

A PLAN FOR AN:

# ATLANTIC COUNTY AVIATION INNOVATION HUB

SUBMITTED TO:  
U.S. DEPARTMENT OF AGRICULTURE, NEW JERSEY FIELD OFFICE

JULY 31, 2019

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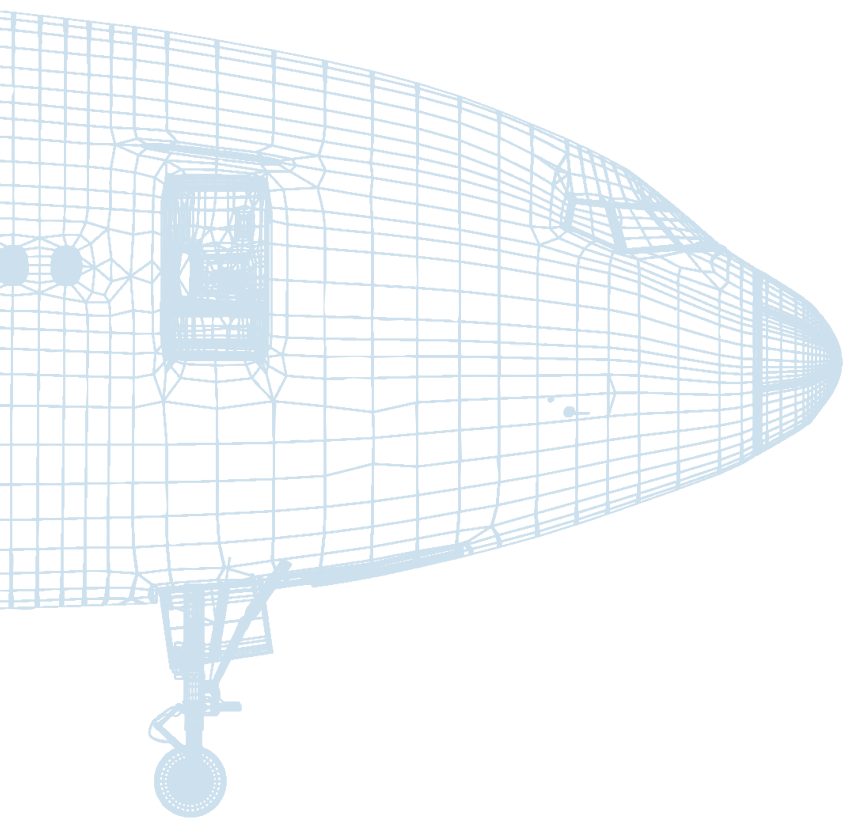


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## DEFINITIONS

**Atlantic County Economic Alliance (ACEA):** Lead, non-profit economic development organization and USDA grant recipient. ACEA's mission is to create and retain jobs while diversifying the Atlantic County economy.

**Atlantic County Government:** County government, encompassing 23 municipalities, run by County Executive (Dennis Levinson) and a nine-member Freeholder Board. As of the 2018, Census Bureau estimate of population was 265,429, making it the 15th-largest of the state's 21 counties.

**Atlantic County Improvement Authority (ACIA):** ACIA serves as Atlantic County's multi-purpose financing, development and project management agency whose primary purpose is to plan, finance and construct public improvements such as schools, buildings, transportation facilities, and infrastructure redevelopment. The ACIA was created by the Atlantic County Board of Chosen Freeholders in 1961, and is directed by a seven member Board of Commissioners.

**Aviation Cluster:** General term describing the growing economic development activity in the aviation industry clustered in southern New Jersey. Growth of the aviation industry is being seeded by the ACEA and Atlantic County government, among other partners and regional economic development entities.

**Aviation District:** A New Jersey state-designated area encompassing all of Atlantic City International Airport (ACY) and an area one-mile outside the boundary fence at ACY. Businesses in the Aviation District were eligible for maximum state tax credit incentives under the Grow New Jersey incentive program. (Note: The Grow New Jersey program expired on June 30, 2019.) Other prominent entities in the Aviation District include the FAA William J. Hughes Technical Center and the National Aviation Research and Technology Park (NARTP).

**Aviation District Plan:** A description of this document, which details the plan to continue developing the state-designated Aviation District, a term virtually synonymous with the Aviation Innovation Hub (see below).



**Aviation Innovation Hub:** A general description of the activity and physical aviation related assets within the state-designated Aviation District. The Aviation Innovation Hub is anchored by Atlantic City International Airport (ACY), the FAA's William J. Hughes Technical Center, and the National Aviation Research and Technology Park.

**Garden State Growth Zone (GSGZ):** A special designation under New Jersey's Grow New Jersey tax credit incentive program. (Note: The Grow New Jersey program expired on June 30, 2019.) Businesses which met Grow New Jersey program criteria (based around job creation/retention and capital spending) were eligible for New Jersey's most lucrative tax credit incentives.

**Grow New Jersey Program:** New Jersey's primary business incentive program for job retention and creation. Program was enacted in 2013 and expired at the end of June 2019.

**New Jersey Aviation Research Triangle:** General term describing three points on the map in southern New Jersey. These points include Joint Base McGuire-Dix-Lakehurst, Cape May County's Airport and Drone Testing Area, and the state-designated Aviation District surrounding Atlantic City International Airport.

**National Aviation Research and Technology Park (NARTP):** A not-for-profit organization formed to develop seven aviation related research buildings on the grounds of Atlantic City International Airport and adjacent to the FAA's William J. Hughes Technical Center. This first NARTP building totaling 66,000 square feet opened in June 2019. An additional 340,000 square feet of aviation research space is planned at NARTP.

**Opportunity Zone:** A federal program that identifies distressed areas around the United States, where federal tax incentives are available to spur investment and economic development opportunities.

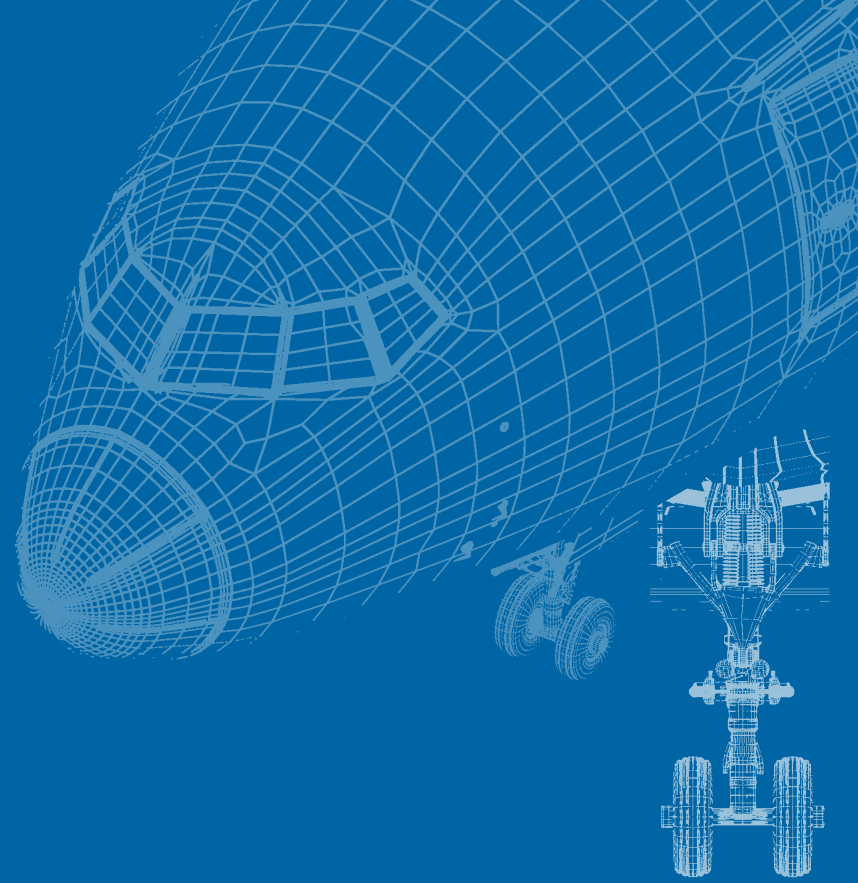
**South Jersey Transportation Authority (SJTA):** New Jersey state agency which runs the Atlantic City Expressway and Atlantic City International Airport.

**William J. Hughes Technical Center:** Name of the FAA's premier research and testing facility on the grounds of Atlantic City International Airport. The FAA's William J. Hughes Technical Center employs more than 4,000 people, including FAA employees and contractors.





# SECTION 01



EXECUTIVE SUMMARY



# INTRODUCTION

In August, 2018 the Atlantic County Economic Alliance (ACEA) received a grant from the U.S. Department of Agriculture, Rural Development Administration's Rural Business Development Program to prepare a plan for the newly created Atlantic County Aviation Technology District, which is becoming the Aviation Innovation Hub of Southern New Jersey. The purpose of the Plan is to provide the ACEA and Atlantic County with a strategy for promoting new aviation related small business investment and corporate development in the Aviation District.

Integral to the District is the Atlantic City International Airport. This full-service airport provides regularly scheduled passenger service and accommodates private aircraft. In addition, the Federal Aviation Administration has a major presence within the District, as does the newly created National Aviation Research & Technology Park.

Based on the strategic location of these principal stakeholders, Atlantic County proposed establishing a boundary for the Aviation District which encompasses the land within a one-mile radius from the property boundaries of the Airport.

The newly established Aviation District was endorsed by the State of New Jersey as a key location for aviation and aeronautic development. This plan focuses on fostering an environment for aviation and other potential small businesses that takes advantage of the assets the District currently has, while also capitalizing on the many development incentives provided by the District, and the County, State, and Federal governments.

The Atlantic County Economic Alliance was the lead entity in this planning process. It is a non-profit economic development organization created by the County Board of Freeholders to promote the development of Atlantic County, New Jersey. The ACEA is the principal contact and the organization that will foster the actions necessary to bring new businesses and investments to the District.

## PLANNING PROCESS

This plan contains an extensive analysis of the site conditions, land use regulations, environmental constraints, market trends, and other characteristics of the Aviation District. The plan also reflects the opinions of a range of stakeholders and community leaders, all of whom have an interest in future investment and development in the District.

Based on these trends and analyses, the plan identifies six areas that have differing levels of development potential, as shown on the following map. The area with the greatest development potential is shown in red. This area generally has zoning which is suitable to commercial and industrial development, and has public sewer and water and favorable site conditions. Since it has the additional advantages of being designated as a Federal Opportunity Zone, a designation with significant investment potential. A portion of the red area in Egg Harbor Township has been designated more specifically as a “Tier 1 Development Area.”

## THE PLAN'S VISION AND GOALS

Atlantic County envisions the Aviation Innovation Hub as an economic generator that will expand the cluster of aviation and aeronautical activity in Atlantic County and Southern New Jersey. The mission of the Hub is to diversify the regional economy and bring high technology businesses, training programs, and employees to the area. The long-term intent is to make the Aviation District one of the State's premier technology hubs and a focal point for new aviation-related investment.

To foster this vision, the plan identifies four primary goals and a series of related objectives. From these goals and objectives, specific near, mid, and long-term projects and actions are identified.

## THE PRINCIPAL GOALS

- GOAL 1:** Promote Economic and Small Business Development at the Aviation Technology District;
- GOAL 2:** Foster Actions that Enable the Aviation District to Become the Hub of Southern Jersey's Emerging Aviation Economic Cluster;
- GOAL 3:** Create and Promote an Administrative Protocol that Makes it Easy for Prospective Businesses and Interested Investors to Secure Information about the Opportunities at the Aviation District and get the Support Needed to Advance Potential Projects.

## **GOAL 4:** Diversify Atlantic County’s Economy and Expand Opportunities for Small Business Development.

### **THE ACTION AGENDA**

The Aviation District Plan recommends a phased approach to investment and new business development. The ACEA should work with its municipal and other partners to promote new business growth in the “red” areas on Map 1, with an initial focus on the Tier 1 Designation within Egg Harbor Township, as the most likely first phase of development activity.

While there are certainly locations within the District’s “red areas” that are suitable for development, and there are municipally designated “Areas in Need of Redevelopment,” there may not be the level of infrastructure, water, sewer and other assets that make it as favorable as Tier 1. This is also an area where additional investment in access and site improvements may be needed.

While the remaining area in the District does not exclude the possibility of aviation related business development, there are constraints on the ground that may make it more difficult. This area will require a much more judicious approach to development or redevelopment – perhaps one that is focused specifically on a block and lot basis.

**Specific actions to advance the plan’s implementation fall into three general categories:**

1. Marketing and Promotion;
2. Infrastructure Investment and Expansion; and
3. Education and Training.

### **MARKETING & PROMOTION**

The market potential of Atlantic County’s location as an Aviation Hub is strengthened by its proximity to a number of regional airports and government facilities. Companies seeking to locate in the Aviation District can provide materials and services not only for Atlantic City International Airport, but also have easy access to the large, international airports in Philadelphia and Newark. Smaller regional airports at Teterboro, Trenton, Millville, and Cape May are in close proximity and could also offer markets for aviation and aeronautic companies locating in Atlantic County.

In addition, the Federal Aviation Administration’s (FAA) presence at the William J. Hughes Technology Center and the new National Aviation Research & Technology Park strengthen the Aviation District’s location as a major Aviation Hub. This strategic location is complemented further by the nearby Joint Military Base at McGuire–Dix–Lakehurst. This facility is located less than 90 minutes from the Aviation District. The base is the only one in the United States that includes units from all five branches of the armed forces. It provides opportunities for companies locating in the Aviation District to provide services in areas such as technology development, equipment maintenance,

and the delivery of supplies to the base. It also offers a great resource from which to recruit retired military personnel for executive and other managerial positions at Aviation District companies. The proximity of the Joint Base could benefit companies in the Aviation District that may be seeking grants and other funding for military related research and development, collaborative military/civilian dual use technologies, or other defense related initiatives.

While certainly not as large an aviation presence as McGuire-Dix-Lakehurst, the U.S. Coast Guard Training Center in Cape May, less than 40 miles south of the Atlantic County Aviation District provides another opportunity to collaborate on aviation or aeronautic research, equipment development, and training. It is also a potential source of trained personnel for Aviation District firms.

### **Some key marketing and promotional priorities include:**

- Establishing an Aviation District Marketing Collaborative comprised of the key stakeholders and organizations interested in advancing the development of the District;
- Creating new marketing materials to promote the District;
- Creating a web page and on-line contact information for prospective investors;
- Developing an inventory of specific businesses and industries to which phone calls and personal contacts can be made, and marketing and recruitment materials can be sent;
- While the ACEA already has this position on a part-time basis, the County should identify a full-time “Aviation Business Ombudsman” whose job it will be to walk investors and developers through the maze of site opportunities, approvals, and financing necessary to advance a project.

### **Infrastructure investments and expansion:**

The announcement in July 2019 that the Atlantic County Economic Alliance received an Innovation Challenge “i6” Grant from the New Jersey Economic Development Authority is another huge step in advancing the County’s position as a major, regional Aviation Hub. The i6 grant of \$750,000 was awarded to foster a Smart Airport and Aviation Partnership (SAAP) in Southern New Jersey that will transform the region’s innovation ecosystem by incubating, accelerating, and attracting new businesses into a cluster that is ideally matched to the region’s strengths and capabilities. This funding, totaling \$1.6 million (inclusive of the i6 grant match), centers on the southern-most region of New Jersey and includes Atlantic, Cape May, Cumberland, and Salem Counties. This region is a U.S. EDA certified “District” and includes the Federal Aviation Administration (FAA) William J. Hughes Technical Center (WJHTC) which has over 4,500 federal and contractor employees and is the FAA’s primary research and technology development center, including a new initiative on smart airport and aviation technologies. The adjoining Atlantic City International Airport (ACY) has a research cooperative



LEGEND

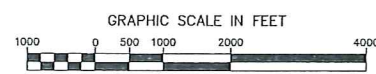
FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)  
 LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)  
 MUNICIPAL BOUNDARY LINE

LIMIT OF AVIATION DISTRICT, TYP.

**TIER 1 TARGET AREA**  
 Egg Harbor Township Opportunity Zone,  
 inclusive of Atlantic City International Airport

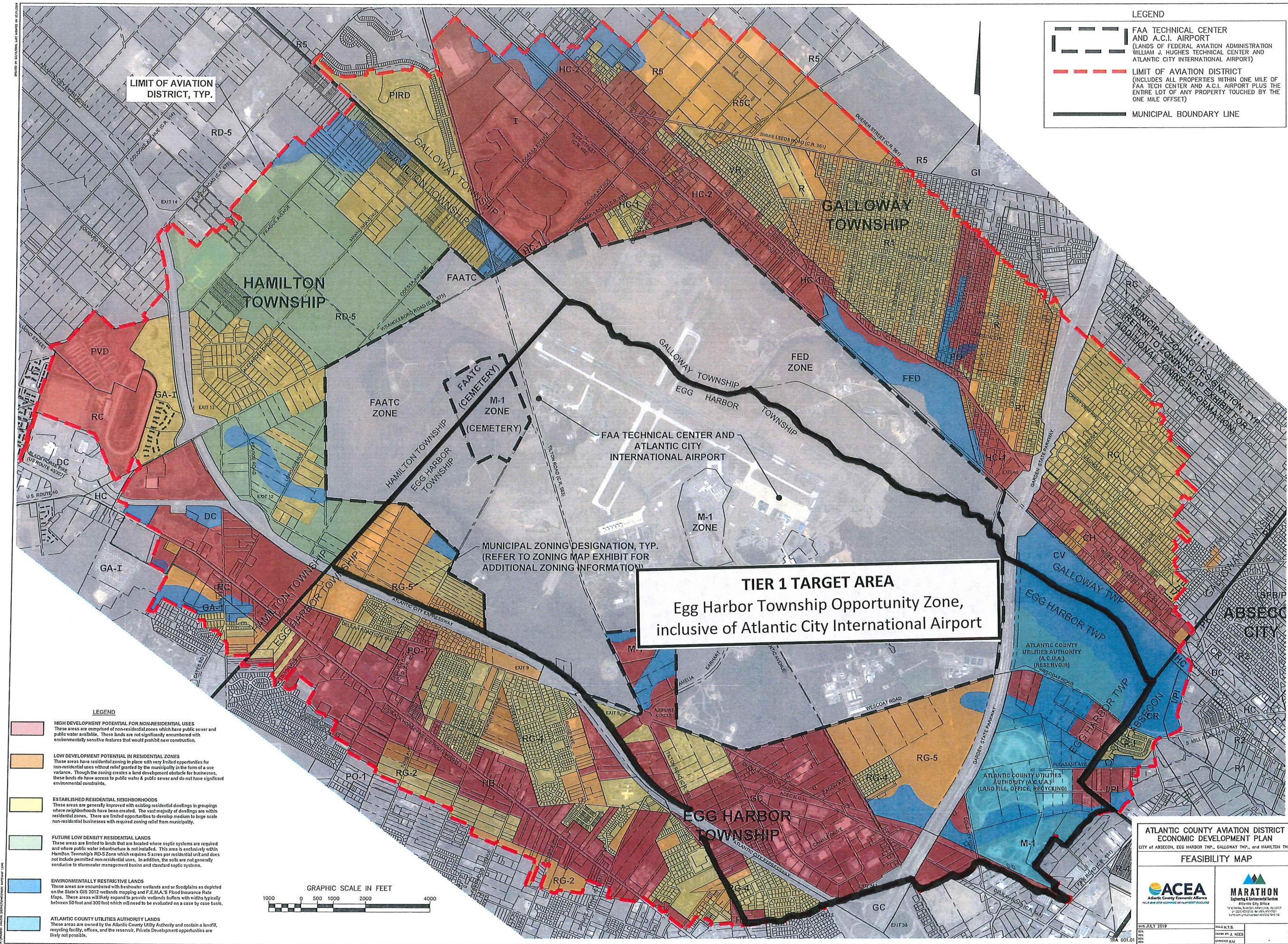
LEGEND

HIGH DEVELOPMENT POTENTIAL FOR NON-RESIDENTIAL USES  
 These areas are comprised of non-residential zones which have public sewer and public water available. These lands are not significantly encumbered with environmentally sensitive features that would prohibit new construction.  
 LOW DEVELOPMENT POTENTIAL IN RESIDENTIAL ZONES  
 These areas have residential zoning in place with very limited opportunities for non-residential uses without relief granted by the municipality in the form of a use variance. Though the zoning creates a land development obstacle for businesses, these lands do have access to public water & public sewer and do not have significant environmental constraints.  
 ESTABLISHED RESIDENTIAL NEIGHBORHOODS  
 These areas are generally improved with existing residential dwellings in groupings where neighborhoods have been created. The vast majority of dwellings are within residential zones. There are limited opportunities to develop medium to large scale non-residential businesses with required zoning relief from municipality.  
 FUTURE LOW DENSITY RESIDENTIAL LANDS  
 These areas are limited to lands that are located where septic systems are required and where public water infrastructure is not installed. This area is exclusively within Hamilton Township's RD-5 Zone which requires 5 acres per residential lot and does not include permitted non-residential uses. In addition, the soils are not generally conducive to stormwater management basins and standard septic systems.  
 ENVIRONMENTALLY RESTRICTIVE LANDS  
 These areas are encumbered with freshwater wetlands and/or floodplains as depicted on the State's GIS 2012 wetlands mapping and F.E.M.A.'S Flood Insurance Rate Maps. These areas will likely expand to provide wetlands buffers with widths typically between 50 foot and 300 foot which will need to be evaluated on a case by case basis.  
 ATLANTIC COUNTY UTILITIES AUTHORITY LANDS  
 These areas are owned by the Atlantic County Utility Authority and contain a landfill, recycling facility, offices, and the reservoir. Private Development opportunities are likely not possible.



ATLANTIC COUNTY AVIATION DISTRICT  
 ECONOMIC DEVELOPMENT PLAN  
 CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
 FEASIBILITY MAP

ACEA  
 Atlantic County Economic Alliance  
 MARATHON  
 Engineering & Environmental Services  
 Atlantic City Office  
 14 E. Atlantic Ave. 3rd Floor  
 Atlantic City, NJ 08402  
 TEL: 609.426.1000  
 FAX: 609.426.1001  
 WWW.MARATHONENR.COM





agreement with the WJHTC and was recently designated as a Smart Airport Research Test-Bed Facility. The nearby Cape May County Airport (WWD) is an FAA-approved drone test flight facility. Both of these sites are ideal for start-up and existing companies to test smart airport technologies in an environment that promotes eventual certification and commercialization. The resources from this grant will be leveraged by the SAAP to provide incubation services, accelerator curricula, investor outreach, and regional branding to ignite innovation in this emerging cluster to spur regional economic development.

Smart airport and aviation technologies refer to a wide variety of innovative “smart” solutions for improving the operational efficiency of conventional airports and aircraft, including new and innovative infrastructure. Technologies include smart lighting, automated de-icing, heated taxiways, automated ground vehicles, automated baggage handling and inspection, smart apps to improve the customer experience and reduce congestion, smart parking, and integrated management through Internet-of-things (IoT) technologies. It also includes the ubiquitous use of drones with intelligence cameras and sensors for aircraft inspection, runway/taxiway inspection, wildlife control, first response, security and communication. With the proceeds of this grant, the SAAP will execute a variety of focused projects that will leverage partner resources to enable a robust regional economic development cluster. These important initiatives and the ancillary activities which they will foster will add to the significance of the Aviation District and its development as a National Aviation Hub.

All of these potential developments point to necessary investments in traditional infrastructure that provide access to the Airport and the Aviation District, as well as the many innovative improvements that might be eventual elements of Smart Airport Design. There are also many collaborative relationships that are needed to advance infrastructure investment and point the way to enhanced operations.

### **Some of these priorities include:**

- Advancing the development of the Atlantic County Aviation Maintenance & Training Academy;
- Funding a traffic study and subsequent conceptual design plans for improvements to key highway arteries and intersections in the Tier 1 Target Area. These arteries include the Tilton and Delilah Road Corridors, particularly where they intersect with smaller side streets that feed existing commercial and industrial sites such as Canale Drive, Fork Road, and Thrasher Avenue;
- Examining the need for infrastructure expansion, such as water and sewer in the other Development Areas;
- Designing suitable access for the movement of planes and cargo between the Tier 1 Aviation District Sites and the Atlantic City International Airport.



- Design and construction of new hangar space at the Atlantic City International Airport.

## **Education and Training:**

The technologies and companies that exist as the “Hub” of aviation activity in Atlantic County, the planned development of a new Aviation Training and Maintenance Academy, and the world-class facilities already present in the Aviation District make it an ideal location for entrepreneurial firms of all sizes. Companies that foster innovation in some aspect of aviation or aeronautics can collaborate with the organizations located at the Aviation District today, along with those that may locate there in the future. Entrepreneurs and small businesses seeking to gain a stronger foothold in some aspect of the industry will find the Aviation District to be a particularly desirable place to locate given the supportive partnerships and other collaborative opportunities available.

Workforce training partnerships and cutting-edge educational programs are needed to meet the needs of new aviation businesses and the advanced technologies they bring. Programs and support for entrepreneurial training and talent development must be central to the collaborative relationships between existing and new training organizations.

## **Priorities identified in this plan include:**

- Creating partnerships with the FAA, the National Aviation Research and Technology Park, and other educational partners to invest in new programs and training opportunities that focus on the needs of existing aviation businesses and help to attract new investment in the Aviation District
- Working with the Atlantic County Workforce Investment Board to create programs that ensures a qualified and well-trained labor force for current and future aviation and aeronautic businesses;
- Attracting national aviation and educational institutions that will bring a physical presence to the District.
- Continue working with existing education partners including Stockton University, Embry-Riddle Aeronautical University, Atlantic Cape Community College, and the Atlantic Country Institute of Technology to enhance workforce development initiatives to support the Aviation Innovation Hub.

These are some of the ideas and actions that are advanced by this Plan. A specific and sequential outline of actions is contained in Section 09 of the Plan. There are also funding and financing opportunities outlined that will assist Atlantic County and the ACEA to invest in the needed projects and initiatives outlined.

All of the proposed investments and activities occurring in the Aviation District point to new opportunities for Venture Capital and “Angel” Investors. The entrepreneurial businesses that will be spurred by the i6 grant; the new companies that emerge from or attracted by the National Aviation & Technology Park; and the great market within the region for emerging aviation and aeronautical companies create an environment for the type of innovation and cutting-edge investments that excite venture capitalists. These types of investments, coupled with the prospects for Opportunity Zone funding, Redevelopment incentives, or other local, State or Federal financing programs makes the Aviation District a highly desirable location for new businesses or expanding existing corporate investment.

Atlantic County has a tremendous opportunity to build on the aviation assets and organizations currently located within the Aviation District. With the active engagement of the partners and stakeholders who share in the vision of this Plan, the County is poised to become one of the region’s premier centers for aviation and aeronautic research, development, and manufacturing.



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## SECTION 02

INTRODUCTION



# INTRODUCTION

The Atlantic County Economic Alliance (ACEA) is a non-profit economic development organization created by the County Board of Freeholders to promote the development of Atlantic County, New Jersey. The ACEA initiated this Aviation Technology District Plan, using a grant from the United States Department of Agriculture, Rural Business Development Program. The Rural Business Development Program “is a competitive grant designed to support targeted technical assistance, training and other activities leading to the development or expansion of small and emerging private businesses in rural areas.” The purpose of this Plan is to provide the ACEA and Atlantic County with an informed, specific, and actionable strategy promoting new private investment and development in the Aviation Technology District that includes the Atlantic City International Airport and an area encompassing a one-mile radius from the Airport’s border. To that end, this plan focuses on fostering an environment for aviation and other potential small businesses that can take advantage of the assets the District currently has, while also taking advantage of the many incentives provided within the District, County, and State.

In 2015, Atlantic County commissioned an Economic Development Plan by AngelouEconomics to identify ways to diversify the County’s economy from its historic reliance on the gaming and accommodations industries. The Angelou Report suggested the County expand its economy by targeting 5 different industries; Aerospace and Avionics, Life Sciences, Tourism, Specialty Manufacturing, and Entrepreneurial Business Services. This Aviation Technology District Plan focuses on developing the County’s Aerospace and Avionics industry. Additionally, the Angelou Report recommended several Aviation sectors for developing the Aerospace and Avionics industry in Atlantic County. These include Testing and Evaluation; Materials Design and Development; Aircraft Maintenance; Unmanned Aerial Vehicle Design, Evaluation, and Repair; Communications System Design, Evaluation, and Repair; and Aeronautic Equipment Research and Recovery.

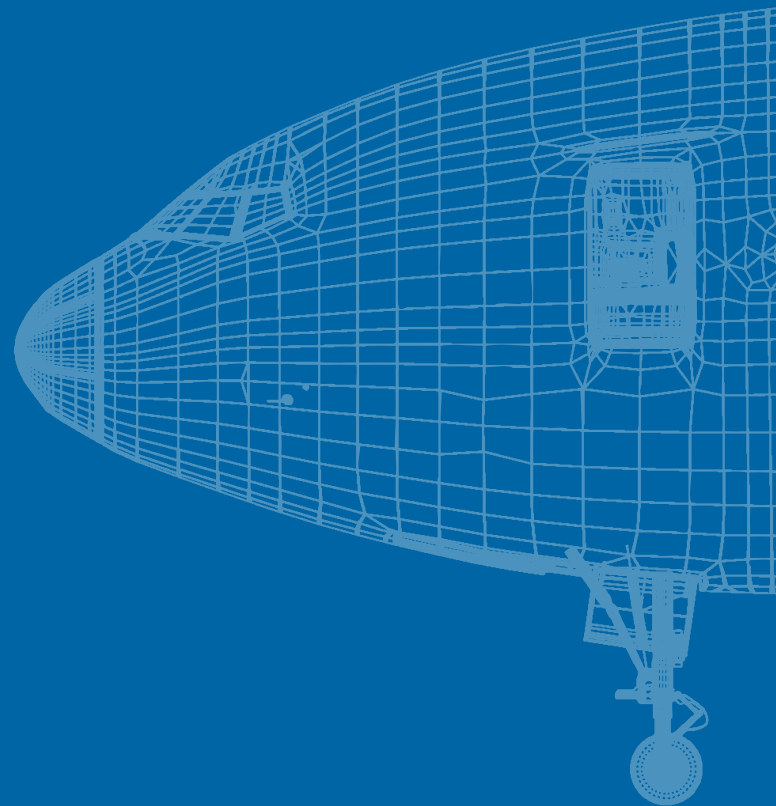
To support this new development, Atlantic County has in place four essential elements for attracting aviation companies to the Atlantic County Aviation District:

- Adequate Infrastructure
- Public Investment
- A Workforce Development Program
- Financing and Other Incentives

When it comes to infrastructure, the District includes the Atlantic City International Airport, which is designated as a smart Airport research test-bed, offering aviation companies a unique opportunity to test their ideas and technologies at a fully-functioning international airport, and the FAA William J. Hughes Technical Center. Additionally, the District is within close proximity to the Garden State Parkway and the Atlantic City Expressway; two vital transportation arteries in the region. The County, the State, and Federal Government have all made investments in the District. The Federal Government, through the USDA, has provided \$88,000 to plan the District, the State has provided funds to assess the market and plan an aviation maintenance academy, and the County has applied for grant funds to support the District's Development. Furthermore, the District is within Federal Opportunity Zone, which could spur private investments for companies within the Zone's boundaries. The County has a workforce in place that can support new, small business development. In addition, there is a new focus on workforce development to provide the high-skill level employers needed for developing an aviation industry workforce of the future. Finally, there are financial incentives for businesses which locate or relocate to the district, mostly in the form of substantial tax benefits. Combined, these four elements make Atlantic County's Aviation District an ideal location for aviation industry leaders and startups.



# SECTION 03



## OVERVIEW OF THE AVIATION INNOVATION HUB





# OVERVIEW OF THE AVIATION INNOVATION HUB

Amid the growing Aviation Cluster in the Southern New Jersey Region, the State designated Aviation District in Atlantic County is becoming known as Southern New Jersey's Aviation Innovation Hub. From planned Maintenance Repair and Overhaul (MRO) operations, to research and development, the Hub has the potential to impact aviation technology and sciences for the Region, State, Nation, and the entire world.

In an effort to diversify the County's economy and address the loss of 20,000 jobs in the past decade from the gaming industry, the Atlantic County Economic Alliance (ACEA) has been exploring a number of avenues to buttress the newly constituted aviation economic cluster in the Region by developing this Aviation Innovation Hub around the Atlantic City International Airport. To establish the Aviation Innovation Hub, the County, through the ACEA, has leveraged the skills and expertise of multiple businesses, nonprofits, and government organizations to provide the necessary foundations for economic growth. Therefore, this Plan outlines the benefits the area has to offer aviation companies; the incentives for locating and relocating businesses to the region, and explains how aviation companies can benefit from the area's growing aviation activity. Finally, this

Plan sets out the strategy and actionable ways to establish the Aviation Innovation Hub in Atlantic County and sustain its viability for new and related aviation and aeronautic investment.

## SITE GEOGRAPHY

Atlantic County lies along the Atlantic Coast plain; a low-lying region on the United States East Coast that stretches from Florida to New England. The County is located in Southern New Jersey, approximately 62 miles southeast of Philadelphia and 127 miles south of New York City. Atlantic County is connected to Philadelphia by the Atlantic City Expressway and to New York City by the Garden State Parkway. The Atlantic City International Airport (ACY) lies at the edge of the Pine Barrens of Southern New Jersey and the wetlands that connect the area to the coast. Most of the County sits on top of a mile of clay and sand, which also includes the Kirkwood-Cohansey Aquifer. Almost the entire County lies within a Coastal Area Facility Review Act (CAFRA Area) or Pinelands Comprehensive Management Plan (CMP) zone. These zones were created to balance the need to protect sensitive environments and ecosystems, while still allowing development to take place within their boundaries. The Aviation

District is located within these zones, yet still offers good opportunities for new investment and development.

Atlantic County has a relatively temperate climate, with summer highs of approximately 90 degrees and winter lows of approximately 25 degrees. The County receives roughly 80 days of rain and 210 sunny days per year, making it a favorable environment for new business and industry, specifically in the Aviation industry.

## **TOPOGRAPHY**

The County's elevation is relatively flat, with ranges from sea level at shore points to roughly 120 feet above sea level in the Borough of Hammonton and Buena Vista Township in the western-most area of the County. The three largest topographic features in Atlantic County are the Egg Harbor, Mullica, and Tuckahoe Rivers; the watersheds from these three rivers are spread throughout the County. These rivers and the County's coastal border contribute to the vast amounts of coastal and inland wetlands throughout the County's geography.

## **OVERVIEW OF THE AIRPORT DISTRICT**

Established as part of business incentives legislation, the State-designated Aviation District's boundary extends one mile from the outermost borders of the Atlantic City International Airport, (see Map 3), and includes the Airport property. The Atlantic City International Airport is a hive of activities that range from airport operations, military operations,

homeland security research, aviation research, and many other aviation-related activities. Currently, the airport property houses the Airport and terminals, the FAA, the FAA's William J. Hughes Technical Center, the South Jersey Transportation Authority, the NJ Air National Guard's 177th Fighter Wing, the U.S. Homeland Security Department's Air Marshal Academy and Testing Lab, the U.S. Coast Guard's Air-Sea Rescue Wing, and the National Aviation Research and Technology Park (which has already recruited General Dynamics, the FAA LIFT Lab, Thunderbolt Software, and the Atlantic County Institute of Technology). While nearly all of these aviation-related activities are relegated to the airport property, the goal of this Plan is to extend the aviation industry into the areas surrounding the airport in an effort to expand and further develop the aviation economy in Atlantic County and the greater Southern New Jersey Region.

The State-designated Aviation District encompasses the entire airport and sections of Egg Harbor Township, Galloway, and Hamilton Township. The District includes industrial sites, residential neighborhoods, commercial zones, and some environmentally protected areas. Furthermore, the Egg Harbor Township section of the Aviation District falls within a Federal Opportunity Zone, which provides tax advantages related to capital investment in the Aviation District.

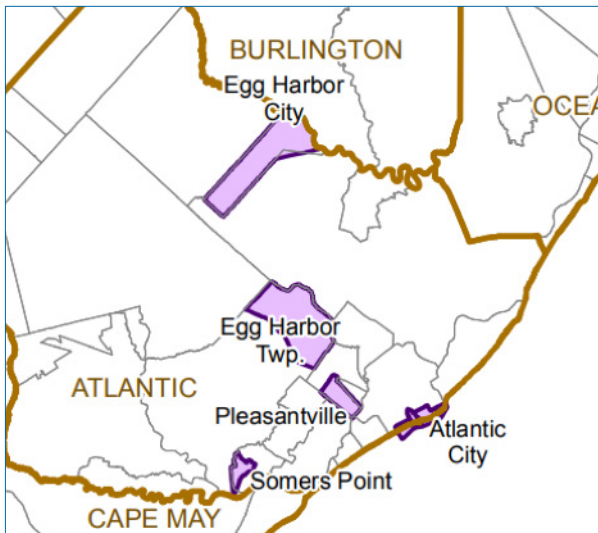


FIGURE I. EGG HARBOR TWP. OPPORTUNITY ZONE

## HISTORY

The Atlantic City International Airport was established in 1942 and leased to the U.S. Navy from Atlantic City as a Naval Air Station. The air station was used to train many different naval air groups until its ownership switched to the Airways Modernization Board in 1958 and then to the FAA later that year, according to the Army Corps of Engineers. At that point, the airport became too big and the City could not afford to operate it; however, the Navy continued to lease some space for years to come. Finally, in 1991, the South Jersey Transportation Authority purchased the terminal areas at the airport, while the FAA still owns nearly all of the land outside of the terminals. The airport is now used for domestic and international flights through Spirit Airlines and as an Air National Guard Base, housing the 177th Fighter Wing's fleet of F-16s. Currently, the airport has one terminal and supports dozens of flights per day.

The municipalities that comprise the Aviation District were once known for shipbuilding, milling, and farming. The waterways that cut through the County and connected the island communities to the Atlantic Ocean made these areas perfect for shipbuilding; wood from the Pine Barrens was used to build ships that were sent downriver for accessibility to the ocean. The existence of streams and rivers also made the area good for mill work and farming. Milling was once a thriving industry throughout Southern New Jersey because of the numerous waterways, but as technology changed, the need for mills decreased and eventually ended entirely. Farming, however, is still an important part of the area's economy, contributing over \$125 million to the State's farming sector valued at over \$1.5 billion.

## PARTNERS

The partners currently involved in developing the Aviation Innovation Hub include both public and private entities. The major partners in this endeavor are the Atlantic County Government, the Atlantic County Improvement Authority ACEA, the National Aviation Research and Technology Park, the South Jersey Transportation Authority, the Atlantic City International Airport, the Federal Aviation Administration, Embry-Riddle Aeronautical University, Rowan University, Stockton University, Atlantic Cape Community College and the New Jersey Innovation Institute, and the Atlantic County Institution of Technology.

Together these organizations provide the County with a sturdy foundation on which a thriving aviation district can develop as part of the larger aviation economic cluster establishing itself in the greater Southern New Jersey region.

## **ATLANTIC COUNTY ECONOMIC ALLIANCE**

The Atlantic County Economic Alliance (ACEA) has been spearheading the Aviation District project from the idea's inception to the actual establishment of the area as a formally recognized Aviation District by the State of New Jersey. The ACEA is a nonprofit organization whose mission is to “drive economic growth and cultivate economic diversity in Atlantic County through the execution of the Atlantic County Economic Development Strategy and Action Plan developed in 2015 by AngelouEconomics, a nationally recognized independent consultant from Austin, Texas,” according to the organization's website. The Atlantic County Economic Development Strategy and Action Plan outlines a way forward for the County to diversify its economy in a way that protects the County from potential future declines of the gaming and hospitality industry. The ACEA's Executive Director and Staff have been working diligently to cultivate relationships with Aviation Industry leaders and multiple institutions to successfully develop the Aviation Innovation Hub. By providing a more detailed focus on develop-able areas within the Aviation District, this study expands upon the findings from the Angelou Report.

## **THE ATLANTIC COUNTY GOVERNMENT**

Atlantic County was established in 1837 from portions of Gloucester County and, at the time, was only comprised of Egg Harbor Township, Galloway, Hamilton, and Weymouth. Over time, the number of municipalities grew from the original 4 to 23; as the population increased, the need to bring government closer to these areas became important as it could take a few days for people to get to the County seat on horseback. Now Atlantic County covers over 671 square miles and includes a population of roughly 270,000. The County is governed by a Board of Chosen Freeholders, of which there is a County Executive; currently, the County Executive is Dennis Levinson. The County fully supports the Aviation Technology District's development and has provided guidance and backing to the ACEA with its mission.

## **NATIONAL AVIATION RESEARCH AND TECHNOLOGY PARK**

The National Aviation Research and Technology Park is a nonprofit organization comprised of industry, academic, and government partners within the aviation industry. According to the NARTP's website, its mission is to “facilitate and conduct aviation related Research and Development with industry, academia, and government entities in a state-of-the-art environment that fosters innovation and cooperation; thereby,



promoting sustained economic growth and job creation throughout New Jersey and the nation.” The NARTP is co-located on the Atlantic City International Airport’s campus, within the Aviation District boundary.

### **FEDERAL AVIATION ADMINISTRATION:**

The Federal Aviation Administration has a large presence in the Aviation District. The FAA’s William J. Hughes Technical Center is a federal laboratory in which many research, development, testing, and evaluations are conducted for the aviation industry. The Hughes Technical Center is the FAA’s crown jewel when it comes to testing and evaluation and serves as the FAA’s national scientific test bed. The Center’s location in the Aviation District is a critically important element in attracting aviation-related industries to the District’s boundaries. The Center is currently working on the NEXTGEN aviation transportation system with many of the largest aviation companies, such as Boeing, General Dynamics, and Honeywell, to name a few. As the Center leads the way for a 21st century aviation system, it is also a tremendous aviation-industry anchor for the District.

### **SOUTH JERSEY TRANSPORTATION AUTHORITY**

The South Jersey Transportation Authority owns and operates the Atlantic City International Airport. According to the SJTA, the organization’s mission is

to “provide the traveling public with safe and efficient transportation through the acquisition, construction, maintenance, operation, and support of expressway, airport, transit, parking, other transportation projects and services that support the economies of Atlantic, Camden, Cape May, Cumberland, Gloucester and Salem Counties.” It accomplishes this mission by managing the Atlantic City Expressway, the Atlantic City International Airport, and Transportation Services (shuttles). The SJTA was established in 1991 by the State of New Jersey, and has owned the Atlantic City International Airport for decades. The SJTA successfully lobbied to have New Jersey selected as a UAS testbed site and established the Atlantic City International Airport as a Smart Airport Testbed in November 2018. These designations will help the area grow as an aviation industry powerhouse.

### **NEW JERSEY INNOVATION INSTITUTE**

The New Jersey Innovation Institute was formed by the New Jersey Institute of Technology as a corporation. Currently, NJII has been retained by the County to manage and operate the National Aviation Research and Technology Park located in the Aviation District. According to the Institutes website, the NJII seeks to “catalyze the renewal of New Jersey’s key industrial sectors, resulting in better products, stronger companies, and vibrant clusters producing more jobs for New Jersey’s citizens.”

## ATLANTIC CAPE COMMUNITY COLLEGE

Atlantic Cape Community College (ACCC) was established in 1964 and offers over 40 degree and certificate programs. ACCC supports the County's workforce development program and enrolls over 6,000 students in certificate and degree programs. ACCC will play an important role in producing the County's aviation workforce.

## AIRPORT DISTRICT COMPOSITION

Figure 2 provides a graphic representation of the Atlantic City International Airport and the Aviation Technology District's borders.

In 2018, Governor Murphy signed a bill designating the Aviation District around Atlantic City International Airport as New Jersey's sixth Garden State Growth Zone (GSGZ). GSGZ's offered eligible businesses in these areas the most lucrative tax credit incentives available from the State of New Jersey under the Grow New Jersey incentive program. The Aviation District was the only GSGZ that was not a city. Other GSGZs included Paterson, Passaic, Trenton, Camden, and Atlantic City. Unfortunately, the GSGZ designation for the Aviation District was extremely short-lived and expired on June 30, 2019, along with this designation for the other five GSGZ cities, and the entire Grow New Jersey tax credit program. The Murphy Administration and the New Jersey Legislature are considering legislation to replace the Grow New Jersey program, but the State is currently operating without any major incentives statewide for job creation and retention.

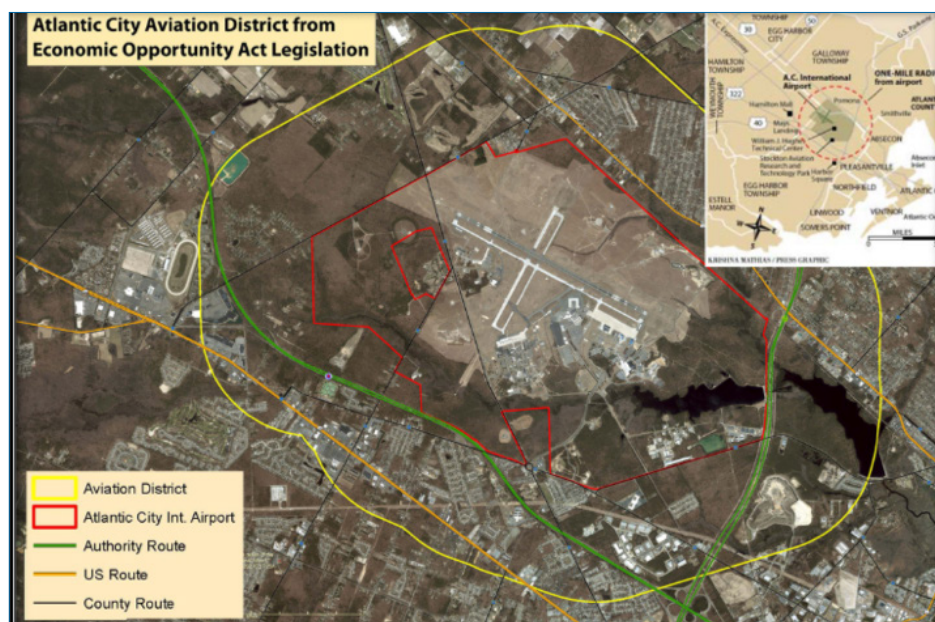


FIGURE 2. AVIATION DISTRICT BOUNDARIES. SOURCE: ACEA



FIGURE 3. ATLANTIC CITY INTERNATIONAL AIRPORT ACTIVITY LOCATIONS

## AIRPORT ACTIVITIES

The Airport property is shown in Figure 3 and it identifies where the South Jersey Transportation Authority, Federal Aviation Administration and William J. Hughes Technical Center, and the 177th Fighter Wing reside on the Airport. The SJTA occupies and owns the area around the Airport's Terminal and extends to the commercial aircraft parking locations to the west of the Terminal. The FAA and the William J Hughes Technical Center occupy the aircraft parking ramp, buildings, and automobile parking lots to the east of the terminal. The FAA actually owns a majority of the Airport. The 177th Fighter Wing occupies a ramp and several buildings and hangars to the Southwest of the Terminal; however, this land is owned by the FAA.

## RELATIONSHIP TO OTHER ECONOMIC AND JOB GENERATORS

Atlantic County's Aviation Innovation Hub has the potential to greatly impact the regional economy in Southern New Jersey. This Hub is poised to include industries such as, but not limited to, the Air Transportation; Professional, Scientific, and Technical Services; and Warehousing and Storage.

The Air Transportation Industry includes aircraft mechanics and service technicians; airline pilots, airline copilots, and flight engineers; cargo and freight agents; and reservation and transportation ticket agents and travel clerks. According to the U.S. Bureau of Economic Analysis' RIMS II Multipliers, in the Southern New Jersey region, it is estimated that every \$1 million in output demand for the Air Transportation Industry (which included MROs and Air Cargo companies) will yield 6 jobs in that particular sector. Furthermore, those 6 jobs in the Air Transportation industry will produce 17 jobs in



the region's overall economy. Thus, for every 1 million dollars of output demand in air transportation there will be an associated increase of 23 jobs in the region's economy. With the planned MRO Operations and Air Cargo operations for the Aviation District, this industry will yield quite an impact on the local economy.

The Air Cargo operations planned for the Aviation District will also increase the need for the Warehousing and Storage Industry. This industry includes industrial truck and tractor operations; laborers and freight, stock, and materials movers; shipping, receiving, and traffic clerks; stock clerks and order filers; and transportation, storage, and distribution managers. According to the US Bureau of Economic Analysis, it is estimated that for every \$1 million of demand output in the Warehousing and Storage Industry, nearly 12 jobs are created in that particular industry. Furthermore, those 12 jobs will create nearly 18 jobs in the regional economy. Thus, for every \$1 million dollars of demand output for the warehousing and storage industry, 30 jobs are created for the economy.



FIGURE 4. MRO OPERATIONS. SOURCE: AIRWAYS MAGAZINE. 2016



FIGURE 5. AIR CARGO OPERATIONS. SOURCE: FORTUNE MAGAZINE. 2016

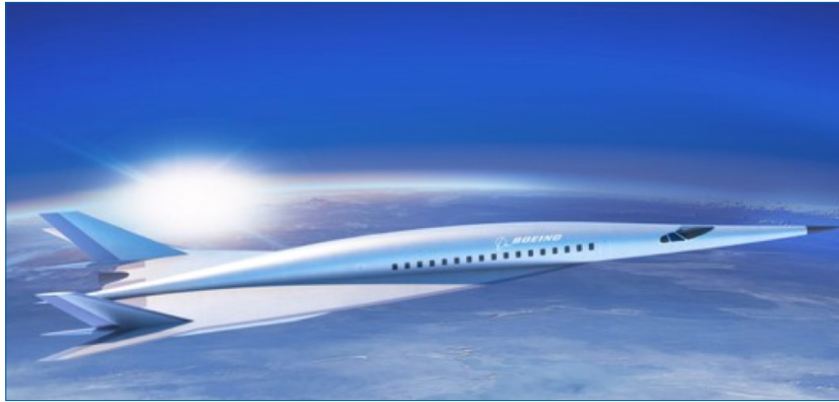


FIGURE 6. BOEING CONCEPT AIRCRAFT. SOURCE: WIRED MAGAZINE. 2018.

The planned research and development operations, especially those at the Aviation District's NARTP, will increase the demand for the Professional, Scientific, and Technical Services industry in the area. This industry includes engineering, IT Consulting, and scientific research and development services. According to the US Bureau of Economic Analysis, for every \$1 million of output demand for the Professional, Scientific, and Technical Services, approximately 10 jobs are created in that industry. Furthermore, those 10 jobs have a ripple effect and create an additional 18 jobs in the regional economy, through indirect and induced industries. Therefore, for every \$1 million dollars of output demand for the Professional, Scientific, and Technical Services industry, roughly 28 jobs are created in that economy.

What this all means is that \$1 million dollars of output demand each in the above industries, can yield over 81 total jobs in the region's economy. Thus, \$10 million of output demand for services in the Aviation District could yield over 800 jobs in the regional economy. These jobs include retail trade, food and beverage services, real estate, accommodations, etc. With just \$10 million dollars of output demand, the Aviation District has the power to increase the employment rate of Atlantic County by nearly 1%. This boost in employment will have tremendously good consequences for the County and greater Southern New Jersey region; wages will rise, small businesses will grow, home prices will gain momentum, and municipal tax revenues will increase.

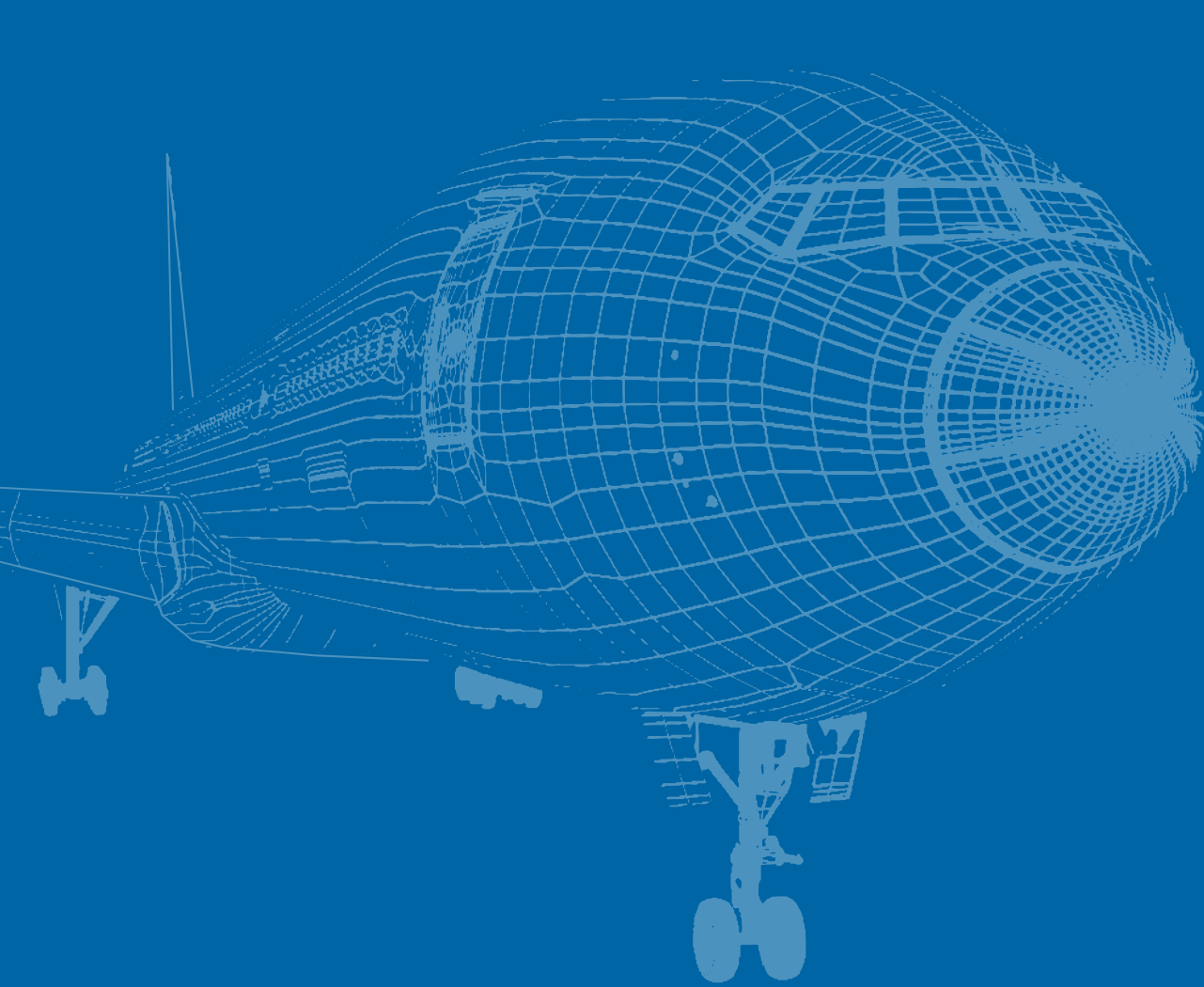
## **ECONOMIC DEVELOPMENT GOALS AND OBJECTIVES**

The Economic Goals and Objectives of this Plan were established by the Aviation District's many stakeholders. Triad Associates surveyed these Stakeholders in an effort to provide a framework for how the Aviation District's goals translate into the Stakeholders' visions of the future development. The following is a list of the Goals established by the stakeholders and are discussed more thoroughly in Section 05. of this Plan:

- GOAL 1:** Promote Economic and Small Business Development at the Aviation Innovation Hub;
- GOAL 2:** Foster Actions that Enable the Aviation District to Become the Hub of Southern Jersey's Emerging Aviation Economic Cluster;
- GOAL 3:** Create and Promote an Administrative Protocol that Makes it Easy for Prospective Businesses and Interested Investors to Secure Information about the Opportunities at the Aviation District and get the Support Needed to Advance Potential Projects.
- GOAL 4:** Diversity Atlantic County's Economy and Expand Opportunities for Small Business Development.

The objectives that support these goals are also explained in detail in Section 5 of this plan. These objectives were identified by the stakeholders and establish the greater vision for developing the Aviation Innovation Hub.

SECTION 04



CURRENT SITE CONDITIONS



## CURRENT SITE CONDITIONS

— A delineation of the physical limits of the Aviation District was prepared and an analysis was performed of these lands to review: the existing conditions, environmental suitability and constraints, regulatory jurisdiction oversight, local zoning, critical utility infrastructure availability and transportation support network. The study of these components is graphically depicted in a series of seventeen (17) maps contained in this section.

The land development analysis is intended to serve as a tool for potential developers of the Aviation District to easily access feasibility criteria for a specific property within the mandated area. The data collected from this analysis was reviewed and placed into six (6) categories (high development potential for non-residential uses, low development potential in residential zones, established residential neighborhoods, future low-density residential lands, environmentally restrictive lands, Atlantic County Utilities Authority lands) of general potential land development feasibility for non-residential uses within the Aviation District lands that are illustrated on Map 1. The information for this investigation was gathered in early 2019 and certain elements are subject to change due to local, state, county, utility company policy or regulation change.

The Feasibility Map (Map 1) is the result of the interpretation of the land development criteria compiled from the preparation of the sixteen maps. This Map categorizes areas by their development potential. The Aviation District lands have been broken down into six (6) general categories which provide a guide to the lands most conducive to development for non-residential development. Those categories include:

### **HIGH DEVELOPMENT POTENTIAL FOR NON-RESIDENTIAL USES**

These areas are comprised of non-residential zones which have public sewer and public water available. These lands are not significantly encumbered with environmentally sensitive features that would prohibit new construction. These lands designated in a red overlay are most appropriate for development of medium to large non-residential facilities.



## **LOW DEVELOPMENT POTENTIAL IN RESIDENTIAL ZONES**

These areas have residential zoning in place with very limited opportunities for non-residential uses without relief granted by the municipality in the form of a use variance. Though the zoning creates a land development obstacle for businesses, these lands do have access to public water & public sewer and do not have significant environmental constraints. These lands designated in an orange tone are less appropriate for Aviation District non-residential development, however, there may be opportunities for smaller scale projects that are surrounded by existing non-residential properties or the expansion of an existing non-residential use.

## **ESTABLISHED RESIDENTIAL NEIGHBORHOODS**

These areas are generally improved with existing residential dwellings in groupings where neighborhoods have been created. The vast majority of dwellings are within residential zones. These areas, similar to the above category, do not lend themselves to the development of medium to large scale non-residential businesses. Most of these areas would require use variances to be granted by the Zoning Board to allow for development of any non-residential use.

## **FUTURE LOW-DENSITY RESIDENTIAL LANDS**

These areas are limited to lands that are located where septic systems are required and where public water infrastructure is not installed. This area is exclusively within Hamilton Township's RD-5 Zone which requires 5 acres per residential unit and does not include permitted non-residential uses. In addition, the soils are not generally conducive to storm-water management basins and standard septic systems.

## **ENVIRONMENTALLY RESTRICTIVE LANDS**

These areas are encumbered with freshwater wetlands and or floodplains as depicted on the State's GIS 2012 wetlands mapping and F.E.M.A.'S Flood Insurance Rate Maps. These areas will likely expand to provide wetlands buffers with widths typically between 50 foot and 300 foot which will need to be evaluated on a case by case basis. These lands themselves cannot be developed, though the portion of the parcel outside an environmentally restrictive area can still be developed.

## **ATLANTIC COUNTY UTILITIES AUTHORITY LANDS**

These areas are owned by the Atlantic County Utility Authority and contain a landfill, recycling facility, offices, and the reservoir. These lands are not available for private development. Developers interested in pursuing a specific parcel should perform a due diligence evaluation of all aspects of the site's environmental conditions, zoning criteria, utility availability, agency jurisdiction, etc. in addition to the information provided in this report prior to purchasing that property.



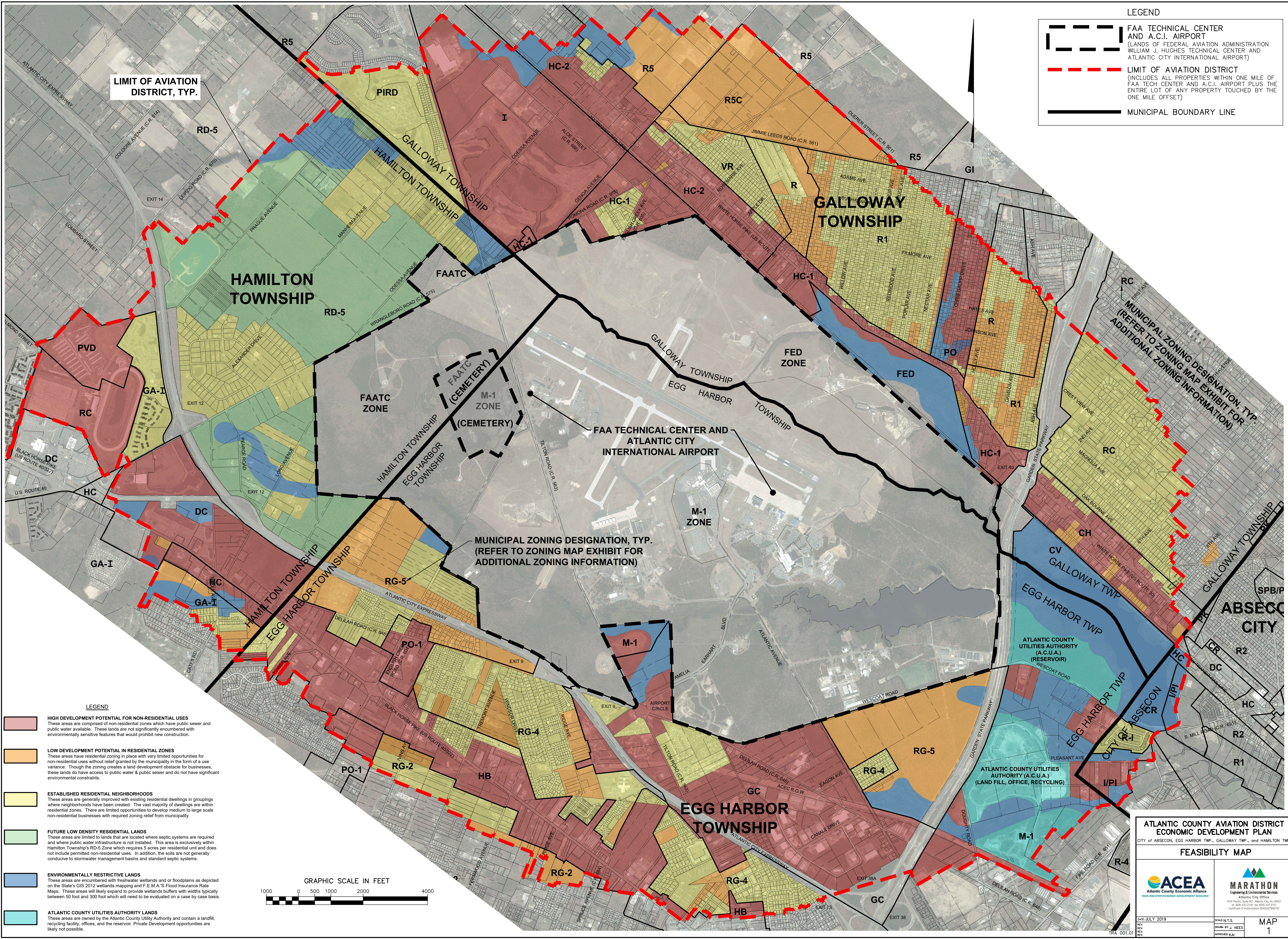
LEGEND

**FAA TECHNICAL CENTER AND A.C.I. AIRPORT**  
(LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)

**LIMIT OF AVIATION DISTRICT**  
(INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)

**MUNICIPAL BOUNDARY LINE**

**LIMIT OF AVIATION DISTRICT, TYP.**



**LEGEND**

**HIGH DEVELOPMENT POTENTIAL FOR NON-RESIDENTIAL USES**  
These areas are comprised of non-residential zones which have public sewer and public water available. These lands are not significantly encumbered with environmentally sensitive features that would prohibit new construction.

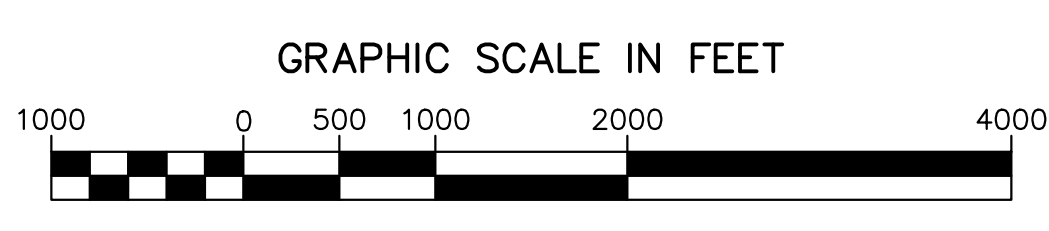
**LOW DEVELOPMENT POTENTIAL IN RESIDENTIAL ZONES**  
These areas have residential zoning in place with very limited opportunities for non-residential uses without relief granted by the municipality in the form of a use variance. Though the zoning creates a land development obstacle for businesses, these lands do have access to public water & public sewer and do not have significant environmental constraints.

**ESTABLISHED RESIDENTIAL NEIGHBORHOODS**  
These areas are generally improved with existing residential dwellings in groupings where neighborhoods have been created. The vast majority of dwellings are within residential zones. There are limited opportunities to develop medium to large scale non-residential businesses with required zoning relief from municipality.

**FUTURE LOW DENSITY RESIDENTIAL LANDS**  
These areas are limited to lands that are located where septic systems are required and where public water infrastructure is not installed. This area is exclusively within Hamilton Township's RD-5 Zone which requires 5 acres per residential unit and does not include permitted non-residential uses. In addition, the soils are not generally conducive to stormwater management basins and standard septic systems.

**ENVIRONMENTALLY RESTRICTIVE LANDS**  
These areas are encumbered with freshwater wetlands and or floodplains as depicted on the State's GIS 2012 wetlands mapping and F.E.M.A.'S Flood Insurance Rate Maps. These areas will likely expand to provide wetlands buffers with widths typically between 50 foot and 300 foot which will need to be evaluated on a case by case basis.

**ATLANTIC COUNTY UTILITIES AUTHORITY LANDS**  
These areas are owned by the Atlantic County Utility Authority and contain a landfill, recycling facility, offices, and the reservoir. Private Development opportunities are likely not possible.



**MUNICIPAL ZONING DESIGNATION, TYP. (REFER TO ZONING MAP EXHIBIT FOR ADDITIONAL ZONING INFORMATION)**

**MUNICIPAL ZONING DESIGNATION, TYP. (REFER TO ZONING MAP EXHIBIT FOR ADDITIONAL ZONING INFORMATION)**

**FAA TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT**

**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.

**FEASIBILITY MAP**

**ACEA**  
Atlantic County Economic Alliance  
FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES

**MARATHON**  
Engineering & Environmental Services  
Atlantic City Office  
1515 PINE BLVD. SUITE 201, ABSECON, NJ 08201  
PH: (609) 437-2100 FAX: (609) 437-2011  
CERTIFICATE OF AUTHORIZATION #K042007010

DATE: JULY 2019  
SCALE: N.T.S.  
DRAWN BY: J. NEES  
APPROVED: KAJ

MAP 1

TRA 001.01



## **FAA TECHNICAL CENTER AND AIRPORT DELINEATION**

The lands comprising the existing Federal Aviation Administration William J. Hughes Technical Center (FAA Technical Center) facilities and the Atlantic City International Airport (AC Airport) are delineated on Map 2 with the current block and lot designations. All lands are owned by the United States Federal Government, with the exception of two lots comprising roughly 84 acres which are owned by the South Jersey Transportation Authority and noted on Map 2. The remaining approximately 5,005 acres is located in the following municipalities: Egg Harbor Township (68%), Galloway Township (20%), and Hamilton Township (12%).

The Atlantic City International Airport terminal is located on the lands owned by the South Jersey Transportation Authority. The public Airport is operated by the South Jersey Transportation Authority with services provided by the Port Authority of New York and New Jersey. According to the Airport, it is served by Spirit Airlines, WestJet Airlines and AirTran Airways. Additionally, Harrah's Entertainment is offering service to select destinations east of the Mississippi River via its Total Rewards Air. This service is being offered as a scheduled charter and only during the summer months.

## **AVIATION DISTRICT BOUNDARY DELINEATION**

The Aviation District is comprised of the lands surrounding the existing Federal Aviation Administration William J. Hughes Technical Center (FAA Technical Center) and the Atlantic City International Airport (AC Airport). In accordance with the adopted legislation, the Aviation District Boundary limit line is established one mile (5,280 l.f.) from the lands presently occupied by the FAA Technical Center and Atlantic City Airport and includes wholly any tax parcels that are touched by the one-mile offset. The individual parcel limits, as shown on the graphics, are based on data obtained from the State's New Jersey Office of Information Technology, Office of GIS (OGIS) Parcels Normalization Project that was implemented to develop a statewide composite of parcels data. Atlantic County's GIS department provided the State with information for Atlantic County properties and this data is a spatial representation of municipal tax lots for Atlantic County. The database was originally created in 2001. The data set was updated and normalized between 2009 and 2011. The tax parcel lines are approximate depictions of the existing right-of-way delineations and property lines and this information is generally representative of existing conditions.

A survey with deed and title research is necessary to accurately delineate the precise boundaries of all properties. The area of each tax parcel is publicly available for review at each of the municipality's tax assessor's office through examination of the official tax maps and or tax records. Map 3 displays the limits of the Aviation District in a red dashed line. The graphic also depicts the intersection of the one-mile offset line in a black dashed line and which tax parcel lines are crossed along the periphery of the one-mile offset.

The FAA Technical Center and AC Airport are located within three municipalities that include Egg Harbor Township, Galloway Township, and Hamilton Township and comprise a combined area of approximately 7.82 square miles or 5,005 acres.

**The following is a percent breakdown of the complex's land area within each municipality:**

68% EGG HARBOR TOWNSHIP  
20% GALLOWAY TOWNSHIP  
12% HAMILTON TOWNSHIP

The delineated one-mile Aviation District band surrounding the existing FAA Technical Center and AC Airport complex is comprised of ±16.47 square miles (±10,538 acres) and is comprised of lands within four (4) different municipalities including: Egg Harbor Township, Galloway Township, Hamilton Township, and Absecon City.

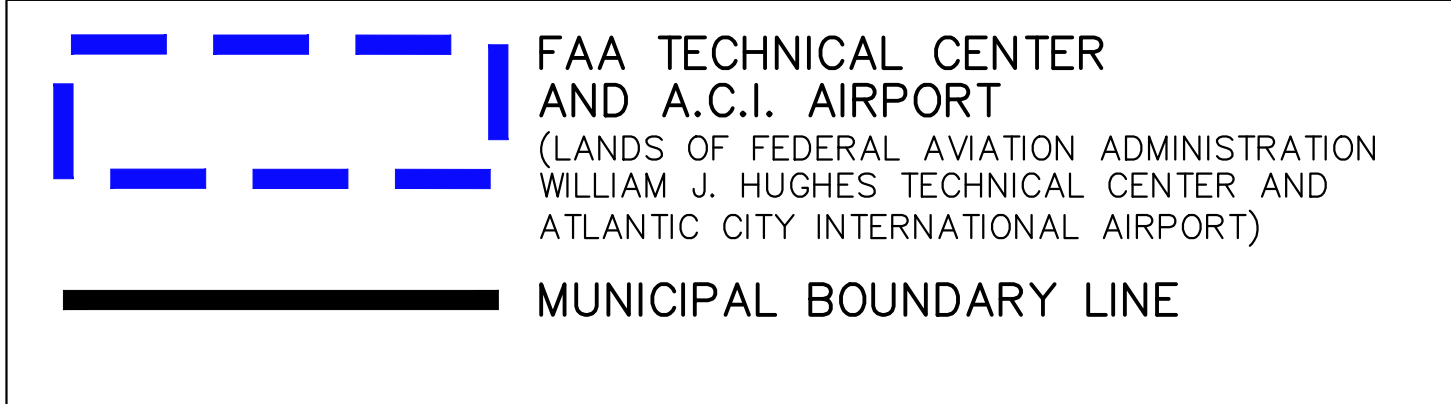
**The following is a percent breakdown of the Aviation District's land area within each municipality:**

37.0% EGG HARBOR TOWNSHIP  
36.9% GALLOWAY TOWNSHIP  
24.7% HAMILTON TOWNSHIP  
1.4% ABSECON CITY

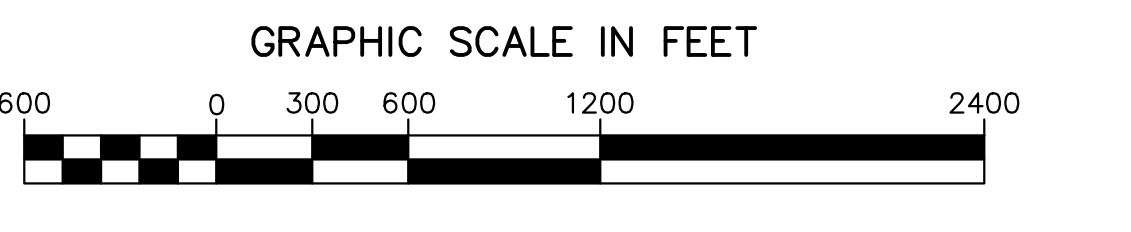
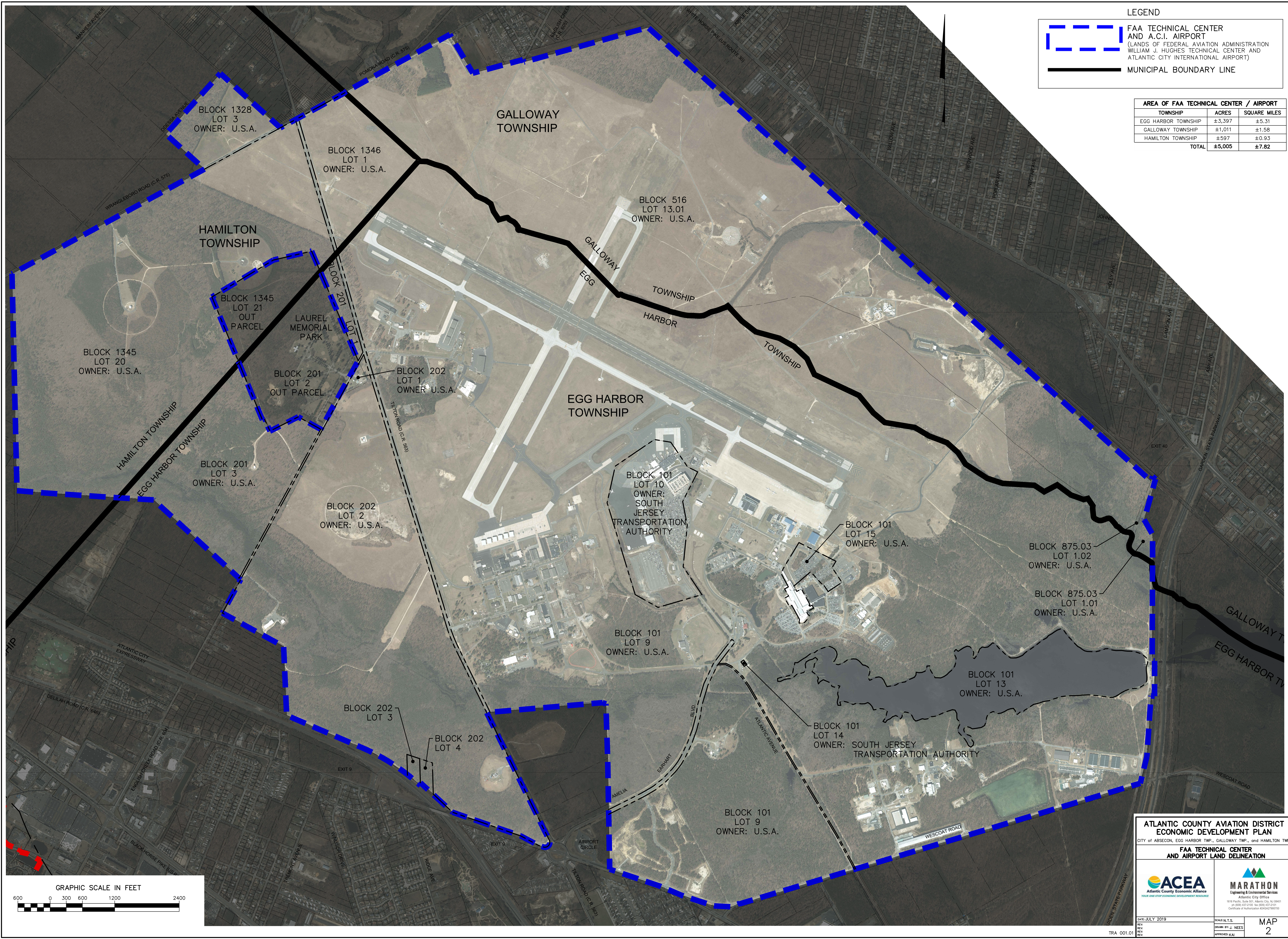
Map 4 displays the existing physical improvements and undeveloped areas within the Aviation District utilizing the State's publicly available 2015 aerial photograph. A rough calculation of the aerial image indicates that approximately 56% of the Aviation District has been disturbed with such improvements as: residential properties, non-residential uses, agriculture, municipal facilities, County facilities, roads, utility distribution lines, etc. Conversely, approximately 44% of the lands are undisturbed as delineated on the aerial with the presence of existing woodlands. Though ±56% of the lands are presently improved, this does not negate the ability for redevelopment and re-purposing of existing resources for a new non-residential use within that area. The 44% of undisturbed woodland areas partially include lands which may not be develop-able due to wetlands, wetlands buffers, other environmental detrimental factors, or State/Municipal regulations. The maps to follow provide overlays that depict these types of development restrictions and areas which are more favorable for development opportunities.



LEGEND



AREA OF FAA TECHNICAL CENTER / AIRPORT		
TOWNSHIP	ACRES	SQUARE MILES
EGG HARBOR TOWNSHIP	±3,397	±5.31
GALLOWAY TOWNSHIP	±1,011	±1.58
HAMILTON TOWNSHIP	±597	±0.93
<b>TOTAL</b>	<b>±5,005</b>	<b>±7.82</b>



**ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN**  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.

**FAA TECHNICAL CENTER  
AND AIRPORT LAND DELINEATION**

DATE: JULY 2019  
SCALE: N.T.S.  
DRAWN BY: J. NEES  
APPROVED: KAJ  
MAP 2

TRA 001.01






PARCELS INCLUDED IN THE AVIATION DISTRICT THAT ARE PARTIAL WITHIN THE ONE (1) MILE RADIUS, TYPICAL

ONE MILE OFFSET

PARCELS INCLUDED IN THE AVIATION DISTRICT THAT ARE PARTIAL WITHIN THE ONE (1) MILE RADIUS, TYPICAL

ONE MILE OFFSET

**LEGEND**

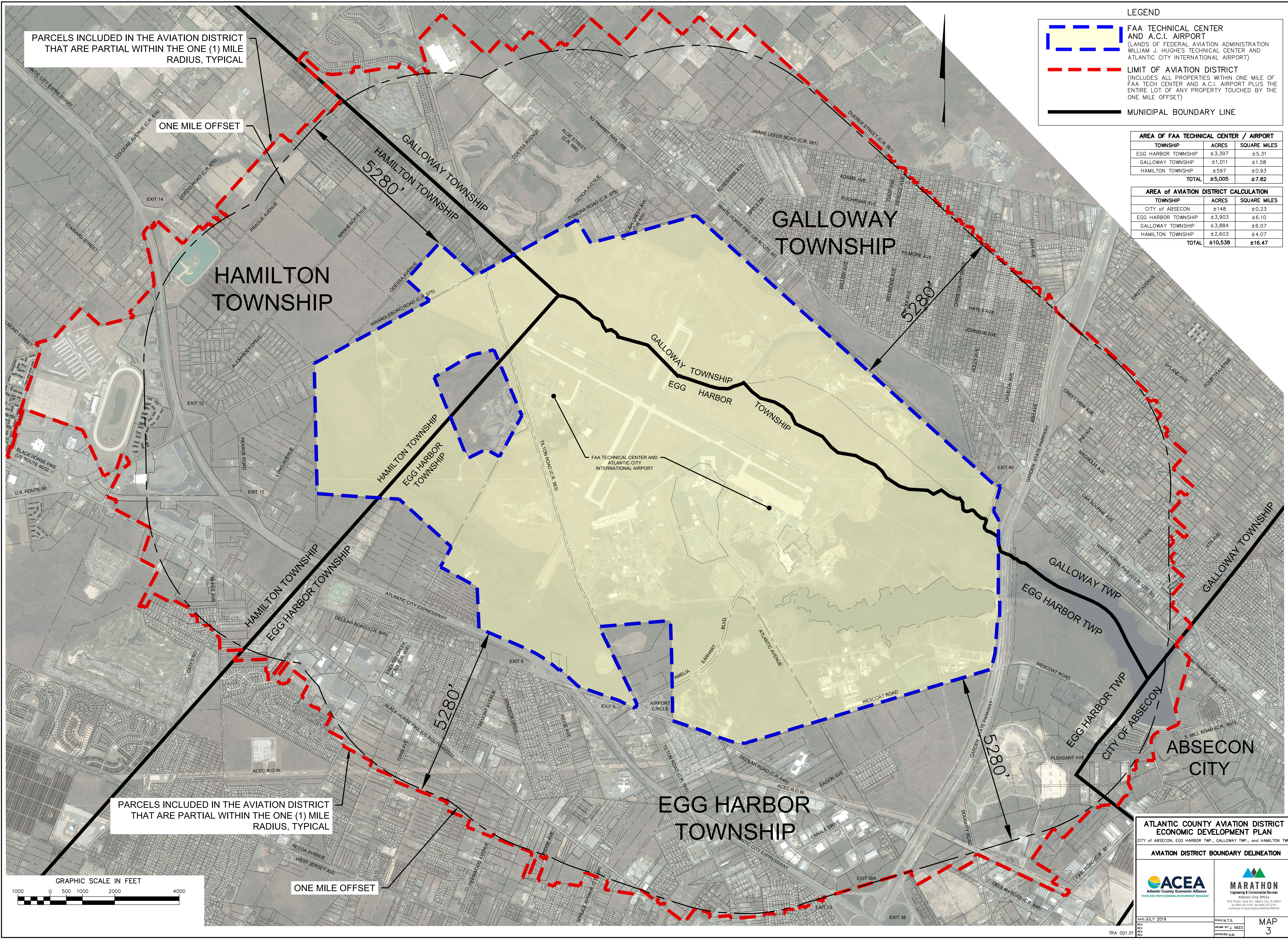
-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
-  LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  MUNICIPAL BOUNDARY LINE

**AREA OF FAA TECHNICAL CENTER / AIRPORT**


TOWNSHIP	ACRES	SQUARE MILES
EGG HARBOR TOWNSHIP	±3,397	±5.31
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HAMILTON TOWNSHIP	±597	±0.93
<b>TOTAL</b>	<b>±5,005</b>	<b>±7.82</b>

**AREA of AVIATION DISTRICT CALCULATION**


TOWNSHIP	ACRES	SQUARE MILES
CITY of ABSECON	±148	±0.23
EGG HARBOR TOWNSHIP	±3,903	±6.10
GALLOWAY TOWNSHIP	±3,884	±6.07
HAMILTON TOWNSHIP	±2,603	±4.07
<b>TOTAL</b>	<b>±10,538</b>	<b>±16.47</b>



**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
 CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**AVIATION DISTRICT BOUNDARY DELINEATION**



**ACEA**  
Atlantic County Economic Alliance  
FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES





**MARATHON**  
Engineering & Environmental Services  
Atlantic City Office  
1515 PINE BLVD. SUITE 200, ATLANTIC CITY, NJ 08401  
PH: (609) 437-2100 FAX: (609) 437-2101  
Certified Professional Engineer EAC024289010


DATE: JULY 2019  
 SCALE: N.T.S.  
 DRAWN BY: J. NEES  
 APPROVED: KAJ  
 MAP 3  
 TRA 001.01



LEGEND

 FAA TECHNICAL CENTER AND A.C.I. AIRPORT  
(LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)

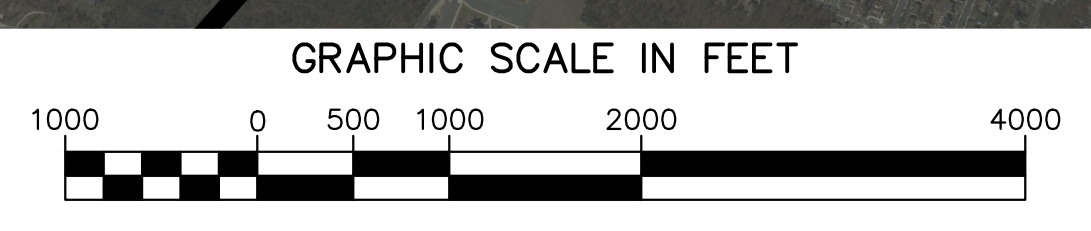
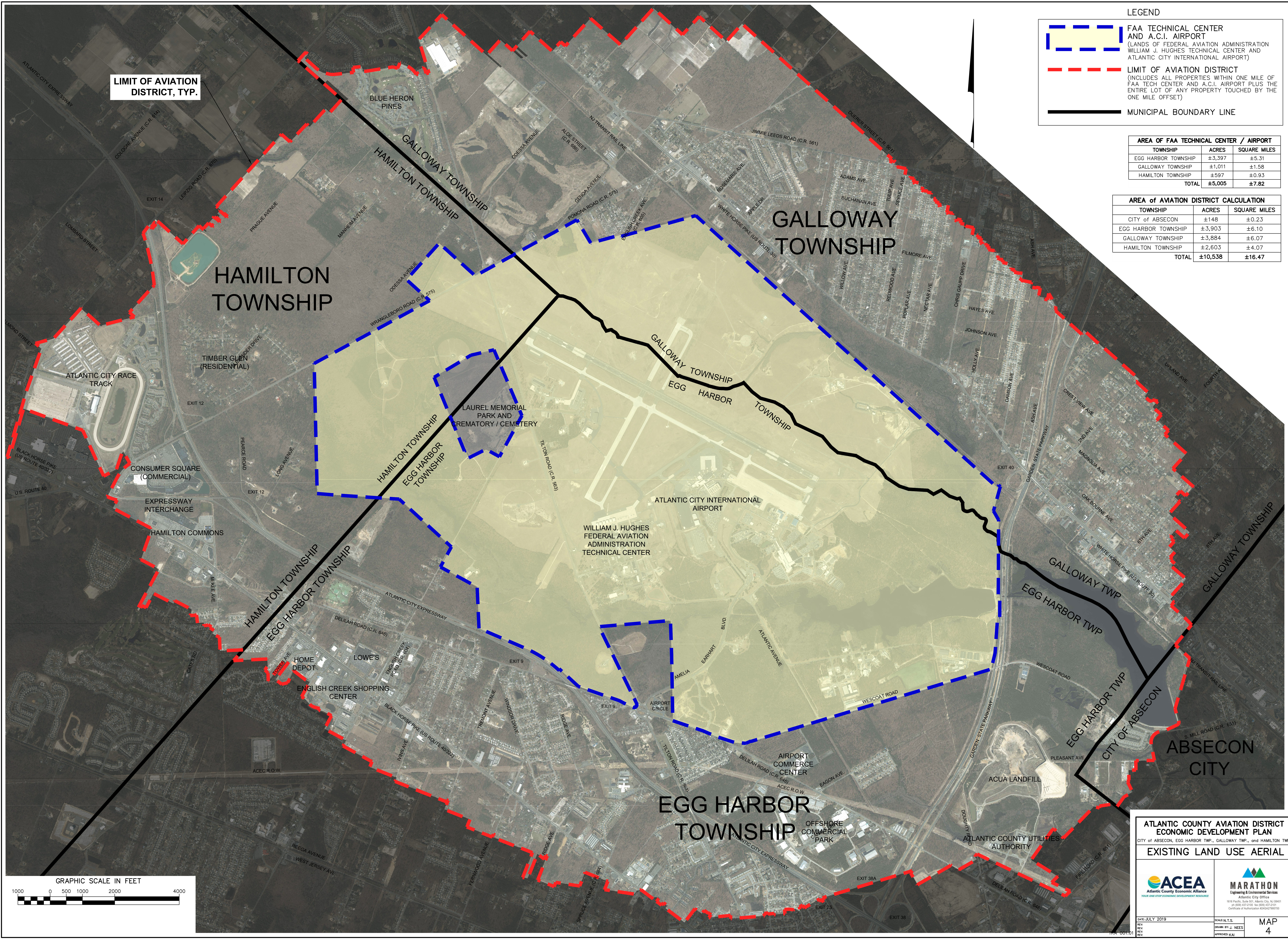
 LIMIT OF AVIATION DISTRICT  
(INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)

 MUNICIPAL BOUNDARY LINE

AREA OF FAA TECHNICAL CENTER / AIRPORT		
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<b>TOTAL</b>	<b>±10,538</b>	<b>±16.47</b>

LIMIT OF AVIATION DISTRICT, TYP.



**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**EXISTING LAND USE AERIAL**

 **ACEA**  
Atlantic County Economic Alliance  
Your one-stop economic development resource

 **MARATHON**  
Engineering & Environmental Services  
Atlantic City Office  
1515 Pacific Blvd. Ste. 200 Atlantic City, NJ 08401  
PH: (609) 437-2100 FAX: (609) 437-2011  
Certified as a Subcontractor #024289020

DATE: JULY 2019  
SCALE: T.S.  
REV: [blank]  
DRAWN BY: J. NEES  
APPROVED: KAJ

MAP 4



## PINELANDS AND CAFRA JURISDICTION

The Aviation District lies within the jurisdictional boundaries of the Pinelands Protection Act, and is managed by the New Jersey Pinelands Commission through the Pinelands Comprehensive Management Plan. The District is also within the jurisdictional boundary of the Coastal Area Facilities Review Act (CAFRA) zone and is managed by the New Jersey Department of Environmental Protection through the New Jersey Coastal Zone Management Rules. These two agencies are primarily concerned with the impacts a project will have on the environment, such as the protection of groundwater, vegetation, wildlife, tidal resources, and air quality. The border line separating these two agencies' jurisdiction is the Garden State Parkway with the lands east of the Parkway under the purview of CAFRA and the lands to the west under the purview of the Pinelands Protection Act. CAFRA maintains control over approximately 17% of the Aviation District lands and The Pinelands has control of 83% of the area. Both agencies have created land development regions within their authority which have been established to generally govern the intensity of development, based on the protection of environmental resources. Map 5 shows the breakdown of these two agencies' development regions.

Projects within The Pinelands area will be required to comply with all of the standards of the N.J.A.C. 7:50 Pinelands Comprehensive Management Plan effective January 14, 1981 and updated through 11/19/2018 or request relief from a standard(s). Projects within the NJDEP Coastal Area Facility Review Act (NJSA 13:19 law) are subject to review and compliance with applicable standards set forth under N.J.A.C. 7:7 or relief requested as administered by NJDEP's Division of Land Use Regulation.

It is highly likely that applications for future development will be required to obtain authorization from one of these two agencies since the projects to be developed under the State program will be of a scale that will exceed the environmental review agency's established threshold limits. The approval from NJDEP for a CAFRA regulated facility or from The Pinelands Commission is in addition to all other required State, County, and Municipal approvals.

The Pinelands controlled lands within the Aviation District are broken into four (4) different management areas that include: Rural Development Area, Regional Growth Area, Pinelands Village, and Federal or Military Facility. See Map 6. A municipality's adopted zoning districts are approved by The Pinelands Commission and are consistent with their land development intensity polices. As such, the municipality's zoning standards with regards to permitted uses, setbacks, impervious coverage, density, etc. are consistent with The Pinelands management areas intent. The Rural Development Areas allow for less intense development whereas the Regional Growth Areas and Pinelands Villages are designated areas where more intense development may occur. Approximately 25%

of the Pinelands Management Areas is within the Rural Development Area with reduced development potential land. Approximately 75% is in the other three management areas which are more conducive to development of larger scale non-residential development.

There are three (3) planning area designations within the CAFRA zone that allow for established levels of intensity of development as indicated in chart below. The ±1,762 acres of CAFRA areas within the Aviation District includes 64% of Metropolitan Planning Area, 10% of Suburban Planning Area (within sewer service area), and 26% Environmentally Sensitive Planning Area. The following chart is an adaptation of the matrixes found in Sub-chapter 13 of NJAC 7:7 Coastal Zone Management Rules which dictate the “Requirements for Impervious Cover and Vegetative Cover for General Land Areas and Certain Special Areas”.

PLANNING AREA #	PLANNING AREA NAME	IMPERVIOUS COVER	TREE PRESERVATION FOR FORESTED SITES	TREE PRESERVATION OR PLANTING FOR UNFORESTED SITES
PA - 1	Metropolitan Planning Area	Maximum 80%	Minimum 10%	NONE
PA - 2	Suburban Planning Area (With sewer)	Maximum 30%	Minimum 35%	Minimum 5%
PA - 2	Suburban Planning Area (No sewer)	Maximum 05%	Minimum 70%	Minimum 5%
PA - 3	Environmentally Sensitive Planning Area	Maximum 03%	Minimum 70%	Minimum 5%




## ZONING DESIGNATIONS

The Zoning (Map 7) provides the official adopted zoning designations for the four municipalities at the time of the preparation of this report. Municipalities revise zoning districts on a regular basis; however, their official Zoning Maps are often not updated at the same time as the zoning modification. Therefore, it is important to consult directly with the municipality’s planning office to verify a parcel’s zoning district during the due diligence period.

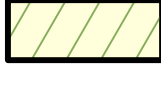

The qualifying types of facilities that will be developed within Aviation District will be non-residential uses. Therefore, the zones which allow for a variety of non-residential permitted uses will be more likely to obtain land use approvals from the municipality than a zone which is predominately zoned for residential



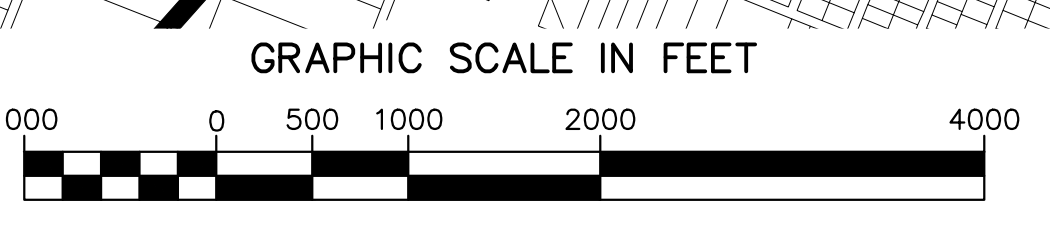
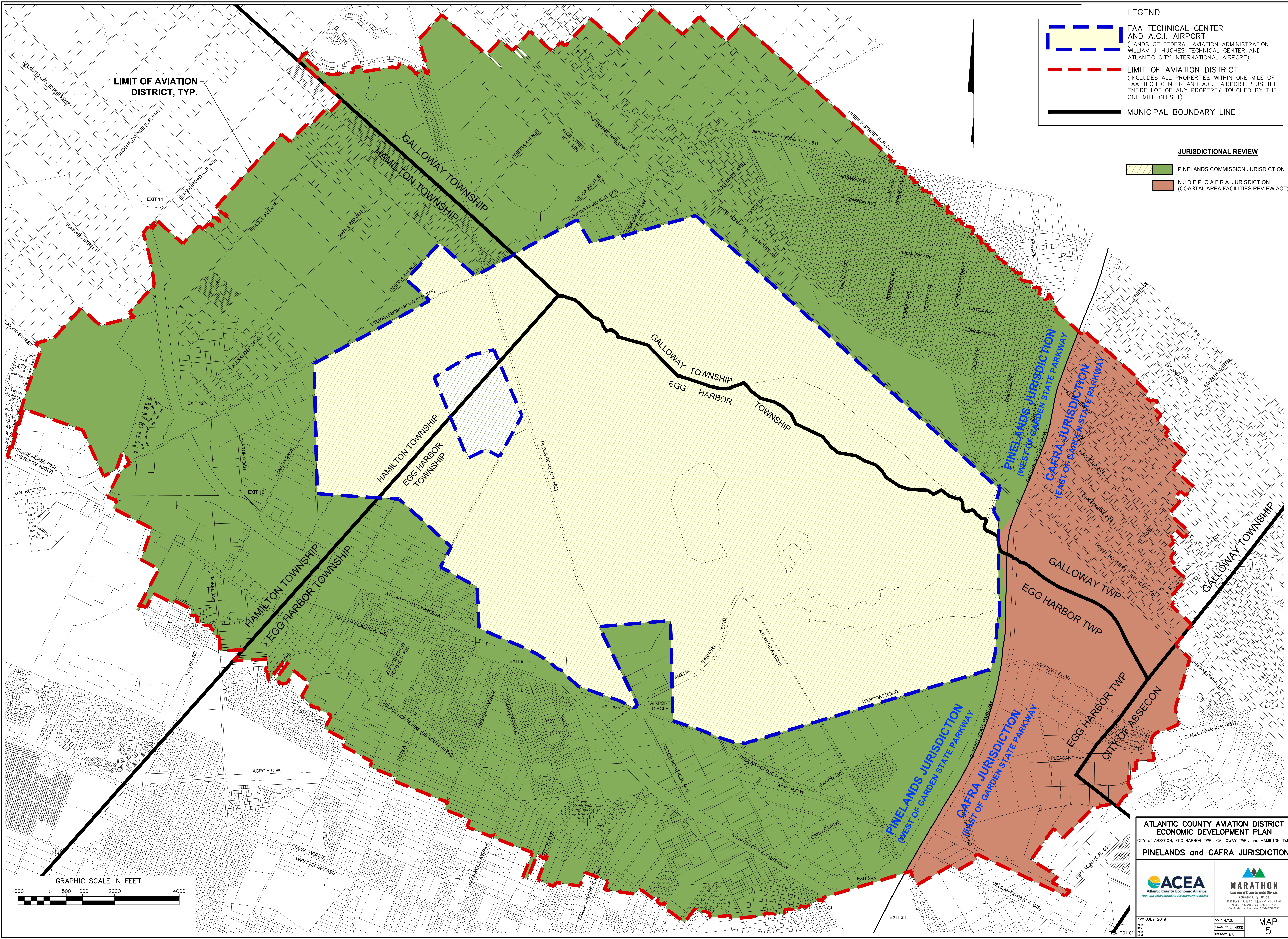
LEGEND

-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
-  LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  MUNICIPAL BOUNDARY LINE

JURISDICTIONAL REVIEW

-  PINELANDS COMMISSION JURISDICTION
-  N.J.D.E.P. C.A.F.R.A. JURISDICTION (COASTAL AREA FACILITIES REVIEW ACT)

LIMIT OF AVIATION DISTRICT, TYP.



ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
PINELANDS and CAFRA JURISDICTION



Atlantic County Economic Alliance  
FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES



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Engineering & Environmental Services  
Atlantic City Office  
1515 PACIFIC BLVD. SUITE 201, MARLTON, NJ 08051  
PH: (856) 437-2100 FAX: (856) 437-2101  
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DRAWN BY: J. NEES  
APPROVED: KAJ  
MAP 5  
TMA 001.01



LEGEND

**FAA TECHNICAL CENTER AND A.C.I. AIRPORT**  
 (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)

**LIMIT OF AVIATION DISTRICT**  
 (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)

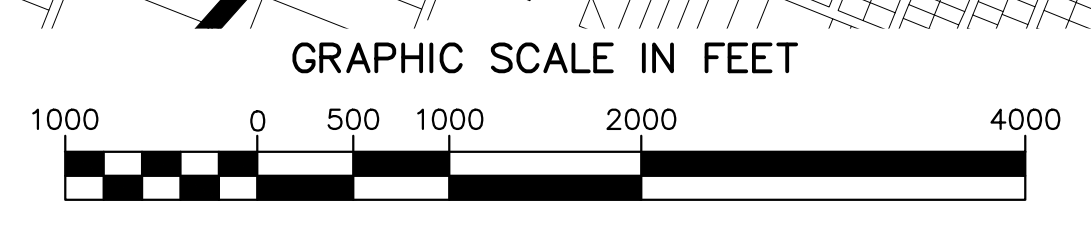
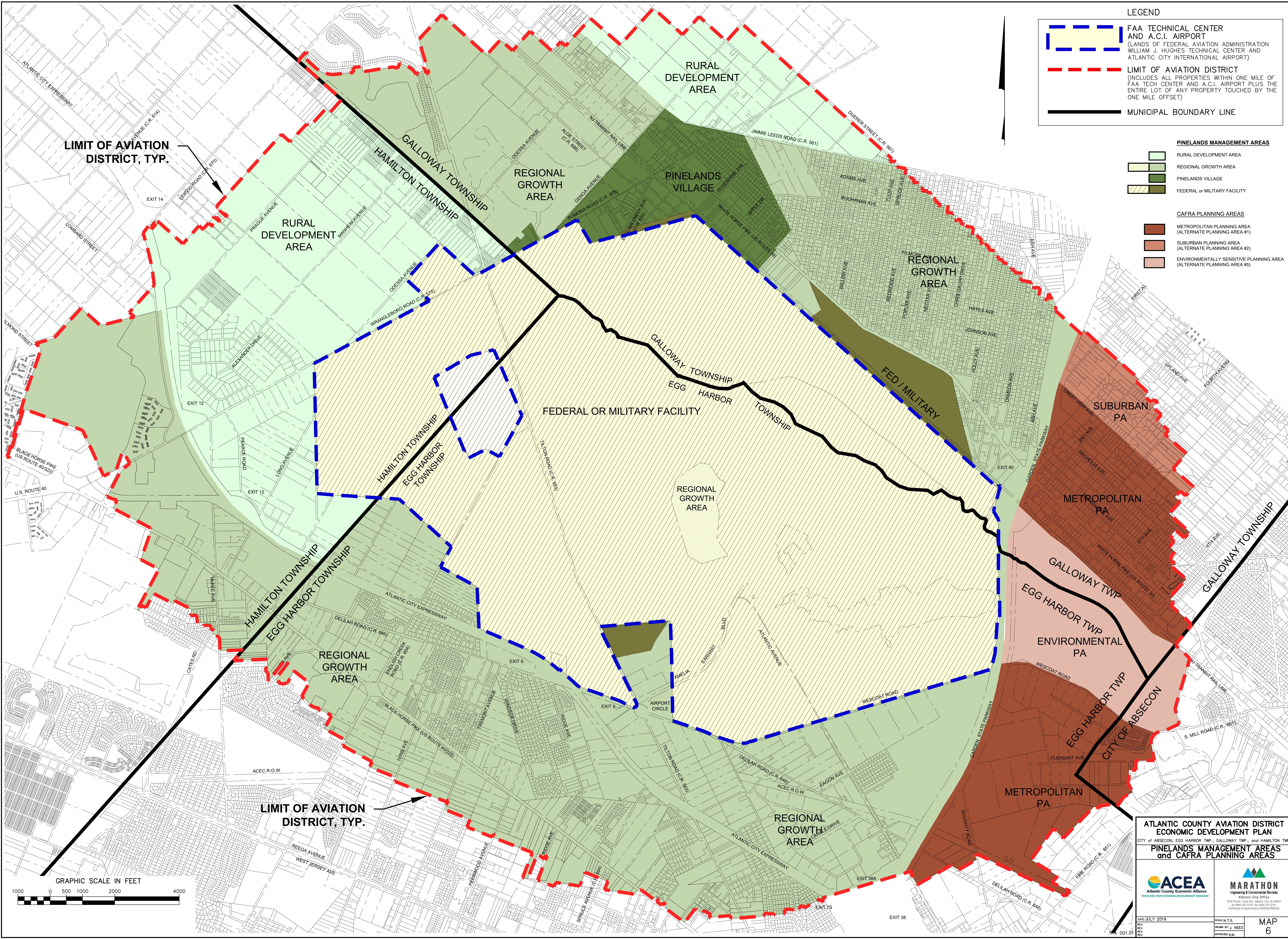
**MUNICIPAL BOUNDARY LINE**

**PINELANDS MANAGEMENT AREAS**

- RURAL DEVELOPMENT AREA
- REGIONAL GROWTH AREA
- PINELANDS VILLAGE
- FEDERAL OR MILITARY FACILITY

**CAFRA PLANNING AREAS**

- METROPOLITAN PLANNING AREA (ALTERNATE PLANNING AREA #1)
- SUBURBAN PLANNING AREA (ALTERNATE PLANNING AREA #2)
- ENVIRONMENTALLY SENSITIVE PLANNING AREA (ALTERNATE PLANNING AREA #5)



**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
 CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**PINELANDS MANAGEMENT AREAS and CAFRA PLANNING AREAS**

**ACEA**  
 Atlantic County Economic Alliance  
 FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES

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 Atlantic City Office  
 1515 PINE BEACH BLVD., SUITE 200, ATLANTIC CITY, NJ 08401  
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DATE: JULY 2019  
 SCALE: T.S.  
 DRAWN BY: J. NEES  
 APPROVED: KAJ

MAP 6

TMA 001.01

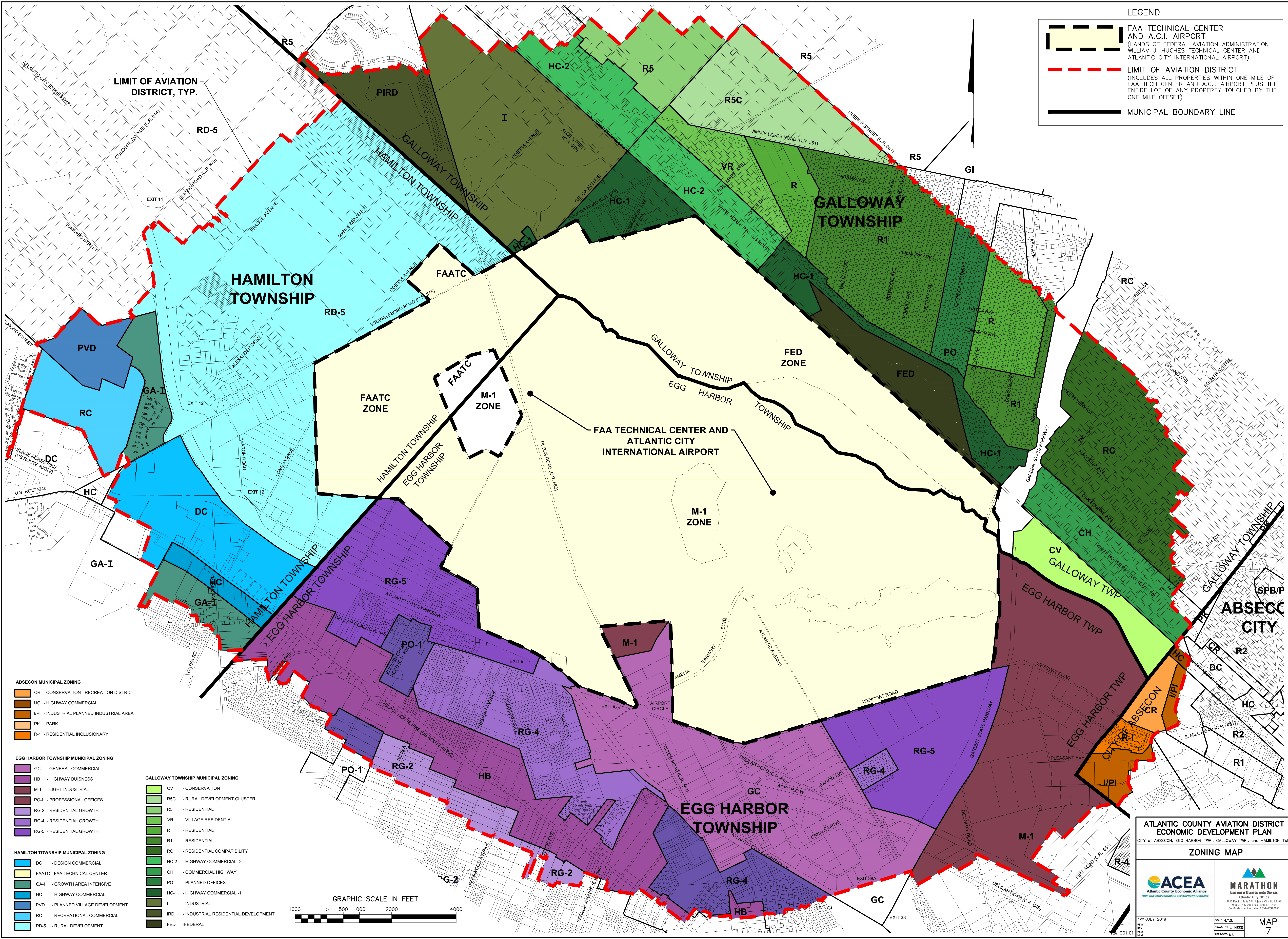


LEGEND

FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)

LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)

MUNICIPAL BOUNDARY LINE

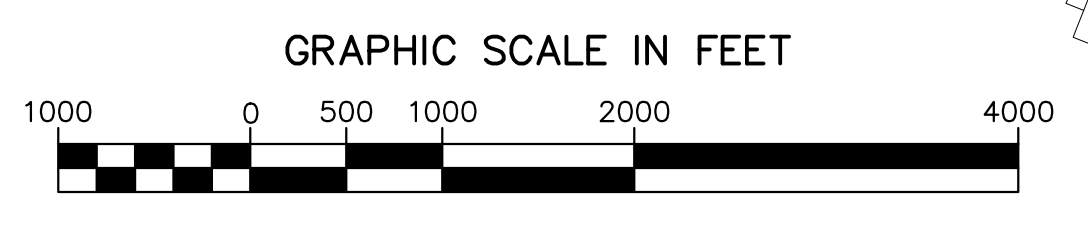


- ABSECON MUNICIPAL ZONING**
- CR - CONSERVATION - RECREATION DISTRICT
  - HC - HIGHWAY COMMERCIAL
  - I/PI - INDUSTRIAL PLANNED INDUSTRIAL AREA
  - PK - PARK
  - R-1 - RESIDENTIAL INCLUSIONARY

- EGG HARBOR TOWNSHIP MUNICIPAL ZONING**
- GC - GENERAL COMMERCIAL
  - HB - HIGHWAY BUSINESS
  - M-1 - LIGHT INDUSTRIAL
  - PO-1 - PROFESSIONAL OFFICES
  - RG-2 - RESIDENTIAL GROWTH
  - RG-4 - RESIDENTIAL GROWTH
  - RG-5 - RESIDENTIAL GROWTH

- HAMILTON TOWNSHIP MUNICIPAL ZONING**
- DC - DESIGN COMMERCIAL
  - FAATC - FAA TECHNICAL CENTER
  - GA-I - GROWTH AREA INTENSIVE
  - HC - HIGHWAY COMMERCIAL
  - PVD - PLANNED VILLAGE DEVELOPMENT
  - RC - RECREATIONAL COMMERCIAL
  - RD-5 - RURAL DEVELOPMENT

- GALLOWAY TOWNSHIP MUNICIPAL ZONING**
- CV - CONSERVATION
  - R5C - RURAL DEVELOPMENT CLUSTER
  - R5 - RESIDENTIAL
  - VR - VILLAGE RESIDENTIAL
  - R - RESIDENTIAL
  - R1 - RESIDENTIAL
  - RC - RESIDENTIAL COMPATIBILITY
  - HC-2 - HIGHWAY COMMERCIAL - 2
  - CH - COMMERCIAL HIGHWAY
  - PO - PLANNED OFFICES
  - HC-1 - HIGHWAY COMMERCIAL - 1
  - I - INDUSTRIAL
  - IRD - INDUSTRIAL RESIDENTIAL DEVELOPMENT
  - FED - FEDERAL



ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.

ZONING MAP

Atlantic County Economic Alliance  
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CERTIFIED PROFESSIONAL ENGINEER LICENSE # 36242

DATE: JULY 2019  
SCALE: N.T.S.  
DRAWN BY: J. NEES  
APPROVED: KAJ

MAP 7



uses. The Aviation District is comprised of thirty-three (33) different zones of which fourteen (14) are geared toward commercial uses, business uses, industrial uses and offices. Those fourteen zones equate to approximately 4,765 acres or 45% of the Aviation District. The remaining 55% of lands have zoning that is tailored to residential uses, conservation uses, municipal uses, parks, etc. The non-residential zones are generally grouped along the two full access highways, the White Horse Pike (Rte. 30) and the Black Horse Pike (Rte. 322/ Rte.40) as well as several County highways that include: Delilah Road, Tilton Road, Wrangleboro Road, Pomona Road, Leipzig Road, and Wescoat Road. “Permitted and Conditional Uses” charts below have been prepared with a general listing of the permitted uses and conditional uses for each of the zoning districts within the Aviation District and organized by municipality. Projects can be developed within the Aviation District where the proposed facility’s use is not permitted in a municipality’s district with the issuance of a use variance from the Zoning Board of Adjustment.

The bulk standards for each zone have been provided in charts following the listing of permitted uses. The bulk standards are land development zoning standards which include such things as the minimum lot area, impervious cover, building heights, building setback lines, etc. Deviations from these standards is allowed with the issuance of variance from the Zoning or Planning Board.

**CITY OF ABSECON ZONING**

Permitted and Conditional Uses

ZONING KEY	FULL NAME OF ZONE	PERMITTED USES	CONDITIONAL USES
CR	Conservation-Recreation District	Public Recreational Uses (not requiring construction of any structures, streets or parking), Public Wildlife Preserves, Dams, Culverts, Bridges, Utility Transmission Lines	NONE
HC	Highway Commercial**	Retail Stores, Restaurants and Bars, Professional Offices, Banks, Motels, Automotive Service Stations, Golf and Tennis Recreational uses, Places containing games	Drive-in Restaurants, Hotels
I/PI	Industrial Planned Industrial Area	Administrative Offices, Fully Enclosed Warehouses, Light Manufacturing, Wholesale Trade Establishment, and Combination of the Above within a Planned Industrial Area	NONE
PK	Park	-----	-----
R-I	Residential Inclusionary	Single Family Detached Dwellings, Parks, Public Utility Substations	NONE

# EGG HARBOR TOWNSHIP ZONING

## Permitted and Conditional Uses

ZONING KEY	FULL NAME OF ZONE	PERMITTED USES	CONDITIONAL USES
GC	General Commercial	Manufacturing Light Machinery, Fabrication of Metal and Wood Products, Fabrication of Paper Products, Warehousing, Retail Services, Commercial Recreation, Hotels, Motels, Conference Centers, Education Facilities, Branch Banks, Shoe Shops, Laundries, Barbershops, Beauty Parlors, Hardware Shops, Drug Stores, Medical and Professional Offices, Restaurants, Food Stores, Auction Houses, Casino Gaming Equipment, Mail, Research Laboratories, General Manufacturing and Fabrication, Wireless Telecommunication Facilities	Industrial and Office Parks, Gasoline Filling Stations, New and Used Auto Sales and Service
HB	Highway Business	Warehousing, Office Building, Furniture and Appliance Stores, Commercial Recreation Facilities, Funeral Homes, Shopping Centers, Banks, Drive-in Banking Facilities, Retail Stores, Wireless Telecommunications Facility, Car Wash, Home Improvement Stores, Fast-food Restaurants, Public Garages, Motor Sales	Gasoline Filling Stations, Mixed Retail Sales, Arcades, Used Motor Sales, Motels & Hotels
M-I	Light Industrial	Manufacturing Light Machinery, Fabrication of Metal and Wood Products, Fabrication of Paper Products, Business Offices, Research Laboratories, Warehousing, General Industries and Manufacturing excluding the curing, tanning and finishing of hides, Farms, Retail Services, Commercial Recreation, Hotels and Conference Centers, Educational Facilities, Bulk Laundry, Auction Houses, Branch Banks, Casino Gaming Equipment, Mail, Wireless Telecommunication Facilities	Industrial and Office Parks, Vehicle Repairs, Used Auto Sales and Service, Towing and Storage, Power Generation Facilities
PO-I	Professional Offices	Offices for Business, Professionals, Government Purposes, Administrative Offices; Wholesaling, Warehousing and Distribution excludes retail or sale of lumber, ice, coal, petroleum, quarried or mined material; Branch Banks, Restaurants excluding Fast-Food, Indoor Athletic and Recreational Facilities, Wireless Telecommunication Facilities	Office Parks
RG-2 (F)	Residential Growth	Farming, Single Family Detached Dwellings, Public Parks and Recreation	Home Occupations, Planned Adult Communities, Cluster Development, Public and Private Schools, Churches, Chapels, Synagogues, Houses of Warship,
RG-4 (F,H)	Residential Growth	Single Family Detached Dwellings, Public Parks and Recreation, Two-family Dwellings, Single-Family Attached Dwellings	Home Occupations, Public and Private Schools, Churches, Chapels, Synagogues, Houses of Warship, Planned Adult Communities
RG-5 (F,H)	Residential Growth	Single Family Detached Dwellings, Public Parks and Recreation, Two-family Dwellings, Single-Family Attached Dwellings	Home Occupations, Public Private Schools, Churches, Chapels, Synagogues, Houses of Warship, Planned Adult Communities, Garden Apartments, Mix-use Planned Development, Assisted Living, Independent Living

# GALLOWAY TOWNSHIP ZONING

## Permitted and Conditional Uses

ZONING KEY	FULL NAME OF ZONE	PERMITTED USES	CONDITIONAL USES
CV	Conservation District	Farms (Excluding Feedlots), Parks and Playgrounds, Fish or game clubs	Single-Family Detached Dwelling
R5C	Rural Residential 5 - Cluster	Single Family Detached Dwellings	
R5	Rural Development District	Single-Family Detached Dwellings, Agriculture, Seasonal Signs, Accessory Uses, Recreational Facilities, Forestry, Public Schools, Quasi-public Schools and Institutions	S.F. Detached Dwellings on 3.2 Ac. lots, R5C-Rural Development Cluster Overlay, Houses of Warship, S.F. Detached Dwelling units not part of cluster
VR	VR-TR	Residential Single-Family Detached Uses, Houses and Warship, Parish Houses, Municipal Parks, Playgrounds, Other Municipal Building Uses and Accessory Uses	
R	Regional Growth District - R	Single-Family Detached Dwellings, Houses of Warship, Parish Houses, Convents, Cemeteries, Public Schools, Quasi-public Schools and Institutions, Municipal Parks, Playgrounds, Municipal Buildings, Golf Courses, Public Buildings, Farms, Recreational Uses, Affordable Housing	
RI	Regional Growth District - R1	Single-Family Detached Dwellings, Recreational Uses	
RC	Residential Compatibility District	Single-Family Detached Dwellings, Houses of Warship, Parish Houses, Convents, Cemeteries, Public Schools, Quasi-public Schools and Institutions, Municipal Parks, Playgrounds, Municipal Buildings and Uses, Golf Courses, Public Buildings, Farms, Planned Unit Residential Developments	Neighborhood Residential (Adjoining Lily Lake Only)
HC-2	Highway Commercial District - HC-2	Restaurants, Motels, Shopping Centers, Malls, Professional Offices, Business Offices, Personal Services Shops, Banks, Fiduciary Institutions, Commercial Recreation, Funeral Homes, Retail Stores, Bakeries, Confectionary Stores, Frozen Dessert Stores, Departments Stores, Dry Goods Stores, Furniture Stores, Garden Supply Stores, Grocery and Food Stores, Hardware Stores, Existing Single-Family Detached Dwellings, Hotels, Fast-food Restaurants, New Car Dealerships, Camping and Marine Dealerships, Nightclubs	Transportation and related Commercial Uses, Self-service Storage Facilities, Limited Warehousing, Age-restricted Housing
CH	Commercial-Highway District	Community Commercial Facilities, Parks, Playgrounds, Cemeteries	Transportation and related commercial uses, Houses of Warship, Parish Houses, Covents, Schools and Institutions, Municipal / Public Buildings, Limited Warehousing
PO	Regional Growth District - PO	Planned Office Facilities, Motels, Hotels, Planned Commercial Development, General Sales, Personal Services, Food Products, Food and Beverage Services, Plants, Animals, Financial uses, Office, Professional Uses, Business Services, Medical Uses, Transportation Uses, Educational Uses, Cultural Uses, Recreational Uses, Entertainment, Funeral Homes	
HC-1	Highway Commercial District - HC-1	Restaurants, Motels, Shopping Centers, Malls, Professional Offices, Business Offices, Personal Services Shops, Banks, Fiduciary Institutions, Commercial Recreation, Funeral Homes, Retail Stores, Bakeries, Confectionary Stores, Frozen Dessert Stores, Departments Stores, Dry Goods Stores, Furniture Stores, Garden Supply Stores, Grocery and Food Stores, Hardware Stores, Existing Single-Family Detached Dwellings, Hotels	Transportation and related Commercial Uses, Self-service Storage Facilities, Limited Warehousing

## GALLOWAY TOWNSHIP ZONING CONTINUED...

### Permitted and Conditional Uses

ZONING KEY	FULL NAME OF ZONE	PERMITTED USES	CONDITIONAL USES
HC-I	Highway Commercial District – HC-1	Restaurants, Motels, Shopping Centers, Malls, Professional Offices, Business Offices, Personal Services Shops, Banks, Fiduciary Institutions, Commercial Recreation, Funeral Homes, Retail Stores, Bakeries, Confectionary Stores, Frozen Dessert Stores, Departments Stores, Dry Goods Stores, Furniture Stores, Garden Supply Stores, Grocery and Food Stores, Hardware Stores, Existing Single-Family Detached Dwellings, Hotels	Transportation and related Commercial Uses, Self-service Storage Facilities, Limited Warehousing
I	Regional Growth District - I	Light Industrial Uses, Planned Commercial Development, Shopping Centers, Malls, Office Facilities, Motels, Hotels, Institutional Uses, Age-Restricted Housing	Age-Restricted Housing
PIRD	Regional Growth District - PIRD	Single-Family Detached Dwellings, Planned Industrial Residential Development, Industrial Uses, Residential, Offices, Hotels, Motels	
FED	Federal	Government Uses	

## HAMILTON TOWNSHIP ZONING

### Permitted and Conditional Uses

Zoning Key	Full Name of Zone	Permitted Uses	Conditional Uses
DC	Design Commercial	Game Arcades, Artists' Studios, Banks, Drive-in or Fast-food Restaurants, Drugstores, New Car Sales and Services, Nursery, Garden Products, Personal Service Establishments, Planned Commercial Developments, Professional Offices, Regional and Design Commercial Shopping Centers, Restaurants, Retail Stores and Shops, Theaters	Drive-in Banks
FAATC-FAA	Federal Aviation Administration Technical Center District	Any use associated with the function of the federal installation may be permitted in the FAATC District with conditions.	Other uses undertaken by or on behalf of another level of government may be permitted in the zone with conditions.
GA-I	Regional Growth Districts – Intensive	Home Occupations, Parks and Playgrounds, Planned Adult Community, Public Utility Substations, Places of Worship, Schools, Single-Family Residential	None
HC	Highway Commercial	Game Arcades, Banks, Agricultural Commercial, Bars, Taverns, Pubs, Inns, Convenience Food Stores, Drive-in or Fast-food Restaurants, Drugstores, Dry-cleaning Establishments, General Business Establishments, Medical Complexes, Nursing, Convalescent Centers, New Car Sales and Services, Nursery, Garden Products, Professional Offices, Restaurants, Retail Stores and Shops	Automotive Services

# HAMILTON TOWNSHIP ZONING

## Permitted and Conditional Uses

Zoning Key	Full Name of Zone	Permitted Uses	Conditional Uses
PVD	Planned Village Development	Single-Family Attached Dwellings, Single-Family Detached Dwellings, Townhouses, Stacked Townhouses, Apartments, Condominiums, Places of Worship, Schools, Community Buildings, Pools, Recreational Facilities, Neighborhood Commercial Development	None
RC	Recreational Commercial	Bars, Taverns, Pubs, Inns, Drive-in or Fast-food Restaurants, Golf, Tennis and Family Indoor Recreation Facilities, Medical Complexes, Nursing, Convalescent Centers, Planned Commercial Developments, Regional and Design Commercial Shopping Centers, Restaurants, Sports Complexes, Stadiums, Racetracks, Theaters	Planned Recreation and Entertainment Developments
RD-5	Rural Development District – RD-5	Agricultural, Commercial Agriculture, Agricultural-related Employee Housing, Forestry, Home Occupation, Parks and Playgrounds, Places of Worship, Schools, Clustered Residential Development, Single-Family Residential on Existing Lots	Non-clustered Single-Family Residential

## ABSECON CITY ZONING SCHEDULE - BULK STANDARDS

Zoning Key	Full Name of Zone	Minimum Lot Area	Minimum Lot Width	Minimum Lot Depth	Front Yard Setback	Rear Yard Setback	Side Yard Setback	Min. Open Space	Maximum Impervious Cover
CR	Conservation-Recreation District	-----	-----	-----	-----	-----	-----	-----	-----
HC	Highway Commercial-Retail stores	15,000 sf	100 ft.	100 ft.	35 ft.	30 ft.	35 ft.	-----	65%
HC	Highway Commercial-Motels	30,000 sf	200 ft.	100 ft.	35 ft.	30 ft.	35 ft.	-----	65%
HC	Highway Commercial-Drive-in Restaurants	30,000 sf	200 ft.	100 ft.	35 ft.	30 ft.	35 ft.	-----	65%
I/PI	Industrial Planned Industrial Area- Single Use	1 acre	-----	-----	40 ft.	30 ft.	Min. 25'/60 ft. Agg.	25%	65%
I/PI	Industrial Planned Industrial Area	15 acres	-----	-----	50 ft. (perimeter buffer)	25 ft.	25 ft.	25%	65%
PK	Park	-----	-----	-----	-----	-----	-----	-----	-----
R-1	Residential Inclusionary	12,550 sf	75 ft.	-----	25 ft.	25 ft.	20 ft.	-----	35%



# EGG HARBOR TOWNSHIP ZONING SCHEDULE -BULK STANDARDS

Zoning Key	Full Name of Zone	Minimum Lot Area	Minimum Lot Width	Front Yard Setback	Rear Yard Setback	Side Yard Setback	Maximum Building Cover	Maximum Impervious Cover
GC	General Commercial	40,000 sf	100	50 ft.-State R.O.W 50 ft.-County R.O.W 50 ft- TWP R.O.W	20 ft.- County ROW 20 ft.- Lot Line 25 ft. - Resid. Zone	20 ft.-Lot Line 25 ft.-Resid. Zone	70ft. – Principal 15ft. - Accessory	70%
HB	Highway Business	80,000 sf	200	50 ft.-State R.O.W 50 ft.-County R.O.W 50 ft- TWP R.O.W	30 ft.- County ROW 30 ft.- Lot Line 35 ft. - Resid. Zone	20 ft.- Lot Line 25 ft.-Resid. Zone	45ft. – Principal 15ft. - Accessory	70%
M-1	Light Industrial	2 acres	150	50 ft.-State R.O.W 50 ft.-County R.O.W 50 ft- TWP R.O.W	50 ft.- County ROW 50 ft.- Lot Line 50 ft. - Resid. Zone	25 ft.- Lot Line 50 ft.-Resid. Zone	70ft. – Principal 15ft. - Accessory	70%
PO-1	Professional Offices	2.5 acres	200	50 ft.-State R.O.W 50 ft.-County R.O.W 50 ft- TWP R.O.W	50 ft.- County ROW 50 ft.- Lot Line 70 ft. - Resid. Zone	25 ft.- Lot Line 60 ft.-Resid. Zone	45ft. – Principal 15ft. - Accessory	70%
RG-2 <sup>f</sup>	Residential Growth	16,000 sf	100	35 ft.-State R.O.W 25 ft.-County R.O.W 25 ft- TWP R.O.W	50 ft.- County ROW 25 ft.- Lot Line	10 ft.- Lot Line	30ft. – Principal 15ft. - Accessory	35%,45% <sup>g</sup>
RG-2 <sup>f</sup>	Residential Growth	10,000* sf	75*	35 ft.-State R.O.W 25 ft.-County R.O.W 25 ft- TWP R.O.W	50 ft.- County R.O.W 25 ft.- Lot Line	10 ft.- Lot Line	----	35%,50% <sup>g</sup>
RG-4 <sup>f,h</sup>	Residential Growth	7,000	70	35 ft.-State R.O.W 25' ft.-County R.O.W 25 ft- TWP R.O.W	50 ft.- County ROW 25 ft.- Lot Line	5'/15' Min./Agg. (to Lot Line)	30 ft. – Principal 15 ft. - Accessory	45%
RG-4 <sup>f,h</sup>	Residential Growth	6,500* sf	60*	35 ft.-State R.O.W 25' ft.-County R.O.W 25 ft- TWP R.O.W	50 ft.- County ROW 25 ft.- Lot Line	5'/15' Min./Agg. (to Lot Line)	30 ft. – Principal 15 ft. - Accessory	50% <sup>b</sup>
RG-5 <sup>f,h</sup>	Residential Growth	6,500 sf	60	35 ft.-State R.O.W 25' ft.-County R.O.W 25 ft- TWP R.O.W	50 ft.- County R.O.W 25 ft.- Lot Line	5'/15' Min./Agg. (to Lot Line)	30 ft. – Principal 15 ft. - Accessory	45%
RG-5 <sup>f,h</sup>	Residential Growth	6,500* sf	60*	35 ft.-State R.O.W 25' ft.-County R.O.W 25 ft- TWP R.O.W	50 ft.- County R.O.W 25 ft.- Lot Line	5'/15' Min./Agg. (to Lot Line)	30 ft. – Principal 15 ft. - Accessory	50% <sup>b</sup>

**FOOTNOTES:**

- b Within the pinelands area, no residential dwelling unit shall be located on a parcel of less than 43,560 square feet unless public sewer is provided
- f The front yard setback for garages shall be 35 feet; unless the garage is provided with a side entry, then the minimum front yard setback for the garage shall be the same as the principal setback for the principal structure in the zone
- g The first number corresponds to base lot coverage while the second applies when utilizing the cluster provision of § 225-45D(3).
- h For two-family and single-family attached dwelling units, see the Schedule of Minimum Area, Yard and Building Requirements - Pinelands Residential Areas.
- I A minimum front yard setback of 20 feet with an average of 25 feet will apply for major subdivision applications.
- \* With Pinelands development credits.

## GALLOWAY TOWNSHIP ZONING SCHEDULE - BULK STANDARDS

Zoning Key	Full Name of Zone	Minimum Lot Area	Minimum Lot Width	Minimum Lot Depth	Side Yard Setback	Front Yard Setback	Rear Yard Setback	Principal Building Cover	Max. Total Site Cover	Height *
CV	Conservation	5 acres* <sup>2</sup>	200 ft.	400 ft.	30 ft.	100 ft.	30 ft.	5%	5%	35 ft.
R5C	Rural Development Cluster	---	---	---	---	---	---	---	---	---
R5	Residential	5 <sup>2</sup> acres	150 ft.	200 ft.	30 ft.	200 ft.	75 ft.	3%	5%	---
VR	Village Residential	.275 acres	100 ft.	100 ft.	15 ft.	50 ft.	30 ft.	25%	40%	---
R	Residential	.14	60 ft.	100 ft.	10ft. one side 12ft. other side	40ft	40 <sup>14</sup>	25%	50%	---
R1	Residential	.14	60 ft.	100 ft.	10ft. one side 12ft. other side	40ft	40 <sup>14</sup>	25%	50%	---
RC	Residential Compatibility	1 acre with sewer	100 ft.	200 ft.	15 ft.	50 ft.	15 ft.	---	30%	35 ft.
RC	Residential Compatibility	2 acres w/o sewer	100 ft.	200 ft.	15 ft.	50 ft.	15 ft.	---	30%	35 ft.
HC-2	Highway Commercial -2	1 acre	200 ft.	---	25 ft.	50 ft.	50/25 <sup>17</sup>	40%	70%	---
CH	Commercial Highway	20,000 sf	200 ft.	200 ft.	15 ft.	50 ft.	15 ft.	---	50%	35 ft.
PO	Planned Offices	1.15 acres	200 ft.	200 ft.	20 ft.	50 ft.	20 ft.	25%	50%	---
HC-1	Highway Commercial -1	.8 acres	120 ft.	---	25 ft.	50 ft.	50/25 <sup>17</sup>	40%	70%	---
I	Industrial	5 acres	200 ft.	200 ft.	25 ft.	75 ft.	50 ft.	25%	60%	---
IRD	Industrial Residential Development	---	---	---	---	---	---	---	---	---
FED	Federal	---	---	---	---	---	---	---	---	---

**FOOTNOTES:**

- \*1 May be reduced for environmental or physical limitations
- \*2 See text for exceptions applying to existing lots of record
- \*3 Refer to § 233-7E for exceptions to height limitations

## HAMILTON TOWNSHIP ZONING SCHEDULE - BULK STANDARDS

Zoning Key	Full Name of Zone	Minimum Lot Area	Minimum Lot Width	Front Yard Setback	Rear Yard Setback	Side Yard Setback	Max. Lot Cover	Max. Imperm. Cover	Height
DC	Design Commercial	10 acres	500 ft.	200 ft.	100 ft.	100 ft			2 ½ stories 35 ft.
FAATC	FAA Technical Center								
GA-I	Growth Area Intensive- w/o PDC	15,000 sf		30 ft.	50 ft.	10' Min. 25' Aggregate	15%	23%	2 ½ stories 35 ft.
GA-I	Growth Area Intensive- w/ PDC	10,000 sf		25 ft.	35 ft.	8' Min. 20' Aggregate	30%	30%	2 ½ stories 35 ft.
HC	Highway Commercial	200,000 sf	500 ft.	50 ft.	35 ft.	30 ft.			2 ½ stories 35 ft.
PVD	Planned Village Development								
RC	Recreational Commercial	50 acres	1,500 ft.	50 ft.	35 ft.	30 ft.			2 ½ stories 35 ft.
RD-5	Rural Development	5 acres		175 ft.	200 ft.	50' Min. 115' Aggregate			2 ½ stories 35 ft.

## **AREAS IN NEED OF REDEVELOPMENT**

As seen on Map 8, Galloway Township and Hamilton Township both include “Areas in Need of Redevelopment” within the Aviation District which have been adopted by the municipalities. These are lands which the towns have targeted to be improved as a benefit to the overall municipality and surrounding properties. Within the designated redevelopment areas, the towns may provide incentives, alternate zoning standards, or additional permitted uses to entice potential developers to improve these particular lands. Those interested in developing within these areas should contact the town’s land planning office to discuss specific standards which relate to the specific “Area in Need of Development”.




## **FRESH WATER WETLANDS**

The State’s GIS mapping of 2012 freshwater wetlands areas was overlaid on the Aviation District lands and are shown on Map 9. There are wetlands within the Aviation District that are regulated by the NJDEP under the New Jersey Freshwater Wetlands Protection Act of 1987 and the New Jersey Coastal Wetlands Act of 1970; by the New Jersey Pinelands Commission under the New Jersey Pinelands Comprehensive Management Plan; and by the United States Army Corps of Engineers under Section 404 of the Federal Clean Water Act. The District includes a relatively small number of wetlands complexes; however, the wetlands area and the likely associated wetlands transitions areas (buffers) will impact development. Refer to Map 15 for the named tributaries of the wetland complexes.


In the CAFRA areas, the wetland transition areas can be imposed around wetlands that are regulated under the New Jersey Freshwater Wetlands Protection Act. CAFRA will assign the freshwater wetlands one of three value classifications including: exceptional value, intermediate value, and ordinary value. A freshwater wetland of exceptional resource value has a 150 - foot transition area. An exceptional resource value wetland is a wetland that discharges into FW-1 or FW-2 trout production waters or their tributaries; is a present habitat for threatened or endangered species; or is a documented habitat for threatened or endangered species, and which remains suitable for breeding, resting, or feeding by these species during the normal period these species would use the habitat. An ordinary resource value wetland consists of small isolated with disturbed adjacent uses; drainage ditches; swales; or detention facilities created by humans in an area that was upland at the time the facility was created. An ordinary resource value wetland does not have a transition area. An intermediate resource value wetland is neither an exceptional or ordinary resource value wetland and has a 50 - foot transition area. In addition, under special circumstances, wetland buffers of up to 300 feet can be imposed around coastal wetlands that are regulated under the New Jersey Coastal Wetlands Act of 1970. Limited development can occur within the wetlands and wetlands buffers with the procurement of specific NJDEP



LEGEND

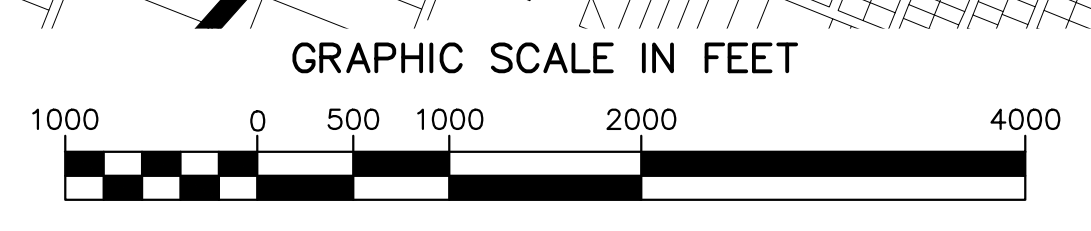
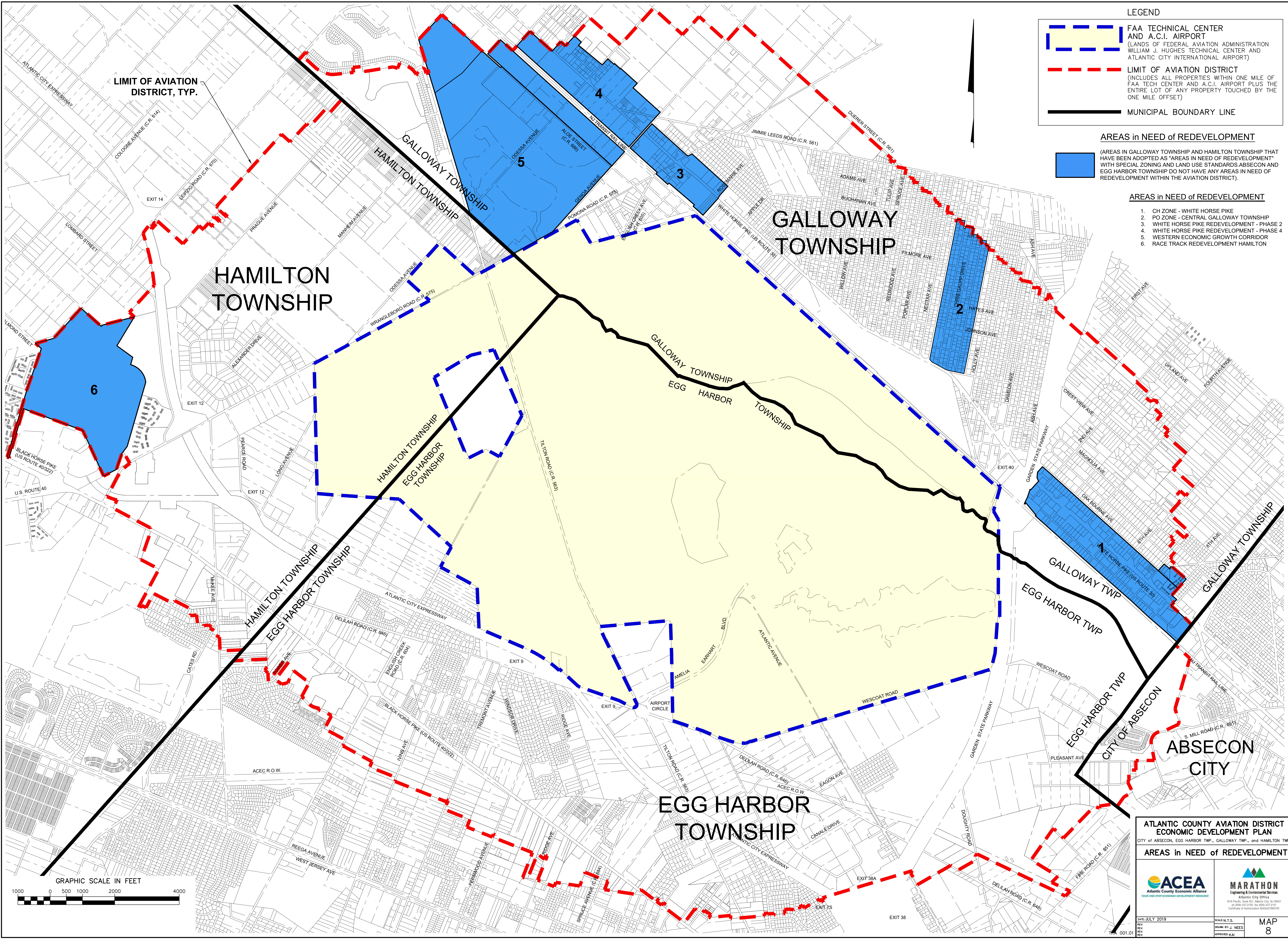
-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
-  LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  MUNICIPAL BOUNDARY LINE

AREAS in NEED of REDEVELOPMENT

 (AREAS IN GALLOWAY TOWNSHIP AND HAMILTON TOWNSHIP THAT HAVE BEEN ADOPTED AS "AREAS IN NEED OF REDEVELOPMENT" WITH SPECIAL ZONING AND LAND USE STANDARDS. ABSECON AND EGG HARBOR TOWNSHIP DO NOT HAVE ANY AREAS IN NEED OF REDEVELOPMENT WITHIN THE AVIATION DISTRICT).

AREAS in NEED of REDEVELOPMENT

1. CH ZONE - WHITE HORSE PIKE
2. PO ZONE - CENTRAL GALLOWAY TOWNSHIP
3. WHITE HORSE PIKE REDEVELOPMENT - PHASE 2
4. WHITE HORSE PIKE REDEVELOPMENT - PHASE 4
5. WESTERN ECONOMIC GROWTH CORRIDOR
6. RACE TRACK REDEVELOPMENT HAMILTON



ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
AREAS in NEED of REDEVELOPMENT



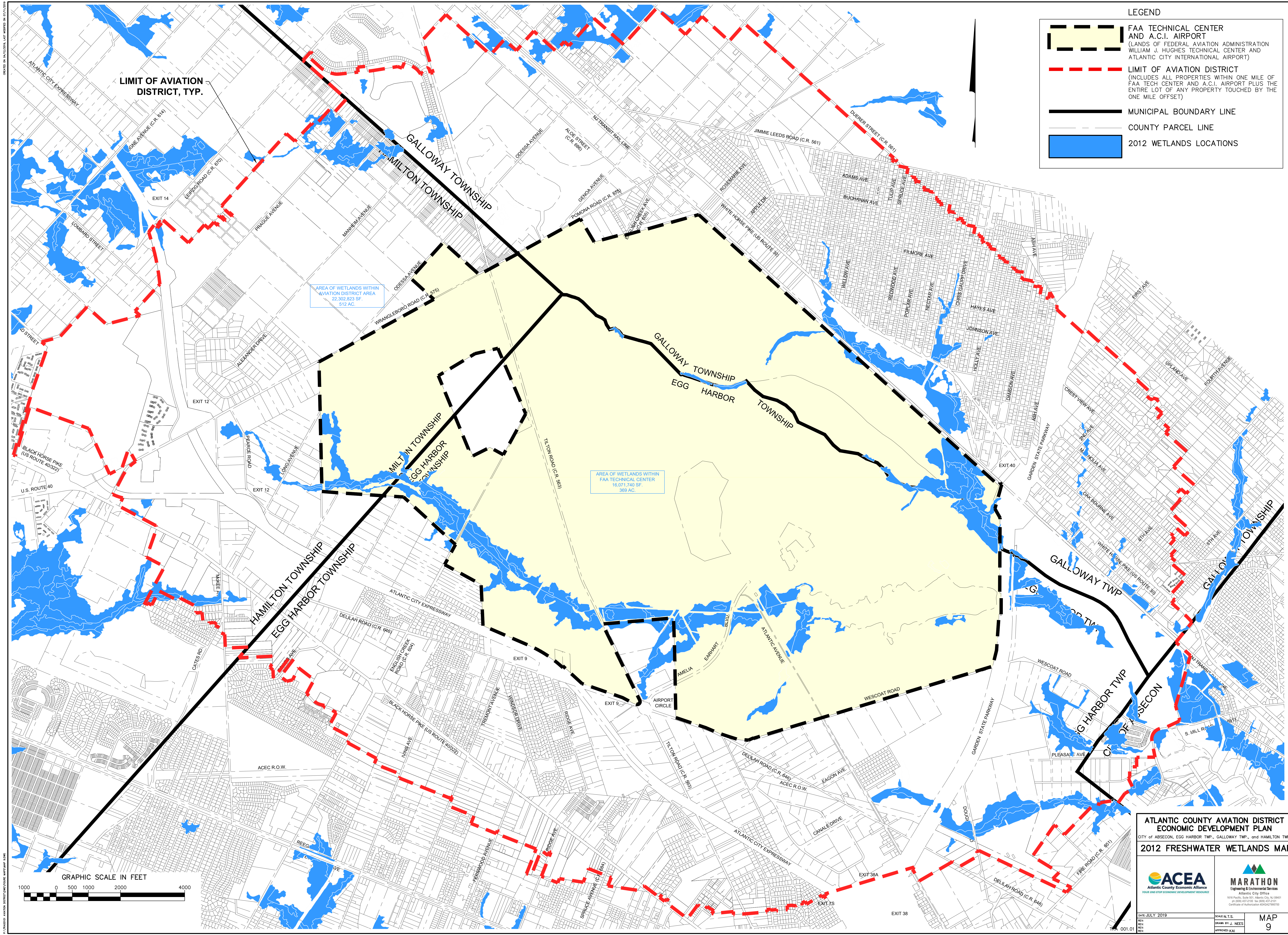
Atlantic County Economic Alliance  
FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES








MARATHON  
Engineering & Environmental Services  
Atlantic City Office  
1515 PINE BEACH BLVD., SUITE 200, ATLANTIC CITY, NJ 08401  
PH: (609) 437-2100 FAX: (609) 437-2101  
CERTIFIED AS AN INTERNATIONAL ISO 9001:2015

DATE: JULY 2019  
SCALE: T.S.  
REV: [blank]  
DRAWN BY: J. NEES  
APPROVED: KAJ  
MAP 8  
TMA 001.01





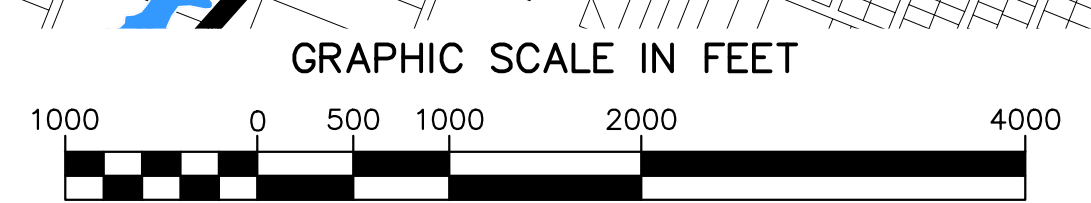
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-  LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  MUNICIPAL BOUNDARY LINE
-  COUNTY PARCEL LINE
-  2012 WETLANDS LOCATIONS

**LIMIT OF AVIATION DISTRICT, TYP.**

AREA OF WETLANDS WITHIN AVIATION DISTRICT AREA  
22,300,823 SF.  
512 AC.

AREA OF WETLANDS WITHIN FAA TECHNICAL CENTER  
16,071,740 SF.  
369 AC.



**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**2012 FRESHWATER WETLANDS MAP**

 <p><b>ACEA</b> Atlantic County Economic Alliance FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES</p>	 <p><b>MARATHON</b> Engineering &amp; Environmental Services Atlantic City Office 1515 PACIFIC BLVD. SUITE 201, MARLTON, NJ 08051 PH: (856) 437-2100 FAX: (856) 437-2101 CERTIFICATE OF PROFESSIONAL ENGINEERING 0242020010</p>
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<p>DATE: JULY 2019 REV: _____ DRAWN BY: J. NEES APPROVED: KAJ</p>	<p>SCALE: T.S. <b>MAP 9</b></p>
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regulatory permits offered by CAFRA; such as, the overall shape of intermediate and exceptional resource value wetland transition areas that are regulated under the New Jersey Freshwater Wetlands Protection Act can be modified without reducing its total square footage through a Transition Area Waiver Averaging Plan.

In the Pinelands jurisdictional portion of the Aviation District, a wetland buffers of 300 feet can be imposed around wetlands that are regulated by the New Jersey Pinelands Commission under the Comprehensive Management Plan. No development is permitted within the 300-foot wetland buffer unless it can be demonstrated that the development will not result in a significant adverse impact on the wetland. Similar to CAFRA, the Pinelands Commission regulations include permit options that allow developers to apply for relief for limited proposed disturbance of wetlands, disturbance of wetlands buffers, and buffer width reductions that are administered under strict guidelines.

There are no buffers around wetlands that are regulated by the United States Army Corps of Engineers under Section 404 of the federal Clean Water Act.

The State's GIS mapping is only a guide to the likely location of wetlands. A field delineation by a qualified professional is needed to accurately assess the extent of wetlands on a property.

## **FLOODPLAINS**

The Flood Insurance Rate Maps (FIRM) developed by the Federal Emergency Management Agency (FEMA) were overlaid onto the Aviation District lands. The new study and re-delineation of the flood areas implemented as a result of Superstorm Sandy have not been completed for portions of Atlantic County and therefore, some of the information provided is classified as "Preliminary" until it is issued as "Effective". The information provided on the plan is a combination of flood maps with an effective date of 5/2/1983, effective date of 8/28/2018, and preliminary date of 1/30/2015. The 100-year floodplain limit as shown on Map 10 in blue is the area defined as a "special flood hazard areas subject to inundation by the 1% annual chance of flood". Though not all of the flood plain delineation information has been finalized, the 100-year floodplain line as shown on the figure is a fair representation of what will likely be adopted.

Development within the floodplain is regulated by NJDEP's Division of Land Use Regulation program and construction activities within the 100 year floodplain will require permits to be obtained per the Flood Hazard Area Control Act Rules, NJAC 7:13. The flood hazard permits do not allow for extensive impact to the floodplains, so it is best to assume that the entire floodplain is undevelopable. Fortunately, the

floodplains are limited to only a few areas within the Aviation District and will therefore have relatively little impact to the overall development potential.

## SOIL CHARACTERISTICS

The underlying soils data is based on the United States Department of Agriculture (USDA), National Resources Conservation Services (NRCS) Web Soil Survey data have been superimposed on the Aviation District’s lands. The District includes 26 different soil classifications which have been assigned one of five different general categories of land development feasibility. The soils provide valuable general resource information for general constructability by providing estimated depth to seasonal high groundwater, subsurface conditions, and surface conditions. The information can be extrapolated to do preliminary engineering analysis for stormwater management facilities, septic disposal field feasibility, soil replacement costs for basins and septic fields, estimate limits of freshwater wetlands, and road base stability.






The information compiled on Map 11 and in the chart below focuses on the groundwater levels and the soils draining ability. These two soil criteria are critical in the ability to successfully construct stormwater management facilities and septic disposal fields. The soils data provided in the chart below provides a snapshot of the extensive information that is available on the WebSoil Survey.

## U.S.D.A SOIL SURVEY DATA

Key Name	Soils Description w/slope	Depth to Restrictive Layer	Natural Drainage Class	Depth to Water Table	Frequency of Flooding	Hydrologic Soil Group	Hydric Soil Rating
AtsAO	Atsion Sand 0-2% slopes	>80"	Poorly Drained	0 to 12"	None	A/D	Yes
AucB	Aura Loamy Sand, 0-5% slopes	15" to 40"	Well Drained	>80"	None	B	No
AugaA	Aura Sandy Loam 0-2% slopes	21" to 39"	Well Drained	>80"	None	B	No
AugaB	Aura Sandy Loam 2-5% slopes	21" to 39"	Well Drained	>80"	None	B	No
BerAr	Berryland Sand 0-2% Slopes	>80"	Very Poorly Drained	0-6"	Rare	A/D	Yes
DocBO	Downer Loamy Sand 0-5% Slopes	>80"	Well Drained	>80"	None	A	No
DoeAO	Downer Loamy Sand 0-2% Slopes	>80"	Well Drained	>80"	None	A	No
EveB	Evesboro Sand 0-5% Slopes	>80"	Excessively Drained	>80"	None	A	No
EvekB	Evesboro Sand, Clayey Substratum, 0-5% Slopes	>80"	Excessively Drained	>80"	None	A	No
FobB	Fort Mott Sand 0-5% Slopes	>80"	Well Drained	48-122"	None	A	No
GamB	Galloway Loamy Sand 0-5% Slopes	>80"	Somewhat Poorly Drained	12-18"	None	A/D	No



LEGEND

-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
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-  MUNICIPAL BOUNDARY LINE
-  ATLANTIC COUNTY PARCEL LINES
-  100 YEAR FLOODPLAIN PER F.E.M.A. FLOOD INSURANCE RATE MAPS, PRELIMINARY MAPS DATED MAY 30, 2015 AND EFFECTIVE MAPS DATED MAY 2, 1983 & AUGUST 28, 2018.

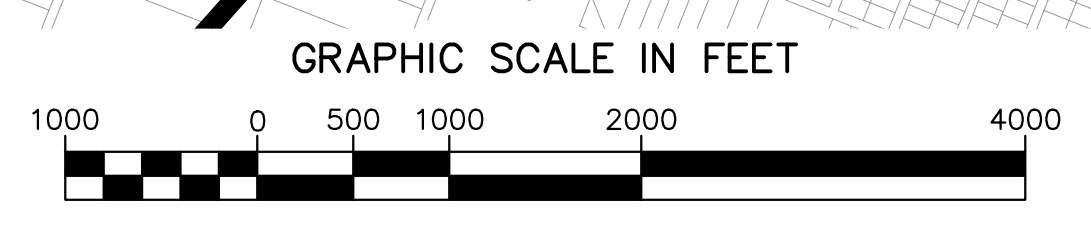
LIMIT OF AVIATION DISTRICT, TYP.

HAMILTON TOWNSHIP

GALLOWAY TOWNSHIP

EGG HARBOR TOWNSHIP

ABSECON CITY



ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
FLOODPLAIN MAP




 Atlantic County Economic Alliance <small>FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES</small>	 MARATHON Engineering & Environmental Services <small>Atlantic City Office 1515 PACIFIC BLVD. SUITE 201, ATLANTIC CITY, NJ 08401 PH: (609) 437-2100 FAX: (609) 437-2101 CERTIFICATE OF AUTHORIZATION: E042000010</small>

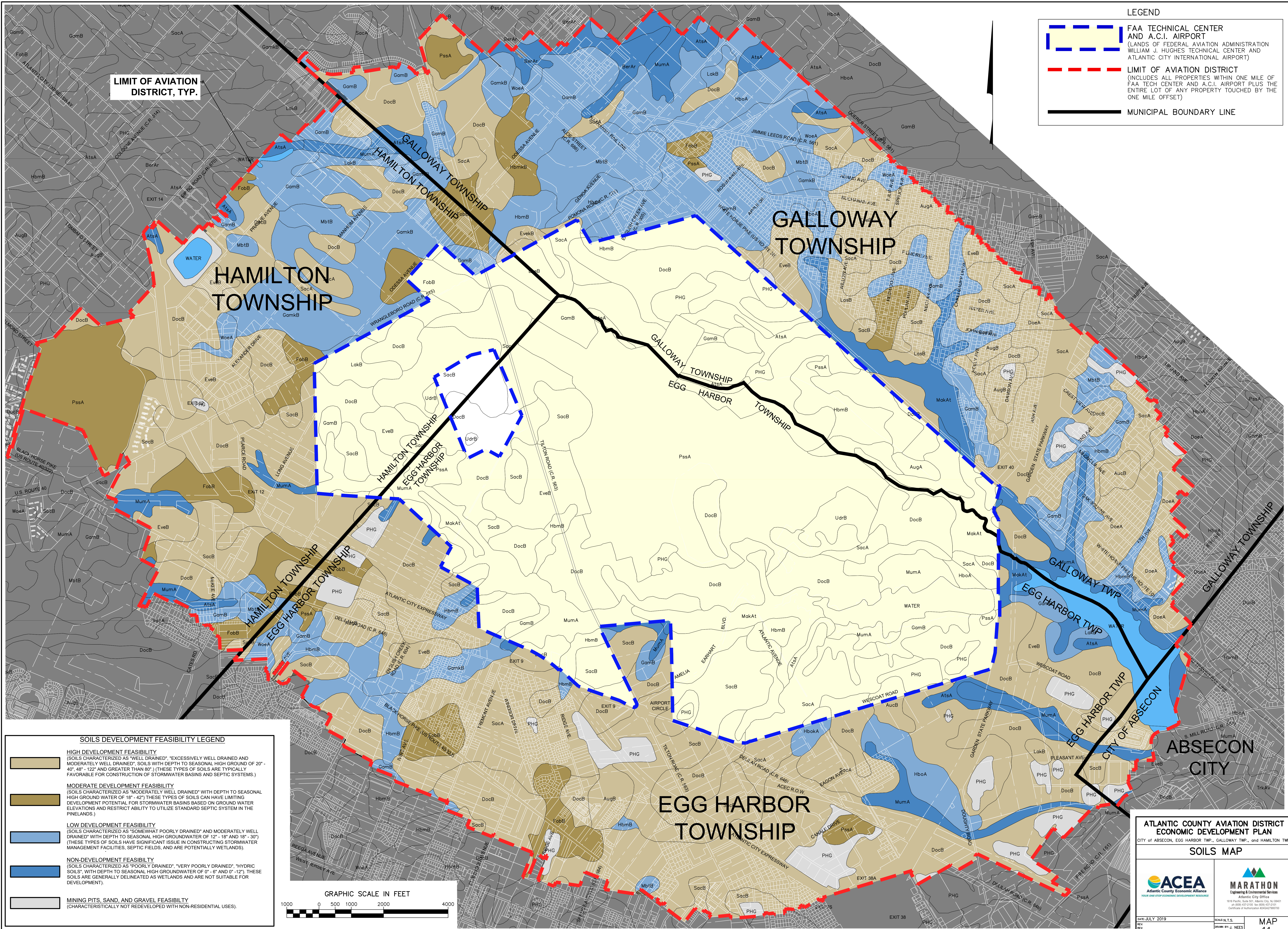
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**LIMIT OF AVIATION DISTRICT, TYP.**

**LEGEND**

-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
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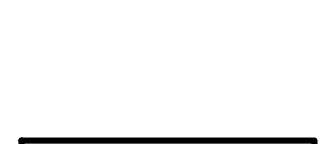


**HAMILTON TOWNSHIP**

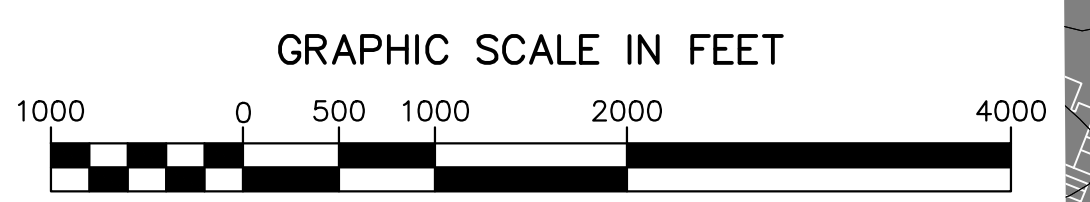
**GALLOWAY TOWNSHIP**

**EGG HARBOR TOWNSHIP**

**ABSECON CITY**


**SOILS DEVELOPMENT FEASIBILITY LEGEND**

-  **HIGH DEVELOPMENT FEASIBILITY**  
(SOILS CHARACTERIZED AS "WELL DRAINED," "EXCESSIVELY WELL DRAINED AND MODERATELY WELL DRAINED," SOILS WITH DEPTH TO SEASONAL HIGH GROUND OF 20" - 40" 40" - 122" AND GREATER THAN 80") (THESE TYPES OF SOILS ARE TYPICALLY FAVORABLE FOR CONSTRUCTION OF STORMWATER BASINS AND SEPTIC SYSTEMS.)
-  **MODERATE DEVELOPMENT FEASIBILITY**  
(SOILS CHARACTERIZED AS "MODERATELY WELL DRAINED" WITH DEPTH TO SEASONAL HIGH GROUND WATER OF 18" - 42") THESE TYPES OF SOILS CAN HAVE LIMITING DEVELOPMENT POTENTIAL FOR STORMWATER BASINS BASED ON GROUND WATER ELEVATIONS AND RESTRICT ABILITY TO UTILIZE STANDARD SEPTIC SYSTEM IN THE PINELANDS.)
-  **LOW DEVELOPMENT FEASIBILITY**  
(SOILS CHARACTERIZED AS "SOMEWHAT POORLY DRAINED" AND MODERATELY WELL DRAINED" WITH DEPTH TO SEASONAL HIGH GROUND WATER OF 12" - 18" AND 18" - 30") (THESE TYPES OF SOILS HAVE SIGNIFICANT ISSUE IN CONSTRUCTING STORMWATER MANAGEMENT FACILITIES, SEPTIC FIELDS, AND ARE POTENTIALLY WETLANDS.)
-  **NON-DEVELOPMENT FEASIBILITY**  
(SOILS CHARACTERIZED AS "POORLY DRAINED," "VERY POORLY DRAINED," "HYDRIC SOILS" WITH DEPTH TO SEASONAL HIGH GROUND WATER OF 0" - 6" AND 0" - 12") THESE SOILS ARE GENERALLY DELINEATED AS WETLANDS AND ARE NOT SUITABLE FOR DEVELOPMENT.)
-  **MINING PITS, SAND, AND GRAVEL FEASIBILITY**  
(CHARACTERISTICALLY NOT REDEVELOPED WITH NON-RESIDENTIAL USES.)




**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.

**SOILS MAP**



Atlantic County Economic Alliance  
FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES



**MARATHON**  
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PH: (609) 437-2100 FAX: (609) 437-2101  
CERTIFICATE OF AUTHORIZATION: EAC02000002

DATE: JULY 2019  
SCALE: T.S.  
DRAWN BY: J. NEES  
APPROVED: KAJ  
MAP 11  
TRA 001.01



## U.S.D.A SOIL SURVEY DATA CONTINUED...

Key Name	Soils Description w/slope	Depth to Restrictive Layer	Natural Drainage Class	Depth to Water Table	Frequency of Flooding	Hydrologic Soil Group	Hydric Soil Rating
GamkB	Galloway Loamy Sand, Clayey Substratum 0-5% Slopes	>80"	Somewhat Poorly Drained	12-18"	None	A/D	No
HbmB	Hammonton Loamy Sand, 0-5% Slopes	>80"	Moderately Well Drained	18-42"	None	B	No
HbmkB	Hammonton Loamy Sand, Clayey Substratum, 0-2% Slopes	>80"	Moderately Well Drained	18-42"	None	B	No
HboA	Hammonton Sand Loam 0-2% Slopes	>80"	Moderately Well Drained	18-42"	None	B	No
LakB	Lakehurst Sand 0-5% Slopes	>80"	Moderately Well Drained	18-42"	None	A	No
LasB	Lakewood Sand 0-5% Slopes	>80"	Excessively Drained	>80"	None	A	No
MakAt	Manahawkin Muck 0-2% Slopes	>80"	Very Poorly Drained	>80"	Frequent	A/D	Yes
MbtB	Matawan Sandy Loam 0-5% Slopes	>80"	Moderately Well Drained	18-30"	None	C	No
MumA	Mullica Sandy Loam 0-2% Slopes	>80"	Very Poorly Drained	0-6"	None	A/D	Yes
PHG	Pits, Sand and Gravel	----	----	----	----	----	No
PssA	Psamments, 0-2% Slopes	>80"	Well Drained	48"	Occasional	A	No
SacAO	Sassafras Sandy Loam 0-2% Slopes	>80"	Well Drained	>80"	None	B	No
SacBO	Sassafras Sandy Loam 2-5% Slopes	>80"	Well Drained	>80"	None	B	No
UdrB	Udorthents, Refuse Substratum, 0-8% Slopes	>80"	Well Drained	>80"	None	B	No
WoeAO	Woodstown Sandy Loam, 0-2% Slopes	>80"	Moderately Well Drained	20-40"	None	C	No

## HABITAT CONDITIONS

The Aviation District is overlain with NJDEP’s GIS delineation of “Species Based Habitat” assessment which ranks the presence, potential presence, or absence of endangered or threatened wildlife or wildlife habitat. The “Landscape Mapping Version 3.3” for “SBH – Pinelands – Landscape Project” layer was utilized from the NJDEP GeoWeb data. See map 12. The State created five ranks of general habitat assessment based on known sightings of threatened and endangered species and the evaluation of the habitat. Rank #1 has the “least” potential to impact site development and is categorized by the State as “Rank 1 designation is used for planning purposes, such as targeting area for future wildlife surveys”. Whereas Rank #5 is “assigned to species-specific habitat patches containing one or more occurrences of wildlife listed as endangered and threatened pursuant to the Federal Endangered Species Act of 1973”. The presence of a rare species or habitat on a property and subsequent required protection of the species/habitat will likely impact the ability to develop that portion of the property. The established presence can increase the width of wetlands buffers where the site is encumbered with wetlands.

Much of the non-residentially zoned lands within the Aviation District were not mapped by the New Jersey Department of Environmental Protection (NJDEP) with one of the five established ranks. The properties that were not assessed a rank are designated on the figure with the absence of color as indicated in the key. The lands which were not ranked by NJDEP did not have documented occurrences and/or were not notable habitats for threatened or endangered species. Prospective developers may consider requesting a search of the “Natural Heritage Database” via NJDEP’s Office of Natural Lands Management for an initial assessment of the known rare wildlife species or rare wildlife habitat for a particular property. Further studies by trained professionals will be required by The Pinelands, The State or local authorities if initial data indicates the potential for threatened or endangered species or habitat on a property.

## **SEWER SERVICE DELINEATIONS**




The sewer service areas as delineated on the plans are based on the latest sewer service area mapping provided by Atlantic County’s Department of Regional Planning and Development GIS system. The four municipality’s maps were adopted in November 2013 as part of the County’s overall sewer service map. All areas which are not designated as sewer service area must utilize alternate means of sanitary waste disposal such as on-site septic disposal system or package treatment plants. Approximately 30% of the Aviation District is outside the sewer service area and 70% of the area has public sewer treatment available to the property. These patterns are shown on Map 13.

The vast majority of the non-residentially zoned lands are within the sewer service area which will provide developers with the ability to improve their lands more intensely with higher sanitary waste generating uses. The more intense waste generating projects within the sewer service area will need to obtain a Treatment Works Approval from the State’s NJDEP Division of Water Quality and also follow local and County treatment authority’s procedures and applications. It is important to note that even if a property is located within a sewer service area it does not mean that there is existing sanitary infrastructure within the public right of way of the property’s frontage. In such cases, off-site sewer main extensions and/or pump stations must be constructed by the developer to connect to the nearest viable existing sanitary infrastructure and typically at the developer’s expense or prorate share.






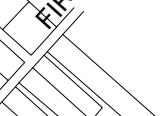
Properties outside the sewer service area can be developed with the installation on-site treatment systems. Most of the non-sewer areas are within the Pinelands jurisdiction and are zoned for low density residential or agricultural uses which are not conducive to non-residential development. The ability to construct a septic disposal field is dependent on several factors, most importantly: the type of soil, the elevation of seasonal high groundwater, and available land area. The “USDA Soil Survey

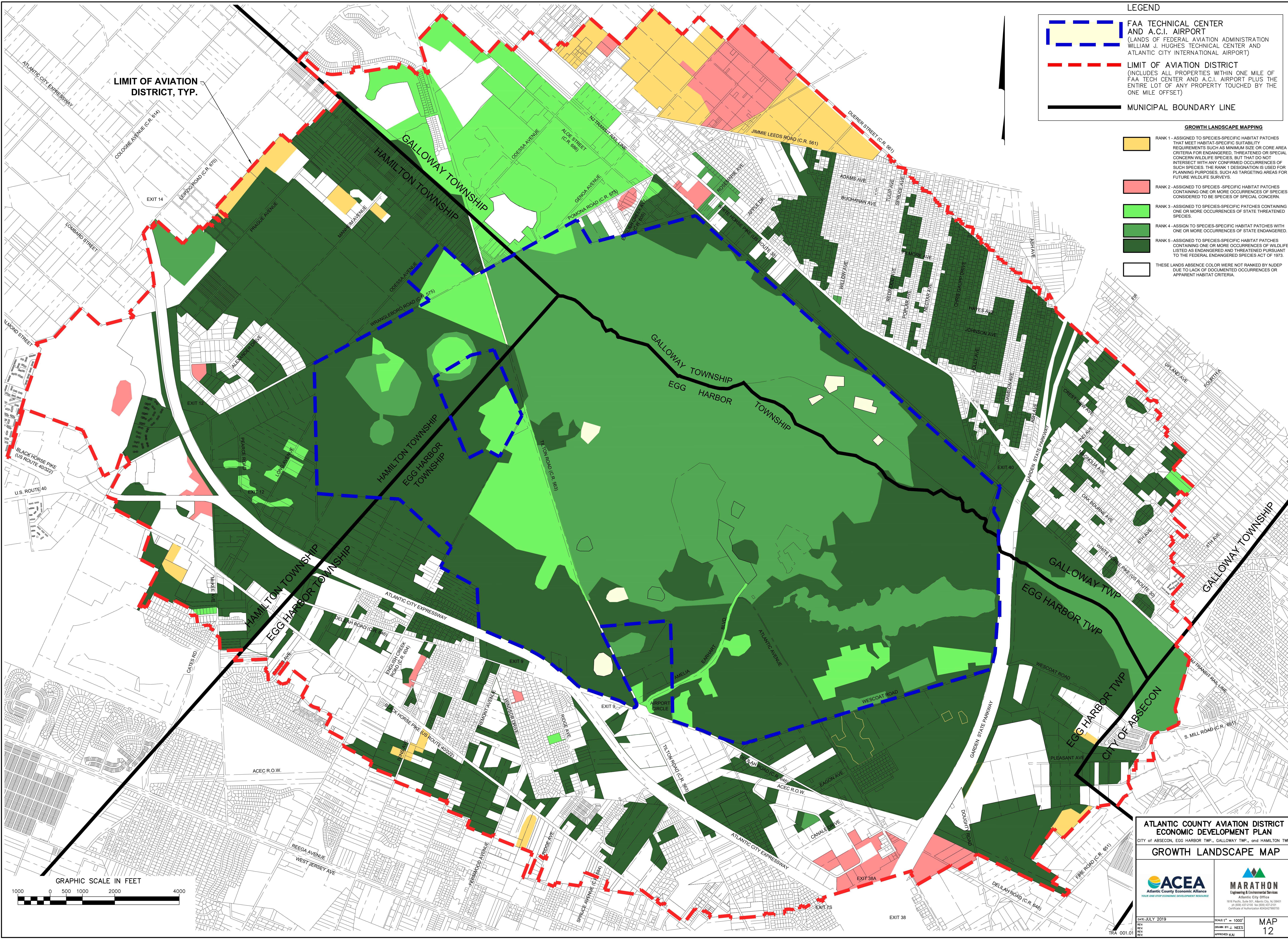


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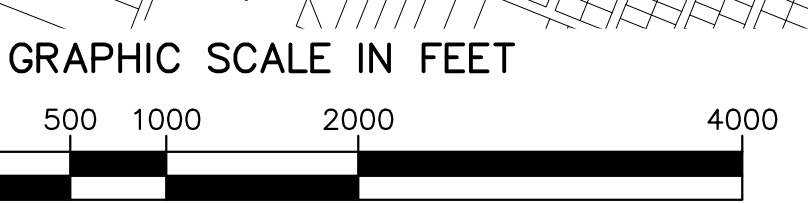
-  **FAA TECHNICAL CENTER AND A.C.I. AIRPORT**  
(LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
-  **LIMIT OF AVIATION DISTRICT**  
(INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  **MUNICIPAL BOUNDARY LINE**

**GROWTH LANDSCAPE MAPPING**

-  **RANK 1 - ASSIGNED TO SPECIES-SPECIFIC HABITAT PATCHES THAT MEET HABITAT-SPECIFIC SUITABILITY REQUIREMENTS SUCH AS MINIMUM SIZE OR CORE AREA CRITERIA FOR ENDANGERED, THREATENED OR SPECIAL CONCERN WILDLIFE SPECIES, BUT THAT DO NOT INTERSECT WITH ANY CONFIRMED OCCURRENCES OF SUCH SPECIES. THE RANK 1 DESIGNATION IS USED FOR PLANNING PURPOSES, SUCH AS TARGETING AREAS FOR FUTURE WILDLIFE SURVEYS.**
-  **RANK 2 - ASSIGNED TO SPECIES-SPECIFIC HABITAT PATCHES CONTAINING ONE OR MORE OCCURRENCES OF SPECIES CONSIDERED TO BE SPECIES OF SPECIAL CONCERN.**
-  **RANK 3 - ASSIGNED TO SPECIES-SPECIFIC PATCHES CONTAINING ONE OR MORE OCCURRENCES OF STATE THREATENED SPECIES.**
-  **RANK 4 - ASSIGNED TO SPECIES-SPECIFIC HABITAT PATCHES WITH ONE OR MORE OCCURRENCES OF STATE ENDANGERED.**
-  **RANK 5 - ASSIGNED TO SPECIES-SPECIFIC HABITAT PATCHES CONTAINING ONE OR MORE OCCURRENCES OF WILDLIFE LISTED AS ENDANGERED AND THREATENED PURSUANT TO THE FEDERAL ENDANGERED SPECIES ACT OF 1973.**
-  **THESE LANDS ABSENCE COLOR WERE NOT RANKED BY MDEP DUE TO LACK OF DOCUMENTED OCCURRENCES OR APPARENT HABITAT CRITERIA.**



**LIMIT OF AVIATION DISTRICT, TYP.**



**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**GROWTH LANDSCAPE MAP**



**ACEA**  
Atlantic County Economic Alliance  
FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES








**MARATHON**  
Engineering & Environmental Services  
Atlantic City Office  
1515 PINE BARREN BL. ABSECON, NJ 08201  
PH: (609) 437-2100 FAX: (609) 437-2101  
CERTIFIED AS AN ISO 9001 REGISTERED FIRM

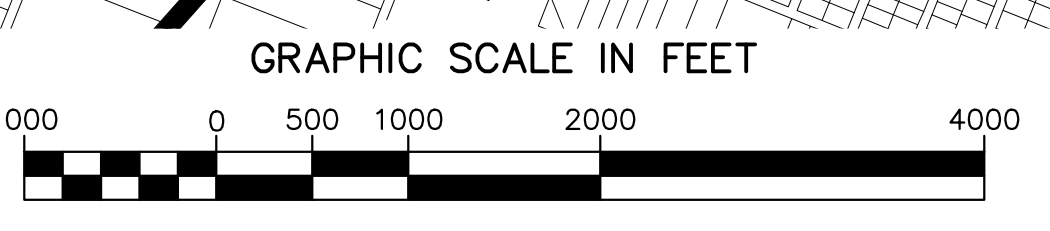
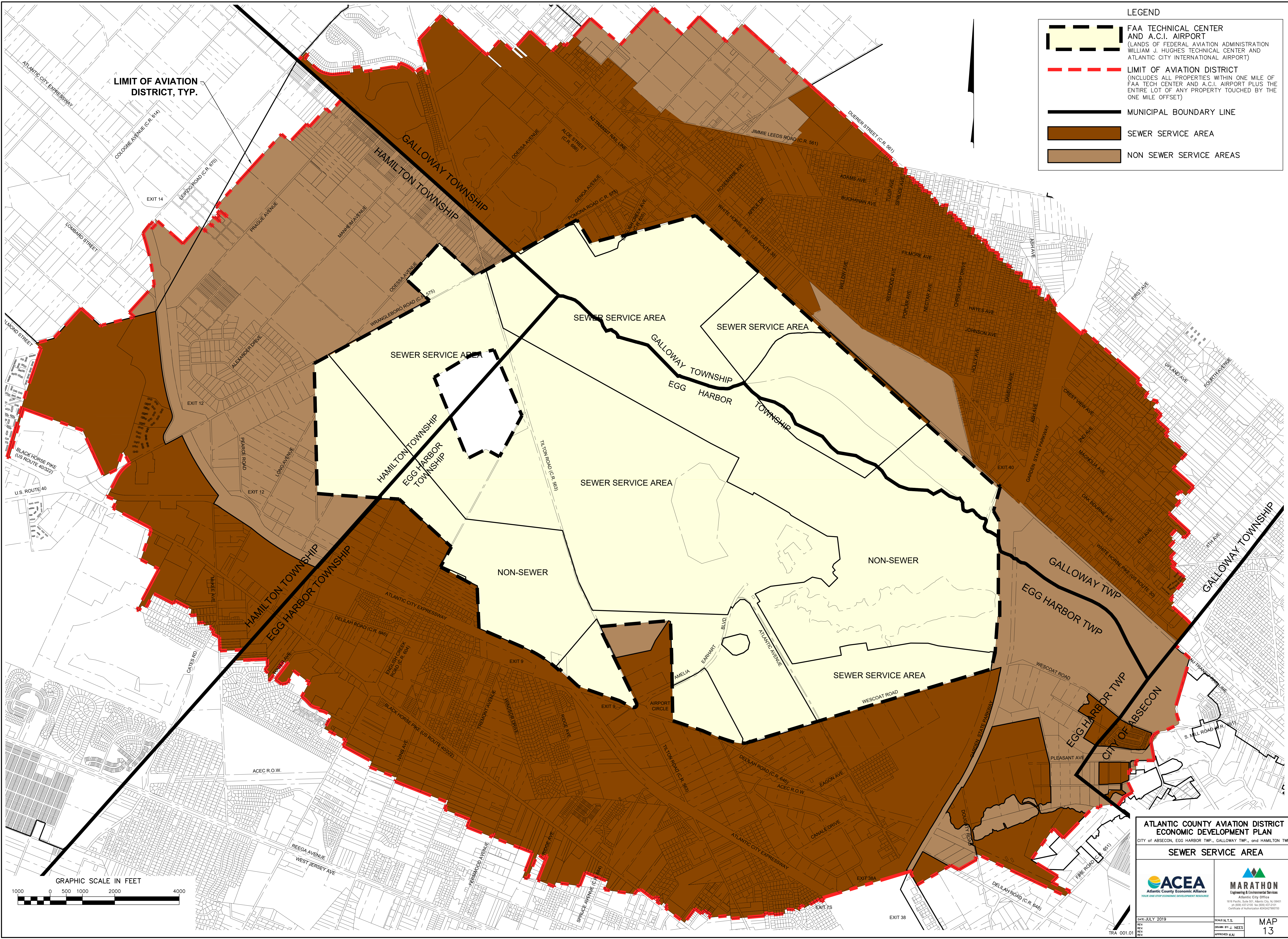
DATE: JULY 2019  
SCALE: 1" = 1000'  
DRAWN BY: J. NEES  
APPROVED: KAJ  
MAP 12  
TRA 001.01





LEGEND

-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
-  LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  MUNICIPAL BOUNDARY LINE
-  SEWER SERVICE AREA
-  NON SEWER SERVICE AREAS

LIMIT OF AVIATION DISTRICT, TYP.



ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
SEWER SERVICE AREA

 <p>Atlantic County Economic Alliance FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES</p>	 <p>MARATHON Engineering &amp; Environmental Services Atlantic City Office 1515 PINE BLVD. SUITE 201 - MARLTON, NJ 08051 PH: (856) 437-2100 FAX: (856) 437-2101 CERTIFIED PROFESSIONAL ENGINEER 024298763</p>
<p>DATE: JULY 2019 REV: _____ REV: _____ REV: _____</p>	<p>SCALE: T.S. DRAWN BY: J. NEES APPROVED: KAJ</p> <p>MAP 13</p>

TRA 001.01



Data” chart included under the Map 10 above provides general soils information that can be utilized to assess the suitability of the subsurface conditions for the construction and permitting feasibility of a septic disposal field.

The soils with the following designations in the soils chart would be not desirable for development of a septic field based on the type of soils and the depth to seasonal high groundwater:

Natural Drainage Class column: Poorly Drained and Very Poorly Drained  
Depth to Water Table column: 0-6”, 0-12”, and 12”-18”  
Hydric Soil Rating column: Yes

Another limiting factor for the development of a septic system in the Pinelands jurisdiction is meeting the Pinelands’ maximum nitrate concentration of 2.0 ppm. The nitrate concentration is calculated utilizing the Pinelands Commission’s “Nitrate Dilution Model” which evaluates the following variables unique to each site: classification of hydrologic soil type, acreage of land available, type of septic system to be constructed, and quantity of generated sanitary waste.

Though it is favorable to be located within a sanitary sewer service area, non-sewered areas can be developed readily with small to medium size facilities.

## **POTABLE WATER SUPPLIES**

Map 14 provides an overlay of the water authority or franchise that can provide public water service for a project. New Jersey American Water’s service area includes all properties in Galloway Township, City of Absecon and Egg Harbor Township that are within the Aviation District. All of the parcels in Hamilton Township can be serviced with public water by the Hamilton Township Municipal Utility Authority, however, as indicated on the Map, only the lands south of the Atlantic City Expressway are presently improved with water infrastructure and water supply wells.

Prospective developers should investigate the nearest location and sizing of existing water main to determine costs or feasibility of extending water main to their property if required. In the absence of nearby public water, developers should investigate the ability to install a potable well if allowed by NJAW or HTMUA.



## **STREAM AND WELLHEAD PROTECTION**

Map 15 displays the existing Well Head Protection Areas (WHPA) is an area modeled around an unconfined Public Community Water Supply (PCWS) well. The actual well is depicted with the symbol “W” inside a circle with the protection area extending outward in light blue. The WHPA delineates the horizontal extent of groundwater captured by a well pumping at a specific rate over 2, 5, and 12-year periods of time for unconfined wells and a 50-foot radius delineated around each confined PCWS well. The WHPA delineations are in compliance with the Safe Drinking Water Regulations and are the first step in defining the sources of water to public supply well. Within these light blue areas, potential contamination will be assessed, and appropriate monitoring implemented. Projects that are developed within the Aviation District that involve the discharge of waste materials into the groundwater will need to address the State’s Safe Drinking Water Regulations.

The map also includes the named tributaries of the wetlands complex and stream network that traverses the Aviation District and FAA Technical Center. Morses Mill Stream to the north is a tributary to the Mullica River. The Absecon Creek branches and other feeders near the City of Absecon are C-1 Waters which feed into the Atlantic City Reservoir and then flow into the Absecon Bay. The tributaries on the west and south side of the District flow into the Great Egg Harbor River Watershed.

## **REGIONAL TRANSPORTATION ROUTES**

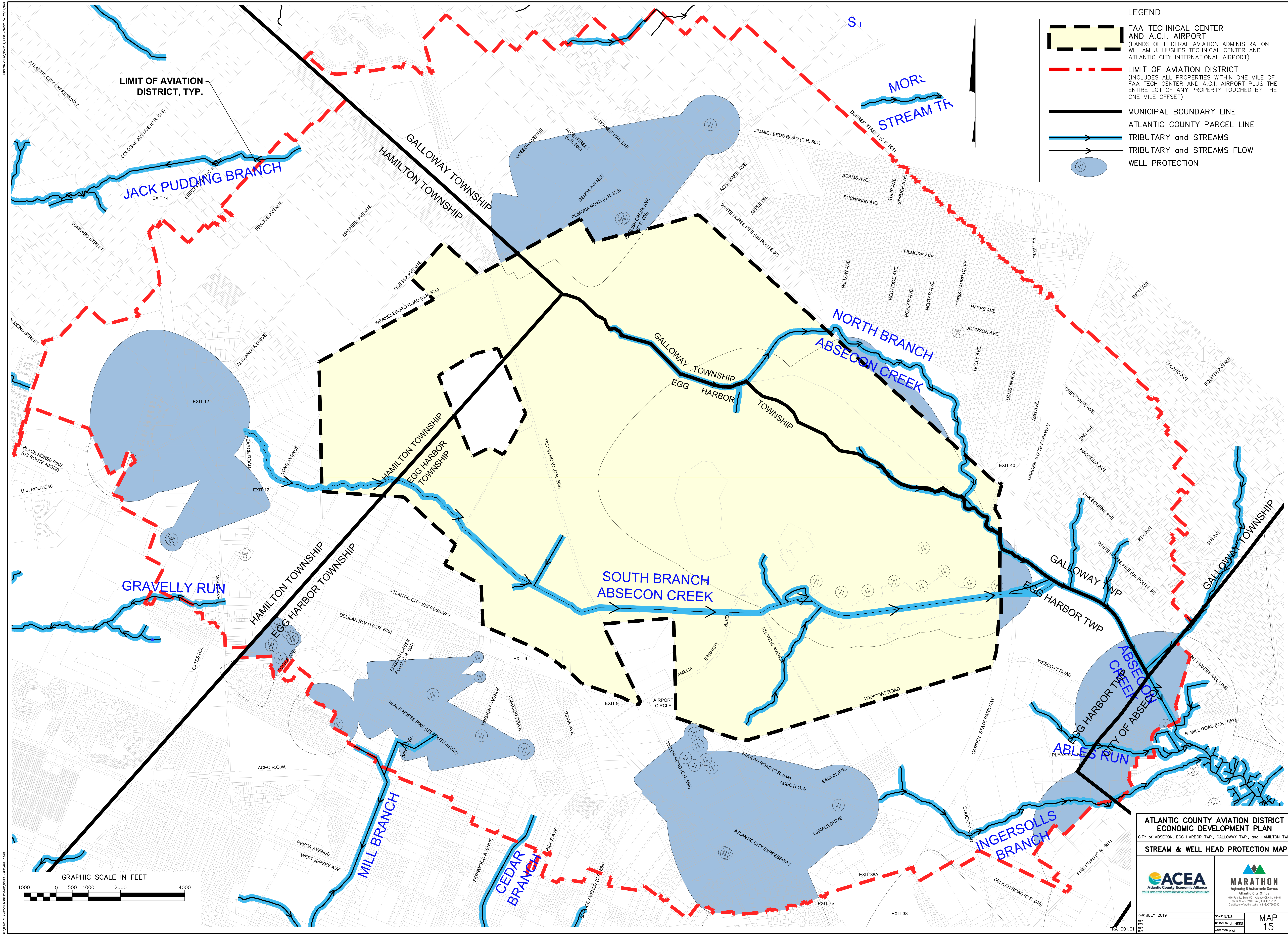
Map 16 provides the publicly available transportation routes available from Atlantic City, Atlantic County to the west to Winslow and Waterford Townships in Camden County. The figure also includes travel options to Ocean County to the north. The FFA Technical Center, Atlantic City International Airport, and the Aviation District are readily accessible via New Jersey Transit bus routes, Atlantic City Rail Line, dedicated Airport shuttle services, and air travel from the centrally located ACI Airport.

The ACI Airport shuttle bus brings passengers to the Egg Harbor City Rail Station, which provides service to the Atlantic City Line, which runs from Philadelphia to the Atlantic City Rail Terminal. Shuttles to the Egg Harbor Rail Station connect to shuttles to the Visitors Center at the FAA Technical Center and the Richard Stockton College of New Jersey, as well as bus lines to the PATCO Speedline at the Lindenwold. A free TransIT Link shuttle runs every 30 minutes between the airport and the




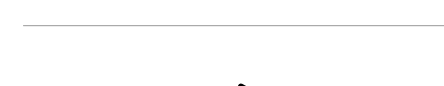











**LEGEND**

-  FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
-  LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
-  MUNICIPAL BOUNDARY LINE
-  ATLANTIC COUNTY PARCEL LINE
-  TRIBUTARY and STREAMS
-  TRIBUTARY and STREAMS FLOW
-  WELL PROTECTION

**LIMIT OF AVIATION DISTRICT, TYP.**

**JACK PUDDING BRANCH**

**GRAVELLY RUN**

**MILL BRANCH**

**CEDAR BRANCH**

**SOUTH BRANCH ABSECON CREEK**

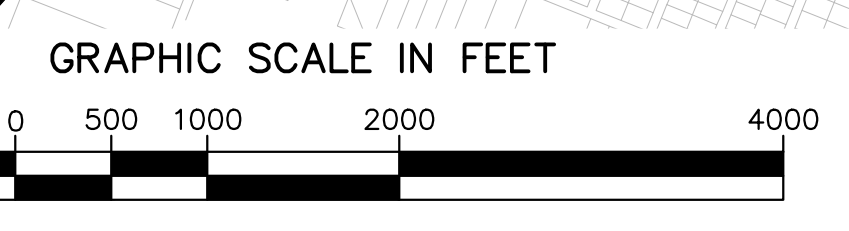
**NORTH BRANCH ABSECON CREEK**

**INGERSOLLS BRANCH**

**ABSECON CREEK**

**ABLES RUN**

**MORRIS STREAM TR.**

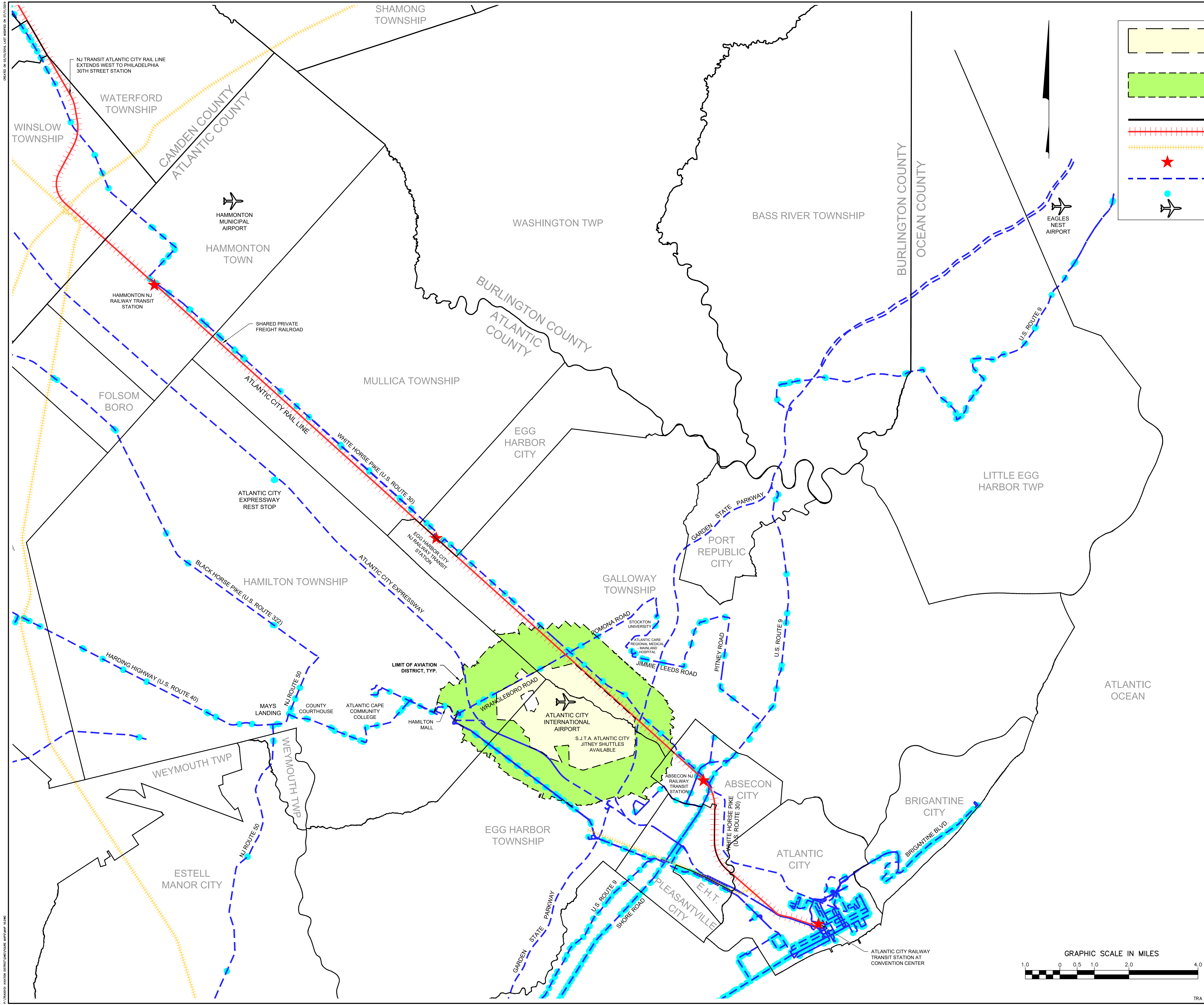


**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
 CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**STREAM & WELL HEAD PROTECTION MAP**



DATE: JULY 2019  
 SCALE: T.S.  
 DRAWN BY: J. NEES  
 APPROVED: KAJ  
 MAP 15  
 TRA 001.01



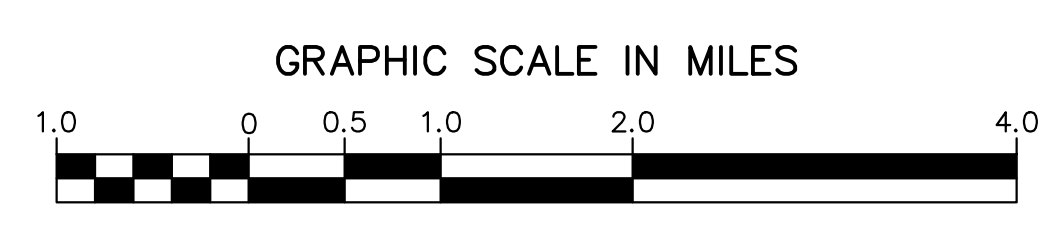


**LEGEND**

- FAA TECHNICAL CENTER AND A.C.I. AIRPORT (LANDS OF FEDERAL AVIATION ADMINISTRATION WILLIAM J. HUGHES TECHNICAL CENTER AND ATLANTIC CITY INTERNATIONAL AIRPORT)
- LIMIT OF AVIATION DISTRICT (INCLUDES ALL PROPERTIES WITHIN ONE MILE OF FAA TECH CENTER AND A.C.I. AIRPORT PLUS THE ENTIRE LOT OF ANY PROPERTY TOUCHED BY THE ONE MILE OFFSET)
- MUNICIPAL BOUNDARY LINE
- NEW JERSEY TRANSIT RAIL LINES
- PRIVATE FREIGHT RAIL LINES
- TRAIN STATIONS ALONG ATLANTIC CITY LINE (EXTENDING FROM ATLANTIC CITY TO PHILADELPHIA 30TH STREET STATION)
- NEW JERSEY TRANSIT BUS ROUTES
- BUS STOP LOCATIONS
- NEW JERSEY AIRPORT LOCATIONS

**ATLANTIC COUNTY AVIATION DISTRICT ECONOMIC DEVELOPMENT PLAN**  
 CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
**REGIONAL TRANSPORTATION ROUTES**

 <b>ACEA</b> Atlantic County Economic Alliance <small>FROM ONE-STOP ECONOMIC DEVELOPMENT RESOURCES</small>	 <b>MARATHON</b> Engineering & Environmental Services <small>Atlantic City Office          1518 PINE BLVD. SUITE 201, ABSECON, NJ 08201          PH: (856) 437-2100 FAX: (856) 437-2101          CERTIFIED PROFESSIONAL ENGINEER 040200070</small>
<small>DATE: JULY 2019</small> <small>REV: 1</small> <small>REV: 2</small> <small>REV: 3</small>	<small>SCALE: N.T.S.</small> <small>DRAWN BY: J. NEES</small> <small>APPROVED: KAJ</small>
<b>MAP 16</b>	



TRA 001.01



Pleasantville Bus Terminal Monday through Friday. From the Pleasantville Bus Terminal there are many options to connect to other NJ Transit buses is available.

## **ROAD CLASSIFICATION**

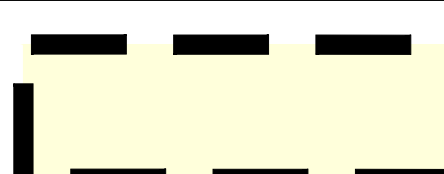






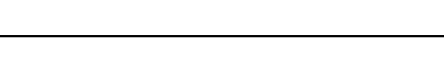
Map 17 displays the extensive network of the existing improved roads and highways that traverse the FAA Technical Center and the surrounding Aviation District.

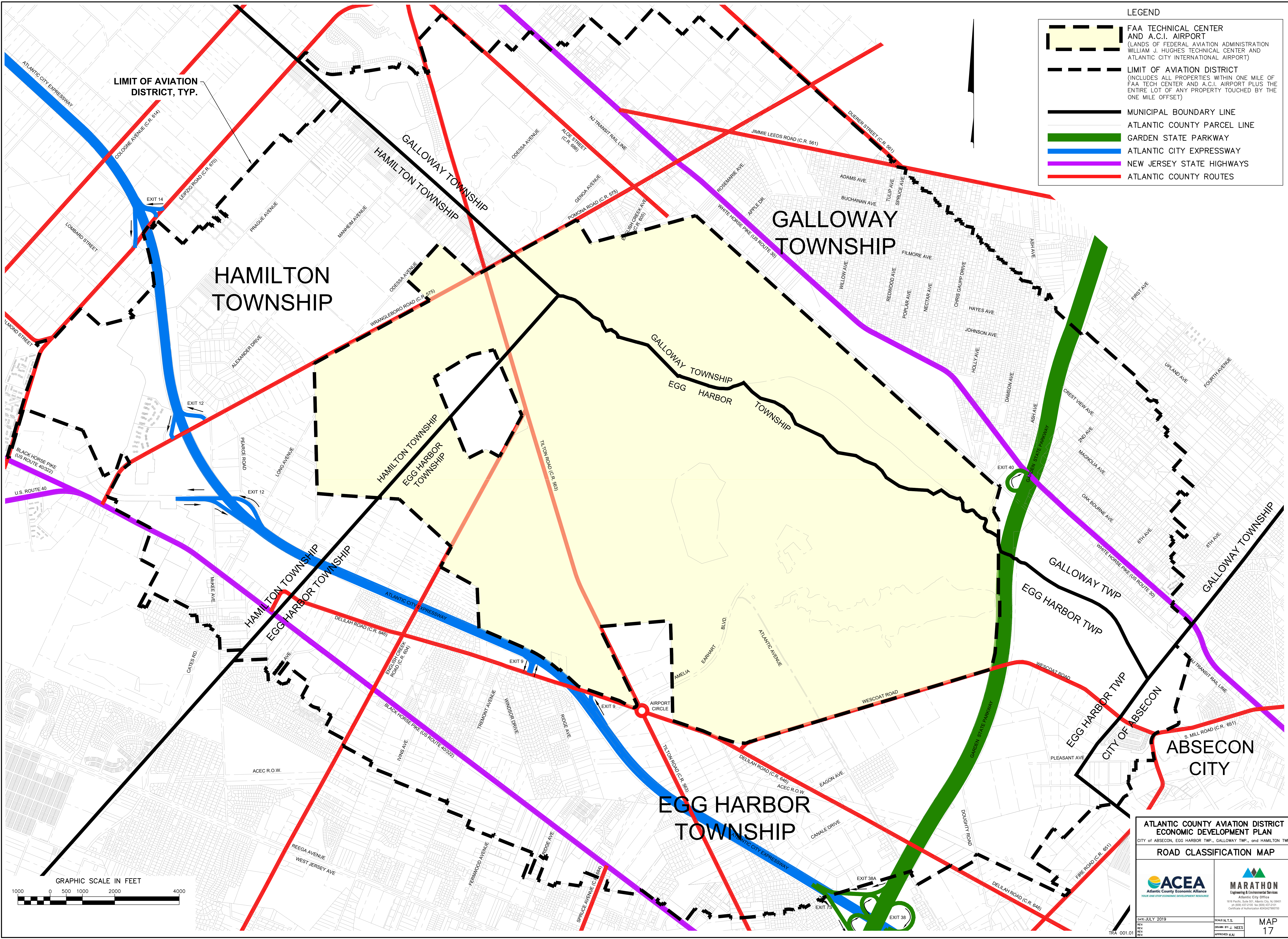
The combined FAA Technical Center and the District are readily accessible from two limited access highways, Atlantic City Expressway (ACE) and the Garden State Parkway (GSP). The Atlantic City Expressway combined with Route 42 is a direct east-west connection between Atlantic City and Philadelphia. There are four ACE interchanges within and directly to the Aviation District that connect to County roads and the GSP. The Garden State Parkway is a north-south highway that extends from Cape May (Exit 0) to the interchange with the New Jersey Turnpike/Route 95 at Exit 129 (near New York City) and to the most northern GSP Exit 171. The Aviation District is located at Exit 38 on the Garden State Parkway.

There are two (2) four lane full access State Highways that run parallel to each other in an east- west; the Black Horse Pike (Rte. 322 & Route 40) and the White Horse Pike (Rte. 30). Both highways have significant existing development and are primarily lined with non-residentially zoned properties. There is also a significant network of County owned collector roads which provide quick access to the local roads, the State highways, and the limited access highways. Lastly, the local roads serve both the residential properties and the sporadic non-residential uses.



LEGEND

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-  MUNICIPAL BOUNDARY LINE
-  ATLANTIC COUNTY PARCEL LINE
-  GARDEN STATE PARKWAY
-  ATLANTIC CITY EXPRESSWAY
-  NEW JERSEY STATE HIGHWAYS
-  ATLANTIC COUNTY ROUTES



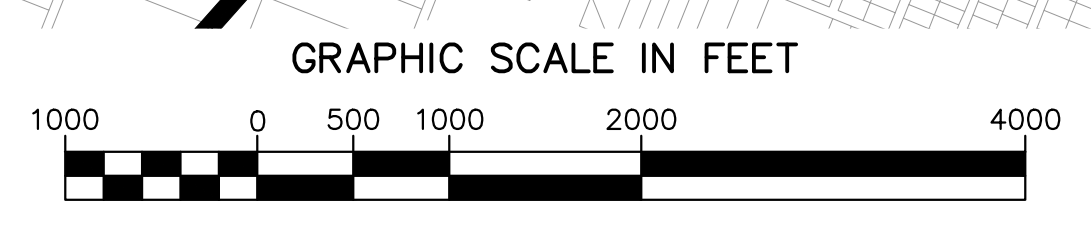
LIMIT OF AVIATION DISTRICT, TYP.

HAMILTON TOWNSHIP



GALLOWAY TOWNSHIP

EGG HARBOR TOWNSHIP

ABSECON CITY



ATLANTIC COUNTY AVIATION DISTRICT  
ECONOMIC DEVELOPMENT PLAN  
CITY OF ABSECON, EGG HARBOR TWP., GALLOWAY TWP., and HAMILTON TWP.  
ROAD CLASSIFICATION MAP

 Atlantic County Economic Alliance <small>FROM ONE STOP ECONOMIC DEVELOPMENT RESOURCES</small>	 MARATHON Engineering & Environmental Services <small>Atlantic City Office 1515 PINE BEACH BLVD., SUITE 201, ATLANTIC CITY, NJ 08401 PH: (609) 437-2100 FAX: (609) 437-2101 CERTIFICATE OF PROFESSIONAL ENGINEERING NO. 024298010</small>
MAP 17 TRA 001.01	







SECTION 05



MARKET ASSESSMENT







# MARKET ASSESSMENT

— This market assessment focuses on the economic climate of Atlantic County and the greater Southern New Jersey / Philadelphia Metropolitan Region and the potential to grow the aviation industry in the Aviation District. Over the years, there have been changes to Atlantic County's demography and economy that present some challenges and opportunities for developing the area around the Atlantic City International Airport as an Aviation Technology District. For instance, declines in Atlantic County's Gaming and Accommodations Industries have forced the County to look beyond these sectors. Furthermore, changes in the County's age demographic is producing an aging population and a reliance on the Health Care Industry. The County's municipalities are not monolithic and this heterogeneity requires a shift from a reliance on one or two main industries to a healthy and diverse economy relying on several sectors for economic growth.

In 2015, the County contracted AngelouEconomics to develop a plan to diversify its economy. Their report, commonly referred to as the Angelou Report, suggested that the County expand its economy by focusing on the following industries: Aerospace and Aviation, Life Sciences, Tourism, Specialty

Manufacturing, and Entrepreneurial Business Services. While this Market Assessment assesses the entire County and Region's economic landscape, its scope focuses on the Aviation Sector, specifically.

To accomplish Aviation Technology District's development, strong partnerships have been forged between businesses, economic development organizations, and government entities. The overall environment inside and outside of the Aviation District offers a unique opportunity for a robust aviation research and development environment, maintenance repair and overhaul operations, air transportation and cargo operations, and various other aviation-related industries. Atlantic County has what it takes to accomplish the successful development of an Aviation Technology District and pave the way for a diverse economic climate for the County, Region, and State.

## EXISTING BUSINESS INVENTORY

Atlantic County is home to over 5,500 businesses which employ over 100,000 people. While the industries vary, the predominant sectors are the retail, hospitality (accommodation and food services), and healthcare industries. Those sectors are also represented in the top industries throughout the United



States. For several decades, the accommodation and food service industries dominated the County's economy, due in large part to the gaming industry in Atlantic City. Gaming laws in New Jersey and the tristate area made Atlantic City the go-to location for gambling on the east coast. Once the gaming laws changed in Pennsylvania, New York, and Connecticut, and the Great Recession struck the United States, Atlantic City's gaming industry began declining. As this sector in Atlantic City sinks even further, the County is looking to diversify its economy by expanding into other industries. To support this diversification, Atlantic County and the ACEA have prioritized development of the Aviation Innovation Hub centered around the Atlantic City International Airport and the FAA William J. Hughes Technical Center.

The Atlantic County Aviation Technology District is part of a larger aviation economic cluster growing throughout Southern New Jersey. The Cape May County Airport is in the process of establishing a UAV research facility on its grounds, the Atlantic City International Airport already houses the FAA's William Hughes Technical Center and the National Aviation Research and Technology Park (NARTP), and both of these locations are within close proximity to Joint Base

McGuire-Dix-Lakehurst, which includes aviation and naval technology research and development elements.

## **JOB INVENTORY & SIC CLASSIFICATION**

According to the United States Census Bureau, the SIC Codes with the highest employment within a 3-mile radius of the Atlantic City International Airport are airport services (SIC Code: 458118), airport terminals (458106), government offices (912101), nursing care facilities (805101), medical business administration (874101), and rehabilitation services (833102). The largest employer within 3 miles of the airport is the William J. Hughes Technical Center (912101), with approximately 4,000 employees. The following sectors make up the majority of employment within 5 miles of the Atlantic City International Airport: Health Care and Social Assistance (12.6%), retail trade (18.5%), and services not including healthcare (21.3%). The table below shows a breakdown of the top industries in the County by the number of establishments and number of employees and compares them to the top industries in the U.S., an aviation cluster, and an aviation district.



Top 5 Industries by Number of Establishments (Atlantic County)	Top Five Industries by Number of Employees (Atlantic County)	Top 5 Industries by Number of Establishments (USA)	Top Five Industries by Number of Employees (USA)
Retail trade	Accommodation and food services	Retail trade	Health care and social assistance
Accommodation and food services	Health care and social assistance	Professional, scientific, and technical services	Retail trade
Health care and social assistance	Retail trade	Health care and social assistance	Accommodation and food services
Professional, scientific, and technical services	Other services (except public administration)	Accommodation and food services	Manufacturing
Other services (except public administration)	Administrative and support and waste management and remediation services	Construction	Administrative and support and waste management and remediation services

FIGURE 7. SOURCE: US CENSUS BUREAU

This Market Assessment compared Atlantic County’s top local industries to Washington State’s and Tippecanoe County’s, in Indiana. Washington State is home to the Nation’s largest Aviation Economic Cluster and Tippecanoe County, Indiana, is home to an Aviation Technology District; The Purdue Aerospace Technology District. Compared to the Washington Aviation Economic Cluster and Purdue Aerospace Technology District regions, the Atlantic County Aviation Technology District’s economic region shares many of the same top industries as both. These similarities are important for new development as it shows a similarly structured support business environment for those relocating to, or establishing themselves in, Atlantic County. However, there are some small differences

in the demographic compositions; specifically, regarding age, income levels, and education.

Atlantic County’s age demographics are similarly structured to that of the State and Nation on the whole, with some differences. When it comes to the working age population, roughly from 15 to 64 years old, Atlantic County has .7% fewer working-age residents than the State of NJ, and .3% fewer than the United States on the whole. That trend also extends to the pool of people who typically look to establish a permanent residence and build a family. With the average age for marriage in the U.S. at approximately 29 years old, Atlantic County has fewer 25 to 35-year-olds than the State and Country, with 11.9%, 12.9%, and 13.6%,



respectively. Moreover, this demographic is on the decline for Atlantic County; the population of 25 to 44-year-olds has declined by 3% annually since 1998 and the population of 0 to 17-year-olds has declined annually since 1998 as well. These declines are likely due to lower birthrates over the past two decades and outmigration of residents looking for better employment opportunities over the period. Because of the declining population of youths, the County's population is aging and there are fewer new families settling down and raising children. This demographic shift is also displayed in the County's business environment, as healthcare services account for a large portion of the County's economy. Obviously, as the population ages, there is more of a reliance on the healthcare industry and that is playing itself out across the County's business scene.

The reason for the age disparity among Millennials residing in Atlantic County could also be attributed to the median earning rates for the County. Members of the millennial generation tend to have higher levels of education than previous generations and the median earnings for those with an undergraduate degree in Atlantic County is \$51,000 a year, compared to \$61,000 for the State. This median earnings difference is seen for graduate degrees as well; for Atlantic County the median earnings for someone with a graduate degree is \$74,000, while the State's median earnings for the same education level is \$86,000. While these wage discrepancies could be a product of the County's lower cost of living, it could also be the result of a job market that does not have a high demand for college-educated workers.

## EMPLOYMENT

Atlantic County's unemployment rate was roughly 5% at the end of 2018, higher than the national average, but consistent with the unemployment rates of other Southern NJ Counties. That is, despite Atlantic County's unemployment rate being the fifth highest among the seven southern NJ counties, the unemployment rates are all mostly clustered around four or five percent.

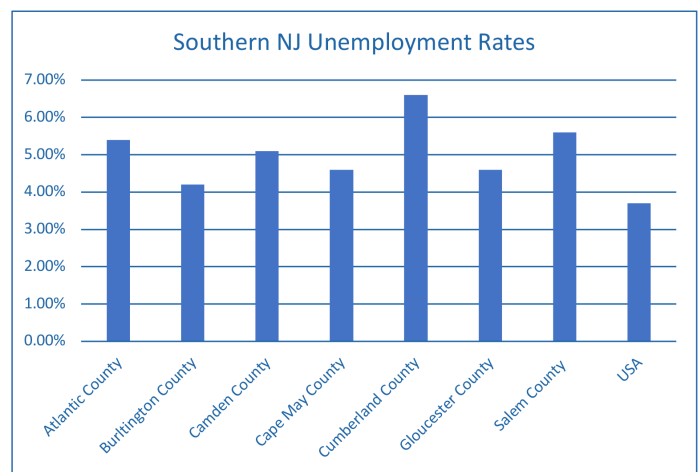


FIGURE 8. SOURCE: US BUREAU OF LABOR STATISTICS

As represented in Figure 8, the southern NJ Region has a higher unemployment rate than the national average. A timeline analysis, Figure 9, of this area demonstrates that Atlantic County has had a slower recovery in response to the 2007 to 2009 economic crisis.

This difference in recovery pace is mostly due to the rise in unemployment for Atlantic County caused by declines in the gaming industry during that period. Since then, the County has been able to recoup some of that employment, but the County still has not been able to diversify its economy in a way that will avoid further unemployment increases resulting from declines in one single industry.



was roughly 5% at the end of 2018, higher than the national average, but consistent with the unemployment rates of other Southern NJ Counties. That is, despite Atlantic County’s unemployment rate being the fifth highest among the seven southern NJ counties, the unemployment rates are all mostly clustered around four or five percent.

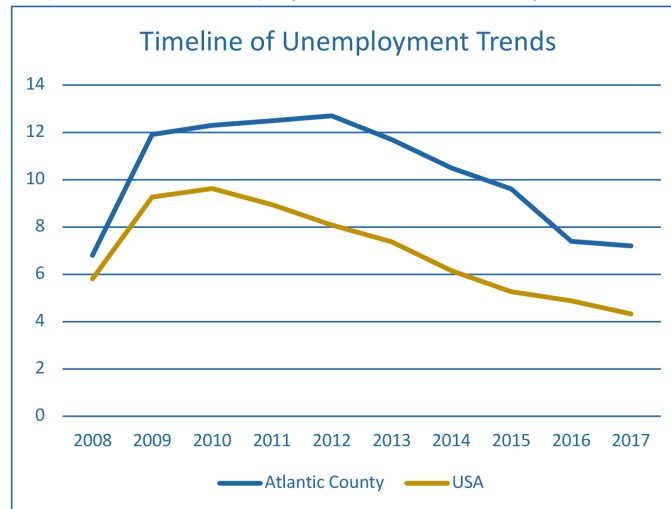


FIGURE 9. SOURCE: US BUREAU OF LABOR STATISTICS

The Atlantic County unemployment rate (by age category) chart shows a right-skewed distribution (see Figure 10) indicating high youth and young adult unemployment for the County, especially when compared to the national average. This age-related unemployment disparity indicates an aging workforce; the County’s population is retiring later in life and likely taking part-time jobs that would have traditionally gone to a younger populations. This could also indicate a labor market with lower education demands. Only 8.8% of the County’s 18 to 24-year-olds have an undergraduate degree or higher and that demographic includes more than 50% of the County’s unemployed. Again, this could be because the County’s employment landscape does not require degrees and those who have them could be moving out of the County for higher-paying jobs.

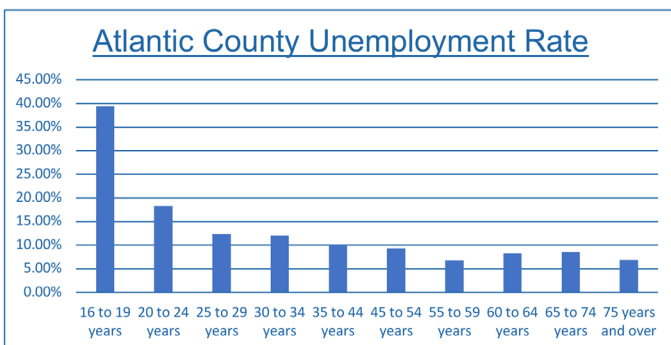


FIGURE 10. SOURCE: US CENSUS BUREAU

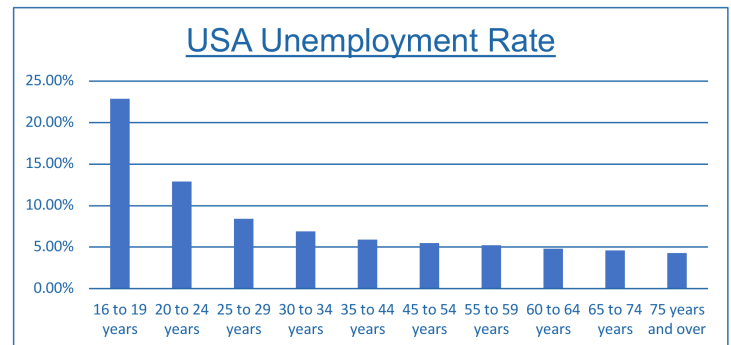


FIGURE 11. SOURCE: US CENSUS BUREAU



The full-time workforce in Atlantic County comprises 39% of the overall working age populations, with the part-time population comprising 27% of the working-age population. Thus, the percentage of the working-age population that have left the workforce is approximately 34%. Compared to the entire State, Atlantic County is not too dissimilar with the full-time, part-time, and non-working percentages of the working age population; 45%, 23%, and 32%, respectively.

**SALARY RANGE**

In Atlantic County, the salary ranges vary by education level. The median income for those with less than a high school diploma is \$22,177 a year. For those with a high school diploma or equivalent, the median income is \$30,078, and \$34,250 for those with a high school diploma and some college. The median annual salary jumps by nearly \$20,000 for those with a bachelor’s degree to \$51,918. This increase in median salary is further expanded for those with a graduate or professional degree, to \$76,807 a year. Atlantic County’s median salaries by education level differ slightly from the rest of the State; \$22,542 for less than a high school diploma, \$32,816 for a high school diploma, \$62,600 for a bachelor’s degree, and \$82,267 for a graduate or professional degree. These differences could be explained by a lower cost of living in Atlantic County, when compared to other parts of the State.

Education Level	Atlantic County	New Jersey
No High School Diploma	\$22,177	\$22,542
High School Degree or Equivalent	\$30,078	\$32,816
Some College	\$34,250	\$40,959
Undergraduate Degree	\$51,918	\$62,600
Graduate Degree	\$76,807	\$82,267

FIGURE 12. US CENSUS BUREAU

By some measurable standards, Atlantic County ranks far lower than the rest of the State in various cost of living metrics. For example, the median home price for Atlantic County (\$174,100) is much more affordable than the State (\$314,000) and nation-wide (\$216,200) medians. Therefore, the lower cost of living for Atlantic County gives the County a competitive advantage for recruiting employees from all demographics, especially for those companies willing to pay more for employees with advanced degrees.



## COMMUTING PATTERNS

The Atlantic County Aviation District resides at the confluence of two of New Jersey's most important highways; the Atlantic City Expressway and the Garden State Parkway. Routes 30 and 322 are also vital lines of communication that run through Atlantic County, near the Aviation District. The Aviation District is also conveniently located along several NJ Transit Bus routes that connect Atlantic City to Philadelphia and the NJ Transit Train that connects Atlantic City to destinations all over the country.

According to the American Community Survey, the average commute time for employed residents in Atlantic County is approximately 24 minutes and 95% of Atlantic County residents commute less than 38 minutes to and from work. Additionally, according to the U.S. Census Bureau, 81.2% of the County's commuters work in Atlantic County. For the entire State of New Jersey, only 54% of the State's commuters work in the same county in which they reside. This means that most of Atlantic County's workforce actually resides within its borders, which makes the population more sensitive to economic changes that can impact employment within its boundaries.



FIGURE 13. SOURCE: ESRI



## CURRENT MARKET CONDITIONS

The Atlantic City-Hammonton Micropolitan area is a portion of the much larger, Philadelphia Metropolitan area. Because some Economic Cluster characteristics are not identified at the micropolitan level, this analysis uses statistics from the Philadelphia Metropolitan area when necessary.

The economic prosperity for Atlantic County, as defined by gross domestic product per capita, has been growing at a slower annual rate (1.6%) than the rest of the State (2.97%) and other aviation clusters and technology districts such as San Jose, CA (3.69%), Langley, VA (2.82%), Cuyahoga County, OH (3.37%), Grand Forks, ND (4.52%), Phoenix, AZ (1.84%), and Oshkosh, WI (2.91%). The common feature that the Atlantic County Aviation Technology District has with all of these clusters and technology districts is proximity to an airport and robust combination of government and private sector research and development services that have grown around them. Since the Atlantic County Aviation District is relatively new compared to these other locations, the County is providing the industry with a foundation similar to the areas that have seen better growth. Although, Atlantic County's GDP per capita ranks among the 90th percentile of all counties in the United States, this indicates there is significant room for growth moving forward.

As this Assessment points out, there is a still substantial reliance on the gaming and food and beverage industries in Atlantic County, but there has also been a decline in the manufacturing sector over the past 20 years. In fact, the County's manufacturing sector has declined annually by about 2% on average over that period. Currently, the County is ranked in the 81st percentile for manufacturing intensity, according to the Harvard Business School and the US Economic Development Administration, which is a measure of manufacturing jobs as a percentage of all jobs.

Thus, the market in Atlantic County is saturated with services and has very little manufacturing. Despite the downward trend in the hospitality industry, less than a percentage point on average per year, hospitality is still the County's largest and strongest economic cluster. The County has recognized the need to diversify its economy and is seeking alternatives that will provide opportunities for its population and retain some of the groups that have been leaving the County for better career prospects.



## **WORKFORCE CHARACTERISTICS**

Atlantic County has a population of 274,549; of whom, 195,000 are 16 years old and older, and 125,696 are in the labor force. The labor force participation rate, the percentage of residents available for work, for Atlantic County is 64.5 percent. Of Atlantic County's population of 18 to 24-year-olds, about 32% have only a high school diploma, 46% have some college or an associate's degree, and 10% have an undergraduate degree or higher. For the County's 25 and older population, 33% have only a high school diploma, 26% have some college or an associate's degree, 18% have an undergraduate degree, and 9% have a graduate or professional degree.

## **LOCAL WORKFORCE SKILLS & PARTNERSHIPS WORKFORCE TRAINING NEEDS / WDB TARGETS**

Atlantic County, and the greater Southern New Jersey Region, has a relatively robust workforce development program through various institutions of higher education, vocational schools, trade schools, and County-run workforce development boards. Having a flexible and proactive workforce development program is vital to the aviation industry's success in Atlantic County. With an annual budget of nearly \$10 million, the Atlantic County Workforce Development Board provides the County with "a workforce development system that meets the needs of area businesses and job-seekers." Most importantly, the workforce development program's leadership is motivated and ready to accommodate the needs of a growing aviation industry in the Region. Luckily, the County already has set the foundation for an aviation workforce development apparatus that begins in the County's high school system.

## **ATLANTIC COUNTY INSTITUTE OF TECHNOLOGY**

The Atlantic County Institute of Technology offers high school students an aviation track to prepare them for either a collegiate-level aviation program or an entry-level career in the industry by providing them with college credits and professional certifications. Their program is a partnership with the Atlantic Cape Community College and exposes students to multiple career paths in the aviation industry. The coursework includes aviation studies, aviation weather, ground school, air traffic control, and unmanned aerial systems. This program builds a foundation for students interested in the industry that can be used to carry them into collegiate-level aviation degrees after they graduate from high school.



## **ATLANTIC COUNTY PUBLIC HIGH SCHOOLS**

The Atlantic County Board of Education is looking to partner with Embry Riddle Aeronautical University's Gaetz Aerospace Institute on an Aviation STEM program for high schools in Atlantic County. This program offers aviation STEM training to high school students and college credits toward college-level aviation programs. The Gaetz Aerospace Institute provides students the opportunity to enroll in the program concurrently, allowing them to be both high school students and college students simultaneously. Furthermore, students can transfer these credits to Embry Riddle Aeronautical University upon high school graduation.

## **THE ATLANTIC CAPE COMMUNITY COLLEGE**

The Atlantic Cape Community College (ACCC) offers aviation programs of study that include general aviation studies, aircraft piloting, helicopter piloting, air traffic control, Unmanned Aerial Vehicle (UAV) systems specialist, flight instructor training, and commercial piloting. ACCC is an accredited institution with Associate Degrees and professional certifications for their aviation programs. ACCC is one of the leading community colleges in the State and can provide a foundation for further undergraduate work in aviation for its students.

## **PROPOSED AVIATION MAINTENANCE AND TECHNOLOGY ACADEMY**

Atlantic County is in the process of establishing an Aviation Maintenance and Technical Academy within the Aviation District, on the airport grounds. To develop this Academy, Embry Riddle Aeronautical University is working with the County and Atlantic Cape Community College. This state-of-the-art academy will provide the aviation industry in Atlantic County with a highly trained and specialized workforce.

## **REGIONAL UNIVERSITIES**

The greater Southern New Jersey Region is already primed for the highly technical careers that the aviation industry needs to fulfill the expansive growth it is projected to see in the coming years. Rowan University's nationally recognized Engineering Program is only a stone's throw from the Aviation District. Rowan offers students various engineering degrees, of which mechanical engineering is a choice. According to Rowan's website, "The U.S. News & World Report (2019 edition) has Mechanical Engineering at Rowan University ranked for the 13th place in its Best Undergraduate



Engineering Programs (master’s or bachelor’s) category.” Furthermore, Stockton University, the County’s only research university, has programs in mathematics, physics, and chemistry; each of which would provide the aviation industry with the highly skilled workers required by the field. Combined, these two universities can provide highly educated and skilled workers to support aviation research and development in Southern NJ and the Aviation District, specifically.

## **PROFESSIONAL ORGANIZATIONS**

A good workforce development program includes all career stages; not just education requirements. Professional organizations are an important piece of any workforce development program. When it comes to professional organizations in the aviation industry, NJ has its fair share. New Jersey has chapters for the following aviation industry professional organizations and associations:

- Aircraft Owners and Pilots Association (AOPA)
- Experimental Aircraft Association (EAA)
- Mid-Atlantic Pilots Association
- National Association of State Aviation Officials (NASAO)
- New Jersey Aviation
- New Jersey Aviation Association (NJAA)
- The Ninety-Nines, Inc.

New Jersey also has professional organizations and associations in the UAS industry as well:

- The Academy of Model Aeronautics
- Association for Unmanned Vehicle Systems International (AUVSI)
- Know Before You Fly

Developing the Aviation Industry in Atlantic County will require a strong focus on aviation-related workforce development, which the County has already begun. To build on the County’s momentum with the aviation industry, the workforce development apparatus should focus on degree programs, aviation industry internships, and aviation professional organizations. To coordinate these functions, the County should establish a branch of its workforce development board for the aviation industry development. Coordinating the various parts of the County’s workforce development with the aviation industry’s needs will be vital to the Aviation District’s success as a cornerstone of the aerospace cluster emerging in the Region.



## TRENDS IN THE AERONAUTIC AND AVIATION INDUSTRIES

Middle-class growth all over the world is increasing the demand for the aviation industry every year. Countries such as China, Indonesia, and India are seeing a rapid increase in their middle class, growing the demand for air travel at the same time; as the middle class grows, so too does the demand for travel and tourism. The FAA predicts that over the next few decades, the number of U.S. airline passengers alone will increase from approximately 840 million in 2017, to about 1.2 billion, according to Aviation Today Magazine. This higher demand is driving a need for the aviation industry that must be filled with new aircraft, new technologies, and new support systems and infrastructure. The global middle-class increase is not only driving a demand for travel and tourism; it is also driving the need for e-commerce.

While the global middle class realizes an increase in dispensable income, the demand for air cargo as a result of increased e-commerce will grow rapidly over the next several decades. According to Boeing, China's demand for e-commerce is growing at nearly exponential rates every year; China's Online retail sales have pushed well over \$1 trillion in recent years. The demand in the United States is also rapidly growing, increasing by about \$50 billion a year on average, according to Boeing. To keep up with the demand for Online retail sales, the current fleet of aircraft will need to either increase its capacity to hold large quantities of cargo on its passenger flights, or increase the number of cargo-specific aircraft.

As new aircraft and aircraft technology makes its way to the industry, and as air travel expands to more regions around the world, the need for more employees in the aviation industry will increase as well. According to a study conducted by Boeing, the aerospace industry will be looking to hire 2.1 million pilots, technicians, and flight crew by 2036. Worldwide, this includes the need for 617,000 new commercial aircraft pilots, 679,000 new maintenance technicians, and 814,000 new flight crew members. Domestically, these aviation career paths are projected to grow at a pace of roughly 7% per year over the next 8 years.

As the current fleet of airplanes ages, the need for replacement aircraft will grow while increased flight demands will require even more aircraft. According to the same Boeing study, their "long-term view of global market replacement demand is that airplane replacement will comprise 44 percent of demand during the next 20 years." This means that 66% of the demand for new aircraft will be driven by the demand for more access to manned flight.



As these new aviation-related industries expand, so too will the need to test, evaluate, and develop the technologies that will grow the aviation industry through the 21st Century. The Atlantic County Aviation District will have those capacities in the William Hughes Technical Center, the NARTP, and the Atlantic City International Airport.

## **TARGETED SMALL BUSINESSES AND INDUSTRIES**

With a public international airport and major research and development facilities within its limits, the Atlantic County Aviation Technology District presents a unique opportunity for various types of aviation companies. The Atlantic City International Airport offers enough space, in terms of vacant land, to attract aviation companies in the Maintenance Repair and Overhaul and Air Cargo sectors. Additionally, with the NARTP and FAA William Hughes Technical Center located at the Airport, there are tremendous opportunities for aviation technology companies to take advantage of those assets.

## **MAINTENANCE REPAIR AND OVERHAUL OPERATIONS**

The Atlantic City International Airport and the Aviation District have plenty of open space for which a maintenance repair and overhaul (MRO) facility could operate. These operations typically require large hangars and aircraft parking areas and the Atlantic City International Airport has the room on its property for the required expansions that would accommodate this industry. With the forthcoming Aviation Maintenance and Technical Academy being established within the Aviation Technology District, an MRO operation will have a pool of highly qualified candidates for the aviation industry cluster as students graduate.

## **UAS COMPANIES**

The UAS industry is predicted to grow from a roughly \$5 billion-dollar industry as of 2015 to approximately \$22 billion by 2022 . Applications for the UAS industry abound; from military and homeland security applications, to photography and even the agriculture industry. As the demand for UASs grow, so too will the need for research and development into the technology behind securing the controls and deconflicting airspace. The research and development into these technologies would fit well at the NARTP which is in close proximity to the FAA's laboratory where these very technologies could be approved for use.



## **URBAN AIR MOBILITY**

Urban Air Mobility uses short-distance vertical take-off and landing (VTOL) to transport people and/or cargo in urban areas . This technology will make it easier for people get themselves, or their things, around a city where road mobility is complicated by heavy traffic volumes. While this technology is still in the early stages of development, and the Aviation District offers plenty of space for testing the technology in controlled settings and its proximity to the FAA laboratory provides an easy path for getting FAA approvals.

## **WIND TURBINE TECHNOLOGY**

Not only do the blades from wind turbines act in a similar manner to airplane wings, so too do the turbine mechanics act similarly to the mechanics of an airplane engine. Because of this, aircraft maintenance technicians can find themselves with careers as wind power generation mechanics. As Atlantic County works to establish its Aviation Maintenance and Technical Academy, the opportunities for wind turbine companies to find employees abound. Furthermore, one of the world's leading offshore wind energy companies, Orsted, has established a location in Atlantic City. Currently, Orsted has been awarded offshore rights for a 1.1-gigawatt wind farm off the coast of New Jersey that will require over 1,000 construction jobs and 100 maintenance jobs after construction is finished. Furthermore, the windfarm could draw its workforce from the planned Aviation Maintenance and Technical Academy.

### **Aviation Cyber Security**

The growing use of connected technology presents a unique challenge when it comes to aircraft cyber security. Several instances of aircraft being hacked from the ground exist, and if aircraft can be manipulated by ill-intentioned third parties, they could become dangerous to the public. This is also true with unmanned aerial systems (UAS). With the proximity of Cape May County's forthcoming UAS Tech Village building, the NARTP, and Hughes Technical Center, aviation cyber security companies would be in a perfect location to take advantage of these assets. The collaborative environment brought about by the NARTP will surely give aviation cyber security companies an opportunity to test their technologies on the emerging technologies growing within the aviation industry.



## SMART AIRPORT TECHNOLOGY TESTING

The Atlantic City International Airport has been designated as a testing site for technological solutions for airport operations. Its prime location, adjacent to one of the world's busiest airspaces, makes it a perfect location for testing the technologies that will run the airports of the future, and right now, Smart Airports are the way of the future. Smart Airports offer technological solutions that can connect passengers with their experiences at the airport, ensure timely takeoff and landings, and improve operations efficiency. This includes mobile assistance with navigating the terminals and gates, automating services, connecting passengers to the outside world, and providing updates to passengers, carriers, and airport personnel in real-time. The South Jersey Transportation Authority designated the Atlantic City International Airport as a Smart Airport Testbed; opening the door to potential research and development activities in the Aviation District. The Atlantic City International Airport is already designated as a testbed for the Transportation Security Administration's (TSA) Transportation Security Laboratory at the William J. Hughes Technical Center, due to its location, size, and operations tempo.

## PROPOSED LOCATIONS

This analysis examined areas within the District that have the proper zoning allowances for the type of development that would facilitate aviation industry growth in the District and take advantage of the Opportunity Zone Designation. Based on the information provided in Section 04 (Map 1), zoning requirements in the municipalities that comprise the Aviation District, a suitability analysis, available vacant land, and access to public infrastructure, there are several areas within the Aviation District that would provide businesses with great locations in the area.

The suitability analysis used variables such as proximity to eateries and retail businesses for employees, available development sites, building area, and proximity to the airport. Additionally, these areas are within close proximity to the Atlantic City Expressway and Garden State Parkway, making it easier to access other parts of the State and Region. These areas are circled in red in Figure 13 and coincide with what has been termed the Tier 1 Target Area.

The areas most suitable for development in the aviation district are within the Egg Harbor Township portion of the District. The areas identified in the picture above and in what was defined as the Tier 1 Development Area have several properties that are vacant, very close to the airport (which includes the FAA, NARTP, William J. Hughes Technical Center, and the Transportation Security Laboratory), and have access to public water and sewer systems. The area is zoned for commercial and industrial use (see zoning map in Section 04).



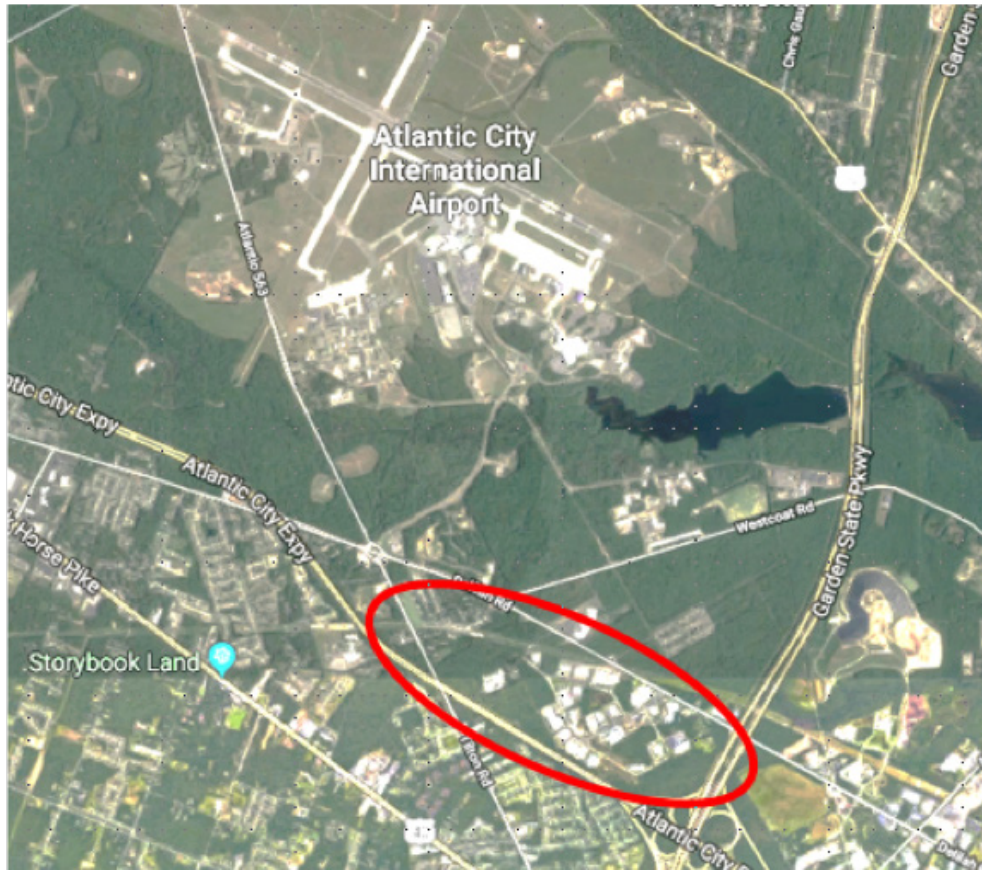


FIGURE 14. AREAS MOST SUITABLE FOR DEVELOPMENT IN AVIATION DISTRICT.

## INCENTIVE PROGRAMS / PROJECTS OPPORTUNITY ZONE

Opportunity Zones were established by the federal government and provide substantial capital gains tax incentives for those who invest in the designated areas. When an investor realizes a capital gain on an investment, they can invest (through an approved Opportunity Zone fund) in Opportunity Zones; deferring or reducing the taxes the investor would have to otherwise pay on capital gains. In addition, gains from that investment can be tax free once realized. The goal of Opportunity Zones is to increase private investment without committing federal funds to development. As such, the Atlantic County Aviation Technology District is within a designated Opportunity Zone.

## GROWTH ZONE

The Aviation District is within the boundaries of a Garden State Growth Zone; again, this program is on pause pending extension legislation. Created in 2013, as part of the grow New Jersey incentive program the Growth Zone designation offered significant incentives for business looking to relocate or develop locations within the zone. (See reference to Garden State Growth Zone on page - for more



details.) The Growth Zone benefits include a tax credit of 40% of project costs, grants of up to 50% of total project costs, a long-term tax exemption for new improvements made within the zone, and a reduced payment in lieu of taxes (PILOT). These benefits are targeted to small and medium sized businesses and would greatly benefit aviation companies looking to locate within the State's aviation research triangle.

## **ATLANTIC COUNTY IMPROVEMENT AUTHORITY 108 LOAN PROGRAM AND MICROLOAN PROGRAM**

The Atlantic County Improvement Authority's (ACIA) 108 Loan Program provides existing small businesses with loans of up to \$400,000 or 40% of a project cost; whichever is the lowest of the two. These funds can be used for working capital, renovation and new construction of commercial and industrial buildings, acquisition of commercial and industrial land and buildings, acquisition and installation of machinery and equipment, and refinancing of existing debt to an independent institutional lender.

The ACIA also offers micro-loans to low and moderate-income residents who wish to start a business, so long as hiring preference is afforded to other low and moderate-income residents of the County. This program offers a one-time loan of up to \$35,000 and a minimum of \$1,000. The funds can be used for working capital and fixed-assets such as machinery, land, equipment, and renovations. To be eligible for this program, 51% of the company's employees must be of low or moderate income.

## **MUNICIPAL TAX ABATEMENTS AND PILOTS**

The properties identified in Egg Harbor Township are all within the Opportunity Zone and are eligible for the ACIA business loan, and the Township's tax abatement and PILOT programs. Egg Harbor Township offers up to five years of tax abatement for commercial and industrial development within the township with over 5,000 square feet of use. Eligible activities include light industrial and manufacturing, warehousing, scientific research, offices, distributorships, research and development, carpet or rug cleaning, printing, baking, repair shops, trade schools, nursing homes and assisted living facilities, general commercial establishments, recreational businesses, and rehabilitating any of the above. Businesses can apply for the tax abatement and, upon council ordinance, can receive this benefit. However, businesses must be within the business and industrial zones designated by the township; these zones include NB, CB, HB, RCD, RB, MC, PO-1, PO-2, M-1 and R-I (see Appendix A for zone definitions).

Egg Harbor Township's PILOT program allows tax payments to be phased in by 20% each year for five years for other programs and projects. The PILOT is structured so



that there is no payment the first year, 20% of the otherwise tax bill the second year, 40% the third, 60% the fourth, 80% the fifth, and the six year includes a payment of the entire assess tax value for the business. In order to receive the PILOT, the township must adopt an ordinance to authorize the agreement.

Hamilton Township also offers tax abatements and PILOTs for businesses looking to locate, or relocate, to the township. However, while part of the township does enter a portion of the Aviation District, the blocks and lots that qualify for the tax abatement are not within the Aviation District's boundaries.

Galloway Township offers tax abatements for new construction of commercial structures, improvements to industrial structures, new construction of industrial structures, new construction of mixed use, improvements to commercial structures, and improvements to dwellings. The tax abatement is entered into by an agreement with the tax assessor and approved as an ordinance by the council. These tax abatement agreements may last for up to five years and are approved at the discretion of the township. There is an application procedure an entity must go through to have an abatement approved.

## **SUMMARY**

This Market Assessment finds that Atlantic County's Aviation Technology District is exceptionally well-suited for aviation-related industry development around the Atlantic City International Airport. The proximity to the research and development operations at the FAA's William J. Hughes Technical Center and the National Aviation Research and Technology Park provide tremendous opportunities for aviation research and development companies of all sizes. Furthermore, the proximity to the growing aviation economic cluster in New Jersey and a fully-functioning international airport, (combined with the Federal, State, and local business incentives), both point to incredible opportunities for established aviation companies and startups, alike. Therefore, the Aviation District is poised to attract companies that deal directly with airport operations, commercial flight technologies, aviation companies who rely on FAA certifications for use of their product, unmanned aerial systems companies, maintenance repair and overhaul, and air cargo.

As noted above, the County has seen some changes in terms of demography, and has had some trouble rebounding from the Great Recession; this is especially exacerbated by declines in the County's gaming and hospitality industries, upon which the County was economically reliant in the past. The lack of opportunities for younger and higher educated demographics has led to an aging workforce; these demographics are not participating in the workforce as much as they are in other areas around Southern New Jersey and the rest of the State. This could potentially result in an inability to



find eligible employees from the County's current population to fill the highly skilled and technical positions required by the Aviation District's activities, especially those in research and development.

However, despite these changes, the County's low cost of living may attract those with higher educations and earning potential to the area from outside of the County. There are many institutions of higher learning in the Region from which the District could recruit qualified employees. Additionally, the Aviation District's proximity to the Parkway and the Atlantic City Expressway gives areas outside of the County easy access and shorter commutes. Should the Country find itself in a position where too much of the workforce is brought in from outside of the County, it should focus on a placemaking or a place branding strategy to attract a younger and higher educated population to fill the direct, indirect, and induced jobs that will be created by companies in the Aviation District.







A wireframe illustration of a vehicle chassis, showing the frame, suspension, and large wheels. The illustration is rendered in a light blue color against a darker blue background. The wheels are prominent, with a grid-like pattern on the tires. The chassis is shown from a side-rear perspective, highlighting the rear axle and suspension components.

**SECTION 06**

**VISIONING FRAMEWORK**







# VISIONING FRAMEWORK

— To establish this Plan’s Visioning Framework, eleven (11) stakeholders were contacted—who have been instrumental in developing the Aviation Innovation Hub thus far. They were asked to provide input for the Goals and Objectives, and to assess the Strengths, Weaknesses, Opportunities, and Threats for developing the Aviation District at the Atlantic City International Airport. The list of stakeholders included representatives from the County Government, the ACEA, the Atlantic County Improvement Authority, the South Jersey Transportation Authority, Stockton University, Atlantic Cape Community College, Embry Riddle Aeronautical University, the FAA William J. Hughes Technical Center, and the National Institute of Aerospace. Each of these stakeholders were surveyed and provided very constructive feedback.

## SWOT ANALYSIS:

From the surveyed Stakeholder’s responses, this Plan is able to provide a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis. Stakeholders were asked to identify their thoughts for the SWOT items. From the responses, the following is a list of strengths, weaknesses, opportunities, and threats identified for developing the Aviation Innovation Hub.

### Strengths:

- FAA William J. Hughes Technical Center
- Hundreds of developable acres of land at the airport and surrounding area
- Regional Partnerships
- Momentum
- Under-utilized Airport with a 10,000 ft Runway. This airport is used at 23% of its available capacity. In 2018, the passenger traffic was just under 1.2 million people, while the airport terminal is designed to handle 3 million passengers.
- More temperate weather at Atlantic City airport than nearby airport in Philadelphia, Newark, and New York City resulting in fewer runway and ramp delays and closures.
- Federal and State Incentives



The most common strength associated with establishing the Aviation Innovation Hub, according to the Stakeholders, is its proximity to the FAA William J. Hughes Technical Center. As mentioned earlier, the William J. Hughes Technical Center is the FAA's premier research and development laboratory. According to their website, "The Technical Center's highly technical and diverse workforce conducts test and evaluation, verification and validation, and sustainment of the FAA's full spectrum of aviation systems, and develops scientific solutions to current and future air transportation safety challenges by conducting applied research and development."



FIGURE 15. WILLIAM J. HUGHES TECHNICAL CENTER

As was confirmed from the analysis of existing conditions in Section III, within the Aviation District, there are many large undeveloped areas which are suitable for new construction and on which an Air Cargo, MRO operation, or other facility could be located. The areas southeast of the Airport in Egg Harbor Township offer the best locations for development.

The County and the ACEA have been aggressively working to recruit Aviation companies and organizations to the District and County, while also building partnerships with political institutions, aviation industry leaders, and non-profit organizations. Through their work, there has been a momentum built toward establishing the District as a critical node for Aviation research and development and related activities.

The Atlantic City International Airport has a 10,000 ft runway, which could accommodate the take off and landings of virtually any airplane in the world-wide fleet. While the Airport is in very close proximity to some of the busiest airspaces in the Country, it is still under-utilized for the amount of capacity it could potentially offer. This is truly a strength since potential cargo and passenger airlines do not have to worry about airspace delays that exist in surrounding airspace.

#### **Weaknesses:**

- Need for a larger and more diversified aviation workforce.
- Need to promote the area more effectively and collaboratively as a location for aviation and aeronautic development.



According to the Stakeholders, the most common weakness identified with developing the Aviation Innovation Hub is the growing demand for a qualified and diverse workforce. As mentioned earlier, the County lacks a sufficiently large aviation workforce that would be required for an expanding aviation industry. Currently, the County has a small number of individuals with advanced aviation related degrees. This shortage needs to be addressed by expanding the aviation workforce development programs in the County. That is why the County is working to expand aviation workforce development programs with the area's high schools, technical schools, and community college and through its work to establish the Atlantic County Aviation Maintenance and Technical Academy.

Moreover, the County's workforce development program should also include training for skill sets associated with indirect industries. For instance, should a Maintenance Repair and Overhaul company locate to the Aviation District, there will be a need for support companies such as fabricators, sheet metal suppliers, aircraft painters, etc. Thus, the County will also have to add programming to its workforce development apparatus that includes these trades.



### **Opportunities:**

- Low cost of living
- The ACEA and NARTP's ability to attract Aviation companies
- SMART Airport Testbed Designation for Atlantic County International Airport

The biggest opportunity for recruiting Aviation companies and institutions is the County's low cost of living. According to bestplaces.net, the cost of living for Atlantic County in terms of housing costs, median home costs, groceries, health, and transportation, ranked below New Jersey's and the Nation-wide indices for these categories. The low cost of living presents an opportunity for those in high-wage aviation jobs to take advantage of the lower prices, especially for buying new homes in the County.

Already, the National Aviation Research and Technology Park (NARTP) has attracted several aviation companies and government organizations to its first building, such as General Dynamics Information Technology, Thunderbolt Software, the FAA LIFT Lab, and the Atlantic County Institute of Technology Aviation Program.



Furthermore, the NARTP's current research partners include Embry Riddle Aeronautical University, New Jersey Institute of Technology, the National Institute of Aerospace, Rowan University,



and Stockton University. With six more buildings planned at the NARTP, the Aviation District will have the space and availability to attract many more aviation companies and research institutions. In addition, the ACEA has been working to build relationships with aviation companies and institutions throughout the nation, in an effort to focus their attention on the Aviation District.

In 2018, the South Jersey Transportation Authority designated the Atlantic City International Airport as a SMART Airport testbed location. For companies working on researching and developing SMART Airport technology, this designation will make the Aviation District an attractive location.

### **Threats:**

- Lack of Funding from Public Entities and Private Investors.
- Regional focus on tourism and gaming industries

While the County has been fortunate thus far in securing funds for planning the Aviation District and Aviation Maintenance and Technical Academy initiatives, there will be a continued need for public funds to continue the District's momentum.

The County has many reasons to focus much of its attention on the tourism industry, as it is the County's largest industry due to the shore locations and the entertainment industry in Atlantic City. However, as mentioned above, over-reliance on this industry has had a detrimental impact on the County's economy in the past. In order to continue the progress of the Aviation District, the County, and the institutions within it, will have to give more attention to attracting aviation-related companies and the support companies that will come with it.

## **GOALS AND OBJECTIVES**

Four main goals and a series of objectives were developed from the Stakeholders' comments and suggestions.

**GOAL 1.** Promote Economic and Small Business Development at the Aviation Technology District:

**Objective 1.** Create and provide Aviation and Related Businesses with promotional literature marketing the assets of the Aviation District such as its location, trained workforce, educational partnerships, airport facilities, FAA William Hughes Technical Center, developable land and other assets to attract targeted companies and investors.



**Objective 2.** Identify and Formulate Financing Packages and Programs that will assist companies and small businesses locate in the Aviation District.

**Objective 3.** Develop an inventory of targeted companies and reach out directly to those Maintenance Repair and Overhaul (MRO) companies, Air Cargo companies, Related Manufacturers and Aviation Research and Development companies that will bring new jobs and investment to the District.

**Objective 4.** Work with the Atlantic City International Airport to ensure the construction of necessary infrastructure and improvements to accommodate access between the Airport and new investment in the Aviation District that meets industry standards.

The Aviation District Development Plan's number one goal is to expand and diversify the County's economy through recruitment and retention of aviation-related enterprises. To accomplish this goal, the County has gone to great lengths to ensure the District was designated for use in State and Federal incentive plans. As previously mentioned, the Aviation District was within a Garden State Growth Zone, which offered business tax credits to employers, and an Opportunity Zone, which allows investors to defer taxes on capital gains, if they are reinvested in the zone.

Furthermore, the District currently houses the FAA William J. Hughes Technical Center, which tests and evaluates aviation-related systems for the industry. Aviation companies that move to the District, especially those in research and development, will have close proximity to industry experts and laboratories at the FAA William J. Hughes Technical Center for state-of-the-art support and industry expertise.

To attract MRO and Air Cargo companies, the Atlantic City International Airport will not only have to increase its ramp space, but it will also have to provide the needed space to construct more facilities and hangars that will have access to the airport's taxiways. MRO operations require large and easily accessible hangars and plenty of ramp space to park airplanes. Air Cargo companies also require ramp space, but they will also require storage facilities, some of which may have to provide refrigeration if the cargo includes perishable goods. Depending on the type of cargo coming in and out of the Airport, there will likely be a need for an increased U.S. Customs presence.

**GOAL 2.** Continued Development of the Aviation District and branding of the Aviation Innovation Hub.



**Objective 1.** Use the Aviation District as an anchor for the State’s emerging Aviation Research Triangle by marketing the District to new research, development, and educational partners.

**Objective 2.** Strengthen partnerships with the N.J. EDA, the N.J. Business Action Center, the N.J. Department of Transportation’s Bureau of Aeronautics, N.J. Department of Labor and Workforce Development, N.J. Secretary of Higher Education, the South Jersey Economic Development District, and existing County and educational agencies to coordinate programs and target resources to expand business development, educational opportunities, and workforce training in the District.

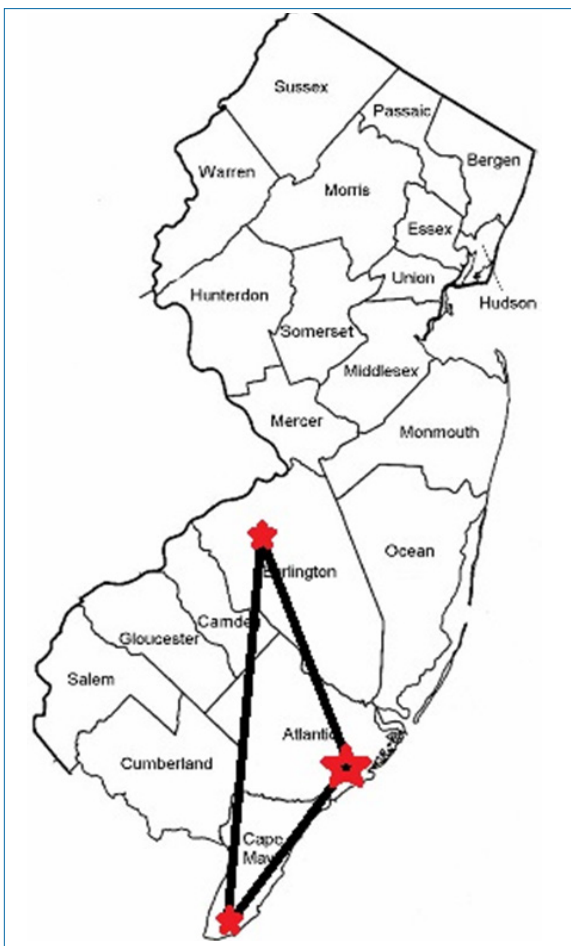


FIGURE 16. NJ AVIATION RESEARCH TRIANGLE

The Southern New Jersey Region has been working to establish an Aviation Economic Cluster. The Region currently has aviation assets at the Cape May County Airport, Atlantic City International Airport, and Joint Base McGuire Dix Lakehurst. The Cape May County Airport is home to the construction of a U.S. EDA-backed Unmanned Aerial System (UAS) research facility and has already begun working with startup companies in this industry at its business incubator. Additionally, the Atlantic City International Airport has robust research and development activities at the William J. Hughes Technical Center and is gaining even more with the NARTP. Finally, there are naval and air research and development operations at Joint Base McGuire Dix Lakehurst, especially on the Lakehurst Campus. Conveniently, the Aviation District is already the physical center of the three locations.

**GOAL 3.** Create and promote an administrative protocol that makes it easy for prospective businesses and interested investors to secure information about the opportunities at the Aviation District and get the support needed to advance potential projects.

**Objective 1.** Through the offices of the Atlantic County Economic Alliance, create an Aviation Industry Advisory Board to coordinate actions and advance development at the Aviation District.



**Objective 2.** Establish the National Aviation Research and Technology Park (NARTP) as the Aviation District’s focal point for new opportunities in research and development.

**Objective 3.** Identify an Aviation Industry Ombudsman in one of the partnering agencies whose job it will be to provide the local knowledge and expertise needed to assist interested businesses or investors navigate the approval process, secure needed financing, obtain qualified labor, and identify the resources necessary to advance their objectives.

In order to take advantage of the aviation-related assets the County already has to offer, and is expected to gain in the coming years, fostering a collaborative environment between the District/Cluster’s aviation companies and institutions is vital. For this reason, the NARTP’s facility is the perfect location as a focal-point for aviation industry collaboration within the Aviation District and Aviation Economic Cluster in Southern NJ. The NARTP’s offices, auditorium, and meeting spaces make it a good central site for the area’s aviation industry.

To steer the aviation-related companies and institutions toward effective collaboration, the Aviation District, and participants in the Aviation Economic Cluster, should create an Aviation Industry Advisory Board. This Advisory Board should work to keep the Cluster updated on the aviation activities in the region to ensure a consistent flow of information to all of the participants. The Advisory Board should also hold meetings with companies and institutions in the Cluster to guarantee there is effective collaboration and mutually beneficial relationships among the area’s aviation enterprises. Collaboration amongst these entities is central for the District and Cluster’s successes. According to Dr. Michael Raco from the University of Glasgow, “the heightened competition of globalization has encouraged a counter-movement, based on local, endogenous resources in which local ownership and control of capital can shelter economies from the effects of global fluctuations. The emphasis has shifted to small, locally based producers, acting collaboratively towards long-term growth and continual improvements in standards.”

While collaboration among local aviation companies may seem counterintuitive, understanding the ways in which each of these companies can utilize local resources will benefit the entire cluster and the local economy. Furthermore, the Economist, Dr. David Newlands explains that “Collaboration between firms can help them become more innovative as a means to capturing or sustaining competitive advantage.” Using the NARTP’s assets to foster an industry-wide collaborative environment will lead to successful development for the District and Economic Cluster.



**GOAL 4.** Diversify Atlantic County's Economy and Expand Opportunities for Small Business Development.

**Objective 1.** Through marketing materials and collaborative messaging, promote the County as an outstanding location within which to live, work and play.

**Objective 2.** Focus on attracting secondary aviation-related companies that could support the proposed MRO, Air Cargo, and Research and Development operations at the airport.

**Objective 3.** Create a business retention program aimed at supporting the existing businesses in Atlantic County such as machinists, commercial and industrial painting firms, upholstery businesses, computer and technology companies, and others that can benefit from a strong aviation and aeronautical cluster.

**Objective 4.** Maximize the benefits from the Opportunity Zone in Egg Harbor Township by working with "Opportunity Zone Real Estate and Financing Experts" to provide another means of private sector investment in Tier 1 Target Area of the Aviation District.

**Objective 5.** Work with the County's Workforce Development Board and the N.J. Department of Labor and Workforce Development to ensure that the County's workforce development strategy aligns with planned aviation activities and keeps pace with the growing needs of the aviation and aeronautical industry in the area.

**Objective 6.** Initiate a dialogue and develop partnerships with the off-shore wind energy companies to identify synergistic opportunities in business development and technology that can aid both the energy and aviation industries.

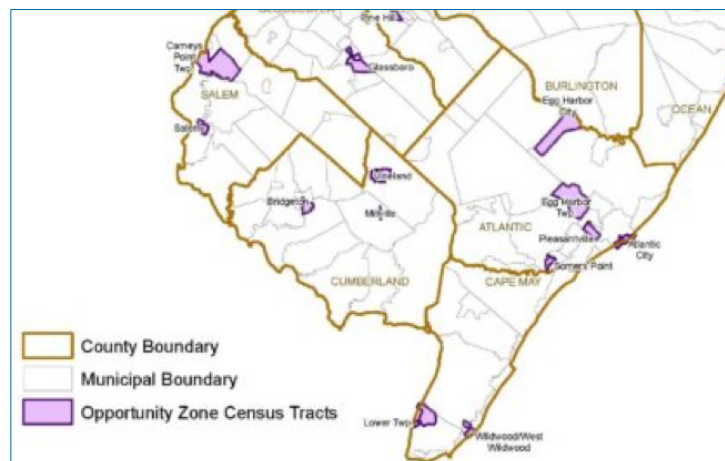


FIGURE 17. SOUTHERN NEW JERSEY OPPORTUNITY ZONES. SOURCE: NJ DCA



As indicated in the Angelou Report, the County’s economic reliance on the Gaming and Hospitality industries has put the region in a precarious position during economic downturns of the past. In order to shield the region from the effects of industry-specific declines or nationwide recessions, the County must work to diversify its economy by courting new industries. According to the Russian Economist, Dr. N.N. Mikheeva’s analysis, regional economic diversification “can provide stable growth of [an] industry and economy of an entire region.” Thus, the County and ACEA should place an emphasis on advertising the economic incentives currently offered to investors for investing in opportunities within the Aviation District and the section of Egg Harbor Township designated as an Opportunity Zone.

The planned activities within the Aviation District, such as MRO and Air Cargo operations, will provide the economy with direct, indirect, and induced industries, diversifying the area’s business landscape even further. For the Aviation District, direct industries are those that are directly involved in aviation, while indirect industries are those that provide support to aviation companies, and induced are the companies in which the direct and indirect workforces spend their earnings on things such as healthcare and entertainment. Furthermore, Aviation research and development companies and institutions will bring the need for information-technology companies, engineering firms, etc.

In order to effectively diversify the County’s economy, the County must align its workforce development strategies with the aviation activities of the region. According to Dr. Harper-Anderson from the Virginia Commonwealth University’s L. Douglas Wilder School of Government and Public Affairs, “intense and consistent interactions [between workforce development and economic development agencies] create a stronger connection and result in better outcomes for local areas.”

## **SUMMARY**

The Atlantic County Aviation Innovation Hub is positioned to become the central location for the growing Aviation Economic Cluster in the entire Southern New Jersey region. According to the Aviation District’s stakeholders, this initiative will provide the County with much needed economic diversification, by ushering in aviation companies and institutions. The District’s assets and location makes it a perfect central hub for the aviation-related activities going on throughout the Region. Furthermore, having the NARTP within the District will offer a chance for collaboration among the area’s aviation assets to ensure effective and maintained economic development.

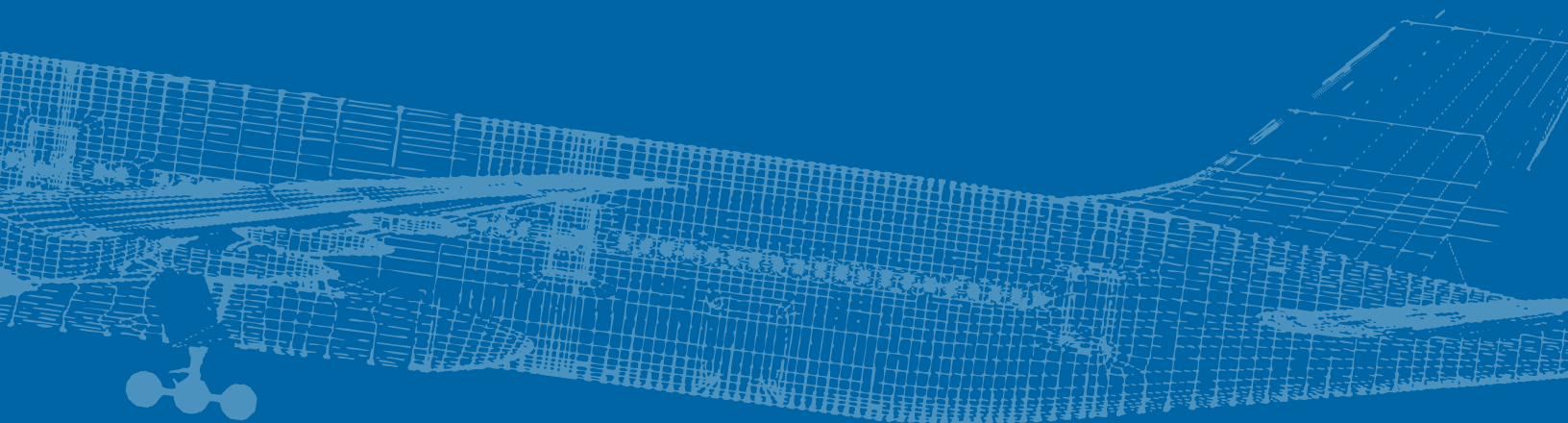
The County, ACEA, and NARTP have built a great amount of momentum toward bringing the aviation industry to the District. While the County does have many assets and incentives it can use to recruit more aviation companies, the County will have to align its workforce development program with the aviation industry’s needs.







# SECTION 07



**ACTION AGENDA**







## ACTION AGENDA

— This section of the plan outlines an Action Agenda for developing the Aviation District. It starts by laying out project and capital investments that should be made in order to successfully develop the Aviation District and offers strategies for bringing these investments to life. It is the recommendation of this plan that investments and development be phased in accordance with the various zones outlined on Map 1. These zones offer guidance for targeting development opportunities in the near and longer terms. Infrastructure, access improvements, and other investments in the Airport District, while not locked into any specific phased development process, by focusing on the various phases in sequence will encourage a more effective and efficient investment and expansion of the Aviation District. These capital investments should be made on the Airport property, in an effort to attract more aircraft-related operations, but should also be made outside of the airport property in the Aviation District, in an effort to attract aviation research and development companies and warehousing for air cargo operations.

### PROJECT AND CAPITAL INVESTMENTS:

To attract different aviation-related companies and institutions to the Aviation District, the County and its partners in this plan will have to make significant investments in additional ramp space at the Airport, new roads, highway access, transit access, communications, advertising, water and sewage, drainage, and workforce development. These investments will vary by the types of aviation companies the County is seeking to recruit to the Aviation District.

In order to successfully recruit aviation industries such as Air Cargo and Maintenance, Repair, and Overhaul (MRO) Operations, and new airlines, the Airport will have to accommodate these companies by expanding its ramp space and allowing for new hangar and warehouse space. These operations require large facilities and space for parking aircraft. Air Cargo operations will require warehouse space on, or with very close proximity to, the airport. Depending on the type of cargo being transported, there may be a need for cold storage warehouses as well. According to the National Academy of Sciences, Air Cargo operations require between





FIGURE 18. SOURCE: AIR CARGO NEWS

approximately 15,000 to 65,000 square feet of warehouse space. According to BuildingJournal.com, the cost for constructing warehouses in Atlantic County would be approximately \$900,000 for a 15,000 square foot warehouse and \$3.7 million for 65,000 square feet. There is room on the Atlantic City International Airport to house warehouse facilities, but it would also be possible to take cargo from the flight line ramp and transport to warehouses in the Egg Harbor Section of the Aviation District. That area of Egg Harbor Township is already home to an industrial park and there are plenty of empty lots that haven't enough acreage for large warehouses.

Specific project concepts include: For Maintenance Repair and Overhaul operations, hangar size and additional ramp space requirements will be determined by the types of aircraft serviced. According to Purdue University, a 25,000 square foot corporate maintenance hangar can cost up to \$8 million; this includes office spaces, kitchen, multi-purpose space, fire protection system, etc. An MRO that

facilitates large, commercial aircraft can be up to 300,000 square feet in size, which could cost up to approximately \$90 million. This figure does not include the cost of equipping the operation which will vary greatly depending on the kinds of maintenance operations the facilities will conduct. New Hangar space would probably fit best to the Northwest of the runways on the Airport.



FIGURE 19. MRO HANGAR. SOURCE: AVIATION INTERNATIONAL NEWS, 2014

According to AviationPros, MRO operations can consist of large hangars where aircraft are brought in, taken apart, and put back together. However, some MRO operations only work on specific components of aircraft such as avionics, landing gears, actuators, engines, etc. The industry can be highly specialized and the facilities needed for these operations largely depend on the types of services they provide.

The Atlantic City International Airport is positioned very closely to the Garden State Parkway and the Atlantic City Expressway; however, the County should consider constructing more direct routes



to the airport from both highway systems. As you can see in Figure 20, there is no direct path for traffic to access the Airport from the Expressway or the Parkway. To get from the Expressway, commuters must take the Expressway Exit 9 (Delilah Road), turn onto Delilah Road, and enter into a traffic circle which brings them to the Airport's main entrance (see Figure 21).

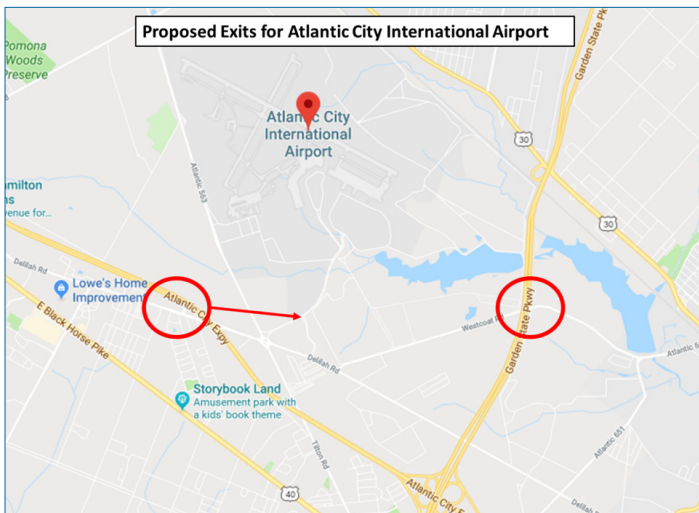


FIGURE 20. THE AIRPORT, GARDEN STATE PARKWAY, AND ATLANTIC CITY EXPRESSWAY



FIGURE 21. DELILAH ROAD INTERCHANGE

From the Garden State Parkway South-bound, commuters must merge onto the Expressway, take the same Delilah Road Exit, follow Delilah Road to the same

circle to bring them to the airport entrance (Figure 20). Including an entry/exit for the Garden State Parkway at Westcoat Road (See Figure 19) would make the airport more accessible and changing the Delilah Road exit on the Expressway and providing a direct Route to Amelia Earhart Blvd, would make.

In addition to highway access, the County should consider a rail connection for the Airport along the New Jersey Transit's Atlantic City to Philadelphia Line. A rail connection at the airport would allow for an easier commute for workers coming from the Philadelphia Metropolitan area. There has been talk of adding this connection in the past, with an estimated cost of approximately \$25 million. The proposed location for the new station would be located to the North of the Airport Property; however, the specific plans have not been announced.

Development at the Airport and within the Aviation District may require upgrades in Broadband communications, water and sewage, and flood and drainage infrastructure. Research and Development companies require high-speed internet access and the County and Airport will have to ensure their broadband communications infrastructure can withstand those high-speed demands. Water and sewage linkages will be required for any new building construction within the Aviation District. The Maps in Section III show the current sewage and water locations. Development in areas without water and sewage will require connections to the County's current systems. Finally, because



new construction causes rainwater displacement, the County and Airport will have to ensure the stormwater drainage will adequately accommodate new development within Aviation District and the Airport. Identifying these requirements will depend on the types of development planned and should be studied by the County to confirm whether or not this development will require upgrades.

To ensure the aviation industry has access to a highly-skilled and eligible workforce, the County is currently working to establish an Aviation Maintenance and Technical Academy at the Atlantic City International Airport. This Academy will provide MRO and additional flight operations at the Airport with highly qualified, FAA Certified maintenance professionals.

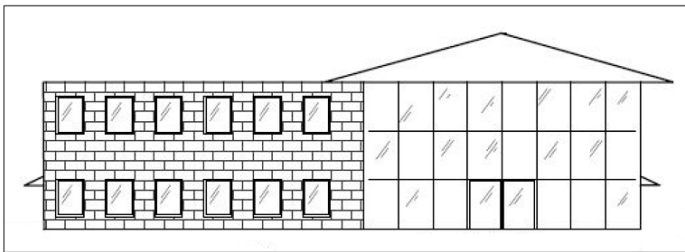


FIGURE 22. PROPOSED ATLANTIC COUNTRY AVIATION MAINTENANCE AND TECHNICAL ACADEMY

The Aviation Maintenance and Technical Academy will house an FAA accredited aircraft maintenance academy that will provide instruction and certification in airframe and powerplant academics. To pursue this Academy's development, the County partnered with Atlantic Cape Community College and Embry Riddle Aeronautical University to provide a plan for a modern, well rounded aviation maintenance program.

Furthermore, the County has already made some investments in Aviation workforce development with programs at the Atlantic Cape Community College, the County's high school system, and the County's vocational school. As previously mentioned, ACCC has an aviation program that includes instruction in general aviation, pilot training, and air traffic control. The County's high school system is planning to include an Aviation STEM program by partnering with Embry Riddle Aeronautical University's Gaetz Institute, which will allow students to enroll concurrently for high school and college credits. This partnership will begin in the Fall of 2019 with classes at the Atlantic County Institute of Technology and likely followed by 5 public schools in 2020. Finally, the Atlantic County Institute of Technology (the County's vocational high school) currently offers aviation academics to prepare students for careers in the aviation industry.

Infrastructure projects and workforce development programs are not the only areas in need of investment by the County and/or the ACEA. The Aviation Technology District will require administrative support to provide regulatory reviews and support for new investments. For instance, this support could include reviewing incentive eligibility for companies locating in the Aviation District, local zoning requirements, ombudsman work to shepherd new investors through the Municipal, County, and State regulatory requirements.



Additionally, the County, ACEA, or another designated entity must invest in a marketing strategy to ensure the aviation community knows that the Aviation District is a worthy investment for companies throughout the industry. The details of the marketing strategy are laid out below; however, enough should be invested for travel to trade shows and associated expenses, advertisements in trade magazines, social media campaigns, etc.

## PROGRAM AND POLICY INITIATIVES

### GOVERNOR MURPHY'S INNOVATION ECONOMY

In his State of Innovation Report, New Jersey Governor Phillip Murphy outlined several programs for building an “Innovation Economy” throughout the State. The Governor’s goal is to “leverage smarter, more targeted incentives and programs to bolster high-wage, high-growth sectors that bring money into New Jersey and support sustainable living for New Jersey residents.” The Governor’s report includes the aviation industry as a high-growth sector for the State. The following is a list of policies the Murphy Administration is proposing to incentivize companies, such as those in the aviation industry, to come to the State and help build an innovative economy.

#### NJ INNOVATION EVERGREEN FUND:

The NJ Innovation Evergreen Fund is planned to “address major shortfalls in venture capital investments for New Jersey startups,” according to the



FIGURE 23. GOVERNOR MURPHY CUTS THE RIBBON AT THE AVIATION DISTRICT'S NARTP.

Governor’s Report. This program will raise capital by auctioning State tax credits to corporations in an effort to raise \$500 million. Then the State will partner with venture capitalists to invest that \$500 million in the Governor’s targeted Innovative Industries, which includes the aviation industry. Aviation startups in the State will have access to the venture capital provided by the fund. Of course, this program could be used by aviation startups within the Aviation District.

#### NJ FORWARD TAX CREDIT

The NJ Forward Tax Credit would provide hiring incentives to companies within the “innovative industries” for hiring employees within Opportunity Zone census tracts. The annual award provides a maximum of \$6,400 in tax credits for each new or retained job within a 5-year period. Since part of the Aviation District is within an Opportunity Zone census tract, any company located in that designated area is eligible to receive this benefit. Although this legislation has not been enacted, the Governor and, the Legislature should maintain the Aviation District designation around Atlantic City International Airport to ensure continued success of the Aviation Innovation Hub.



## **OPPORTUNITY ZONE**

As mentioned in Section IV, the Opportunity Zone program offers capital gains tax deferments for those who invest in any of the Nation's Opportunity Zones. Fortunately, there is a census tract within the Aviation District with the Opportunity Zone designation. Any company or individual who invests its capital gains into the fund within the Aviation District will be able to defer the taxes on the original gain.

## **NEW EDA SMALL BUSINESS LOAN PROGRAM**

Currently, the NJ EDA Small Business Loan Program provides a loan of up to \$500,000 for small businesses within the State for fixed assets or working capital. Eligible small businesses must have been in operation for at least one (1) year to participate in the program. This program would be useful for small aviation companies within the Aviation District, but it would also be useful for any nonprofit aviation research institutions who meet the eligibility requirements. Eligible nonprofits must have been in operation for at least three (3) years to participate.

## **MARKETING AND BUSINESS ATTRACTION STRATEGIES**

To recruit aviation companies and institutions to the Atlantic County Aviation Technology District, the County

should embark on a multifaceted marketing and business attraction strategy that includes attending industry trade shows, advertising County and Regional assets, social media campaigns, mailing outreach, advertising at the Atlantic City International Airport, and include a place-making strategy for attracting an outside workforce. To accomplish this, the State, the County, and the ACEA (co-marketing) must continue the aviation-industry's current momentum by continuing to build partnerships with regional entities, especially those within the aviation industry.

## **TARGET MARKET**

The target market for the Aviation Technology District are those companies that can take full advantage of the District's assets and incentives. These include, but are not limited to:

- Maintenance Repair and Overhaul Operations
- Air Cargo Operations
- Airlines
- Aviation Research & Development Institutions
- Aviation Technology companies
- Avionics Companies
- Aviation Defense Companies
- Cargo Logistics Companies
- Aircraft Part Manufacturers



## STRATEGIES

### MEDIA COLLABORATIVE-

In Section V, this plan mentioned the need for the Aviation District to establish an Aviation Advisory Board. The intent is that this Board will produce a collaborative environment for the aviation related entities in the region. Additionally, this collaboration should also extend to advertising the Aviation District as a destination for the Aviation Industry. Each entity within the District can highlight the assets they bring to the District and the Board can craft a collaborative media strategy with inputs from its membership. There are several Aviation-related associations, magazines, websites, etc. for which the Aviation District could advertise its assets to the industry, while focusing its message to the correct audience. The following is a list of potential advertising methods the District should consider.

### TRADE SHOWS-

The following list includes the top-rated Aviation Industry Trade Shows in North America and Europe:

- World Aviation Training Conference and Trade Show- Orlando, Fl.
- Boeing Seafair Air Show- Seattle, WA.
- International Conference for Aviation Experts, Academics, Military Personnel and Industry Leaders- Big Sky, MT.
- Business & General Aviation Industry Suppliers Conference- Los Angeles, CA.
- NBAA Business Aviation Convention & Exhibition- Las Vegas, NV.
- Aero Conference- Portland, OR.
- Arizona Aircraft Expo- Scottsdale, AZ.
- US Corporate Aviation Summit- Fort Lauderdale, FL.
- Farnborough/Paris Air Show, France

These events attract aviation businesses and institutions from around the world, making them perfect locations for showcasing the opportunities, assets, and incentives for investing in the Aviation District. The State, County, and ACEA should work on a co-marketing strategy by undertaking opportunities to attend aviation-related trade shows to advertise the State and District's assets and incentives. This would include possibly hosting a booth at these events and/or distributing pamphlets about the District's aviation activities, while showcasing the tax incentives involved with buying property or investing in the District through the Opportunity Zone programs.



## ADVERTISING IN TRADE MAGAZINES-

The County and ACEA should also consider taking out ads in aviation trade magazines to reach the widest and most relevant audience possible. According to Mediaspace Solutions , trade magazine advertisements provide “laser-focused targeting,” they are a “trusted source,” and they “reach decision makers.” Much like attending tradeshow, advertising in aviation trade magazines will ensure the District’s opportunities, assets, and incentives are being promoted to the right market.

## SOCIAL MEDIA-

The County, the ACEA, and the Aviation Advisory Board can use social media platforms such as LinkedIn to advertise the Aviation District. LinkedIn’s platform includes industry groups for which members of a business community can connect. This platform can also target advertisements to members of aviation professional groups, or people who have included their aviation industry experience in their profile. This type of advertising will enable the Aviation District to target professionals within the Aviation Industry.

## INFRASTRUCTURE INVESTMENTS

This section provides an outline of the County’s near, mid, and long-term investment priorities for the Aviation District:

The following list is comprised of the investments mentioned above with Cost Estimates:

Investment	Cost Estimate
Clearing Land for ramp space north of the flight line. <sup>16</sup> :	\$18,000/100,000 square feet
Broadband Fiber throughout the High Development potential areas identified in Section III. <sup>17</sup> :	\$22,000 per mile
Warehouse Construction on the Airport property or in the High Development Potential Areas identified in Section III. <sup>18</sup>	\$600,000/10,000 square feet
Hangar Construction on the Airport property	\$3,000,000/10,000 square feet
Highway access from the Atlantic City Expressway and the Garden State Parkway. <sup>19</sup>	\$2,000,000 - \$4,000,000 per mile
Rail Connection north of the Airport.	\$25,000,000
Aviation Maintenance and Technical Academy Construction on the Airport property.	\$7,300,000



## NEAR-TERM INVESTMENTS:

The County should prioritize investments in workforce development, administrative staffing, and an advertising campaign in the near-term. These investments are less expensive than some of the others suggested; however, they will also build a proper foundation for administering the Aviation District and building a local aviation workforce.

Since the County is already beginning an aviation workforce development foundation with the area high schools and community college—and is planning an Aviation Maintenance and Technical Academy—the County should continue the momentum it currently has with developing an aviation workforce. This would include continuing to pursue the County’s high schools’ relationship with the Gaetz Institute at Embry Riddle Aeronautical University and advertising the aviation programs at Atlantic County Community College. Combined, these workforce development programs will provide the aviation industry at the Aviation District with a highly skilled workforce.

Investing in the County’s aviation workforce development would also include construction of the Atlantic County Aviation Maintenance and Technical Academy. If the County is successful in recruiting Air Cargo and MRO companies to the Airport and Aviation District, the need for qualified aircraft maintainers will increase dramatically for the area. The FAA’s Maintenance Academy accreditation process can be lengthy; thus, the County should begin this process immediately.

To coordinate advertising the Aviation District to the industry and assisting new businesses to the District with State and Local regulatory issues, the County should consider staffing an administrative office dedicated to developing the Aviation District. This could include funding one or two positions at the County or at the ACEA. Furthermore, the County should begin working toward the advertising campaign outlined above so the Aviation District can be advertised to the aviation industry as soon as possible.

## MID-TERM INVESTMENTS:

In the mid-term, the County should ensure that companies can move to the Aviation District with as much ease as possible. This would include, but is not limited to clearing land for new development on the Airport grounds and in the Aviation District and constructing warehouses and/or airplane hangars for air cargo or MRO businesses. The ACIA could apply for federal grant funds and/or use bond financing for land clearing, construction of warehouses, and hangar construction. The County and the SJTA should make every effort to prepare adequate locations for aviation companies to locate in the Aviation District and the Airport. To that end, the SJTA should



consider which locations would be most suitable for constructing new ramp space, warehousing, or hangars, and ensure that the land is adequately cleared for MRO and air cargo operations on the Airport grounds.

The ACIA could use its bonding ability to build warehouses and/or hangars and lease them to aviation companies, similar to the ACIA leasing space at the NARTP for aviation research and development companies. The ACIA has the experience and ability to undertake large projects such as these, as they have been successful in building the Atlantic City Convention Center and the NARTP.

The County should look at investing in adequate water and sewage connections, and proper drainage, for development within the Aviation District. According to the map provided in Section 04, there are large portions of the northern part of the airport that do not have access to running water and sewage. Northern portions of the Atlantic City International Airport were part of a protected bird habitat (see Figure 24), but the Airport recently worked out an agreement with the New Jersey Pineland commission to relocate this habitat. Moving the bird habitat not only improves safety at the Airport but also opens an additional 293 acres of land that can be developed (pending New Jersey Pinelands commission approval) adjacent to runway 13-31 and runway 4-22 at the Airport.



FIGURE 24. BIRD HABITAT AREA ON AIRPORT GROUNDS



Broadband access is not only important for the research and development activities within the Aviation District, but it is a vital component for all businesses in today's economy. So that the Aviation District's current Broadband network is not overloaded with new companies' data and information needs, the State should inventory its current capabilities and come up with a plan to ensure there will be adequate internet access for new development.

## **LONG-TERM INVESTMENTS**

As the Aviation District develops, and if the district successfully recruits air cargo and MRO companies, there will be a need to enhance access to the airport and district for large trucks moving cargo and aircraft parts. As previously mentioned, this would likely require direct access to and from the Garden State Parkway and Atlantic City Expressway. In its current setup, access to the airport from these roads is cumbersome and would be difficult for large volumes of trucks to navigate.

Furthermore, the State should invest in a rail connection at the Airport for the NJ Transit Philadelphia to Atlantic City Line. This will broaden the employment pool from which aviation companies in the District can recruit. However, because the NJ Transit Line passes through the area to the North of the Airport, there will have to be a way to get train passengers from the rail station, to the airport entrance, as there currently no direct airport entrance access from that area. Not only will this enable the District to attract workers from farther away, this will also make the airport more accessible to air travelers from farther away.









SECTION 08

IMPLEMENTATION STRATEGY







## IMPLEMENTATION TIMELINE

Based on the priority investments described in the previous section, this section provides an estimated timeline for how these investments in the Aviation District should be made.

### 1<sup>ST</sup> YEAR:

Within the first year, the County and Aviation District Partners should begin the process for constructing and accrediting the Aviation Maintenance and Technical Academy. As previously mentioned, the construction and accreditation for this facility can take a considerable amount of time and the sooner this project is started, the sooner it will be able help produce an eligible aviation workforce. Furthermore, the County should begin planning for future investments within the first year to ensure there are no delays in executing this plan.

### 2<sup>ND</sup> YEAR:

In the beginning of the second year of implementation, the State should undertake an analysis to ensure it has adequate bandwidth in its broadband system to support existing and continued business growth within the Aviation District. The County could examine its current capacity and hire an engineer to estimate the needs of future growth. The County and the SJTA should also look at the infrastructure requirements for sites within the District and Airport to assess utility needs.

By the end of the second year, the Aviation District should come up with an advertising and branding strategy, and have a full-time staffer dedicated to administering the Aviation District's development. Advertising the location to the aviation industry will be an important piece for developing the Aviation District; however, the County should also consider a place-branding strategy, as part of its advertising strategy, to attract the workforce these companies will need. Place-branding strategies have been effective, especially when carefully targeted to specific audiences . The County's place-branding strategy for the Aviation District should target workers in the creative and professional industries.



### **3<sup>RD</sup> YEAR:**

By the beginning of the third year of implementing the Aviation District Plan, the County, ACIA, and/or the SJTA should begin clearing land on and off the airport property (depending on jurisdiction) in the Aviation District to provide areas for air cargo and MRO facilities. By the end of the third year, these entities could consider funding the construction of additional aircraft ramp space, hangars, and/or warehouses in the Aviation District, to be leased to aviation companies in those industries once they are built. Funding the construction of new ramp space at the airport would accommodate air cargo and MRO operations.

### **4<sup>TH</sup> TO 5<sup>TH</sup> YEARS:**

By the fourth and fifth years, construction for ramp space, hangars, and/or warehouses should have begun and air cargo and MRO companies could begin locating at the Atlantic City International Airport.

### **6<sup>TH</sup> YEAR AND BEYOND:**

In the sixth year and beyond, the County and the Aviation District partners should begin planning the Airport highway connections from the Garden State Parkway and Atlantic City Expressway. As previously mentioned, these connections will make access to the Airport and surrounding area more accessible for large trucks hauling cargo and aircraft parts, should the airport receive air cargo and MRO operations, respectively. In addition to providing direct access to those highways, the State should invest in a rail connection for the Atlantic City International Airport in this timeframe. This rail connection at the airport would benefit workers at the District and travelers alike.

## **SUGGESTED PARTNERSHIP ASSIGNMENTS**

### **ATLANTIC COUNTY**

The County Engineer could assess the Aviation District's current infrastructure for water and sewage, electricity, broadband bandwidth, and roadways. This assessment will help the County identify the needs for new development within the Aviation District. The County could also work with the ACEA on staffing a permanent position to coordinate the Aviation District's development and advertising campaign.

### **ATLANTIC COUNTY ECONOMIC ALLIANCE**

The ACEA should continue working to recruit aviation companies from all aviation sectors to develop a diverse atmosphere within the industry. Until administrative



control for the Aviation District is established, the ACEA could be the primary focal point for aviation-related development in the designated area. The ACEA could also begin the advertising campaign for the Aviation District until and unless another partner steps in or specific staff is funded and dedicated to the District's administration.

### **ATLANTIC COUNTY IMPROVEMENT AUTHORITY**

The ACIA could use a combination of US EDA grant funds and bond financing to construct public facilities that will be leased to private entities within the Aviation District. As previously mentioned, this could include warehouses on or off the Airport property and within the Aviation District. Additionally, the ACIA could construct hangars for leasing to airlines and/or MRO operations on the Airport.

### **SOUTH JERSEY TRANSPORTATION AUTHORITY**

The SJTA could establish areas for development within the Airport proper and work with the County and other partners to add additional aircraft parking and ramp space that will be required with increased aviation operations.

### **NATIONAL AVIATION RESEARCH AND TECHNICAL PARK**

The NARTP should coordinate the Aviation District Advisory Board and ensure there is adequate space for the group to meet regularly.

### **FAA**

The FAA at the Atlantic City International Airport should have a representative on the Aviation District Advisory Board. Currently, the District's largest aviation asset is the FAA and the William J. Hughes Technical Center. Their experts can assist with collaboration, federal regulations, and technology testing.

### **NJII**

As the lead agency running the NARTP, NJII should also participate in the Aviation Advisory Board and work to ensure the broader aviation economic cluster is engaged with the Aviation District; this could include regional industry outreach.

### **ACCC**

The Atlantic Cape Community College should continue its aviation workforce development programs and work to advertise those programs to reach the entire Southern New Jersey Region and Philadelphia Metropolitan Area.



## **FUNDING SOURCES:**

### **NJ EDA**

As mentioned in Section 05, the NJ EDA has multiple funding options for aviation companies within the State. If enacted, the NJ Evergreen Fund can be used for startups as venture capital. Also, if enacted the NJ Forward Program could provide tax credits of up to \$6,400 for creating and retaining jobs over a five-year period. The New Jersey Forward Program and any successor to the Grow New Jersey Incentive Program, which expired on June 30, 2019, should re-establish the “Aviation District” around Atlantic City International Airport and offer maximum incentives. The New EDA Small Business Loan provides loans of up to \$500,000 for small businesses within the State for fixed assets or working capital. The programs could substantially help new businesses in the Aviation District develop sustainable operations.

### **ATLANTIC COUNTY IMPROVEMENT AUTHORITY**

The Atlantic County Improvement Authority could fund projects within the Aviation District through bond financing. The ACIA has successful experience with this as recently as 2018, with the NARTP project.

### **UNITED STATES ECONOMIC DEVELOPMENT ADMINISTRATION**

The US EDA’s Public Works Program could also be used to fund infrastructure projects in the Aviation District. According to the US EDA’s website, this program “enables communities to attract new industry; encourage business expansion; diversify local economies; and generate or retain long-term, private-sector jobs and investment through the acquisition or development of land and infrastructure improvements needed for the successful establishment or expansion of industrial or commercial enterprises.” This program can be combined with County resources to facilitate the capital and infrastructure projects laid out in this Plan.

### **UNITED STATES DEPARTMENT OF AGRICULTURE:**

The USDA’s Water & Waste Disposal Loan & Grant Program could be utilized for ensuring the currently undeveloped areas the County is considering to use for aviation companies on and off the Airport within the Aviation District. According to the program’s website, “this program provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.” According to the USDA’s website, there are long-term, low-interest loans and, if available, grant funding.



## **FEDERAL AVIATION ADMINISTRATION (FAA) AIRPORT IMPROVEMENT PROGRAM**

According to the FAA's website, the Airport Improvement Program (AIP) "provides grants to public agencies—and, in some cases, to private owners and entities—for the planning and development of public-use airports." For 2019, Grant Awards ranged from \$150,000 to \$45,000,000. These funds can be used for "those improvements related to enhancing airport safety, capacity, security, and environmental concerns. In general, sponsors can get AIP funds for most airfield capital improvements or rehabilitation projects and in some specific situations, for terminals, hangars, and nonaviation development." The Federal share for these projects is typically 75% for large and medium airports and 90% for small airports.

### **OPPORTUNITY ZONE FINANCING**

Since the area is within a Federal Opportunity Zone, businesses in the Aviation District (who fall within the Zone) could seek investment funding from an authorized Opportunity Zone Fund.

### **FIRST STEPS:**

The initial steps for developing the Aviation District should be community outreach to local municipal leadership. The County and the ACEA should share this plan with the Mayors and Councilmembers of these communities so they know what to expect and can provide answers to their constituents regarding how this Aviation District plan will be rolled out. For the community members, the County, ACEA, and Municipalities could consider townhall-style meetings where the ACEA can present this plan to residents so they are kept aware of the Plan and its progress, and so that they can provide feedback.

Once the Mayors and Councilmembers are presented with this plan, they should inform their individual Planning Boards on this plan's recommendations. This will allow each municipality's planning board enough time to ensure that these activities fit within each zone's allowable uses and variances can be issued when or if necessary. Furthermore, when the Aviation Advisory Board is created, each local government should have a representative on the Board, in an effort to keep communication open and transparent for the municipal governments.

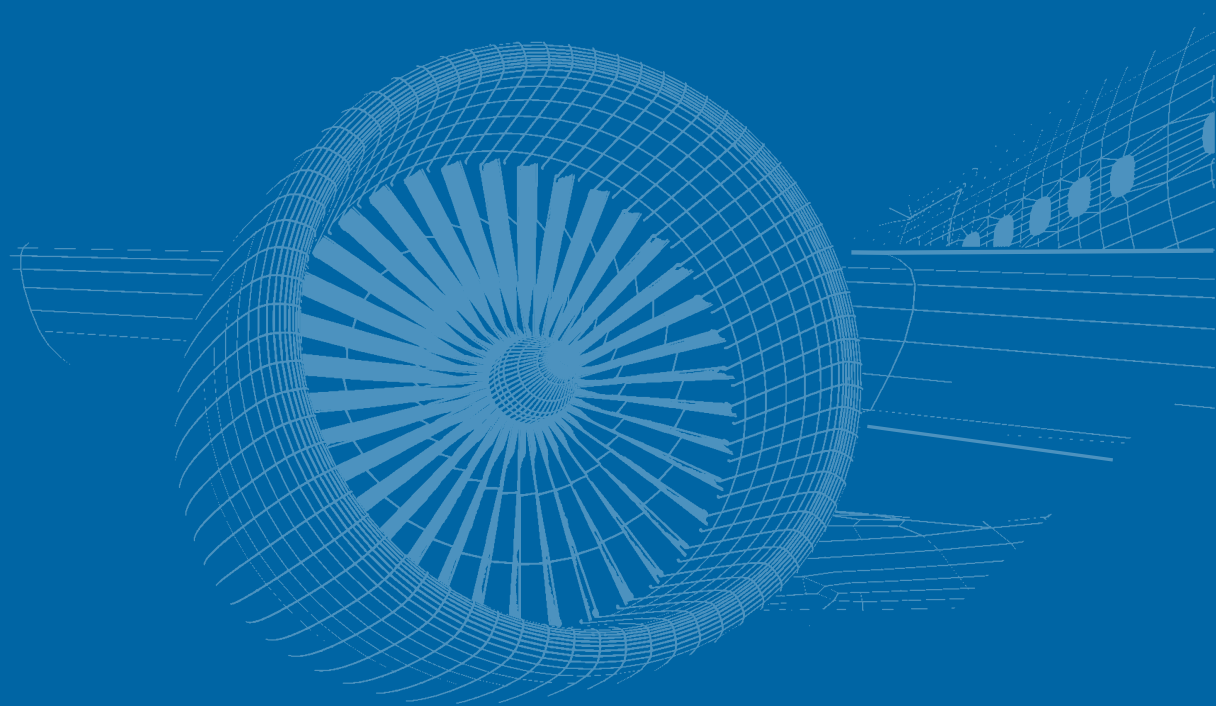
In addition to informing local municipal leadership, zoning boards, and residents, the ACEA should consider a social media campaign video to kick off the plan. This can be posted to various social media networks and can add local excitement to the prospect of developing the area as an aviation hub. Furthermore, this video could also be used in advertising to aviation companies and social media groups on various platforms. This video could be used to highlight the area to the aviation companies and institutions while showcasing the many benefits of locating to the Aviation District and the amenities the County has to offer.







SECTION 09



SUMMARY OF THE PLAN







## SUMMARY OF THE PLAN

Atlantic County is making a historic economic shift from its reliance on Atlantic City's gaming, hospitality, and tourism industries, to a diversified economy that includes multiple sectors of the aviation industry. According to the analyses conducted throughout this Plan, the County has laid very important foundations for aviation workforce development, business attraction, partnerships, and private and public investments. The County and the ACEA have been diligently working to leverage the County and Airport's current assets, partnerships, incentives, and available land in an effort to recruit aviation companies to the Aviation District

The County's Workforce Development program already includes aviation activities at the high school and community college levels. This workforce development program is being extended even further with the County's planned Aviation Maintenance and Technical Academy at the Atlantic City International Airport. This will produce a workforce for air cargo, MRO, and airlines that operate out of the Airport. Furthermore, the Region's universities could supply the District with the highly-technical workforce that aviation research and development demands.

Incentives for aviation companies seeking to locate within the Aviation District abound. As mentioned throughout this Plan, the area is rife with Federal, State, and Local tax incentive and subsidy programs for which aviation companies could take advantage. New Jersey Governor Phillip Murphy has identified the aviation industry as a high-growth potential sector in his Innovation Economy Plan. This designation allows aviation companies to receive even more incentives for moving their businesses to the State and the Aviation District.

The aviation industry is rapidly growing and changing. With increased demands on air travel and air cargo, the demand for maintenance operations and technicians is projected to greatly increase over the next decade. The Aviation District has plenty of developable land at the Airport and within its public sections in the surrounding municipalities to accommodate air cargo and MRO operations.





FIGURE 25. AVAILABLE LAND IN THE AVIATION DISTRICT

The Market Assessment provided in this plan indicates that the County is ready and able to integrate the aviation industry into its economy, especially within the Aviation District. There is tremendous room for economic growth in Atlantic County and many opportunities for aviation companies to take advantage of what the County has to offer with its current and growing assets.

To facilitate future growth of the aviation industry at the Aviation District, the County and its partners will have to make significant investments in the area to attract aviation companies and an eligible workforce. This includes projects to expand the airport's current capacity for aircraft parking, hangars and warehouse construction, and easier access to the Airport from the regional highways. Of course, there are many Federal and State grant and loan opportunities for which the County could fund these large projects.

Furthermore, the County will have to continue its momentum with the aviation industry by fulfilling the Goals and Objectives outlined earlier and advertising its assets and business incentives. As previously mentioned, this will include highlighting the Aviation District at trade shows, in trade magazines, and through professional social media groups. This will also include using the NARTP as the focal-point for regional aviation collaboration. The NARTP has already been successful in recruiting prominent aviation companies and research institutions, and there are still several buildings planned for the future.

To facilitate some specific direction and tasks, the following outline offers a range of steps that can be initiated in next months. There are many issues involving both organizational collaboration and specific project implementation that will take time for the ACEA staff and individuals from partner organizations to track. A Task Force, to be charged with marketing issues, tracking new industry trends, pursuing funding for infrastructure and other improvements should be established either formally or informally to keep the plan's implementation moving and encourage new development opportunities.



For example, the regulatory environment for aviation businesses is constantly changing. Safety issues are front and center today, given the 737 Max-8 issue. There are new and pending regulations for unmanned aircraft. There are also key emerging markets for unmanned air cargo and E-VTOL urban air mobility (Electronic Vertical Take Off and Landing). An individual or organization within the Task Force should be charged with tracking and updating the local stakeholders in these issues.

There are also issues regarding the growth and development of the Aviation Hub that tie very nicely into the “Smart Airport” Strategies evolving through the County’s recent i6 Innovation Challenge Grant. These include:

- Concept breakthroughs (e.g., Gate-to-gate trajectories vs. procedural control)
- Digital transformation: Smart airports and connected aircraft; deep analytics
- Speed to market and early user input with smart test beds and aviation systems of systems prototyping
- Identification of Emerging Best Practices in Smart Airport Design and Integration

In addition, it is critical that educational collaborations be broadened that will expand training opportunities to ensure a pool of qualified workers both for existing jobs and those that will be provided within the Aviation Hub. Ongoing support from Embry-Riddle Aeronautical University, the development of the Aviation Training & Maintenance Academy, and the support of local and regional schools and universities can help ensure that the latest in STEM research, aeronautics, dual-use (research in civil/military machinery and technologies); new modeling both for business solutions as well as aircraft design and maintenance all remain central to the growth and development of the Atlantic County Aviation Hub.

One of the principal goals of this document is to facilitate small business development in the Aviation District. As implied above, companies that cater to various aspects of aviation maintenance and technology can be prime recruits for locating within the growing “hub” of new businesses. This would include firms involved in areas such as the following:

- Painting and decaling
- Air frame structural and sheet metal repair
- Windshield repair and replacement
- Upholstery repair and replacement
- Carpeting and interior design
- Avionics
- Software and computer specialists
- General servicing operations
- General engine repair and maintenance
- Machinists



This list of “business types” can help to focus the outreach and marketing efforts of the County as it moves to expand the existing Aviation Hub. Beyond small businesses, there are other larger entities that can also be catalysts for growth. The local and regional partners that have been central in developing the concepts and ideas in this Plan will continue to play important roles. Their ongoing help and guidance will be critical. But, there are also large national and international firms that can become engaged as specific tasks and development opportunities are identified. These include but may not necessarily be limited to:

## **EXAMPLES OF AVIATION PARTNERSHIPS**

### **Traditional Aviation Players and New Entrants**

- Boeing Corporation
- Lockheed Martin
- UTC Aerospace Systems – Collins Aerospace
- Raytheon Corporation
- Honeywell International
- FedEx
- Spirit, Jet Blue and other large commercial carriers
- Amazon Prime Air
- Uber Elevate

### **Information Technology**

- IBM
- Microsoft Corporation
- Apple
- Harris Corporation/L3 Harris

### **Consulting and Professional Services**

- Booz-Allen
- Deloitte
- Opportunity Zone Financing
- Grant Funding Specialists

Atlantic County, like all communities, has seen fluctuations in its economic cycle. Some of these fluctuations particularly related to the gaming and tourism industries have been significant. However, diversifying its economy with a high-growth industry like aviation will help insulate the County from similar downturns in the future. The County has already begun laying the groundwork for economic development with



the aviation industry and this Plan offers the County suggestions on how to maintain and grow this momentum. To aid in keeping the momentum moving, a summary matrix of “Next Steps, Projects, and Tasks” follows this narrative.

As the County and the ACEA continue to cultivate relationships among the Aviation District partners and outside aviation companies and research institutions, the aviation industry in Atlantic County will soon take off. The County is well positioned to grow its aviation industries and become the World-class Aviation Hub to which it aspires.

## SUMMARY INVENTORY OF ACTIONABLE NEXT STEPS, PROJECTS, AND TASKS

PROPOSED PROJECT/TASK	POSSIBLE PROJECT LEAD(S)	SUGGESTED TIMELINE (On or Before)
<b>Near Term Agenda</b>		
Identify Targeted Development Sites and Ensure Municipal Support	ACEA and Municipal Governments	December 2019
Establish Aviation District Marketing Collaborative/Task Force	ACEA and Atlantic County Board of Chosen Freeholders	December 2019
Create Marketing Materials to Promote New Aviation District	Aviation District Marketing Collaborative/Task Force	March 2020
Create Website of Developable/Priority Sites in the Aviation District	ACEA and Atlantic County Board of Chosen Freeholders	March 2020
Identify and Fund Position of Aviation District Ombudsman	ACEA and Atlantic County Board of Chosen Freeholders	March 2020
Create Inventory of Targeted Businesses and Industries	Aviation District Marketing Collaborative/Task Force	March 2020
Screen and Prioritize the List of Possible Business Prospects and Points of Contact	Aviation District Marketing Collaborative/Task Force	March 2020
Recruit an Expert in Opportunity Zone Financing to help Recruit Potential Investors/Projects	Atlantic County, ACEA, SJTA, Egg Harbor Township	March 2020
Direct Mail and Personal Outreach to Targeted Industries	Aviation District Marketing Collaborative/Task Force and Ombudsman	March 2020
Align i6 Smart Airport Initiatives and Recommendations to the Needs of the Aviation District	i6 Smart Airport Team and Aviation District Marketing Collaborative/Task Force	May 2020
Target Exploratory Visits by Business Prospects, Educational Leaders and Other Investors	Aviation District Marketing Collaborative/Task Force	June 2020
Fund Conceptual Engineering Study of Short-Term Tiers 1 and 2 Road and Highway Access Improvements, as necessary	Atlantic County Engineering Department and Atlantic County Improvement Authority	June 2020
Fund Conceptual Engineering Study of Near Term Tiers 1 and 2 Water/Sewer and Infrastructure Extensions, as necessary	Atlantic County Engineering Department and Atlantic County Improvement Authority	September 2020



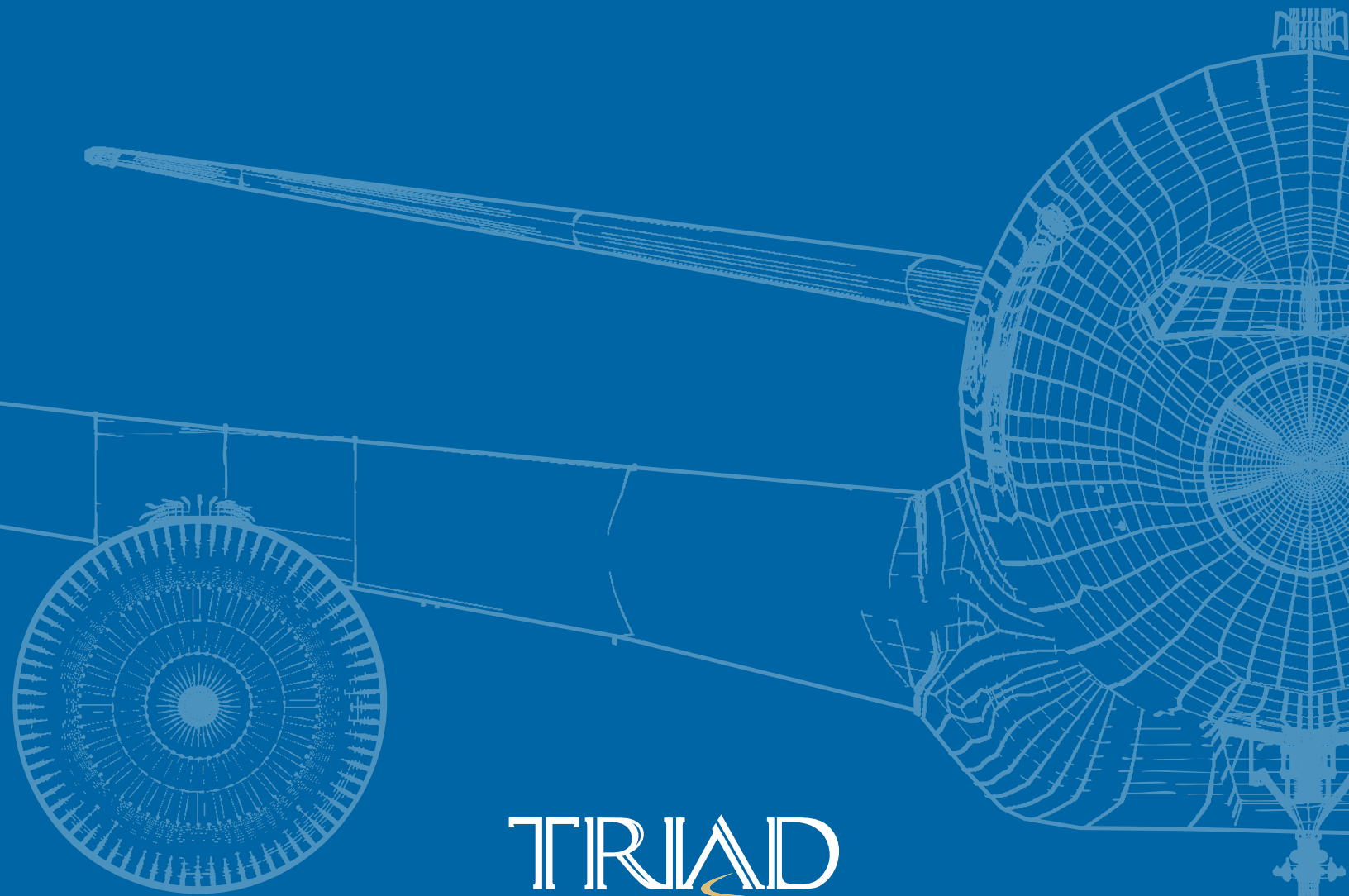
PROPOSED PROJECT/TASK	POSSIBLE PROJECT LEAD(S)	SUGGESTED TIMELINE (On or Before)
<b>Near Term Agenda</b>		
Fund Preliminary Architectural Plans for Atlantic County Aviation Maintenance & Training Academy	Atlantic County Board of Chosen Freeholders and Atlantic County Improvement Authority	September 2020
Work with Educational Leaders and Workforce Development Board to Define Specific Training Needs and Programs	ACEA, Embry Riddle Aeronautical University, Atlantic Cape Community College, County WDB	September 2020
Expand Collaborations on R&D and workforce development with McGuire–Dix–Lakehurst Base and Cape May Coast Guard	ACEA, Atlantic County Government	October 2020

<b>Mid-Term Agenda</b>		
Complete Construction of the Atlantic County Aviation Maintenance Academy	ACEA, Atlantic County government, Atlantic County Improvement Authority	August 2021
Fund construction of any new infrastructure, access or other improvements needed to Tiers 1 and 2 of the Aviation District	State, Atlantic County Engineering Department, Atlantic County government, Atlantic County Improvement Authority, SJTPO	September 2021
Begin conceptual planning for new Hangar and Warehousing in the Aviation District	Atlantic County Engineering Department and Atlantic County Improvement Authority	November 2021
Expand Partnerships with New Educational and Training Institutions and Implement New Aviation Training Programs	State, ACEA, Embry Riddle Aeronautical University, Atlantic Cape Community College, County WDB	December 2021
Conduct Analysis of Long-Term Broadband Needs in Aviation District	State, ACEA, Aviation District Marketing Collaborative/Task Force	December 2021
Implement Branding and Full Scale Marketing Campaign for District Development	State, ACEA, Atlantic County, and Aviation District Marketing Collaborative/Task Force	December 2021
<b>Longer-Term Agenda</b>		
Expand Hangar Space at the Aviation District	Atlantic County Engineering Department and Atlantic County Improvement Authority and Private Investors/Companies	TBD
Create Aviation District/International Airport Station on NJ Transit Atlantic City Line	New Jersey Transit, U.S. DOT, N.J. DOT, ACEA, Atlantic County, A.C. International Airport, SJTA	TBD
Construct Direct Highway Access to the AC Expressway	SJTA, New Jersey Transit, U.S. DOT, N.J. DOT, ACEA, Atlantic County, A.C. International Airport	TBD



<b>Longer-Term Agenda</b>		
Market Aviation Training Academy Opportunities as a Passenger and Freight Maintenance Facility	State, ACEA, Atlantic County, N.J. DOT, Aviation District Marketing Collaborative and District Ombudsman	TBD
Develop New Air Passenger and Freight Maintenance Facilities in Coordination with Aviation Training Academy	New Jersey Transit, U.S. DOT, N.J. DOT, ACEA, Atlantic County, A.C. International Airport, SJTA	TBD





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