airport - Falcon Field. There are also six general aviation airports located within 30 nautical miles of the Atlanta Regional Airport - Falcon Field, each serving their respective communities and the region.

## Existing Land Use

Analysis of land use patterns in the immediate vicinity of an airport is of particular importance. Careful consideration of land use controls/conflicts is required to evaluate airport development alternatives. The land uses surrounding the Atlanta Regional Airport - Falcon Field consist primarily of commercial property to the northeast and undeveloped land to the southwest.

## Community Facilities

Identification of community facilities (such as schools, churches, and hospitals, among others) is important because of the potential sensitivity to the noise generated by aircraft. Three churches are in the vicinity of the airport (a defined area that is one mile each direction laterally from Runway 13/31 and two miles off each runway end). Any noise sensitive institutions with incompatible land uses that are located within this zone will be identified and mitigation methods will be described to minimize adverse impacts.

The study area contains many K-12 public-school systems from elementary through high school, and approximately twenty higher education facilities in the area. These include Georgia Institute of Technology, Georgia State University, Atlanta Metropolitan State College, and Southern Crescent Technical College. **Table I.1** lists the municipalities for each county within the study area.

### Table I.1: Study Area Municipalities

| County | Municipalities |
|---|---|
| **Clayton** | Forest Park, Jonesboro, Lake City, Lovejoy, Morrow, and Riverdale |
| **Coweta** | Grantville, Haralson, Moreland, Newnan, Sargent, Senoia, Sharpsburg, and Turin |
| **Fayette** | Brooks, Fayetteville, Peachtree City, Tyrone, and Woolsey |
| **Fulton** | Alpharetta, Atlanta, College Park, East Point, Fairburn, Hapeville, Johns Creek, Milton, Mountain Park, Palmetto, Roswell, Sandy Springs, South Fulton, and Union City |
| **Henry** | Hampton, Locust Grove, McDonough, and Stockbridge |
| **Spalding** | Griffin, Orchard Hill, and Sunny Side |

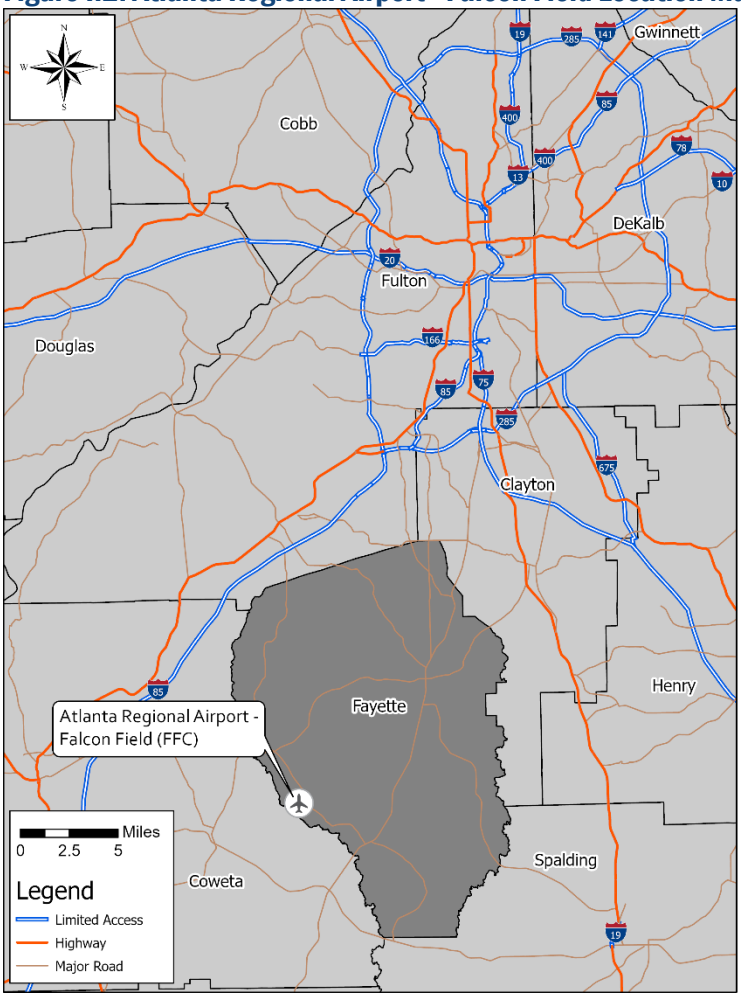
Roughly 775 religious facilities are located within the study area, representing a range of denominations. Various community parks, recreation facilities, and attractions are also located around the FFC study area, making it a great community in which to live. Boutique shops and signature restaurants are abundant for locals and visitors to enjoy as well.

## Transportation Network

Due to the airport's location within the Atlanta Metropolitan Area, the study area contains many transportation links. I-85 provides the closest interstate access to the airport. I-85 runs northeast to southwest through the central portion of the study area and takes travelers 665 miles from near Richmond, VA at its northern terminus to Montgomery, AL at its southern terminus. I-20 is a major east-west highway that runs 1,539 miles from Kent, TX to Florence, SC. The last major

interstate in the study area is I-75 which is a major north-south highway running 1,786 miles from Flint, MI to Miami Lakes, FL. I-285 creates a 64-mile beltway around the perimeter of Atlanta, connecting I-20, I-75, and I-85. **Figure I.1** and **Figure I.2** show the geographic location of the Atlanta Regional Airport - Falcon Field and all major adjacent transportation links.

**Figure I.2: Atlanta Regional Airport - Falcon Field Location Map**




***Source:*** *WK Dickson & Co., Inc., 2021*

## Natural Environment

The natural environment of an airport's service area is an important factor in planning the development and future role of that airport. Several environmental factors have the potential for direct and indirect physical effects on the Atlanta Regional Airport - Falcon Field. These include:

- Climate
- Topography

## Climate

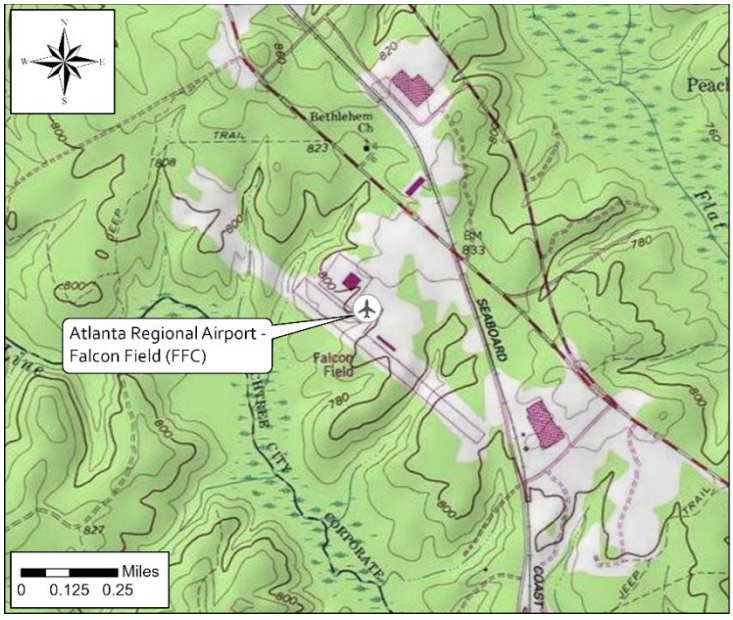
The climate in the study area (and central Georgia) is typical for its topography. The temperate climate is characterized by warm days and comfortable nights in summer, bright and colorful days in fall, and moderate winters. Very little frozen precipitation falls during the winter with accumulations occasionally enough to result in business closures and travel delays. Otherwise, rainfall is distributed throughout the rest of the year. Prevailing winds are generally from the northwest, as indicated by records from the weather station at FFC.

Fayette County enjoys an extended period of comfortable weather – warm days and comfortable nights, from early April until late October. According to the National Oceanic and Atmospheric Administration, the January temperatures averages lows around 32°F and two inches of annual snow fall accumulation. Summer days are typically very warm with some hot spells, with highs averaging 90°F. Overall, the mean annual temperature is 62°F with an annual average precipitation reaching just under 50 inches throughout the year.

## Topography

The topography surrounding the Atlanta Regional Airport - Falcon Field is in the Piedmont region of Georgia, with low, rolling hills. The airport's runway is built on a sloped plain with an elevation of 800.8 feet on Runway End 13 and 807.7 feet on Runway End 31. Topography directly surrounding the runway is mostly flat but provides drainage mostly to the southwest of the airfield. Through tributaries, the entire airfield runoff ultimately drains to Line Creek, which is located to the east of the airport property. The terrain surrounding FFC is illustrated on **Figure I.3**.

**Figure I.3: Atlanta Regional Airport - Falcon Field Topography**




***Source:*** *USGS 7 ½ Minute Topographic Map, WK Dickson & Co., Inc., 2021*

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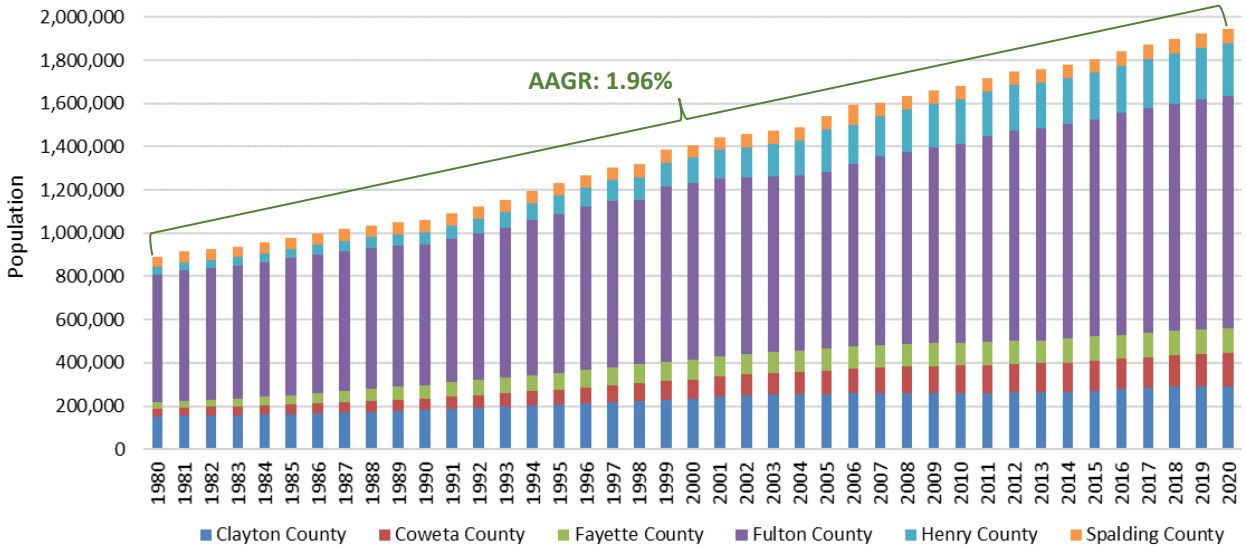
# II. Inventory

An inventory of airport facilities is imperative in planning airport needs in the short and long term. A physical inventory of the facilities provides information needed for operational capacity determination, facility replacement timing, service levels, transient and based aircraft service needs, and runway and airspace needs into the future. The data collection effort for this Airport Layout Plan utilized a variety of sources including interviews with airport management, on-site investigations, and coordination with governmental agencies and other organizations.

## Socioeconomic Trends and Projections

Experience has shown that there is a significant relationship between an area's population and its aviation activity. Analysis of the population of the study area (Clayton, Coweta, Fayette, Fulton, Henry, and Spalding Counties) is therefore an important factor in developing the Airport Layout Plan. **Figure II.1** presents the population growth data that is used in development of the aviation demand forecasts which are presented in **Chapter III** of this report. The study area has seen a 1.96% Average Annual Growth Rate (AAGR) over the last 40 years. These population projections are based on a historic data string with consideration given to demographic factors such as birth/death ratios, emigration factors, etc., and represent a reasonable forecast for the future.

### Figure II.1: FFC Study Area Historic Population Levels




***Source:*** *U.S. Census Bureau*

# Aviation Inventory

## Airports in the Region

There are seven public use airports within a 30-nautical mile radius of the Atlanta Regional Airport - Falcon Field (FFC) that offer services for the needs of general aviation users. An inventory summary of FFC and surrounding airports is presented in **Table II.1**. Please note there is a plan to relocate the Griffin-Spalding County Airport approximately 4 miles northeast of its current location within the planning period.

### Table II.1: Public Use Airports in a 30 NM Radius of FFC

| Airport Element | Newnan Coweta County Airport (CCO) | Atlanta Speedway Airport (HMP) | Griffin-Spalding County Airport (6A2) | Hartsfield-Jackson International Airport (ATL) | Fulton County Executive Airport (FTY) | Roosevelt Memorial Airport (5A9) | Thomaston-Upson County Airport (OPN) |
|---|---|---|---|---|---|---|---|
| **Ownership** | Public | Public | Public | Public | Public | Public | Public |
| **Elevation** | 970.2 | 882.0 | 958.4 | 1,026.2 | 841.1 | 882.4 | 797.7 |
| **Runway Length** | 15/33 5,500'x100' | 6/24 5,500'x100' | 14/32 3,701'x75' | 9L/27R 12,390'x150' (4 additional runways) | 8/26 5,797'x100' 14/32 4,158'x100' | 18/36 5,004'x75' | 12/30 6,350'x100' |
| **Runway Surface** | Asphalt | Asphalt | Asphalt | Grooved Concrete | Asphalt | Asphalt | Asphalt |
| **Approach Aids** | MALSF, PAPI, ILS | PAPI | REIL, PAPI | MALSR, MALS, ALSF2, PAPI, REIL, ILS/DME | MALSR, REIL, VASI, PAPI, ILS | - | MALSR, PAPI, ILS |
| **Lighting Type** | HIRL | MIRL | MIRL | HIRL | HIRL/MIRL | MIRL | MIRL |
| **Based Aircraft** | 114 | 91 | 77 | 3 (only heli) | 88 | 13 | 88 |
| **Location Relative to FFC** | 10 nm W | 12 nm E | 17 nm SE | 18 nm NE | 25 nm N | 26 nm SW | 29 nm SE |

## Airside Facilities

Airside facilities include runways, taxiways, airfield lighting, markings, and navigational aids.

**Runway:** The Atlanta Regional Airport - Falcon Field has a single runway. The runway is designated 13/31, 5,768 feet long, 100 feet wide, and is constructed of asphalt. The calculated weight bearing capacity of this runway was recently determined to be 41,000 pounds on single wheel gear and 60,000 pounds on dual wheel gear. A 2019 Pavement Condition Index (PCI) Study provided by GDOT outlined that the runway index ranged from 76 to 85 over two sections. This is within the range of good to excellent condition and only preventative maintenance is necessary in the short term. It should be noted that each year of age typically

reduces the PCI by two points. **Figure II.2** provides the 2019 GDOT PCI Study geographic depiction of the runway, taxiway, apron, and taxilane pavements. Additionally, the last Georgia Department of Transportation safety inspection of April 2021, the condition of the runway was evaluated as "good." The runway has Medium Intensity Runway Lights (MIRL) and precision instrument pavement markings on Runway End 31. The markings are in "fair" condition.

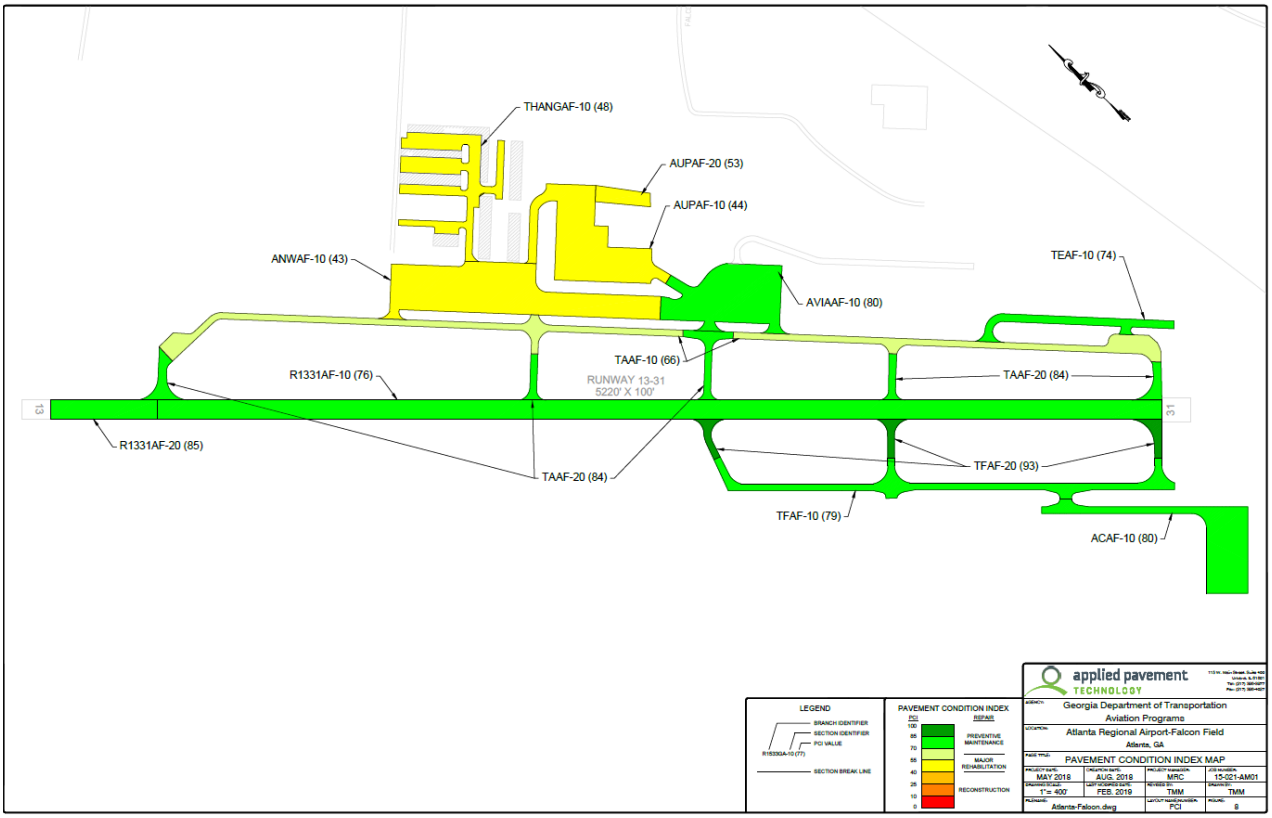
Runway 13/31 was analyzed for true azimuth alignment and consideration of the magnetic declination rate of change. As of April 2022, the runway numeral markings were confirmed to be correct at 13 (130°±) and 31 (310°±). Further, the markings are expected to need a change to 14/32 in approximately 10+ years.

**Declared Distances:** Declared distances represent the maximum distances available and suitable for meeting takeoff, rejected takeoff, and landing distances performance requirements for turbine powered aircraft. The declared distances are Takeoff Run Available (TORA) and Takeoff Distance Available (TODA), which apply to takeoff; Accelerate Stop Distance Available (ASDA), which applies to a rejected takeoff; and Landing Distance Available (LDA), which applies to landing. Declared distances is a design methodology that results in declaring and reporting the TORA, TODA ASDA and LDA for each operational direction. The declared distances for the Atlanta Regional Airport - Falcon Field are as follows:

- Runway 13
  - TORA – 5,768'
  - TODA – 5,768'
  - ASDA – 5,174'
  - LDA – 4,625'
- Runway 31
  - TORA – 5,768'
  - TODA – 5,768'
  - ASDA – 5,318'
  - LDA – 5,118'

**Taxiway:** FFC's Runway 13/31 is served by a 35-foot-wide full taxiway connecting to the terminal area. Taxiway centerline to runway centerline separation varies between approximately 310' on the Runway 31 End to approximately 490' on the Runway 13 End. The taxiway is equipped with medium intensity taxiway lights (MITLs). The weight bearing capacity of the taxiway was determined to be 23,000 pounds on single wheel and 30,000 pounds on dual wheel. The 2019 PCI study also provided that the taxiway system PCI rating in 2019 ranged from 66 to 93. A rating of 65 is on the border of the threshold for rehabilitation of that pavement section. Pavement ratings above 70 are preventative maintenance, from 41-70 are major rehabilitations, and less than 55 is reconstruction. See **Figure II.2** below for a geographic display of the 2019 PCI rating of Falcon Field, which will require an apron rehabilitation, but the rest of the airfield is in "good" condition and currently requires preventative maintenance.

**Figure II.2: FFC 2019 PCI Study Exhibit**




**Source:** Atlanta Regional Airport Pavement Management Plan, GDOT/Applied Pavement Technology, 2019.

**Airfield Lighting:** Airport lighting serves several functions, the most significant of which is providing the facilities necessary for a pilot to locate, land, taxi, and depart safely at night and in poor visibility conditions. The lighting facilities available at FFC to assist pilots include:

- **Rotating Beacon** – A rotating beacon is the universal indicator for pilots to locate an airport at night or in periods of low visibility. The beacon for a civilian land airport consists of opposing white and green lenses set 180 degrees apart from each other. The beacon rotates 360 degrees emitting alternating white and green light that is visible about 10 miles from the airport. The Atlanta Regional Airport - Falcon Field has a rotating beacon located on in the middle of the terminal area, towards the single-unit hangars.

- **Runway Lights** – At FFC, the runway lighting system, designated as "Medium Intensity Runway Lights" (MIRLs), consists of quartz runway edge and threshold lights. Runway edge lights, located just off the edge of both sides of the runway, are omni-directional through 360 degrees and serve to provide the pilot visual reference for speed, alignment, lateral displacement, and distance while taking off or landing. The lights emit white

(clear) light the entire length of the runway, except for the last 2,000' of usable runway where the lights emit yellow lights. At FFC, the level of light intensity of the system is controlled by the pilot on the Common Traffic Advisory Frequency (CTAF).

- **Threshold Lights** – At the Atlanta Regional Airport - Falcon Field, these lights consist of a series of eight quartz fixtures (on each runway end) in two groups of four, placed on either side of the extended runway centerline in a straight line perpendicular to the runway alignment. The lights have two color lenses (red/green). They are placed such that the pilot of an approaching aircraft would see green, indicating the beginning of the usable landing area. The pilot of a departing aircraft would see red indicating the end of the usable runway. The light intensity is controlled by the pilot on the CTAF frequency.

- **Taxiway Lights** – The taxiway lighting system, designated as "Medium Intensity Taxiway Lights" (MITLs), consists of lights located just off the edge of both sides of the taxiways. The lights are omni-directional through 360 degrees, emit blue light and serve to provide the pilot visual reference and alignment while ground maneuvering. All taxiway lights north of the runway have been upgraded to LED lights; however, taxiway lighting south of the runway (Taxiway F and Taxiway G) consist of older quartz lighting.

**Airfield Pavement Marking:** Marking of the runway pavement provides two essential pieces of visual information to the pilot; the magnetic heading of the Runway, 130 degrees and 310 degrees (13/31), and whether or not there is an instrument approach (a series of bars between the runway numbers and the threshold). While Runway 13 has non-precision markings, precision markings are present for Runway 31, consisting of centerline markings, threshold markings, aiming point markings, edge markings, and touchdown zone markings.

**NAVAIDS:** The Satellite- or Ground-Based Navigational Aids located on or near the Atlanta Regional Airport - Falcon Field may be functionally classified as En Route Navigational Aids; those located on the airport may be classified as Terminal Area Navigational Aids and Landing Aids. Listed below are the existing NAVAIDS at or near FFC:

## En Route Navigational Aids

**VOR** - Very High Frequency Omni-Directional Range (VOR) navigational equipment is utilized by a pilot to determine an aircraft's position and stay on course by receiving radio signals from the unit. A VOR approach is published utilizing the ATL VORTAC located 17.7 nautical miles NE.

## Terminal and Landing Navigational Aids

**Instrument Landing System (ILS)** - An ILS provides pilots with electronic guidance for aircraft alignment, descent gradient, and position until visual contact confirms the runway alignment and location. This system has two major components: a localizer (LOC) and glideslope (GS). The LOC signal is used to establish and maintain the aircraft's horizontal position until visual contact confirms the runway alignment and location. The GS signal is used to establish and maintain vertical position until visual contact confirms the vertical descent path and touchdown point. FFC has an ILS approach for Runway 31 published.

**Area Navigation (RNAV) (GPS)** - Global Positioning System (with horizontal guidance) approaches are published for aircraft with receiving equipment. These enable the pilot and aircraft to utilize signals from satellites to navigate an approach to each runway end. FFC has RNAV (GPS) Localizer Performance with Vertical Guidance (LPV) approaches for Runway 13 and Runway 31.

**PAPI** - A Precision Approach Path Indicator is an airport lighting system that consists of two (PAPI-2) or four (PAPI-4) light units installed on the left or right side of the runway in a line perpendicular to the runway centerline. It provides vertical visual descent guidance to aircraft during approach and landing, by radiating a directional pattern of high intensity red and white focused light beams which indicate a pilot is "on path" if red/white is seen, "above path" if white/white is seen, and "below path" if red/red is seen. PAPI-4 systems currently exist at FFC, serving both runway ends.

**Weather Reporting** - An Automated Surface Observation System (ASOS) is a computer-based data acquisition system designed to retrieve airport information, such as weather data, and distribute it to both airborne and ground users. The entire process is automatic and continuously available 24 hours per day via frequency or phone. Atlanta Regional Airport - Falcon Field utilizes an ASOS located on airport property near Runway End 31 near Taxiway 'B'.

With review of historic records, airport management provided a summary of the airport assets based on records of installation, and remaining life expectancy with any applicable notes as of September 2021. **Table II.2** provides a summary of the inventoried airport assets that will require life cycle end rehabilitation with an estimate of each assets remaining life. A listing of "exceeded life expectancy" depicts that the asset is beyond its estimated life cycle but is still functioning.

**Table II.2: Atlanta Regional Airport - Falcon Field Asset Inventory**

| Asset | Install Date | Notes | Life Remaining (Years) |
|---|---|---|---|
| **Runway 13/31** | 1991 | Overlay in 2014 | 3 |

| | | | |
|---|---|---|---|
| **Taxiway A** | 1971 | Original runway | Exceeded Life Expectancy |
| **Taxiway B** | 1991 | | Exceeded Life Expectancy |
| **Taxiway C** | 1992 | Overlay in 2014 | 3 |
| **Taxiway D** | 1991 | | Exceeded Life Expectancy |
| **Taxiway E** | 1999 | | Exceeded Life Expectancy |
| **Taxiway F** | 2009 | | Exceeded Life Expectancy |
| **Taxilane (Northeast)** | 1994 | | Exceeded Life Expectancy |
| **North Apron** | 1994 | | Exceeded Life Expectancy |
| **Terminal Apron** | 1992 | Overlay in 2014 | 3 |
| **Area C Apron and Vehicle Parking Lot** | 2010 | | Exceeded Life Expectancy |
| **Area C Access Road** | 2010 | | Exceeded Life Expectancy |
| **Leo Giles Way Road** | 2009 | | Exceeded Life Expectancy |
| **Lighting Vault** | 1988 | | 10 |
| **Runway Lighting System** | 1994 | LEDs | Exceeded Life Expectancy |
| **Taxiway F Lighting System** | 2009 | Incandescents | Exceeded Life Expectancy |
| **Taxiway System (other than Twy F)** | 2017 | LEDs | 6 |
| **PAPI's** | 2009 | | 5 |
| **Rotating Beacon** | 2019 | | 8 |
| **ODALS** | 2019 | | 8 |
| **ASOS** | 2006 | | Exceeded Life Expectancy |
| **Fuel Farm** | 1993 | | Exceeded Life Expectancy |
| **T-Hangar A (10 T-Hangars - single unit)** | 1993 | | Exceeded Life Expectancy |
| **T-Hangar B (14 T-Hangars - single unit)** | 1996 | | Exceeded Life Expectancy |
| **1130 Echo Court (Hangar & Office Combo)** | 1992 | | 20 |
| **FBO Hangar and Attached Offices** | 1971 | | Exceeded Life Expectancy |
| **Annex Hangar** | 1988 | | Exceeded Life Expectancy |
| **Hangar A-1** | 1988 | | Exceeded Life Expectancy |
| **Terminal Building Vehicle Parking Lot** | 1996 | | 25 |

| | | | |
|---|---|---|---|
| **Vehicle Parking Lot** | 1996 | | Exceeded Life Expectancy |
| **Localizer** | 2009 | Antennas Replaced 2021 | 20 |
| **Glideslope** | 2009 | Antennas Replaced 2021 | 20 |
| **Non-Directional Beacon** | 1991 | | Exceeded Life Expectancy |
| **DME** | 1991 | | Exceeded Life Expectancy |
| **Perimeter Fence** | 1992/2015 | | 10 |

***Source:*** *Airport management records and industry typical life cycle standards.*

## Aircraft Storage

There are two general categories of areas used for aircraft storage: enclosed space and exposed space. The enclosed space consists of space required for aircraft that are in hangars and the exposed space consists of space where aircraft are tied down on the apron. The tiedown space available at the Atlanta Regional Airport - Falcon Field consists of approximately 555,000 square feet of apron space. This apron envelope translates to the capability of accommodating space for 107 tiedown positions. **Table II.3** provides an inventory of all existing hangars located on airport property at FFC.

### Table II.3: Atlanta Regional Airport - Falcon Field Existing Hangar Summary

| Building ID | Owner | Use | Size |
|---|---|---|---|
| T-Hangar A | PCAA | 10 Unit T-Hangar | 11,064 SF |
| T-Hangar B | PCAA | 14 Unit T-Hangar | 17,832 SF |
| T-Hangar C | Private Owner | 13 Unit T-Hangar | 17,832 SF |
| D1 | Private Owner | Port-A-Port Hangar | 1,136 SF |
| D2 | Private Owner | Port-A-Port Hangar | 1,128 SF |
| D3 | Private Owner | Port-A-Port Hangar | 1,118 SF |
| D4 | Private Owner | Port-A-Port Hangar | 1,093 SF |
| D5 | Private Owner | Port-A-Port Hangar | 1,097 SF |
| D6 | Private Owner | Port-A-Port Hangar | 1,063 SF |
| D7 | Private Owner | Port-A-Port Hangar | 1,052 SF |
| D8 | Private Owner | Port-A-Port Hangar | 1,036 SF |
| D9 | Private Owner | Port-A-Port Hangar | 1,007 SF |
| D10 | Private Owner | Port-A-Port Hangar | 1,085 SF |
| D11 | Private Owner | Port-A-Port Hangar | 1,122 SF |
| D12 | Private Owner | Port-A-Port Hangar | 1,119 SF |
| D13 | Private Owner | Port-A-Port Hangar | 1,136 SF |

| Building ID | Owner | Use | Size |
|---|---|---|---|
| D14 | Private Owner | General Aviation Storage Hangar | 1,783 SF |
| D15 | Private Owner | General Aviation Storage Hangar | 2,829 SF |
| D16 | Private Owner | General Aviation Storage Hangar | 3,199 SF |
| D17 | Private Owner | General Aviation Storage Hangar | 3,230 SF |
| D18 | Private Owner | General Aviation Storage Hangar | 3,237 SF |
| D19 | Private Owner | General Aviation Storage Hangar | 3,236 SF |
| D20 | Private Owner | General Aviation Storage Hangar | 4,875 SF |
| D21 | Private Owner | General Aviation Storage Hangar | 4,878 SF |
| D22 | Private Owner | General Aviation Storage Hangar | 4,929 SF |
| D23 | Private Owner | General Aviation Storage Hangar | 4,909 SF |
| D24 | Private Owner | General Aviation Storage Hangar | 3,218 SF |
| D25 | Private Owner | General Aviation Storage Hangar | 3,218 SF |
| D26 | Private Owner | General Aviation Storage Hangar | 3,220 SF |
| D27 | Private Owner | General Aviation Storage Hangar | 3,263 SF |
| D28 | Private Owner | General Aviation Storage Hangar | 4,875 SF |
| D29 | Private Owner | General Aviation Storage Hangar | 4,875 SF |
| D30 | Private Owner | General Aviation Storage Hangar | 4,875 SF |
| D31 | Private Owner | General Aviation Storage Hangar | 4,875 SF |
| B1 | Private Owner | Corporate Hangar | 6,400 SF |
| B2 | Private Owner | Corporate Hangar | 10,000 SF |
| B3 | Private Owner | Corporate Hangar | 12,000 SF |
| B4 | Private Owner | Corporate Hangar | 12,000 SF |
| B5 | Private Owner | Corporate Hangar | 6,400 SF |
| B5 | Private Owner | Corporate Hangar | 12,000 SF |
| C1 | Private Owner | Corporate Hangar | 13,000 SF |
| C3 | Private Owner | Corporate Hangar | 4,990 SF |
| C4 | Private Owner | Corporate Hangar | 4,992 SF |
| C5 | Private Owner | Corporate Hangar | 4,800 SF |

***Source:*** *Airport Inventory/Airport Management Records, April 2021*

## Terminal Building and Terminal Access

A terminal building provides a base of terminal functions at the Atlanta Regional Airport - Falcon Field. The designated general aviation terminal is housed within a 7,988-square foot space, which provides:

- Aviation fuel
- Conference Rooms
- GPU / Power cart
- Hangar leasing
- Lavatory Carts
- Passenger terminal and lounge
- Rental cars
- Taxi service / rideshare

The publicly operated Fixed Base Operator (FBO) out of the airport's terminal building provides the terminal area services described above. Other services offered on the field through third parties include aerial tours, aircraft cleaning, aircraft maintenance, aircraft management, and flight training.

The terminal area of FFC is located on Falcon Drive, which connects to Dividend Drive to the northeast. This connection gives access to Peachtree City and the national highway network. Presently, the primary terminal area auto parking lot totals approximately 14,000 square feet in size and consists of 43 designated spaces.

## Fuel Storage

Fuel available at the airport fuel farm includes the following types and storage amounts:

- 100LL – one 15,000-gallon aboveground tank at the fuel farm
- 100LL – two 1,200-gallon trucks
- Jet A – one 15,000-gallon aboveground tank at the fuel farm
- Jet A – one 3,000-gallon truck; one 5,000-gallon truck

It is assumed that as the need arises, fuel storage facilities will be adjusted to meet the demand. However, there is sufficient storage for the current operational characteristics of the airport.

## Obstructions and Approaches

Published minimums for Runway 31 are ¾ mile visibility and a ceiling of 252 ft achieved by a precision GPS LPV WAAS. The minimums for Runway 13 are currently set at 1 mile for visibility and a ceiling of 274 feet, achieved with an ILS Approach. The most recent FAA Form 5010 was obtained from the FAA on June 22, 2021. Based on a safety inspection from the Georgia Department of Transportation from April 16, 2021, the current controlling runway obstructions to the FAR Part 77 Surfaces are listed below in **Table II.4**.

### Table II.4: Atlanta Regional Airport - Falcon Field Runway Approaches

| Runway | Existing Approach Slope | Part 77 Approach Slope | Obstructions |
|---|---|---|---|
| **13** | 5:1 | 34:1 | Trees |
| **31** | 6:1 | 50:1 | Road |

***Source:*** *FAA Form 5010, dated 06/22/2021, based on 04/16/2021 State Inspection and supplied by FAA.*

The Airport Master Record Form 5010 shows controlling obstructions on both runway ends. There is a cluster of trees located 445 feet from Runway End 13 and 502 feet left of the centerline. Additionally, Aviation Way is located 296 feet from Runway End 31 and 506 feet right of the centerline. A project planned to address the mitigation of the obstructions is underway and being examined with an environmental assessment.

## Airport Land Holdings

Current property holdings at FFC total approximately 313 acres of fee simple property and 54 acres in avigation easements. A geographic depiction of the existing property line with easements as well as planned future property acquisitions is represented on the Exhibit 'A' Property Map as part of the Airport Layout Plan package. **Table II.5** below lists all active Through-the-Fence (TTF) arrangements at FFC. Airport management is currently working to address all TTFs that do not currently have an official, written agreement.

### Table II.5: Through-the-Fence Summary

| Parcel ID | Associated Hangar/Owner | Access Agreement |
|---|---|---|
| **0615-024** | Chick-Fil-A, Inc. | Yes |
| **0615-010** | Chick-Fil-A, Inc. | Yes |
| **0612-040-03** | Falcon 6, LLC | No |
| **0612-040-05** | ATP Flight School | No |
| **0612-040-11** | Triangle H. Properties, LLC | No |
| **0612-040-10** | Commemorative Air Force | No |

***Source:*** *Airport Management Inventory; Fayette County, GA GIS Property Records*

## Airport Zoning Ordinance

Peachtree City, Georgia currently has a zoning ordinance in place to protect the airspace surrounding the airport. The zoning ordinance enables law enforcement by the City to issue penalties accordingly if any section of this ordinance is violated. The ordinance was recently accepted by City Council as of June 17, 2021, and is setup to reference the Airspace Plan of this Airport Layout Plan Update, which outlines the ultimate FAR Part 77 Surfaces.

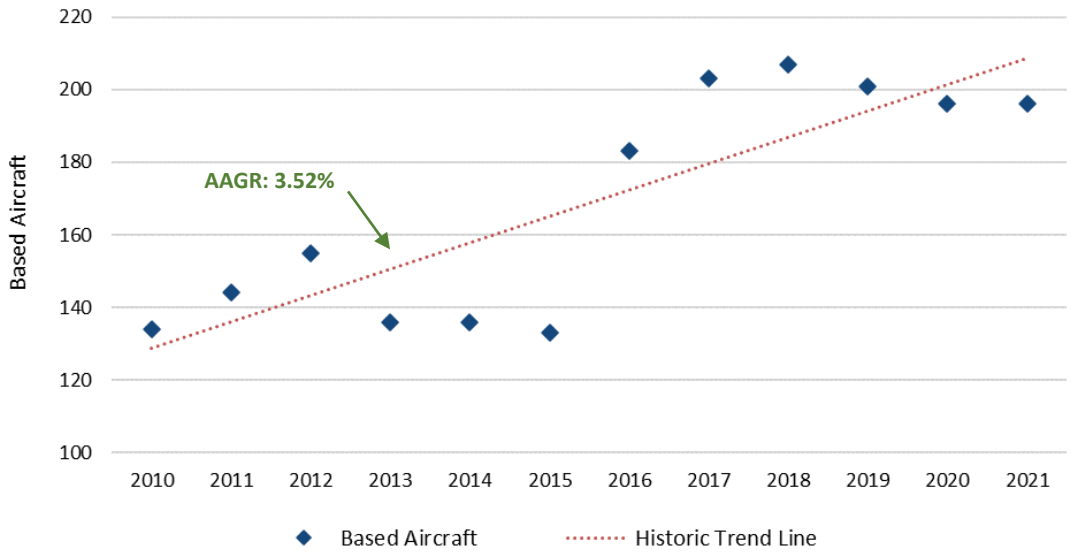
## Aircraft Activity

Aircraft operations and flight activity at the Atlanta Regional Airport - Falcon Field consists of general aviation and military operations. For purposes of this report, general aviation is considered to encompass charter and nonscheduled air taxi service in addition to operations by

corporate and general aviation aircraft.

**Based Aircraft:** The Atlanta Regional Airport - Falcon Field has seen the level of based aircraft fluctuate but increase overall in the past 15 years. At present, there are 196 based aircraft consisting of 161 single engine pistons, 29 multi-engine pistons, and 6 jets. Although the FAA Terminal Area Forecasts (TAF) report 201 based aircraft, both the FAA 5010 and basedaircraft.com report 196 based aircraft, so this count was used as the base year for forecasting. **Figure II.3** presents the historical levels of based aircraft at FFC.

### Figure II.3: FFC Historical Based Aircraft




***Sources:*** *WK Dickson Inventory Survey, April 2021; FAA APO-Terminal Area Forecast, January 2020*

**Operations:** An operation constitutes either a takeoff or a landing. A takeoff and a landing are two separate operations. Generally, accurate historic operational levels at non-towered airports are not available. Consequently, the FAA Form 5010, FAA APO-Terminal Area Forecast, and Georgia Statewide Aviation System Plan (GSASP) are reviewed for historical operations numbers; however, recently, the airport began collecting operations data through 1200.aero which tracks aircraft using Automatic Dependent Surveillance-Broadcast (ADS-B) technology. While the FAA TAF estimates 76,000 annual operations, the 5010 estimates 76,000 annual operations as well, and the 2018 GSASP estimates 71,500 operations, data from 1200.aero proves a significantly higher annual operations count. From the start of recording on April 3, 2021 through June 30, 2021, an average of 276 operations occurred daily. Please note, this average excludes 10 suspect days where operations were recorded incorrectly. For example, only 20 operations were recorded on April 21st; however, 502 operations were recorded on the following day, April 22nd. Additionally, in the month of September 2021, 1200.aero tracking provided

daily total operations that ranged between 250 and 400 operations per day. As such, airport management strongly believes the airport currently sees an average of 300 operations per day throughout the year, resulting in 109,500 annual operations. As additional support, airport management provided a letter estimating over 60,000 annual operations by the 51 most frequent operators, both based and itinerant. While some frequent operators do own multiple aircraft, this proves that are there significantly more itinerant operations than management has been able to record. Consequently, a count of 109,500 annual operations was used as the base year number for operations forecasts.

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# III. Aviation Demand Forecasts

Forecasts of aviation demand are an essential element in airport planning. Reflecting the desires and needs of the service area's population and economy, demand forecasts provide a basis for determining the type, size, and timing of aviation facility development. Consequently, these forecasts influence virtually all phases of the planning process.

Demand forecasts provide the basis for:

- Estimating the capacity of the airfield system
- Determining the role of the airport and the facilities required
- Estimating potential environmental impacts
- Evaluating the financial feasibility of the development program

## Methodology

There are two basic processes used in providing aviation demand forecasts, analytical and judgmental.

1. The analytical process examines past trends of aviation demand. It then uses these past trends to formulate projections using various techniques and assumptions.

2. The judgmental process requires experienced professional analysis. The various growth projections for each demand element are examined along with the demographics of the area. This information is used to formulate a subjective determination of the impact that the variables may have on the demand.

Forecasts of aviation demand are made using various methods including regression analysis, time-series extrapolations, market share analysis, and published FAA forecasts. The forecasts are presented in short – Interim (Stage I), Future (Stage II), and Ultimate (Stage III) term periods. For this report, 2021 was used as the base year.

The sources of data used for this chapter include:

- Airport Historical Data
- Atlanta Regional Airport - Falcon Field Study Area Population (See **Figure II.1**)
- FAA Terminal Area Forecasts (TAF)
- FAA Aerospace Forecast
- 2018 Georgia Statewide Aviation System Plan (GSASP)
- ADS-B Recorded Operations Data by 1200.aero

The goal is to provide forecasts for this facility considering the formulated trends, reflections of the current activity at the facility, and any environmental and industry changes.

## Aviation Activity

Below is an outline summary of the socioeconomic and operational environment within and around the Atlanta Regional Airport - Falcon Field:

### Economic Characteristics

- Located in Peachtree City, GA and sponsored by the Peachtree City Airport Authority.
- The most recent economic impact study of airports in Georgia completed in 2020 revealed that the Atlanta Regional Airport - Falcon Field has a direct annual economic impact of roughly $96,491,300 to the surrounding area.
- Major industries in the study area are transportation/warehousing, education services, retail trade, and management/office administration support. Some of the largest employers in the study area include Delta Airlines, Inc., Panasonic Automotive Systems Co., Eaton Lighting Solutions, and Yamaha Motor Company.
- According to the Georgia Department of Labor, the FFC study area had 893,723 employed persons with an unemployment rate of 7.5% in 2020.

### Study Area Demographic Characteristics

- The population of the study area is roughly 1,943,271 people as taken from analytics by the U.S. Census Bureau and has increased by roughly 38% in the last twenty years (See **Figure II.1**). This provides an Average Annual Growth Rate (AAGR) of 1.96%.
- The estimated median age in the study area is 36, and approximately 33.4% of the population has a bachelor's degree or higher. There are roughly 6,471 active registered pilots within the study area.
- All six counties within the study are considered urban, as opposed to rural, according to the Georgia Department of Community Health's State Office of Rural Health.
- Fayette County had the highest median household income within the study area with $90,145 in 2019 dollars, while Spalding County had the lowest at $47,111.

### Geographic Attributes

- The Atlanta Regional Airport - Falcon Field is 10 nautical miles east of the Newnan Coweta County Airport (CCO), 12 nautical miles west of the Atlanta Speedway Airport (HMP), 17 nautical miles northwest of the Griffin-Spalding County Airport (6A2), and 18 nautical miles southwest of the Hartsfield - Jackson Atlanta International Airport (ATL).
- The airport is approximately ten statute miles east of I-85, a major roadway through the entire southeast United States.

The Atlanta Regional Airport - Falcon Field (FFC) is a general aviation airport. General aviation operations account for a vast majority of the operations at the facility. The remaining operations

consist of air taxi/commuter and military operations. Due to general aviation operations being the majority, the forecasts presented here assumed that all operations are general aviation. Several aspects of general aviation have an impact on the projected demand levels, including:

- Based Aircraft (total number and type of aircraft)
- General Aviation operations
- Airport services available
- Available approaches and minima

Through an inventory of operations, jets are operated by variety of both based and itinerant businesses users. Because of the proximity to Atlanta and the film industry, the airport sees a significant number of charter flights. Outside of the charters, multiple large companies, like Chick-Fil-A, base their aircraft at FFC. Additionally, the airport is home to four maintenance facilities as well as one paint shop; all see a wide variety of aircraft, from small Cessnas to large Bombardiers, operating throughout the year. **Table III.1** details an estimate of annual operations from the most significant operators as provided by management (full estimate provided in **Appendix A**).

**Table III.1: Frequent Operators at FFC**

| Operator | Aircraft Type | Estimated Annual Operations |
|---|---|---|
| Chick-Fil-A | Cessna Citation CJ4 | 120 |
| S&H Aviation | Gulfstream 400 | 240 |
| Home Grown Industries | Hawker 850 | 240 |
| JERAB, LLC | Citation V | 310 |
| Z Magic Carpet, LLC | Gulfstream 400 | 310 |
| Delta Private Jets | Various Midsize Jets | 360 |
| NetJets | Various Midsize Jets | 360 |
| Trilith Studios | Various, like Global 5000 | 120 |
| Stalwart Films | Various, like Hawker 850 | 96 |
| WarDaddy Aviation | Various, like Challenger 600 | 1,200 |
| Straube Paint Shop | Various, like Challenger 300 | 240 |

Additionally, four flight schools (FLYT Aviation, Academy of Aviation, ATP, and Sorenson Aviation) operate at FFC with a variety of courses and small piston aircraft. FFC is home to the Commemorative Air Force - Airbase Georgia, which restores and preserves combat aircraft.

## National Aviation Overview


Published annually by the Federal Aviation Administration (FAA), the *FAA Aerospace Forecast: Fiscal Years 2020-2040* is an important guide for projecting aviation operations and based aircraft. The Aerospace Forecast presents national trends in aviation demand over the forecast period based on economic conditions, historical trends, and international economic and aviation projections.

The Aerospace Forecast indicates that the previous slow increase in rotorcraft deliveries improved in both piston and turbine segments in 2019 (FAA 24), the total active general aviation fleet is projected to remain stable and the general aviation hours flown is expected to increase through 2040. Most of the increase in general aviation hours flown will occur in the business jet fleet with a slight decrease in the fixed-wing piston-engine fleet (FAA 26). The active general aviation fleet is projected to remain stable over the forecast period. The declines in the fixed-wing piston fleet are expected to be offset by increases in the turbine-powered fleet (including rotorcraft), growing at an average rate of 1.8% a year over the forecasting period for the turbine-powered fleet. Further analysis indicates that the turbojet fleet is expected to increase 2.3% a year. The growth in U.S. GDP and corporate profits are catalysts for this growth (FAA 25).

An average annual rate decrease of -1.0% is forecasted through 2040 for the fixed-wing piston aircraft fleet. Unfavorable pilot demographics, overall increasing cost of aircraft ownership, coupled with new aircraft deliveries not keeping pace with retirements of the aging fleet are the drivers of the decline. However, large growth in the light-sport-aircraft market of 3.4% growth annually is expected through 2040 (FAA 25). Overall, the number of active general aviation pilots is expected to decrease 0.2% per year over the forecast period, excluding students and ATPs.

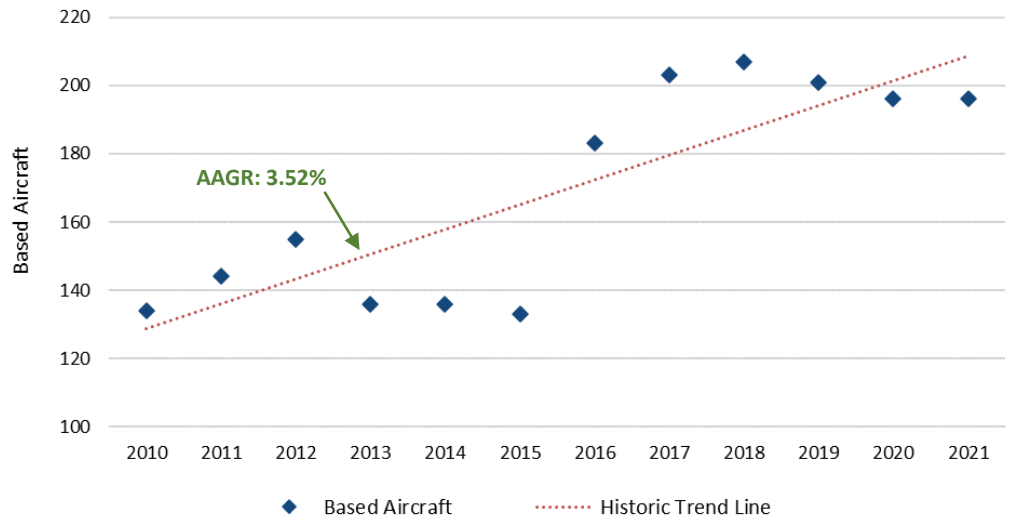
The number of general aviation flight hours is expected to increase an average of 0.7% per year over the forecast period. This increase will be fueled by a 2.7% increase in hours flown by jet aircraft and supported by the expected strong growth in the turbine-powered fleet (FAA 26).

The National Aerospace Forecast is considered when developing demand forecasts for the Atlanta Regional Airport - Falcon Field (FFC). As a general aviation facility, the airport could experience growth and contraction like those projected on the national scale.

## Based Aircraft

The level of based aircraft at the Atlanta Regional Airport - Falcon Field has shown a steady increase over the last decade. Basedaircraft.com records validate 196 aircraft based at the airport as of April 2021. Please note, there are significant fluctuations in the historic record of based aircraft, especially between 2003 and 2009. It is suspected that this is due to reporting issues and the incorporation of www.basedaircraft.com for the official reporting location in recent years; however, this count of 196 based aircraft was used as the base year for forecasting as it concurs with the FAA 5010 count and is similar to the FAA TAF count of 201. Additionally, basedaircraft.com is the most reliable reporting method as it came be updated at any time by airport management. The trend of based aircraft at FFC saw an increase of 46.3% since 2010. The population of the study area (Clayton, Coweta, Fayette, Fulton, Henry, and Spalding Counties) has increased by 15.5% during this same period. The ensuing discussions consider this and other factors in the formulation of based aircraft and operations forecasts.

### Figure II.3: FFC Historical Based Aircraft (Repeated Figure)




***Sources:*** *WK Dickson Inventory Survey, April 2021; FAA APO-Terminal Area Forecast, January 2020*

Several methods were used to develop projections of based aircraft at FFC, including:

- Market Share – analysis with respect to the FAA Southern Region general aviation fleet
- Simple Linear Regression with respect to time
- Multiple Linear Regression with respect to time and population
- 2018 Georgia Statewide Aviation System Plan (GSASP)

These methods are important for forecasting future based aircraft at FFC. The preferred methodology will be chosen and will guide future development decisions at the airport. A brief

discussion of each methodology is provided.

### Market Share Analysis

The Market Share method examines the Atlanta Regional Airport - Falcon Field's current based aircraft levels as a share of the FAA Southern Region general aviation fleet as calculated in the FAA's Terminal Area Forecast. The current 2021 market share for FFC projected through the planning period reveals a total of **232 based aircraft** by 2041. This represents a 0.85% AAGR.

### Simple Linear Regression

Historical levels of based aircraft versus time series is one of the simplest and most widely accepted methods of forecasting aviation demand. This process assumes a linear relationship between variables. Regression analysis then analyzes this linear relationship and produces projections based on it. Applying this relationship to the historical data from 2001-2021 taken from the FAA's Terminal Area Forecast results in a projected level of **253 based aircraft** by 2041, reflecting a 1.28% AAGR.

### Multiple Linear Regression

Multiple Linear Regression is used when forecasting with multiple factors. In the case of the Atlanta Regional Airport - Falcon Field, multiple linear regression was used to analyze any relationship between based aircraft, time, and the study area's population. It is thought that population correlates to the number of pilots and ultimately the number of potential based aircraft. Historical and future populations of the study area through 2041 were obtained from the Texas A&M Real Estate Research Center (TAMU) and the Georgia Governor's Office of Planning and Budget. The based aircraft forecast formulated using multiple linear regression resulted in **265 based aircraft** in 2041. The annual growth rate is 1.53%. With projections from the State forecasting the significant increase in population to continue, the regression line increases at a higher rate than in the Simple Linear Regression method. This forecast scenario is reasonable.

### 2018 Georgia Statewide Aviation System Plan (GSASP) Forecast

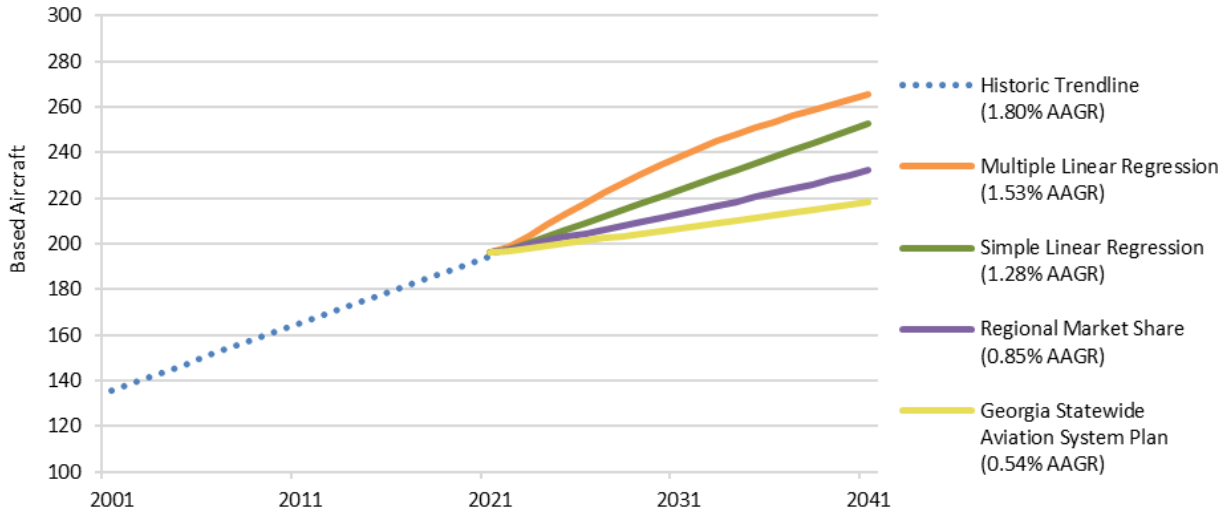
Projections for the Atlanta Regional Airport - Falcon Field in the Georgia Department of Transportation forecasts from the 2018 GSASP were examined. The GSASP forecast projects based aircraft for FFC in 5-year increments through 2035 with a projected 0.54% AAGR. Applying this rate to the current number of 196 based aircraft yields an estimated **218 based aircraft** in 2041.

### Preferred Forecast Methodology

The Multiple Linear Regression forecast provides the preferred planning methodology. In discussions with airport management and consideration of all available data, it's 1.53% AAGR was determined to be the most reliable growth trend available. It is expected that aviation activity will recover from the recent industry-wide travel anomaly cause by the COVID-19 pandemic and continue to grow. The growth of 20 based aircraft from 2009 to 2019 following the 2008 recession proves the reasonableness of expecting a growth trend to continue throughout the

20-year planning period and reach **265 based aircraft** by 2041. **Figure III.2** gives a visual representation of the 20-year historic trend line compared to the forecasts yielded by each of the forecast methodologies. As can be seen, the Multiple Linear Regression methodology yields a reasonable forecast that factors the historic growth trend experienced over the past 20 years with the population growth of the Atlanta Metropolitan Area. Therefore, the Multiple Linear Regression methodology has been chosen as the preferred methodology.

**Figure III.2: Forecast Methodology Line Chart**




The Federal Aviation Administration's 2020 Terminal Area Forecast (TAF) was used only to compare various forecast methodologies to the TAF for the Atlanta Regional Airport - Falcon Field after being reset to the April 2021 inventory. The FAA TAF forecasts the level of based aircraft for FFC to be 183 in 2041. This projects a sharp increase, growing 35.4% from the currently provided 196 aircraft based at FFC.

The TAF data provided for non-towered general aviation airports does not take into consideration forecasted trends of based aircraft revealed in the state, regional, and national TAF data. Industry standards are to utilize a preferred forecast methodology from all the forecast methodologies used and utilize the TAF future year data only for comparison purposes.

As can be seen in **Table III.2**, it is observed that the based aircraft for the TAF and all other methodologies reflect the current based aircraft count for the base year as given by airport management. Previous variations from the TAF can be supported by the numerous factors that influence aviation activity as previously discussed in this chapter and the lack of variation in forecasted based aircraft provided by the TAF.

### Table III.2: Forecasted Based Aircraft

| Year | FAA TAF[1] | Regional Market Share | Simple Linear Regession | Multiple Linear Regression | GSASP Forecast | Airport Forecast/TAF (% Difference) |
|---|---|---|---|---|---|---|
| 2021[2] | 196 | 196 | 196 | 196 | 196 | 0.0% |
| 2026 | 196 | 203 | 209 | 218 | 201 | 11.2% |
| 2031 | 196 | 211 | 223 | 238 | 207 | 21.6% |
| 2036 | 196 | 220 | 238 | 254 | 212 | 29.4% |
| 2041 | 196 | 232 | 253 | 265 | 218 | 35.4% |
| AAGR | - | 0.85% | 1.28% | 1.53% | 0.54% | - |

[1] *For Comparison Purposes Only* [2] *Year 2021 from April 2021 Inventory*

## Based Aircraft by Type

The current fleet mix at FFC and the Federal Aviation Administration's Aerospace Forecast for Fiscal Years 2020-2040 were utilized to project the planning period mix of aircraft fleet based at the airport. The projected national general aviation fleet mix through 2040 was factored with the current mix. Aircraft types projected as a range of percentages of the total fleet applied:

- Single Engine – 82%→76%
- Multi-Engine Propeller (piston and turbine) –15%
- Jet – 3%→7%
- Rotorcraft – 0%→1%
- Other (gliders, ultralight/lighter-than-air, etc.) – 0%→1%

In the case of the Atlanta Regional Airport - Falcon Field, a projection of the current fleet mix with consideration to the trend of the national fleet mix normally provides the best indication of future aircraft types. It is expected that the jet mix will grow at a higher rate over the planning period to align closer to the national fleet mix ratio (10%) expected at a general aviation facility like Atlanta Regional Airport - Falcon Field. Transient aircraft operations recorded by airport management in 2021 indicate numerous operations by small- to mid-size jets. It is likely that single-engine based aircraft would continue to maintain the predominant share of the airport's market and that jet aircraft at FFC would be more in line with the national fleet mix trends. Consequently, the expected based jet total will increase over the 20-year planning period. **Table III.3** reflects this scenario in the potential fleet mix.

### Table III.3: Projected Fleet Mix

| Year | Single Engine (82%→76%) | Multi Engine (15%) | Jet (3%→7%) | Rotor (0%→1%) | Other (0%→1%) | Total |
|---|---|---|---|---|---|---|
| 2021 | 161 | 29 | 6 | 0 | 0 | 196 |
| 2026 | 175 | 32 | 10 | 1 | 0 | 218 |
| 2031 | 186 | 35 | 14 | 2 | 1 | 238 |
| 2036 | 195 | 38 | 17 | 2 | 1 | 254 |
| 2041 | 201 | 40 | 19 | 3 | 2 | 265 |
| AAGR | 1.13% | 1.62% | 5.93% | - | - | 1.53% |

## Operations

Like the methodology used in developing the based aircraft forecast, the projections for aircraft operations were prepared. The methods considered include market share, operations per based aircraft, and extrapolations from GSASP forecasts. Operations were projected utilizing existing fleet mix, FAA fleet projections, and airport management observations.

The FAA's 2021 Terminal Area Forecast (TAF) is used in this forecast effort as a record of historic and current operations. For FFC, the TAF estimates 76,000 annual operations in 2021 and shows no increases or decreases throughout the forecast period. With the support provided by 1200.aero tracking, airport management strongly believes this estimate is lower than the actual operations counts realized and is 109,500 operations per year, equating to 300 operations per day. To support this, monitoring operations in the month of September 2021, 1200.aero tracking provided daily total operations that ranged between 250 and 400 operations per day. This will be used as the base year operations level for all forecast methodologies and carried throughout the planning period for the TAF forecast.

### Market Share Analysis

The Market Share method examines the Atlanta Regional Airport - Falcon Field's operations levels as a share of the Southern Region operations total as calculated in the FAA's Terminal Area Forecast. The current 2021 market share for FFC projected through the planning period reveals a total of **122,055 operations** by 2041. This represents a 0.54% AAGR.

### Operations per Based Aircraft Method

Forecasting operations as a factor of the number of aircraft based at the airport is one of the most effective methods of projecting levels of general aviation operations. Dividing a historic given year's operations by based aircraft reveals the Operations Per Based Aircraft (OPBA) for that year. Calculating the OPBA from 2021 reveals a total of 288 OPBA. FAA Order 5090.5 *Formulation of the National Plan of Integrated Airport Systems (NPIAS) and the Airports Capital Improvement Plan (ACIP)* provides guidance that busier general aviation airports might have 350 operations per based aircraft. FFC can confidently be considered a busier general aviation airport; this indicates that FFC has a near-average ratio of operations per based aircraft. Multiplying the existing 388 OPBA value by the forecasted based aircraft of 265 in 2041 reveals a forecasted **148,401 operations** in 2041. This represents an AAGR of 1.53%.

### 2018 Georgia Statewide Aviation System Plan (GSASP) Forecasts

In the year 2018, the Georgia Department of Transportation performed a statewide system plan study that provided forecast operations for the state's airports projected through the year 2026. The forecasts were completed under economic and demographic considerations at the time of the study. The projections for the Atlanta Regional Airport - Falcon Field were reviewed as part of this forecasting effort. Total operations for FFC through the year 2035 depicted a 0.54% AAGR. Applying this trend to the 2021 base year operations of 109,500 through the forecast horizon

results in an annual operations forecast of approximately **121,953** in 2041.

## Preferred Forecast Methodology

The Operations per Based Aircraft forecast provides the preferred planning methodology. In discussions with airport management and consideration of all available data it's 1.53% AAGR was determined to be the most reliable growth trend available. Based on these discussions about observations at the airport, it is reasonable to expect the forecasted growth trend in based aircraft to apply to a growth trend in operations and reach **148,401 operations** by 2041. This forecast method yields **Table III.4** illustrates the operations forecasts for each 5-year interval of the 20-year planning horizon for comparison.

### Table III.4: Forecasted Annual Operations

| Year | FAA TAF | Regional Market Share | GSASP Forecast | Operations Per Based Aircraft Method | Airport Forecast/TAF (% Difference) |
|---|---|---|---|---|---|
| 2021[1] | 109,500 | 109,500 | 109,500 | 109,500 | 0.0% |
| 2026 | 109,500 | 115,032 | 112,489 | 121,851 | 11.3% |
| 2031 | 109,500 | 117,243 | 115,559 | 133,236 | 21.7% |
| 2036 | 109,500 | 119,576 | 118,713 | 141,777 | 29.5% |
| 2041 | 109,500 | 122,055 | 121,953 | 148,401 | 35.5% |
| **AAGR** | - | 0.54% | 0.54% | 1.53% | - |

[1] *Operations Estimate from Airport Management and 1200.aero*

The FAA TAF forecasted the level of operations for FFC to be 76,000 from 2019 through 2041; however, the flatlined estimate was reset to match the base year operations used for these forecasts. It is observed that the operations vary from the reset FAA Terminal Area Forecast (TAF) by 35.5% in 2041. This variation from the TAF can be explained by the flatlined estimates provided by the TAF for 2019 and beyond coupled with the historic growth with consideration of the market population growth reflects an on-going positive trend.

## Operations by Type

For planning forecasts to be more meaningful in planning future developments, it is useful to provide a description of future operations by aircraft type. Projecting operations by aircraft type allows more precise estimates of hangar needs, transient apron space, and other facility needs. Further analysis of operations by type can also aid in determining airfield capacity and constraints which, in turn, dictate a need for development and enhancements to mitigate capacity issues.

A based-aircraft ratio was used to determine operations percentages by aircraft type. The range of percentages used are shown at the top of each column in **Table III.5**. Although the total number of jet operations at the Atlanta Regional Airport - Falcon Field represents a relatively small amount of the total activity, it is an important number by itself due to the facilities

demanded by jet aircraft. At a facility like FFC, the largest jet regularly operating there typically becomes the critical aircraft. **Table III.5** describes projected operations through the 20-year planning period by aircraft type.

**Table III.5: Projected Annual Operations by Type**

| Year | Single Engine (78%→72%) | Multi Engine (14%→15%) | Jet (5%→9%) | Rotor (2%→3%) | Other (1%) | Total |
|---|---|---|---|---|---|---|
| 2021 | 85,410 | 15,330 | 5,475 | 2,190 | 1,095 | 109,500 |
| 2026 | 93,520 | 17,364 | 7,311 | 2,437 | 1,219 | 121,851 |
| 2031 | 99,261 | 19,319 | 9,327 | 3,997 | 1,332 | 133,236 |
| 2036 | 103,852 | 20,912 | 11,342 | 4,253 | 1,418 | 141,777 |
| 2041 | 106,849 | 22,260 | 13,356 | 4,452 | 1,484 | 148,401 |
| AAGR | 1.13% | 1.88% | 4.56% | 3.61% | 2.83% | 1.53% |

As **Table III.5** suggests, single engine aircraft will remain dominant in operational activity at the airport with jet aircraft increasing steadily over the planning period. The base year estimate and forecasts are developed based on FAA TAF data and airport management observations.

## Critical Aircraft

**Existing Critical Aircraft Determination:** Per AC 150/5000-17, Critical Aircraft and Regular Use Determination, "[t]he critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport. Regular use is 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing." At FFC, The C-II Runway Design Code (RDC) was established by review of the FAA Traffic Flow Management System Counts (TFMSC), as well as ADS-B data recorded by 1200.aero. Please note that while the airport sees close to 110,000 operations annually, only 6,770 operations were recorded by TFMSC (less than 7%). Approximately 7 months of ADS-B data were used to supplement the TFMSC, though collection was inconsistent throughout the collection period due to new system implementation. Discussions with FFC management also revealed that they regularly observe operations of larger than C-II aircraft.

Airport management provided an estimate of annual operations by frequent operators, both based and itinerant, which is provided at the end of this report in **Appendix A**. Some of the aircraft they have routinely observed in operation are Hawker 850, Citation V, and multiple Gulfstream 400's. Airport management confirmed additional operations of these larger aircraft than what the recorded TFMSC and ADS-B data report. Therefore, it is recommended that this critical aircraft discussion be revisited in one year, when more supporting data may confirm the observed larger aircraft operations, potentially revising the choice of the critical aircraft group. At this time, data sources suggest that the Hawker 125-800 is the most predominant operating C-II aircraft at the airport and has therefore been selected as the existing representative model for

this critical aircraft group.

The AAC 'C' grouping of aircraft is further supported by the Challenger 300/600, Citation II, Citation X, and Learjet 45/60 that are both regularly captured by TFMSC. A substantial amount of ADG 'II' aircraft both operate and are based at the airfield, including a Cessna CJ4, Citation Ultra, and the two based Gulfstream 400s. While the TFMSC data does not capture all operations at the airport, it can be used as a profile of aircraft operating at the facility at any given time. In 2019, the TFMSC recorded 1,558 operations by ADG 'II' aircraft. A profile detailing the fleet mix breakdown by Aircraft Approach Category and Aircraft Design Group from the 2019 TFMSC at FFC can be found in **Table III.6**.

**Table III.6: TFMSC Fleet Mix at FFC from 01/2019 to 12/2019**

| | AAC + ADG | Recorded Annual Operations |
|---|---|---|
| **Total Operations** | - | **6,770** |
| **Subtotals by AAC** | A | 4,294 |
| | B | 1,832 |
| | C | 476 |
| | D | 168 |
| **Subtotals by ADG** | I | 5,122 |
| | II | 1,558 |
| | III | 76 |
| | IV | 14 |
| | No Data | 586 |

***Sources:*** *Traffic Flow Management System Counts (TFMSC)*

The 2021 recorded ADS-B data are annualized and summarized in **Table III.7**. ADS-B data are collected through a GPS-based system on board aircraft that communicates with satellites and ground-station receivers. 232 days of data beginning in April 2021 yield annual projections. Total projected annual operations are 14,037 with categorized (B-I and larger aircraft) operations at 3,173 (23%). 81% of 'C' group operations are C-II aircraft, contributing to 618 projected annual operations from C-II or larger aircraft. Results suggest that the operations of group 'C' and 'D' trend towards C-II and larger aircraft.

**Table III.7: ADS-B Recorded Operations at FFC from 04/2021 to 11/2021**

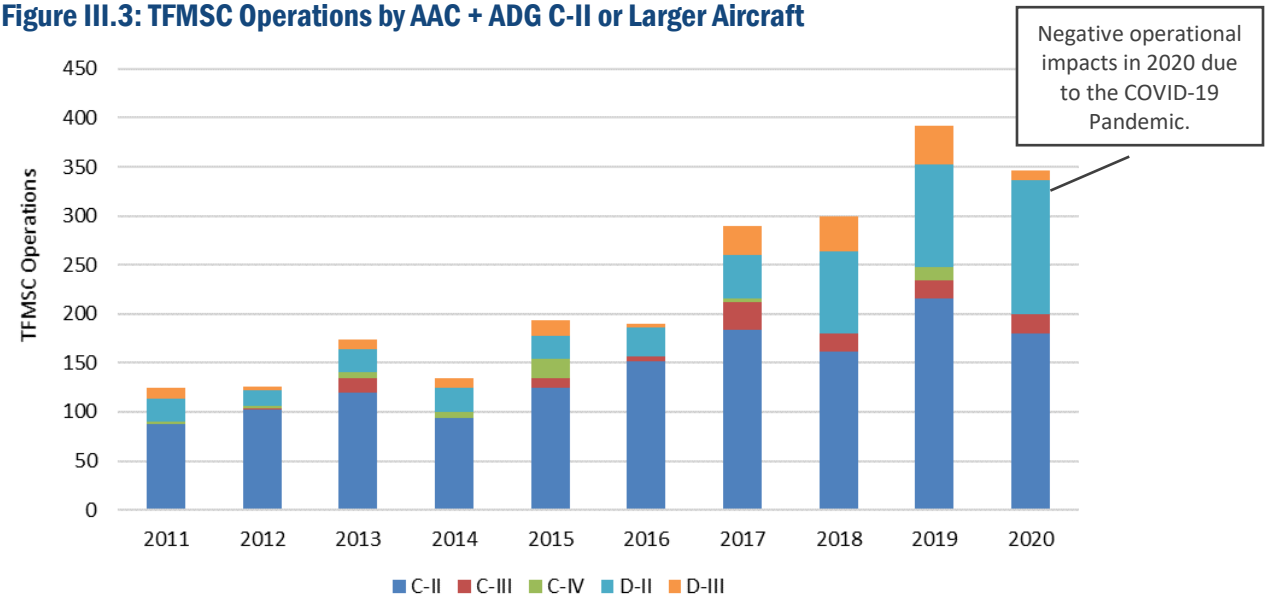
| | AAC + ADG | Recorded Operations | Recorded Annualized Operations |
|---|---|---|---|
| **Total Operations** | - | **8,922** | **14,037** |
| **Subtotals by AAC** | A | - | - |
| | B | 1,567 | 2,465 |
| | C | 303 | 477 |
| | D | 147 | 231 |
| **Subtotals by ADG** | I | 670 | 1,054 |
| | II | 1,310 | 2,061 |
| | III | 37 | 58 |
| | IV | - | - |
| | No Data | 6,905 | 10,863 |

***Sources:*** *1200.aero*

Both datasets exhibit similar proportions of C-II or larger aircraft operations versus total aircraft operations (5% and 4%, respectively). However, the 2019 TFMSC data report shows that 16% of categorized aircraft are C-II or larger, while our analysis of the ADS-B projections attributes at least 20% of 2021 operations to C-II or larger aircraft.

**Future and Ultimate Critical Aircraft:** Along with the airport's proven demand to accommodate large aircraft and the ADS-B projections, TFMSC from 2011 through 2020 reveals an upward trend in operations by C-II or larger aircraft. It is reasonable to expect the primary operators at FFC to upgrade their aircraft, likely to a Gulfstream 650 or similar aircraft, as well as new operators to move and begin basing their similar aircraft at the airport due to its location in the Atlanta Metropolitan Area. With this information, it is projected that in an interim stage, the critical aircraft will shift to a D-II represented by the Gulfstream V/550. Ultimately, given the growth trend in AAC "D" classification aircraft operating at FFC, it is reasonable to expect the Gulfstream VI/G650 to become the representative critical aircraft for the D-III RDC in the Ultimate (Stage III). Although these changes in critical aircraft are proposed in the interim and ultimate Stages, it is recommended that airport management closely monitor activity by any D class or similar aircraft throughout the planning period to help justify these proposed changes. The upward trend by larger aircraft (C-II or larger) can be seen by the trend in **Figure III.3**. Although a drop in annual operations can be seen in 2020, this can be explained by the effects of the COVID-19 Pandemic on the aviation industry. It should be noted that FFC only saw an 11.7% decrease in C-II or larger aircraft between 2019 to 2020, which proves operators' desires to operate at FFC as opposed to similar airports which saw a much more substantial decrease.

### Figure III.3: TFMSC Operations by AAC + ADG C-II or Larger Aircraft




***Source:*** *Traffic Flow Management System Counts (TFMSC)*

## Local/Itinerant Split

The current operational split from 2021 finds that 40% of flights are itinerant operations (operations that either begin or end at an airport other than the Atlanta Regional Airport - Falcon Field) and 60% of flights are local operations. This estimated operational split was based on the FAA Terminal Area Forecast and adjusted to reflect a higher volume of local operations observed by airport management. Percentages for operations by type were derived from the operational split reflected in the 2021 Terminal Area Forecast data. Both ratios were applied to the future operations. While the total based aircraft count is expected to increase to 265 by 2041, the itinerant/local operational split is expected to remain constant despite any fluctuations in based aircraft types. **Table III.8** illustrates the projected future traffic split with further breakdown by type of itinerant operation.

### Table III.8: Projected Itinerant and Local Traffic

| Year | Itinerant Operations | | | Local Operations | | Total |
|---|---|---|---|---|---|---|
| | General Aviation | Military | Total | Civil | Total | |
| 2021 | 43,300 | 500 | 43,800 | 65,700 | 65,700 | 109,500 |
| 2026 | 48,240 | 500 | 48,740 | 73,110 | 73,110 | 121,851 |
| 2031 | 52,794 | 500 | 53,294 | 79,942 | 79,942 | 133,236 |
| 2036 | 56,211 | 500 | 56,711 | 85,066 | 85,066 | 141,777 |
| 2041 | 58,860 | 500 | 59,360 | 89,041 | 89,041 | 148,401 |

***Note:*** *Itinerant/Local split was determined by TAF estimates and historical observations by airport management.*

## Peak Traffic Factors

Determination of the peaking factors is vital in assessing capacity and delay that result from the airport's runway capacity versus the number of projected operations on a "design day" and during a "peak hour." A design day is described as the activity level occurring during the average day of operations. The peak hour is the activity occurring during the average busiest hour of the design day.

In order to find the design day, visibility minimums must be analyzed to establish the number of days an airport will be open each year. The total operations for a forecasted year are then divided by the days an airport is expected to be open to divide all operations evenly amongst the open days. Historical data on weather, in terms of ceiling and visibility, indicates that FFC will experience weather conditions below basic VFR minimums (when visibility is less than 3 miles, and the cloud ceiling is less than 1,000 feet) approximately 7.8% of the year (28 days). The Atlanta Regional Airport - Falcon Field has navigational aids that enable it to remain open under instrument conditions to minima that include a cloud ceiling of 252 feet and visibility of ¾ mile. This is allowed with the use of a published precision GPS (RNAV) LPV approach to Runway 31. With this navigational aid, the facility is closed an estimated 6.0% (22 days) per year due to weather conditions. Additionally, the design day resulting operations are increased by 10% for potential daily fluctuations. Further discussion of these planned approach improvements can be found in **Chapter V**.

Typically, the Peak Hour accounts for approximately 20 percent of the Design Day's traffic that represents the peak hour that is above average in an established design day. This ratio was developed by the consultant from a large sample of over 50 general aviation airports in the southeastern United States over a 15-year period, thus establishing a coefficient used for this calculation. Based on this factor and the approach minima, the design day for the Atlanta Regional Airport - Falcon Field is based on 343 days per year improving to 348 days per year over the planning period. Application of the ratios for Design Day and Peak Hour to the projected operations results in the findings presented in **Table III.9**.

### Table III.9: Design Day/Peak Hour

| Year | Operations | Design Day | Peak Hour |
|---|---|---|---|
| 2021 | 109,500 | 351 | 70 |
| 2026 | 121,851 | 385 | 77 |
| 2031 | 133,236 | 421 | 84 |
| 2036 | 141,777 | 448 | 90 |
| 2041 | 148,401 | 469 | 94 |

***Notes:*** *Design Day totals are based on 343 improving to 348 days per year (Stages I-III), adjustment for weather/approach limitations, plus 10% for daily fluctuations. Peak Hour accounts for about 20% of Design Day totals.*

The design day and peak hour will be used in future chapters of this report to help project the facility requirement demand over the planning period. This includes the demand on the runway and taxiway system as well as the terminal area facilities such as the terminal building and apron.

## Instrument Operations

Annual instrument operations conditions were determined based upon meteorological data reported and recorded for Atlanta, GA over a 20-year period. As previously mentioned, the use of a currently published Instrument Flight Rules (IFR) approach at FFC reduces the closing of the airport due to weather to approximately 6% of the year.

Examining operations data from calendar years 2018 and 2019 in the FAA Traffic Flow Management System Counts (TFMSC) reveals a total of 6,002 and 6,586 recorded operations respectively at the Atlanta Regional Airport - Falcon Field. TFMSC include data for flights that fly under Instrument Flight Rules (IFR) and are captured by the FAA's enroute computers. Most VFR and some non-enroute IFR traffic are excluded. The data represents a small portion of the total operations in any given calendar year since it is only a record of filed flight plans and VFR flight following requests. A large portion of IFR operations were not accounted for to FFC in that often, IFR flight plans are cancelled in the air when the pilot has the airport in sight. In this case, an IFR operation is no longer recorded and counted for that airport. Furthermore, if a pilot begins their IFR flight plan after departing the airport enroute, it does not count as an operation departing that airport. Consequently, the TFMSC data is used as a profile of aircraft operating at the facility and are considered only as a portion of instrument operations.

Given the expected annual operations at the end of the 20-year planning period and the planned improvement of approach minimums, the forecasted instrument operations at FFC in IFR conditions may reach 4,635. **Table III.10** depicts the forecasted operations in IFR conditions during the planning period. It is expected that approved approach minima will increase the use of instrument approaches. Actual instrument operations at the airport may be higher than that shown as instrument operations can also occur during VFR conditions. The FAA Report, "Ceiling-Visibility Climatological Study" of 1975 was used to determine the historical percentage of time that IFR conditions exist at FFC.

### Table III.10: Operations During IFR Conditions

| Year | Total Operations | % Instrument | Estimated Operations in IFR Conditions |
|---|---|---|---|
| 2021 | 109,500 | 7.8% | 4,271 |
| 2026 | 121,851 | 7.8% | 4,752 |
| 2031 | 133,236 | 9.0% | 5,996 |
| 2036 | 141,777 | 9.0% | 6,380 |
| 2041 | 148,401 | 9.0% | 6,678 |

## Summary of Operational Activity

The Multiple Linear Regression forecast is the preferred scenario for based aircraft and the Operations Per Based Aircraft forecast is the preferred scenario for operations and are used throughout the remainder of this study. Although these are the most aggressive methods presented, each are considered reasonable due to historical trends at the airport as shown in **Figure III.2**.

**Table III.11** provides a summary of annual aircraft activity expected at the Atlanta Regional Airport - Falcon Field during the next 20-year period.

### Table III.11: Aviation Activity Summary

| Year | Based Aircraft | | Operations | | | |
|---|---|---|---|---|---|---|
| | Total | Airport Forecast/TAF (% Difference) | Local | Itinerant | Total | Airport Forecast/TAF (% Difference) |
| 2021 | 196 | 0.0% | 60,225 | 49,275 | 109,500 | 0.0% |
| 2026 | 218 | 11.2% | 67,018 | 54,833 | 121,851 | 11.3% |
| 2031 | 238 | 21.6% | 73,280 | 59,956 | 133,236 | 21.7% |
| 2036 | 254 | 29.4% | 77,978 | 63,800 | 141,777 | 29.5% |
| 2041 | 265 | 35.4% | 81,620 | 66,780 | 148,401 | 35.5% |
| AAGR | 1.53% | - | 1.53% | 1.53% | 1.53% | - |

Based aircraft are expected to increase from 196 to 265 and operations are expected to increase from 109,500 to 148,401 over the 20-year planning period. It is observed that the based aircraft vary from the FAA Terminal Area Forecast (TAF) by 35.4 percent and the operations vary from the TAF by 35.5 percent in 2041. These variations can be considered nominal as the TAF is flatlined and does not consider factors that may affect local forecasts.

# IV. Meteorology and Capacity Analysis

## Meteorology

The weather an airport experiences is helpful in determining the necessary facility upgrades to ensure safe, efficient, and continuous operations. In some geographic areas, complete instrumentation is necessary to provide constant operation of the airport. In others, the type(s) of weather that necessitate an instrument landing system (or similar) are so infrequent that it does not justify the costs associated with equipment installation, operation, and maintenance.

According to records obtained from the National Climatic Center, the Atlanta Regional Airport - Falcon Field (FFC) will experience visual flight rules weather (VFR-ceiling >1,000 ft. and visibility ≥ 3 miles), approximately 86.2% of the year or 315 days. Using the navigational approach aid instruments available at FFC, the facility can remain open an additional 7.8% of the year (28 days), meaning that conditions are below minimums approximately 22 days per year or only 6% annually. It should be noted that this down time can be portions of a day or entire days, all totaling approximately 526 hours per year when weather at the facility is below the minimums.

## Wind Analysis

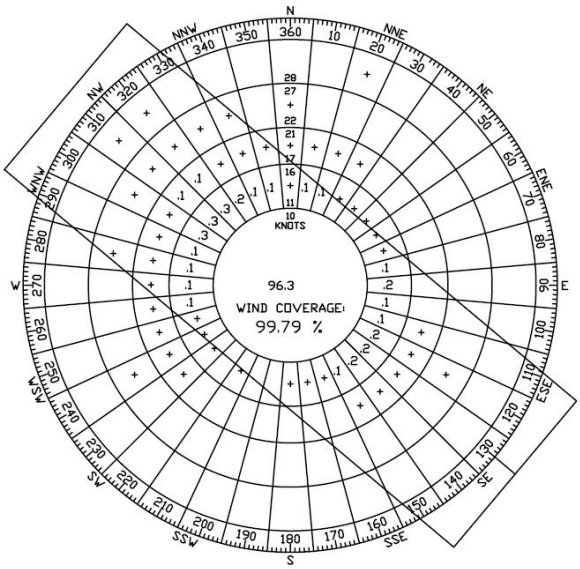
Runway wind coverage for aircraft is defined by the allowable or rated crosswind for the type of aircraft using the facility. If the airfield is utilized substantially by small aircraft, the critical crosswind component used is 10.5 knots. Where aircraft classified as larger than utility (generally weighing ≥ 12,500 pounds) are using the facility, a crosswind component of 13 knots is used. A facility that has large, heavy transport aircraft and large corporate jets are analyzed on a 16-knot crosswind component. Given that FFC is a facility that is designed for a critical aircraft of category C-II (mid to large size corporate jet or mid to large sized turbo propeller driven), it was analyzed with a crosswind component of 13 knots. If a runway does not provide at least 95 percent wind coverage, a crosswind runway may be required. **Table IV.1** presents a summary of the wind coverage for VFR, IFR, and all-weather conditions at 10.5, 13, and 16 knot crosswind components. **Figure IV.1** is for all weather operations, and **Figure IV.2** depicts the IFR wind rose.

### Table IV.1: Wind Tabulations

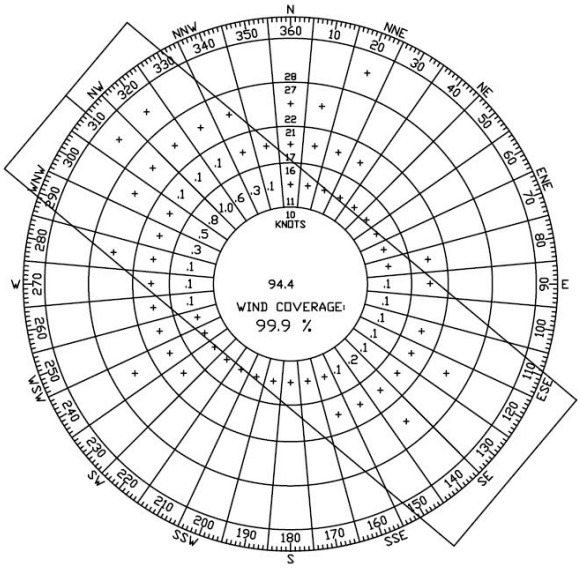
| Direction | All Weather | | | IFR (Day) | | | VFR (Day) | | |
|---|---|---|---|---|---|---|---|---|---|
| | 10.5 Knots/12 MPH | 13 Knots/15 MPH | 16 Knots/18 MPH | 10.5 Knots/12 MPH | 13 Knots/15 MPH | 16 Knots/18 MPH | 10.5 Knots/12 MPH | 13 Knots/15 MPH | 16 Knots/18 MPH |
| **13** | 69.53% | 69.59% | 69.61% | 77.51% | 77.59% | 77.61% | 67.56% | 67.61% | 67.63% |
| **31** | 73.61% | 73.77% | 73.84% | 59.63% | 59.84% | 59.96% | 76.79% | 76.93% | 76.98% |
| **Total Coverage** | 99.69% | 99.90% | 99.98% | 99.51% | 99.79% | 99.94% | 99.74% | 99.93% | 99.99% |
| **Not Covered** | 0.31% | 0.10% | 0.02% | 0.49% | 0.21% | 0.06% | 0.26% | 0.07% | 0.01% |

Source: NOAA National Centers for Environmental Information; Data for Falcon Field Airport, Peachtree City, GA 2011-2020.

### Figure IV.1: All Weather Windrose – 13 Knots




### Figure IV.2: IFR Windrose – 13 Knots




## Capacity

Airport capacity includes acceptance rates expressed as weighted operations per hour on the runway and taxiway components of a general aviation airfield. Operationally, the capacity of the entire airfield is governed by the capacity of the least efficient component. For the Atlanta Regional Airport - Falcon Field, runway and taxiway components will be considered, since the airport is not forecasted to be served by a scheduled commuter or major air carrier. An air carrier airport capacity could be governed by the apron/gate capacity. The projected aircraft mix for capacity at FFC is as follows:

| Class A & B | Class C |
|---|---|
| (<12,500 pounds) | (12,500-300,000 pounds) |
| 55% | 45% |

Although the Class "C" aircraft weight range is between 12,500 lbs. and 300,000 lbs., within the planning period, the heaviest aircraft expected at FFC generally will not weigh more than 101,000 lbs. on dual landing gear.

The capacity calculations for the Atlanta Regional Airport - Falcon Field incorporate the techniques of the most recent methodology prepared by the Federal Aviation Administration Systems Research and Development Services entitled *Airport Capacity and Delay*, AC-150/5060-5, dated 09/23/1983. Capacity, using this methodology, is defined as the maximum physical capacity of an airfield or any of list components (i.e., a saturation capacity).

The basic assumptions or conditions for determining capacity for this type of airport are as follows:

- The airport is used primarily by Class A and B aircraft (weighing less than 12,500 pounds);
- The airport is forecast to have increased use by Class "C" aircraft (weighing between 12,500 lbs. and 300,000 lbs.). However, this usage will be about 45% and with aircraft weighing less than 101,000 lbs.;
- The airport has an existing precision approach to Runway 31;
- The airport has GPS LPV WAAS approaches to Runway 13 and Runway 31;
- Arrivals equal departures; and
- There are no airspace limitations affecting runway use.

### Runway Component

The hourly capacity of the runway component is defined as the maximum number of aircraft operations that can occur on the runway within one hour.

### Taxiway Component

Calculation of the taxiway component is not applicable for the Atlanta Regional Airport - Falcon Field, since this capacity is a consideration only if they are continuously used with active crossing runways; in this case, they will not.

### Capacity of Gates

The apron gate component only considers the capacity of the air carrier parking apron. Since general aviation aircraft do not operate on a fixed schedule and scheduled air carrier operations are not expected at this facility, the capacity of the gates is not a consideration.

### Hourly Capacity - Airfield

The hourly capacity of the airfield is governed by the capacity of its constraining component. Since the runway is the only appropriate parameter, the hourly capacity of the airfield is governed by the capacity of the runway system.

## Annual Service Volume

Annual Service Volume (ASV) is a measure of the number of operations that may occur annually on the airport. The ASV considers various operating conditions (i.e., VFR, IFR, and period below IFR minimums), the hourly capacity of the runway component under those conditions, and peaking ratios. The actual annual capacity is determined by consulting the appropriate tables associated with the proposed conditions at the Atlanta Regional Airport - Falcon Field.

Those conditions are:

- A single runway configuration
- Departures equal landings
- Partial parallel taxiway with plans to complete full parallel taxiway in immediate future
- Apron located on west side of runway near midfield
- Touch and Go Operations up to 50 percent of local traffic operations
- Mix Index - A + B aircraft (weighing <12,500 pounds) = 55%; Class C aircraft (weighing > 12,500 pounds but < 300,000 pounds) = 45%
- Typical climate conditions: 86.2% VFR / 7.8% IFR / 6% below IFR minimums

The annual capacity is calculated by determining the hourly capacities for the runway configuration. For FFC, the percentage of maximum capacity the airport is in use (by VFR and IFR conditions) "P", the hourly capacity "C", and the Weighted Mix Index "W" are:

| | | |
|---|---|---|
| $P_1$ - VFR Conditions = 0.86 | $C_1$ - VFR Ops per Hour = 74 | $W_1$ - Weighted Index = 5 |
| $P_2$ - IFR Conditions = 0.08 | $C_2$ - IFR Ops per Hour = 57 | $W_2$ - Weight Index = 16 |
| $P_3$ - Below Minimums = 0.06 | $C_3$ - IFR Ops per Hour = 0 | $W_3$ - Weight Index = 16 |

To get the weighted hourly capacity "$C_W$":

$$C_W = \frac{(P_1 \times C_1 \times W_1) + (P_2 \times C_2 \times W_2) + (P_3 \times C_3 \times W_3)}{(P_1 \times W_1) + (P_2 \times W_2) + (P_3 \times W_3)}$$

Therefore:

$$C_W = \frac{(0.86 \times 74 \times 5) + (0.08 \times 57 \times 16) + (0.06 \times 0 \times 16)}{(0.86 \times 5) + (0.08 \times 16) + (0.06 \times 16)} = \frac{414.4}{6.3} = 65.7$$

Next, the weighted hourly capacity is applied to factors from typical daily demand and hourly ratios determined from appropriate tables:

Where:

ASV = $C_W$ x D x H; where
ASV = Annual Service Volume
$C_W$ = Weighted Hourly Capacity
D = Typical Daily Ratio
H = Typical Hourly Ratio

Therefore: ASV = 65.7 x 310 x 11 = 224,037

***Source:*** *C - VFR & C - IFR were derived from AC 150/5060-5, Figure 2-1*
*$C_W$ was calculated using AC 150/5060-5, Figure 3-3, Figure 3-43, and Table 3-1*
*D&H were derived from AC 150/5060-5, Table 3-2*

The annual service volume of the Atlanta Regional Airport - Falcon Field is expected to be approximately **224,037 annual operations** with an **hourly capacity of 74 operations VFR** and an **IFR hourly capacity of approximately 57 operations**, assuming proper control and suitable NAVAIDS.

### Capacity - vs - Operations

The forecast of operations presented in **Chapter III** indicates a level of approximately 148,401 annual operations by the year 2041. The capacity (Annual Service Volume) of the airfield configuration is calculated to be 224,037 annual operations. It is therefore evident that the airport, as currently configured, can physically accommodate the numbers of air traffic expected throughout the forecast period with proper instrumentation and facilities.

### Capacity of Roadway

The existing roads providing access to the Atlanta Regional Airport - Falcon Field, TDK Boulevard, Dividend Drive, and Falcon Drive are two lane roads traveling through a suburban district. These roads should provide capacity in excess of the demand to be generated by the airport.

The 2041 level of vehicles expected to use the access roads to the airport is approximately 160 (80 each direction) during the average "busy hour." This is significantly lower than the capacity of the road and should provide adequate access to the facility if adequate maintenance is provided. The capacity of an urban two-lane road is approximately 2,000 vehicles per hour, or 1,000 per hour in each direction.

The calculation for "busy hour" vehicles is as follows:

$$\frac{[A \times .4 + B] \times 1.5 \times 3.41}{2} = 161$$

Where:

A = 52
0.4 = Adjustment for touch and go (constant)
B = 42
2 = Operations converted to departures (constant)
3.41 = Average occupants per aircraft, per departure (constant)
1.5 = Average vehicle per enplaned passenger (constant)

# V. Facility Requirements

This chapter is the most critical element of the planning process since it identifies the need for facility improvements such as runway enhancements, taxiways, navigational aids, and buildings in order to adequately accommodate the expected demand during the 20-year planning period. Additionally, some projects identified herein are recommended in order to meet the objectives for each group development standards as identified by the *Georgia Statewide Aviation System Plan.* That plan identified the Atlanta Regional Airport - Falcon Field as a Level III airport and recommends the following major characteristics of that grouping working with and beyond the requirements of the FAA Design Guide AC 5300-13B (latest change) for the airport's Runway Design Code (RDC) classification:

| Development Category | Level III Objectives |
|---|---|
| **Runway Length** | 5,500 feet |
| **Runway Width** | 100 feet |
| **Taxiway** | Full parallel |
| **Approach** | Precision |
| **Runway Lighting** | HIRL for precision approaches |
| **Taxiway Lighting** | MITL |
| **NAVAIDS/Visual Aids** | Rotating beacon, segmented circled, wind cone, PAPIs |
| **Weather Reporting** | AWOS or ASOS |
| **Airfield Signage** | Runway hold position signs, location and guidance signs |
| **Fencing** | Entire airport |
| **Hangared Aircraft Storage** | 70% of based aircraft fleet |
| **Tie-downs** | 30% of based aircraft fleet plus an additional 75% for transient aircraft |
| **Terminal/Administration** | 2,500 square feet with restrooms, conference area, and pilot's lounge |
| **Auto Parking** | 1 space for each based aircraft plus an additional 50% for visitors/employees |
| **Fuel** | AvGas and Jet Fuel |
| **Fixed Based Operator (FBO)** | Full service |
| **Maintenance** | Full service |
| **Rental Cars** | Available |

These elements of airfield development must be viewed carefully since the recommendations contained herein have a direct effect on the budgeting and the ability of the airport management to handle the financial aspects of this plan's implementation.

The facility requirements presented in the following sections were developed with the basic assumption that existing facilities will remain serviceable. Should any facilities become unserviceable, that facility would be replaced in addition to the plan presented.

These facility requirements of the Atlanta Regional Airport - Falcon Field (FFC) have been developed for the various functional areas throughout the airport:

| Airfield | Other | Terminal Area |
|---|---|---|
| Runways/Taxiways | Fueling Facilities | GA Terminal and Hangars |
| Navigational Aids and Lighting | Fencing | Aircraft Parking Apron |
| Land Acquisition Needs | | Land Acquisition Needs |

## Alternatives

Certain elements within this chapter involved an alternatives analysis to establish the best solution for proposed development. Cost and constructability are two key factors considered when analyzing alternatives as well as meeting the goals and objectives of the airport sponsor.

### Runway Extension

The proposed development outlined in this chapter depicts a plan to extend the runway 233 feet to a total length of 6,001 feet within Future (Stage II). Three alternatives were considered:

- Alternative 1 – 233-foot extension off Runway End 31
- Alternative 2 – 233-foot extension off Runway End 31 with EMAS
- Alternative 3 – 233-foot extension off Runway End 13
- Alternative 4—233-foot extension off Runway End 13 with EMAS
- Alternative 5—Maximize Declared Distances within Current Runway Footprint

A discussion of the findings of each alternative are included in the following subsections.

**Alternative 1 – 233-foot extension off Runway End 31:** Extend Runway end 31 by 233 feet to reach 6,001 feet of usable pavement. Runway end 31 has a 600-foot Runway Safety Area (RSA), truncated from the typical 1,000-foot RSA, due to the location of Aviation Way. A 233-foot extension would push the RSA onto Aviation Way, which is not permitted at current grade. A significant portion of the RSA needs to be graded. Environmental impacts would be minimal. Should this alternative be realized, a partnership with GDOT would be required to reconfigure Aviation Way to meet airspace and RSA requirements. Existing taxiway would be

reconfigured, and an additional one added. Additionally, the runway safety area would be developed to current FAA standards by grading out to 1,000 ft. in length and 500 ft. in width beyond the extended end of pavement on End 31—which would require several land acquisitions. A railroad track is located on the other side of Aviation Way and would need to be accounted for when designing the RSA. The railroad would need to be reconfigured to meet current FAA airspace safety requirements.

**Alternative 2 – 233-foot extension off Runway End 31 with EMAS:** Extend runway off Runway 31 end by 233 ft. to reach 6,001 ft. usable pavement. This alternative places Engineered Material Arresting System (EMAS) base directly off the new extended runway, which would be 150 ft. wide by 600 ft. long. This option would keep the RSA at the reduced 600 feet, same as current. The EMAS bed would be 150 ft. wide by 350 ft. long, and would occupy the footprint of the EMAS base, beginning 600 ft. from the end of the runway. The RSA grading that is currently needed would still be required. The EMAS and RSA would both interfere with Aviation Way, so a partnership with GDOT to reconfigure the road would be critical. The expense of the EMAS materials, however, made this alternative have a higher expected cost— and this option still interferes with current GDOT infrastructure and does not extend the RSA to the 1000 ft. FAA regulation.

**Alternative 3 – 233-foot extension off Runway End 13:** In another alternative, it was examined to extend runway off Runway 13 end by 233 ft. to reach 6,001 ft. of usable pavement. The existing RSA is 600 ft. With a 233 ft. extension, the RSA interferes with TDK Boulevard, and Planterra Club, the nearby Country Club. Airspace and RSA requirements would dictate the reconfiguration of TD Boulevard and relocation of Planterra Club. Furthermore, additional land would need to be purchased to accommodate these major changes. The impact to the community infrastructure as well as the expected cost associated with the road relocation were found to be limiting factors in this alternative.

**Alternative 4—233-foot extension off Runway End 13 with EMAS:** Extend runway off Runway 13 end by 233 ft. to reach 6,001 ft. usable pavement. This alternative places Engineered Material Arresting System (EMAS) base directly off the new extended runway, which would be 150 ft. wide by 600 ft. long. This option would keep the RSA at the reduced 600 feet, same as current. The EMAS bed would be 150 ft. wide by 350 ft. long, and would occupy the footprint of the EMAS base, beginning 600 ft. from the end of the runway. The EMAS and RSA would both interfere with TDK Boulevard and the Planterra Club. Reconfiguration of the road and relocation of the Planterra Club would be critical. The expense of the EMAS materials, land acquisitions, and the impacts to community infrastructure however, made this alternative have a higher expected cost. This alternative does not extend the RSA to the 1000 ft. FAA regulation.

**Alternative 5— Maximize Declared Distances within Current Runway Footprint:** Extends the LDA and ASDA for Runway 13, and the LDA for Runway 31 within the current runway

footprint. The TORA and TODA would remain at 5,768 feet, and RSAs would not be impacted. This alternative ensures that the surrounding roadways and community infrastructure remain intact as-is and increases usable runway pavement for landing aircraft. Within the current runway footprint, there is room to expand the LDA for Runway end 13 by 710 ft., the ASDA for Runway end 13 by 194 ft., and the LDA for Runway end 31 by 200 ft. The ASDA for Runway end 31, and the TORA/TODA for Runway 13/31 would remain the same. The grading in the RSA for Runway end 31 would still need to occur. This alternative does not require land acquisitions or strategic project partnerships with GDOT and/or surrounding members of the community.

**Recommended Alternative:** Alternative 5 featuring the maximization of declared distances within the current runway footprint is recommended as the preferred alternative due to its low lower cost and impact to the community surrounding the airport environment. This alternative provides much more cost effective, feasible, and community-friendly option to extend within the current bounds of the usable pavement. This extension is reflected in the Airport Layout Plan update as the representative preferred runway extension alternative.

## Airfield

### Runway 13/31

The Atlanta Regional Airport - Falcon Field currently has a single runway configuration. Runway 13/31 is 5,768 feet long and 100 feet wide with a determined pavement strength of 48,000 lbs. single wheel and 60,000 lbs. dual wheel. The last safety inspection of the airfield and pavement performed by the Georgia Department of Transportation was in April 2021. The condition of the runway was identified as "good." There is a forecasted need to lengthen the runway in order to accommodate larger corporate jet aircraft. This runway lengthening (see recommended alternative in previous section) is expected to be needed in Interim (Stage I). Additionally, the runway will need to be strengthened in Interim (Stage I) to 70,000 lbs. single wheel, 100,000 lbs. dual wheel, and a Pavement Classification Number (PCN) of 32 F/C/X/T and should be maintained throughout the remainder of the 20-year planning period. In addition to the strengthening, it is recommended that the runway surface be transverse-grooved in order to increase safety on the airfield by reducing the risk of hydroplaning and improving nose-wheel steering.

The existing critical aircraft category for FFC is in the Approach Category C, Design Group II, as defined by FAA Advisory Circular *Airport Design*, AC/150-5300-13B. This classification indicates that the Airport can accommodate aircraft with approach speeds between 121 and 140 knots and wingspans between 49 and 79 ft. A representative critical aircraft for this group and weight limitation is Hawker 125-800 and has been determined to be the existing critical aircraft for planning and design purposes at FFC.

The Gulfstream G650 is expected to become the ultimate representative critical design aircraft

within the D-III RDC group. This is expected to occur during Interim (Stage I) of the planning period. Large aircraft as depicted in the operations and critical aircraft discussion within Chapter III have regularly expressed the desire for strengthening of the runway, taxiway and apron to airport management. This strengthening and grooving of the runway is recommended for study and addressing in Interim (Stage I).

It is recommended that airport management closely monitor activity by C-II, or larger, aircraft throughout the planning period to help justify the infrastructure needs of these aircraft. It is expected that a runway extension may be necessary provided the growth trend of operations by the Gulfstream G650 and similar groups of aircraft. This is shown in Interim (Stage I) but will need to be justified and approved under the guidance of the FAA utilizing FAA AC 150/5325-4B (latest change) *Runway Length Requirements for Airport Design* at the time when Airport Management observes the need and documentation is available.

### Runway Safety Area

The primary role of the runway safety area (RSA) is to provide an area bordering the runway which, under normal (dry) conditions, can support aircraft without causing structural damage to the aircraft or injury to the passengers. The RSA enhances the safety of any aircraft that may undershoot, overrun, or veer off the runway. It also provides greater accessibility for fire fighters and rescue equipment. The runway safety area for the Atlanta Regional Airport - Falcon Field currently meets the standards for a C-II airport with lower than ¾ mile visibility, with existing declared distances and a displaced threshold on Runway End 31.

### Taxiways

The Atlanta Regional Airport - Falcon Field is currently served by a 35 ft. wide full parallel taxiway (A) and partial crossfield parallel taxiway (F). The existing taxiway width will not accommodate the standards for the ultimate RDC; consequently, new taxiways and improvements should be constructed to TDG 3 Standards (50 Feet wide). FAA Runway Design Standards require 400 feet runway to taxiway centerline separation for both the existing and ultimate dimensions. Currently, the taxiway to runway centerline separation varies from 339 feet to 472 feet. Consequently, a project is recommended to occur in Interim (Stage I) to reconfigure and realign Taxiway A to a uniform 400-foot separation from Runway 13/31. Additionally, due to a recent safety requirement of aircraft geometry by the FAA, it is recommended in Interim (Stage I) the "through connecting" stub taxiways servicing directly from the runway to the main apron be reconfigured to be offset creating a pilot decision point for safety in remaining off an active runway inadvertently. These projects are depicted on the Airport Layout Plan Sheet to be addressed early in the planning period. Furthermore, the current Taxiway A is equipped with LED Medium Intensity Taxiway Lights (MITLs); all expansions to the taxiway system should have LED MITLs as well.

## Geometric Standards

### Runways

Runway 13/31 presently meets the geometric standards for an Approach Category "C", Design Category II airport, as defined by FAA AC/150 5300-13B. This category of facility will accommodate aircraft with approach speeds between 121 and 140 knots and wingspans between 49 and 79 feet. Forecasts indicate that the airport is expected to utilize the Approach Category "D", Design Category III critical design class of aircraft ultimately. A Design Category D-III facility will accommodate aircraft with approach speeds 141 knots or more but less than 165 knots and wingspans between 79 and 118 feet. The recommended minimum standards are as follows for the existing and planned airfield:

**Design Category C-II**
**Visibility Minimums Not Lower Than ¾ Mile**

| | |
|---|---|
| Runway Width | 100 feet |
| Runway Shoulder Width | 10 feet |
| Runway Blast Pad Width | 120 feet |
| Runway Blast Pad Length | 150 feet |
| Runway Safety Area Width | 500 feet |
| Runway Safety Area Length Prior to Landing Threshold | 600 feet |
| Runway Safety Area Length Beyond Runway End | 1,000 feet |
| Runway Object Free Area Width | 800 feet |
| Runway Object Free Area Length Beyond Runway End | 1,000 feet |
| Runway Centerline to Edge of Aircraft Parking | 400 feet |

**Design Category D-III**
**Visibility Minimums Lower Than ¾ Mile**

| | |
|---|---|
| Runway Width | 100 feet |
| Runway Shoulder Width | 20 feet |
| Runway Blast Pad Width | 140 feet |
| Runway Blast Pad Length | 200 feet |
| Runway Safety Area Width | 500 feet |
| Runway Safety Area Length Prior to Landing Threshold | 600 feet |
| Runway Safety Area Length Beyond Runway End | 1,000 feet |
| Runway Object Free Area Width | 800 feet |
| Runway Object Free Area length beyond Runway End | 1,000 feet |
| Runway Centerline to Edge of Aircraft Parking | 500 feet |

***Source:*** *FAA Airport Design Airplane and Airport Data reference AC 150/5300-13B*

### Taxiways

The design standards for a taxiway serving the existing Airplane Design Group (ADG) "II" Runway based on Taxiway Design Group (TDG) "2" and planned Airplane Design Group

(ADG) "III" Runway based on Taxiway Design Group (TDG) "2" at the Atlanta Regional Airport - Falcon Field are as follows:

**Airplane Design Group II and Taxiway Design Group 2**

| | |
|---|---|
| Taxiway Width | 35 feet |
| Taxiway Safety Area Width | 79 feet |
| Taxiway Edge Safety Margin | 7.5 feet |
| Taxiway Shoulder Width | 15 feet |
| Taxiway Centerline to Fixed or Moveable Object | 62 feet |
| Taxilane Centerline to Fixed or Moveable Object | 55 feet |
| Taxiway Object Free Area Width | 124 feet |
| Taxilane Object Free Area Width | 110 feet |

**Airplane Design Group III and Taxiway Design Group 3**

| | |
|---|---|
| Taxiway Width | 50 feet |
| Taxiway Safety Area Width | 118 feet |
| Taxiway Edge Safety Margin | 10 feet |
| Taxiway Shoulder Width | 20 feet |
| Taxiway Centerline to Fixed or Moveable Object | 85.5 feet |
| Taxilane Centerline to Fixed or Moveable Object | 79 feet |
| Taxiway Object Free Area Width | 171 feet |
| Taxilane Object Free Area Width | 158 feet |

***Source:*** *FAA Airport Design Airplane and Airport Data reference AC 150/5300-13B*

## Navigational Aids and Lighting

The Atlanta Regional Airport - Falcon Field currently has navigational aid facilities that allow a precision Instrument Landing System (ILS) and straight-in non-precision GPS/LPV approach to Runway End 31 and straight-in non-precision GPS/LPV approach to Runway End 13. The minimums for Runway 31 are currently set at 3/4 mile for visibility and a ceiling of 252 feet, achieved with an ILS Approach Published minimums for Runway 13 are 1 1/8-mile visibility and a ceiling of 387 ft achieved by a non-precision GPS LPV WAAS.

As previously mentioned, there are 343 annual days of operation on average, because of the climatic conditions and use of navigational aids at FFC, (closed approximately 6% of the year).

The Atlanta Regional Airport - Falcon Field currently has a Medium Intensity Runway Lighting (MIRL) system for Runway 13/31 with an LED Medium Intensity Taxiway Lighting (MITL) system on the airfield taxiway. This equipment varies in age and type (i.e., LED and incandescent). The runway lighting system and lighting on the taxiway stubs has recently been replaced and should adequately service the airfield during the planning period. The existing

incandescent MITLs on the taxiway system should be replaced along with the taxiway pavement rehabilitation. Any replacements or additions to the airfield lighting system (runway or taxiway) should include the installation of newer LED lighting systems. The LED lighting system is more energy efficient and requires less maintenance than a standard bulb lighting system.

Other lighting equipment that can be found on the FFC airfield includes four-box Precision Approach Path Indicators (PAPI-4) on each runway end and a 24" rotating beacon located within the terminal area, between Hangars D27 and D28. The beacon is located on a 51 ft. tower. The Atlanta Regional Airport - Falcon Field currently has Runway End Identifier Lights (REILs) present on Runway End 13. Additionally, a lighted windsock with segmented circle is located on the north side of the center of the runway.

FFC does not have a Medium Approach Light System with Runway Alignment Indicator Lights (MALSR) on either end of Runway 13/31. Consequently, it is recommended that a MALSR is installed on Runway End 31 as part of the runway extension/runway safety area project planned for Interim (Stage I).

## Terminal Area

The terminal at the Atlanta Regional Airport - Falcon Field is 7,988 sq. ft. and provides the following services:

- Aviation fuel
- Passenger terminal and lounge
- Aircraft maintenance
- Rental cars
- Taxi Service/Rideshare
- Internet access
- Hangar leasing
- GPU/Power cart
- Aircraft cleaning
- Lavatory Carts


An estimate of gross terminal building requirements is determined by the annual occupants projected to use the facility during the planning period. **Table III.8** in Chapter III (Forecasts) shows that by the year 2041, over 148,000 annual occupants are expected over the course of a year. The peak daily occupants are calculated by taking 110% of the average daily occupants based on the average number of days the airport is open for operations. Of this number, the peak hour occupants represent 25% of the peak daily occupants. This process provides that 94 passengers/pilots per peak hour can be expected to use the terminal by the end of the planning period. Based on industry trends for general aviation facilities and the consultant's experience, between 150 sq. ft. and 175 sq. ft. per peak-hour occupant should be used to determine gross

terminal building requirements. The result is that approximately 7,300 sq. ft. of terminal space could be needed by 2041. **Table V.1** displays these calculations and the corresponding terminal requirements.

**Table V.1: Atlanta Regional Airport - Falcon Field Terminal Building Requirements**

| Year | Annual Occupants | Forecast Peak Daily Occupants | Forecast Peak Hour Occupants | Terminal Bldg. Requirements (SF) |
|---|---|---|---|---|
| 2021 | 109,952 | 337 | 67 | 7,749 |
| 2026 | 129,862 | 398 | 80 | 9,152 |
| 2031 | 149,241 | 457 | 91 | 10,518 |
| 2036 | 167,031 | 509 | 102 | 11,706 |
| 2041 | 183,442 | 559 | 112 | 12,856 |

As **Table V.1** suggests, the existing 7,988 sq. ft. terminal will not be sufficient in accommodating future demand. Consequently, it is expected that an increase in the existing footprint will be necessary during the 20-year planning period. Chapter VI (Airport Plans) includes plans for terminal expansion. Other buildings at FFC presently occupy approximately 280,000 square feet of space. This consists of one FBO hangar, ten corporate hangars, three T-hangar buildings, and thirty other hangars.

With the planned growth of based aircraft at FFC, it is expected that both corporate and T-hangars will be constructed as the market demands grow throughout the planning period. The Airport Plans (Chapter VI) outline a logical staged development plan for FFC's terminal area that includes building within the existing terminal area early in Interim (Stage I).

## Terminal Area Plan Alternatives

Early in the Airport Layout Plan Update process a focus was put on the alternatives for laying out the ultimate terminal area plan development and staging. Through that process several layouts were developed, and consideration was made for:

- Efficient aircraft movement on taxiways and taxilanes
- Auto access
- Aircraft storage needs
- Land acquisition
- Adjacent wetlands impacts

Throughout the work session process between the Sponsor and Consultant, three terminal area plan alternatives were developed in order to meet the projected growth. A preferred layout alternative for the terminal area was formulated and the ultimate approved forecast results were considered to ensure consistency. The preferred alternative can be seen on the Airport Layout Plan and Terminal Area Plan.

## Auto Parking

At present, the designated auto parking spaces near the terminal building encompass approximately 14,500 square feet of pavement. Vehicular parking spaces are typically based on peak hour pilots and passengers using 34 square yards of space per vehicle, including circulation. The expansion of the main parking area adjacent to the terminal area is recommended, especially considering future growth and demand over the planning period. Auto parking to appropriately service each planned type of development is shown in the Terminal Area Plan.

## Aircraft Apron/Hangars

Aircraft operational usage at FFC is expected to continue to grow throughout the planning period (20 years). This will continually increase the need for additional aircraft parking and storage. Careful consideration should be given to determine the type and degree of development required to accommodate this important component.

Hangar/apron demands are predicated on the number of based aircraft, the type of aircraft accommodated, owner preference, and land availability. Historical observations and industry trends find that there is potential demand for approximately 85% of the forecasted based aircraft to be hangared and 15% to be non-hangared. This provides that by the end of the planning period, 225 aircraft would be hangared and the remaining 40 would be accommodated through tiedowns.

Additionally, there should be enough tiedown spaces to accommodate the daily itinerant aircraft. Typically, a standard estimate is to take 20 to 25 percent of the based aircraft to provide a guideline for accommodating these transient aircraft. The airport currently has 107 designated tiedown spaces and the planning period forecasts would dictate that 66 spaces would be needed for transients. Consequently, the 107 existing spaces would be able to accommodate the 40 based aircraft plus 66 transients, therefore no additional spaces are expected to be needed throughout the planning period. Additional increases in apron size and tiedown spaces are recommended in the event of higher than projected aircraft traffic.

Furthermore, throughout Georgia and the southeast, the demand for hangar space far exceeds supply. This strong demand validates almost any hangar construction. The Peachtree City Airport Authority has recognized this and continues to work toward development of hangars to accommodate the market. **Table V.2** reflects the facility requirements including the need for aircraft storage spaces, both hangared and non-hangared.

## Table V.2: Atlanta Regional Airport - Falcon Field Facility Requirements

| ITEM | EXISTING | INTERIM (STAGE I) | FUTURE (STAGE II) | ULTIMATE (STAGE III) |
|---|---|---|---|---|
| **1. Runway 13/31** | | | | |
| **a. Length & Width** | 5,768' x 100' | N/C | 5,768' x 150' | N/C |
| **b. Strength (lbs.)** | | | | |
| **- single wheel (SW)** | 48,000 SW | N/C | N/C | N/C |
| **- dual wheel (DW)** | 60,000 DW | N/C | N/C | N/C |
| **- PCN** | 15 /F/B/X/T | N/C | N/C | N/C |
| **2. Taxiways** | 50' Wide | N/C | N/C | N/C |
| **3. Navigational Aids and Lighting** | PAPI-4 & REILs both RWYs, ILS Rwy 31, GPS LPV Both RWYs, MIRL, MITL, Rot. Beacon | MALSR (RWY 31) | N/C | N/C |
| **4. Aircraft Storage** | | | | |
| **a. Tiedown #** | 107 | 46 | N/C | N/C |
| **b. Tiedown area SY (Est.)** | 21,250 | 9,500 | N/C | N/C |
| **c. Apron area SY** | 63,500 | 74,800 | 86,600 | 101,000 |
| **d. Total Hangar Spaces (Est.)** | 73 | 117 | 143 | 178 |
| **e. T-Hangars (bldgs.)** | 3 | 6 | 7 | 8 |
| **f. Total Hangar Area SF (Est.)** | 201,000 | 335,000 | 422,000 | 535,000 |
| **5. Terminal SF** | 7,988 | N/C | 12,856 | N/C |
| **6. Total Auto Parking** | | | | |
| **a. Spaces** | 273 | 402 | 506 | 602 |
| **b. Area SY (Est.)** | 9,750 | 15,850 | 20,600 | 24,360 |
| **7. Fuel Storage (gal.)** | | | | |
| **a. 100 LL** | 15,000 (abv-grnd) | | N/C | N/C |
| | 1,200 (2 trucks) | Expanded as | N/C | N/C |
| **b. Jet A** | 15,000 (abv-grnd) | Demand | N/C | N/C |
| | 3,000 (truck) | Requires | N/C | N/C |
| | 5,000 (truck) | | N/C | N/C |
| **8. Property** | | | | |
| **a. Fee (acres)** | 330 | N/C | 445 | N/C |
| **b. Easement (acres)** | 66 | 117 | N/C | N/C |
| **9. Perimeter Fencing (lf.)** | 25,000 | 27,000 | 30,000 | N/C |

**Note:* *Tiedown and apron space need estimates are dependent upon new hangar construction and overall availability of hangar spaces and could increase if hangar construction does meet demand.*

## Fuel Storage

100LL and Jet A fuel for aircraft is stored at the airport in above ground tanks. The fuel types and storage facilities are listed below:

- 100LL – one 15,000-gallon aboveground tank at the fuel farm
- 100LL – two 1,200-gallon trucks
- Jet A – one 15,000-gallon aboveground tank at the fuel farm
- Jet A – one 3,000-gallon truck; one 5,000-gallon truck

These facilities should be expanded during the planning period based on current and forecasted demand, assuming maximum delivery schedules. This expansion is depicted on the Airport Layout Plan and Terminal Area Plans. Airport management should monitor the operational demand over the planning period to accommodate fuel needs.

## Land Acquisition

Currently, FFC's land envelope includes 330 acres fee simple and 66 acres of avigation easement over land. The lands needing to be acquired through the 20-year planning period total an additional 33 acres of fee simple and 26 acres of avigation easement.

## Fencing

Presently, the Atlanta Regional Airport - Falcon Field has 8-foot fencing with 3-strand barbed wire outriggers around the entire perimeter of the airport. Additional fencing will need to be added within Interim (Stage I) to accompany the runway extension project and enclose the new airport property boundary. The augmented perimeter fencing will amount to approximately 5,000 linear feet of additional fence. With security a top priority at all aviation facilities, the maintenance of this fencing is essential to ensure safety at the facility with the prevention of vermin, vandals, and trespassers onto the airfield.

## FAR Part 77 Surfaces and FAA AC 150/5300-13B TERPS Surfaces

The design criteria used for the Airport under its existing conditions puts Atlanta Regional Airport - Falcon Field in the category of "C-II" and ultimately "D-III". The existing and planned surfaces under these design criteria are listed in **Table V.3**.

### Table V.3: Atlanta Regional Airport - Falcon Field Surface Dimensions

| SURFACE | EXISTING DIMENSIONS | EXISTING SLOPE | ULTIMATE DIMENSIONS | ULTIMATE SLOPE |
|---|---|---|---|---|
| **Runway 13 Protection Zone** | 500’ x 1,700’ x 1,010’ | 34:1 | 1,000’ x 1,700 x 1,510’ | 34:1 |
| **Runway 31 Protection Zone** | 1,000’ x 1,700’ x 1,510’ | 34:1 | 1,000’ x 2,500’ x 1,750’ | 50:1 / 40:1 |
| **Runway Safety Area** | 600’ (RW 13) or 1,000’ (RW 31) x 150’ | N/A | 600’ (RW 13) or 1,000’ (RW 31) x 150’ | N/A |
| **Runway Object Free Area** | 800’ x 1,000’ | N/A | 800’x1,000’ | N/A |
| **Obstacle Free Zone** | 400’ x 200’ | N/A | N/A | N/A |
| **Part 77 Approach Surface Runway 13** | 10,000' x 500' x 3,500’ | 34:1 | 10,000' x 1,000' x 4,000’ | 34:1 |
| **Part 77 Approach Surface Runway 31** | 10,000’ x 1,000’ x 4,000 | 34:1 | 1,000’ x 50,000’ x 16,000’ | 50:1 / 40:1 |
| **TERPS Approach Surface Runway 13** | 500’ x 10,000’ x 3,500’ | 34:1 | 1,000’ x 10,000’ x 4,000’ | 34:1 |
| **TERPS Approach Surface Runway 31** | 1,000’ x 10,000’ x 4,000’ | 34:1 | 1,000’ x 50,000’ x 16,000’ | 34:1 |

It is extremely important to protect these surfaces from being penetrated by future construction, tree growth, and facility additions. For lands within the approaches and beyond the fee simple and avigation easement lands owned by the airport, local zoning ordinances can be used to protect these surfaces and should be enforced as necessary.

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# VI. Airport Plans

This chapter presents the drawings that have been prepared to illustrate the development proposed during the planning process. These drawings present, in a graphical format, the airside/landside facility improvements necessary to satisfy the existing and future demand at the Atlanta Regional Airport - Falcon Field. This drawing set includes:

- Airport Layout Plan
- Airspace Plan
- Approach Surface Plan Runway 13
- Approach Surface Plan Runway 31
- Departure Surface Plan Runway 13
- Departure Surface Plan Runway 31
- Terminal Area Plan
- Land Use Plan
- Exhibit A Property Map

All plans are presented at the end of this chapter.

## Airport Layout Plan

The Airport Layout Plan Drawing illustrates the existing facilities and property at the Atlanta Regional Airport - Falcon Field, as well as the location and size of the facilities recommended to satisfy the projected need through the forecast period, and ultimately the Year 2041. The facilities proposed in Chapter V were developed through consultations with the Airport Management and the Peachtree City Airport Authority, with guidance from the Federal Aviation Administration and the Georgia Department of Transportation.

The primary purpose of the Airport Layout Plan is to identify existing and projected facility needs. The major development items required to improve the facility include:

- Realign/Reconfigure Taxiway 'A' and connectors for standard separation and runway safety requirements
- Widen and Strengthen Runway 13/31
- Rehabilitate Taxiway 'A' and auxiliary apron
- Construct crossfield access road and additional auto parking
- New Corporate Hangars in the terminal area (primary and crossfield)
- New Box Hangars in the terminal area (primary and crossfield)
- New T-Hangar Buildings in the terminal area (primary and crossfield)
- Terminal Expansion
- Construct Air Traffic Control Tower

The development items are staged to conform to the following periods of development:

- Interim (Stage I) – Short Term
- Future (Stage II) – Intermediate Term
- Ultimate (Stage III) – Long Term

## Approach/Departure Plans and Profiles

According to Federal Aviation Regulations (FAR) Part 77, airports are required to protect the surrounding airspace to ensure that it is free and clear of obstructions that could be hazardous to aircraft on departure and approach paths. It is, therefore, desirable and necessary to maintain the surrounding airspace free from obstacles, preventing the development and growth of obstructions to airspace that could cause the airport to become unusable. The regulations for the protection of airspace in the vicinity of the Airport are established by the definition of a set of imaginary obstacle limitation surfaces, penetration of which represents an obstacle to air navigation.

The dimensional standards for these surfaces are determined by the runway classification, such as visual, non-precision instrument, or precision instrument. A visual runway is a facility designed for operation under visual approach conditions only (a published circling approach is considered visual for the purpose of FAR Part 77). A non-precision instrument runway has azimuth guidance or area-wide navigation equipment. A precision instrument runway has azimuth guidance as well as vertical guidance.

Protected airspace around the airport is made up of five principle imaginary surfaces:

**Primary Surface:** A 500 or 1,000-foot-wide surface that is longitudinally centered on the runway, extending 200 feet beyond the threshold in each direction, and coincides with the centerline runway elevation.

**Approach Surface:** An inclined trapezoidal plane centered on the runway centerline varying in size and slope, extending out from each end of the primary surface and beginning with the same elevation as the runway end.

**Transitional Surface:** An inclined plane with a slope of 7:1 extending outward and upward from the edge of the primary and approach surfaces, terminating at the horizontal surface where the planes meet.

**Horizontal Surface:** A horizontal flat plane 150 feet above the established airport elevation. The dimension of the horizontal surface is set by where the transitional surface ends and the Conical Surface begins, both being the same elevation.

**Conical Surface:** An inclined plane at a slope of 20:1 extending outward and upward from the periphery of the horizontal surface for a horizontal distance of 4,000 feet and a vertical distance of 200'.

Beyond these five principal Part 77 surfaces, the FAA also requires the Inner Approach Surface Plans to show Terminal Instrument Procedures (TERPS) Surfaces. These surfaces are similar to approach surfaces. However, they vary in size and slope and are utilized by the FAA Flight Procedures Office (FPO) to develop and protect the instrument approaches for each runway end. As such, the FAA evaluates them for impacts to approach minimums.

**TERPS Surface:** An inclined trapezoidal plane centered on the runway centerline varying in size and slope, extending out from each end of the primary surface and beginning with the same elevation as the runway end.

Additionally, the FAA requires Airport Layout Plans to create a Runway Departure Surface Plan that outlines any potential obstructions to the departure end of any instrument runway. The surface therein is described as:

**Departure Surface:** An inclined 40:1 trapezoidal plane, centered on the runway centerline that begins at the runway threshold of the departure end of the runway at the same elevation as the runway threshold.

The Airport Airspace Plan for the Atlanta Regional Airport - Falcon Field, in conjunction with the Inner Approach Surfaces, shows in plan and profile view the planned approaches for each ultimate runway end. It also identifies the location of obstructions which exceed the Federal Aviation Regulations (FAR) Part 77 criteria.

The surfaces identified will need to be included and referenced in any new or updated height/hazard ordinances that are adopted by Spartanburg County.

## Terminal Area Plans

The purpose of the Terminal Area Plan is to present the development recommended on the Airport Layout Plan in more detail. The Terminal Area Plan presents the following major items:

- Building locations and sizes
- Aircraft parking apron – tie downs and fuel area
- Hangar areas
- Servicing taxiways and taxilanes
- Auto parking areas
- Access and service roads
- Security Fencing

The planning stages mentioned previously are consistent on the terminal area plan drawings.

## Land Use Plan

The Land Use Plan depicts general guidelines for developing the key functional areas on the airport. The purpose of preparing an airport land use plan is to delineate a land use pattern considering the Airport's current and future development. The land use categories are in accordance with adapted designations and include:

- Airport Operations Area
- Public Use Area
- Residential/Rural/Agricultural Areas

The assignment of the land for the airport operations area has the highest priority since it requires the most land and represents the most critical airport element. The size of the active airfield is dictated by application of FAA safety criteria for building restriction lines surrounding the runways and taxiways and includes the airspace zones within the airport property. Once the areas are defined and approach zones are established, the configuration of the remaining land uses can be determined.

Priority dictates that dedication of the airport land be made first to aviation activity centers and then to secondary activity centers. Thus, the first priority in allocating airport land is for runways and taxiways, plus the area required to protect them from obstructions. The second priority is to provide for direct aviation base activities, such as the terminal, apron, and hangars. The third priority is assigned to businesses that, for various reasons, wish to locate at the airport. Often, these businesses wish to locate at the airport because of some dependence upon the air transportation of personnel and/or goods. The fourth, and last, priority is given to general industrial uses and vacant buffers that occupy the balance of airport property.

The land use plan is a large-scale allocation of property to each of the appropriate categories with suggested guidance for land uses around the airport. The suggested land uses illustrated on the Land Use Plan are based on airport operational data, aircraft traffic patterns, and expected noise levels at and around the Airport. Recommend land uses are broken down into four different Land Use Guidance (LUG) zones as described in **Table VI.1**.

**Table VI.1: Atlanta Regional Airport - Falcon Field Land Use Guidance Zones**

| LUG Zone | Zone Area | Description |
|---|---|---|
| A | Zone A includes the Runway Protection Zone, as defined in FAA AC 150/5300-13B, Section 310 (latest change), and the portion of the Approach Surface from the edge of the Runway Protection Zone to where each Approach Surface is 150 feet of height above its respective runway end elevation. | Land should be reserved for activities that can tolerate a high level of sound exposure such as some agricultural, industrial, and commercial uses. No residential developments of any type are recommended. Sound sensitive activities such as schools, offices, hospitals, churches, and like activities should not be constructed in this area unless no alternative location is possible. All regularly occupied structures should consider sound control in design. |
| B | Zone B includes the portion of the Approach Surface from the edge of Zone A to 10,000 feet from the inner edge of the Approach Surface, and the area formed by offsetting the Primary Surface edge outward by 1,500 feet and extending its ends and squaring them off at the edge of Zone A. | Activities where uninterrupted communication is essential should consider sound exposure in design. Generally, residential development is not considered a suitable use although multifamily developments where sound control features have been incorporated in building design might be considered. Open-air activities and outdoor living will be affected by aircraft sound. The construction of auditoriums, schools, churches, hospitals, theaters, and like activities should be avoided within this zone where possible. |
| C | Zone C includes the areas of the Transitional and Horizontal Surfaces not part of Zones A or B. | Few activities will be affected by aircraft sounds, although building designs for especially sound sensitive activities such as auditoriums, churches, schools, hospitals, and theaters should consider sound control in areas closest to the airport. Detailed studies by qualified personnel are recommended for outdoor amphitheaters and like places of public assembly in the general vicinity of the airport. |
| D | Zone D is identical in area to the Conical Zone. | No special considerations |

## Property Map

The Exhibit A Property Map shows the existing airport property with regards to fee simple and easement ownership types. It also shows major airport developments that necessitate land acquisition. These parcels are shown on the Exhibit A Property Map as well and the type of ownership recommended.

Additionally, the federal government requires the establishment of a Runway Protection Zone (RPZ) at the end of each runway when federal funds are to be expended on new or existing airports. The airport owner must have positive control over development within the critical portions of the RPZ. This gives long-term positive assurance that there will be no encroachment of airspace within the critical portions of this section of the inner approach surface.

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# VII. Implementation Plan

The preceding Chapters have identified and established schedules of development for the Atlanta Regional Airport - Falcon Field. The implementation plan is intended to provide the Peachtree City Airport Authority with the information necessary to formulate an approach for obtaining the funding for the recommended development. As is the case with all implementation plans, demand, activity levels, construction costs, inflation, and federal, state and local programs can change, thereby altering the costs and participation levels contained in this plan. Therefore, it is extremely important to re-examine and modify the implementation plan as these changes occur.

This plan includes an estimation of order of magnitude costs and the recommended contribution to each capital improvement by each anticipated participating agency.

The costs presented in **Table VII.1** were prepared for all items shown in the ALP, split out by those potentially eligible for state/federal funding, and those that are not eligible for funding by those agencies and are likely to be constructed with local (and/or private) funding only. A proposed prioritized 5-Year Capital Improvement Plan (CIP) can be found in **Appendix B**.

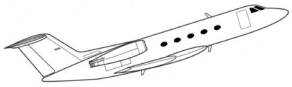
The typical level of Federal Airport Improvement Program (AIP) provides 90% financial support for qualifying projects. Ten percent local participation will supplement the remaining project funds. It should be noted that projects identified as AIP eligible may not be qualifying projects over the entire planning period, as funding eligibility changes, and furthermore, are subject to funding priority by the State as outlined in the *Georgia Statewide Aviation System Plan* of 2019. Additionally, funding percentages are subject to change throughout the planning period. Limited AIP Eligible projects could be eligible for funding from a State Grant. State participation projects would be handled on a case-by-case basis. For the purposes of this exercise, the total cost for Limited AIP Eligible projects is listed and the local sponsor should be prepared to fund the full cost of the project.

Furthermore, Limited AIP Eligible projects such as hangars could be funded through a public/private partnership or a 'revert-lease' scenario where the Airport Sponsor retains ownership of a privately funded hangar from the private party after a contractually determined timeframe. FFC's Terminal Area Plan displays several hangars that could utilize this scenario if the Airport Authority's financial support could not keep pace with the market demand.

Estimated costs of development include a 15% contingency and are presented for the short-range Interim (Stage I), Future (Stage II), and Ultimate (Stage III).

## Table VII.1: Atlanta Regional Airport - Falcon Field: Development Stage Cost Estimates

| INTERIM (STAGE I) | FAA | STATE | LOCAL | TOTAL |
|---|---|---|---|---|
| A. AIP ELIGIBLE | | | | |
| Runway Safety Area Grading (~250,200 SF) | 225,000 | 12,500 | 12,500 | 250,000 |
| Parallel Taxiway Recongfiguration & Rehabilitation (Design + Construction) | 3,150,000 | 175,000 | 175,000 | 3,500,000 |
| New Taxiway (Design + Construction) | 720,000 | 40,000 | 40,000 | 800,000 |
| Apron Rehabilitation + Reconfiguration (Design + Construction) | 4,950,000 | 275,000 | 275,000 | 5,500,000 |
| Additional Terminal Auto Parking | 427,500 | 23,750 | 23,750 | 475,000 |
| Access Road Construction | 585,000 | 32,500 | 32,500 | 650,000 |
| Wash Pad Construction (2) | 360,000 | 20,000 | 20,000 | 400,000 |
| Fuel Farm Construction | 630,000 | 35,000 | 35,000 | 700,000 |
| Crossfield Access Road Extension and Additional Auto Parking | 2,250,000 | 125,000 | 125,000 | 2,500,000 |
| Add Helipad | 315,000 | 17,500 | 17,500 | 350,000 |
| Add Additional Large Aircraft Parking | 4,050,000 | 225,000 | 225,000 | 4,500,000 |
| Additional Perimeter Fencing (~3,000 LF) | 225,000 | 12,500 | 12,500 | 250,000 |
| Add Fuel Truck Parking | 247,500 | 13,750 | 13,750 | 275,000 |
| Runway 13 Easement Acquisitions (~14 Acres, 2 Parcels) | 90,000 | 5,000 | 5,000 | 100,000 |
| Runway 31 Easement Acquisitions (~37 Acres, 6 Parcels) | 247,500 | 13,750 | 13,750 | 275,000 |
| SUBTOTAL | 18,472,500 | 1,026,250 | 1,026,250 | 20,525,000 |
| B. LIMITED AIP ELIGIBLE | FAA Entitlements, state discretionary, and non-traditional funding options may be available for these projects The remaining costs would be serviced by the local sponsor. | | | |
| Add 3-Unit One-Sided Hangar 60'x180' (1) | | | 2,700,000 | 2,700,000 |
| Add Corporate Hangar 80'x80' (2) | | | 500,000 | 500,000 |
| Add Corporate Hangar 100'x100' (2) | | | 750,000 | 750,000 |
| Add 10-Unit T-Hangar (2) | | | 600,000 | 600,000 |
| FBO Hangar Reconstruction (225'x225') | | | 2,000,000 | 2,000,000 |
| Add Corporate Hangars 150'x100' (3) + Apron + Auto Parking | | | 2,000,000 | 2,000,000 |
| Add Flight School Dorm (~24,000 SF) , Access Road, Parking | | | 7,500,000 | 7,500,000 |
| Add Corporate Hangars 100'x120' (2) | | | 750,000 | 750,000 |
| SUBTOTAL | | | 16,800,000 | 16,800,000 |
| TOTAL STAGE I | | | | **$37,325,000** |





| FUTURE (STAGE II) | FAA | STATE | LOCAL | TOTAL |
|---|---|---|---|---|
| A. AIP ELIGIBLE | | | | |
| Terminal Expansion (~4,500 SF) | 2,700,000 | 150,000 | 150,000 | 3,000,000 |
| Add Air Traffic Control Tower (Design + Construction) | 3,600,000 | 200,000 | 200,000 | 4,000,000 |
| Runway Widening (25 LF on each side, from 100 Ft to 150 Ft) | 495,000 | 27,500 | 27,500 | 550,000 |
| Add Additional Small Aircraft Parking (75x500) | 558,000 | 31,000 | 31,000 | 620,000 |
| Corporate Hangar Aprn Expansion | 360,000 | 20,000 | 20,000 | 400,000 |
| Terminal Ramp Expansion with Aircraft Parking Areas | 360,000 | 20,000 | 20,000 | 400,000 |
| Crossfield Access Road Expansion with Auto Parking | 900,000 | 50,000 | 50,000 | 1,000,000 |
| Crossfield Apron Expansion | 2,250,000 | 125,000 | 125,000 | 2,500,000 |
| Crossfield Land Acquisition (~105 Acres, 2 Parcels) | 720,000 | 40,000 | 40,000 | 800,000 |
| SUBTOTAL | 11,943,000 | 663,500 | 663,500 | 13,270,000 |
| B. LIMITED AIP ELIGIBLE | FAA Entitlements, state discretionary, and non-traditional funding options may be available for these projects The remaining costs would be serviced by the local sponsor. | | | |
| Add Corporate Hangar 80'x80' (9) | | | 7,200,000 | 7,200,000 |
| Add Corporate Hangar 60'x60' (8) | | | 4,800,000 | 4,800,000 |
| Add 3-Unit One-Sided T-Hangar (2) | | | 1,200,000 | 1,200,000 |
| Corporate Hangar Access Road and Auto Parking | | | 500,000 | 500,000 |
| Corporate Hangar Apron Construction | | | 500,000 | 500,000 |
| Add 10-Unit T-Hangar (2) | | | 1,600,000 | 1,600,000 |
| SUBTOTAL | | | 15,800,000 | 15,800,000 |
| TOTAL STAGE II | | | | **$29,070,000** |

| ULTIMATE (STAGE III) | FAA | STATE | LOCAL | TOTAL |
|---|---|---|---|---|
| A. AIP ELIGIBLE | | | | |
| Corporate Hangar Apron Expansion (Design + Construction) | 495,000 | 27,500 | 27,500 | 550,000 |
| Corporate Hangar Access Road Extension + Auto Parking | 675,000 | 37,500 | 37,500 | 750,000 |
| Crossfield Fuel Farm Construction | 900,000 | 50,000 | 50,000 | 1,000,000 |
| Corporate Hangar Auto Parking | 270,000 | 15,000 | 15,000 | 300,000 |
| Crossfield Access Road Extension + Auto Parking | 540,000 | 30,000 | 30,000 | 600,000 |
| SUBTOTAL | 2,880,000 | 160,000 | 160,000 | 3,200,000 |
| B. LIMITED AIP ELIGIBLE | FAA Entitlements, state discretionary, and non-traditional funding options may be available for these projects The remaining costs would be serviced by the local sponsor. | | | |
| Add Corporate Hangar 100'x150' | | | 1,000,000 | 1,000,000 |
| Add 3-Unit One-Sided Hangar (2) | | | 1,200,000 | 1,200,000 |
| Add Corporate Hangar 80'x80' (6) | | | 2,250,000 | 2,250,000 |
| Add 10-Unit Nested T-Hangar (1) | | | 800,000 | 800,000 |
| SUBTOTAL | | | 5,250,000 | 5,250,000 |
| TOTAL STAGE III | | | | **$8,450,000** |
| **TOTAL ALL STAGES** | | | | **$74,845,000** |

# Appendix A

## Airport Management Observed Aircraft Activity

ATLANTA REGIONAL AIRPORT
FALCON FIELD

July 1, 2021

Mr. Michael Giambrone
GDOT Division of Intermodal
600 West Peachtree Street NW
Atlanta, GA 30308

**RE: FFC ALP Update Forecasts – Observed Aircraft Activity**

Dear Mr. Giambrone,

The Atlanta Regional Airport - Falcon Field is a general aviation facility that sees a variety of corporate jet traffic for various business and recreational reasons. As part of providing the best available information in the Airport Layout Plan Update process, and specifically the operations forecast efforts, I as the Manager of Operations have provided the following estimates for aircraft we routinely observe at FFC, both based and itinerant:

**Based**

- **Chick-Fil-A (Cessna CJ4) – 120 operations per year**
- **S&H Aviation (Gulfstream 400) – 240 operations per year**
- **Home Grown Industries (Hawker 850) – 240 operations per year**
- **JERAB, LLC (Cessna Citation V) – 310 operations per year**
- **Tac Air (Cessna Citation Mustang) – 120 operations per year**
- **Z Magic Carpet, LLC (Gulfstream 400) – 310 operations per year**
- **RTS Aviation (King Air 90) – 96 operations per year**
- **Food Service Renovations (Cessna 441) – 120 operations per year**
- **Gardner Lowe Aviation (various small piston aircraft) – 2,400 operations per year**
- **WarDaddy Aviation (various mid- to large-sized jets) – 3,600 operations per year**
- **Straube Paint Shop (various mid- to large-sized jets) – 240 operations per year**
- **Base Leg Aviation (various small piston aircraft) – 960 operations per year**
- **FLYT Aviation (various small piston aircraft) – 18,000 operations per year**
- **Academy of Aviation (various small piston aircraft) – 9,000 operations per year**
- **ATP (various small piston aircraft) – 9,000 operations per year**
- **Sorenson Aviation (Piper Cherokee) – 3,600 operations per year**
- **Commemorative Air Force (various small vintage aircraft) – 3,600 operations per year**
- **Civil Air Patrol (various small piston aircraft) – 3,600 operations per year**
- **Aircraft Spruce (various sized aircraft) – 3,000 operations per year**

ATLANTA REGIONAL AIRPORT
FALCON FIELD

**Itinerant**

- **Delta Private Jets (various mid-sized jets) – 360 operations per year**
- **Net Jets (various mid-sized jets) – 360 operations per year**
- **Wheels Up / GAMA / Mountain Aviation (King Air 350) – 360 operations per year**
- **Georgia Jet (Beechcraft Beechjet) – 48 operations per year**
- **Flight Works (Challenger 300) – 48 operations per year**
- **Trilith Studios (various similar to Bombardier Global 5000) – 120 operations per year**
- **Stalwart Films (various similar to Hawker 850) – 96 operations per year**
- **Plane Sense (Pilatus PC-12) – 72 operations per year**
- **Disney (Gulfstream 650) – 24 operations per year**
- **Eaton / Cooper (Challenger 300) – 24 operations per year**
- **Nestle Purina (Bombardier Global Express) – 24 operations per year**
- **Owens Corning (Challenger 300) – 48 operations per year**
- **Atlas Leasing (Hawker 800) – 72 operations per year**
- **Midwest Aviation (Learjet 75) – 48 operations per year**
- **Lowes (Dassault Falcon 900) – 8 operations per year**
- **Niagara Bottling (Gulfstream 450) – 8 operations per year**
- **Costco (Dassault Falcon 2000) – 4 operations per year**
- **Bass Pro Shops (Cessna Citation Excel) – 4 operations per year**
- **Walmart / Sam's Club (Learjet 75) – 8 operations per year**
- **MSG Aviation (Gulfstream 550) – 10 operations per year**
- **Penske Racing (Bombardier CRJ200) – 8 operations per year**
- **NASCAR (Hawker 850) – 8 operations per year**
- **ATP (Cessna CitationJet) – 20 operations per year**
- **Jimmy Johns (Bombardier Global Express) – 6 operations per year**
- **Zaxby's (King Air 350) – 20 operations per year**
- **Sanderson Farms (Gulfstream 400) – 4 operations per year**
- **Claxton Farms (King Air 200) – 48 operations per year**
- **Davis Development (Cessna Citation X) – 20 operations per year**
- **WinPak (Dassault Falcon 7X) – 8 operations per year**
- **Gulfstream (various jets for testing) – 30 operations per year**
- **Piper (M600s for testing) – 30 operations per year**
- **HondaJet (HA-420 for testing) – 30 operations per year**

Please let me know of any questions at (770) 487-2225. Thank you.

Sincerely,

Mike Melton
Manager of Operations
Atlanta Regional Airport - Falcon Field

# Appendix B

## 5-Year Capital Improvement Plan (CIP)

**Atlanta Regional Airport - Falcon Field (FFC - Peachtree City, GA)** **GDOT PM: Tracie Kleine**

**Capital Improvements Plan (updated November 10, 2021)** **Runway 13/31 (5,768' x 100') | Existing RDC: C-II / Ultimate RDC: C-II**

| FY | Local Priority | Project Description | NPR Value (A) | 90 / 5 / 5 | 90 / 0 / 10 | 0 / 75 / 25 | 0 / 0 / 100 | 75 / 25 Option? | Federal Share Amount | State Share Amount | Local Share Amount | Total Project Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2022 | | Remove Obstructions - Bid & Construction | 82 | X | | | | | $ 273,600 | $ 15,200 | $ 15,200 | **$ 304,000** |
| 2022 | | Improve Airport (Install Security Fencing) - Bid & Construction | 58 | X | | | | | $ 209,766 | $ 11,654 | $ 11,654 | **$ 233,074** |
| 2022 | | Refueler Parking Expansion - Design | 37 | | | | X | | $ - | $ - | $ 54,723 | **$ 54,723** |
| 2022 | | Area B - Environmental Assessment | 69 | X | | | | | $ 135,600 | $ 7,533 | $ 7,533 | **$ 150,667** |
| 2022 | | Conduct DBE Plan: FY 2021-2023 (reimbursement) | 66 | | X | | | | $ 10,283 | $ - | $ 1,143 | **$ 11,425** |
| 2022 | | Primary Surface Fence Relocation (reimbursement) | 58 | | X | | | | $ 11,200 | $ - | $ 1,244 | **$ 12,444** |
| 2023 | 1 | RSA & TSA Improvements - Design | 91 | X | | | | | $ 76,500 | $ 4,250 | $ 4,250 | **$ 85,000** |
| 2023 | 2 | RSA & TSA Improvements - Bid & Construction | 91 | X | | | | | $ 1,350,000 | $ 75,000 | $ 75,000 | **$ 1,500,000** |
| 2023 | 3 | Runway/Taxiway Crackseal & Re-Mark - Design | 86 | X | | | | | $ 72,000 | $ 4,000 | $ 4,000 | **$ 80,000** |
| 2023 | 4 | Runway/Taxiway Crackseal & Re-Mark - Bid & Construction | 86 | X | | | | | $ 378,000 | $ 21,000 | $ 21,000 | **$ 420,000** |
| 2023 | 5 | Acquire Easement for Approaches (parcel 0615-028) | 72 | X | | | | | $ 22,500 | $ 1,250 | $ 1,250 | **$ 25,000** |
| 2023 | 6 | Acquire Esmt. for Approaches (parcel 0615-028) - Land Acq. Svcs. (reimb.) | 72 | | X | | | | $ 36,463 | $ - | $ 4,051 | **$ 40,515** |
| 2023 | 7 | Acquire Miscellaneous Land (TTF Falcon 6 LLC Property PID 061204003) - Land Acquisition | 72 | X | | | | | $ 657,000 | $ 36,500 | $ 36,500 | **$ 730,000** |
| 2023 | 8 | Expand/Strengthen Terminal Apron (18,500 SY Expansion) - Design | 69 | X | | | | | $ 117,000 | $ 6,500 | $ 6,500 | **$ 130,000** |
| 2023 | 9 | Conduct Env. Assessment (Extend Rwy 31, incl. Strengthening) | 69 | X | | | | | $ 211,500 | $ 11,750 | $ 11,750 | **$ 235,000** |
| 2023 | 10 | Area B (twy/apron/site) - Design | 70 | X | | | | | $ 171,000 | $ 9,500 | $ 9,500 | **$ 190,000** |
| 2023 | 11 | Low Ramp, Upper Ramp, North Ramp and Hangar Area A Taxilanes - Design | 69 | X | | | | | $ 207,000 | $ 11,500 | $ 11,500 | **$ 230,000** |
| 2023 | 12 | Rehab/Strengthen/Extend Taxiway A (@ Rwy 31 end) - Design | 77 | X | | | | | $ 121,500 | $ 6,750 | $ 6,750 | **$ 135,000** |
| 2023 | 13 | Terminal Auto Parking Rehab and Expansion - Design | 39 | X | | | | | $ 72,000 | $ 4,000 | $ 4,000 | **$ 80,000** |
| 2023 | 14 | Refueler Parking Expansion - Bid & Construction | 37 | | | | X | | $ - | $ - | $ 225,000 | **$ 225,000** |
| 2024 | 1 | Conduct DBE Plan: FY 2024-2026 (reimbursement) | 66 | | X | | | | $ 11,250 | $ - | $ 1,250 | **$ 12,500** |
| 2024 | 2 | Strengthen Runway - Design | 81 | X | | | | | $ 162,000 | $ 9,000 | $ 9,000 | **$ 180,000** |
| 2024 | 3 | Extend Runway (Rwy 31) - Design | 80 | X | | | | | $ 153,000 | $ 8,500 | $ 8,500 | **$ 170,000** |
| 2024 | 4 | Runway Edge Light and Taxiway Foxtrot Edge Light Replacement - Design | 81 | X | | | | | $ 76,500 | $ 4,250 | $ 4,250 | **$ 85,000** |
| 2024 | 5 | Install Runway Visual Guidance System (MALSR) - Design | 85 | X | | | | | $ 67,500 | $ 3,750 | $ 3,750 | **$ 75,000** |
| 2024 | 6 | Rehab/Strengthen/Extend Taxiway A (@ Rwy 31 end) - Bid & Construction | 77 | X | | | | | $ 3,600,000 | $ 200,000 | $ 200,000 | **$ 4,000,000** |
| 2024 | 7 | Expand/Strengthen Terminal Apron (18,500 SY Expansion) - Bid & Construction | 69 | X | | | | | $ 4,702,500 | $ 261,250 | $ 261,250 | **$ 5,225,000** |
| 2024 | 8 | Upper Ramp and Lower Ramp - Bid and Construction | 69 | X | | | | | $ 3,555,000 | $ 197,500 | $ 197,500 | **$ 3,950,000** |
| 2024 | 9 | Hangar Area A Taxilanes and North Ramp - Bid and Construction | 69 | X | | | | | $ 3,802,500 | $ 211,250 | $ 211,250 | **$ 4,225,000** |
| 2024 | 10 | Acquire Miscellaneous Land (TTF Triangle H Properties PID 061204011) - Land Acquisition | 72 | X | | | | | $ 1,350,000 | $ 75,000 | $ 75,000 | **$ 1,500,000** |
| 2025 | 1 | Extend Runway (Rwy 31, incl. Strengthening) - Bid & Construction | 81 | X | | | | | $ 4,950,000 | $ 275,000 | $ 275,000 | **$ 5,500,000** |
| 2025 | 2 | Install Runway Visual Guidance System (MALSR) - Bid & Construction | 85 | X | | | | | $ 1,237,500 | $ 68,750 | $ 68,750 | **$ 1,375,000** |
| 2025 | 3 | Runway Edge Light and Taxiway Foxtrot Edge Light Replacment - Bid & Construction | 81 | X | | | | | $ 270,000 | $ 15,000 | $ 15,000 | **$ 300,000** |
| 2025 | 4 | Area B (twy/apron) - Bid & Construction | 70 | X | | | | | $ 1,575,000 | $ 87,500 | $ 87,500 | **$ 1,750,000** |
| 2025 | 5 | Terminal Auto Parking Rehab & Expansion - Bid & Construction | 39 | X | | | | | $ 324,000 | $ 18,000 | $ 18,000 | **$ 360,000** |
| 2025 | 6 | Access Road Area C - Design | 38 | X | | | | X | $ 112,500 | $ 6,250 | $ 6,250 | **$ 125,000** |
| 2025 | 7 | Acquire Miscellaneous Land (TTF ATP Properties PID 061204005) | 72 | X | | | | | $ 592,393 | $ 32,911 | $ 32,911 | **$ 658,214** |
| 2025 | 8 | Fuel Farm Replacement - Design | 72 | X | | | | X | $ 81,000 | $ 4,500 | $ 4,500 | **$ 90,000** |
| 2026 | 1 | Rehabilitate Taxiway F & Hangar Area C Apron (Crack Seal & Re-mark) & Improve Airport (Install Security Fencing) - Design (reimb.) | 76 | | X | | | | $ 57,803 | $ - | $ 6,423 | **$ 64,225** |
| 2026 | 2 | Expand Apron (Hangar Area C - 5,500 SY Expansion) - Design | 69 | X | | | | | $ 110,700 | $ 6,150 | $ 6,150 | **$ 123,000** |
| 2026 | 3 | Access Road Area C - Bid & Construction | 38 | X | | | | X | $ 675,000 | $ 37,500 | $ 37,500 | **$ 750,000** |
| 2026 | 4 | Acquire Miscellaneous Land (TTF ATP Properties) - Land Acquisition Services (reimbursement) | 72 | | X | | | | $ 707,165 | $ - | $ 78,574 | **$ 785,739** |
| 2026 | 5 | Fuel Farm Replacement - Bid & Construction | 72 | X | | | | X | $ 540,000 | $ 30,000 | $ 30,000 | **$ 600,000** |
| 2027 | 1 | Expand Apron (Hangar Area C - 5,500 SY Expansion) - Bid & Construction | 68 | X | | | | | $ 954,000 | $ 53,000 | $ 53,000 | **$ 1,060,000** |
| 2027 | 2 | Install Utilities - Hgr Area C Water & Sewer - Design, Const. (reimb.) | 43 | | X | | | | $ 174,870 | $ - | $ 19,430 | **$ 194,300** |
| 2027 | 3 | Install Utilities - Hgr Area C Power, Gas, Internet, Cable - Const. (reimb.) | 43 | | X | | | | $ 149,400 | $ - | $ 16,600 | **$ 166,000** |
| 2027 | 4 | Rehab Taxiway __ (Main apron to CAF and Twy B tiein) - Design | 76 | | | | X | | $ - | $ - | $ 60,000 | **$ 60,000** |
| | | | | | | | | **2022 Totals** | **$ 640,449** | **$ 34,387** | **$ 91,497** | **$ 766,333** |
| | | | | | | | | **2023 Totals** | **$ 3,492,463** | **$ 192,000** | **$ 421,051** | **$ 4,105,515** |
| | | | | | | | | **2024 Totals** | **$ 17,480,250** | **$ 970,500** | **$ 971,750** | **$ 19,422,500** |
| | | | | | | | | **2025 Totals** | **$ 9,142,393** | **$ 507,911** | **$ 507,911** | **$ 10,158,214** |
| | | | | | | | | **2026 Totals** | **$ 2,090,668** | **$ 73,650** | **$ 158,646** | **$ 2,322,964** |
| | | | | | | | | **2027 Totals** | **$ 1,278,270** | **$ 53,000** | **$ 149,030** | **$ 1,480,300** |

ATLANTA REGIONAL AIRPORT
FALCON FIELD

Project (or Part of Project) mentioned in Interim (Stage I) of FFC Airport Layout Plan Chapter VII: Implementation Plan