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RICHMOND HILL
G E O R G I A

New Richmond Hill Airport Preliminary Site Selection Study Phase II FINAL

prepared for the

City of Richmond Hill
Georgia

HOLT
CONSULTING COMPANY, LLC.

in
association
with

**THOMAS
&
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New Airport Preliminary Site Selection Study City of Richmond Hill, Georgia

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**CHAPTER ONE
INTRODUCTION**

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 a significant amount of commercial passenger and general aviation activity. Today, the Savannah-Hilton Head International Airport accommodates much of the general aviation traffic. As 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. The Location Map is illustrated in **EXHIBIT 1-1** on the following page.

In Phase I of the planning process, the justification and feasibility of developing a new airport to serve the City of Richmond Hill and Coastal Georgia Region was established. This study incorporates the information and results gained from the New Airport Feasibility/Justification Study – Phase I. The forecasting element indicated that the area's population and corresponding income growth are substantial, often leading the state in statistical growth measures. This type of growth is projected to be able to support a fully functional general aviation airport designed to initially accommodate all small general aviation aircraft and small to medium-sized business aircraft, representing Aircraft Design Group (ADG) B-II.

Ultimately, the airport should be designed to accommodate ADG C-II. Phase II – Preliminary Site Selection Study will present an evaluation of several candidate sites for locating a new airport in Bryan County. The location must be able to accommodate the prototype airport presented in **EXHIBIT 1-2** (page 3). This airport template was overlaid on all candidate sites to ensure sufficient acreage and area was available for the appropriate runway orientation, and to evaluate potential airspace and obstruction issues.

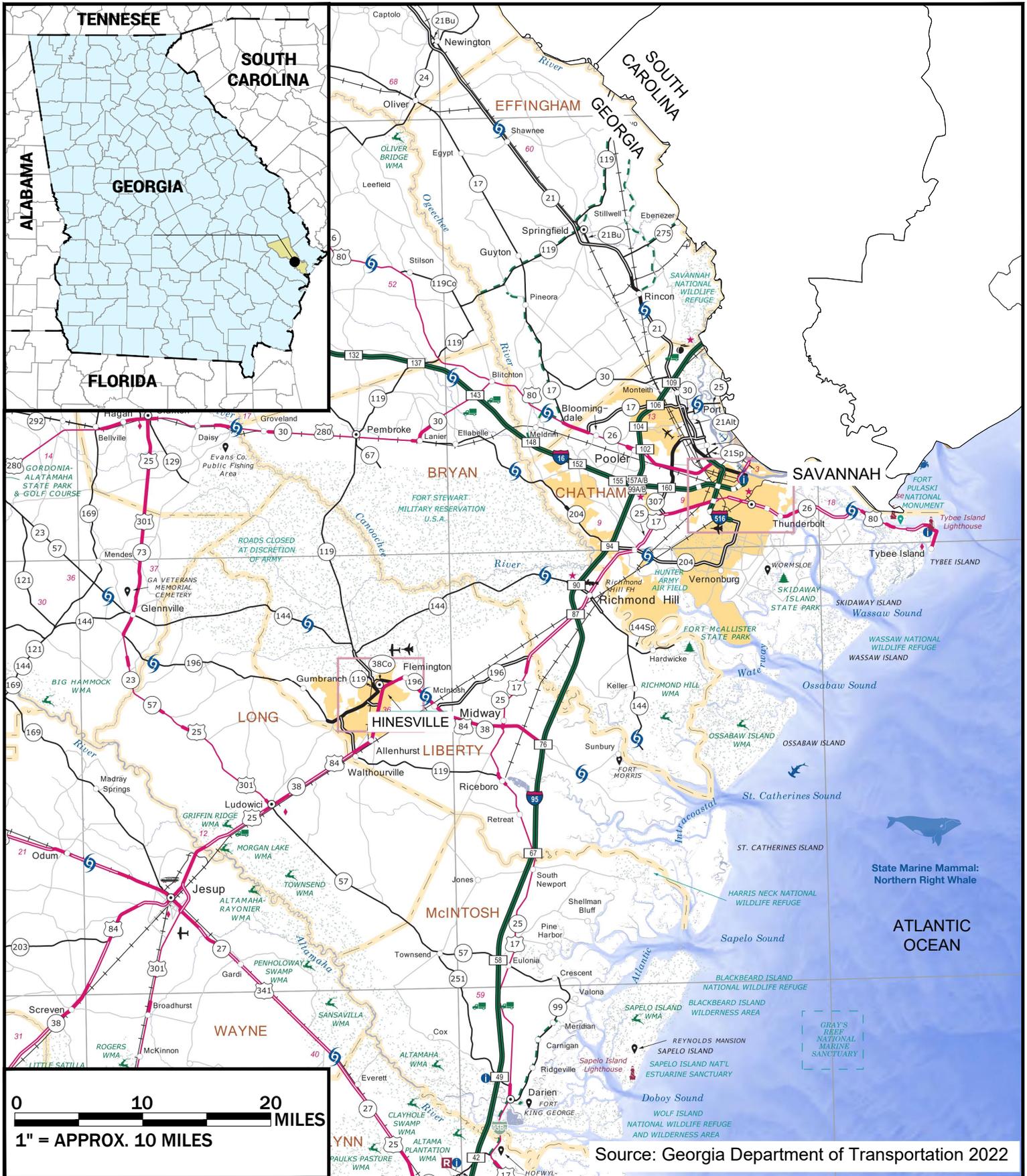
The objectives of this project include:

1. Identifying potential sites for a new airport within the city limits of Richmond Hill or sites in Bryan County that have the potential for being annexed into the city.
2. Evaluating potential sites based on selected criteria to include physical suitability/accessibility, airspace analysis, operational criteria, ability to avoid or minimize environmental impacts, ability to minimize costs and impacts on existing improvements, and construction costs.
3. Preparing updated cost estimates and comparison of primary funding options by source (FAA/GDOT).

The site selection process to identify a preferred site for the new general aviation airport will encompass the following:

- ▶ Preliminary Site Screening
- ▶ Identification of candidate sites
- ▶ Evaluation of candidate sites
- ▶ Selection of preferred site

This study is the initial step in determining a potential site for a new airport that will meet both the Federal Aviation Administration (FAA) and Georgia Department of Transportation (GDOT) requirements.



Location Map

Preliminary Site Selection Study

Additional studies that will be required include:

- ▶ Airport Master Plan
- ▶ Environmental Assessment

The Airport Master Plan, if initiated, will identify required facilities for the new general aviation airport and determine the most efficient layout given the selected site. In most cases, the master plan will include the following elements:

1. **Pre-planning:** The pre-planning process includes an Initial Needs Determination, Request for Proposal and Consultant Selection, Development of Study Design, Negotiation of Consultant Contract, and Application for Study Funding.
2. **Public Involvement:** Establish a public involvement program and identify and document the key issues of various stakeholders. This takes place once the consultant team is under contract and a notice-to-proceed has been issued.
3. **Environmental Considerations:** A clear understanding of the environmental requirements needed to move forward with each project in the recommended development program.
4. **Existing Conditions:** An inventory of pertinent data for use in subsequent plan elements.
5. **Aviation Forecasts:** Forecasts of aeronautical demand for short-, medium-, and long-term time frames.
6. **Facility Requirements:** Assess the ability of the existing airport, both airside and landside, to support the forecast demand. Identify the demand levels that will trigger the need for facility additions or improvements and estimate the extent of new facilities that may be required to meet that demand.
7. **Alternatives Development and Evaluation:** Identify options to meet projected facility requirements and alternative configurations for each major component. Assess the expected performance of each alternative against a wide range of evaluation criteria, including its operational, environmental, and financial impacts. A recommended development alternative will emerge from this process and will be further refined in subsequent tasks. This element should aid in developing the purpose and need for subsequent environmental documents.
8. **Airport Layout Plans:** One of the key products of a master plan is a set of drawings that provides a graphic representation of the long-term development plan for an airport. The primary drawing in this set is the Airport Layout Plan. Other drawings may also be included, depending on the size and complexity of the individual airport.
9. **Facilities Implementation Plan:** Provides a summary description of the recommended improvements and associated costs. The schedule of improvements depends, in large part, on the levels of demand that trigger the need for the expansion of existing facilities.
10. **Financial Feasibility Analysis:** Identify the financial plan for the airport, describe how the sponsor will finance the projects recommended in the master plan, and demonstrate the financial feasibility of the program.

Finally, the Environmental Assessment will use the National Environmental Protection Act (NEPA) and FAA guidelines to identify potential environmental impacts, if any, of the new general aviation airport and determine the most suitable way to avoid, minimize, or mitigate the impacts as necessary.

Preliminary Site Selection Study

The following environmental impact categories will be evaluated:

1. Air Quality
2. Biological Resources (including fish, wildlife, and plants)
3. Climate
4. Coastal Resources
5. Department of Transportation Act, Section 4(f)
6. Farmland
7. Hazardous Materials, Solid Waste, and Pollution Prevention
8. Historical, Architectural, Archeological and Cultural Resources
9. Land Use
10. Natural Resources and Energy Supply
11. Noise and Compatible Land Use
12. Socioeconomic, Environmental Justice, Children's Environmental Health and Safety Risks
13. Visual Effects (including light emissions)
14. Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers). A Wetlands/Streams delineation will be performed.

The Preliminary Site Selection Study – Phase II for Richmond Hill, Georgia includes the following components:

- ▶ Introduction
- ▶ Preliminary Site Screening
- ▶ Identification of Candidate Sites
- ▶ Evaluation of Sites
- ▶ Development Costs/Funding Sources

The Preliminary Site Selection Study will identify the most suitable site in the region for the proposed facility in a manner that is defensible to the various Federal, State, and regional review agencies and the public.

**CHAPTER TWO
PRELIMINARY SITE SCREENING**

AIRPORT SEARCH AREA

As previously determined, the airport will primarily serve the City of Richmond Hill, Bryan County, and the surrounding counties in Coastal Georgia. The airport should be within a reasonable distance of the Central Business District (CBD) and the residents of the community. When other factors are generally equal, the proximity of an airport to a primary residence or business is the main reason for an aircraft owner to base at or utilize a general aviation airport.

Fort Stewart, the largest Army installation east of the Mississippi River, covers 280,000 acres and lies primarily in Liberty and Bryan counties but also extends into smaller portions of Evans, Long, and Tattnall counties. The Fort Stewart landmass consumes the middle third of Bryan County, essentially splitting the county into separate northern and southern sections. Each has a distinct identity: the northern part, home to Pembroke, the small town that serves as the county seat and anchors a classic rural community; and the southern part, marked by the massive growth of Richmond Hill, a modern bedroom community for Savannah, and just launching an industrial presence.

The potential airport to serve the City of Richmond Hill will need to serve the overall Georgia aviation system by being located a sufficient distance from other general aviation airports or by filling a service level void. The Georgia Department of Transportation (GDOT) will conduct a Regional Aviation System Plan to analyze the overall demand to determine if a void exists within the Coastal Georgia Region and provide recommendations to satisfy that demand. It is preferable that the site location selected for further study fit within the overall system network of general aviation airports in Georgia, while still primarily serving the City of Richmond Hill, Bryan County, and Coastal Georgia.

The defined study area that has been identified encompasses the southern section of Bryan County, including the City of Richmond Hill, and has the ability for future annexation.

PRELIMINARY SITE SCREENING

The criterion and rationale utilized in the preliminary airport site screening process are described below.

- ▶ **Population Center:** FAA guidance suggests that a public-use general aviation airport ideally be accessible within 30 minutes of the population it is projected to accommodate. In Bryan County, nearly 40 percent of the total population resides in Richmond Hill; therefore, the city center of Richmond Hill was used to calculate a drive time of 30 minutes, determining site suitability as it relates to population access.
- ▶ **Nearby NPIAS Airports:** The FAA guidance for an airport to be included in the National Plan of Integrated Airport Systems (NPIAS) states, in part, that it should ideally be located at least 30 miles from another existing NPIAS airport.
- ▶ **Highway Access:** Interstate 95 provides north-south access to major markets along the eastern seaboard while Interstate 16 runs from Savannah to Macon and offers connectivity to Interstate 75, which runs from Miami through Atlanta. Additionally, several other state roads run through the county, including Highway 17. It is important that the airport is within proximity to an Interstate, Highway, or State road.

- ▶ **Future Land Use:** The most advantageous airport site would preferably be designated as vacant, agricultural, industrial, commercial, or transportation land use, to be consistent with existing planning efforts for the City of Richmond Hill and Bryan County. Property surrounding a potential airport site should have similar land uses, to be the most compatible with airport operations.
- ▶ **Nearby Airports' Airspace:** For flight safety and to avoid potential flight path conflicts, the approach and departure airspace of nearby airports was avoided. A runway buffer of 4,000 feet wide on each side of the centerline and extending 50,000 feet from each runway end was evaluated for this criterion, based upon FAR Part 77 surfaces.
- ▶ **Population Density:** To minimize disruption to residents on or near a potential airport site, 500 people per square mile was determined to be the threshold at which land acquisition and relocation of residents may become disruptive and costly.
- ▶ **Streams:** Environmental mitigation, such as the relocation of streams, can prove to be costly and should be avoided, if possible.
- ▶ **Wetlands:** As with streams, wetland mitigation may also become costly in construction projects and should be avoided, if possible. Over 42 percent of Bryan County is covered by wetlands, posing potential limitations to new transportation development.
- ▶ **Floodplains:** Floodplain impacts often result in adverse effects to drainage infrastructure and should be avoided, if possible.
- ▶ **Landfills:** The proximity of a proposed airport to municipal waste disposal operations and water management facilities is important because these facilities have the potential to attract hazardous wildlife, particularly birds, within the area of airport operations. In FAA AC 150/5200-33B, Hazardous Wildlife Attractants on or Near Airports, the FAA recommends a five-mile buffer for land uses that might attract wildlife into the airport's approach, departure, and circling airspace.
- ▶ **Railroads:** Railroads are typically constructed in a permanent location and may either be infeasible or costly to relocate.
- ▶ **Transmission Lines:** High-voltage transmission lines, like railroads, are typically constructed as permanent infrastructure and may be cost-prohibitive to relocate or bury. The structural towers and extending transmission wires also pose a hazard with respect to airspace.
- ▶ **Obstructions (Towers):** Obstructions were an important factor in this study for airspace consideration. The FAR Part 77 surfaces surrounding an airport provide guidance on the heights of objects near airports.
- ▶ **Terrain:** For safety, airport terrain must be relatively flat. It is expensive to grade steeply varying terrain to conform to FAA airport design standards; therefore, the percentage slope was evaluated within GIS.

TABLE 2-1 on the following page presents the site suitability criteria.

**TABLE 2-1
PRELIMINARY EVALUATION CRITERIA**

<u>Criteria</u>	<u>Goal</u>	<u>Suitable</u>	<u>Acceptable</u>	<u>Unacceptable</u>
Population Center	Convenience to users	Within 30 minutes of City of Richmond Hill	-	More than 30 minutes from City of Richmond Hill
Nearby NPIAS Airports	Observe FAA guidance	More than 30 minutes from NPIAS Airport	Within 30 minutes of NPIAS Airport	-
Future Land Use	Adherent to city and county planning and visioning efforts	Vacant, agricultural, industrial, commercial, transportation	Low density residential	Park, cemetery, open space, institutional, medium or high density residential
Interstate	Convenient transportation access	Less than 5 minutes to interstate/state highway	Less than 5 minutes to interstate/state highway	More than 10 minutes to interstate
State Roads	Convenient transportation access	3 miles or less to state road	-	More than 3 miles to state road
Nearby Airports' Airspace	Avoid airspace of nearby airports	Not within runway buffer	-	Within runway buffer
Population Density	Minimize disruption to existing residents	Less than 500 people per square mile	-	More than 500 people per square mile
Streams	Comply with NEPA and FAA regulations	No streams on site	Intermittent stream	Perennial stream
Wetlands	Comply with NEPA and FAA regulations	No wetlands within 1/8 mile	Wetlands within 1/8 mile	Wetlands on site
Floodplains	Comply with NEPA and FAA regulations	No floodplains within 100 feet	Floodplains within 100 feet	Floodplains on site
Landfills	Comply with NEPA and FAA regulations	No landfills within 5 miles	-	Landfill within 5 miles
Railroads	Minimize construction costs	No railroads on site	Railroads within 1/8 mile	Railroads on site
Transmission Lines	Minimize construction costs	No transmission lines on site	Transmission lines within 8 miles	Transmission lines on site
Obstructions (Towers)	Comply with FAA airspace standards	No obstructions within 1 mile	Obstructions within 1 mile	-
Terrain	Minimize construction costs	Less than 1% slope	Between 1-5% slope	Greater than 5% slope

CHAPTER THREE CANDIDATE SITES

IDENTIFICATION OF CANDIDATE SITES

With the study area determined and preliminary site screening completed, discussions with representatives of the City of Richmond Hill, Bryan County, and Bryan County Industrial Development Authority were held and resulted in the identification of 5 potential sites that meet the objectives of the study. Three of the sites are located within the current city limits, while 2 sites are located outside the city limits within possible annexation areas to the city. The 5 sites identified for initial consideration are identified below and presented in **EXHIBIT 3-1**.

- ▶ **SITE 1:** Site 1 is located approximately 9 miles southeast of Richmond Hill in the Oak Level Community. The southern boundary for Site 1 lies along Bryan Fisherman’s Co-Op Road and extends north to Belvedere Road. The property is situated on 1,293 acres.
- ▶ **SITE 2:** Site 2 is located approximately 4.5 miles southeast of Richmond Hill and is situated on 2,495 acres of privately owned property. The airport site is bound by Harris Trail Road to the west and Popular Swamp Road to the east.
- ▶ **SITE 3:** Site 3 is located within the city limits of Richmond Hill and is adjacent to I-95 and Highway 17. This site is situated on approximately 300 acres of property.
- ▶ **SITE 4:** Site 4 is located 3.5 miles south of Richmond Hill. It is bound to the northwest by Highway 17, to the south by Belfast Keller Road, and to the west by I-95. This site is situated on approximately 400 acres of property.
- ▶ **SITE 5:** Site 5 is located to the south of Site 4, approximately 5 miles south of Richmond Hill. It is bound to the northwest by Highway 17, to the east by Belfast Keller Road, and to the south by I-95. This site is situated on approximately 500 acres of property.

SITE SELECTION CRITERIA

To determine the most desirable site for an airport, a variety of factors must be considered. The following have been developed as criteria upon which to judge the advantages and disadvantages of each site. In this manner, a process of elimination can be used to select the most advantageous site for the airport.

Engineering Factors: Engineering factors are those which relate directly to the construction, operation, and maintenance of the airport. The categories considered under engineering factors include:

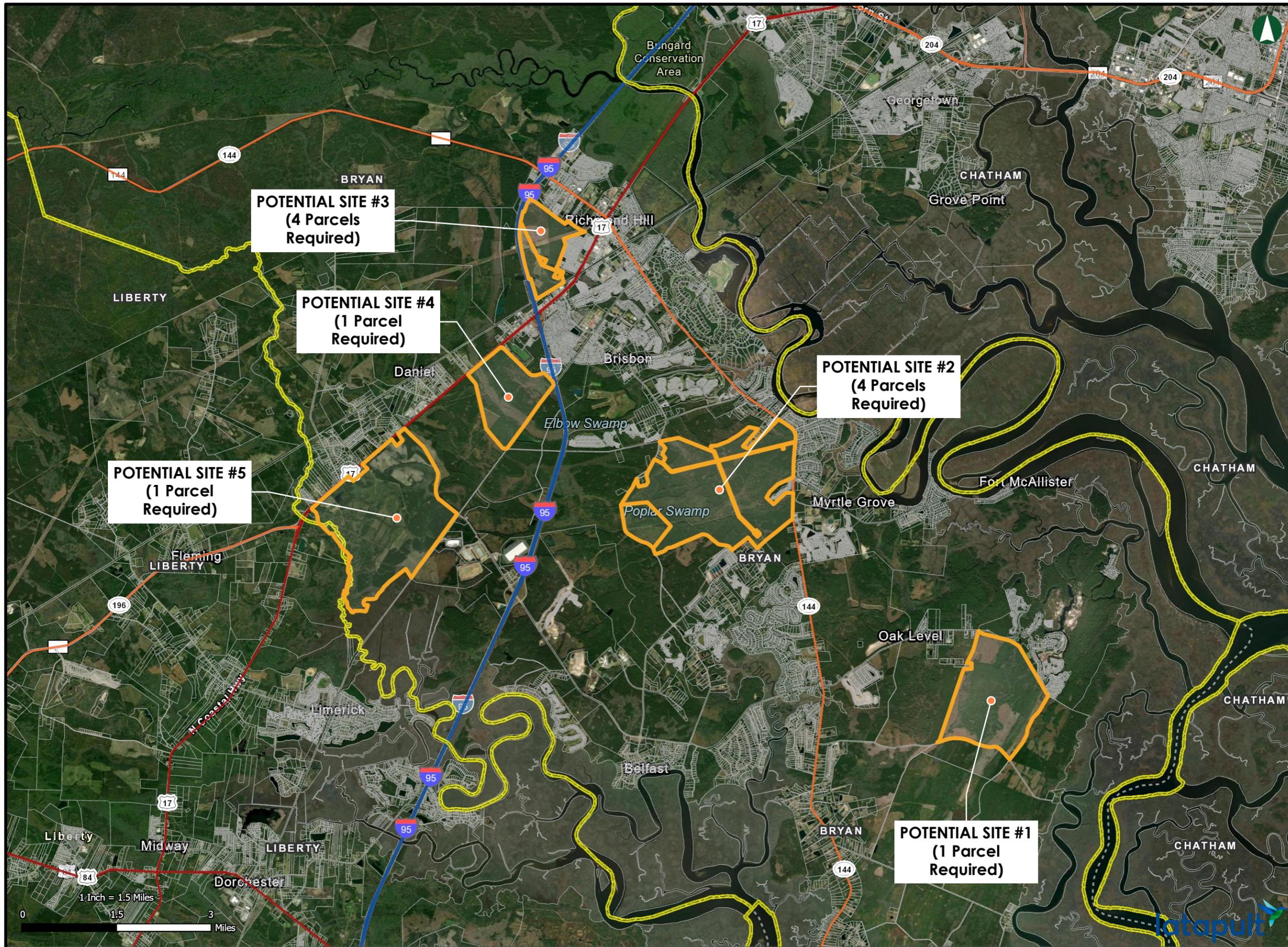
- ▶ **Proximity and Access:** To provide maximum service to an area, an airport should be located within reasonable proximity to the population center it is to serve. The location in relation to business and industry should also receive attention. The airport should have access to a major roadway or preferably, a major highway. Future access and visibility should also be considered, based on plans for the growth of the surrounding area.

Planning for compatible land uses adjacent to an airport site is a prudent consideration. Warehousing, industrial, and commercial employment centers are compatible with airport activity. Factors to be weighed include available land, proximity to major thoroughfares, location to supporting industry networks, and availability or proximity to existing utility infrastructure.

Airport Alternate Location Map

06/17/2024

- Parcels
- Counties
- Interstates
- US Highway
- State Highway



- ▶ **Site Layout and Design:** Each potential site must be evaluated on its ability to physically accommodate the airport. This includes consideration of runway orientation for wind coverage, site limitations that could constrain development including the surrounding terrain, functional efficiency, safety, utility services, and terminal facility layout. Other factors to be considered are the level of infrastructure relocations (roads, power lines, irrigation canals, etc.) and development (roads, utilities, etc.). The site layout will also consider the possibility of locating an industrial park adjacent to the airport site.
- ▶ **Property Acquisition:** This factor examines the magnitude of property to be acquired for each candidate site. The airfield layout, size and shape of existing parcels, and potential impacts to neighboring parcels can affect the amount of property that must be acquired. Also included for consideration under this category is the need for any residential acquisition and/or relocation.

The ultimate development plan will require 300+ acres of land. In some cases, landowners may desire that their entire parcel be acquired rather than selling just one portion, preventing them from being left with an uneconomic remnant. For example, if only a portion of a property is sold and the remaining piece no longer has road access, it is now less viable than it was previously, making it an uneconomic remnant. In this phase of the site selection process, the template airport encompassing approximately 300+ acres will be shown on each site.

- ▶ **Earthwork and Drainage:** This factor involves a preliminary evaluation of each site as it relates to site preparation, earthwork, grading, and drainage. The site topography will dictate the amount of earthwork required. As it is not desirable to construct an airport on a site that requires major cut and fill, each of the site ratings will reflect the level of earthwork and drainage required for development.
- ▶ **Airspace, Obstructions, and Navigational Conditions:** An analysis of the relationship with the airspace requirements of the existing airport system is essential. It is also necessary to review the envelope area of each site for the presence or absence of potential obstructions to aircraft activity. Certain obstructions may be considered immovable or too expensive to move when other options are available (e.g., large landforms, tall communication towers, major power lines, water towers, etc.). Other obstructions, such as smaller power lines, trees, buildings, and roads, impose a removal or relocation cost that must be considered.

The airport should be capable of providing a non-precision instrument approach; therefore, an examination of potential obstructions must be considered to provide a clear approach.

Environmental Factors: Environmental factors are those that affect the area surrounding the airport site, thus having an impact on the existing conditions within the community. Currently, only topical environmental information is available. Criteria to be considered under the environmental analysis includes the following categories:

- ▶ **Social Resources:** Each site must be evaluated for its potential impact upon social factors within the community. Examples include the potential relocation of residents and/or businesses necessary for the development of the airport site; how future area development plans may be influenced; and the relocation/closing of roads and similar disruptions.
- ▶ **Physical Resources:** This category evaluates potential impacts related to physical factors of construction of the airport. Included in this evaluation are impacts such as flood hazards, earth fissures, light emissions, air quality, water quality, and the airport's effect on energy supply or other natural resources.

- ▶ **Ecological Resources:** This category evaluates the potential impacts on the natural and historic environment. Biotic communities, endangered species, and their habitat areas are included under this category.
- ▶ **Farmland Resources:** The Natural Resource Conservation Service, in cooperation with other federal, state, and local government organizations, has inventoried land that can be used to produce the nation's food supply. Prime Farmland, as defined by the U.S. Department of Agriculture (USDA), is land that has the best combination of physical and chemical characteristics for producing food. This may include cultivated land, pastureland, forestland, or other land, but not urban/built-up land or water areas. Land with these designations will require additional environmental evaluation prior to approval for development. Generally, the closer to existing or planned urban development that prime or unique farmland is located, the higher the impact development will have.
- ▶ **Historical and Cultural Resources:** This category evaluates the potential impacts to historical or cultural resources and DOT Section 4(f) resources (park lands) that may be of national, state, or local significance.

EXHIBIT 3-2 on the following page illustrates the ultimate airport layout for each site.

Richmond Hill Airport

Bryan County / GA
05/29/2025

- Interstates
- US Highway
- State Highway

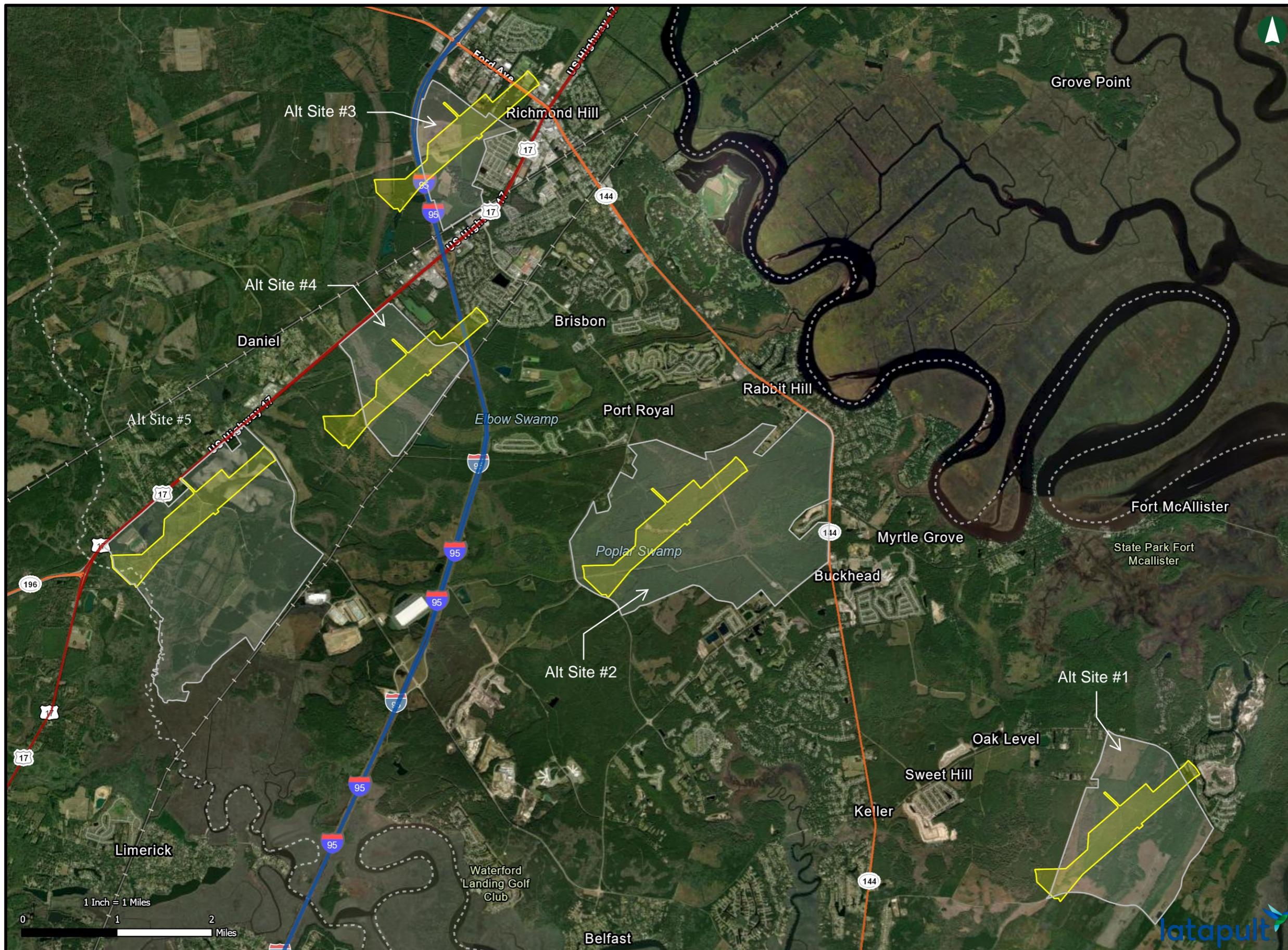


Exhibit 3-2

Preliminary Site Selection Study

The candidate sites were further evaluated to determine the advantages and disadvantages of potential new airport construction on each site. Based on the initial site evaluation, the following are advantages and disadvantages for each site.

► SITE 1:

ADVANTAGES

One parcel owner
No road relocation necessary
Able to accommodate initial/ultimate layout

DISADVANTAGES

Distance from I-95 and city center
Not convenient for commercial or industrial development
Potential noise exposure to surrounding residential areas
FEMA Flood Zone impacts
Wetlands impact
Adjacent to Richmond Hill Wildlife Management Area

► SITE 2:

ADVANTAGES

Undeveloped land across much of the site
Potential for expansion
Able to accommodate initial/ultimate layout

DISADVANTAGES

Relocation or burial of major transmission line
FEMA Flood Zone impacts
Wetlands impacts - major drainage way
Limited access to I-95/City Center
Multiple property owners
Proximity to residential properties

► SITE 3:

ADVANTAGES

Convenient access to I-95 and Highway 17
Within Richmond Hill city limits

DISADVANTAGES

Residential land uses surrounding site
FEMA Flood Zone impacts
Wetlands impacts
Unable to accommodate initial/ultimate layout
Relocation or burial of major transmission lines

► SITE 4:

ADVANTAGES

One parcel required
Convenient to the City of Richmond Hill
Compatible industrial land uses surrounding property
Convenient access to I-95 and Highway 17

DISADVANTAGES

FEMA Flood Zone impacts
Wetlands impacts
Unable to accommodate ultimate layout

► SITE 5:

ADVANTAGES

One parcel required
Convenient to the City of Richmond Hill
Compatible industrial land uses surrounding property
Convenient access to I-95 and Highway 17
Undeveloped land across much of the site
Able to accommodate initial/ultimate layout
Potential for future expansion

DISADVANTAGES

FEMA Flood Zone impacts
Wetlands impacts

CHAPTER FOUR COMPARATIVE SITE RATINGS

The preliminary evaluation of the five sites was a consolidated effort to explore all issues that could influence site selection with refined criteria. The following categories of site suitability were applied to all sites for a more in-depth analysis:

- ▶ Engineering factors
- ▶ Environmental factors

These criteria provided the framework for a preliminary analysis of each site utilizing easily accessible resources, such as State of Georgia databases, GIS data sets from Bryan County, FAA regulations, and engineers' experience based on similar projects. Applying the engineering and environmental criteria previously identified, each site has been evaluated and ranked. The combination of this ranking, consultation with City staff, and consultant experience and expertise will lead to a preferred alternative for the proposed airport development site.

The rating values outlined below were developed so that some penalties would be applied to sites that do not entirely meet criteria, with a greater penalty applied to sites that are totally unsatisfactory. If applicable, sites that met or enhanced the criteria were given a bonus, while sites that substantially exceeded the criteria were given an additional bonus.

Five rating values were assigned as described below, and the section that follows discusses the rating analysis for each site.

0 – UNACCEPTABLE: The site fails to meet the criteria or requires major changes to achieve acceptable conditions.

2 – INADEQUATE: The site includes factors that do not meet the criteria as well as some other sites or requires some changes to achieve acceptable conditions.

5 – ACCEPTABLE: The site satisfactorily meets the criteria.

8 – ADEQUATE: The site is fully sufficient to properly meet the criteria and includes some advantages in meeting the criteria.

10 – SUPERIOR: The site best meets the criteria and includes major advantages.

ENGINEERING FACTORS

This section evaluates the candidate sites using an engineering site rating analysis to determine which site has the best overall potential. Engineering factors were used to give each site a single number rating indicating the degree to which the site met the criteria discussed in the preceding section.

Proximity and Access: **Site 1** and **Site 2** are located within proximity to Highway 144 but would require improvements for access to the sites. **Site 3** also provides excellent proximity to the city center and access to I-95 and Highway 17. **Site 4** and **Site 5** have excellent proximity to the city center and access to a major highway and state highway. Both sites are adjacent to I-95 and Highway 17. The new Belfast Keller Road (Exit 82) intersection provides excellent access to I-95. Because of the proximity and access capabilities, **Site 4** and **Site 5** were given the highest rating of 10. A rating of 8 was applied to **Site 3** and a rating of 2 was applied to **Site 1** and **Site 2**.

Preliminary Site Selection Study

Site Layout and Design: Each potential site must be evaluated on its ability to physically accommodate the airport. This includes consideration of runway orientation for wind coverage, site limitations that could constrain development including the surrounding terrain, functional efficiency, safety, utility services, and terminal facility layout. Other factors to be considered are the level of infrastructure relocations (roads, power lines, irrigation canals, etc.) and development (roads, utilities, etc.).

The candidate sites were evaluated on an individual basis to determine the advantages and disadvantages of potential new airport construction on each site. The prototype layout established the recommended facilities and included a 6700'x100' runway, with applicable runway safety areas, object free areas, runway protection zones, and a full-length parallel taxiway. The existing landside facilities planned to be accommodated in a linear fashion along the frontage of the taxiway.

This analysis also included an evaluation of wind data obtained from MidCoast/Wright Army Airfield to determine a preferred runway orientation. Because the direction of aircraft operations is dependent upon wind conditions, the FAA requirement for runway orientation is 95% crosswind coverage for a single or primary runway. The ideal orientation of the runway is based on the prevailing wind direction. Both the FAA and GDOT desire that a single or parallel runway system accommodate 10.5 knot crosswinds or less at least 95 percent of the time. A more detailed analysis of wind conditions will be completed in conjunction with an airport master plan.

Another factor analyzed was the ability to establish an Instrument Approach. Due to the restricted areas located on Ft. Stewart and the existing approach to Savannah-Hilton Island Airport, a runway orientation of 6/24 provided the most feasible layout for an instrument approach. The results of the wind analysis show that a 6/24 runway alignment would provide 97.14 percent for 10.5-knot crosswind, 98.64 percent for a 13-knot crosswind, and 99.72 percent for a 16-knot crosswind, thereby exceeding the requirement.

The availability of water and sanitary sewers is also an important site layout and design consideration. Maps representing the extent of water and sewer lines were analyzed to determine the approximate distance each potential airport site is from these lines. The further from these utility lines a site is located, the more expensive it would be to extend the lines, thus a lower rating for that site.

TABLE 4-1 presents this analysis for each of the five sites.

**TABLE 4-1
DISTANCE TO WATER AND SEWER**

CANDIDATE AIRPORT SITE	DISTANCE TO WATER	DISTANCE TO SEWER
Site 1	1 mile	1 mile
Site 2	1 mile	1 mile
Site 3	Immediate proximity	Immediate proximity
Site 4	Immediate proximity	Immediate proximity
Site 5	Immediate proximity	Immediate proximity

Site 1 has no obvious terrain issues. The initial airport layout could easily be situated within the property based on a runway orientation of 6-24 but does not allow the ultimate development. Water and sewer lines are located within 1 mile of the site. **Site 1** would require improvements to the road network. **Site 1** received a rating of 2.

Preliminary Site Selection Study

Site 2 allows for both the initial and ultimate layout to be situated within the property based on a runway orientation of 6-24. Relocation or burial of transmission line (138 kV) would be required. **Site 2** received a rating of 2.

Site 3 would allow for the initial airport layout but does not allow the ultimate development. Water and sewer lines are available adjacent to the site. **Site 3** received a rating of 2.

Site 4 would require no changes to the existing road network. Water and sewer lines are available adjacent to the site and run along Belfast Keller Road and Highway 17. Only the initial layout could be situated within the property based on a runway orientation of 6-24. **Site 3** received a rating of 8.

Site 5 has relatively few issues with the development of an airport. **Site 5** would require no changes to the existing road network. Both the initial and ultimate runways could easily be situated within the property based on a runway orientation of 6-24. Water and sewer lines are available adjacent to the site and run along Belfast Keller Road and Highway 17. **Site 5** received a rating of 10.

Property Acquisition: The acquisition of property for the location of a new airport is an important consideration. It is typically less expensive to acquire undeveloped property. Acquisition of property that is occupied by residences or businesses can be expensive. To acquire homes or businesses can also be time-consuming as it requires appropriate notice and relocation funding. Any acquisition by condemnation can also be politically challenging.

The first consideration for the airport property is the footprint of the prototype airport. The prototype occupies approximately 300 acres. Additionally, any parcels that would potentially be left economically damaged, meaning they no longer have road access or are landlocked, have been considered for acquisition. Therefore, sites that have the fewest landowners, homes, or affected parcels will rate well. **TABLE 4-2** presents a summary of affected property for each of the five sites.

TABLE 4-2
PROPERTY ACQUISITION - POTENTIAL AIRPORT SITES

	SITE 1	SITE 2	SITE 3	SITE 4	SITE 5
Airport Footprint	314 Acres				
Home Relocations	0	0	0	0	0
Impact Parcels	1	4	4	1	1

Site 1 is located on privately owned property. A potential advantage of **Site 1** is that the property is owned by a single landowner. **Site 1** receives a rating of 8 for this category. **Site 2** presents a more complex property acquisition scenario. The acquisition of the recommended property would impact 4 parcels. For these reasons, **Site 2** is given a rating of 2. **Site 3** would require the acquisition of 4 parcels. **Site 3** is given a rating of 2. **Site 4** and **Site 5** would only impact one parcel and the current land use is compatible with an airport site. A rating of 8 is applied for **Site 4** and **Site 5**.

Earthwork and Drainage: Each site is relatively flat but would require additional fill material to meet the required elevations. The footprint of an airport requires large impervious surfaces to be constructed including the runways and aprons. During rain events, this water needs to run off in a safe and controlled manner. As a result, each site must also consider the impact of drainage. A rating of 5 was applied to each site.

Obstructions to Airspace: The airspace around an airport must be clear of obstructions for the safety of the airport users as well as people and property on the ground. Sites with man-made obstructions, such as communications towers, may require relocation or acquisition, which is costly. A rating of 8 was given to a site with no known obstructions within the vicinity. A rating of 5 was given to a site with one or two obstructions in the area. A rating of 2 was given to a site with many obstructions potentially requiring relocation or acquisition. The current air space characteristics of the area, as depicted on the Jacksonville Sectional Aeronautical Chart, are presented on the following page in **EXHIBIT 4-1**.

ENVIRONMENTAL FACTORS

NWI Wetlands/Streams: A desktop review of the National Wetland Inventory database revealed the existence of forested freshwater wetlands. Based on this desktop assessment:

Site 1 consists of +/-60 acres of wetlands, and +/-190 acres of uplands. Potential wetland impacts for the current proposed runway and taxiway within would be +/-21 acres.

Site 2 consists of +/-60 acres of wetlands, and +/-190 acres of uplands. Potential wetland impacts for the current proposed runway and taxiway would be +/-18 acres.

Site 3 consists of +/-34 acres of wetlands, and +/-164 acres of uplands. Potential wetland impacts for the current proposed runway and taxiway would be +/-18 acres.

Site 4 consists of +/-118 acres of wetlands, and +/-152 acres of uplands. Potential wetland impacts for the current proposed runway and taxiway would be +/-47 acres.

Site 5 consists of +/-118 acres of wetlands, and +/-152 acres of uplands. Potential wetland impacts for the current proposed runway and taxiway would be +/-47 acres.

There are no identified streams on-site (ephemeral, intermediate, or perennial). Wetlands will need to be formally delineated or surveyed and verified by the United States Army Corps of Engineers (USACE) prior to any on-site land disturbance activities. Additional wetland information for each site is included in **APPENDIX A**. Mitigation for any impacts associated with the new runway will be through purchase of credits through mitigation banks within the basin. Due to the impacts associated with each site, a rating of 5 was applied to each site.

FEMA Floodplain Information: Based on the United States Federal Emergency Management Agency (FEMA) Flood Insurance Rating Map (FIRM), the proposed sites are not located within Zone A and Zone AE 100-year flood zones, with no small portion of the site located within Zone X, 0.2% Annual Chance Flood Hazard. FEMA Flood Hazard Zones and water bodies near the project sites are included in **APPENDIX B**. Any impacts to the 100-year floodplain would have been mitigated through excavation of areas to increase volume of fill equal to the volume of impacts per local ordinance. Based on the known impacts associated with each site, a rating of 2 was applied to **Site 1** and **Site 2**, and a rating of 5 was applied for **Site 3**, **Site 4**, and **Site 5**.



FAA Airspace

Preliminary Site Selection Study

Soils/Topography: Per the Natural Resources Conservation Service (NRCS) mapping Web Soil Survey, the soil within **Site 1** is mapped as Cape Fear Soils (Hydrologic Soil Group: C/D), Albany Fine Sand (Hydrologic Soil Group: A/D), Craven Loamy Fine Sand (Hydrologic Soil Group: C), and Pelham Loamy Sand (Hydraulic Soil Group: B/D). A majority of the proposed project site falls within the Soil Group C/D, with slow infiltration rates. The existing elevations within the proposed site range from 18 to 6 feet.

The soil within **Site 2** is mapped as Cape Fear Soils (Hydrologic Soil Group: C/D), Albany Fine Sand (Hydrologic Soil Group: A/D), Craven Loamy Fine Sand (Hydrologic Soil Group: C), and Pelham Loamy Sand (Hydraulic Soil Group: B/D). A majority of the proposed project site falls within the Soil Group C/D, with slow infiltration rates. The existing elevations within the proposed site range from 18 to 6 feet.

The soil within **Site 3** is mapped as Cape Fear Soils (Hydrologic Soil Group: C/D), Albany Fine Sand (Hydrologic Soil Group: A/D), Craven Loamy Fine Sand (Hydrologic Soil Group: C), and Pelham Loamy Sand (Hydraulic Soil Group: B/D). A majority of the proposed project site falls within the Soil Group C/D, with slow infiltration rates. The existing elevations within the proposed site range from 18 to 6 feet.

The soil within **Site 4** is mapped as Cape Fear Soils (Hydrologic Soil Group: C/D), Albany Fine Sand (Hydrologic Soil Group: A/D), Craven Loamy Fine Sand (Hydrologic Soil Group: C), and Pelham Loamy Sand (Hydraulic Soil Group: B/D). A majority of the proposed project site falls within the Soil Group C/D, with slow infiltration rates. The existing elevations within the proposed site range from 18 to 6 feet.

Site 5 is mapped as Cape Fear Soils (Hydrologic Soil Group: C/D), Albany Fine Sand (Hydrologic Soil Group: A/D), Craven Loamy Fine Sand (Hydrologic Soil Group: C), and Pelham Loamy Sand (Hydraulic Soil Group: B/D). A majority of the proposed project site falls within the Soil Group C/D, with slow infiltration rates. The existing elevations within the proposed site range from 18 to 6 feet.

Additional Soils/Topography information for each site is included in **APPENDIX C**. It is anticipated that the soils are adequate for fill material to be used within the sites with possible admixtures needed to stabilize in areas. A rating of 5 was applied to each site.

Historic/Cultural/Natural Resources/Protected Species: Per the National Register of Historic Places website, there are no known or listed historic resources within the proposed project sites. Based on the available information from the Georgia Department of Natural Resources – Georgia Biodiversity Portal, the proposed project sites do not appear to impact any endangered or threatened wildlife or plants. A rating of 5 was applied to each site.

Environmental Protection Agency Facilities: Based on available information, there are no known areas of contaminated soil, dump sites, or any other operations on the proposed sites that would lead to environmental issues. A rating of 5 was applied to each site.

SITE ANALYSIS SUMMARY

TABLE 4-3 on the following page summarizes the results of the preliminary site rating analysis. To avoid the potential for bias in the rating analysis, there was no special weighting applied to any factor. With a maximum score of 100, a total score of less than 60 would suggest multiple problems with the site that may be difficult to overcome. A rating of 60 to 69 would suggest that the site has better potential to be acceptable for airport development. A score of 70 to 79 or above would indicate that the site has several distinct advantages and would be an excellent location for the development of an airport. Scores above 80 are not typical, as impacts will always exist when considering development of any kind, especially an airport, due to the large area required.

**TABLE 4-3
RATING OF CANDIDATE SITES
CITY OF RICHMOND HILL AIRPORT SITE SELECTION**

EVALUATION CRITERIA	POTENTIAL AIRPORT SITES				
	SITE 1	SITE 2	SITE 3	SITE 4	SITE 5
ENGINEERING FACTORS					
Location and Access	2	2	8	10	10
Site Layout and Design	2	2	2	2	10
Property Acquisition	8	2	2	8	8
Earthworks and Drainage	5	5	5	5	5
Airspace and Obstructions	5	5	5	8	8
ENGINEERING SUBTOTAL:	22	16	22	33	41
ENVIRONMENTAL FACTORS					
NWI Wetlands/Streams	5	5	5	5	5
FEMA Floodplain	2	2	5	5	5
Soils/Topography	5	5	5	5	5
Historical & Cultural Impacts	5	5	5	5	5
EPA Facilities	5	5	5	5	5
ENVIRONMENTAL SUBTOTAL:	22	22	25	25	25
GRAND TOTAL:	44	38	47	58	66

FINAL RANKING

Based on the preliminary site evaluation, **Site 4** and **Site 5** are the top two ranked sites, with **Site 5** being the ranked the highest.

CHAPTER FIVE

REVISED DEVELOPMENT COST ESTIMATES/FUNDING SOURCES

INTRODUCTION

This chapter details the revised estimated development costs of a new general aviation airport in the City of Richmond Hill, in Bryan County, GA. Development costs based on the needs represented in the facility template are summarized in the following sections:

- ▶ Estimated Development Costs
- ▶ Overview of Airport Development Funding Sources
- ▶ Potential Funding Sources

The estimated development costs of a new general aviation are identified by major facility/project category. These estimated development costs represent planning level estimates of project costs and are intended to provide an order-of-magnitude estimate. More detailed project definitions and associated cost estimates will be required prior to the implementation of any airport development project identified herein. Common sources of airport development funding are summarized in this chapter and a preliminary funding analysis is also presented. The funding analysis illustrates anticipated funding contributions from Federal, State, local, and private sources based on typical airport development funding scenarios.

ESTIMATED DEVELOPMENT COSTS

The construction of a new general aviation airport in Richmond Hill would be a multi-year task that could only be initiated following detailed analyses that include a Master Plan, Environmental Assessment, environmental permitting, and potential environmental mitigation. At this point, however, it is important to develop an order-of-magnitude cost estimate at a planning level of detail, for the potential airport development project. While the estimated development costs identified in this analysis may not be all-inclusive, to the best extent possible these estimates include development costs associated with major components of the potential project. Costs were estimated using region-specific average unit costs for airport development projects. Detailed construction estimates for the options presented below are included in **APPENDIX D**. An initial and ultimate cost estimate is included for both options.

For comparative purposes, two options were developed for the initial layout.

- ▶ **OPTION 1** includes the development of a facility that meets B-II standards and includes a 5,000' long x 75' wide runway and taxiway turnarounds on each end.
- ▶ **OPTION 2** includes the development of a facility that meets C-II standards and includes a 6,700' long x 100' wide runway and a full parallel taxiway.

OPTION 1 (initial) estimated costs for each development component are presented in **TABLE 5-1** on the next page.

**TABLE 5-1
OPTION 1: INITIAL DEVELOPMENT COSTS**

PHASE AREA	PHASED ELEMENT DESCRIPTION	TOTAL EST. COST
PRE-CONSTRUCTION ELEMENTS		
A	Land Acquisition – Fee Simple (314 Acres)	\$6,000,000
B	Avigation Easement – (100 Acres)	\$150,000
C	Wetlands Fill Mitigation – (Includes Options 1 & 2)	\$20,000,000
D	Master Plan/Environmental Assessment	\$1,000,000
CONSTRUCTION ELEMENTS		
1	Runway (5,000'x75')/Taxiway Turnarounds	\$19,000,000
2	Terminal Apron – (293'x421')	\$2,700,000
3	Terminal Building (Modular)	\$85,000
4	New Access Road/Parking/Utilities	\$4,100,000
5	T-Hangar Taxilanes & South Apron Expansion	\$1,600,000
6	T-Hangars/(2-16 unit) and Associated Pavement	\$6,400,000
7	Fuel Farm/Fuel Trucks	\$1,500,000
OPTION 1 - INITIAL PROJECT TOTAL:		\$62,535,000

As shown in **TABLE 5-1**, total development costs for **OPTION 1** based on the facility template are estimated at approximately \$63 Million. Estimated development costs for the following major elements are as follows:

- ▶ Master Plan/Site Selection Study/Environmental Assessment: \$1 Million
- ▶ Property Acquisition: \$6.1 Million
- ▶ Wetlands Mitigation: \$20 Million
- ▶ Airfield Construction Projects: \$19 Million
- ▶ Terminal Area Development Projects: \$12.2 Million
- ▶ Access Road/Utilities: \$4.1 Million

It is estimated that property acquisition/easement will entail a land area encompassing over 300 acres to accommodate aviation-related facilities and associated safety areas. It may be necessary and/or beneficial to acquire a larger land area to provide airport-owned property available to support non-aviation development, such as an industrial park or other commercial development. The actual size and number of parcels may also affect the final land envelope to be acquired.

The largest component of the potential facility’s estimated development cost is associated with airfield construction projects. Clearing, grading, and drainage costs associated with the construction of a 5,000’ long x 75’ wide runway, taxiway turnarounds, and aircraft parking areas are included in the total estimated airfield construction costs of approximately \$19 Million. Terminal area development projects, including the construction of a modular airport terminal building, fuel farm, and aircraft T-hangars are estimated to cost approximately \$12.2 Million. Costs for a new access road and utilities are estimated at approximately \$4.1 Million.

OPTION 2 estimated costs for each development component are presented in **TABLE 5-2** on the next page.

**TABLE 5-2
OPTION 2: INITIAL DEVELOPMENT COSTS**

PHASE AREA	PHASED ELEMENT DESCRIPTION	TOTAL EST. COST
PRE-CONSTRUCTION ELEMENTS		
A	Land Acquisition - Fee Simple (314 Acres)	\$6,000,000
B	Avigation Easement – (100 Acres)	\$150,000
C	Wetlands Fill Mitigation-(Includes Option 1 & 2)	\$20,000,000
D	Master Plan/Environmental Assessment	\$1,000,000
CONSTRUCTION ELEMENTS		
1	Runway (6,700x100’)/Full Parallel Taxiway	\$32,000,000
2	Terminal Apron – (293’x421’)	\$2,700,000
3	Terminal Building (Modular)	\$85,000
4	New Access Road/Parking/Utilities	\$4,100,000
5	T-Hangar Taxilanes & South Apron Expansion	\$1,600,000
6	T-Hangars/ (2-16 unit) and Associated Pavement	\$6,400,000
7	Fuel Farm/Fuel Trucks	\$1,500,000
OPTION 2 - INITIAL PROJECT TOTAL:		\$75,535,000

As shown in **TABLE 5-2**, total development costs for **OPTION 2** based on the facility template are estimated at approximately \$76 Million. Estimated development costs for the following major elements are as follows:

- ▶ Master Plan/Site Selection Study/Environmental Assessment: \$1Million
- ▶ Property Acquisition: \$6.1 Million
- ▶ Wetlands Mitigation: \$20 Million
- ▶ Airfield Construction Projects: \$32 Million
- ▶ Terminal Area Development Projects: \$12.2 Million
- ▶ Access Road/Utilities: \$4.1 Million

It is estimated that property acquisition/easement will entail a land area encompassing over 300 acres to accommodate aviation-related facilities and associated safety areas. It may be necessary and/or beneficial to acquire a larger land area to provide airport-owned property available to support non-aviation development, such as an industrial park or other commercial development. The actual size and number of parcels may also affect the final land envelope to be acquired.

The largest component of the potential facility’s estimated development costs is associated with airfield construction projects. Clearing, grading, and drainage costs associated with the construction of a 6,700’ long x 100’ wide runway and a full parallel taxiway are included in the total estimated airfield construction costs of approximately \$32 Million. Terminal area development projects, including the construction of a modular airport terminal building, fuel farm, and aircraft T-hangars are estimated to cost approximately \$12.2 Million. Costs for a new access road and utilities are estimated at approximately \$4.1 Million.

The development costs associated with projects presented in **TABLE 5-1** and **TABLE 5-2** are potentially eligible for funding from a variety of sources, once the sponsor meets the eligibility requirements. Anticipated funding sources for these development projects will be summarized in the following section and total funding anticipated from each source will be quantified.

OVERVIEW OF AIRPORT DEVELOPMENT FUNDING SOURCES

At a planning level of detail, required projects and their estimated development costs have been identified for the construction of a new general aviation airport in Richmond Hill. Another important consideration in this analysis is the funding eligibility and potential funding sources for these development projects. Federal, state, and local governments all play an important role in managing and funding airport facility development. In addition, private businesses and individuals often contribute to the construction of ancillary airport facilities that support their own activities at the airport. Primary funding sources available to support airport development projects include the following:

- ▶ Federal Aviation Administration (FAA) Funding
- ▶ Georgia Department of Transportation (GDOT) Funding
- ▶ Local Funding
- ▶ Private Funding Source(s)
- ▶ Innovative Financing

Each of these potential funding sources and their respective programs for funding airport development projects will be summarized in following sections. It is important to note that a variety of other sources may also be available to fund components of development projects and/or defray costs associated with the construction of a new general aviation airport in Richmond Hill. While anticipated funding from these other sources is not quantified, examples of innovative funding sources will be presented. In many cases, using innovative funding techniques could significantly reduce the local/private share of project costs associated with the development of the new Richmond Hill Airport.

Federal Aviation Administration (FAA) Funding

To promote the development of airports to meet the nation's needs, the Federal Government embarked on a Grants-In-Aid Program to units of State and local government after the end of World War II. This early program, the Federal Aid Airport Program (FAAP), was authorized by the Federal Treasury Act of 1946 and was provided with its funding from the Treasury.

In 1970, a more comprehensive program was established with the passage of the Airport and Airway Development Act of 1970. This Act provided grants for airport planning under the Planning Grant Program (PGP) and for airport development under the Airport Development Aid Program (ADAP). These programs were funded from a newly established Airport and Airway Trust Fund, which received funds from taxes on airline tickets, air freight, and aviation fuel. The authority to issue grants under these two programs expired on September 30, 1981.

The Airport Improvement Program (AIP) was established by the Airport and Airway Improvement Act of 1982. The initial AIP provided funding legislation through fiscal year 1992. Since then, the AIP has been authorized and appropriated on a yearly basis. Funding for this program is generated from a tax on airline tickets, freight waybills, international departure fees, tax on general aviation fuel, and a tax on aviation jet fuel. The FAA uses these funds to provide 90 percent funding for eligible projects at qualified airports. Federal Airport Improvement Funds must be spent on FAA eligible projects as defined in FAA Order 5100.38 "Airport Improvement Program (AIP) Handbook." In general, the handbook states that:

- ▶ An airport must be in the currently approved National Plan of Integrated Airport Systems (NPIAS) to be eligible for AIP funding.
- ▶ To be eligible for Federal funding, an improvement project at a NPIAS airport must be depicted on an FAA-approved Airport Layout Plan.

- ▶ Most improvement projects at NPIAS airports are eligible for 90 percent Federal funding.
- ▶ General aviation terminal buildings, T-hangars, corporate hangars, and other private-use facilities are not eligible for Federal funding. Additionally, revenue-producing items such as automobile parking lots are typically not eligible for Federal funding.

Other sources of FAA funding include Facilities and Equipment (F&E) funding for facilities such as air traffic control towers and some runway instrumentation. This funding is separate from the AIP program and typically requires no local match. Federal noise funds (Part 150 funds) can also be used for noise mitigation, where applicable, with an 80 percent Federal and 20 percent State and/or local share.

Georgia Department of Transportation (GDOT)

Many state governments take an active role in supporting airport development by providing funding to support a share of airport project costs. The state of Georgia is one of the states that play a vital role in promoting and financially supporting development at its airports. In most cases, states collect money through aviation and aeronautics-related taxes that are then disbursed to support airport development projects based on airport needs and state-specific funding priorities. As a Block Grant state, the GDOT is responsible for determining how to distribute AIP grants to eligible NPIAS airports, excluding primary air carrier airports whose grant funding is managed by the FAA. In distributing AIP grants to eligible airports, GDOT is required to use a prioritization process, generally in accordance with the FAA's process. However, the Block Grant program enables GDOT to play a more active role in promoting and managing airport system development throughout Georgia.

Local/Private Funding Sources

Local airport owners and sponsors, such as counties, cities, and/or airport authorities, are frequently responsible for remaining costs associated with airport development projects after Federal and State shares have been applied. Private sector investment is also a growing source of funding for airport development projects. In some cases, specific facilities at an airport, such as aircraft storage hangars and fuel storage/distribution facilities are constructed with private funds. These facilities are typically constructed on land leased from the airport and a private developer retains the right to operate and profit from the facility that is constructed. For projects that are eligible for Federal/State funds, the local share of the project costs is typically 5 percent. For projects not eligible for AIP funding, the local or private funding requirement can be as great as 100 percent of project costs.

Innovative Financing

As a result of scarcities in traditional Federal, State, and local funding sources, many airports, especially general aviation airports and their sponsors, have resorted to innovative and non-traditional funding sources to mitigate airport development project funding shortfalls. There are a variety of non-traditional sources at all levels of government that can be used to leverage local funds in support of airport development projects.

Strong community relations and ties with the local municipality in which the airport operates are vital to successfully taking advantage of any innovative financing opportunities that may exist.

Examples of Federal programs that have successfully been used to provide non-traditional funding for airport development projects include:

- ▶ Community Development Block grants and loans through the U.S. Department of Housing and Urban Development (HUD).
- ▶ Economic Development Assistance (EDA) grants and loans through the Department of Commerce, Economic Development Administration.

Preliminary Site Selection Study

- ▶ Rural Economic Development grants and loans through the U.S. Department of Agriculture (USDA).

In addition to these Federal programs, there may be other State and local programs that should be examined as potential avenues for project funding. While estimated funding from innovative funding sources is not quantified in this analysis, successfully acquiring funding from these sources, and leveraging local or private funding against those grants or loans, could significantly reduce the funding burden of both local and private funding sources.

POTENTIAL FUNDING SOURCES

Airport facility needs and the estimated project costs have been estimated at a planning level of detail for the construction of a new general aviation airport in Richmond Hill. To determine anticipated funding sources, each project was examined to determine its eligibility for funding from Federal, State, local and private sources. The results of this analysis are summarized in **TABLE 5-3** which presents preliminary estimates of **OPTION 1** – initial funding by source for the estimated project costs identified in this analysis.

TABLE 5-3
OPTION 1: INITIAL FUNDING SOURCES

FUNDING SOURCE	FEDERAL	STATE	LOCAL/PRIVATE	TOTAL
Land Acquisition-Fee Simple (314 Acres)	\$0	\$0	\$6,000,000	\$6,000,000
Avigation Easement (100 Acres)	\$0	\$0	\$150,000	\$150,000
Wetlands Fill Mitigation	\$0	\$0	\$20,000,000	\$20,000,000
Mater Plan/Environmental Assessment	\$0	\$0	\$1,000,000	\$1,000,000
Runway (5,000' x 75')/Taxiway Turnarounds	\$17,100,000	\$950,000	\$950,000	\$19,000,000
Terminal Apron	\$2,430,000	\$135,000	\$135,000	\$2,700,000
Terminal Building	\$0	\$0	\$85,000	\$85,000
Access Road/Parking/Utilities	\$3,690,000	\$205,000	\$205,000	\$4,100,000
T-Hangars Taxilanes & South Apron Expansion	\$0	\$0	\$1,600,000	\$1,600,000
T-Hangars (2-16 unit) & Associated Pavement	\$0	\$0	\$6,400,000	\$6,400,000
Fuel Farm/Fuel Trucks	\$0	\$0	\$1,500,000	\$1,500,000
TOTAL:	\$23,220,000	\$1,290,000	\$38,025,000	\$62,535,000

A summary of anticipated funding eligibility for **OPTION 2** initial development project costs is presented in **TABLE 5-4** on the following page.

**TABLE 5-4
OPTION 2: INITIAL FUNDING SOURCES**

FUNDING SOURCE	FEDERAL	STATE	LOCAL/PRIVATE	TOTAL
Land Acquisition-Fee Simple (314 Acres)	\$0	\$0	\$6,000,000	\$6,000,000
Avigation Easement (100 Acres)	\$0	\$0	\$150,000	\$150,000
Wetlands Fill Mitigation	\$0	\$0	\$20,000,000	\$20,000,000
Mater Plan/Environmental Assessment	\$0	\$0	\$1,000,000	\$1,000,000
Runway (6,700'x100')/Taxiway Turnarounds	\$28,800,000	\$1,600,000	\$1,600,000	\$32,000,000
Terminal Apron	\$2,430,000	\$135,000	\$135,000	\$2,700,000
Terminal Building	\$0	\$0	\$85,000	\$85,000
Access Road/Parking/Utilities	\$3,690,000	\$205,000	\$205,000	\$4,100,000
T-Hangars Taxilanes & South Apron Expansion	\$0	\$0	\$1,200,000	\$1,600,000
T-Hangars (2-16 unit) & Associated Pavement	\$0	\$0	\$6,400,000	\$6,400,000
Fuel Farm/Fuel Trucks	\$0	\$0	\$1,500,000	\$1,500,000
TOTAL:	\$34,920,000	\$1,940,000	\$38,675,000	\$75,535,000

Total estimated **OPTION 1** initial development costs for a new general aviation airport in Richmond Hill are estimated at approximately \$63 Million, of which 37 percent, or approximately \$23.2 Million would be eligible for Federal funding. The remaining 63 percent of total estimated development costs would be funded through state, local, private, and/or non-traditional funding sources. See **TABLE 5-5**, below.

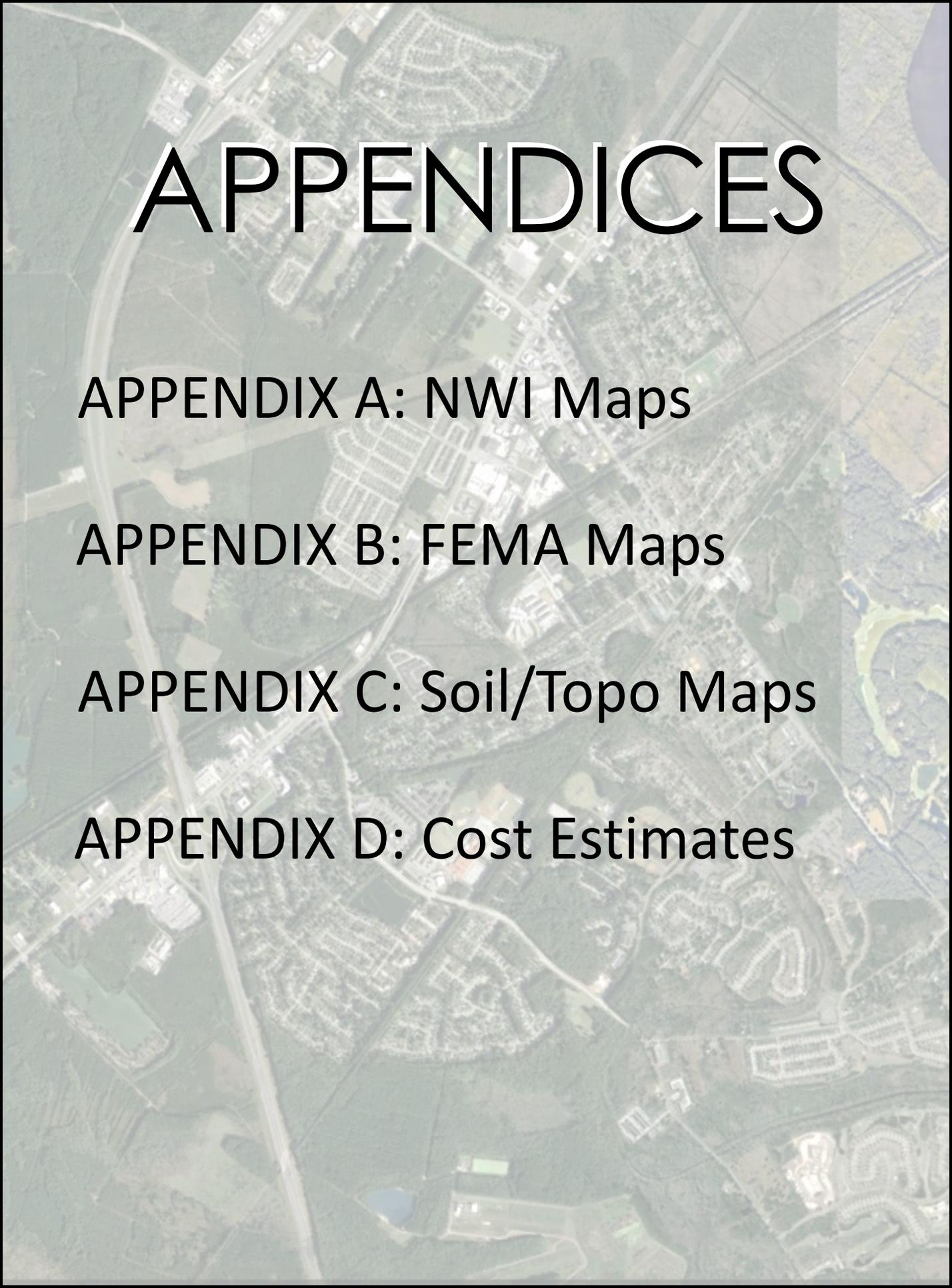
**TABLE 5-5
OPTION 1: ESTIMATED INITIAL FUNDING ELIGIBILITY**

FUNDING SOURCE	AMOUNT	PERCENTAGE
Federal	\$23,220,000	37%
State	\$1,290,000	2%
Local/Private	\$38,025,000	61%
TOTAL ESTIMATED DEVELOPMENT COSTS:	\$62,535,000	100%

Total estimated **OPTION 2** initial development costs for a new general aviation airport in Richmond Hill are estimated at approximately \$76 Million, of which 46 percent, or approximately \$34.9 Million would be eligible for Federal funding. The remaining 54 percent of total estimated development costs would be funded through state, local, private, and/or non-traditional funding sources. See **TABLE 5-6**, below.

**TABLE 5-6
OPTION 2: ESTIMATED INITIAL FUNDING ELIGIBILITY**

FUNDING SOURCE	AMOUNT	PERCENTAGE
Federal	\$34,920,000	46%
State	\$1,940,000	2%
Local/Private	\$38,675,000	52%
TOTAL ESTIMATED DEVELOPMENT COSTS:	\$75,535,000	100%



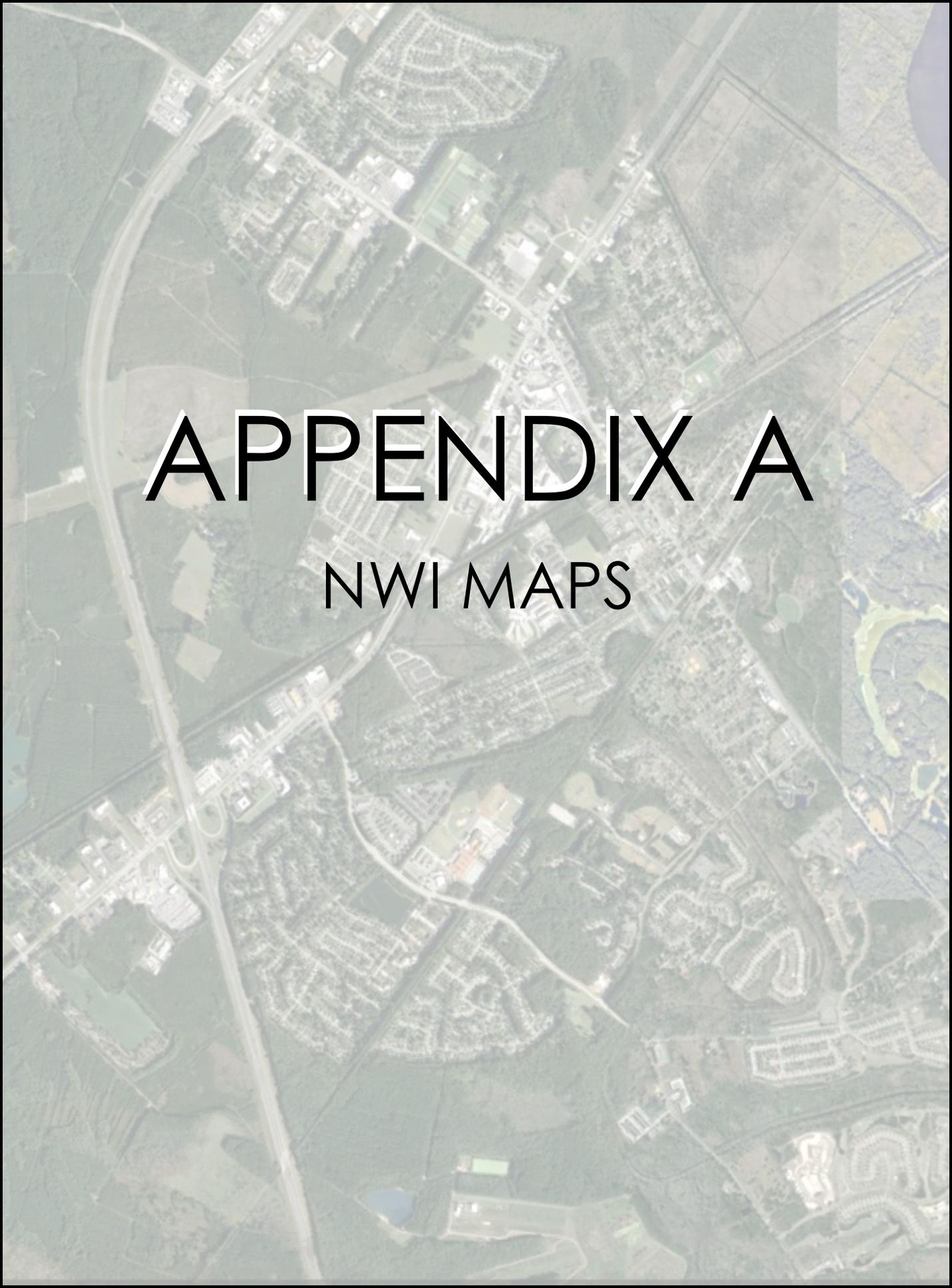
APPENDICES

APPENDIX A: NWI Maps

APPENDIX B: FEMA Maps

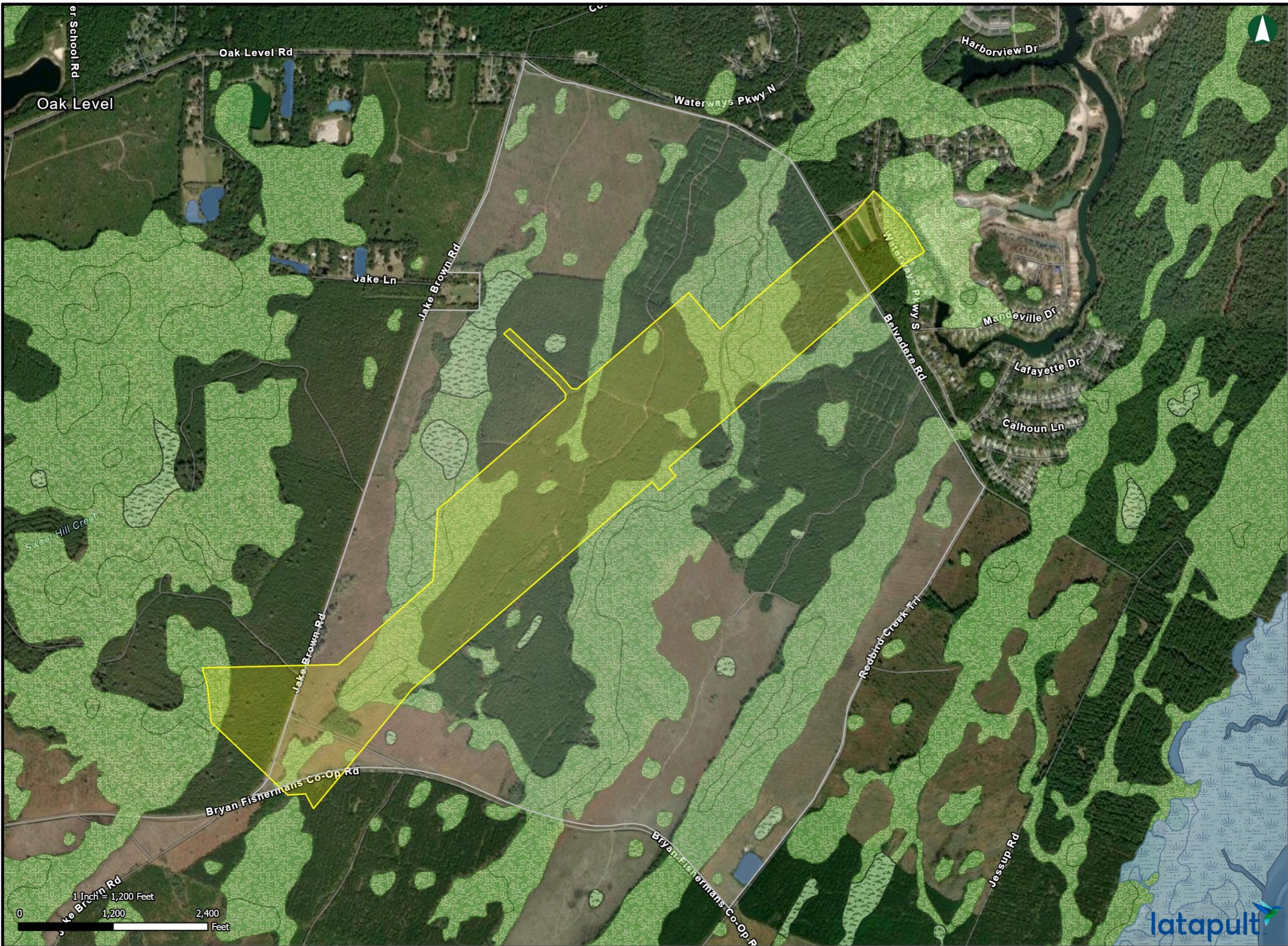
APPENDIX C: Soil/Topo Maps

APPENDIX D: Cost Estimates

An aerial photograph of a suburban area, showing a mix of residential housing, roads, and green spaces. The text is overlaid on the center of the image.

APPENDIX A

NWI MAPS



Alt #1

NWI Map
06/19/2025

-  Forested Wetland
-  Non-Forested Wetland
-  Salt Marsh
-  Water

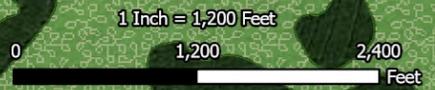




Alt #2

NWI Map
06/19/2025

-  Forested Wetland
-  Non-Forested Wetland
-  Salt Marsh
-  Water



Alt #3

NWI Map
06/19/2025

-  Forested Wetland
-  Non-Forested Wetland
-  Salt Marsh
-  Water



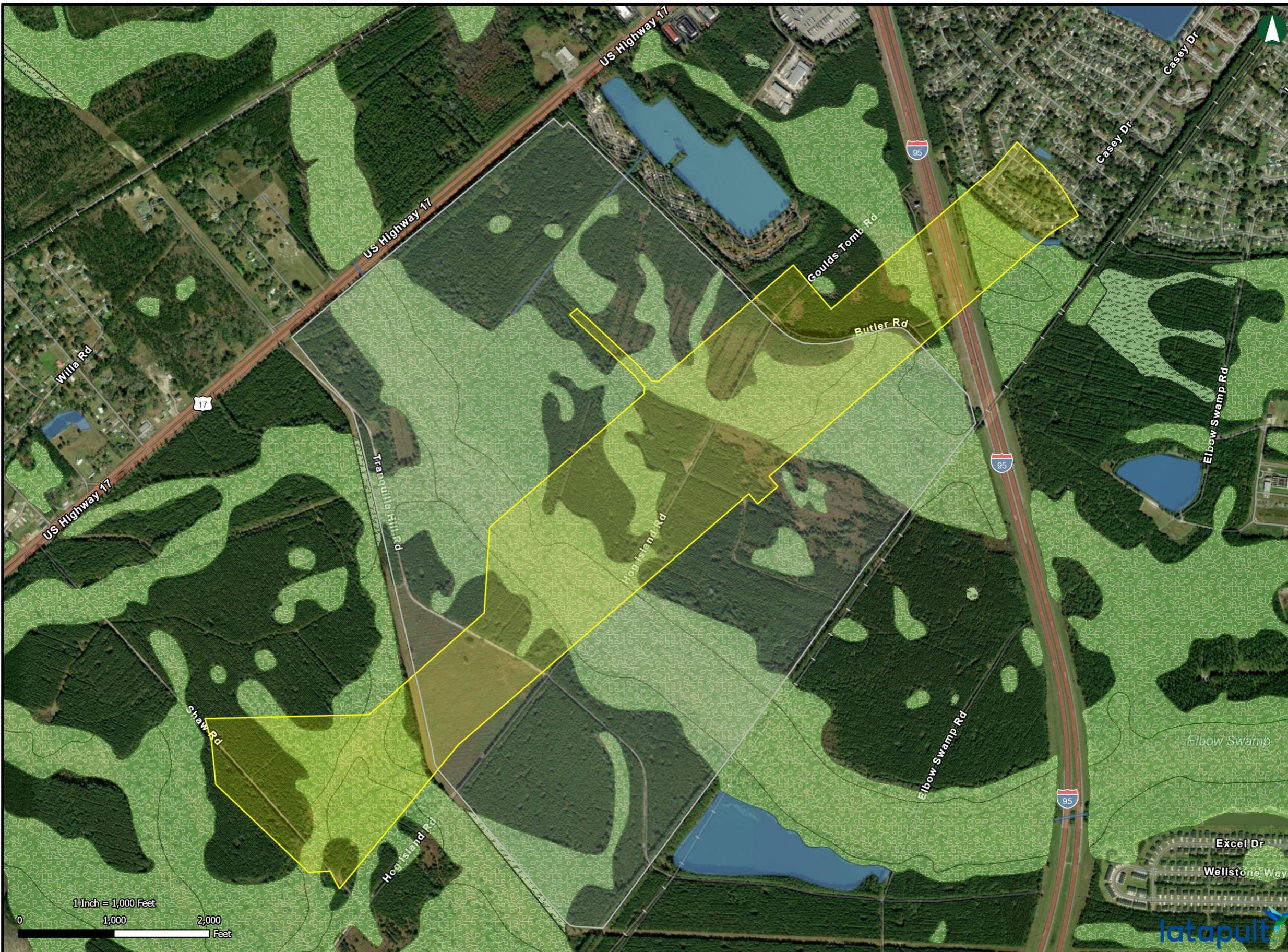
1 Inch = 1,000 Feet
0 1,000 2,000 Feet

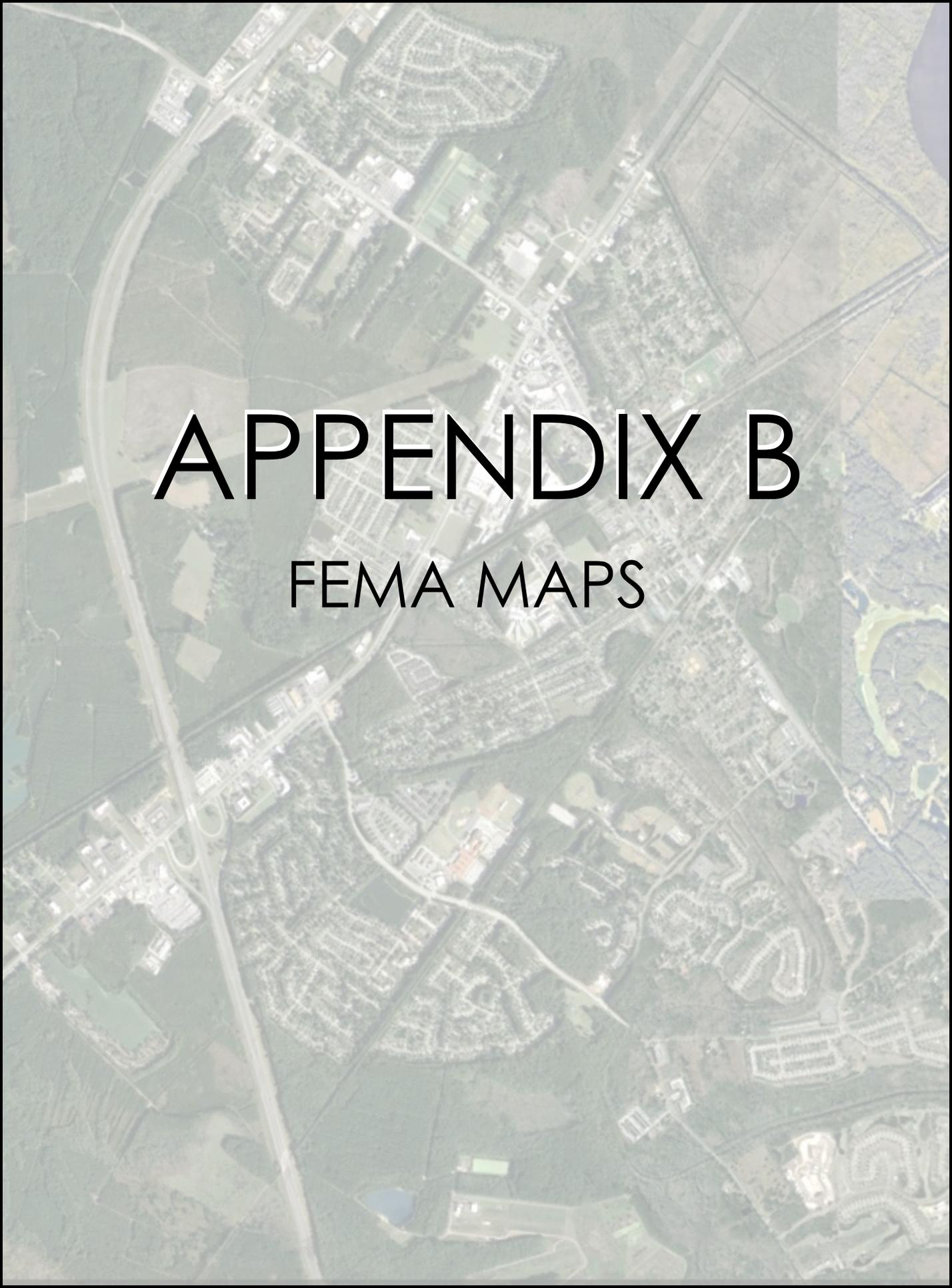


Alt #4

NWI Map
06/19/2025

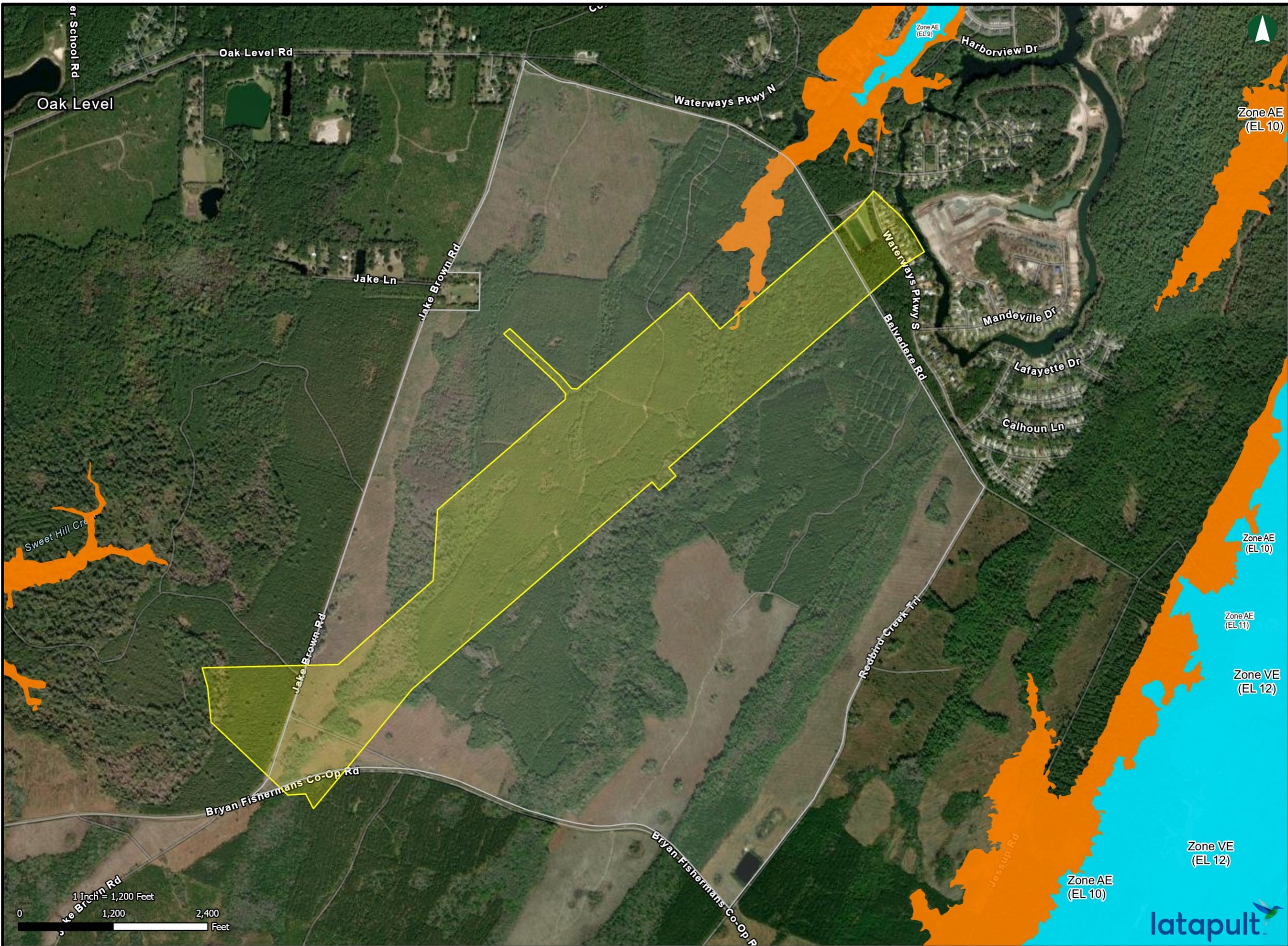
-  Forested Wetland
-  Non-Forest Wetland
-  Salt Marsh
-  Water



An aerial photograph of a suburban area, showing a mix of residential housing, commercial buildings, and green spaces. A major road runs diagonally across the left side of the image. The text 'APPENDIX B' is overlaid in large, bold, black letters in the upper-middle section.

APPENDIX B

FEMA MAPS



Alt #1

FEMA Map
06/19/2025

-  1% Annual Chance Flood Hazard
-  Regulatory Floodway
-  Special Floodway
-  Area of Undetermined Flood Hazard
-  0.2% Annual Chance Flood Hazard
-  Future Conditions 1% Annual Chance Flood Hazard
-  Area with Reduced Risk Due to Levee
-  Area with Risk Due to Levee

Zone AE (EL 10)

Zone AE (EL 10)

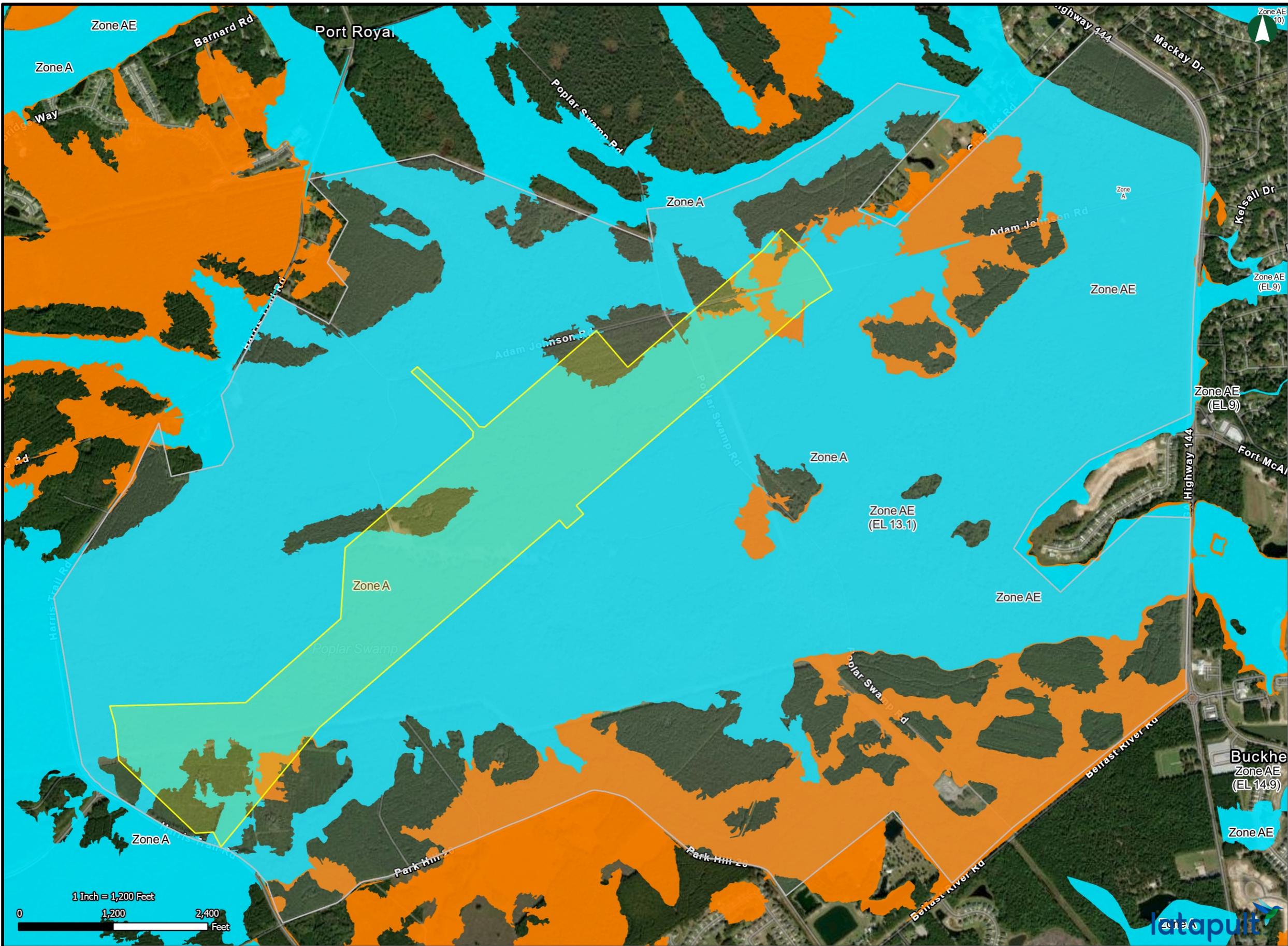
Zone AE (EL 11)

Zone VE (EL 12)

Zone VE (EL 12)

Zone AE (EL 10)





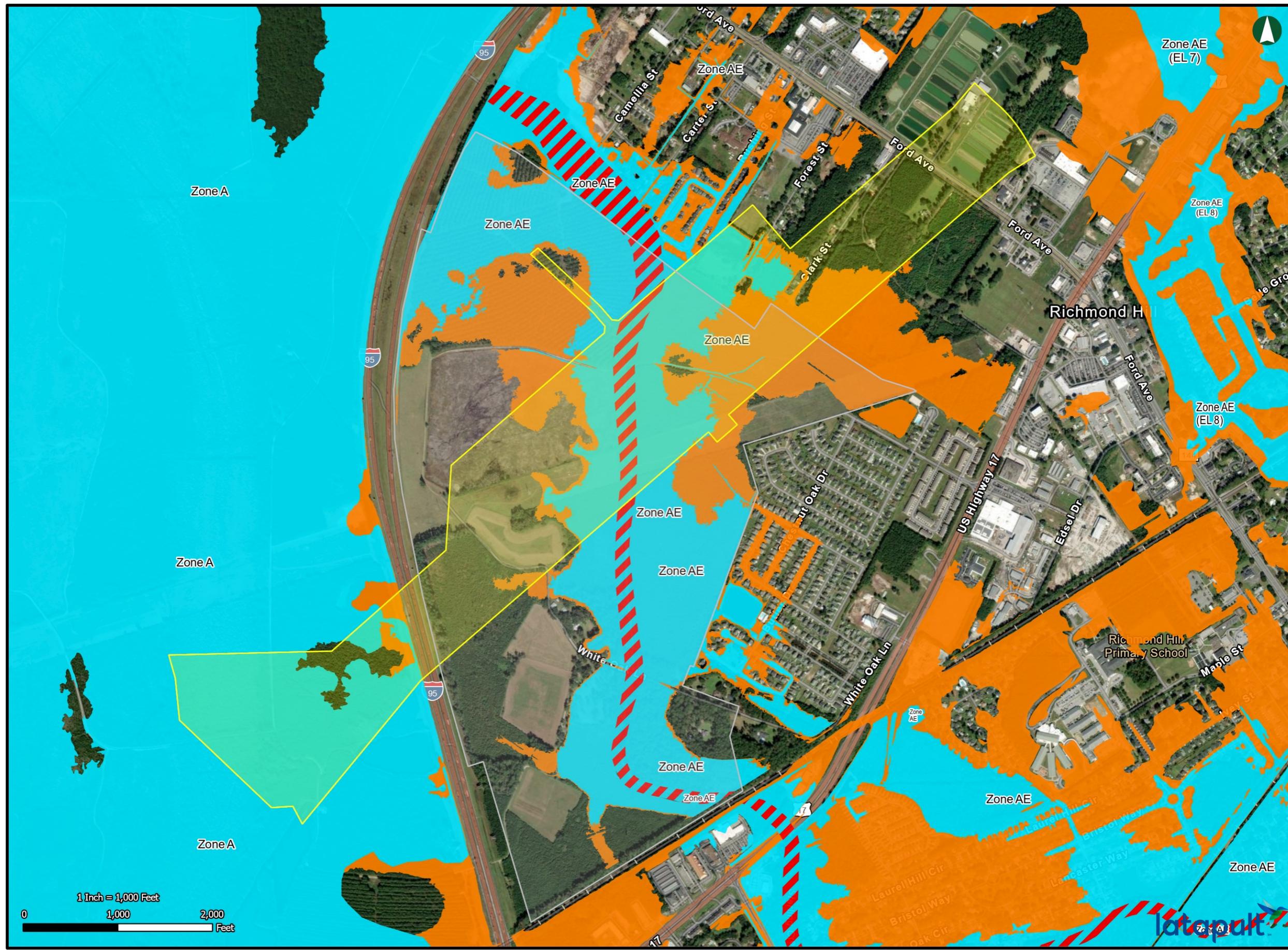
Alt #2

FEMA Map
06/19/2025

- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

Alt #3

FEMA Map
06/19/2025



- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

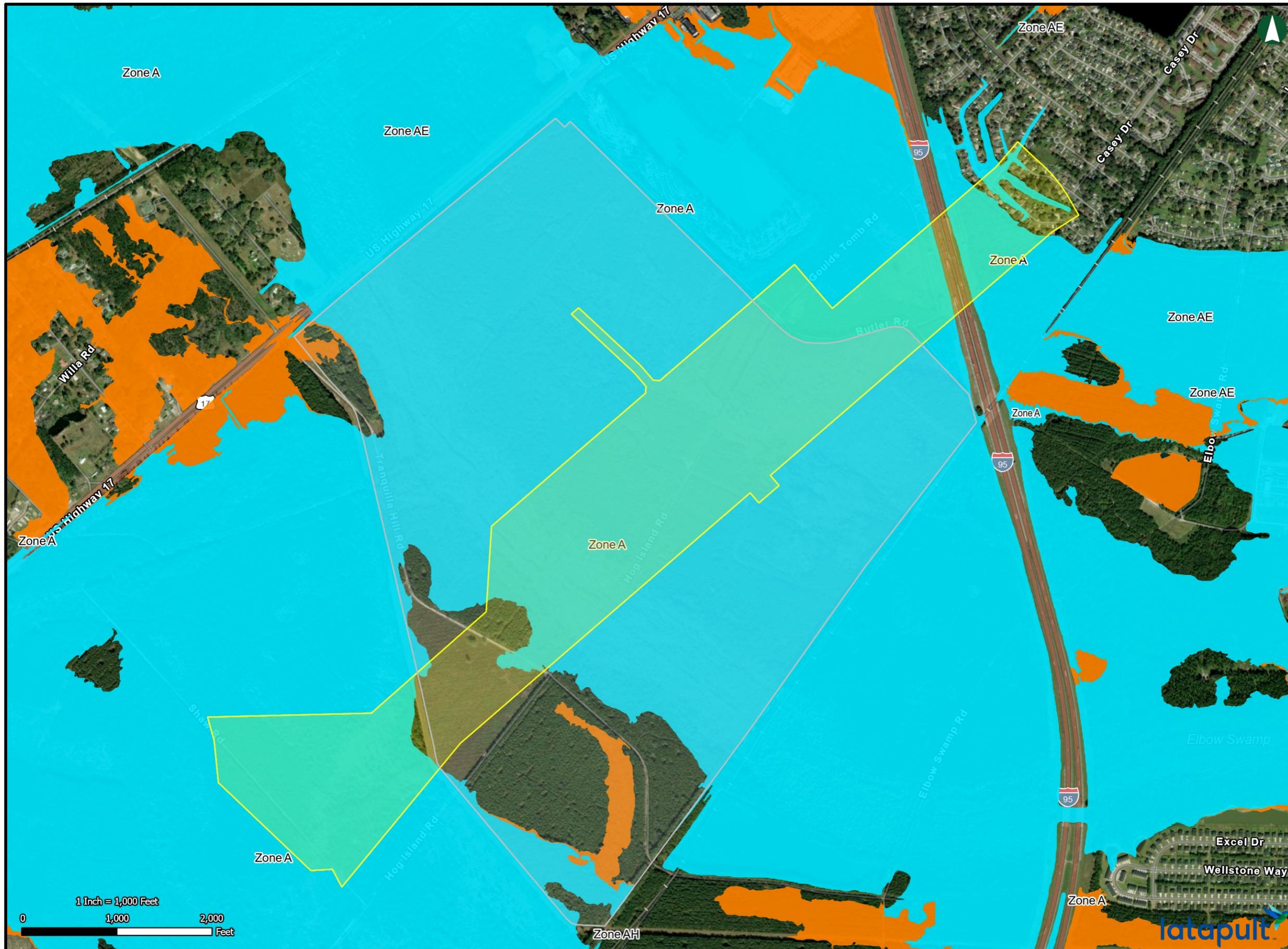
1 Inch = 1,000 Feet
0 1,000 2,000 Feet

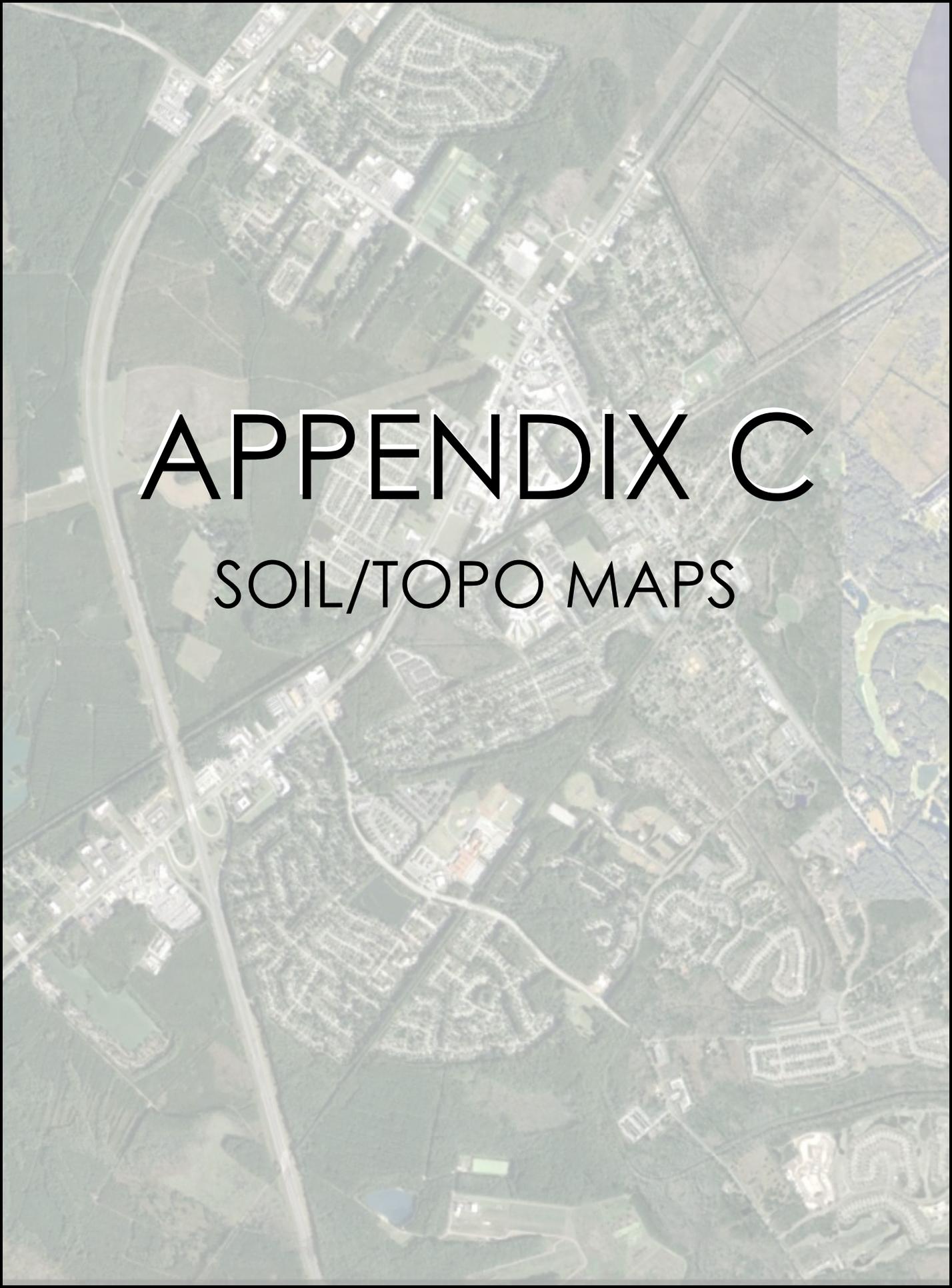


Alt #4

FEMA Map
06/19/2025

-  1% Annual Chance Flood Hazard
-  Regulatory Floodway
-  Special Floodway
-  Area of Undetermined Flood Hazard
-  0.2% Annual Chance Flood Hazard
-  Future Conditions 1% Annual Chance Flood Hazard
-  Area with Reduced Risk Due to Levee
-  Area with Risk Due to Levee



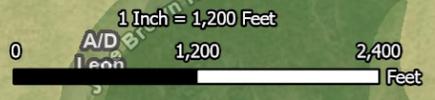
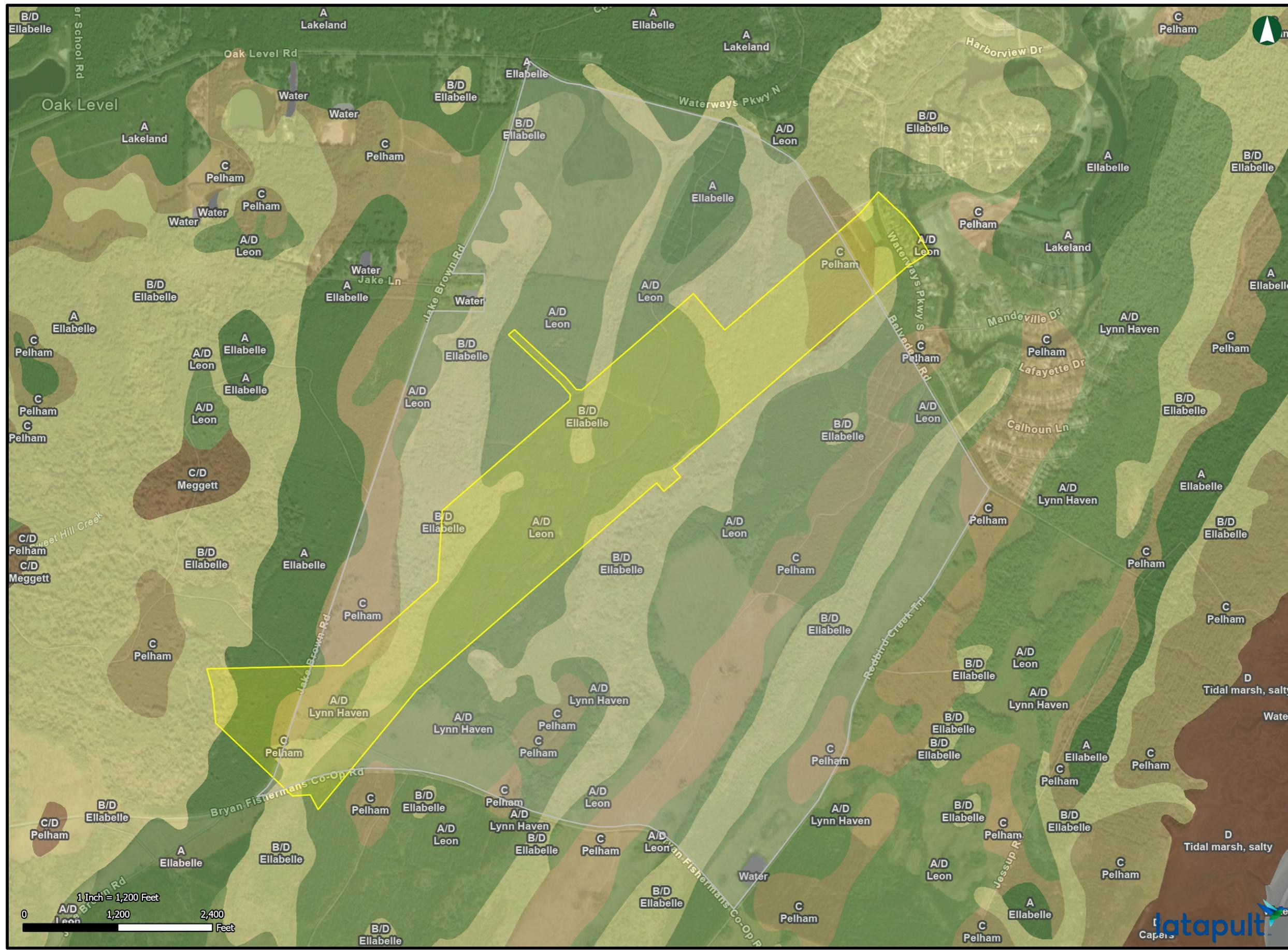
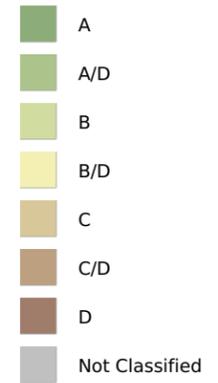
An aerial photograph of a suburban area, showing a mix of residential housing, roads, and green spaces. The houses are arranged in clusters, with some larger commercial or institutional buildings interspersed. The roads are clearly visible, and there are several green areas, possibly parks or undeveloped land. The overall scene is a typical suburban landscape.

APPENDIX C

SOIL/TOPO MAPS

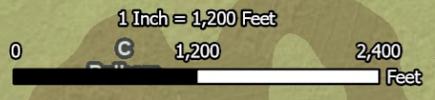
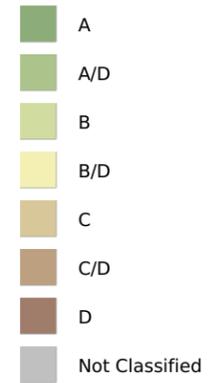
Alt #1

Soils Map
06/19/2025



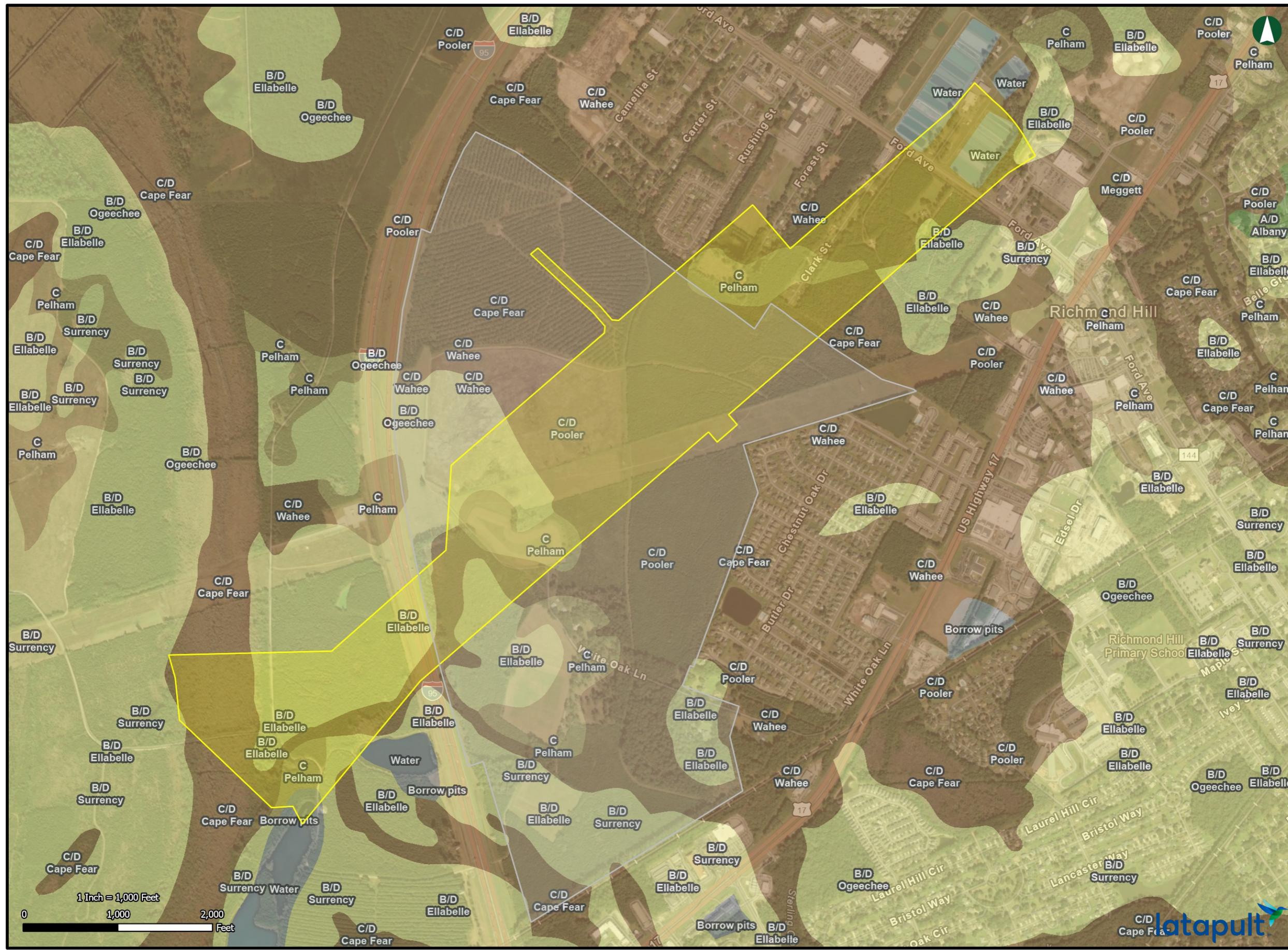
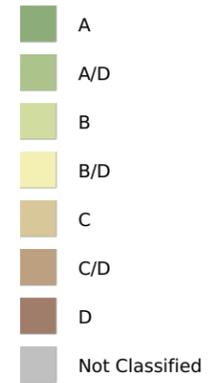
Alt #2

Soils Map
06/19/2025



Alt #3

Soils Map
06/19/2025



1 Inch = 1,000 Feet
0 1,000 2,000 Feet



Alt #4

Soils Map
06/19/2025

- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not Classified



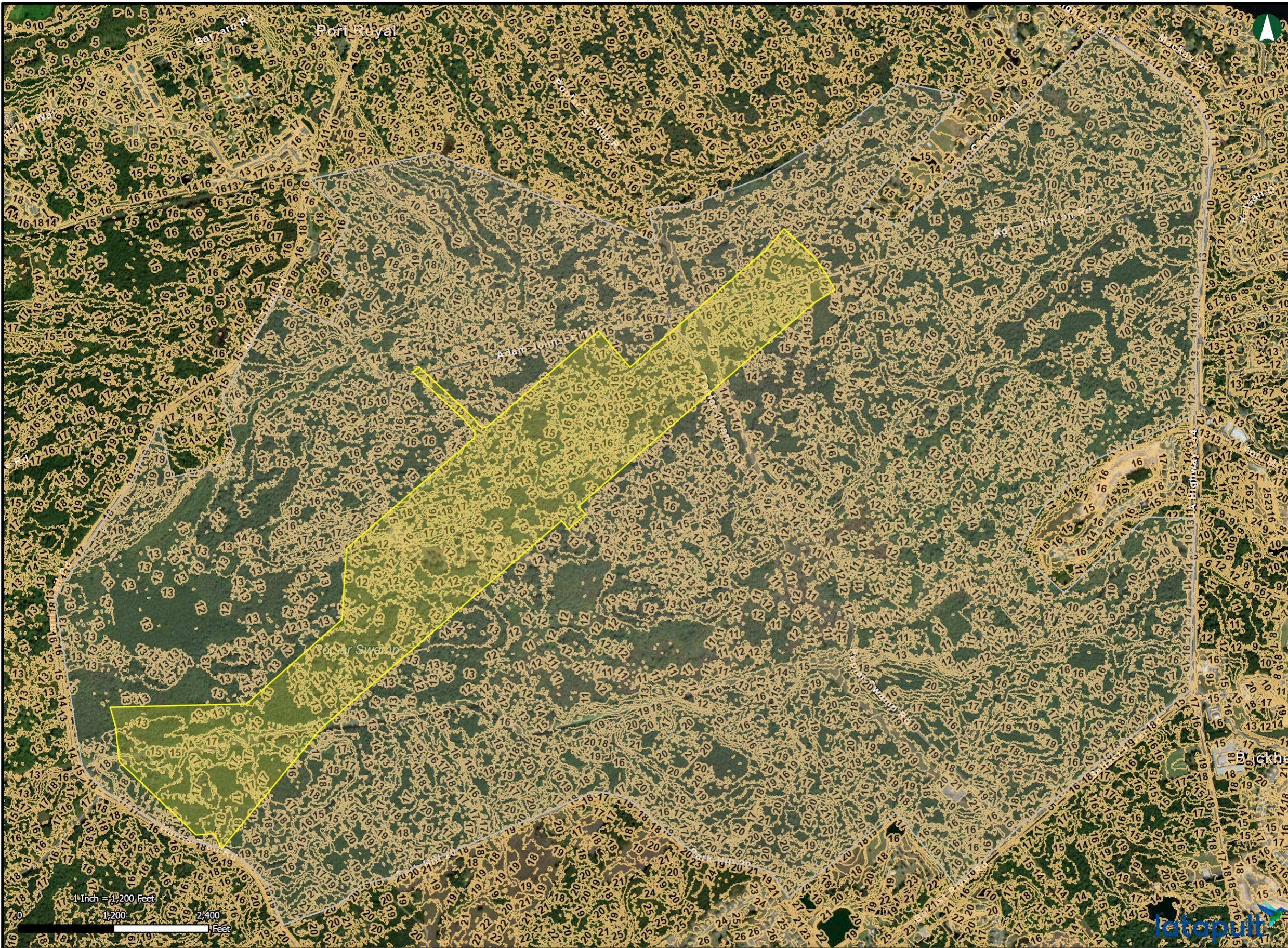
Alt #1

Topo Map
06/19/2025



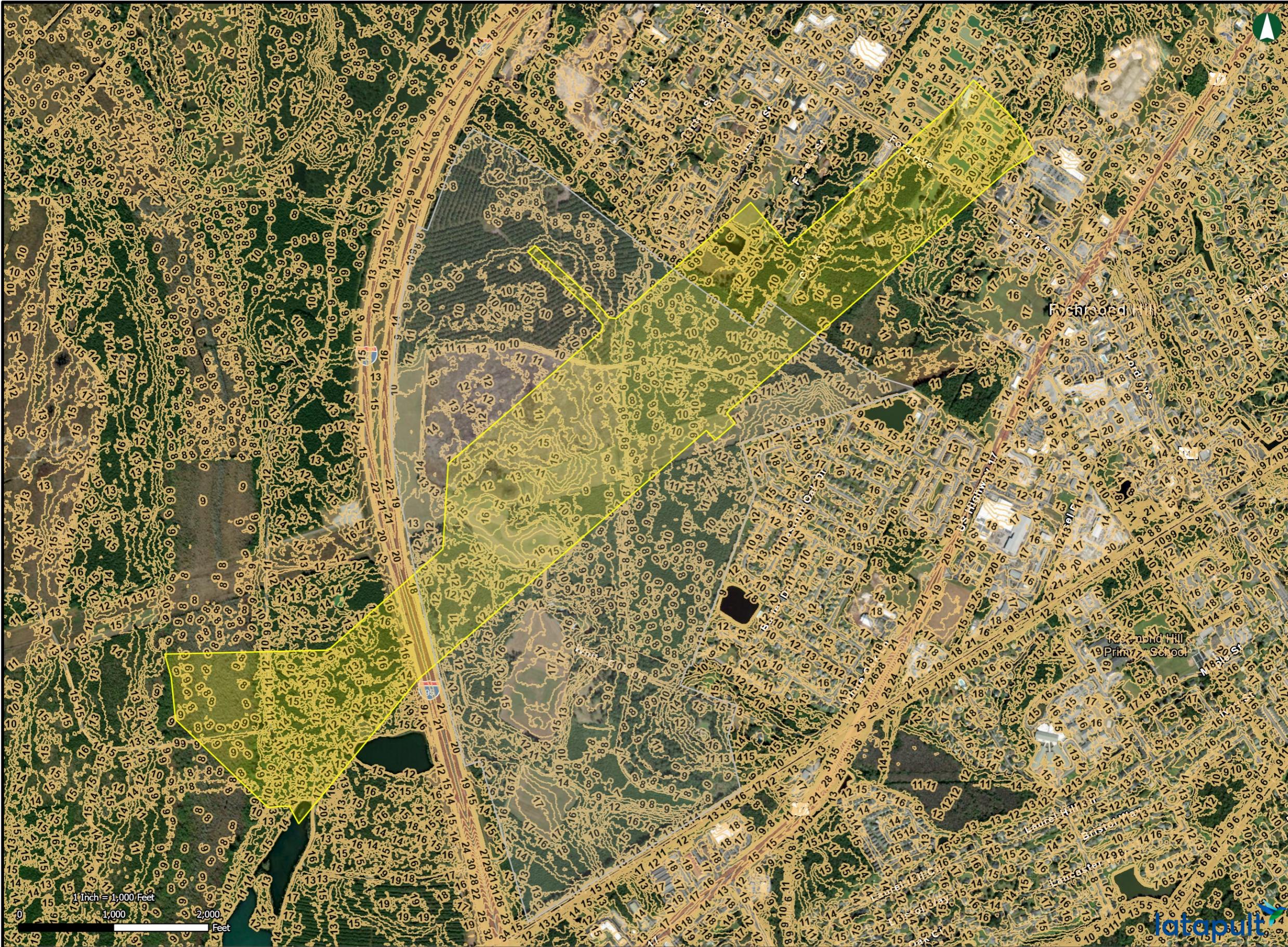
Alt #2

Topo Map
06/19/2025

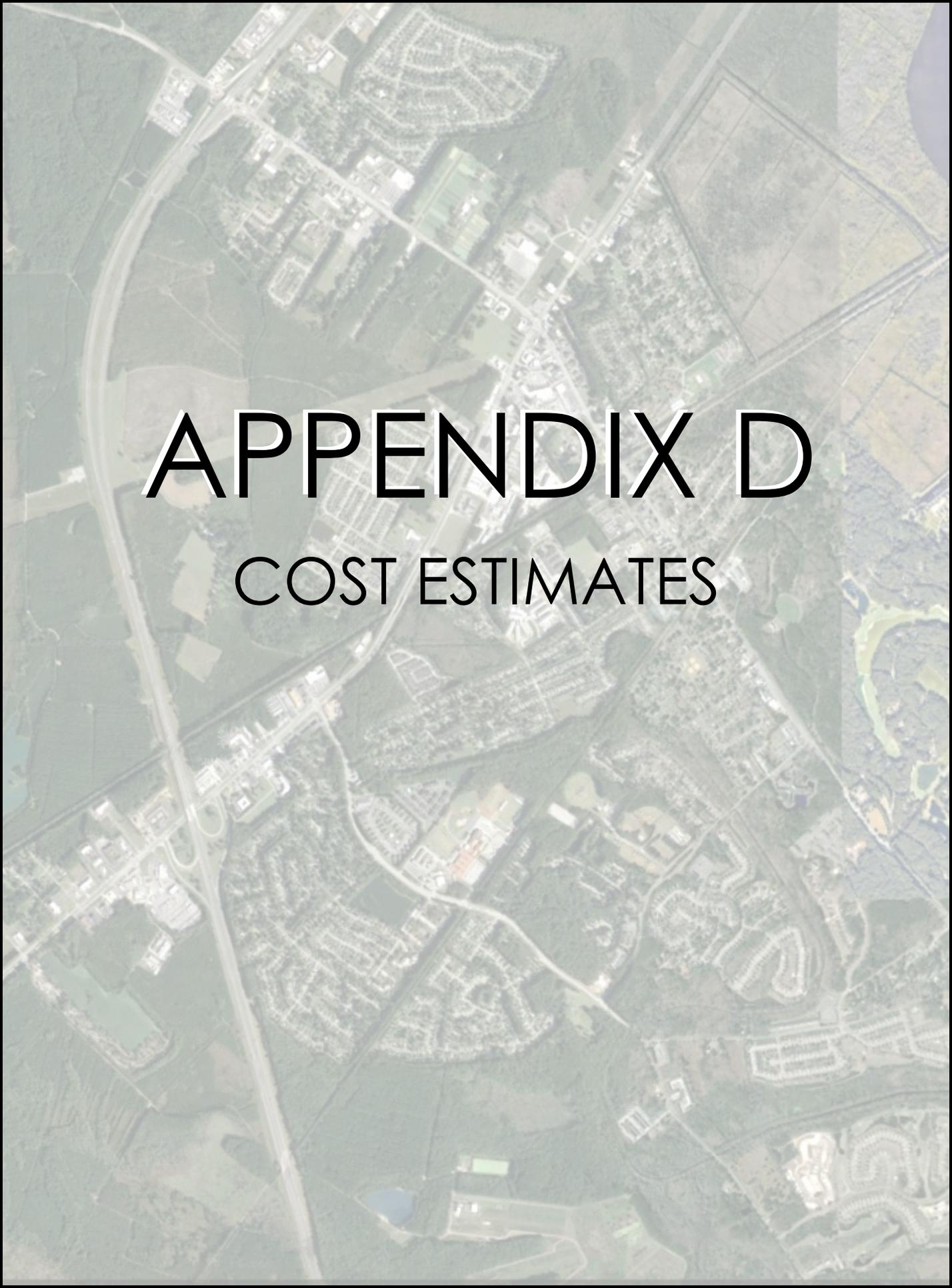


Alt #3

Topo Map
06/19/2025





An aerial photograph of a suburban area, showing a mix of residential housing, commercial buildings, and green spaces. A major road or highway runs diagonally across the left side of the image. The text is overlaid in the center.

APPENDIX D

COST ESTIMATES

New Airport Site Selection Study
Development Costs-Initial Layout (5000' Runway 6-24)

RICHMOND HILL PROPOSED AIRPORT
 RICHMOND HILL, GEORGIA



OPTION 1

May 28, 2025

Phase Area	Phased Element Description	Estimated Cost	Remarks
Pre-Construction Items			
A	Property Acquisition - 314 Acres Minimum for Runway, RPZ, Terminal Area Development and Entrance Road	\$6,000,000.00	Cost Developed by Thomas & Hutton (Based on 100 acres of uplands @ 60k/acre)
B	Avigation Easements (Estimated 110 Acres - up to 100' tree height in approaches, assumed 3 maximum affected parcels)	\$150,000.00	Costs based on recent avigation easements at Ridgeland-Claude Dean Airport, assuming \$50k per parcel to cover professional services and easement
C	Wetland Fill Mitigation - Ultimate Facility Construction	\$20,000,000.00	119 Acres of Fill Impacts, 81 acres clearing only, calculated based on NWI boundaries
D	Airport Master Plan, Environmental Assessment	\$1,000,000.00	Placeholder for Mark Counts
Subtotal, Pre-Construction Items		\$27,150,000.00	
Airport Infrastructure Construction Elements			
1	New Runway 6-24 - Initial 5000'x75' Runway with Minimal Taxiways	\$19,000,000.00	Includes B-II 5000' x 75' runway, taxiway turnarounds on each end, midfield connector taxiway, edge lighting, PAPI-2 for both ends, lighted wind cone and segmented circle, lighting vault, main drainage and 4 permanent detention ponds
2	Terminal Apron - Initial (293' x 421')	\$2,700,000.00	Initial terminal aircraft parking apron with 18 small aircraft parking spaces and ADG-II taxilanes and concrete aircraft fueling pad and 4 apron mast lights
3	Interim 3600 SF Terminal Building (Modular)	\$85,000.00	Estimated Lease/Rental Cost Per Year (Based on 3J1 Costs)
4	New Access Road, Parking, Utilities	\$4,100,000.00	24' wide entrance road connection to US 17, 8" Water Main to Site, 2" Force Main, Pump Station with Fencing, 8" Gravity Sewer at Site connected to Pump Station, 3-Phase power to site, public parking lot pavement with curb and gutter, drainage
5	T-Hangar Taxilanes and South Terminal Apron Expansion	\$1,600,000.00	FAA Eligible T-Hangar Taxilanes & South Apron Expansion
Subtotal, Initial Airport Infrastructure		\$27,500,000.00	
Revenue Producing Elements			
6	Initial T-Hangar Buildings and Associated Pavement	\$6,400,000.00	2 ~ 16 Unit T-Hangar Buildings (12-14' Door Height, 42'-44' Door Width, Bathroom in Both T-Hangar Building, FAA Ineligible Pavement, Utilities, Drainage)
7	Fuel Farm and Fuel Trucks	\$1,500,000.00	Includes 20,000 gallon AvGas and 20,000 gallon Jet A packaged systems and self-service AvGas station, concrete pad with bollards. Also includes 2 fuel trucks
Subtotal, Revenue Producing Elements		\$7,900,000.00	
TOTAL ESTIMATED INITIAL FACILITY COST, ROUNDED		\$63,000,000.00	

Costing Notes:

All costs shown are in 2025 dollars.
 All construction costs have 15% contingency added.
 Construction projects include 15-20% to cover professional services (varies based on complexity of project)
 Hangar Projects include 10-15% to cover professional services



**New Airport Site Selection Study
Development Costs - Ultimate Layout
OPTION 1**

RICHMOND HILL PROPOSED AIRPORT
RICHMOND HILL, GEORGIA



May 28, 2025

Phase Area	Phased Element Description	Estimated Cost	Remarks
Pre-Construction Items			
E	Wetland Fill Mitigation - Covered by Initial Mitigation	\$0.00	Mitigation covered by initial project mitigation credits
Airport Infrastructure Construction Elements			
8	Parallel Taxiway (For Initial 5000' Runway)	\$5,200,000.00	35' Wide Full Parallel Taxiway with connectors (for 5000' Runway), Including Edge Lights/Signage
9	Ultimate Runway (6700' x 100'), Including Parallel Taxiway Extension	\$12,000,000.00	Extend Runway 1700' on RWY 35 End, Widen Runway to 100', Upgrade RSA from B-II to C-II, Including Extension of Taxiway A on South End
10	Terminal Aircraft Apron - South Expansion (Intermediate)	\$3,500,000.00	Extend Terminal Apron 640' South for Additional Aircraft and Hangar Connectivity. Also includes Access Road Extension (South) and trunk utilities
11	Intermediate North Terminal Apron Expansion (MRO & 3-Corporate Hangars)	\$4,000,000.00	254.5' x 636' ADG-II Apron Suitable for MRO and 3 ~ 100x100 Box Hangars plus Group II aircraft movements.
12	Future Corporate Apron Expansion for 6 Box Hangars	\$4,600,000.00	213.5' x 895' ADG-II Apron for for 6 ~ 100x100 Box Hangars plus Group II aircraft movements.
13	Perimeter Fencing	\$1,000,000.00	Includes Wire Fencing for main perimeter, chain link fencing along front of facility, manual access gates at regular intervals.
14	AWOS III P/T	\$400,000.00	Design and Installation of AWOS III P/T System
15	RNAV Approach Development - Both Runway Ends	\$200,000.00	Includes cost of 18B Survey, Required Coordination with FAA for AGIS data uploads
16	New Terminal Building	\$7,000,000.00	Based on a 5,000 SF terminal building, with minimal fencing, 2 automatic airfield gates, utility service connections
17	Intermediate T-Hangar Taxilanes (for 52 Units)	\$2,600,000.00	FAA Eligible Taxilanes to support 4 T-Hangar Buildings (52 Units Total)
18	Ultimate T-Hangar Taxilanes (for 80 Units)	\$4,000,000.00	FAA Eligible Taxilanes to support 5 T-Hangar Buildings (80 Units Total)
19	Ultimate Corporate Apron Expansion	\$5,000,000.00	213.5' x 862' ADG-II Apron Suitable for 6 ~ 100x100 Box Hangars plus Group II aircraft movements.
Subtotal, Ultimate Airport Infrastructure		\$49,500,000.00	
Revenue Producing Elements			
20	MRO Hangar Facility	\$4,600,000.00	100' x 150' Maintenance, Repair, Overhaul Hangar, Parking and Utilities
21	Intermediate Corporate Box Hangar (Bldg/Parking/Utilities)	\$8,700,000.00	Includes cost for 3 ~ 100' x 100' Box Hangars, including parking,access drives, utility connections.
22	Future Corporate Box Hangar (Bldg/Parking/ Utilities)	\$17,400,000.00	Includes cost for 6 ~ 100' x 100' Box Hangars, including parking,access drives, utility connections.
23	Intermediate T-Hangar Expansion (52 Units)	\$10,500,000.00	2 ~ 12 Unit & 2 ~ 14 Unit Hangar Buildings(12-14' Door Height, 42'-44' Door Width, Taxilane Pavement, Bathroom in 2 T-Hangar Buildings, Utilities, Drainage
24	Ultimate T-Hangar Expansion (80 Units)	\$16,000,000.00	5 ~ 16 Unit T-Hangar Buildings (12-14' Door Height, 42'-44' Door Width, Taxilane Pavement, Bathroom in 3 T-Hangar Buildings, Utilities, Drainage
25	Ultimate Corporate Box Hangars (6 ~ 100x100)	\$18,000,000.00	Includes cost for 6 ~ 100' x 100' Box Hangars, including parking,access drives, utility connections, apron, road cul-de-sac
Subtotal, Ultimate Revenue Producing Elements		\$75,200,000.00	
TOTAL ULTIMATE DEVELOPMENT		\$124,700,000.00	All Intermediate and Ultimate Development Costs (After Airport enters NPIAS)
<p><u>Costing Notes:</u> All costs shown are in 2025 dollars. All construction costs have 15% contingency added (except perimeter fence, set at 10%) Construction projects include 15-20% to cover professional services (varies based on complexity of project) Hangar and Box Hangar Projects include 12-15% to cover professional services</p>			



New Airport Site Selection Study
Development Costs-Initial Layout (6700' Runway 6-24)
OPTION 2

RICHMOND HILL PROPOSED AIRPORT
RICHMOND HILL, GEORGIA



May 28, 2025

Phase Area	Phased Element Description	Estimated Cost	Remarks
Pre-Construction Items			
A	Property Acquisition - 314 Acres Minimum for Runway, RPZ, Terminal Area Development and Entrance Road	\$6,000,000.00	Cost Developed by Thomas & Hutton (Based on 100 acres of uplands @ 60k/acre)
B	Avigation Easements (Estimated 110 Acres - up to 100' tree height in approaches, assumed 3 maximum affected parcels)	\$150,000.00	Costs based on recent avigation easements at Ridgeland-Claude Dean Airport, assuming \$50k per parcel to cover professional services and easement
C	Wetland Fill Mitigation - Ultimate Facility Construction	\$20,000,000.00	119 Acres of Fill Impacts, 81 acres clearing only, calculated based on NWI boundaries
D	Airport Master Plan, Environmental Assessment	\$1,000,000.00	Placeholder for Mark Counts
Subtotal, Pre-Construction Items		\$27,150,000.00	
Airport Infrastructure Construction Elements			
1	New Runway 6-24 - Ultimate 6700'x100' with Full Parallel Runway	\$32,000,000.00	Includes C-II 6700' x 100' runway, full parallel taxiway system, edge lighting, PAPI-4 for both ends, lighted wind cone and segmented circle, lighting vault, main drainage and 1 large permanent detention pond
2	Terminal Apron - Initial (293' x 421')	\$2,700,000.00	Initial terminal aircraft parking apron with 18 small aircraft parking spaces and ADG-II taxilanes and concrete aircraft fueling pad and 4 apron mast lights
3	Interim 3600 SF Terminal Building (Modular)	\$85,000.00	Estimated Lease/Rental Cost Per Year (Based on 3J1 Costs)
4	New Access Road, Parking, Utilities	\$4,100,000.00	24' wide entrance road connection to US 17, 8" Water Main to Site, 2" Force Main, Pump Station with Fencing, 8" Gravity Sewer at Site connected to Pump Station, 3-Phase power to site, public parking lot pavement with curb and gutter, drainage
5	T-Hangar Taxilanes and South Terminal Apron Expansion	\$1,600,000.00	FAA Eligible T-Hangar Taxilanes & South Apron Expansion
Subtotal, Initial Airport Infrastructure		\$40,500,000.00	
Revenue Producing Elements			
6	Initial T-Hangar Buildings and Associated Pavement	\$6,400,000.00	2 ~ 16 Unit T-Hangar Buildings (12-14' Door Height, 42'-44' Door Width, Bathroom in Both T-Hangar Building, FAA Ineligible Pavement, Utilities, Drainage)
7	Fuel Farm and Fuel Trucks	\$1,500,000.00	Includes 20,000 gallon AvGas and 20,000 gallon Jet A packaged systems and self-service AvGas station, concrete pad with bollards. Also includes 2 fuel trucks
Subtotal, Facility/Revenue Producing Elements		\$7,900,000.00	
TOTAL ESTIMATED INITIAL FACILITY COST, ROUNDED		\$76,000,000.00	

Costing Notes:

All costs shown are in 2025 dollars.

All construction costs have 15% contingency added.

Construction projects include 15-20% to cover professional services (varies based on complexity of project)

Hangar Projects include 10-15% to cover professional services



**New Airport Site Selection Study
Development Costs - Ultimate Layout
OPTION 2**

RICHMOND HILL PROPOSED AIRPORT
RICHMOND HILL, GEORGIA



May 28, 2025

Phase Area	Phased Element Description	Estimated Cost	Remarks
Pre-Construction Items			
E	Wetland Fill Mitigation - Covered by Initial Mitigation	\$0.00	Mitigation covered by initial project mitigation credits
Airport Infrastructure Construction Elements			
8	Terminal Aircraft Apron - South Expansion (Intermediate)	\$3,500,000.00	Extend Terminal Apron 640' South for Additional Aircraft and Hangar Connectivity. Also includes Access Road Extension (South) and trunk utilities
9	Intermediate North Terminal Apron Expansion (MRO & 3-Corporate Hangars)	\$4,000,000.00	254.5' x 636' ADG-II Apron Suitable for MRO and 3 ~ 100x100 Box Hangars plus Group II aircraft movements.
10	Future Corporate Apron Expansion for 6 Box Hangars	\$4,600,000.00	213.5' x 895' ADG-II Apron for for 6 ~ 100x100 Box Hangars plus Group II aircraft movements.
11	Perimeter Fencing	\$1,000,000.00	Includes Wire Fencing for main perimeter, chain link fencing along front of facility, manual access gates at regular intervals.
12	AWOS III P/T	\$400,000.00	Design and Installation of AWOS III P/T System
13	RNAV Approach Development - Both Runway Ends	\$200,000.00	Includes cost of 18B Survey, Required Coordination with FAA for AGIS data uploads
14	New Terminal Building	\$7,000,000.00	Based on a 5,000 SF terminal building, with minimal fencing, 2 automatic airfield gates, utility service connections
15	Intermediate T-Hangar Taxilanes (for 52 Units)	\$2,600,000.00	FAA Eligible Taxilanes to support 4 T-Hangar Buildings (52 Units Total)
16	Ultimate T-Hangar Taxilanes (for 80 Units)	\$4,000,000.00	FAA Eligible Taxilanes to support 5 T-Hangar Buildings (80 Units Total)
17	Ultimate Corporate Apron Expansion	\$5,000,000.00	213.5' x 862' ADG-II Apron Suitable for 6 ~ 100x100 Box Hangars plus Group II aircraft movements.
Subtotal, Initial Airport Infrastructure		\$32,300,000.00	
Revenue Producing Elements			
18	MRO Hangar Facility	\$4,600,000.00	100' x 150' Maintenance, Repair, Overhaul Hangar, Parking and Utilities
19	Intermediate Corporate Box Hangar (Bldg/Parking/Utilities)	\$8,700,000.00	Includes cost for 3 ~ 100' x 100' Box Hangars, including parking,access drives, utility connections.
20	Future Corporate Box Hangar (Bldg/Parking/ Utilities)	\$17,400,000.00	Includes cost for 6 ~ 100' x 100' Box Hangars, including parking,access drives, utility connections.
21	Intermediate T-Hangar Expansion (52 Units)	\$10,500,000.00	2 ~ 12 Unit & 2 ~ 14 Unit Hangar Buildings(12-14' Door Height, 42'-44' Door Width, Taxilane Pavement, Bathroom in 2 T-Hangar Buildings, Utilities, Drainage
22	Ultimate T-Hangar Expansion (80 Units)	\$16,000,000.00	5 ~ 16 Unit T-Hangar Buildings (12-14' Door Height, 42'-44' Door Width, Taxilane Pavement, Bathroom in 3 T-Hangar Buildings, Utilities, Drainage
23	Ultimate Corporate Box Hangars (6 ~ 100x100)	\$18,000,000.00	Includes cost for 6 ~ 100' x 100' Box Hangars, including parking,access drives, utility connections, apron, road cul-de-sac
Subtotal, Facility/Revenue Producing Elements		\$75,200,000.00	
TOTAL ULTIMATE DEVELOPMENT		\$107,500,000.00	All Intermediate and Ultimate Development Costs (After Airport enters NPIAS)

Costing Notes:

All costs shown are in 2025 dollars.
All construction costs have 15% contingency added (except perimeter fence, set at 10%)
Construction projects include 15-20% to cover professional services (varies based on complexity of project)
Hangar and Box Hangar Projects include 12-15% to cover professional services

