August 10, 2023

RICHMOND HILL
GEORGIA

New Airport Justification/Feasibility Study Phase I

EXECUTIVE SUMMARY

prepared for the

City of Richmond Hill

Georgia

HOLT CONSULTING COMPANY, LLC.

in association with

THOMAS & HUTTON

EXECUTIVE SUMMARY

Richmond Hill, located in Bryan County Georgia, is one of ten counties that comprise the Coastal Georgia Regional Development District (RDC). Coastal Georgia is home to a growing, diverse economy. The thriving economic base, coupled with a strong tourism/recreation market, supports significant amounts of commercial passenger and general aviation activity. Today, the Savannah-Hilton Head International Airport accommodates much of the general aviation traffic. As the commercial traffic continues to increase at Savannah-Hilton Head International Airport, a secondary airport that can accommodate the area's growing demand for general aviation and divert that general aviation traffic from the busier commercial service airport, becomes more critical to the aviation system of Coastal Georgia.

This study is the initial step in determining the justification/feasibility for a new airport that meets both the Federal Aviation Administration (FAA) and Georgia Department of Transportation (GDOT) requirements.

Additional studies that would be required include:

- Site Selection Study
- Master Plan
- Environmental Assessment

The following goals and objectives for the study include:

- Identify the potential general aviation demand in Bryan County and the surrounding area.
- Conduct a survey of aircraft owners and pilots in the surrounding area to determine their willingness to relocate to a new airport, the facilities, and services important to them, and the type and magnitude of their aviation activity.
- Determine FAA's National Plan of Integrated Airport System (NPIAS) Eligibility
- Prepare forecasts for the airport, including based aircraft, operations, and design aircraft for initial and ultimate planning periods.

Population

In many airport planning studies, population is used as a variable in the estimation of demand for based aircraft and general aviation operations. In general, based aircraft numbers and general aviation activity levels in a study area tend to reflect changes in that area's population. As the population of an area increases, there naturally tends to be an increase in the number of aircraft owners and/or users of general aviation services. Furthermore, even those components of the population that do not use general aviation or own an aircraft generate additional demand for general aviation activities. The study area consisted of Bryan, Chatham, Effingham, Liberty and

As shown in **Table 1** on the following page, the study area, especially Bryan County, experienced substantial population growth from 2010-2020, with its population increasing by 47 percent. Bryan County was the fastest growing county in Georgia during this time frame.

Table 1
Historic (2010) and Current (2020) Population Data

County	2010 Census	2020 Census	Change	Percent Change 2010-2020
Bryan	30,233	44,738	14,505	47.98%
Chatham	265,128	295,291	30,163	11.38%
Effingham	52,250	64,769	12,519	23.96%
Liberty	63,453	65,256	1,803	2.84%
McIntosh	14,333	10,975	-3,358	-23.43%
Study Area Total	**425,397**	**481,029**	**55,632**	**13.08%**
Georgia	**9,687,653**	**10,711,937**	**1,024,284**	**10.57%**
United States	**308,745,538**	**331,449,281**	**22,703,743**	**7.35%**

Source: U.S. Census Bureau, 2022

Registered Aircraft Owner Survey

A registered aircraft owners survey was conducted to gather additional information regarding characteristics of local aviation activity in the study area. Important data collected through this survey process included identifying where aircraft owners live, where their aircraft are based, and the distance and length of time they travel to get to and from their base airport.

Survey Results

In January 2023, approximately 400 surveys were mailed to registered aircraft owners in Bryan, Chatham, Effingham, Liberty, and McIntosh Counties. Registered aircraft owner data was acquired through the FAA's database of registered aircraft owners. 93 surveys were returned. Important findings from the survey effort include:

- Nearly 33 percent of survey respondents based their aircraft at Savannah/Hilton Head International Airport. Over 16 percent based aircraft at MidCoast Regional Airport.
- The typical driving time experienced by aircraft owners when driving from their residence to the airport at which their aircraft is currently based was equally distributed among the ranges identified in the survey.
- Approximately 45 percent of survey respondents indicated that they are best served by a runway length of 5,000 feet. Almost 34 percent indicated that a length of 4,000 feet best serves their aircraft.
- Almost 62 percent of survey respondents indicated that they would consider relocating their aircraft to a new general aviation airport.

Airport-specific survey results for relevant data are summarized in **Table 2** on the following page.

Table 2
Registered Aircraft Owners Survey – Relevant Results by Airport

Airport Name	Respondents	Average Driving Distance	Consider Relocating to New Airport		
			% Yes	% Maybe	% No
Savannah/Hilton Head Int'l Airport (KSAV)	29	27	68.00%	21.43%	3.57%
Northeast Philadelphia Airport (KPNE)	1	30	100.00%	0.00%	0.00%
Chautauqua County/Dunkirk Airport (KDKK)	1	60	100.00%	0.00%	0.00%
Hodges Airpark (GA39)	8	29	57.14%	28.57%	14.29%
MidCoast Regional Airport (KLHW)	16	32	64.29%	28.57%	7.14%
John Edwin Jones Sr. Field/ Metter Municipal Airport (LMHP)	3	35	50.00%	50.00%	0.00%
Eagle Neck Airport (1AG0)	7	12	14.29%	14.29%	71.43%
Swaids Field Airport (2GA2)	2	30	0.00%	50.00%	50.00%
Statesboro Bulloch County Airport (KTBR)	3	50	100.00%	0.00%	0.00%
Ridgeland – Claude Dean Airport (3J1)	3	50	33.33%	66.67%	0.00%
Plantation Airpark (KJYL)	5	40	66.67%	33.33%	0.00%
Cypress Lake Airport (GA35)	1	0	0.00%	0.00%	100.00%
Brunswick Golden Isles Airport (KBQK)	3	43	100.00%	0.00%	0.00%
Claxton-Evans County Airport (KCWV)	2	7.5	100.00%	0.00%	0.00%
Tampa Executive Airport (KVDF)	1	45	0.00%	100.00%	0.00%
Middle Georgia Regional Airport (KMCN)	1	10	0.00%	50.00%	50.00%
Reidsville Municipal Airport (KRVJ)	1	15	100.00%	0.00%	0.00%
Briar Patch Airport (9GA1)	1	0	0.00%	0.00%	100.00%
Emmanuel County Airport (SBO)	1	90	100.00%	0.00%	0.00%

NPIAS Eligibility

Meeting NPIAS eligibility is an important factor for any new airport. The FAA's criteria for an airport's inclusion in the NPIAS are based on a variety of factors such as operational demand, geographic location, airport sponsorship, as well as other criteria. The following criteria are considered by FAA for an airport's inclusion in the NPIAS:

- Airports formerly in the NPIAS
- Location of airport in relation to the nearest NPIAS airport (serves a community located is within a 30-mile drive from the nearest existing or proposed NPIAS airport)
- Reliever Airports
- Airports receiving US Mail Service
- Airports with a National Defense Role

An existing or proposed airport not meeting the criteria above may be included in the NPIAS if it meets all the following:

- It is included in the state airport system plan.
- It serves a community more than 30 miles from the nearest NPIAS airport.
- It is forecasted to have 10 or more based aircraft within the short-term planning period (five years); and,
- There is an eligible public sponsor willing to undertake the ownership and development of the airport.

Based Aircraft

The number of aircraft based at an airport is dependent upon the number of registered aircraft in the local service area. Based on FAA's Aircraft Registry, 449 aircraft are currently registered in the study area, of which 34 are registered in Bryan County. This shall serve as the baseline for future projections.

Estimating future-based aircraft for the new airport was based on Bryan County market share of the study area's registered aircraft and population. The results of each projection methodology for the projection period are summarized in **Table 3.** The selected forecast for based aircraft for the new airport is based upon the Increasing Registration Per Capita. The selected forecasts result in 34 based aircraft in 2022, 41 based aircraft by 2027, 48 based aircraft by 2032, and 58 based aircraft in 2042.

Table 3
Richmond Hill Airport - Based Aircraft Projections

Year	Study Area Registered Aircraft	New Airport Market Share	Percent of Market Share	Bryan County Population	AC Per 1,000 Residents
2022	449	34	7.57%	49,938	0.68
Constant Market Share of Study Area Registered Aircraft					
2027	468	37	7.57%	54,530	0.67
2032	498	40	7.57%	59,922	0.66
2042	563	45	7.57%	68,466	0.65
Increasing Market Share of Study Area Registered Aircraft					
2027	468	40	8.50%	54,530	0.73
2032	498	45	9.00%	59,922	0.75
2042	563	46	10.00%	68,466	0.81
Constant Registrations Per Capita					
2027	468	38	8.11%	54,530	0.68
2032	498	41	8.23%	59,922	0.68
2042	563	47	8.34%	68,466	0.68
Increasing Registrations Per Capita (Selected Forecast)					
2027	468	41	8.76%	54,530	0.75
2032	498	48	9.63%	59,922	0.80
2042	563	58	10.30%	68,466	0.85

Prototype Airport

Exhibit 1 presents a prototype airport for the City of Richmond Hill. The primary runway would be initially constructed to a length of 5,000 feet and a width of 75 feet. The runway could eventually be extended to 5500 feet.

Estimated Development Costs/Funding

As shown in **Table 4**, development costs for a new general aviation airport based on the facility template are estimated at approximately $48 million for initial development and $80 million for ultimate development. Construction of an airport is eligible for both federal and state funding. Most projects are eligible for 90 percent FAA funding and 5 percent State funding.

Table 4
Funding Sources

Initial Funding Source	Federal	State	Local/Private	Total
Planning Documents: Master Plan/Site Selection Study/Environmental Assessment	$0	$0	$700,000	$700,000
Fee Simple (298 Acres)	$0	$0	$3,725,000	$3,725,000
Avigation Easement (30 Acres)	$0	$0	$350,000	$350,000
Wetlands Fill Mitigation	$0	$0	$5,216,000	$5,216,000
Wetlands Temporary Impacts	$0	$0	$2,350,000	$2,350,000
Runway (5,000'x75')/Taxiway Turnarounds	$16,200,000	$900,000	$900,000	$18,000,000
Terminal Apron	$2,700,000	$150,000	$150,000	$3,000,000
Terminal Building	$0	$0	$75,000	$75,000
Access Road/Utilities	$5,220,000	$290,000	$290,000	$5,800,000
Fuel Farm/Fuel Trucks	$0	$0	$1,200,000	$1,200,000
T-Hangars/Taxilanes	$2,520,000	$140,000	$4,540,000	$7,200,000
Total:	**$26,640,000**	**$1,480,000**	**$19,496,000**	**$47,616,000**

Ultimate Funding Source	Federal	State	Local/Private	Total
Wetlands Fill Mitigation	$4,547,700	$252,650	$252,650	$5,053,000
Wetlands Temporary Impacts	$765,000	$42,500	$42,500	$850,000
Parallel Taxiway	$5,670,000	$315,000	$315,000	$6,300,000
Ultimate Runway (5500'x100')	$7,560,000	$420,000	$420,000	$8,400,000
Terminal Aircraft Apron – South Expansion	$5,400,000	$300,000	$300,000	$6,000,000
MRO Hangar Facility	$0	$0	$4,500,000	$4,500,000
Intermediate Corporate Box Hangars	$0	$0	$7,800,000	$7,800,000
Corporate Hangar Apron	$4,500,000	$250,000	$250,000	$5,000,000
Ultimate Corporate Box Hangars	$0	$0	$15,600,000	$15,600,000
Intermediate T-Hanger Expansion	$3,114,000	$173,000	$4,013,000	$7,300,000
Ultimate T-Hanger Expansion	$3,024,000	$168,000	$4,008,000	$7,200,000
Perimeter Fencing	$765,000	$42,500	$42,500	$850,000
AWOS III P/T	$315,000	$17,500	$17,500	$350,000
RVAV Approach Development	$180,000	$10,000	$10,000	$200,000
Terminal Building	$0	$0	$5,400,000	$5,400,000
Total:	**$35,840,700**	**$1,991,150**	**$42,971,150**	**$80,803,000**

PRO FORMA INCOME OPERATING REVENUE AND EXPENSES

An estimate of key operating revenue and expenses associated with the new airport is presented in **Table 5.** This analysis assumes that a Fixed Based Operator (FBO) will operate the airport under a lease agreement with the City of Richmond Hill.

Table 5
Operating Revenue & Expense-FBO

ITEM	YEAR 1	YEAR 5	YEAR 10
OPERATING REVENUE			
Fuel Flowage Fee	$21,800	$24,500	$28,400
Hangar Ground Lease	$0	$13,500	$18,000
T-Hangar Rental	$115,200	$127,200	$271,000
Aircraft Tiedown Fees	$400	$500	$600
Terminal Building Rental Space	$36,000	$38,000	$42,200
TOTAL:	**$173,400**	**$203,700**	**$360,200**
OPERATING EXPENSES			
Staff	$0	$0	$0
Insurance	$6,000	$6,400	$6,900
Communications/Technology	$1,500	$1,700	$1,900
Administration	$1,500	$1,700	$1,800
Utilities	$10,000	$10,300	$10,800
Maintenance/Operations	$100,000	$108,000	$20,000
TOTAL:	**$119,000**	**$128,100**	**$41,400**
NET OPERATING INCOME:	**$54,400**	**$75,600**	**$318,800**

Operating Revenue

The new airport will derive operating revenue principally from the rental of hangar and tiedown space for based aircraft, fuel flowage fee and land lease.

Fuel flowage fees are typically charged per gallon of fuel sold by the FBOs at the airport. Typical fees range from four to 12 cents per gallon. For this analysis, a fee of 10 cents per gallon was utilized.

Tie-down fees are charged to based and transient aircraft using the airport's parking apron. Based aircraft are charged monthly, while transient aircraft pay an overnight parking fee. A rate of $30 per month was used for based aircraft. Overnight fees can vary depending upon the size of the aircraft but will generally be 15 to 20 percent of the monthly fee.

Hangar fees are charged to based aircraft monthly. A rate of $300 per month was used for T-hangars.

Terminal building space rental is charged for office or concession space in the terminal building. A rate of $18 per square foot was assumed for leased space. It was further assumed that less than 40 percent of the space could be leased in the public terminal.

Land rentals include rentals for box hangar development and corporate/maintenance hangars. Space for individual box hangars was estimated at $0.15 per square foot and $0.30 per square foot for corporate/maintenance hangars.

Operating Expenses

Key operating expenses include the modular terminal building lease, utilities (electricity, water and sewer), and insurance. The latter may be included in the overall insurance policy and premiums paid by the City.

Net Operating Income

A new airport may expect to operate at a small net income for years 1-5 and yield a surplus in year 10.

Summary

In summary, the new airport has the potential to attract based and transient aircraft users and, as activity levels increase, result in a positive net operating income that will encourage private sector investment. The net operating income can be applied to debt service requirements on general obligation bonds issued by the City for capital projects at the new airport or held in reserve.

It is important to note that federal and state regulations require all revenue generated at the new airport be allocated to the maintenance and operation of the facility, and that there is no diversion of these funds for any other public purpose.