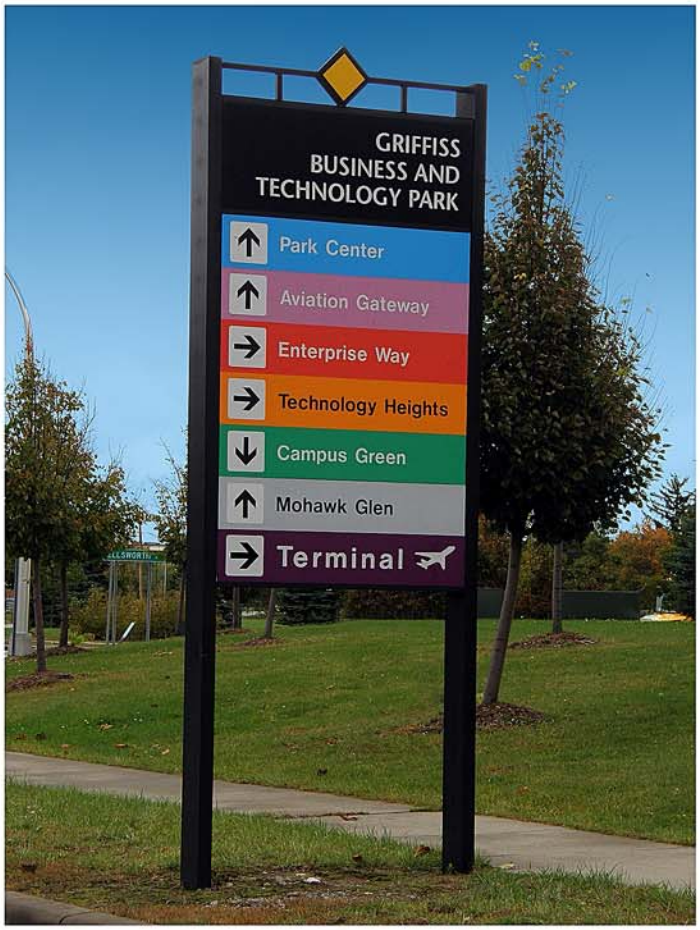
Griffiss International Airport
Business Plan

Technical Report



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Griffiss International Airport Business Plan

1. INTRODUCTION

THE PURPOSE OF THIS BUSINESS PLAN FOR Griffiss International Airport is to recommend a plan of action to improve the Airport's financial performance and long-term viability as a provider of jobs and general aviation services to Oneida County and the broader Utica-Rome metropolitan area. The plan is founded upon an understanding of current activities at the Airport and sets forth options to address a number of key areas: the Airport's economic impact; job creation on and off the Airport; opportunities related to the Airport's maintenance/repair/overhaul (MRO) tenants; marketing for aviation users and non-aeronautical business; high utility and facility maintenance costs; retro-fitting of aging structures for new users; air service options; and, capitalizing on a number of real growth opportunities in the near term.

1.1 Vision and Key Issues

The 1,680-acre Griffiss International Airport features an impressive airfield designed to meet standards for the operation of a range of military aircraft since its activation as Rome Air Depot in early 1942. The Airport is equipped with a primary runway measuring 11,820 feet in length by 200 feet in width. This impressive length, combined with a control tower, non-precision GPS approaches to both runways, and a precision instrument landing system (ILS) on Runway 33, permits the Airport to accommodate operations of all aircraft in the civil and military fleet, especially during periods of low visibility and poor weather conditions. Landside facilities consist of approximately 20 structures, including: Airport administrative and FBO offices; an aircraft rescue and fire fighting (ARFF) building; large conventional hangars for storage and aircraft maintenance; and, a set of five "nose dock" hangars that were once used for maintenance of B-52 aircraft.

Looking forward, the Airport's vision is to serve as a nexus of economic activity for the region. The Business Plan presents an overall strategic direction and 5-year plan for the Airport, given its existing setting and opportunities. A number of preliminary issues have been identified that are addressed in this plan including:

- ***Economic Impact Assessment:*** The Airport does not break even relative to operating costs, so there is a need to show the economic value of the Airport to the County. In this regard, there are a significant number of high-paying jobs supported by industries at the Airport, which create large direct and indirect contributions to the local economy. This value is generally not recognized by the public or their elected representatives. In addition, the previous spending from the Military Airport Program (MAP) at Griffiss has reportedly totaled more than $90 million. To communicate the economic impact of the Airport, some accounting of the job creation and economic outputs from that spending is desired. Thus, one important output of the study is an economic impact assessment for the Airport. The economic impact assessment will use inputs such as the number of jobs on-Airport, along

with a more accurate figure for total investment from all sources, to estimate total economic output of Griffiss International Airport.

- ***Job Creation:*** The philosophy of economic development in the Mohawk Valley is relatively simple: job creation. Thus, if enterprises at the Airport break even, it will be considered a good trade off for the creation of more jobs. This is especially the case given the loss of jobs since the closure of Air Force operations at the Airport. Therefore, it is recognized that preference and scoring weight will be given to Business Plan alternatives that will result in the creation of more jobs. While revenue enhancement is important in balancing the budget, the overriding concern at this time is linked to increasing the employment base in the County and region.

- ***Marketing Materials:*** Currently, the Airport is marketed by Mohawk Valley EDGE and the Griffiss Local Development Corporation (GLDC). Discussions with Airport Management indicate that more marketing is needed. While this study cannot produce marketing materials, it can produce good information that can be included with other marketing items from the Airport and Oneida County. These materials can be packaged with information developed in the Business Plan for a wide range of future marketing, advertising, and promotional campaigns the County may consider for attracting activity and business investment to the Airport.

- ***Utility Costs:*** The Airport currently operates on a $4.5 million budget and has experienced an operating deficit of $1.5 million. Most of this deficit can be attributed to utility costs. For example, Building 101 alone uses roughly $800,000 in utilities each year. These high costs are due to the aging utility infrastructure of the Airport, which includes a steam heating system. Because most of the buildings use steam heat, there is a significant waste of power when compared to newer radiant heating techniques, insulation, and green technology. The Business Plan will analyze a number of potential cost-effective methods of lowering utility expenses at the Airport.

- ***Large Infrastructure:*** Griffiss Airport incorporates 1,700 acres of the former Griffiss Air Force Base, including acres of concrete paving, large hangars, and undeveloped land. Aside from utilities, the upkeep of this huge airfield requires significant labor, large maintenance costs, significant mowing in the summer, and snow plowing/blowing in the winter. Without major tenants supporting the operation through their rents and fees, along with grants to perform capital maintenance, it would be difficult for the County to operate the facility.

- ***Cost Effective Retrofitting:*** There are a number of older Air Force buildings and hangars that must either be re-designed and retrofitted to newer uses or demolished. Some require extensive reconstruction. For example, one of the 28,000 square foot "Nose Dock" hangars is being renovated for about $3 million (including conversion from steam to natural gas systems). Thus, much of the decision process in how to proceed with renovations or rehabilitations depends upon financing sources (grants or loans), terms, and potential rental rates that can be charged for the reconstructed facilities. Clearly, buildings covered by grants either from the Military Airport Program or NYS Bond Act or Airport Improvement

Program are much more likely to show a positive set of net revenues over time.

- ***Significant Opportunities:*** While the Airport faces a number of challenges, it does have significant potential and real opportunities in sight. For example, the possible attraction of military flight training and airlift programs to Griffiss for refueling would add significant revenues to both the FBO and to the County. In addition, the possible attraction of other MROs to the Airport could help the facility become a "one-stop maintenance shop" for all types of aircraft. The development of hangars on the Airport is believed to be another method of enhancing operating revenues. Other options include the continued support of charter operators and of Mohawk Valley Community College, which offers aircraft maintenance courses.

- ***Airline Operations:*** Although the Airport has a Part 139 Operating Certificate, it has not been able to attract scheduled airline service since the loss of subsidized Essential Airline Service (EAS) in 2002. The size of the local market, combined with the Airport's proximity to Syracuse-Hancock International have prevented non-subsidized service in recent years. These factors are likely to constrain scheduled air service activity at least for the five year planning horizon of this Plan.

- ***Local Demographics:*** The Airport and the associated Griffiss Business & Technology Park have attracted roughly 75 companies and approximately 5,500 jobs since the facility was turned over to the County in the mid-1990s. However, some socioeconomic and demographic characteristics of the County have lagged behind New York State. For example, since 2000, County population has dropped 1.6 percent, while the State population has grown 2.7 percent. Additionally, 2007 per capita personal income (PCPI) in Oneida County was $30,623, which is just 66 percent of the statewide PCPI average of $46,364. The challenge for the Airport is to improve its financial and operational performance and contribute to local job creation, despite such trends.

The Business Plan will address these issues within the broader goal of improving overall revenue production and streamlining costs where appropriate. Additionally, since the Airport currently operates at a deficit, it is important to communicate its overall economic value to the County. When complete, the Business Plan will serve as a roadmap for the continued operation, maintenance, investment, and development of Griffiss International Airport.

1.2 Desired End Products

A number of end products will be produced as a result of this analysis, including:

- An economic impact assessment that identifies the Airport's direct and induced impacts in Oneida County.
- An identification and evaluation of needs, opportunities, and challenges facing the Airport, including:
  - Potential cost-effective methods for lowering utility and maintenance costs, to include "green" technology retro-fitting.

  - Creative options for reuse of existing Airport structures to support the Business Plan strategies.
  - An approach for capitalizing on growth opportunities in markets currently being served by the Airport, such as the military and MRO markets, for revenue enhancement and job creation.
  - Aviation and non-aviation development opportunities.
- A five-year projection of revenues and expenses at the Airport for the baseline case and recommended plan scenario.
- Strategic planning recommendations for the Airport, including those for capital development, leases, operations, marketing, and management.
- Informational and graphic materials for use by the Airport for promotion and marketing.

1.3 Report Outline

In order to address the issues described above and to produce the desired end products, this report has been organized to include the following sections:

- ***Section 1*** - Introduction
- ***Section 2*** - Airport Mission and Management Structure
- ***Section 3*** - Existing Airport Characteristics
- ***Section 4*** - Baseline Financial Outlook
- ***Section 5*** - Business Plan Alternatives
- ***Section 6*** - Recommended Plan
- ***Section 7*** - Airport Community Value
- ***Appendix A*** - State and Local Incentive Programs
- ***Appendix B*** - Impact of Green Technologies on Costs
- ***Appendix C*** - Economic Impact/IMPLAN Results

2. AIRPORT MISSION AND MANAGEMENT STRUCTURE

A CLEARLY ARTICULATED MISSION REFLECTS THE GOALS and vision for Griffiss International Airport. It also empowers all Airport staff to fulfill their roles. The overall Airport mission provides a foundation of common purpose from which decisions can be made and changes can be pursued. The management structure and capabilities of the Sponsor must fit with the mission of the Airport to ensure success.

Understanding the background and management structure of the Airport aids in working through the key issues identified in the previous section. This examination can identify whether roles and/or responsibilities are clearly defined, or if authority in the decision-making process is granted at the proper levels. To address these issues, this section is organized to include the following:

- Airport Mission
- Airport Management Structure

2.1 Airport Mission

Griffiss International Airport's role is that of a publicly-owned, public-use airport. The Airport is classified in the National Plan of Integrated Airports System (NPIAS) as a General Aviation airport, providing access to the air transportation system for general aviation aircraft. Griffiss International does hold an FAR Part 139 Operating Certificate, which permits certain types of airline and charter aircraft to use the facility. The function of Griffiss International Airport as stated on the Airport website is:

> *"To provide a safe and well-maintained facility to serve the current and future commercial, corporate business, governmental, and general aviation needs of Oneida County and the State of New York."*

Recommended for realignment or closure by the 1993 Base Realignment and Closure Commission (BRAC), and subsequently realigned by September 30, 1995, the Airport now serves as a General Aviation facility for the Oneida County area. Since the realignment of Air Force missions occurred, there has been a concerted effort on the part of County leaders to find ways for the Airport to act as a catalyst for job creation and economic development in the County.

Discussions with Airport management indicate that job creation in Oneida County is the number one priority for economic development. Thus, the focus for the Airport has also been placed on job creation as a means to improve revenues and to serve as a catalyst for economic growth in the County. A number of other specific goals for the Airport include:

- Enhancing public relations to elevate awareness in the community of the economic impact of the Airport in the County today, including the many high-paying jobs supported by the Airport.

- Reduction of high utility costs associated with the antiquated steam heat utility system.
- Continued support of existing Maintenance, Repair, and Overhaul (MRO) operations on the Airport and recruitment of new businesses to compliment this market niche.
- Providing assistance to the existing FBO operator for growth initiatives that support and reinforce the market position of the Airport.
- Improved revenue generation through securing new tenants and private investment for both aviation and non-aeronautical development on the Airport.
- Reduction of maintenance costs associated with operating such a large infrastructure.

While the statement of the Airport's mission shown above is adequate, the challenge to achieving greater financial performance in the future will depend on the County's ability to partner with private enterprise in creating a strong brand and market niche. Subsequent sections of this Business Plan will further examine the Airport's market potential in an effort to achieve these goals.

2.2 Airport Management Structure

Griffiss International Airport is owned and operated by Oneida County. The County is governed by a 29-member Board of Legislators. Serving as the head of County government is the County Executive. The County Executive is independently elected to perform specific executive functions. The Board of Legislators retains legislative authority, but executive authority is vested in the County Executive.

There are 11 standing committees of the Board of Legislators, one of which is the Airport Committee. There are nine members of the Board on the Airport Committee. Griffiss International Airport is operated as one of the County Departments and is led by the Commissioner of Aviation. The Commissioner of Aviation is a position appointed by the County Executive, and is subject to confirmation by the Board. Figure 1 below illustrates the organizational structure of the Airport Department at Oneida County.

At the top of the Airport operational structure is the Commissioner of Aviation, under whom are three divisions. These three divisions are: Management Services, Operations, and Planning & Capital Projects . As shown in Figure 1, each division has a number of functions that are carried out by various departments. The Operations Division holds the largest number of employees lead by managers, or superintendents, of five departments. All together, the Airport Department accounts for 23 County employees in a wide range of positions, including: Accounting Supervisor, Heavy Equipment Operator, Maintenance Worker, Auto and Heavy Equipment Mechanics, and Supervisors of Airport Maintenance and Buildings and Grounds.

The Commissioner of Aviation position has accountability to County officials for all areas of the Airport business, operations, and planning and capital projects. The Commissioner and his managers must have a working knowledge of Federal, State, and local laws and regulations relating to aviation and airport operations. Administratively, the Commissioner supervises staff and

coordinates with Board of Legislator and/or the County Executive on matters of long-range capital development, human resources/staffing, and funding options under the County's general fund. As a Part 139 Certificated Airport[1] the Airport Management team must implement the provisions of federally required security programs, as well as the various operational and safety requirements for scheduled airline service.

2.3 Other Participating Agencies

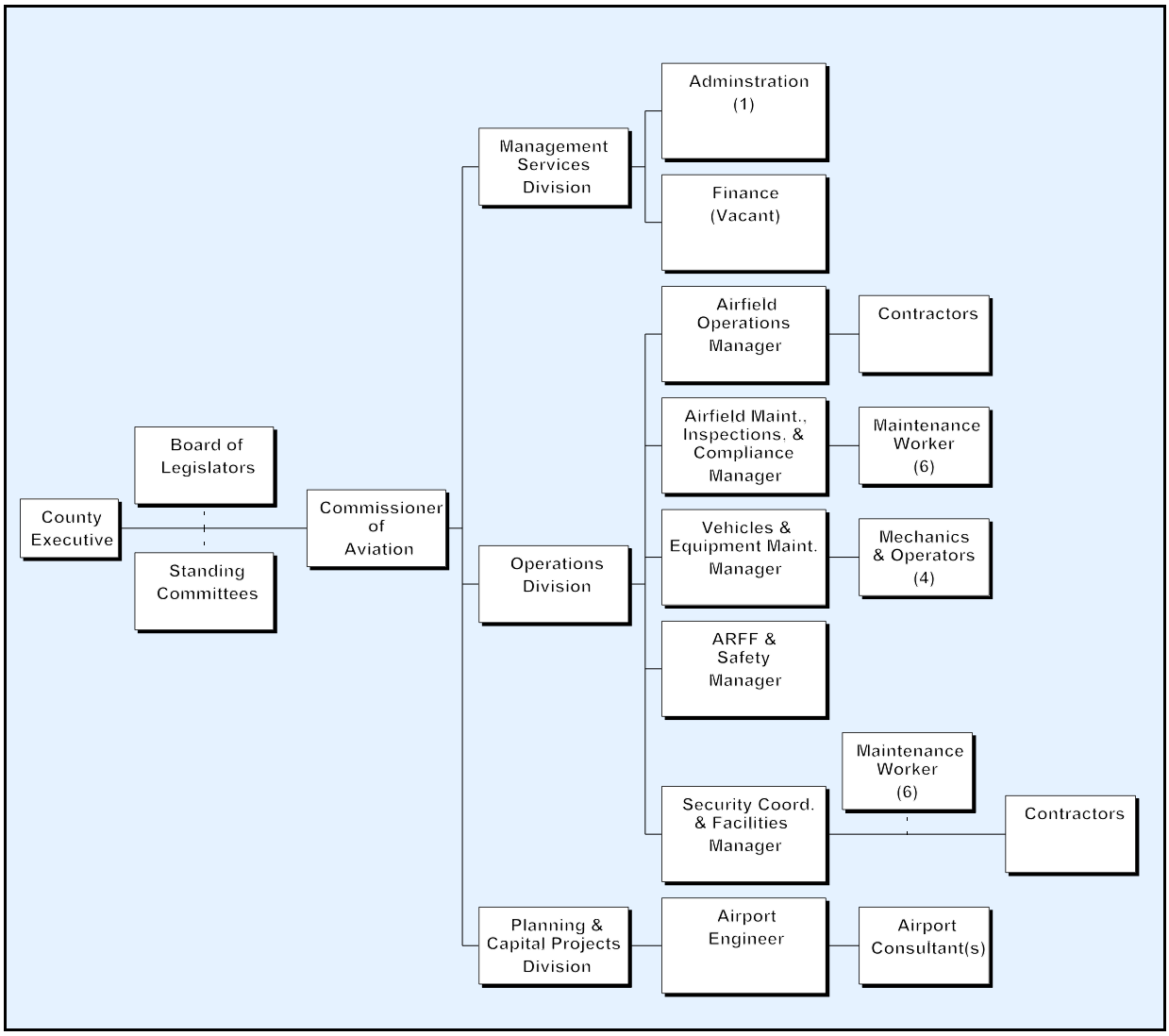


Figure 1 - ***Griffiss International Airport Organization Chart***

[1] Title 14, Code of Federal Regulations, Part 139 requires the FAA to issue airport operating certificates to airports that: serve scheduled and unscheduled air carrier aircraft with more than 30 seats; or serves scheduled air carrier operations in aircraft with more than 9 seats but less than 31 seats. Airport Operating Certificates serve to ensure safety in air transportation. Source: http://www.faa.gov/airports/airport_safety/part139_cert/

In addition to Oneida County as the Airport sponsor, there are a number of other agencies involved in activities around the Airport that will likely impact the future of the Airport. These agencies include: Griffiss Local Development Corporation (GLDC); Mohawk Valley Economic Development Growth Enterprises (EDGE); and Oneida County Industrial Development Agency (IDA). This section describes their roles and how they affect the Airport.

Griffiss Local Development Corporation

Griffiss Local Development Corporation is a not-for-profit agency established by New York State in 1994 that is charged with facilitating and coordinating the redevelopment efforts at Griffiss Business & Technology Park. GLDC is responsible for implementing the reuse plan of the decommissioned Griffiss Air Force Base. The Master Reuse Strategy was published in 1995 and updated in 1996 with the approval of the surrounding communities and the U.S. Department of Defense. GLDC has a 15-member board and is essentially a real estate developer dealing solely with the Park. GLDC is a statutory vehicle through which the redevelopment of the Base is possible. As such, the GLDC received the land transferred by the Air Force to the community and based on State law can play a more active role in its redevelopment. GLDC can provide access to loans and grants, can be more active in public-private partnerships, and can even structure arrangements to purchase and develop real estate.

One example of the added legislative flexibility of GLDC is the Griffiss Utility Services Corporation (GUSC). GUSC is a not-for-profit corporation that was formed in 2000 for the purpose of assisting GLDC in its economic development efforts. In particular, GUSC's role is to administer the provision of utility services within the Park at the lowest price practicable, consistent with the provision of safe and reliable service. GUSC also works with existing and prospective property owners and tenants within the Park on strategies to minimize energy-related costs.

Mohawk Valley EDGE

Mohawk Valley EDGE is a private, not-for-profit corporation serving as the economic development agency for Oneida and Herkimer Counties. The relationship of EDGE to GLDC is that EDGE provides staff to GLDC. In this way, EDGE is an integral part of the long-term effort by the County to strengthen opportunities and open the door for new businesses and industries to locate and grow within the Griffiss Business & Technology Park, as well as the broader areas of the two-county area it serves.

Because of EDGE's two-county service area, the agency is involved in areas beyond the Griffiss Business & Technology Park, and acts as a one-stop agency for business assistance. EDGE promotes and markets specific sites available to industrial development and site selection specialists and real estate brokers representing businesses both inside and outside the Mohawk Valley. It also links the area's economic development organizations by developing financing, incentive, and other assistance packages to help companies interested in locating or expanding their operations and job base in Oneida and Herkimer Counties.

Oneida County Industrial Development Agency

Oneida County Industrial Development Agency is a public benefit corporation of New York State offering financial incentives for hands-on manufacturing and other eligible projects. Compared to the GLDC, the IDA is an arm of County government that exists for the benefit of the County, whereas the GLDC is independent of local government (both Oneida County and the City of Rome). Options for project financing and incentives made available by the IDA include:

- Payments in Lieu of Taxes (PILOT)
- Tax-exempt Industrial Development Bond financing
- Taxable Industrial Revenue Bond financing
- Relief from Mortgage Recording Tax
- Relief from Sales Tax on Materials, Machinery, Equipment and Furnishings

One significant difference between the IDA and GLDC is that utilizing the financing benefits of the IDA requires public notice, public hearings, and disclosure. In contrast, due to legislative authority granted to local development corporations, the GLDC does not need to advertise projects via competitive bid process or execute an independent valuation of an asset.

Summary

Together, all three agencies are involved in economic development in areas surrounding the Airport. In a sense, Mohawk Valley EDGE serves as the face of economic development activities, providing staff to GLDC, but also working in a broader two-county region. EDGE also aids the IDA on projects in Oneida County. The IDA, which was created after GLDC was established, is a more traditional form of local development agency, as it is a public benefit corporation that is subject to legislative protocols akin to most government agencies. However, in some cases these protocols add time and obstacles to economic development opportunities in the local market. The role of GLDC is one that responds to the importance of redeveloping the Base for the community, and therefore benefits from a more streamlined legislative authority.

3.0 EXISTING AIRPORT CHARACTERISTICS

3.1 Introduction

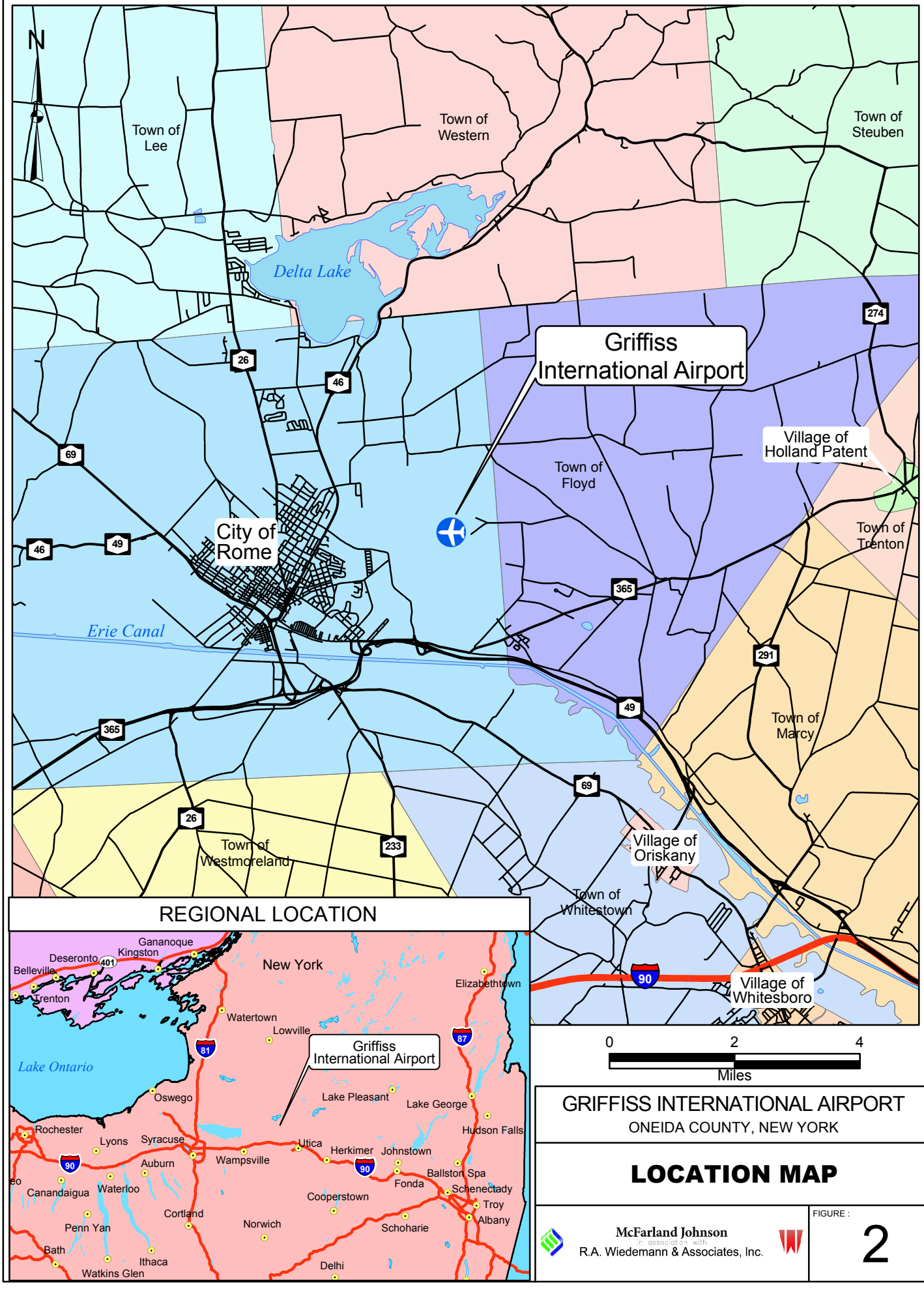
Griffiss International Airport (RME), formerly known as the Griffiss Airpark, is located in, and owned and operated by Oneida County. The Airport is on the site of the former Griffiss Air Force Base. Griffiss is situated on 1,680 acres in the City of Rome and the Town of Floyd. The Airport is approximately three miles from downtown Rome, 18 miles east of the City of Oneida, and 15 miles west of the City of Utica. The Erie Canal is located approximately one mile south of the Airport. The City of Rome is located in the Mohawk Valley region of Central New York, approximately 45 miles east of Syracuse and 110 miles west of Albany. The location of the Airport is illustrated in Figure 2.

Access to the Airport is provided via several routes. Access to the primary facilities at the Airport is via State Route 825 (Griffiss Parkway) from State Routes 46 and 49. From State Route 825, several roads provide access to the Airport and to facilities in the adjacent Griffiss Business and Technology Park. Airside access is primarily gained via Hangar Road, accessible from State Route 825, and Perimeter Road accessible from State Route 825 and Ellsworth Road. One major highway, Interstate 90, the New York State Thruway, provides east-west access to the Rome area. From Interstate 90, motorists can utilize State Routes 233 (Exit 32, Westmoreland/Rome) and 365 (Exit 33, Verona/Oneida/Rome). Other major access roads to the Airport area include State Route 26 from the north and south, and State Route 69 from the east and west.

Griffiss International Airport is designated in the 2009-2013 National Plan of Integrated Airport Systems (NPIAS) as a general aviation facility[1] with no commercial passenger service. NPIAS is a national airport system plan for the development of public use airports in the United States prepared by the Federal Aviation Administration (FAA). This plan identifies needed improvements to airports in the national system that are eligible for federal funding provided through the Airport Improvement Program (AIP). The funding comes from the Airport and Airways Trust Fund, which is supported by taxes paid by aviation system users. Expenditure of AIP funds are scheduled through the five-year Airport Capital Improvement Program (ACIP). Griffiss is also included in the 2008 New York State Department of Transportation State Airport System Plan (SASP), which identifies airport development in the State and serves as the source for the NPIAS. The SASP also identifies Griffiss as a General Aviation airport.

Prior to its use as a general aviation airfield, Griffiss International Airport was known as Griffiss Air Force Base. The base was opened in 1942 as the Rome Air Depot. The base was later renamed after Col. Townsend Griffiss, the first United States airman to die in Europe during World War II. The base served as part of the Strategic Air Command from 1960 until 1992. From 1992 until the base's realignment as a civilian and non-combat facility in 1995, Griffiss served as part of the Air Combat Command[2]. Presently, the adjacent Griffiss Business & Technology Park continues to host some Air Force operations, including the Rome Laboratory, part of the Air Force Material Command. In addition, the Eastern Air Defense Sector

[1] National Plan of Integrated Airport Systems (NPIAS) (2009-2013). Page A-71.
[2] New York State Military Museum (http://www.dmna.state.ny.us/forts/fortsE_L/griffissAir.htm).



GRIFFISS INTERNATIONAL AIRPORT

ONEIDA COUNTY, NEW YORK

LOCATION MAP

McFarland Johnson
in association with
R.A. Wiedemann & Associates, Inc.

FIGURE :
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(EADS), a component of the North American Aerospace Defense Command (NORAD) operated by the Air National Guard, is also located at the Griffiss Business & Technology Park. At its peak, Griffiss Air Force Base was the largest employer in Oneida County.

While there has never been commercial passenger service at Griffiss International Airport, the former Oneida County Airport in the Village of Oriskany maintained commercial service until CommutAir, a codeshare partner with Continental Airlines, cancelled its route (subsidized by the Essential Air Service) in 2002. Historically, the Oneida County Airport had been a hub and operations center for Mohawk Airlines and Empire Airlines. In the 1990s, Empire Airlines was acquired by Piedmont Airlines, which eventually would become USAir (and today, US Airways), and following the acquisition, the airline cancelled jet service from the Oneida County Airport and closed their major maintenance base and reservations call center[3].

Oneida County provides 23 full and part-time jobs at the Airport. Public sector jobs at the Airport include a Commissioner of Aviation, a Superintendent of Airport Maintenance, a Superintendent of Buildings & Grounds, an Assistant Engineer, and several Airport Maintenance Workers and Heavy Equipment Mechanics. Other public and private sector employers, including Million Air, the Fixed Base Operator (FBO); MidAir USA; Mohawk Valley Community College; the U.S. Air Force; and the Federal Aviation Administration also employ personnel based at the Airport. Further details regarding these tenants will follow in Section 3.4, *Existing Tenants & Users*.

Runways

The airport has one runway. Runway 15-33 extends in a northwest-southeast direction. Table 1 summarizes the characteristics of the runway. According to airport management, Griffiss has an ILS to the Runway 33 end, as well as an Area Navigation (RNAV/GPS) approach and a VHF Omni-Directional Range/Distance Measuring Equipment (VOR/DME) approach to both runway ends. In 2008, ILS approaches to both runway ends, installed by the military, were removed. The ILS to the Runway 15 end was not replaced. Figure 3 displays the current airport layout at Griffiss.

Taxiways

Griffiss currently has nine usable taxiways, as well as a number of taxiways that have been taken out of service. Each taxiway is concrete with medium intensity taxiway lights. Taxiway "A" is a parallel taxiway to Runway 15-33. Taxiways "B" and "E" are former runways that provide access to the eastern portion of the Airport, including Aprons 3 and 4 as well as Hangar #101. Both taxiways can also provide access to areas identified for future development in the 2008 Airport Layout Plan Update. Taxiways "C" and "D" are stub taxiways that provide access from Taxiway "A" to Runway 15-33. Taxiways "G", "H", and J" are connector taxiways that provide access from various aprons and airport facilities to Taxiway "A". According to the 2005 Terminal Area Plan, Taxiway "H" is closed. Taxiway "F" is also a connector taxiway, providing access from the taxilane adjacent to Aprons 3 and 4 to Taxiway "E". Table 2 details each of the taxiways at the Airport.

[3] US Airways (http://www.usairways.com/awa/content/aboutus/pressroom/history.aspx).

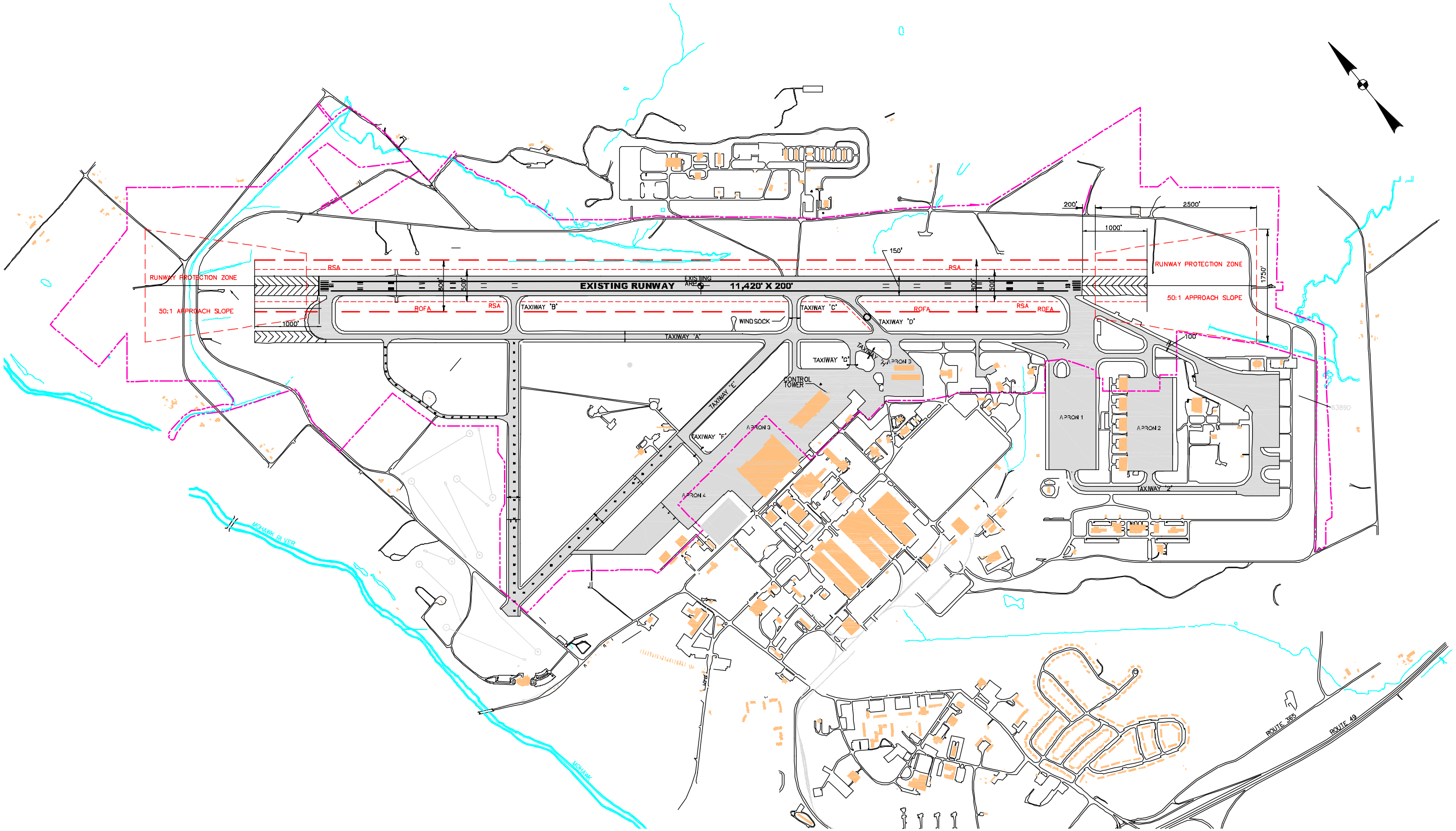
Table 1: Runway Characteristics		
	Runways	
	15	**33**
Airport Reference Code	D-V	
Length	11,820’	
Width	200’	
Grooved	Yes	
Pavement Condition	Good	
NAVAIDS		
ILS	No	Yes
REILs	Yes	No
MALSR	No	Yes
PAPI	Yes	Yes
Runway End Elevation	503.6’	497.9’
Marking	Non-Precision	Precision
Lighting	High Intensity Runway Lights	
Touchdown Point	Yes	
Gross Weight Limitations	Single Wheel: 100,000 lbs Double Wheel: 240,000 lbs Double Tandem: 500,000 lbs	
AWOS/ASOS	ASOS	

Source: AirNav, June 2009 (http://www.airnav.com/airport/RME
FAA Airport Master Record, as of June 2009

Airport Reference Code

An Airport Reference Code (ARC) is based on characteristics of the most demanding aircraft, or group of aircraft (generally referred to as the “design aircraft”) that regularly use the airport, with the term “regularly” defined as at least 250 takeoffs annually (500 annual operations). The letter defines the approach category and is based on the approach speed, or 1.3 times the stall speed of the design aircraft. The Roman numeral, which indicates the design group, is based on the wingspan or the tail height of the design aircraft, whichever is more demanding. Table 3 indicates the groupings used to determine the ARC.

A variety of aircraft utilize the Griffiss International Airport. The largest of these aircraft include the Boeing 747 and members of the Airbus 320 family. In addition, a variety of single-engine, twin-engine aircraft, and small jets utilize the facility on a regular basis. Several of these aircraft types are indicated in Table 4.



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GRIFFISS INTERNATIONAL AIRPORT
ONEIDA COUNTY, NEW YORK

EXISTING LAYOUT

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FIGURE:
3

Table 2: Taxiway Characteristics								
	A	B	C	D	E	F	G	H
Width	150’	200’	200’	100’	100’	75’	75’	75’
Lighting	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights	Medium Intensity Taxiway Lights
Type	Parallel	Stub	Stub	Stub	Stub	Connector	Connector	Connector
Location / Function	Parallel to Runway 15-33	Access to Runway 15 from Taxiway “A”	Access to Runway 33 from Apron 3 and the Adjacent Taxilane	Access to Runway 33 from Apron B	Access to Runway 15 from Taxiway “F”	Access to Taxiway “E” from Aprons 3 & 4	Access to Taxiway “A” from Apron B	Access to Taxiway “A” from Apron B

Source: Airport Layout Plan Updates, September 2003 and September 2008.

Table 3: Airport Reference Code (ARC)		
Aircraft Approach Category	**Approach Speed**	
A	Less than 91 knots	
B	91 knots or more but less than 121 knots	
C	121 knots or more but less than 141 knots	
D	141 knots or more but less than 166 knots	
E	166 knots or more	
Airplane Design Group	**Wingspan**	**Tail Height**
I	Up to but not including 49 feet	Up to but not including 20 feet
II	49 feet up to but not including 79 feet	20 feet up to but not including 30 feet
III	79 feet up to but not including 118 feet	30 feet up to but not including 45 feet
IV	118 feet up to but not including 171 feet	45 feet up to but not including 60 feet
V	171 feet up to but not including 214 feet	60 feet up to but not including 66 feet
VI	214 feet up to but not including 262 feet	66 feet up to but not including 80 feet

Source: FAA Advisory Circular 150/5300-13, Change 12, page 1.

Table 4: Aircraft Use Sample (August 20 – 27, 2009)		
Single Engine	**Multi-Engine**	**Jet**
Beechcraft Bonanza	Aero Commander 500	Boeing 737
Cessna 172	Beechcraft Baron	Cessna Citation Excel
Cessna 206	Cessna 414	Cessna Citation V
Piper PA-21	Cessna 421	Gulfstream V
Piper PA-28	Piper PA-31	

Source: FlightAware.com

The 2008 Airport Layout Plan Update designated the runway at Griffiss an ARC of D-V. The design aircraft for Griffiss was listed as the Boeing 747. According to the Airport Layout Plan Update, the ultimate ARC and design aircraft is expected to remain unchanged through the planning period and Griffiss will retain an ARC of D-V, indicating use by some of the most demanding aircraft currently flying. According to the 2008 New York State Airport System Plan, of the commercial and general aviation airports in New York State (with the exception of LaGuardia and J.F. Kennedy Airports, which were not listed in the study), only Stewart International Airport in Newburgh had a more demanding ARC (D-VI) than Griffiss.

Obstructions

FAR Part 77 Imaginary Surfaces

The specifications for airspace surrounding airports are set forth in Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace. The airspace is defined and delineated by a set of geometric surfaces referred to as "imaginary surfaces," which extend

outward and upward from airport runways. Those imaginary surfaces identify the maximum acceptable height of objects beneath and within their boundaries. An object may be considered an obstruction to air navigation if it penetrates an imaginary surface.

The imaginary surfaces created under FAR Part 77 consist of five geometric surfaces that surround an airports runway. These surfaces are the primary, approach, transitional, horizontal, and conical. If a surface is penetrated, the approach or departure minimums at that airport could be impacted. According to the 2008 ALPU, there are on-Airport obstructions off the Runway 33 end at Griffiss. The ALPU recommended removal of these on-Airport obstructions.

Runway Protection Zones (RPZs)

The Runway Protection Zone (RPZ) is a controlled area that is generally kept clear of concentrated activity and development. The FAA recommends property acquisition and/or lease easements within the RPZ to assure necessary control over these areas. An RPZ is a trapezoidal area that begins 200 feet from each runway end that extends and diverges based on the type of aircraft that the facility expects to serve, and by approach visibility minima for each runway end. The RPZs at Griffiss are all on airport property and are clear of non-compatible uses, including places of public assembly or residential structures. Table 5 describes the RPZ requirements for the runway ends at the Airport.

Table 5: Runway Protection Zones

Runway	Length (feet)	Inner Width (feet)	Outer Width (feet)	Area (Acres)
15	2,500	1,000	1,750	78.914
33	2,500	1,000	1,750	78.914

Source: Airport Layout Plan Update, September 2008.

Runway Safety Areas (RSAs)

Incidents at airports across the country over the past several years have brought attention to the importance of maintaining adequate Runway Safety Areas (RSAs). The size of the RSA is determined based on the instrument approaches available for a runway as well as the ARC of the runway. Table 6 lists the required and actual RSA widths and the length of the extended runway safety areas at Griffiss.

Table 6: Runway Safety Areas

Runway	Required Width	Required Extended Runway Safety Area	Actual Width	Actual Extended Runway Safety Area
15	600	1,000	600	1,000
33	600	1,000	600	1,000

Source: Airport Layout Plan Update, September 2008.

As shown in Table 6 above, the Runway Safety Areas at Griffiss are presently in compliance for Runway 15-33. Typical of many military airfields, and unlike many general

aviation facilities, paved runway overruns, rather than grass areas, are provided for the extended runway safety area. A paved overrun is also available on the Runway 15 end of Taxiway "A".

3.2 Existing Aviation Activity

Griffiss International Airport serves the recreational and business general aviation market in the Mohawk Valley region of New York State. The Airport, with one of the longest and widest runways in the State, is accessible to a variety of aircraft from the smallest single-engine propeller aircraft to the Boeing 747 jumbo jet. Griffiss is an attractive option for aircraft based in the region as well as to transient aircraft passing through the area.

According to data provided by Oneida County, as of January 2010, 68 aircraft were based at Griffiss. This includes 52 single-engine aircraft, 11 twin-engine aircraft, two jets, and four helicopters. Operations data for the year ending December 31, 2009 indicated 53,678 operations occurred at the Airport. Of the total operations, 20,732 were itinerant. These operations included 178 air carrier operations, 1,392 air taxi operations, 16,964 general aviation operations, and 2,198 military operations. The airport had 32,946 local operations, including 28,356 general aviation operations, and 4,590 military operations. According to the 2008 New York State Airport System Plan (SASP), Griffiss was the busiest general aviation airport in the State, outside of the New York City Metropolitan Area.

3.3 Existing Facilities

Landside facilities support the many activities involved in storing and maintaining aircraft and in processing aircraft and passengers before and after use of the airside facilities. Typical landside facilities include aircraft hangars and aprons, terminals, aviation fuel facilities, parking lots, and access roads. Well-maintained and affordable landside facilities are important to an airport's efficient operation and success in terms of both general aviation and commercial passenger use. Landside facilities and services are discussed in detail on the pages to follow.

FBO Facilities

The FBO at Griffiss, Million Air, currently operates out of Hangar #100. Facilities include hangar space for based and transient aircraft, as well as a general aviation terminal area with restrooms, vending machines, a lounge area, WSI weather information, a crew rest area, WiFi access, computers, and printers. Million Air also provides a courtesy car for the use of transient pilots and visitors. In addition, the FBO provides Type I and IV deicing services, lavatory service, hotel reservations, and rental car services through an agreement with Avis Rental Car Systems. Prior to the arrival of Million Air in 2008, FBO services at the Airport were provided by Oneida County.

Hangars

As a result of the Airport's status as a former Air Force Base, there are a variety of previously constructed hangars at the Airport, some of which are currently occupied. Most hangars at the Airport were constructed for military use, with the exception of two T-hangar

structures near Apron B. The largest hangar at the Airport is Hangar #101. A building layout for Hangar #101 is shown in Figure 4. The hangar has 470,000 square feet of floor space and can house two Boeing 747 aircraft simultaneously. Hangar #100, which houses airport administration and the FBO, measures 175,245 square feet. Hangars #781 – 786 are nose dock hangars. These hangars are located on the southeastern portion of airport property, near Apron 2. Each hangar measures 28,251 square feet. Hangars #220 and 221 are located on the western portion of airport property, near Apron 4. These hangars include the facilities for the Mohawk Valley Community College Airframe and Powerplant (A&P) program. Hangar #220 measures 19,200 square feet, while Hangar #221 measure 19,220 square feet. In addition, as previously mentioned, thirty T-Hangar units were recently constructed adjacent to Apron B. These units replaced a 36,368 square foot bulk hangar that was previously on the footprint of the new units.

In addition to aircraft storage hangars, there are a variety of other structures on the Airport. These structures include a fire station, a tanker alert facility, jet fuel storage facilities, and several storage and security buildings.

Existing Utility Systems

Various utility systems are utilizing at Griffiss International Airport to heat and ventilate the current facilities. Most facilities at the Airport utilize steam provided by the Griffiss Central Steam Plant and fed to the buildings through underground pipes. In addition, some buildings utilize individual steam boilers during more mild conditions, and newer buildings at the Airport are heated by a boiler that is fueled utilizing liquefied petroleum gas (LP). According to airport officials, it is a significant cost burden to heat the facilities during the winter months utilizing the steam heat provided by the Griffiss Central Steam Plant. An inventory of lighting at the Airport indicated that most fixtures are either newly installed, or currently utilizing fluorescent or high-bay sodium lighting, which is typically the most energy efficient. A detailed analysis of energy use and efficiency at Griffiss International Airport can be found in Appendix C.

Aprons

According to the 2005 Terminal Area Plan (TAP), there are five aprons at Griffiss International Airport. Apron 1 is located on the southern end of the Airport. All hangars that previously lined the apron have been removed, and the 77,778 square yards of apron space is reserved for large aircraft operations and storage. Apron 2 is located to the south of Apron 1, near the nose dock hangars and the off-airport Family Dollar distribution center. The apron, measuring 108,889 square yards, provides access to the nose docks and serves as storage for aircraft being serviced by MidAir USA.

Apron 3 is 80,000 square yards and is located to the west of the FBO and the administration building/hangar, and adjacent to Hangar #101. Apron 4 is located west of Apron 3. Apron 4 houses aircraft that are utilized by the Mohawk Valley Community College Airframe & Powerplant (A&P) program. According to the 2005 TAP, the apron measured 80,000 square yards, but had been partially closed. Apron B is located southeast of the Air Traffic Control Tower. According to the TAP, the apron measured 3,333 square yards. However, since completion of the TAP, two T-hangars have been constructed that can store a total of thirty

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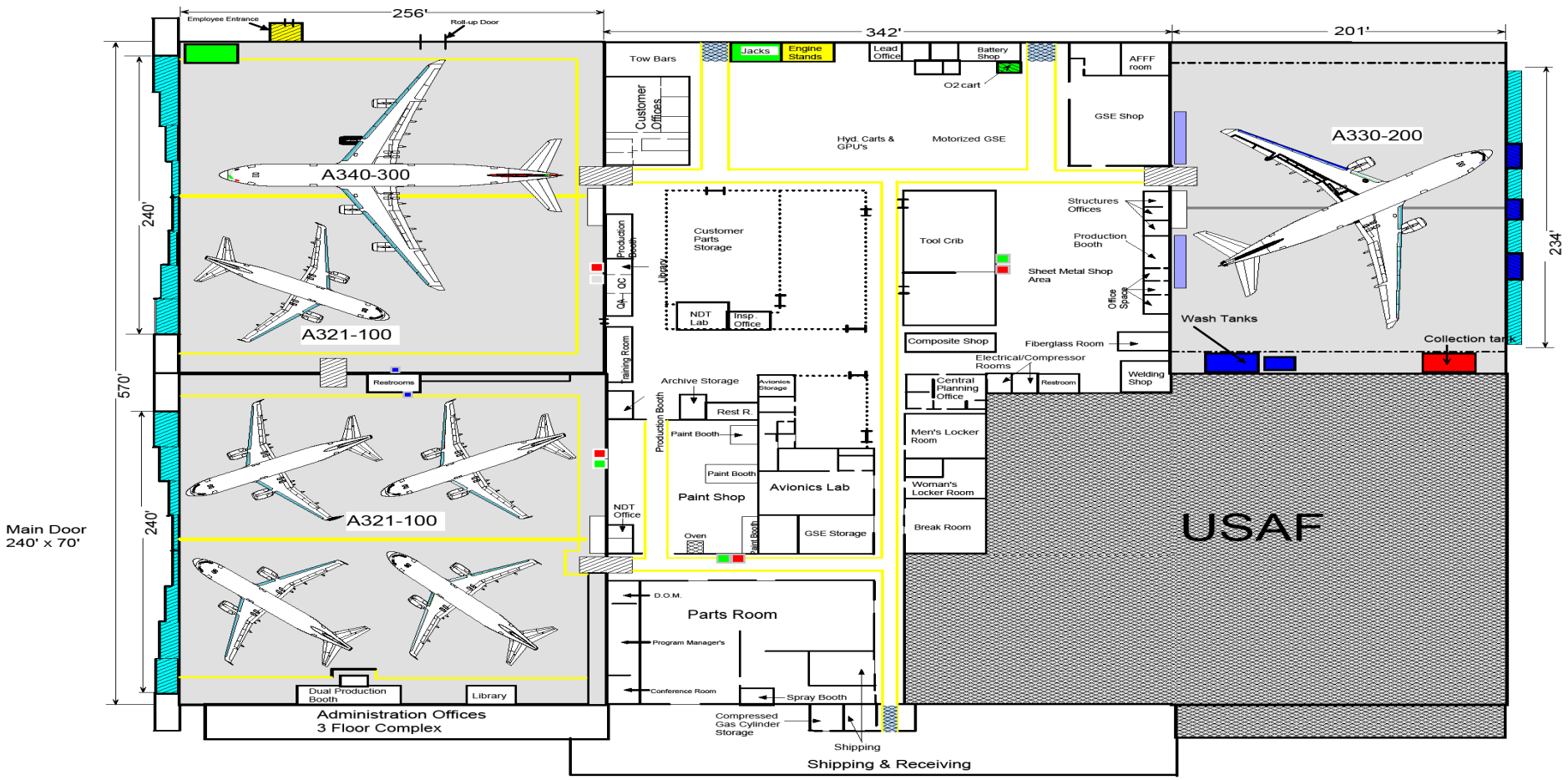


GRIFFISS INTERNATIONAL AIRPORT

ONEIDA COUNTY, NEW YORK

HANGAR #101 LAYOUT

McFarland Johnson
in association with
R.A. Wiedemann & Associates, Inc.

4

Image Provided by Oneida County, Not to Scale

aircraft. The construction of these hangars has decreased the amount of available space on Apron B, which is now utilized mainly for maneuvering space for general aviation aircraft. According to figures provided by Million Air, there are currently no aircraft based on the aprons at Griffiss.

Automobile Access & Parking

Automobile access is provided to the Airport from a variety of local roads. Hangar #100, home of the Airport Administration Offices, the FBO, rental car agencies, and several other businesses, as well as the Mohawk Valley Community College facility and Hangar #101, are located on Hangar Road, which is accessible from Griffiss Parkway (State Route 825). Parking facilities are available at each of these structures, including a large parking lot at Hangar #100. Limited automobile parking is also available near the other hangars at the Airport. Access to the other facilities at the Airport is via Turner Street, Ellsworth Road, Brooks Road, and Perimeter Road.

Fuel Farm

A fuel farm is located on the western end of Apron 4, near the Mohawk Valley Community College Hangar. According to Airport management, the Airport currently sells 100LL and Jet A fuels. All fuel sales are full-service only. Currently, the Airport has the capacity to store 60,000 gallons of Jet A fuel, and 12,000 gallons of 100LL fuel. However, bids have been received for the installation of fuel tanks capable of raising the total Jet A capacity at Griffiss to 150,000 gallons. In addition, a self-service fuel farm, providing 100LL fuel only, is to be constructed in 2010 and will have the capability to store 4,000 gallons of fuel. This facility will be constructed along Apron B, near the new T-Hangars.

Security

As a former Air Force Base, Griffiss has a much greater number of security features than most other general aviation airports. In addition to a full security fence surrounding the airport, card access readers are available at all entry gates. Because large commercial aircraft operate at the Airport, the facility is Part 139 certified and has Transportation Security Administration offices and officials on Airport. Public safety services at the Airport are also provided by the Oneida County Sheriff's Department and the City of Rome Police Department.

Aircraft Rescue & Firefighting

As a Part 139 airport, Griffiss International has a fully-equipped Aircraft Rescue & Firefighting (ARFF) facility. The Airport maintains ARFF facilities at the Index A level, the lowest level mandated by the FAA. At Index A, the Airport must maintain at least one ARFF vehicle that is capable of holding 500 pounds of sodium-based dry chemical or 450 pounds of potassium-based dry chemical, as well as 100 gallons of water or foam. With prior notice, Index B and C ARFF capabilities can be provided when aircraft with greater than 30 passenger seats utilize the Airport. According to Airport management, the Airport owns three ARFF vehicles. The primary vehicle is a 2007 Oshkosh. Two secondary vehicles, a 1993 Oshkosh and a 1990 KME/Ford Truck, are utilized as backups.

Air Traffic Control

An Air Traffic Control Tower (ATCT) is located on-airport adjacent to Hangar #100, near the intersection of Taxiways "A" and "E". The ATCT is operated by Midwest ATC. The Midwest employees operate the ATCT daily from 7:00 am until 9:00 pm. During the overnight hours when the ATCT is closed, pilots must announce their movements at the Airport using designated approach and departure frequencies.

Airfield Maintenance and Operations

Airfield maintenance is accomplished by Oneida County employees. According to the County, there are 23 employees in the Department of Aviation. Of these employees, twelve are "Airport Maintenance Workers" and an additional three hold the title of "Superintendent of Airport Maintenance." There are also three heavy equipment operators and mechanics. Airfield maintenance includes snow removal, the cutting of grass, as well as other day-to-day duties including preventative maintenance, FOD (foreign object debris) control, wildlife control, security checks, and issuance of field reports and Notices to Airmen (NOTAMs). According to the 2008 Annual Report, the Operations and Maintenance employees removed snow from and maintained approximately 10 million square feet of paved surface, mowed approximately 1,000 acres of grass, maintained 12 miles of security fence, and maintained approximately 750 runway and taxiway lights and signs.

3.4 Existing Tenants & Users

In addition to thirty private tenants, there are a variety of commercial and government tenants at Griffiss. This section provides a description of the major tenants at the Airport.

Commercial Tenants & Users

Million Air

Million Air provides FBO services to users of Griffiss International Airport. This firm operates at 27 airports across the United States and Canada. Million Air has operated at Griffiss since October 2008. Previously, Oneida County provided all FBO services at the Airport. Million Air offers a variety of services at Griffiss, including full-service fueling (100LL and Jet A), deicing (Type I and Type IV), hangar and tie-down spaces, a crew rest area, a pilots lounge and rest area, rental car services through Hertz Rental Car, and a courtesy car[4]. In addition to providing services to pilots and passengers at the Airport, Million Air also collects ramp and overnight fees for Oneida County. Million Air is based out of Hangar #100 at the Airport.

Empire Aero Center

The Empire Aero Center previously operated out of the 470,000 square foot Hangar #101 with a staff of over 200. According to the company, the hangar is one of the few Maintenance,

[4] Millionair.com

Repair, and Overhaul (MRO) facilities in the United States that can house two Boeing 747s in separate bays for MRO services. Previous Empire Aero Center clients included Air Canada, JetBlue, Midwest, Transferor, Virgin America, and Evergreen International. Empire Aero provided regular maintenance checks (A through D) for commercial and military aircraft, as well as airframe modification and aircraft painting. According to their website, Empire Aero serviced all Boeing aircraft types, as well as members of the Airbus 320 family and the U.S. Air Force's C-130[5]. In January 2010, Empire Aero Center significantly decreased their employment base at Griffiss and the future of the company is uncertain at this time.

Airport Services Unlimited

Airport Services Unlimited (ASU) provides helicopter services and helicopter maintenance at the Airport. Services provided by ASU include utility survey, aerial photography, emergency services, and film and video support. ASU is an approved service facility for Bell Helicopter and provides sales and service for used helicopters. ASU's aircraft, two Bell 206Bs, are located in Hangar #100.

Brodock Press, Inc.

Brodock Press, Inc. is a Utica-based graphic communications company. Brodock maintains a 24-hour plant in Utica, printing, binding, and finishing a variety of publications for clients across the Northeast. In addition, Brodock has two sales offices in New York City. In order to provide services for time-sensitive clients, Brodock offers its unique "Brodock Air" service. This service will bring clients from across the region to Griffiss, utilizing Brodock's Cessna 414 twin-engine aircraft, which is based at the Airport. This service allows for Brodock to maintain its operations in Utica, while serving clients throughout the region with strict deadlines. Brodock brings clients to its plant for press approvals and plant visits.

Galaxy Aviation

Galaxy Aviation is a flight training school and aviation club based at Griffiss. Galaxy provides flight training utilizing a Piper PA-28 aircraft based in Hangar #100. The aviation club requires monthly dues from its members, who in turn receive a variety of benefits including the use of two rooms at the facility, ground school refresher courses, instrument competency checks, FAA Wings flights, four hours of flight simulator instruction each year, and pilot supplies at dealer cost. In addition, the club holds a "Refresher and Review" class once per week, and offers frequent discussions on topics relating to aviation.

Indium Corporation

Indium Corporation is a developer, manufacturer, and distributor of alloys, solders, pure indium, indium compounds, and electrically-conducive adhesives, among a variety of other products. Indium was founded in 1934 in Utica, where it still maintains its corporate headquarters, with offices in China, Singapore, and England. Indium maintains a Cessna Citation Excel jet at the Airport in Hangar #100.

[5] http://www.empireacmro.com

Landcare Aviation, Inc.

Landcare Aviation Inc. (LAI) provides aerial photography and remote sensing collection services. LAI provides aerial data collection services across the country and is one of the largest such firms in the nation. LAI uses their own aircraft and their own or their client's collection equipment. LAI has a workforce of 25, including two dedicated aircraft mechanics. LAI operates and houses 18 aircraft at Griffiss, including four Piper PA-23-250s and 14 aircraft in the Cessna 172 family. All aircraft are based in Hangar 220 or on Apron 4.

Midair USA

Midair USA is a subsidiary of Midair S.A., which provides a variety of aviation-related services including aircraft trading and leasing, aircraft engineering, aircraft maintenance management, aviation consultancy, and aircraft re-marketing services. Midair currently bases two aircraft at the Airport, a Piper PA-44 multi-engine aircraft; and a Boeing 747 jet. At Griffiss, Midair renovates aircraft that the company has purchased and intends to resell. Midair leases Hangar #782 from the Airport.

Avis, Budget & Hertz

The availability of rental cars at an airport is an important factor to transient general aviation business users. Hangar #100 at Griffiss is home to rental car service by Avis, Budget and Hertz. Avis and Budget have a staffed counter at the Airport, while Hertz provides its rental cars through the Million Air FBO.

Other Businesses On-Airport

There are several other businesses that maintain operations on-airport at Griffiss. These businesses include Schiele Brewer, M.D., a Senior Aviation Medical Examiner with an office in Hangar #100; Air Charter Express, a charter company operated by Mike Ezzo utilizing a Beech A36 based in Hangar #100; BankAir, operating a charter Mitsubishi MU-28-60 based in Hangar #100; High Peaks Helicopters, offering helicopter services utilizing a Schweizer 269-C, based in T-hangar #26; and Reutter Aircraft Services providing aircraft maintenance with an office in Hangar #220.

Government Tenants and Users

Mohawk Valley Community College

Mohawk Valley Community College (MVCC) operates an Airframe and Powerplant (A&P) Training Center at Griffiss in Building #221, off Langley Road and accessible from Apron 4. According to the College, the A&P Certificate program is certified by the FAA and approved by the State University of New York (of which MVCC is a member-institution). Students can receive a certificate after the completion of 42 credits (1,905 hours), which typically takes three semesters of courses and can be completed in one calendar year. According

to the program's website, the goal of the program is provided needed employees for on-airport operations at Griffiss. Students in the program utilize several donated aircraft in their studies, including a former FedEx Boeing 727-100 and a Cessna 310.

Civil Air Patrol

The Civil Air Patrol (CAP) bases a Cessna 182R in Hangar #48. In addition, the Mohawk-Griffiss Senior Squadron holds meetings at the Airport in Hangar #100. The CAP provides search and rescue capabilities out of the Airport as well as rescue training operations. The CAP is also primarily responsible for emergency response in the event of aircraft incidents. In additions to meetings at the Airport, the CAP holds some programs for local youth in an effort to introduce them to flying.

3.5 Airport Development Plan

Development Considerations

There are a number of issues that impact the development of space at the airport. These include:

- Griffiss Business and Technology Park
- Environmental Concerns
- Zoning
- Interstate Accessibility
- Community Support

Griffiss Business and Technology Park

As a former Air Force Base, the Airport environs have a variety of buildings that were vacated after the relocation of most military uses. While the airside facilities at Griffiss were obtained by Oneida County for use as an airport, most buildings without airside access became part of the Griffiss Business & Technology Park. The Mohawk Valley Economic Development Growth Enterprises Corporation (EDGE) has divided the facility into seven marketing districts. Each district promotes different features that will attract different groups. For instance, an area called "Technology Heights" has a hilltop location that could be ideal for satellite use and is the home to recently remodeled buildings. The business park is an ideal location for businesses which utilize general aviation aircraft, but which do not require airfield access, as well as nearby rail and Interstate routes. Currently, several businesses maintain operations in the park. A partial listing of businesses can be found in Table 7.

Table 7: Sample of Tenants in the Griffiss Business & Technology Park	
Air Force Real Property Agency	Air Force Research Laboratory
BAE Systems	BOCES Center for Business & Industry
Cathedral Corporation	Centrex Labs
Defense Finance Accounting Service	Family Dollar Distribution Center
Faxton-St. Luke's Healthcare	Goodrich Corporation
Griffiss Institute	ITT Industries
Lockheed Martin	MGSHall
Northeast Air Defense Sector	Research Associates of Syracuse
Sovena USA	Wingate by Wyndham

Source: Mohawk Valley EDGE

Environmental Concerns

Environmental concerns are evident at most airports. At Griffiss, there are a variety of environmental concerns and hazards that must be considered prior to any future development. These considerations include wetlands, endangered animals and vegetation, and the presence of archeologically sensitive areas. While it is not expected that these environmental concerns will prevent future development of facilities at the Airport, all environmental concerns must be addressed following the guidelines set by the National Environmental Policy Act (NEPA), the New York State Department of Environmental Conservation, and the Federal Aviation Administration.

In addition, significant ground contamination has been noted at the Airport. According to a report issued by the Environmental Protection Agency (EPA), several types of solvents and lead were generated as a result of research and development activities at the former Griffiss Air Force Base. These contaminants were disposed in landfills and dry wells throughout the base. Subsequently, evidence of volatile organic compounds (VOCs) has been found in the groundwater at the former base. Contaminants found include lead, barium, chromium, and polychlorinated biphenyls (PCBs). Since 1990, this site has undergone significant levels of soil remediation[6]. On March 20, 2009, 23 of the 32 sites at the former Griffiss Air Force Base were deleted from the National Priorities List (NPL) as soil remediation was completed and the sites were deemed "clean." Work will still be necessary for the remaining nine sites, comprising of approximately 655 acres, to be removed from the NPL[7].

Zoning

As the boundaries of Griffiss International Airport are within two municipalities, the zoning ordinances of both the City of Rome and the Town of Floyd affect development at the Airport. The majority of the property is located within the City of Rome and is zoned as Planned Development (PD). According to the 2008 Airport Layout Plan Update, a small portion of Airport property northwest of the Runway 33 end is located within the limits of the Town of Floyd, and is zoned as Residential-Agricultural (R-A), with a Runway Protection Zone (RPZ) Overlay District. Uses within this area are mainly limited to residential, agricultural, or

[6] Environmental Protection Agency, National Priorities List Fact Sheets, November 18, 2008.
[7] Environmental Protection Agency, Federal Register Notice, March 20, 2009

municipal uses. In addition, with a special use permit, campgrounds, hospitals, nursing facilities, kennels, junk yards, and rural service stations are allowed.

According to the City of Rome Code of Ordinances, PD districts were "developed to encourage new development that would not be limited by the strict application of (the) code." The development standards for the site of the Griffiss Business & Technology Park, and the Griffiss International Airport, are included in Appendix A of the City of Rome Zoning Code, as well as on the website of the Griffiss Business Park, and can be found in Appendix B of this report. The development standards are based on recommendations made in a 1998 Master Plan completed for the former Air Force Base. The area was subdivided into ten zoning categories. These categories, and examples of permitted uses, can be found in Table 8.

Table 8: Permitted uses in the Griffiss Business & Technology Park

District	*Examples of Permitted Uses*
Rome Lab/R&D/Office Campus	Corporate, administrative, and business offices; research and development facilities; laboratory; daycare centers; convenience sales and service, car rental agencies, travel bureaus; eating establishments (excluding drive thru service); hotels; medical/dental care facilities
Manufacturing Complex, Airfield and Related Services	Administrative offices; vehicle assembly, test and manufacturing; printing facilities; warehousing and distribution; aviation repair; terminal facilities; air cargo/air freight facilities; light manufacturing; public utilities
Business Complex	Administrative/business offices; communication services; training services; electric/electronic equipment manufacturing and repair; finance, insurance, and real estate services
Light Industrial	Administrative offices; light manufacturing; public utilities; printing facilities; vehicle assembly facilities; aviation services; warehousing and distribution
Heavy Industrial, Aviation and Related Services	All uses permitted in Light Industrial; heavy industrial
Corporate Development	Corporate/administrative/business offices; hotels
Service Campus	Administrative offices; dormitories; assisted-living facilities; hotels; daycare centers; training services; financial institutions; medical/dental care facilities; eating establishments (excluding drive-thru service); public and commercial recreation facilities
Mohawk Glen	Administrative offices; medical and dental care facilities; hotels; conference centers; golf course and associated facilities; eating and drinking establishments (excluding drive-thru service)
Woodhaven Village	One-family dwellings; senior housing; two-family dwellings; assisted-living facilities

Source: Griffiss Business and Technology Park Development Standards (http://www.griffissbusinesspark.com/DevelopmentStandards.pdf).

The current zoning and the development guidelines for the Griffiss International Airport, and the neighboring properties in the Griffiss Business & Technology Park, should not restrict future development of property at or near the Airport.

Interstate Accessibility

For potential users of the Griffiss International Airport, the proximity of the airfield to Interstate 90 could be either a drawback or an attractor. For those businesses that require close proximity to an interstate, typically distribution centers or tourist attractions, the fifteen mile drive from the Airport to the closest on-ramp to Interstate 90 could be considered a deterrent.

Further, several miles of this drive are on two-lane, non-limited access roadways. In addition, the New York State Thruway Authority charges tolls to utilize Interstate 90. This would result in additional expenses for potential tenants that have a heavy reliance on interstate highway accessibility. However for other potential tenants, the presence of an interstate within a twenty minute drive could be attractive for those that do not need immediate access to a highway, but want to be within reasonable proximity. Further, rail access, including Amtrak service, in Rome could be considered a similar positive feature for some businesses.

Community Support

Community support for the current operations at the Griffiss International Airport is mixed. The point of discontent appears to lie with the use of millions of dollars of federal aid to improve the Airport, as well as the annual operating loss incurred by the Airport. According to Airport management, the goal of the Airport is to provide jobs for community residents to try to mitigate the loss of employment when the military use of the Airport ceased, in addition to breaking-even financially, if not able to turn a profit. The local community, which is still recovering from the closure of the Rome Air Force Base, may have ill feelings as a response to the effects caused by the Base closure on the community.

Development Areas

There is a significant amount of land that can be utilized for future development at the Airport. There are several areas that can be utilized for either aviation-related development, such as hangars, aprons, or an air cargo facility, or for non-aviation or aviation-related industrial development which would benefit from the close proximity to the airfield. Each development area is detailed below and is depicted in Figure 5.

Development Area 1

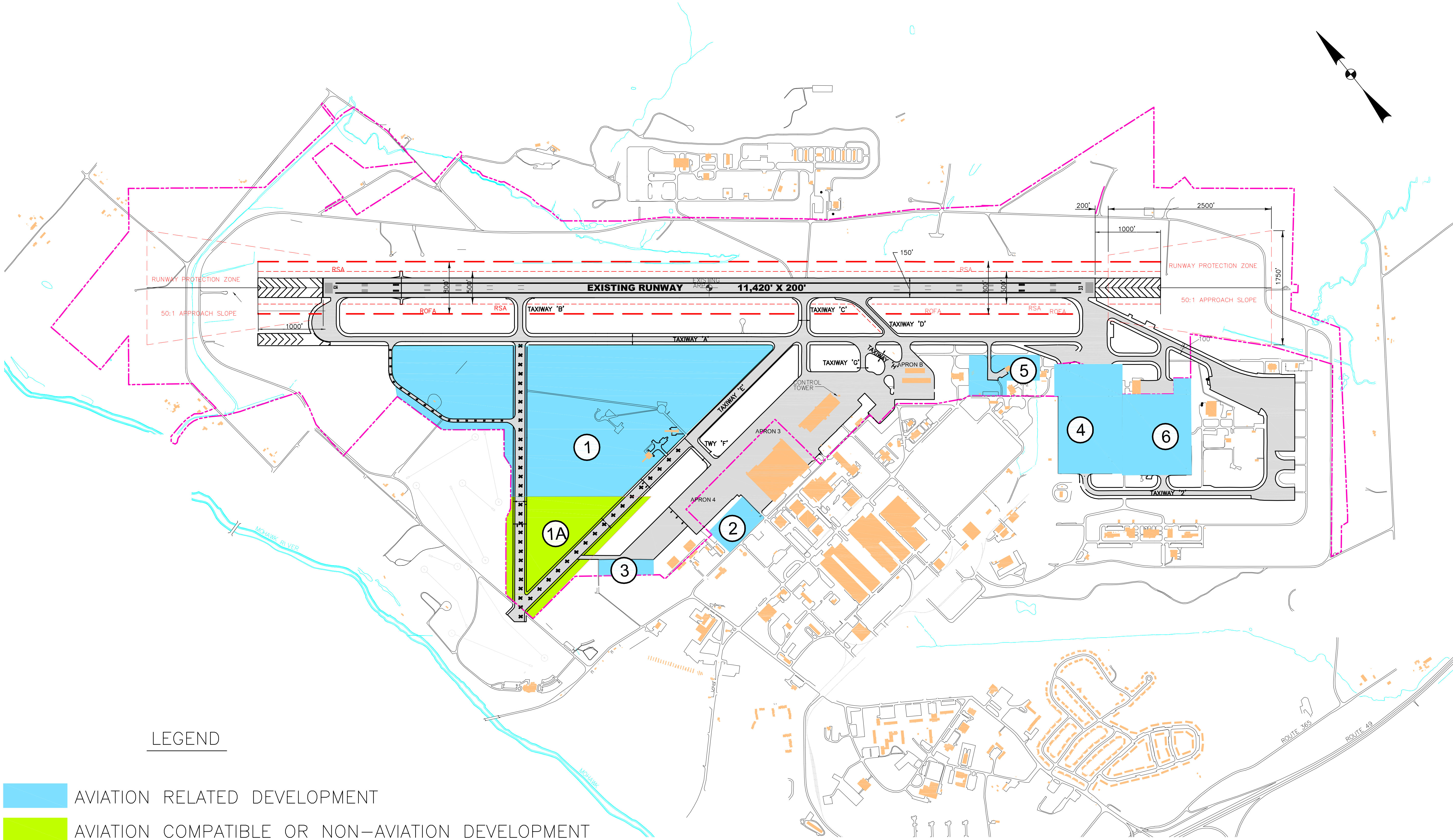
Development Area 1 is 201.6 acres and is located in an area west of Taxiway "A", north of Taxiway "E" and south of the former Taxiway "B". This area is available for development of aviation-related uses due to the proximity of the former taxiways as well as the significant amount of available space. Access to this area is available via an access road off Mohawk Drive. This site has minimal elevation changes and is currently only minimally developed, with an equipment storage facility located near Taxiway "E".

Development Area 1a

West of Development Area 1 is an area that currently has no taxiway access due to the closure of Taxiways "B" and "E" near the area. This area, also accessible from an access road off Mohawk Drive, is 53.9 acres and could suit non-aviation related development. In addition, this area could also be utilized as parking or support space for uses in Development Area 1.

Development Area 2

The land encompassing Development Area 2 is located west of Hangar #101. With 7.9



LEGEND

AVIATION RELATED DEVELOPMENT

AVIATION COMPATIBLE OR NON–AVIATION DEVELOPMENT

EXISTING AIRPORT PROPERTY LINE

SCALE

0 1500 3000

FEET

GRIFFISS INTERNATIONAL AIRPORT

ONEIDA COUNTY, NEW YORK

DEVELOPMENT PLAN

McFarland Johnson in association with R.A. Wiedemann & Associates, Inc.

FIGURE: 5

acres of available space, this site could be ideal for a potential expansion by a tenant utilizing Hangar #101, or for use by another similar firm looking for space to construct a large hangar. This space, with access to Apron 4 and to Hangar Road, would be ideal for aviation development.

Development Area 3

Development Area 3 is 4.6 acres and is located west of Hangar #221, the MVCC Hangar, off Apron 4. This area, while small, could potential house several additional conventional hangars similar in size to Hangar #220 and Hangar #221. These hangars could be utilized for the storage of several small aircraft or for a larger jet.

Development Area 4

Development Area 4 is 38.2 acres and is located in the southeastern portion of the Airport. The site is known as Apron 1, and is a relatively vacant site with one recently constructed hangar. In the future, this site could be converted into a corporate hangar facility, offering close access to the Runway 33 end with space available for the development of multiple small conventional hangars.

Development Area 5

This development area is located southeast of the ARFF building. Development Area 5 is 12.8 acres and was proposed for development of corporate hangars. Due to the proximity of the site to Taxiway "A" and Runway 15-33, this site would be ideal for that use. The Airport may also want to consider utilizing the site for the development of additional hangar space for general aviation aircraft at the Airport, if the demand warrants, due to its close proximity to the new T-hangars located on the opposite side of the ARFF building.

Development Area 6

Development Area 6 is adjacent to Development Area 4 and is currently the home to five nose dock maintenance hangars. This area, with 31.5 acres of available space, is currently undergoing some redevelopment. Hangar #782 has recently been rehabilitated, with the remainder of the hangars scheduled for rehabilitation within the next five years.

Funding for Capital Improvements

There are a number of means of funding needed improvements at Griffiss International Airport. These are briefly discussed below.

Airport and Airway Improvement Program

Griffiss International Airport is eligible for assistance in funding capital projects through the FAA Airport and Airway Improvement Program (AIP). As an eligible participating airport in the AIP program, the Airport is required to prepare, update annually, and submit to the FAA a

five-year Airport Capital Improvement Program (ACIP) to apply for Federal grants. AIP grants typically fund at least 90 percent of development costs for eligible projects.

AIP eligible projects include the planning, design, and construction of projects associated with public use non-revenue generating facilities and equipment of the Airport. Typical AIP eligible projects include: Airport Master Plans, Airport Layout Plans; land acquisition and site preparation; airfield pavements, e.g. runways, taxiways, and transient aprons; lighting and navigational aids; safety, security, and snow removal equipment; public use passenger terminal facilities that are not leased for exclusive use; and obstruction identification and removal. Items not typically eligible for AIP funding include revenue generating facilities such as hangars (at primary airports), automobile parking facilities, and private-use areas of terminal facilities. Fuel farms and hangars are potentially eligible for funding at non-primary or general aviation airports such as Griffiss[8]. The highest funding priority according to FAA's rating procedure is generally given to those projects that are safety-related such as runway safety area improvements, obstruction removal, and facility improvements to meet current FAA Airport Design Standards. Griffiss International Airport received three AIP Grants in 2008 for the rehabilitation of taxiway lighting (construction); the rehabilitation of Building 782 as an aircraft storage facility (design); and the installation of navigation aids for the Runway 33 end (construction).

Each year, the Airport is required to complete an updated Airport Capital Improvement Plan (ACIP). The ACIP displays all projects proposed at the Airport within the upcoming five years. At Griffiss, the 2010-2014 ACIP displays 23 projects proposed throughout the planning period. While presence on this list will not guarantee a project funding from the FAA or the New York State DOT, it is a necessary step in order to receive that funding. The 2010-2014 ACIP is detailed in Table 9.

[8] Per Vision 100-Century of Aviation Reauthorization Act, "The Secretary may decide that the costs of revenue producing aeronautical support facilities, including fuel farms and hangars, are allowable for an airport development project at a nonprimary airport if the Government's share of such costs is paid only with funds apportioned to the airport sponsor under section 47114 (d)(3)(A) (nonprimary entitlement) and if the Secretary determines that the sponsor has made adequate provision for financing airside needs of the airport."

Table 9: Airport Capital Improvement Plan (ACIP)

Year	Project Description	FAA			State	Local/Other	Total
		Entitlement	Discretionary	MAP			
2010	ARFF/SRE Addition (30,000 SF) – Design		$332,500		$8,750	$8,750	$350,000
2010	Terminal Building – Construction			$8,550,000	$225,000	$225,000	$9,000,000
2010	Apron 1 and B Infills – Design		$142,500		$3,725	$3,725	$150,000
2010	Hangar Fire Suppression System – Design			$285,000	$7,500	$7,500	$300,000
2010	Nose Dock Rehabilitation – Design			$95,000	$2,500	$2,500	$100,000
2011	ARFF/ Addition (30,000 SF) – Construction		$6,650,000		$175,000	$175,000	$7,000,000
2011	Apron Infills – Construction			$3,467,500	$91,250	$91,250	$3,650,000
2011	Transient Aircraft Hangar (30,000 SF) – Design			$237,500	$6,250	$6,250	$250,000
2011	Hangar Fire Suppression System – Construction			$2,660,000	$70,000	$70,000	$2,800,000
2011	Airport Drainage and Deicing Study	$118,750			$3,125	$3,125	$125,000
2011	Taxiway Rehabilitation – Design	$31,250	$158,750		$5,000	$5,000	$200,000
2011	Nose Dock Rehabilitation – Construction			$2,950,000	$77,630	$77,630	$3,105,260
2011	Airport Access Road (Phase II) – Design			$95,000	$2,500	$2,500	$100,000
2011	Nose Dock Rehabilitation – Design			$95,000	$2,500	$2,500	$100,000
2011	Equipment Acquisition	$150,000			$3,950	$3,950	$157,900
2012	Apron Rehabilitation (Phase I) – Design and Construction		$1,900,000		$50,000	$50,000	$2,000,000
2012	Transient Aircraft Hangar (30,000 SF) – Construction			$2,850,000	$75,000	$75,000	$3,000,000
2012	Nose Dock Rehabilitation - Construction			$2,950,000	$77,630	$77,630	$3,105,260
2012	Airport Access Road (Phase II) – Construction			$1,425,000	$37,500	$37,500	$1,500,000
2012	Taxiway Rehabilitation – Construction		$1,900,000		$50,000	$50,000	$2,000,000
2012	Nose Dock Rehabilitation – Design			$95,000	$2,500	$2,500	$100,000
2012	Equipment Acquisition	$150,000			$3,950	$3,950	$157,900
2013	Apron Rehabilitation (Phase II) – Design and Construction		$1,900,000		$50,000	$50,000	$2,000,000
2013	Nose Dock Rehabilitation – Construction			$2,950,000	$77,630	$77,630	$3,105,260
2013	Nose Dock Rehabilitation – Design			$95,000	$2,500	$2,500	$100,000
2013	Equipment Acquisition	$150,000			$3,950	$3,950	$157,900
2014	Apron 4 Reconstruction – Design and Construction		$3,325,000		$87,500	$87,500	$3,500,000
2014	Nose Dock Rehabilitation – Construction			$2,950,000	$77,630	$77,630	$3,105,260
2014	Equipment Acquisition	$150,000			$3,950	$3,950	$157,900
TOTAL		$750,000	$16,308,750	$31,750,000	$1,284,420	$1,284,420	$51,377,590

Source: Oneida County

Military Airport Program

As a former United States Air Force Base, Griffiss is eligible for funding through the FAA's Military Airport Program (MAP). This funding is intended to assist the Airport sponsor in converting former military airfields into civilian or joint military/civilian airfields. This funding may be used for projects that would not typically be eligible for AIP funding. Potential projects could include access roads, cargo buildings, parking lot improvements, fuel farms, and airport utilities. As with AIP funding, MAP projects are typically at least 90 percent funded through the program. At Griffiss, the remaining cost is split between Oneida County and New York State.

State Grant Programs

New York State also provides wholly-funded State programs to assist aviation development. These programs are targeted toward projects that may not be eligible for AIP funding, such as Airport-owned fuel facilities, hangars, security projects, and terminal buildings. Since 2005, the Rebuild and Renew New York Transportation Bond Act has provided $60 Million to airports throughout the State to complete these improvements. The remaining $16.4 Million will be disbursed for the 2009-2010 programs, which will be the final disbursement. The program is divided into disbursements for general aviation security improvements, development at business airports (including Griffiss), and the AIR '99 program, which provides funding for capital projects, equipment, and navigational aids, up to $300,000. Grants through the general aviation security program are 100 percent funded by the State, while all other grants are funded at 90 percent of the total project cost, with the remaining 10 percent to be covered by the local municipality. It is expected that a new program will be announced in the future that will replace the current Bond Act program. In addition New York State, through its Department of Transportation, has historically funded 2½ percent of projects eligible under the Federal Airport Improvement Program.

Local Funding

Local funding for Griffiss is accomplished through Oneida County's general fund. This expenditure may be offset by airport-generated revenues. Public bodies may also issue general obligation (GO) or revenue bonds. These bonds are usually reserved for large capital projects. A GO bond is backed by the full faith and credit of the issuing party. Statutory restrictions often limit the amount that can be borrowed in relation to the tax base of the issuing government. A revenue bond is backed by a promise to pay the principal and interest represented by the bond with revenues generated by the project it funds. Revenue bonds must be evaluated by independent underwriters, and the proposed bonds must demonstrate a reasonable expectation of repayment. Revenue bonds issued by general aviation airports, such as Griffiss, may not always meet this test since many airport facilities generate more indirect benefits than direct revenues.

Private Funding

Private investors are a potential source of funds for revenue producing developments at Griffiss International Airport. Tenants and/or investors may finance the purchase of existing facilities or the construction of new facilities from which they derive income. While direct

revenues to the Airport are usually limited to the purchase or lease charges for the land underlying the facilities, the local sponsor does not need to obtain its own funding for these improvements. Additionally, the increased activity resulting from Airport improvements often increases the number of based aircraft or operations, which in turn generates additional revenue associated with fuel sales and other aviation services. Examples of private investment at airports include buildings for fixed based operators, fuel facilities, hangars (bulk and T-hangars), aviation-related commercial development, and non-aviation commercial development.

3.6 Market Analysis

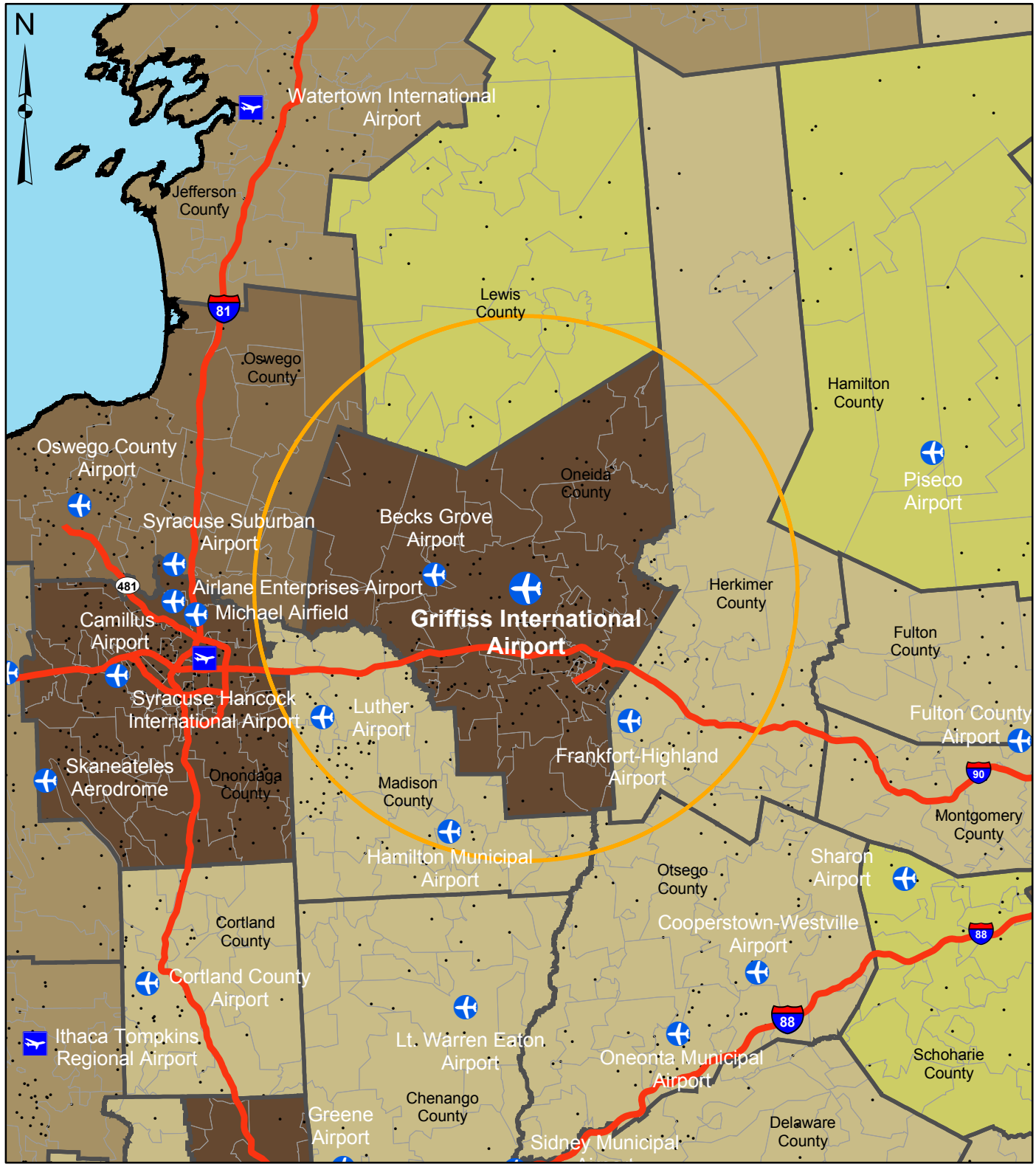
Airport Service Area

Figure 6 illustrates the General Aviation Airport Service Area (ASA) as well as the Corporate Aviation ASA, characterized by 30 and 50 mile circles, respectively, centered at the Airport. There are four other public use airports within a 30-mile radius of Griffiss. In addition to the facilities mentioned in this section, there are several private airports in the ASA that are not open to the public. These are not considered in this analysis because their impact on Griffiss is minimal. As none of the airports in the General Aviation ASA are comparable to Griffiss in terms of operations or runway length, several other similar airports across upstate New York have also been included in this analysis. A list of airports considered is in Table 10.

Table 10: Airport Service Area & Other Comparable Airports

Airport Service Area				
Airport	**City & State**	**Distance from Griffiss**	**NPIAS Designation**	**Ownership**
Griffiss International	Rome, NY	N/A	General Aviation	Public (County)
Beck's Grove	Rome, NY	10 miles	N/A	Private
Frankfort-Highland	Frankfort, NY	19 miles	General Aviation	Private
Luther	Chittenango, NY	26 miles	N/A	Private
Hamilton Municipal	Hamilton, NY	28 miles	General Aviation	Public (Municipal)
Other Comparable Airports				
Syracuse Hancock International	Syracuse, NY	32 miles	Primary – Small Hub	Public (Municipal)
Schenectady County	Schenectady, NY	69 miles	General Aviation - Reliever	Public (County)
Albany International	Albany, NY	76 miles	Primary – Small Hub	Public (County)
Plattsburgh International	Plattsburgh, NY	120 miles	General Aviation	Public (County)
Niagara Falls International	Niagara Falls, NY	155 miles	General Aviation - Reliever	Public (Authority)

Source: McFarland Johnson, Inc, 2009



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GRIFFISS INTERNATIONAL AIRPORT

ONEIDA COUNTY, NEW YORK

SERVICE AREA

McFarland Johnson
in association with
R.A. Wiedemann & Associates, Inc.

FIGURE :
6

Facilities

Table 11 provides a comparison of facilities at the airports under consideration in this study. All but one of the airports (Luther) has at least one paved runway. Two airports have two paved runways, and two other airports have three paved runways. In terms of approaches, the best approach at six airports is a precision approach, at one airport is a non-precision approach, and three airports only have visual approaches. In addition, five of the airports have air traffic control towers.

Aviation Services

Table 12 presents the availability of various aviation services at each of the area airports. Major airframe and power repair service is available at three airports: Griffiss, Syracuse Hancock, and Albany. Minor service is available at Hamilton, Schenectady County, and Niagara Falls. Flight instruction and charter service is available at Griffiss, as well as at Syracuse Hancock, Schenectady County, and Niagara Falls. Flight instruction only is available at Albany, and charter service only is available at Hamilton. Avionics service is available at two airports, Schenectady County and Plattsburgh International. Aircraft sales and rental are available at four airports: Syracuse Hancock, Schenectady County, Albany, and Niagara Falls. Aircraft rental only is available at Hamilton.

Hangars and Tie-downs

Table 13 presents information regarding costs associated with storing aircraft in publicly available hangars or tie-down spaces on aprons. While some aircraft do tie-down at Griffiss overnight ($25/night), there is virtually no long-term tie-down use at the Airport. Tie-down space is available at competing airports Frankfort-Highland for $40/month and at Hamilton for $20/month. At other comparable airports, tie-downs range from $30/month at Plattsburgh to $97/month at Niagara Falls. In terms of hangar availability, aircraft storage costs in Hangar #100 at Griffiss range from $200 - $1,400 per month. This cost varies as a result of aircraft size. No other airports in the ASA provide conventional hangar storage. Among the comparable facilities, conventional hangar storage is available at Schenectady County for $100 per night for a single-engine aircraft. At Niagara Falls, during the summer months, conventional hangar storage starts at $45 per night for a single engine aircraft, doubling to $90 per night during winter months.

In terms of T-Hangar storage, Griffiss provides T-Hangar space for $275 per month. Outside of the ASA, two airports surveyed also have T-Hangar space for lease. Schenectady County Airport offers T-Hangar space starting at $375 per month for an unheated T-Hangar and Albany International has T-Hangars for lease starting at $325 per month.

Fuel

Table 13 also presents information regarding fuel prices for airports in the General Aviation ASA and the comparable airports. A July 16, 2009 survey of AirNav.com revealed that 100LL fuel at Griffiss was priced at $5.15 per gallon. This price was the second highest of the eight airports surveyed that sold 100LL fuel, behind Niagara Falls International which sold

100LL for $5.44 per gallon. The lowest price per gallon for 100LL was $3.83 per gallon at Albany International, listed as a "Great Deal" on AirNav.com, followed by Schenectady at $3.99 per gallon. In the ASA, the lowest price for 100LL was $4.40 per gallon at Frankfort-Highland and Hamilton Municipal. The average price per gallon for 100LL fuel in New York was listed at $4.65, while the national average was $4.33, both significantly below the price for 100LL at Griffiss.

In terms of Jet A fuel, the July 16, 2009 survey of AirNav.com indicated that the price of Jet A fuel at Griffiss was $4.24. Six other airports surveyed offered Jet A fuel, with Albany International the lowest at $3.85 per gallon and Syracuse-Hancock International the highest of the airports surveyed at $4.79 per gallon. The average price per gallon for Jet A fuel in New York was listed at $4.59, while the national average was $4.01. While slightly above the national average, the price of fuel at Griffiss is competitive when compared to the average cost of Jet A fuel in New York.

It should be noted that fuel prices are highly volatile. As such, the prices cited in this analysis are provided as a point of reference for fuel costs on a certain day and should be considered as such.

Summary

Within the General Aviation ASA, Griffiss is the largest airport in terms of based aircraft, runway length, and facility size. In addition, Griffiss is the only airport in the General Aviation ASA with an Instrument Landing System (ILS) procedure. As a significantly larger facility than other airports within the General Aviation ASA, there are more services available at Griffiss, and at a larger scale, than at other nearby airports. When considering fuel costs, the price of 100LL at Griffiss is the highest within the ASA. However, Jet A at Griffiss is priced lower than at Hamilton, the only other airport in the General Aviation ASA that offers the sale of Jet A. The cost for T-Hangar space at Griffiss is priced lower than for similar facilities at Hamilton, while the cost for apron tie-down space is higher.

When compared to other comparable airports within New York State, Griffiss is relatively similar with the second longest runway and a similar offering of available FBO services. In addition, all other similar airports utilized in this study have ILS approaches and, with the exception of Plattsburgh, an air traffic control tower. However, Griffiss and Plattsburgh only have one runway. Albany and Syracuse each have two runways, while Schenectady and Niagara Falls have three. Fuel costs vary between the airports. In terms of 100LL fuel, the price per gallon at Griffiss is above average and is the second highest of the airports queried. The price for Jet A fuel is the median and slightly below average. The cost for monthly T-Hangar space at Griffiss is significantly less than at other airports where T-Hangars were available.

Table 11: Facility Comparisons

Airport	Acres	ARC	Number Of Based Aircraft							Runway (feet)			NAVAIDs	Control Tower
			Jet	Multi	Single	Heli	Ultra-light / Gliders	Military	**Total**	First L x W	Second L x W	Third L x W	Best Approach	
Griffiss International	1,680	D-V	2	12	55	5	1	0	**75**	11,820 x 200 (Concrete)	N/A		Precision (ILS)	Yes
Beck's Grove	120	N/A	0	0	16	1	0	0	**17**	3,000 x 23 (Concrete)	N/A		Visual	No
Frankfort-Highland	45	B-I	0	0	6	0	0	0	**6**	2,500 x 30 (Asphalt)	N/A		Visual	No
Luther	0	N/A	0	0	9	0	0	0	**9**	1,700 x 80 (Turf)	1,060 x 90 (Turf)	N/A	Visual	No
Hamilton Municipal	180	B-II	0	1	30	0	9	0	**40**	5,314 x 75 (Asphalt)	N/A		Non-Precision (VOR/GPS)	No
TOTAL (ASA)			**2**	**13**	**116**	**6**	**10**	**0**	**147**					
Syracuse Hancock International	2,000	D-IV	8	14	54	4	0	18	**98**	9,003 x 150 (Asphalt)	7,500 x 150 (Asphalt)	N/A	Precision (ILS)	Yes
Schenectady County	759	C-IV	2	7	69	2	0	14	**94**	7,000 x 150 (Asphalt)	4,840 x 150 (Asphalt)	2,640 x 50 (Asphalt)	Precision (ILS)	Yes
Albany International	1,000	D-III	16	12	46	9	0	10	**93**	8,500 x 150 (Asphalt)	7,200 x 150 (Asphalt)	N/A	Precision (ILS)	Yes
Plattsburgh International	3,874	D-V	0	0	5	0	0	0	**5**	11,758 x 200 (Asphalt/ Concrete)	N/A		Precision (ILS)	No
Niagara Falls International	1,067	D-IV	3	12	34	1	0	17	**67**	9,829 x 150 (Asphalt/ Concrete)	5,189 x 150 (Asphalt)	3,973 x 75 (Asphalt)	Precision (ILS)	Yes

Sources:
Airport Master Records as published July 2009 (http://www.gcr1.com/5010web/),
New York State Airport System Plan

Table 12: Service Comparison								
Airport Service Area								
Airport	Frame Repairs	Power Repairs	Flight Instruction	Charter Service	Avionics	Aircraft Sales	Aircraft Rentals	Other Information
Griffiss International	Major	Major	Y	Y	N	N	N	None
Beck's Grove	N	N	N	N	N	N	N	None
Frankfort-Highland	N	N	N	N	N	N	N	None
Luther	N	N	N	N	N	N	N	None
Hamilton Municipal	Minor	Minor	N	Y	N	N	Y	Glider Rides Available
Other Comparable Airports								
Airport	Frame Repairs	Power Repairs	Flight Instruction	Charter Service	Avionics	Aircraft Sales	Aircraft Rentals	Other Information
Syracuse Hancock International	Major	Major	Y	Y	N	Y	Y	Commercial Air Service Available via American Eagle, Continental, Delta, United, JetBlue, and US Airways.
Schenectady County	Minor	Major	Y	Y	Y	Y	Y	Air Ambulance and Cargo Services Available
Albany International	Major	Major	Y	N	N	Y	Y	Commercial Air Service Available via Air Canada, Cape Air, Continental, Delta, Southwest, United, and US Airways
Plattsburgh International	N	N	N	N	Y	N	N	Commercial Air Service Available via Allegiant Air, Cape Air, and Direct Air
Niagara Falls International	Minor	Minor	Y	Y	N	Y	Y	Commercial Charter Air Service Available via Direct Air

Source: Airport IQ 5010 Airport Master Records as Published July 2009 (http://www.gcr1.com/5010web/)
Legend: N=No, Y=Yes

Table 13: Rates and Charges Comparison									
Airport Service Area									
Airport	Tie-Down		Conventional Hangars		T-Hangars		Lowest Fuel Price ($/gallon)		GA Landing Fee
	$/	Available	$/	Available	$/	Available	100LL	Jet A	
Griffiss International	$25 / day	Y	$200 - $1,400 / month	N	$275 / month	N	$5.15 (f/s)	$4.24 (f/s)	N/C
Beck's Grove	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/C
Frankfort-Highland	$40 / month	Y	N/A	N/A	N/A	N/A	$4.40 (s/s)	N/A	N/C
Luther	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/C
Hamilton Municipal	$20 / month	Y	N/A	N/A	$125 (wood) - $185 (metal) / month	N	$4.40 (f/s)	$4.75 (f/s)	N/C
Other Comparable Airports									
Syracuse Hancock International	Unavailable						$4.95 (f/s)	$4.79 (f/s)	Unavailable
Schenectady County	$40 / month	Y	$100 / night - $250 / night	Y	$375 (small unheated) - $1,250 (large heated) / month	Y	$3.99 (s/s)	$3.87 (f/s)	Single Engine: Pleasure – N/C Business - $3.50 Multi Engine / Jet: $1 / 1,000 lbs
Albany International	$150 / month	Y	N/A	N/A	$325 / month	Y	$3.83 (s/s)	$3.85 (f/s)	$30-$100
Plattsburgh International	$30 - $50 / month	Y	N/A	N/A	N/A	N/A	$4.26 (s/s)	$4.45 (f/s)	N/C
Niagara Falls International	$97 / month	Y	$45 / night – Single (Summer) $90 / night – Single (Winter) $175 / night - Jet (Summer) $225 / night – Jet (Winter)	N	N/A	N/A	$5.44 (f/s)	$4.71 (f/s)	$0.90 per 1,000 lbs. Maximum Takeoff Weight

Source: McFarland-Johnson, Inc. Telephone Survey; Fuel prices obtained from Airnav.com, July 16, 2009.
Legend: N/C = No Charge, N/A = Not Applicable, N=No, Y=Yes

4. BASELINE FINANCIAL OUTLOOK

THIS SECTION IDENTIFIES HISTORICAL REVENUES AND EXPENSES at Griffiss International Airport and projects those revenues and expenses to the year 2014. This projection only considers a baseline scenario with no revenue enhancement projects included. It does not consider an expansion of the operation. However, in a later section, alternative projections of financial performance will be presented based upon business plan recommendations and marketing pro-formas.

- Historical Revenues and Expenses
- Baseline Forecast of Revenues and Expenses

4.1 Historical Revenues and Expenses

Information concerning historical revenues and expenses for the Airport were provided by Airport Management for the years 2007 through 2009 (Table 14). Average annual growth rates are shown for each category.

Table 14 - Historical Revenues and Expenses

	2007	2008	2009	Av. Rate/Yr.
OPERATING REVENUES				
Oriskany Facilities Rents	$131,388	$705,273	$1,067,196	185.0%
Hangar & Building 100 Rents	$524,512	$371,825	$363,275	-16.8%
FBO Income	$1,596,173	$3,651,380	$0	n/a
Fuel Flowage, Parking, Misc. Fees	$0	$35,875	$67,401	87.9%
PILOT Income	$705,083	$706,266	$709,067	0.3%
Miscellaneous	$201,090	$119,381	$190,200	-2.7%
Total Revenues	**$3,158,246**	**$5,590,000**	**$2,397,139**	**-12.9%**
OPERATING EXPENSES				
Salaries & Benefits	$1,701,331	$1,643,396	$1,485,743	-6.6%
Administrative/Office Equipment	$169,380	$272,154	$131,618	-11.8%
Utilities	$1,022,813	$926,337	$955,366	-3.4%
Insurance, etc.	$91,533	$111,751	$96,810	2.8%
Equipment & Maintenance	$463,438	$396,601	$465,470	0.2%
FBO Expenses	$922,503	$2,818,549	$0	n/a
Miscellaneous	$575,791	$410,836	$744,601	13.7%
Total Operating Expenses	**$4,946,789**	**$6,579,624**	**$3,879,608**	**-11.4%**
Total Net Revenues/(Deficit)	**($1,788,543)**	**($989,624)**	**($1,482,469)**	**-9.0%**

Note 1: Operating Expenses as shown do not include the depreciation of Airport assets.

As shown, over the three-year period the Airport has not generated enough operating revenues to cover operating expenses. As such, funds available in Oneida County's General Fund supplement Airport revenues to cover the balance of annual expenses. Significant changes occurred in both revenue and expense accounts when the Airport was relocated. This is apparent on both the sides of the Airport balance sheet, where both revenues and expenses associated with the County operating the FBO went away once Million Air began operating. Based on conversations with Airport Management, much of the FBO income in 2008 was driven by fuel purchases made by the U.S. Air Force, who were operating AWACS (Airborne Warning and Control System aircraft) at the Airport.

It should be noted that the balance sheet for the Airport at Griffiss benefits from rent for facilities still in place at the Oriskany location and payment in lieu of taxes (PILOT) made through Griffiss Local Development Corporation. Oriskany rents currently include those from Orion Bus Industries, Oneida County STOP-DWI (a County program for reducing alcohol-related traffic injuries and fatalities), and the New York State Office of Homeland Security. The County receives payment in lieu of taxes (PILOT) as part of the development deal that brought Empire Aero to Griffiss International Airport. PILOTs are a vehicle to replace property taxes that would have been paid if the property had remained in private ownership.

4.2 Baseline Forecast of Revenues and Expenses

The baseline forecast for future revenues and expenses at Griffiss International Airport represents a scenario that assumes all current operating conditions remain the same. While this is somewhat unrealistic, it does present benchmark forecasts that can be used as measures for the performance of recommended alternatives. The forecast begins in 2010 with the assumption that the Airport performs to the County's adopted budget for the Airport. From this point, the Baseline Forecasts do not include any changes to the Airport's financial performance that may occur through the implementation of this business plan or other local economic shifts that could alter the existing trend. Additional assumptions used in developing the baseline forecast include the following:

- ***Rate of Inflation:*** Historically, the rate of inflation has been used to escalate prices when making forecasts of revenues and expenses. For this baseline forecast, a rate of 4 percent was used to forecast some revenue categories such as fees collected from Fuel Flowage/Parking and Miscellaneous revenues. On the cost side of the balance sheet, this rate of monetary inflation was applied to Administrative Expenses, Utilities, Capital Equipment and Maintenance, and Miscellaneous expenses.

- ***Facility Rents Growth:*** As described, the Airport realized revenues from rent payments for facilities at the old Oneida County Airport facility in Oriskany and buildings and hangars at Griffiss. These rent payments are established in existing lease agreements with tenants at both locations. Currently (March 2010), the Oriskany facility is still in the process of becoming fully-released from covenants made to the FAA by the County. It is believed that the process could take as long

as five years. Therefore, the baseline forecast for revenues from these facility rents drew directly from these lease agreements, including current and escalated rental rates per square foot through 2014.

- ***PILOT Revenue Growth:*** The County receives payment in lieu of taxes (PILOT) as part of the development deal that brought Empire Aero to Griffiss International Airport. The baseline forecast assumes a modest growth in revenues from the level of PILOT revenue estimated for 2010, which was provided by Airport management.

- ***Direct Salaries, Wages, and Benefits Costs Growth:*** Direct Salaries, Wages, and Benefits *decreased* by a rate of more than 6.5 percent during the 2007-2009 period, due in large part to a decline in overtime payments and salaries. There was a slight increase in temporary services, which were used to make up for the overall cuts. Due to the ongoing budgetary pressures being felt by many local governments and other governmental units like the Oneida County, the baseline forecast assumes that such expenses in this category have been cut prudently, and will increase over the period by a modest rate of 2 percent annually through the 2014.

- ***Insurance Costs Growth:*** Costs associated with insurance and bonding remained relatively flat between 2007-2008; however, the 2010 budget appropriated $142,000 for this expense. This represents an increase of over 42 percent. The baseline forecast assumes that the insurance policies in place today will not be substantially modified during the 5-year period, and that the cost of such insurance will increase in concert with broader insurance industry trends. Thus, a 7 percent growth rate was assumed.

Drawing on historical growth trends and the assumptions described above, the baseline projection of revenues and expenses was forecast through the year 2014 (Table 15).

Table 15 - Baseline Forecast of Operating Revenues and Expenses

ITEM	2010	2011	2012	2013	2014
OPERATING REVENUES					
Facilities Rents	$1,720,224	$1,750,587	$1,780,321	$1,810,933	$1,842,448
Fuel Flowage, Misc. Fees	$83,000	$86,320	$89,773	$93,364	$97,098
PILOT Income	$717,000	$722,091	$727,218	$732,381	$737,581
U.S. Customs Fees	$175,000	$150,000	$150,000	$150,000	$150,000
Miscellaneous	$161,500	$167,980	$174,678	$181,666	$188,932
Total Operating Revenues	**$2,856,724**	**$2,876,978**	**$2,921,990**	**$2,968,344**	**$3,016,059**
OPERATING EXPENSES					
Administrative Expenses/Office Equipment	$76,294	$79,346	$82,520	$85,820	$89,253

Table 15 - Baseline Forecast of Operating Revenues and Expenses					
ITEM	2010	2011	2012	2013	2014
Utilities	$827,000	$860,080	$894,483	$930,263	$967,473
Direct Salaries, Wages, & Benefits	$1,542,454	$1,573,303	$1,604,769	$1,636,865	$1,669,602
Insurance	$142,500	$152,475	$163,148	$174,569	$186,788
Capital Equipment & Maintenance	$596,702	$620,570	$645,393	$671,209	$698,057
U.S. Customs Service	$175,000	$150,000	$150,000	$150,000	$150,000
Miscellaneous	$581,000	$604,240	$628,410	$653,546	$679,688
Total Operating Expenses	**$3,940,950**	**$4,040,014**	**$4,168,723**	**$4,302,272**	**$4,440,861**

As shown, total baseline revenues are anticipated to grow from approximately $2.85 million in 2010 to $3.01 million by the year 2014. Baseline expenses are expected to increase from $3.94 million in 2010 to about $4.44 million by the year 2014. When the baseline costs are compared with the baseline forecasts of revenues, the net operating costs for the Airport can be predicted as follows:

Table 16 - Baseline Net Deficit			
Year	Total Expenses	Total Revenues	Net Deficit
2010	$3,940,950	$2,856,724	($1,084,226)
2011	$4,040,014	$2,876,958	($1,163,056)
2012	$4,168,723	$2,921,990	($1,246,733)
2013	$4,302,271	$2,968,343	($1,333,928)
2014	$4,440,861	$3,016,059	($1,424,802)

As shown, under the baseline scenario, net deficits could be anticipated to increase from -$1.08 million in 2010 to -$1.42 million by 2014. For the period 2010-2014, this forecast represents a cumulative net deficit total of -$6.25 million. The results of this forecast indicate that under a conservative baseline scenario, where no new revenue-generating or cost-cutting strategies are undertaken. Thus, if the Airport continues under such a baseline operating direction through 2014, significant net revenue deficits can be expected.

In the next section, a set of revenue enhancement initiatives will be examined that are anticipated to improve the financial performance for the Airport.

5. BUSINESS PLAN ALTERNATIVES

SEVERAL BUSINESS PLAN ALTERNATIVES WERE DEVELOPED TO increase financial performance at Griffiss International Airport. Additional revenues could be used to offset existing and projected net revenue deficits as described in the previous section, or to pay for portions of the local share of capital development projects. In order to present these alternatives, this section is organized to include the following:

- Area-wide Factors Supporting Growth and Development of the Airport
- Obstacles to Airport Performance and Goal Attainment
- Revenue Enhancement Options

5.1 Area-wide Factors Supporting Growth and Development of the Airport

There are a number of factors that support the potential growth and development of Griffiss International Airport. In this regard, a primary goal of the County is for the Airport to serve as an economic and job growth catalyst for the community. Since the realignment of Griffiss Air Force Base on September 30, 1995, and the subsequent relocation of Oneida County Airport in Oriskany to Griffiss International Airport on January 1, 1997, there has been a concerted effort on the part of County leaders to find ways for the Airport to create jobs and economic development in the County.

Airport Location

Griffiss International Airport is located on the eastern edge of the City of Rome, and is bound on the west by State Route 825 and State Route 365 on the south. Airports typically serve an area comprising a 30-minute drive-time radius around the facility for small general aviation aircraft and up to 60 minutes driving time or more for corporate aircraft and business jet owners. Being just 10 miles from Interstate 90, the New York State Thruway, the 60-minute corporate service area for Griffiss International Airport extends westward to the significant Syracuse corporate market (Figure 5 shown previously). The distance to the Airport from other communities is:

Nearby Cities	Driving Distance (miles)	Driving Time (hours)
Utica, NY	16	0.5
Oneida, NY	18	0.5
Syracuse, NY	47	1.0
Schenectady, NY	91	1.75
Watertown, NY	90	1.5
Binghamton, NY	119	2.0
Rochester, NY	128	2.25

Redevelopment Efforts

The significant redevelopment efforts by the County, with supporting funding from federal sources has resulted in new areas of growth for the region. The following represent significant public and private investment in two projects aimed at rebuilding the County and the region.

- ***Marcy NanoCenter***: Marcy NanoCenter is the largest remaining shovel-ready, greenfield site in New York State's Tech Valley. The 300-acre site is being aggressively marketed (http://www.marcynanocenter.com/) as an ideal location for a new semiconductor manufacturing facility due to its proximity to high-tech and semiconductor clusters, secure water and energy sources, quality work force, and access via three major highways, regional airports and major U.S. and international markets.

- ***Computer Chip Hybrid Integration Partnership:*** This Partnership is a high-tech venture between State University of New York Institute of Technology and the University at Albany. Expected to create as many as 475 supplier and contractor jobs in the Mohawk Valley and expand the nanotechnology industry throughout upstate New York[1]. The project is funded with $92.5 million in capital funds from the 2009 state budget, as well as a combined capital investment of $133.5 million from the internationally renowned firms IBM, SEMATECH and Intel.

Mohawk Valley Economic Development Growth Enterprises Corporation (EDGE) is at the center of promoting the area and economic development efforts in both Oneida and Herkimer Counties. EDGE notes a number of locally concentrated industry groups that have historically proven to fuel one another's growth and success in the Mohawk Valley. Such business networks lead to competitive advantages for existing companies and start-ups alike. In addition to nanotechnology, other industry clusters include: aviation, logistics, metals manufacturing, finance, insurance and real estate.

Griffiss Business & Technology Park

Encompassing 3,500 acres, Griffiss Business and Technology Park is a vibrant center for private and public enterprise in Oneida County. The Park has a range of development districts that are focused on meeting the unique needs of businesses focusing in technology, manufacturing, aviation, office, education, and recreation. Operated by Griffiss Local Development Corporation (GLDC), the Park boasts approximately 75 tenants and over 5,500 employees. An example of globally-recognized organizations involved in innovative research are:

- ***Air Force Research Laboratory (AFRL):*** An internationally recognized R&D center, AFRL specializing in information technology. AFRL offers technical assistance and unique laboratory facilities, plus cooperative R&D agreements,

[1] Source: College of Nanoscale Science & Engineering, University at Albany, July 2009

educational partnerships and more. Many Griffiss Park tenants benefit from AFRL's close proximity.

- ***Griffiss Institute for Information Assurance:*** A center of excellence in New York State's technology corridor. The Griffiss Institute establishes the Mohawk Valley as a national center of research and economic development in the field of information security. It sets a new standard for partnerships between academia, government and the private sector.

The Park offers access to highway, air, and rail transportation systems important to U.S. and international trade centers. As of October, 2009, the Park offered a number of sites and/or facilities, including:

- ***Oneida Financial Center:*** A two-story structure offering Class A office space on the 13,700-square-foot second floor. The first floor is fully leased by tenants such as Oneida Savings Bank, two insurance/financial services firms, and coffee and barber shops. The second floor has been leased to Alion Science and Technology Corporation, an employee-owned technology solutions company that works with AFRL.

- ***Park Center:*** Three sites, 14, 16, and 23 acres in size, located at the heart of the Park, this site is a prime location with access via a four-lane state parkway, State Route 825.

- ***Skyline Summit:*** 18 parcels with 92 acres of developable land. Located at the gateway to Griffiss Business and Technology Park.

Current Development/Expansion Activity

Local development trends impact an airport's ability to serve businesses and corporate aviation. Typically, the greater the level of economic activity, the more demand for air transportation services and facilities. For Oneida County, the level of commercial and industrial development activity in the County includes the following projects:

- ***Air Force Research Laboratory Expansion:*** Ground was broken on August 11, 2009 for a 28,000-square-foot addition to a research center at the Air Force Research Laboratory at Griffiss Business and Technology Park in Rome. Also included are renovations to existing buildings to develop about 18,000 square feet of lab space. The $10 million expansion is part of the recommendations made in the 2005 federal Base Realignment and Closure report, and construction should be complete by 2011.

- ***Leonard Bus Sales, Inc. Relocation:*** In June 2009, Leonard Bus Sales Inc. announced relocation of the company into a larger, 20,000-square-foot building at the Park, thanks to an increase in the company's customer base in the school bus

market.

- ***BAE Systems Growth:*** In February 2009, BAE Systems leased space in the recently expanded Griffiss Institute building to add more jobs to their existing 135 over the next three years. BAE began in the business park with six employees in 1997.

These investments and expansions in the Griffiss Business & Technology Park, follow the August 2008 the award for construction of a new access road connecting the Park with State Route 365 by the Griffiss Local Development Corp. (GLDC). The $1.15 million project consists of about one mile of new road along the southern portion of Perimeter Road. This will not only provide improved access, but will also eliminate concerns that some Rome residents expressed regarding increased vehicle traffic through neighborhood streets to gain access to Griffiss using the Rickmeyer Road entrance.

Environmental Reclamation

Also of note is the decision of Environmental Protection Agency officials to remove more than 2,900 of 3,552 acres at the Airport from the list of potentially hazardous sites[2]. After more than two decades and $138 million in clean-up costs, Air Force specialists have successfully remediated many of the potentially hazardous waste sites at the former Strategic Air Command base, making it eligible for removal from the EPA's National Priorities List. The EPA's approval on remediation makes the land much more attractive for business or aviation development.

Local and State Incentives & Programs

The local business climate in the Oneida County area benefits from local and State incentives and programs available to businesses in the area. Such incentives and programs, in concert with a balanced mix of industrial and commercial capacity, create an environment where businesses have the economic tools available to support their continued success. Incentives summarized on the Mohawk Valley EDGE website include:

- ***Empire Zones:*** There are two empire zones locally available: Oneida County and City of Rome. To participate in the Empire Zones Program, a business must first be located in an Empire Zone, or qualify as a regionally significant project, and become zone certified. To qualify for certification, a business must be able to demonstrate that it will create new jobs and/or make investments in the Empire Zone and be consistent with the local zone's development plan, including a cost-benefit analysis.

- ***Empire State Development:*** The State of New York offers the following incentives:
  - Linked Deposit Program Used in conjunction with bank loans. Participating banks can apply for a 2 percent - 3 percent interest subsidy on loan amounts up to $500,000 to reduce company borrowing costs for up to four years.

[2] Source: Environmental Protection Agency, Federal Register Notice, March 20, 2009

- Financing with lower interest rates for up to 40 percent of new equipment and/or real estate.
- Infrastructure Assistance Grant/loan combination to municipalities, local development agencies and industrial development agencies for relocation and expansion projects that will foster economic development. Up to $1,000,000.
- Capital Investment Tax Credit Corporate tax credit of 5 percent for new capital investment in new buildings, and/or depreciable tangible personal property used for manufacturing or R&D purposes. The tax credit is useable for up to 10 years.
- Employment Incentive Tax Credit Available to manufacturers, the tax credit is deductible in each of the 2 years after the first year of original investment for all new employees. The credit is 2.5 percent in each year. In order to be eligible, employment forecasts must conform to certain requirements.
- Workforce Training Defrays the cost of employee training for up to 50 percent of the cost based on the program specifications.
- Department of Labor Assistance Employee recruitment, screening and interviewing. It is free of charge.
- Export Assistance works with manufacturers to expand their export markets.

- ***Foreign Trade Zones:*** Foreign-Trade Zones are designated sites licensed by the Foreign-Trade Zones (FTZ) Board in which special customs procedures may be used. These procedures allow domestic activity involving foreign items to take place prior to formal Customs entry. Duty-free treatment is accorded items that are re-exported and duty payment is deferred on items sold in the United States, thus offsetting Customs advantages available to overseas producers who compete with producers in the United States. Mohawk Valley EDGE administers FTZ #172, which includes:
  - Utica Business Park
  - Dominick Assaro Industrial Park
  - West Rome Industrial Park
  - Oneida County Airport Industrial Park (Oriskany facility)
  - Griffiss Business and Technology Park
  - Boonville Industrial Park

- ***Loan Programs:*** Mohawk Valley EDGE oversees and administers a number of revolving loan funds to support economic development. These funds are available to support investment in non-retail projects which will create new jobs, retain existing jobs, enhance the area's tax base, and provide other benefits to the region's economy. EDGE loans support projects in connection with bank financing and owner equity, including:
  - Job Development Loan Fund
  - Micro Enterprise Assistance Program
  - Rural Development and Agri-Business Assistance Program

A more complete listing of incentive programs available to businesses in Oneida County can

be found in Appendix B of this Plan.

Existing Tenant Activity at Griffiss

The location of Midair USA (MA), Airport Services Unlimited (ASU), and previous operations by Empire Aero Center (EAC) at the Airport had created a nexus of Maintenance, Repair, and Overhaul (MRO) activity at Griffiss International. While EAC is no longer a part of this activity at the Airport, the 470,000-square-foot Hangar #101 still offers significant capacity that may be attractive to prospective companies, if the right industry segment and market can be identified. Even with EAC's demise, Midair employs 16 at the Airport and currently bases two aircraft there: a Piper PA-44 multi-engine aircraft; and a Boeing 747 jet. ASU employs 6 at the Airport, and is an approved service facility for Bell Helicopter, and provides sales and service for used helicopters.

While the current national economic recession has affected air carriers, and by extension the MRO industry that served them, the sheer size of existing facilities at Griffiss remains an advantage for the Airport going forward. Thus, as the economy rebounds, continued support of these companies and a focus on opportunities within the MRO market and industry segments that provide services to such operators represents a growth area for the Airport.

5.2 Obstacles to Airport Performance and Goal Attainment

In addition to the factors that support growth at the Airport, there are a number of factors that present challenges to the economic growth of Griffiss International Airport. Some of these factors are briefly described below.

- ***Infrastructure Maintenance and Utility Costs:*** The Airport currently operates on a $4.5 million budget, and has experienced an operating deficit of $1.5 million - most of which can be attributed to costs of operating the aging steam heat system. Additionally, the Airport has acres of concrete paving, large hangars, and undeveloped land that must be kept in good condition. To do so requires significant labor costs, large equipment and parts expense, significant mowing in the summer, and snow plowing/blowing in the winter. Overcoming such substantial operational costs is a large obstacle for the future financial performance of the Airport.

- ***Public Opinion and Perceptions:*** Because the Airport does not break even, there is a need to show its economic value to the County. There are a significant number of high-paying jobs supported by industries at the Airport that create large direct and indirect contributions to the local economy. This value may not be recognized by the public or their elected representatives.

- ***Improved Partnerships with Economic Development Agencies:*** Today, Mohawk Valley EDGE, Griffiss Local Development Corporation, Oneida County Industrial Development Agency, and other groups coordinate regularly with each other; however, there is some question as to whether the Airport is fully integrated into

their business attraction and retention efforts. The gap between the Airport and these agencies creates an overlap in effort and may also detract from a cohesive marketing image for opportunities at the Airport. In a crowded and competitive environment, enhanced activities at the Airport will depend in part upon better partnerships with these agencies.

- ***AFB Facilities Reuse and Retrofitting:*** There are a number of older Air Force buildings and hangars that offer significant potential; however, most must be re-designed and retrofitted to newer uses. Those that cannot be retrofitted must ultimately be demolished. While grants or loans from the Military Airport Program or NYS Bond Act or Airport Improvement Program to fund the retrofitting may show positive net revenues, such renovations must also meet design requirements and rental rates that can be supported by prospective business tenants.

- ***Socioeconomic Indicators:*** The Airport and the associated Griffiss Business & Technology Park have attracted approximately 75 tenants and over 5,500 jobs since the facility was turned over to the County. However, some socioeconomic and demographic characteristics of the County have lagged behind New York State. For example, since 2000, County population has dropped 1.6 percent, while the State population has grown 2.7 percent. Additionally, 2007 per capita personal income in Oneida County was $30,623, which was just 66 percent of the statewide $46,364 PCPI average. The challenge for the Airport is to improve its financial and operational performance and contribute to local job creation despite such trends.

5.3 Revenue Enhancement Options

In this section, revenue enhancement strategies for Griffiss International are discussed. Elements of these strategies include the following:

- ***FBO Growth:*** Based on Million Air's business plan, growth of their operation at the Airport is dependant on securing new agreements for selling large quantities of jet fuel to civilian-operated military charter operators. The Million Air franchisee at Griffiss has had success in this market at a number of other airports. However, to be successful in this pursuit, the FBO is in need of additional jet fuel capacity and getting U.S. Customs on site. Also, a dedicated terminal building with space for the FBO is needed. As of October 2009, the Airport is finalizing plans for the installation of a bulk fuel farm (to be operational in mid-2010), is pursuing approval from the FAA for the new terminal building ($9 million in Military Airport Program funds are in place), and is working on a user fee agreement with U.S. Customs and Border Protection (CBP). As the Airport makes progress on these valuable infrastructure projects, it will be important for Million Air to successfully capture new military charter operators, some of which are firmly entrenched at other airports.

- ***Existing Tenant Growth:*** With the location of two MRO operators on the Airport

(Midair USA, ASU), the County can support and encourage expansion of these operations by working with these tenants on marketing and promotional activities. For example, discussions with ASU indicate that the agreement with CBP might benefit its work with Bell Helicopter in Mirabel, Quebec. Such collaborative efforts will require a more active partnership in packaging and promoting their combined capabilities to prospective clients. Such expansions could benefit the Airport by increasing lease revenues or spur the development of new facilities. In any event, support of existing tenants at the Airport will could lead to additional jobs and help meet the mission of the Airport as an economic engine for the area.

- ***Oriskany Facility Leasing:*** As shown in the baseline forecast of revenues, existing leases in place with Orion Bus and New York State Department of Homeland Security for facilities at the Oriskany facility will likely represent between 35 and 40 percent of Airport revenues over the next five years. Currently (October 2009), Airport management is working with the FAA on a covenant to ensure that these revenues will continue to benefit the County at Griffiss until the Airport can become more fully self-sustaining in terms of revenues. If any remaining buildings on the old airport are attractive to businesses desiring to expand or relocate, the County should view these as an opportunity to increase revenues in support of Griffiss over the next five years.

- ***Attraction of Corporate Aviation:*** When successful, the attraction of new corporate/business aviation operations to an airport can create significant revenue gains. If the County can attract new corporate tenants, new revenue streams would be created through rent payments for land leases where new hangars are constructed and through sales of fuel. While approximately 230 aircraft are registered in Oneida County[3], just 3 of these aircraft are turbine or turboprop aircraft and 14 multi-engine aircraft. It is these types of aircraft, whether owned by a corporation, partnership, individual, or co-owners, that likely represent business/corporate users in the County. Thus, the attraction of corporate aviation to Griffiss will require reaching out to these owners in Oneida County, and similar owners in surrounding counties, in order to attract corporate users that can have a real impact on activity and revenues at the Airport. Additional opportunities for attracting new corporate tenants may be possible through support of existing tenants, as described, and the pursuit of companies broader industry or geographic markets with corporate flight departments.

- ***Airport Branding:*** Branding is the process of developing a unique selling identity for a product or service. In this regard, the Griffiss International Airport could re-examine their brand and determine if improvements could be made. Improved branding may increase awareness in the market for the facility's attributes and services offered if the Airport revisited or modified its brand. Such a project would endeavor to identify and market the facility and its unique qualities to a target list of

[3] Source: Avantext, Aircraft & Airmen database, 2009.

MRO and corporate/business aircraft operator prospects in the Northeast or other markets already identified by the GLDC and Mohawk Valley EDGE.

- ***Expanded Charter Passenger Service:*** As a Part 139 certificated facility, the Airport can improve revenues through attracting additional charter operators and flights. At present, Gold Transportation operates one round-trip flight each month to Atlantic City with an average of 75 passengers. Based on this activity, it may be feasible to approach Turning Stone Casino, located just 14 miles southwest near the New York State Thruway/State Route 365 interchange. Turning Stone already promotes the availability of a private heliport located adjacent the casino that is available 24-hours a day and offers valet service to the casino.

- ***New or Improved Terminal Services, Amenities, and Activities:*** One means for generating new activity is by offering new and/or improved services and amenities. Today, Griffiss International Airport does offer ground transportation through Avis and Hertz, both of which are located at the Airport. However, adequate food service is not available. Considering the 5,500 employees within the Griffiss Business & Technology Park in addition to those employed on the Airport, a restaurant at the Airport stands to benefit from a captive market of potential customers.

- ***Hangar Development Options:*** Planned hangar construction includes a 17 unit T-hangar building (mid-2010) and a 30,000-square-foot box hangar for transient aircraft (2012, per Airport Capital Improvement Program). Some of this storage will be occupied by tenants relocated from the old Oriskany airport facility, which are presently stored in the East Bay of Building 100. Additionally, a number of remaining "nose docks" are scheduled for rehabilitation for new tenants in the future. Continued hangar development as set forth on the Airport Layout Plan and in response to demand can contribute to the overall revenue picture at the Airport.

- ***Non-Aviation Property Development:*** At Griffiss International Airport, non-aviation commercial and industrial development is a potential revenue producer; however, attracting such businesses may be enhanced through a more coordinated effort with GLDC and Mohawk Valley EDGE. In fact, GLDC is currently in the process of refining a proposal for an Airport Business and Industrial Park for the west side of the Airport. Much like the recommendations for Airport Branding above, the County should work with these agencies on non-aviation property development rather than compete with them on the pursuit of such opportunities. Griffiss International Airport has a tremendous amount of land to offer prospective businesses. Realization of the opportunities presented by this asset favors a coordinated approach to the market.

5.4 Cost Reduction Strategies

In addition to the revenue enhancement options discussed above, Oneida County is also pursuing a range of cost reduction strategies at the Airport. Such strategies are focused in the following areas:

- Utilities Expenses
- Airfield Maintenance
- Facility Maintenance

Since the County moved Airport operations to Griffiss International Airport, the County has inherited a significant expense in maintaining such a large facility. To address these current circumstances, a number of cost reduction improvements were considered as a result of a building conditions and energy usage survey. These alternatives and the anticipated impacts of the County's cost-reduction strategies on the Airport's net operating budget are discussed in Section 6 of this Plan. The results of the building survey and impacts of cost reduction strategies are included in Appendix B.

5.5 Impact of Revenue Enhancement Strategies on Potential Demand

The first step in determining the impacts of the revenue enhancement strategies is to predict the change in aviation demand that would occur if each strategy were implemented. Table 17 presents a listing of the potential demand changes along with the assumptions used in estimating demand changes. As shown, if all activity-generating strategies are undertaken, aviation demand could be anticipated to grow by 13 based aircraft and approximately 4,300 aircraft operations by the year 2014.

Some of the strategies listed in Table 17 work together and cannot be adequately separated such as the effects of branding and the attraction of corporate aviation. For this reason, some categories were cross-referenced in the demand estimation process. In addition, there are a number of activities that may impact revenues, but will not impact overall aviation activity levels. This would include strategies such as non-aviation Property Development, and the new Terminal Services and Amenities described in this Plan.

Table 17 - Impact of Revenue Enhancement Strategies on Potential Demand			
Strategy	Assumptions	Based Aircraft	Operations
		65	53,678
FBO Growth	New bulk fuel farm is operational mid-2010; new terminal under construction in 2011 (operational 2012).	Impacts to Fuel Sales Revenues	N/A
Existing Tenant Growth	Recruitment/attraction efforts begin in 2010 with prospects identified and negotiations begin in late 2010.	N/A	1%
Oriskany Facility Leasing	Re-use of remaining buildings for revenue generation	Impacts to Facility Rent Revenues	
Attraction of Corporate Aviation	Recruitment/attraction efforts within targeted corporate sectors. Partnering with GLDC and EDGE with branding, added hangars, and terminal services. Assume 200 operations/based jet plus itinerant operations.	3	2%
Airport Branding	The Airport branding project will support recruitment/attraction efforts within MRO market, corporate aviation, and FBO growth strategies.	See Corporate Aviation	
Expanded Charter Passenger Service	Achievable through increased targeted marketing with Turning Stone Casino and partnership with Gold Transportation.	Increase in Passenger Levels	
New or Improved Terminal Services, Amenities, & Activities	Increases value-added experience but not assumed to increase based aircraft	N/A	N/A
Hangar Development	Increases based aircraft capacity. Includes both new hangars and rehabilitation of nose docks. Assume 300 operations/based aircraft.	10	6%
Non-Aviation Property Development	Should increase overall revenues but not impact aviation activity significantly.	Impacts to Facility Rent Revenues	
Additional Growth From Plan	Includes all strategies	13	8%
Total Activity - Year 2014		**78**	**58,000**

6. RECOMMENDED PLAN

THE RECOMMENDED BUSINESS PLAN FOR GRIFFISS INTERNATIONAL AIRPORT focuses on methods that the County can use to maximize future growth opportunities for the Airport. Since Oneida County Airport was officially relocated to Griffiss International Airport on January 1, 2007, there has been significant investment in the facility. To date, this has amounted to more than $92 million, which has come from a number of State and Federal grant programs and Oneida County. The ultimate goal of the investment in Griffiss International was to create jobs, which is an issue the community has been dealing with since Griffiss Air Force Base was decommissioned in 1995.

The Recommended Plan outlines the means and methods for accomplishing County goals at the Airport. These goals include: ideas for reducing high utility and facility maintenance costs; options for retro-fitting of aging structures for new users; and ways to market and promote the Airport for aviation users and non-aeronautical business.

Not a Typical General Aviation Airport

Griffiss International Airport is situated on 1,680 acres and features an 11,820-foot runway rated to accommodate aircraft weighing up to 500,000 pounds (double-tandem gear). The Airport has 225 acres of runway, taxiway, and apron pavement. Other facilities and services include a precision (ILS) approach capability, an Air Traffic Control Tower, an Aircraft Rescue and Fire Fighting (ARFF) facility, Types I and IV deicing services, and a 470,000-square-foot hangar capable of housing two Boeing 747 aircraft simultaneously. Considered together, these facilities enable the Airport and the County to service all aircraft in the active national and international fleets.

The approach used in this Business Plan takes a broad look at the potential for the Airport over the immediate 5-year planning period, recognizing that the diversity of markets the Airport can serve will continue to evolve. Thus, the overall strategy of this Plan for Griffiss is for all local partners (Oneida County, Airport Management, Mohawk Valley EDGE, and others) to remain nimble enough to change quickly in response to changes in all segments of the general aviation, air carrier, air cargo, and military markets.

6.1 Recommended Management and Policy Actions

The first steps toward growing revenue at the Airport are actions that will build a stronger business platform from which these gains can occur. In this regard, some changes to the Airport's administrative function have been identified. These changes are discussed below.

Airport Staffing

Existing staffing levels were reviewed in light of the expansive infrastructure at Griffiss and the wide array of functions that Airport staff must be trained and ready to perform. The review incorporated research on similarly-sized airports as well as insights gained from the conduct of business plans for other airports across the nation.

Currently, the Airport has 23 job positions. This Plan recognizes the need for at least three additional positions in the near term:

- ***Accounting/Administrative Assistant:*** There are two approved accounting position at the Airport, one of which is vacant. This vacant position needs to be filled based on existing and projected workloads for accomplishing the recommendations of this Plan.

- ***Heavy Equipment Mechanic:*** Only one heavy equipment mechanic is currently on staff, and this person is a division manager. An additional mechanic is needed in the near-term for better coverage of both normal and after-hours shifts. For the long term (post-five-year period), two mechanics are desired for each 8-hour shift, plus a rotating on-call staff for the 10:00PM shift. Therefore, 4 full-time mechanics would provide full coverage for Airport operating hours and allow for days off, sick leave, and earned vacation in the long term.

- ***Marketing/Business Development:*** An extensive program of marketing, market research, business development, and promotional activities are recommended for the Airport to achieve County goals for job creation and improved financial performance. As such a dedicated marketing/business development staff person is recommended.

  To fill this position, the County should consider acquiring the services of a professional airport marketing consultant. The goal here is to bring in the specific aviation market and/or corporate aviation marketing expertise that does not presently exist at Mohawk Valley EDGE or the Airport. Responsibilities of this consultant would be to supplement EDGE efforts in some areas as the Airport's marketing leader. When pursuing this professional or firm, the County should place high priority on a portfolio of work that demonstrates success in attracting new activity to general aviation airports using both traditional and current marketing tools. Such tools would include public relations, advertising, creative design for collateral pieces,

print and electronic media.

Given these needs, some personnel additions in the near term are appropriate. Therefore, it is recommended that:

Oneida County should recruit staff for two positions in accounting and heavy equipment maintenance, and solicit proposals by invitation or RFP process for a professional Airport marketing professional in the near term.

Other long term staffing needs were considered as a part of this Plan. Based on this review, the following positions should be considered, by function:

- ***ARFF/Airport Maintenance Worker:*** At Griffiss, these positions benefit from cross-trained personnel that can perform a variety of skilled and unskilled tasks. These include everything from security patrols to ARFF duties, foreign object debris removal to building and mechanical repairs. The primary need for this function is 24-hour coverage of the ARFF station, which typically requires 6-8 workers per shift. However, depending on the demands of other Airport functions or shift staffing sometimes just 1-2 workers man the ARFF station overnight. Additionally, with more than 1,000 acres of areas for mowing, and 225 acres of pavement for plowing, additions will assure that all functions of Airport operations are adequately staffed. Therefore, an additional shift of 6-8 ARFF/Maintenance workers is recommended for the long term.

- ***Air Traffic Control Tower (ATCT):*** As of February 2010, MRO activity at the Airport has decreased as a result of airline reductions in aircraft lift capacity via flight reductions and aircraft retirements. Additionally, military charter operations being pursued by Million Air have not materialized. Therefore, no changes to ATCT staffing levels are recommended at this time.

- ***U.S. Customs and Boarder Patrol (CBP):*** The Airport has recently executed a user agreement with CBP, with a need for one full-time CBP agent on-site. First year costs for this agent has been budgeted at $175,000 (which includes equipment and other items to outfit the CBP operation at Griffiss). After the first year the budgeted amount decreases to $150,000 annually. These costs are to be paid by the County. A modest amount of these costs will be offset by a $10/passenger customs fee.

Improved Partnership with EDGE

Currently, local economic development agencies (i.e., Mohawk Valley EDGE and Griffiss Local Development Corporation) operate in close coordination with each other; however, activities related to prospective tenants for the Airport are not fully integrated with these agencies. The gap between the Airport and these agencies creates an overlap in effort that may detract from engaging

the market with a cohesive brand message. In a competitive environment where private enterprise plays incentives from one community off another, realizing growth at Griffiss will benefit from a closer partnership with these agencies.

Additionally, EDGE already has a contract in place with Oneida County to serve as the marketing agent for the Airport. Thus, the Airport and EDGE should commit to regular meetings (i.e., bi-weekly) to keep prospects and activities of the Airport marketing consultant aligned and moving forward. Initiating such regular meetings would add some degree of formality for sharing information and adjusting pursuit activities to respond to new information and opportunities. Initial meetings should establish the following:

- ***Well-defined Roles:*** Airport Management and Department Managers roles would be focused on airport operations, and GA/carrier market trends. The Airport marketing consultant would lead discussions on prospects and opportunities. Marketing roles for EDGE leadership and personnel would be focused on economic development, broader market trends, and structuring incentive packages as the economic development "deal-maker" in the County. These roles can help define responsibilities and prospect-related assignments.

- ***Well-defined Responsibilities:*** As partners, Airport responsibilities might include keeping EDGE abreast of existing tenant relationships/needs/issues, and inquiries from new prospects regarding hangar/building and land availability. The Airport marketing consultant would report back to the team developments and progress in target markets. EDGE's responsibilities might include keeping Airport Management informed of planning activities that affect the Airport and including Airport personnel during deal-making with business prospects.

- ***Daily Work Activities:*** A more fully-integrated relationship between the Airport and EDGE will be based on a free-flow of information daily, regarding identifying and qualifying new business leads to pursue in MRO, Charter, Military, and Corporate Aviation markets. Daily or as needed communication and coordination between the Airport, the Airport marketing consultant, and EDGE will advance individual tasks and priorities.

Such a unified approach should also strengthen the position of the Airport when reporting to the County Executive/Board of Legislators. Therefore, it is recommended that:

Airport personnel should engage in a marketing task-oriented partnership with Mohawk Valley EDGE.

As a starting point, this Business Plan should serve as an agenda for the division or responsibilities and tasks for both the Airport and EDGE staff. Suggested activities within each of the revenue enhancement initiatives identified in Section 5 of this plan include:

- ***FBO Growth:*** EDGE and Airport leadership should meet with Million Air to explore areas that EDGE personnel may be able to provide assistance needed in support of the company's business plan. To date, the Airport has invested in additional jet fuel capacity (bulk fuel farm to be operational in mid-2010) and U.S. Customs on-site. Additionally, a dedicated terminal building with space for the FBO has received FAA approval ($9 million in Military Airport Program funds).

- ***Existing Tenant Growth:*** EDGE and Airport leadership should meet with existing tenants (i.e., Midair USA, ASU) to ensure that the County and EDGE staff are providing the appropriate support for their businesses. For example, Midair USA recently provided a 2-year business plan to the Airport that showed needs and anticipated revenue and job growth associated with the plan. Also, U.S. Customs at the Airport will benefit ASU's work with Bell Helicopter in Mirabel, Quebec.

- ***Attraction of Corporate Aviation:*** With only two jets and 20 multi-engine aircraft registered in Oneida County[1], the Airport will rely upon the Airport marketing consultant and the support of EDGE to reach out to other markets beyond County limits. The details of corporate aviation attraction efforts are included in a subsequent recommendation of this Plan.

- ***Expanded Charter Passenger Service:*** Building on existing charter operations by Gold Transportation, it may be feasible to approach Turning Stone Casino, located just 14 miles to the southwest near the New York State Thruway/State Route 365 interchange. Turning Stone already promotes the availability of a private heliport located adjacent the casino that is available 24-hours a day and offers valet service to the casino. Other charter passenger service opportunities may also become apparent once EDGE and Airport personnel conduct more research into additional operators and local tourism groups.

Growth in these segments of existing Airport activities, and the future financial performance of Griffiss International Airport, has much to gain from a coordinated team effort between the highly-trained and knowledgeable staff at the Airport and EDGE.

6.2 Revenue Enhancement Recommendations

This section describes how a number of business options might improve revenues for the Airport. The projected levels of enhanced revenues, which are presented in Table 18, reflect specific revenue growth initiatives being undertaken by Oneida County at Griffiss International Airport.

Prospective Tenant Additions

Recent discussions with Airport management revealed a host of prospective tenant additions

[1] Source: Avantext, Aircraft & Airmen database, 2009.

currently being pursued by the Airport. The following summarizes existing tenant prospects at Griffiss:

- ***Flight School/A&P/Part 135 Operator:*** This business is interested in a lease for the East Bay of Building 100.
- ***Charter Operator:*** This operator is initiating two trial flights to Mississippi on February 6 and 9 to gauge the local market and interest.
- ***MRO Business #1:*** This business is interested in leasing the West Bay of Building 100 to service customers, with a need to accommodate two MD-80 aircraft.
- ***MRO Business #2:*** A well-established Midwest corporate/business aircraft MRO with many locations is considering expanding at Griffiss with construction of a new hangar. The current need is for a 120,000-square-foot hangar.
- ***MRO Business #3:*** A light maintenance and interior refurbishment company that specializes in helicopters has expressed an interest in relocating to Griffiss with a need for 12,000 square feet of hangar space.

For the Airport to capitalize on these opportunities for new revenue streams, it is important for EDGE to be involved in conversations and negotiations regarding the structure of a financial incentive package. Therefore, it is recommended that:

Airport and EDGE leadership should follow-up with prospective tenants to ensure Griffiss does not lose them to competing airports.

Existing Tenant Business Activities Expansions

- ***Aviation Services Unlimited:*** Bell Helicopter (of Mirabel, Canada) is considering using the services of ASU for aircraft finishing work upon the establishment of full-time Customs services at Griffiss. Therefore, it is recommended that:

Oneida County Executive and Board of Legislators should approve the hiring of a U.S. Customs and Border Patrol agent for the Airport.

- ***Midair USA:*** Recently, MidAir has expressed interest in leasing Bay 5 of Building 101, and has forwarded to Airport Management an aggressive 2-year business plan and growth strategy. The company's plan calls for serving as the direct provider of MRO services at the Airport previously offered by EAC, in addition to efforts to capture additional tenants. If this plan can be supported by the Airport and the County quickly, the company could retain some portion of the local workforce that was previously employed at EAC. Therefore, it is recommended that:

Airport Management, EDGE leadership, and County officials should create an incentive package to retain Midair.

Other Potential and Long-Term Revenue Opportunities

- ***Future of Building #101:*** As of February 2010, Building #101 is being leased by Empire Aero Corporation (EAC); however, recent downsizing at the company makes its future at Griffiss uncertain. While the total impacts of this change are unknown at this time, the long-term potential for marketing this 470,000-square-foot facility to a broader range of prospects is significant. For example, a major defense contractor has recently expressed interest in performing a capabilities assessment for a possible USAF C-5A maintenance contract. Going forward, the sheer size of this facility makes the Airport a national and global competitor for operators and maintenance service providers of large aircraft in need of such storage space. Therefore, it is recommended that:

Airport Management and EDGE team should jointly develop a marketing strategy for targeting operators who may be interested in utilizing Building #101.

As mentioned, however, EAC still maintains a leasehold for the facility. Thus, any marketing activities related to Building #101 should first consider any legal rights granted the company over the facility while the existing lease agreement remains in effect.

- ***Air Cargo:*** Recently, a number of interests have surfaced regarding the Airport's ability to accommodate increased air cargo operations. One opportunity is an air cargo carrier and another a local company seeking improvements to receipt and temporary storage of sensitive materials from an international location. Regarding an air cargo carrier at Griffiss, State Aviation officials have indicated that the market is New York City, where such carriers typically require freight forwarders and ground networks to be in place. Additionally, air cargo operations in Syracuse, Buffalo, and Albany are quite successful and may be difficult to displace. While the Airport and EDGE should certainly respond to inquiries from air cargo carriers, the pursuit of this market as a growth area in the near term at Griffiss may be premature. Therefore, it is recommended that:

The Airport Management and EDGE team should consider air cargo service as an opportunity beyond the five-year planning period.

In the second opportunity noted above, the local company is interested in leasing space at the Airport for storage of time/temperature sensitive materials from an international location. The benefit for the company is improved shipping time over existing logistics arrangements. In this case, the Airport's role would be to provide

the storage space and accommodate the company's cargo carrier with adequate U.S. Customs staff and facilities. Therefore, it is recommended that:

The Airport Management and EDGE team should ensure adequate storage space and planned U.S. Customs services for future prospects.

- ***Oriskany Facility Rent Revenues:*** Existing leases in place with Orion Bus and New York State Department of Homeland Security for space at the old Oneida County Airport (Oriskany) facility represent over 40 percent of revenues at Griffiss International over the next five years. Additionally, Airport Management remains in contact with the FAA regarding the continued need for these revenues to benefit Griffiss until the Airport can become more fully self-sustaining. Thus, retention of tenants at the Oriskany facility remains a significant part of maintaining the Airport's existing level of financial performance. Therefore, it is recommended that:

The Airport Management and EDGE team should seek to retain Orion Bus and NYS Department of Homeland Security at the Oriskany facility.

Airport Branding & Marketing

In order to grow business/corporate use and the tenant-base, the Airport may benefit from a stronger brand identity in the market. A brand is the idea of a particular business, product, or service, in the minds of customers. Strong brands - if backed-up by the consistent delivery of value and benefit to customers - elicit the desired positive thoughts, emotions, and responses from customers. Today, while the "Griffiss" name itself has significant historical importance, the Airport brand may still be "the old Griffiss Air Force Base." Therefore, the development of a new brand for the Airport can actually claim the desired identity that recognizes the role and capabilities of the facility.

The new Griffiss brand should begin with a reevaluation or reaffirmation of the mission statement and core values associated with the Airport. Once these are established, a slogan or tagline that reinforces the Airport name should be used. As stated, the "Griffiss" moniker has historical significance that remains powerful for branding purposes. However, the "International Airport" portion of the name reflects more of a scheduled passenger air service role than a hub for corporate activity or center for diverse MRO service offerings. Therefore, while the existing name can be kept, a tagline that caters to these segments of the aviation market may be beneficial. Potential taglines might include something as simple as "Your Gateway to Central New York," or "Business' Gateway to Central New York." Such taglines conjure a much different idea in the minds of customers about where the Airport is, what services are offered, and what benefits may be realized by operating there. Therefore, it is recommended that:

The County should consider a compelling tagline as a part of building the new Airport brand.

This Business Plan can serve as the foundation of a stronger brand identity for Griffiss International Airport. Building on the recommendations for revenue growth contained here, the Airport can craft a mission statement and set of core values that will drive decision-making by Airport Management when directing staff, Board of Legislators, and the County Executive.

Moving beyond mission and value statements and the Airport tagline, the Airport brand must communicate a value proposition that is distinct and attractive in the market. The expanded partnership between the Airport and EDGE leadership, and the acquisition of an Airport marketing consultant should aid this effort. As such, the Airport brand competes for awareness in the market with a number of airports. In New York State, these include:

- Syracuse-Hancock International
- Schenectady County
- Albany International
- Plattsburgh International

When compared to these airports, Griffiss is relatively similar with the second longest runway and a similar offering of available FBO services. In addition, all other similar airports have ILS approaches and, with the exception of Plattsburgh, an air traffic control tower. Costs and fees for fuel, ground support services, and hangar storage vary between the airports. Thus, in order to stand out, Griffiss must identify a unique selling proposition, communicate that value, and provide a level of service that delivers on this value to users.

A Unique Selling Proposition and Communicating the Griffiss Brand

Communicating the new Airport brand should focus on the benefits of the services offered, in addition to the features of the Airport's infrastructure, facilities, and FBO services. This means that marketing communications must do the work of drawing out what the benefits of using the expansive infrastructure are for targeted market segments. The difference between a feature and a benefit is that a feature is a factual statement about a product or service being promoted, while a benefit answers the question, "What's in it for me?" The following is a snapshot of Airport features and their actual benefits and value they offer to operators who use Griffiss:

	Feature	**Benefits to Users**
●	ARC D-V/Runway Length	The facilities to safely accommodate your business and the aircraft you operate or service as your industry, market, and/or customers evolve.
●	ILS Approach Capability	The speed and pace of business does not stop when poor weather arrives. Users can safely conduct business in nearly all weather conditions, providing

	uninterrupted service to their customers and passengers.
• FBO Services	Aviation enthusiasts that understand your needs, the urgency of your business, and the importance of keeping your customers happy. The FBO's business is making sure your business keeps moving.
• Rental Car	Ensuring that your transition from air to ground keeps you on time and ready for local business activities.

These and other features and benefits should be drawn out in the branding process, and communicated to the market.

Additionally, the Griffiss brand must include a strong graphic identity, or logo, that represents this value. Today, the Airport itself does not have a logo. Concurrent with the branding process and design of a new logo, upgrades to the existing Airport website should be considered. Currently, the Airport's online presence is somewhat buried among other County government departments on the County homepage. While the County's Airport site is not difficult to find when searching specifically for the Airport by name, the domain name (//ocgov.net/oneida/airport) does not help the Airport brand because there is no reference to "Griffiss."

The unique domain www.griffissairport.com, which was the location of the Airport website, now redirects to www.ocgov.net/oneida/airport. Also, and interestingly, the domain www.griffissairfield.com appears to host an older version of the full Oneida County website, not just the Airport site. Other inconsistencies in the Airport's online presence are found when searching for "airport" on the Mohawk Valley EDGE site and when searching for "Griffiss," which return references to "Oneida County Airport" and property listings in the Griffiss Business and Technology Park, respectively.

In terms of website content, the site does lack some information that might be helpful to prospects. In this regard, benefits of using the Airport should be highly visible, along with land and/or facilities available for lease, nearby accommodations, an online contact form, and other improvements that communicate the Airport brand. Therefore, it is recommended that:

The County should pursue the development of a new logo and standalone Airport website.

This process will require the allocation of resources for the design of a new logo and website. This can be accomplished through a design agency by invitation or by using an RFP process.

Airport Marketing and Promotion

Once the Airport brand is more firmly identified, the following types of marketing should be considered. These marketing tactics should make full use of brand messaging, taglines, logo, and

website information for taking the Griffiss International Airport value proposition to the market:

- ***Direct Mail:*** Direct Mail refers to postcards, brochures and flyers that are sent through the mail and generally contain a direct response call-to-action. This traditional and powerful form of marketing can be customized to target a specific audience of prospective Airport users (corporations, high net-worth individuals, etc.). A starting point for direct mail is the list of registered aircraft in the region.

- ***Online Marketing:*** Internet advertising continues to expand. For Griffiss, improving awareness about the Airport could be supplemented by utilizing the following:
  - *Organic Search:* Using search engine optimization (SEO) to rank high on Google and Yahoo! in aviation and airport industry-related searches. SEO is a process for optimizing a website that involves editing content, HTML and associated coding to increase its relevance to specific keywords used in searches, and to remove barriers to indexing activities of search engines.
  - *Banner Advertising:* A graphic ad placed on aviation industry or local relevant websites, where clicking the ad directs prospects to the Airport's website.
  - *Email Marketing:* Using a list of email addresses of target prospects to deliver content and promotional offers. This might include major employers in Oneida and Herkimer Counties.
  - *Pay Per Click:* This entails bidding on search terms, which would result in having the Airport's ads appear when relevant keywords are searched for in Google and/or Yahoo!

These marketing activities offer upside potential for growing revenues at the Airport. However, some activities might be better reserved for coming years once initial efforts gain traction or if new approaches are necessary.

To accomplish a marketing program for the Airport, these activities will require a budget that accommodates staff effort and costs. Therefore, it is recommended that:

Oneida County allocate an annual marketing budget for the Airport through the 5-year planning period.

A two-year budget for marketing the activities at Griffiss International Airport has been estimated to be approximately $25,000. This level of funding for marketing includes: $20,000 for branding (unique selling proposition, mission, values, brand message development, and creative services related to the logo, tagline, and website); $2,500 for a sophisticated PowerPoint presentation that can be utilized by the Airport Management, the Airport marketing consultant, and EDGE when promoting the Airport; and approximately $5,000 for direct mail campaigns during 2010 and 2011. For the remaining three years of the period a minimum budget of $10,000 annually should be appropriate for continued direct mail and other activities. Currently, the County contract with

Mohawk Valley EDGE includes Airport marketing as a work task among many, as EDGE provides such services as part of a broad scope of attraction and retention efforts for the County for a lump sum. Establishing this budget for the Airport is important because it will direct the resources necessary to accomplish the goals for the Airport.

Keeping Griffiss International "Top-of-Mind"

As the Griffiss International Airport brand is communicated through marketing and promotional activities, other new-media tools should also be considered for keeping the Airport "top-of-mind" in the market. In this regard, social networking tools such as Facebook, Twitter and even YouTube are fast-rising method for communicating an airport's brand to its users. These sites offer an opportunity for the Airport to connect directly with users on their terms and in ways they already connect with other brands. While utilizing such tools is relatively new to the aviation industry, just a few minutes of searching on these and other sites revealed the following aviation/airport-related results:

- ***Airport Videos on YouTube:*** Aviation enthusiasts, pilots, and travelers alike post videos of aircraft and airports on YouTube. A quick search for "Griffiss" returned a wide range of results, including: a train of empty tankers coming to in the Griffiss Business & Technology Park from East Coast Olive Oil; a Piper Cherokee landing on Runway 33; touch-and-go's by a Galaxy C5A and KC-135 aircraft; and, a long list of musical acts captured by those who attended the Woodstock 1999. Use of YouTube in such ways to communicate the new Griffiss brand can increase awareness and interest in support of other, more traditional marketing efforts.

- ***Airport Fans on Facebook:*** A search for "Griffiss" on Facebook returned a number of page and group results listed by people with some personal connection to the Airport. These potential connections can be valuable, linking old friends and new enthusiasts alike. Sometimes, the numbers are surprising, for example: a Griffiss AFB Alumni page has 158 fans; a Griffiss AFB Military Brats group has 134 members; and a Griffiss Firefighters group has 68 members. If the Airport would develop an "official" fan or group page for the Airport, it would provide a medium for current, prospective, and past users to connect with each other as part of the Griffiss community. If Airport staff can engage with this community on a regular basis, local support and appreciation for the Airport can be encouraged.

  Examples of aviation communities on Facebook include: a "Support General Aviation" page, which has 1,480 members; a "Corporate Aviation" group for pilots, engineers and flight attendants has 643 members. Joining and engaging in these particular online communities of enthusiasts could uncover insights for generating interest and activity at Griffiss.

- ***A Compelling Case: Akron-Canton Airport:*** Located approximately 15 miles outside of greater Cleveland, the airport is making tremendous strides utilizing new

media. The airport maintains two blogs, has more than 1,800 followers on Twitter, and over 4,800 fans on Facebook. A recent YouTube post covered the delivery of their new fire truck. At the time of this writing, this video had reached nearly 1,000 views.

The use of new media is a means to communicate directly with those who are passionate about and rely on general aviation for business travel. This media can also convey the Airport brand and deliver personal attention and customer care. Therefore, it is recommended that:

The Airport Management and EDGE team should include new media tools as part of its growth strategy.

To accomplish this, Airport management and EDGE should select the best tools (blog, Facebook, Twitter, YouTube, etc.), that can help the Airport enter this new territory. Social networking as a strategy requires regular attention, therefore the media utilized should be updated regularly (at a bare minimum, at least once per week). Therefore, to be effective this will require assigning the task of maintaining the Airport's presence on these sites to personnel who are comfortable using them.

Attraction of Corporate/Business Aviation

The attraction of corporate/business aviation operators to the Airport should begin with a targeted search. This search would first focus on attracting transient users that do not currently use the Airport and then transition toward luring these and other operators as tenants. Using the branding methods described earlier, detailed contact information for corporate and business aircraft owners can be used for direct mail marketing. Detailed contact information for owners of these aircraft that can be searched and assembled for direct mail or other marketing campaigns is available for purchase from vendors such as Avantext, and others. However, preliminary queries of data available from Avantext[2] reveal only two jets and 20 multi-engine aircraft registered in Oneida County. Thus, Griffiss International Airport's best opportunity for attracting new corporate tenants is likely to expand the list of prospects to include surrounding counties.

In addition to targeting owners within Oneida and surrounding counties, attraction efforts should be a combined effort that draws upon the market intelligence and research capabilities of Mohawk Valley EDGE. For example, EDGE has targeted a range of industry clusters including: logistics, metals manufacturing, finance/insurance and real estate, and nanotechnology. Further analysis of these clusters may reveal insights regarding general aviation use and reliance as part of such businesses within these industries. In this way, the enhanced partnership between the Airport and EDGE, and communication of the Airport brand messaging when pursuing growth in these industries may result in new opportunities at the Airport. Therefore, it is recommended that:

[2] Avantext, Inc., Aircraft and Airmen CD, 2009

The Airport Management and EDGE team should continue to pursue corporate/business aviation operators via a list of geographic and industry-based target prospects.

Another way that the improved partnership with EDGE could aid corporate aviation attraction efforts is by extending communications to include tenants of the Griffiss Business and Technology Park. Tenants such as the Information Directorate of the Air Force Research Laboratory and others conduct work all over the country and if tapped could represent a market for corporate aviation activity or increased charter services. These attraction efforts should also include Million Air, who as the FBO, would be providing the front-line services required by these users.

A direct mail campaign is a relatively inexpensive effort, and can use the brochure and other materials as information for generating interest in the Airport. Ultimately, the effort will identify owners that might be willing to relocate their aircraft to Griffiss and work toward securing pre-sale commitments for new hangars. Importantly, the list of prospects that is generated for marketing and attraction efforts should be viewed as a Customer Relationship Management (CRM) tool, that includes all existing Airport users, Business Park tenants, and new prospects. Additionally, Internet marketing and engaging directly with users through social networking sites mentioned previously offers an inexpensive method for attracting prospective tenants that can be added to the business development pipeline.

The database should be maintained and updated as a primary tool of the new Airport marketing professional recommended in the opening section. This CRM database will be the source of all information regarding prospective users and tenants that the business development process generates, including a point of contact at each company, the current state of the qualification process (interested, not interested, future possibility, etc.), actions taken (meeting scheduled, information sent, etc.), and future activities to undertake for each prospect.

Hangar Development

The overall purpose for hangar development at Griffiss is for generating revenue and capturing based aircraft of corporate/business users. In this regard, the development of conventional/box hangars is preferable, as there are limited such facilities available on the Airport. The current Airport Capital Improvement Program shows the construction of one 30,000-square-foot conventional hangar (2012) for transient aircraft storage, in addition to the rehabilitation of the four remaining 28,250-square-foot "nose dock" hangars - one each year - through 2014. Nose dock #782 was recently refurbished and is under lease by Midair USA. Additionally, 30 T-Hangar units were recently constructed, which replaced a 36,368 square foot bulk hangar.

Existing hangar space demand at Griffiss (as described in the beginning of this Section), is focused on existing facilities. In this regard, Building #100 has garnered interest from several private businesses. Additionally, Midair USA has expressed interest in leasing a portion of Building #101. Given the added capacity of four newly refurbished nose dock hangars by 2014, it is believed

that the existing large hangar facilities at Griffiss are adequate through the five-year period. This is also true considering that two other private business prospects would be interested in constructing their own facilities through long-term ground leases.

Airport Management has directed that the preferred approach for hangar development is to utilize the refurbished nose dock facilities first, with additional hangar construction to occur afterward or as desired by private interests willing to construct their own facilities. Therefore, it is recommended that:

Marketing should focus on the refurbished nose dock facilities first, followed by additional hangar construction or private investment in new hangars.

Based on existing hangar capacity and the ability of private interests to construct new space, the speculative construction of new hangars by the County is not recommended unless pre-sale commitments can be secured. If marketing activities result in enough interest and financial commitment, conventional hangars should be considered over T-hangar facilities. The development of conventional hangars offers a level of flexibility that T-hangars cannot match. In this regard, they can store several small aircraft as a community hangar in the near term and can ultimately transition into use as corporate hangars for business aviation tenants operating larger multi-engine or jet aircraft. Therefore, it is recommended that:

Airport Management should seek the development of conventional/box hangar facilities if pre-sale commitments are secured.

These conventional hangars could be a range of sizes; however, the pro forma in this Plan assumes they will be 3,600-square-feet (60x60) with 18-foot-tall doors, as recommended by Airport Management. These modestly sized hangars offer adequate space for up to four small aircraft or one corporate tenant. Once these are filled, planning and development of additional hangars will then be warranted.

New Terminal Building, Enhanced Amenities, and Terminal Services

Hangar #100 is a multi-use facility that measures 175,245 square feet and houses Airport administration offices, the FBO, a modest general aviation terminal, and hangar storage for based and transient aircraft. This facility has served well for the transition from an Air Force Base to a fledgling public general aviation airport. However, the FAA has cleared the County to continue with plans to construct a new terminal building at the Airport. Such a facility will strengthen the Airport's brand image and demonstrate the continuing commitment of the County, the FAA, and local Congressional and Senatorial representatives to developing Griffiss International Airport into a catalyst of economic growth.

The new terminal at Griffiss will offer expanded general aviation and passenger terminal

areas, with enhanced amenities to service charter passengers, general aviation pilots and passengers, and corporate aviation through the FBO. Continued offering of services for corporate/business use (i.e., restrooms, vending, lounge areas, WSI weather information, a crew rest area, WiFi access, computers/printers, courtesy car, deicing, lavatory cart, rental car, and hotel reservations) is also recommended. To further complement this line of existing services, the addition of a full-service restaurant is appropriate. Therefore, it is recommended that:

In the new terminal building, Oneida County should continue to offer corporate/business services and seek to add full-service restaurant.

Proposals by restauranteurs should be invited. Selection criteria should consider the ability of an operator to:

- Accommodate existing and future levels of general aviation and local demand
- Offer catering services for corporate/business clients
- Host meetings held by Airport administration or County departments at the Airport
- Deliver to off-site locations within the Griffiss Business and Technology Park

Other Revenue Generation Sources and Long Term Considerations

The strategies and recommendations above focus on initiatives and action items that address current activities and projects underway at the Airport. In addition to these, there are long term opportunities and considerations that can benefit the Airport. These are profiled briefly in the following sections.

Aviation and Non-Aviation Property Development

Given the significant amount of land on the Airport, there are plans in place by the Airport and Mohawk Valley EDGE for the long term development of this land that should be coordinated and planned at this time. The enhanced partnership between the Airport and EDGE will improve the coordination of such planning activities in ways that will benefit the Airport. The most recent Master Plan for aviation and non-aviation development prepared by EDGE represents a sound basis for guiding future development both on-Airport and on available parcels adjacent to landside and airifield areas.

As shown in Figure 7, the Master Plan identifies the following three land use areas on Airport property in the Preferred Option: over 65 acres of land for aviation development among 9 parcels; approximately 70 acres among 7 parcels for light industrial (aviation compatible use); and, just more than 35 acres in 3 parcels appropriate for commercial office and/or research and development uses. This plan for development of the "triangle" is recognized by EDGE leadership and Airport Management to be long-term. However, the plan does serve as a basis for recruitment and attraction efforts by the Airport and/or EDGE.

Additionally, these areas are marked in the 2009 Airport Layout Plan as reserved for future development. Thus, this Business Plan supports the Master Plan vision for development of aviation and non-aviation. Therefore, it is recommended that:

The Airport Management and EDGE team should incorporate Master Plan graphics into the upgraded Airport website and marketing materials.

Figure 7 - *Griffiss Master Plan - Land Uses*

Lease Administration

Another recommendation for the Airport focuses on leasehold contracts with existing tenants. In this regard, only the Empire Aero Center lease was available for review by the Consultant Team. Thus, the following general improvements are recommended:

- ***Assemble Records:*** As mentioned, lease documents for all but one tenant were not available for review for this Business Plan. Such documentation should be complete and on file at the Airport so that Airport management and/or County leadership can

gain easy access to these important legal agreements. Additionally, a complete record system is important to ensure that Airport/County obligations and tenant obligations under all lease agreements are met.

- ***Lease Standardization:*** Generally, standardization of lease agreement language to include certain rights and protections for both the Lessor and the Lessee, is recommended. Such improvements should include:
  - Requirement for new leases if a tenant wishes to increase permitted uses.
  - Lease extension options should include requirements and/or criteria that must be met if a tenant wishes to exercise an option to extend the agreement (i.e., tenant is in compliance, no more than X events of default over X time period, it is in the best interest of the County or Airport, etc.).
  - The method of determining rent escalations should be standardized and based on Consumer Price Index (CPI) or straight-line increases (X percent annually, periodically, etc).
  - Ensure that there is a clear procedure and recipient shares identified for dividing up insurance proceeds in the event of partial or total destruction of the property.
  - Ensure that all FAA required and recommended clauses are present.
  - Ensure that leases preserve the use of a reversion clause that returns full ownership of the leased premises to the County at the expiration of the lease agreement.

In addition to assembling complete records and standardizing leases as they come due, the County should consider other policy and legal standards for operation of private interests and activities at the Airport. As such, it is recommended that:

Airport Management should draft minimum standards for Fixed Base Operators and Specialty Aviation Service Operators at the Airport for approval by the Board of Legislators .

Doing so will set the legal framework for all tenants on the Airport, making expectations and legal obligations explicit and predictable, and the sponsor-tenant relationship transparent. This is especially important considering any future scenario where multiple FBOs or Specialty Aviation Service Operators (SASOs) may wish to locate on the Airport.

Continued Private FBO

Due to continued obstacles of the Airport FBO to successfully attract military charter operations from Bangor (ME) the future of Million Air at the Airport could face challenges. Securing military charter activity was a crucial element of the FBOs original business plan at Griffiss. While Million Air has been able to attract some supplemental military activity (i.e., servicing USAF KC-10 aircraft while the runway at McGuire-Dix-Lakehurst Joint Base is being serviced), the Airport should prepare for a change that might require recruiting a new FBO. This

is especially the case given the broad downturn in many segments of the air carrier market that has affected other MRO activity at the Airport.

Thus, in the event the current FBO elects to leave the Airport, a search for a replacement should consider current industry trends and incentives. For example, the original network of locally-owned FBOs operated by older pilots and aviation enthusiasts has transitioned to larger corporations with multiple locations (Landmark Aviation, Signature Flight Support) or franchises (Million Air). In this regard, the FBO landscape has changed to include complex national and even international companies that are entering the FBO market from an investment standpoint by acquiring locally-owned FBOs. One example of this complexity involves Skyport FBO at Westchester County Airport, which was acquired by Landmark Aviation in 2005. At that time, Landmark was owned by The Carlyle Group, a multi-national private-equity investment firm. In August 2007, Landmark Aviation was acquired by Dubai Aerospace Enterprises, who later that year (December 2007) sold Landmark to BTCR Golder Rauner, a private equity firm in Chicago that manages more than $8 billion in capital.

The most important aspect of this market knowledge is the implications such changes may have for Griffiss over the 5-year period. Therefore, it is recommended that:

> ***The Airport Management and EDGE team should seek FBO market intelligence in preparation for changes that may impact the Airport.***

Cost Savings from Improvements to Utility Systems

A survey of energy efficiency was performed as part of the Business Plan effort, and included Buildings 45, 48, 100, 101, 220, 221 and 504. The buildings' visible envelop, heating, electrical lighting and utility infrastructure systems were included in the survey, along with review of recently prepared building surveys. The purpose was to develop recommendations to reduce utility costs at the Airport. The complete results of the energy survey are included in Appendix B.

Overall, while Oneida County has made many improvements to several of these buildings including new roof and wall insulation and energy efficient lighting replacements, much is left to do. Primarily, new underground gas services by National Grid is desired. National Grid has estimated a total cost of approximately $350,000 to provide the underground gas utility service extension to each of the surveyed buildings. Additionally while other funding sources may be available to offset or reduce some of the construction costs of the projects to Oneida County, additional investigation and feasibility studies are necessary and not part of this Business Plan effort. Therefore, it is recommended that:

> ***Airport Management, Oneida County, and EDGE should begin to implement cost-efficient technologies for reducing energy costs.***

Based upon the estimates of annual cost savings shown in detail in Appendix B, the building energy-efficiency improvements recommended could achieve a cumulative savings of approximately $480,200 over the 5-year planning period. Estimated annual savings are preceded by an explanation of the assumptions used.

6.3 Impact on Revenues and Expenses

The revenue enhancement strategies recommended for Griffiss International Airport represent growth opportunities within the current market and outlook on the coming five-years. The impacts of proposed revenue enhancement on the Airport net revenues are discussed in the following sections.

Revenue Impacts

Quantifying the levels of additional potential revenue that might result from implementing the strategies presented above is highly subjective. In fact, there are a wide variety of complex external economic forces that will have some affect on revenues at the Airport, not the least of which is the fluctuating cost of fuel, changes in the markets existing tenants serve, and overall uncertainty regarding the current economic downturn. For this process, a number of assumptions for each strategy were made, along with the resulting impact on revenues.

Table 18 presents an optimistic forecast of how these enhancement strategies could impact the revenue picture for Griffiss International Airport, if the assumptions for each scenario are met.

Table 18 - Revenue Totals Resulting from Revenue Enhancement Strategies

Revenue Category	2010	2011	2012	2013	2014
Oriskany Facility Rents	$1,058,919	$1,079,561	$1,099,230	$1,119,489	$1,140,356
Hangar and Building Rents	$676,005	$1,043,179	$1,456,832	$2,074,038	$2,822,004
PILOT Revenues	$717,000	$724,651	$732,383	$740,198	$748,097
Fuel Flowage & Misc. Fees	$83,000	$86,735	$91,072	$95,625	$100,407
Miscellaneous	$161,500	$168,768	$177,206	$186,066	$195,369
Total	$2,696,424	$3,102,894	$3,556,723	$4,215,416	$5,006,233

The estimates in the projection of revenues are based on the following assumptions:

- ***Facility Rents Revenue:*** The pro forma includes projected revenues from rental agreements paid by existing tenants as advised by Airport management, in addition to Oriskany facility rents. Also incorporated are new revenue streams from the many

interested prospects listed in the opening of this section. These revenues include the lease of two rehabilitated nose dock hangars during the 5-year period, lease of space in the new terminal building by a restaurant, ground lease revenues for a privately-developed hangar, and a number of individual leases for bays in Buildings 100 and 101.

- ***Fuel Flowage and Miscellaneous Fee Revenues:*** The pro forma assumes the Airport will continue to benefit from fuel flowage fees paid to the County by Million Air. The 2010 County budget recognizes some growth in fee revenues in this category associated with new tenant activity (as outlined in the beginning of this section). As such, the pro forma reflects the budgeted amount of $83,000 in 2010. The projection shows a modest growth rate of 4 percent annually through the 5-year period for these revenues.

Under this enhanced performance scenario, facility rental revenues from new activity propel total revenues upward through the 5-year period. Revenues from the PILOT income was projected in line with historical revenues in this category and the 2010 County budget. The Miscellaneous category was increased at the projected rate of the CPI (4 percent), which is same rate used for the baseline financial performance scenario.

Impact on Expenses

When projecting impacts of increasing activity at Griffiss International Airport, and subsequent increases in revenue, it is important to consider any affects that such activity may have on expenses. Such impacts typically come from County debt service for capital projects used to accommodate the growth and other business development related expenses such as marketing and advertising as described previously.

The Airport expenses pro forma is based in large part on the 2010 County budget for appropriations to the Department of Aviation. However, these expenses were augmented by increases in direct salaries, wages, and benefits, and marketing/advertising/promotional activities as recommended in this Plan. The following assumptions concerning those increases were used:

- ***Direct Salaries, Wages, and Benefits Expenses:*** The following additional expenses in this category were included based upon the recommendation to recruit additional staff in accounting, marketing, and heavy equipment maintenance functions. Based on current job postings for similar positions, the following salary levels were used:
  - *Accounting:* The pro forma assumes that an accounting professional can be hired for approximately $30,000 annually.
  - *Marketing:* The pro forma assumes that a professional Airport marketing consultant can be retained for approximately $55,000 annually.
  - *Heavy Equipment Maintenance:* The pro forma assumes that a heavy equipment mechanic can be hired for approximately $60,000 annually.
  - *ARFF/Airport Maintenance Worker:* The pro forma assumes that needs in this area will increase during the 5-year period; however, existing staff levels

might be maintained until revenues begin to increase with activity levels. Therefore, the pro forma includes an expense of $30,000 for one new hire annually from 2012-2014.

- ***Marketing/Advertising/Promotion Expenses:*** The pro forma includes expenses related to implementing the marketing, branding, and promotional activities recommended in the Plan. Such expenses will be regular throughout the period, but are assumed to fluctuate based on the specific marketing activity, as follows.
  - *PowerPoint Presentation Cost:* A one-time cost included in 2010, in the amount of $2,500.
  - *Branding Project Cost:* This one-time cost of $20,000 is distributed evenly over 2010 and 2011.
  - *Direct Mail Costs:* Direct mail campaigns are envisioned to begin in 2010 and continue through 2012. The pro forma assumes that such costs will diminish as the Airport brand gains traction in the market.
  - *NBAA Conference Costs:* The pro forma includes $4,000 annually for the NBAA annual conference, which will provide for the Commissioner of Aviation and one other Airport representative to attend. These costs are programmed to begin in 2010 and carry through the 5-year period.

- ***U.S. Customs Service Expenses:*** An expense line item was added for U.S. Customs. Based upon previous estimates, this cost is anticipated to be $175,000 for the first year and $150,000 for each year thereafter.

- ***Savings on Utility Expenses:*** As mentioned, the estimates of annual cost savings were based upon calculations performed as part of an energy-use survey, as detailed in Appendix B. Utility estimates were based upon consumption statistics for six buildings during the period between October 2008 and September 2009. The six buildings included in the survey were: 45, 100, 101, 220, 221, and 504. Total utility costs for these buildings during the period was $1,199,508. The savings estimated for making improvements to these buildings is $737,600, which represents a reduction of 38.5 percent. The pro forma, however, utilizes the allocation for Utilities expenses at the Airport as adopted in the 2010 County Budget. This expense for 2010 is budgeted at $800,000. Therefore, the pro forma includes savings on utilities by reducing the $800,000 allocation by 38.5 percent. The result is an estimated savings of approximately $480,200 over the 5-year period. Long term savings from projects with long-term payback schedules would add approximately $11,700 to this annual savings, for a total of $491,900.

All expense-related categories are shown in Table 19, including a phased approach to implementing utility cost-saving improvements as described in Appendix B.

Table 19 - Expense Totals Resulting from Enhancement Strategies					
Revenue Category	2010	2011	2012	2013	2014
Administrative Expenses/Office Equipment	$76,294	$79,346	$82,520	$85,820	$89,253
Utilities	$827,000	$843,540	$860,411	$877,619	$895,171
Hangar 45 (ARFF)	($11,253)	($11,253)	($11,253)	($11,253)	($11,253)
Hangar 220 - Tenants	-	($18,755)	($18,755)	($18,755)	($18,755)
Hangar 100 - Arpt. Admin.FBO	-	-	($120,955)	($120,955)	($120,955)
Hangar 101 - MRO	-	-	($270,564)	($270,564)	($270,564)
Hangar 221 - MVCC A&P	-	-	-	($21,215)	($21,215)
Direct Salaries, Wages, & Benefits	$1,621,254	$1,746,104	$1,845,948	$1,949,786	$2,057,778
Insurance	$142,500	$149,625	$157,106	$164,962	$173,210
Capital Equipment & Maintenance	$596,702	$620,570	$645,393	$671,209	$698,057
Hangar 45 (ARFF)	$60,000	-	-	-	-
Hangar 48 - CAP	-	$1,000	-	-	-
Hangar 220 - Tenants	-	$90,000	-	-	-
Hangar 100 - Arpt. Admin.FBO*	-	-	$120,000	$120,000	$120,000
Hangar 101 - MRO*	-	-	$429,000	$429,000	$429,000
Hangar 221 - MVCC A&P	-	-	-	$90,000	-
National Grid - Gas Mains	$70,000	$70,000	$70,000	$70,000	$70,000
Marketing/Advertising/Promotion	$18,800	$16,300	$10,000	$10,000	$10,000
U.S. Customs Service	$175,000	$150,000	$150,000	$150,000	$300,000
Miscellaneous	$581,000	$604,240	$628,410	$653,546	$679,688
Total	$4,157,297	$4,340,717	$4,577,261	$4,829,200	$5,079,415

* Improvement costs for Hangars 100 ($942,000) and 101 ($3,370,000) financed over 10 years at 5 percent interest rate.

Comparison of Revenues and Expenses for Recommended Plan

Comparison of the enhanced operating expenses and forecasted levels of enhanced revenues indicates a continual net operating deficit through 2014; however, the recommended strategies are projected to accelerate reductions in net deficits through the period. Table 20 presents this

comparison of enhanced revenues and expenses.

Table 20 - Recommended Plan Operating Revenue v. Recommended Plan Operating Expense Comparison

Year	Forecast Enhanced Operating Revenues	Forecast Enhanced Operating Expenses	Forecast Net Operating Deficit/Revenue
2010	$2,696,424	$4,157,297	($1,460,873)
2011	$3,102,893	$4,340,717	($1,237,824)
2012	$3,556,723	$4,577,261	($1,020,538)
2013	$4,215,417	$4,829,200	($613,783)
2014	$5,006,233	$5,079,415	($73,182)

When compared to the baseline performance outlined in Section 4, the Airport's financial benefit from implementing the strategies outlined in this section is a cumulative gain of approximately $1.74 million over the baseline "do nothing" scenario for the same period. As described in the previous sections, significant costs are associated with improvements to utility infrastructure necessary for the Airport to improve financial performance. Additionally, other initial expenses related to new personnel, marketing and promotional activities are necessary to meet existing activity demands and to jumpstart activity at Griffiss. However, if all assumptions can be met within the 5-year period, the Airport stands to reach positive net revenues shortly beyond 2014.

6.4 Summary of Business Plan Recommendations

A number of recommendations have been made as a part of this Business Plan, all with the ultimate goal of improving financial performance of Griffiss International Airport and helping to attract growth in the area. The recommended plan of action in this Business Plan rests on four primary initiatives:

1) ***Airport Branding, Marketing, and Promotion:*** For Griffiss International Airport to grow, the County must develop a brand identity that represents a value that can attract new activity. Utilizing direct marketing to reach prospective clients, new media tools to engage with users and prospects, and hiring a marketing professional to do the work, the Airport can then communicate its brand in a powerful way that compel operators to utilize Griffiss. Success will rely upon consistent messaging through multiple channels, including: a new tagline and attractive logo; an easy to navigate standalone website; and engaging with users regularly via personal outreach and new media tools.

2) ***Attraction of Corporate/Business Aviation and Retention of Existing Tenants:*** The retention of existing tenants and attraction of increased corporate/business aviation tenants and transient activities to Griffiss is linked to the following four strategies: continuous improvement and offering desired services such as U.S. Customs; marketing specific facilities as solutions to prospects' office space and hangar

storage needs; and, a marketing campaign that reaches out to existing companies in the Business and Technology Park as well as aircraft owners and operators in the region. Together, these recommendations represent a strategic move to devote more time and resources toward the growth of the Airport business at Griffiss.

3) ***Improved Partnership with Mohawk Valley EDGE:*** As a business development strategy, improving the County's partnership with EDGE is a critical part of achieving the County's growth goals at the Airport. As such, the hiring of a marketing professional for the Airport whose sole purpose is to generate leads and grow activity will significantly improve communication between the Airport and EDGE leadership. This strategy essentially elevates all facets of the Airport's business development approach, improving the partnership to an action-oriented team that has a regular stream of real business prospects with the potential to impact the Airport's bottom line.

4) ***Implementation of Utility System Upgrades:*** As described in this Plan, the cost of operating the antiquated utility system infrastructure leftover from the old Griffiss Air Force Base is significant, and has required more than $920,000 annually in recent years. Therefore, upgrading existing utility systems from aging steam-heat to natural gas is a central strategy toward improving the ability of the Airport to achieve self-sustaining revenue levels. As shown in the recommendations section, if improvements can be made to a number of Airport building facilities within the 5-year period, annual operating utility expenses could be reduced by $491,900. Such savings offer an opportunity for the Airport to achieve positive net revenues by 2014, with a cumulative net gain of more than $1.33 million over the baseline performance scenario.

A recommended priority-based timeline for implementing the recommendations of this Business Plan is outlined below.

Immediate

- ***1st Priority - Existing Tenant Business Activities Expansions:*** Airport Management, EDGE leadership, and County officials should create an incentive package to retain Midair.
- ***2nd Priority - Improved Partnership with EDGE:*** Airport personnel should engage in a marketing task-oriented partnership with Mohawk Valley EDGE.
- ***3rd Priority - Prospective Tenant Additions:*** Airport and EDGE leadership should follow-up with prospective tenants to ensure Griffiss does not lose them to competing airports.

2010

- ***1st Priority - Existing Tenant Business Activities Expansions:*** Oneida County Executive and Board of Legislators should approve the hiring of a U.S. Customs and Border Patrol agent for the Airport.
- ***2nd Priority - Other Potential and Long-Term Revenue Opportunities:*** Airport

Management and EDGE team should jointly develop a marketing strategy for targeting operators who may be interested in utilizing Building #101.

- ***3rd Priority - Airport Marketing and Promotion:*** Oneida County allocate an annual marketing budget for the Airport through the 5-year planning period.

2011

- ***1st Priority - Airport Branding & Marketing:*** The County should pursue the development of a new logo and standalone Airport website.
- ***2nd Priority - Airport Branding & Marketing:*** The County should consider a compelling tagline as a part of building the new Airport brand.
- ***3rd Priority - Airport Marketing and Promotion:*** The Airport Management and EDGE team should include new media tools as part of its growth strategy.
- ***4th Priority - Attraction of Corporate/Business Aviation:*** The Airport Management and EDGE team should continue to pursue corporate/business aviation operators via a list of geographic and industry-based target prospects.

2011-2012

- ***1st Priority - Airport Staffing:*** Oneida County Oneida County should recruit staff for two positions in accounting and heavy equipment maintenance, and solicit proposals by invitation or RFP process for a professional Airport marketing professional in the near term.
  - As activity increases, an additional shift of 6-8 ARFF/Airport Maintenance Workers should be brought on board.
- ***2nd Priority - New Terminal Building, Enhanced Amenities, and Terminal Services:*** In the new terminal building, Oneida County should continue to offer corporate/business services and seek to add a full-service restaurant.
- ***3rd Priority - Other Potential and Long-Term Revenue Opportunities:*** The Airport Management and EDGE team should ensure adequate storage space and planned U.S. Customs services for future prospects.
- ***4rd Priority - Hangar Development:*** Marketing should focus on the refurbished nose dock facilities first, followed by additional hangar construction or private investment in new hangars.

2013-2014

- ***1st Priority - Other Potential and Long-Term Revenue Opportunities:*** The Airport Management and EDGE team should seek to retain Orion Bus and NYS Department of Homeland Security at the Oriskany facility.
- ***2nd Priority - Hangar Development:*** Airport Management should seek the development of conventional/box hangar facilities if pre-sale commitments are secured.

Other Revenue Generation Sources and Long Term Considerations:

- ***Aviation and Non-Aviation Property Development:*** The Airport Management and EDGE team should incorporate Master Plan graphics into the upgraded Airport

website and marketing materials.

- ***Other Potential and Long-Term Revenue Opportunities:*** The Airport Management and EDGE team should consider air cargo service as an opportunity beyond the five-year planning period.
- ***Lease Administration:*** Airport Management should draft minimum standards for Fixed Base Operators and Specialty Aviation Service Operators at the Airport for approval by the Board of Legislators.
- ***Continued Private FBO:*** The Airport Management and EDGE team should seek FBO market intelligence in preparation for changes that may impact the Airport.
- ***Cost Savings from Improvements to Utility Systems:*** Airport Management, Oneida County, and EDGE should begin implement cost-efficient technologies for reducing energy costs.

6.5 Timetable and Trigger Points

Table 21 presents a list of trigger points and general timeframe for implementation of the Business Plan recommendations, grouped by type of action as described in previous sections.

Table 21 - Action Plan Trigger Points

Action	Description	Trigger Points	Timeframe
Management/Policy			
Airport Staffing	Oneida County should recruit staff for three positions in accounting, marketing, and heavy equipment maintenance. An additional shift of ARFF/Maintenance Workers should be considered, beginning with one new hire annually from 2012-2014.	Job postings advertised shortly after adoption of Business Plan.	2011-2014
Improved Partnership with Mohawk Valley EDGE	Airport Management and personnel should engage in a marketing task-oriented partnership with EDGE.	Immediate	2010
Corporate/Business Aviation			
Prospective Tenant Additions	Airport Management and EDGE team should follow-up with prospects to ensure they are not lost to competing airports.	Immediate	2010-2011
Attraction of Corporate Aviation	Airport Management and EDGE team should continue to pursue corporate/business aviation operators via geographic and industry-based list of target prospects.	In concert with improved partnership with EDGE, and hiring of marketing professional.	2011
U.S. Customs and Border Patrol Service	Oneida County Executive and Board of Legislators should approve hiring of CBP agent.	During 2011 budgetary process.	2010

Table 21 - Action Plan Trigger Points			
Action	Description	Trigger Points	Timeframe
Retention of Existing Tenants			
Midair USA	Airport Management, EDGE, and County officials should create an incentive package to retain Midair USA.	Immediate	2010
Oriskany Facility	Airport Management and EDGE team should seek to retain Orion Bus and NYS Department of Homeland Security at the Oriskany Facility.	Ongoing customer relationship building and in concert with lease renegotiations.	2013-2014
Airport Development			
Hangar Development	Airport Management should seek the development of conventional/box hangars if pre-sale commitments can be secured.	In response to demand and/or once nose-docks are leased.	2013-2014
Non-Aviation Development	Airport Management and EDGE team should incorporate Master Plan graphics into upgraded Airport website and marketing materials.	In concert with other EDGE marketing activities	2010-2014
New Terminal Building, Enhanced Amenities, and Terminal Services			
Terminal Building, Amenities, Services	Oneida County should continue to offer corporate/business services and seek to add a full-service restaurant.	RFP should be advertised just prior to completion of terminal construction.	2011-2012
Airport Branding & Marketing			
Communicating the Brand	Oneida County should develop a new logo and standalone Airport website.	Adoption of Business Plan	2011
Airport Marketing	Oneida County should allocate an annual marketing budget for the Airport through the 5-year period.	Adoption of Business Plan	2010
New Media	Airport Management and EDGE team should include new media tools as part of Airport growth strategy.	During branding process.	2011
Building #101	Airport Management and EDGE team should jointly develop a marketing strategy for targeting operators for Building #101.	Once knowledge of EAC's future is clear.	2010
Hangar Facilities	Marketing should focus on refurbished nose dock facilities first, followed by additional hangar construction or private hangar development.	As part of corporate/business aviation attraction efforts.	2010-2014

Table 21 - Action Plan Trigger Points			
Action	Description	Trigger Points	Timeframe
Other Revenue Generation Sources and Long Term Considerations			
Utility Cost Savings	Oneida County, Airport, and EDGE leaders should begin to implement cost-efficient technologies for reducing energy costs.	Part of tasks undertaken within improved partnership with Mohawk Valley EDGE.	2011-2014
Air Cargo	Airport Management and EDGE team should consider air cargo as an opportunity beyond the 5-year planning period.	In response to demand or market opportunity.	Post-2014
Lease Administration	Airport Management should draft minimum standards for FBOs/SASOs at the Airport.	As soon as possible or can be included by addendum to leases.	2010-2014
Continued Private FBO	Airport Management and EDGE team should seek continued market intelligence regarding the FBO market that may impact the Airport.	Ongoing market research; can be assigned to marketing professional.	2010-2014
Airport Storage and Services	Oneida County should ensure adequate storage space and services such as planned U.S. Customs and Border Patrol.	Part of tasks undertaken within improved partnership with Mohawk Valley EDGE.	2010-2014

7. AIRPORT COMMUNITY VALUE

THIS SECTION PRESENTS THE METHOD AND FINDINGS used in measuring the economic activity of Griffiss International Airport. In this regard, the economic activity can be measured by estimating the number of direct jobs, income, and output at the Airport. In addition, there is a ripple effect of these jobs and income on the community. Just as the nation is experiencing a negative multiplier effect of job cutbacks, airports and individual communities experience similar processes - both positive and negative - only at a smaller scale.

The economic impact of Griffiss International Airport is dynamic. Over time, as the local economy expands and contracts and businesses change, the impact of the Airport changes. This is especially the case considering the potential exit of Empire Aero Center from Griffiss. Thus, this section will include two snapshots of the economic impact of the Airport: 1) When EAC was operating at its peak, and 2) The economic activity without EAC. The first picture represents a near-term goal for the Airport in the attraction of new businesses and users that can sustain the Airport as a catalyst for jobs and economic activity in Oneida County.

7.1 The Multiplier or Ripple Effect

Economic impact studies show the multiplied effect of spending money on an enterprise. As an example, if a new firm comes into an area and employs 50 people and also purchases some local goods and services, the economic impact of that firm is attributable to the company's direct outlays plus the respending of these outlays by firms supplying goods and services to the new firm. There are generally two types of ripple effects: (1) those associated with firm-to-firm transactions, and (2) those derived from the wages and salaries allocated to employees in these firms. The wages and salaries paid to the 50 new employees are spent and respent several times within the community. Retail establishments that have nothing to do with the nature of the new firm's business are affected by its presence as the new employees spend their income on clothes, automobiles, restaurant meals and so forth. Thus, for every dollar of new wages and salaries, an additional 25 to 75 cents of income might be generated elsewhere in the area. As supplier companies providing inputs to the new firm expand their own production and allocate more resources to wages and salaries, a further consumption-generated ripple effect occurs.

When all the effects are taken in the aggregate, a new job often generates the equivalent of another job (summed up over many partial jobs in different parts of the area's economy) if the community is large and has a sophisticated consumer retail base. In smaller communities, a new job can generate between one-third and two-thirds additional jobs. Ripple or multiplier effects work in both a **positive** way (when a new airport is built or an existing airport expands) and in a **negative** manner (when an enterprise goes out of business or an airport closes). For example, as Oneida County is well aware, the closure of a military base has a much greater economic impact than simply the loss of direct employment or expenditures at the facility.

Numerous studies have been conducted to establish respending multipliers for various geographic areas and segments of the economy. Sector-specific, input-output multipliers are usually developed to estimate the respending impacts of wages and salaries and other related

expenditures. For impacts relating to airport employment, construction, and local business use, multipliers from a number of different sectors are used.

7.2 IMPLAN Modeling

Typically, economic impact models are used to describe the flow of money from one economic sector to another. In the past, models such as the Regional Input-Output Modeling System (RIMS II) and the U.S. Corps of Engineers Economic Impact Forecasting System (EIFS) were used to measure the impacts of direct spending on an area. In recent years, more complex models have been developed, including IMPLAN and Regional Economic Modeling, Inc. (REMI), which have the ability to estimate tax revenue impacts. In all of these models, the inputs of direct jobs and direct spending are critical to the economic impact measurement process. The models trace sector-to-sector impacts and estimate the proportion of any change that is likely to circulate within the economy and the percentage that can be expected to "leak" out to other geographic regions.

The models are based on input-output tables produced by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). Input-output modeling takes into account the dependency of each economic sector on every other sector (there are 500 sectors recorded in the BEA input-output tables). Using these models, the BEA input-output tables are adjusted to take into account the structure of the local economy under study. For example, in calculating a manufacturing multiplier for one county, over 300 sectors can be involved. Each of their contributions to the multiplier is weighted by the size of the sector in terms of output. In addition, the IMPLAN databases are composed of the following components:

- Employment;
- Industry Output;
- Value Added:
  - -Employee Compensation;
  - -Proprietary Income;
  - -Other Property Type Income;
  - -Indirect Business Taxes;
- Institutional Demands;
- Personal Consumption Expenditures (PCE) - three income levels;
- Federal Government Military and Non-Military Purchases;
- State and Local Government Education and Non-Education Purchases;
- Commodity Credit Corporation;
- Inventory Purchases;
- Capital Formation;
- Foreign Exports;
- Federal, State and Local Government Sales; and,
- Inventory Sales.

For this study, the IMPLAN methodology for measuring the ripple effect of spending and economic activity at Griffiss International was used. This method is more useful than older

methods in generating both the economic impacts and the tax accounting aspects of the Airport activity. Desired outputs of the IMPLAN modeling include the following:

- ***Direct Spending:*** Includes on-airport spending on employment, operations, and capital projects. It also includes off-airport spending by air travelers for rental cars, hotels, restaurants, etc. Thus, direct spending is associated with both the *providers* and the *users* of airport services.
- ***Induced Benefits (Multiplier Effect):*** Impacts above the original direct spending created by the successive rounds of spending in the local economy until the original direct dollar impact has been incrementally exported from Oneida County.
- ***Jobs and Income:*** Quantify the income generated by aviation and the number of jobs supported by the Airport.
- ***Total Output in Dollars:*** The combined impacts of direct and induced spending.
- ***Taxes:*** Tax revenue contribution of the aviation industry to local and State units of government in New York.

7.3 Other IMPLAN Input Data

The determination of Griffiss' economic impact focuses on the value of the Airport and how money spent there impacts other sectors of the local economy until the original expenditure ultimately leaves the area. To estimate these totals, the analysis utilized IMPLAN and the following methodology:

IMPLAN Model Inputs

- Input Data on Direct Impacts
  - On-Airport employment expenditures by the County and other employers
  - Off-Airport spending by air travelers (rental cars, hotels, restaurants, etc.)

IMPLAN Model Outputs

- Direct and Induced Economic Impacts
- State and Local Tax Impacts

This section concludes with a summary of direct, induced, and State and local tax impacts generated by Griffiss International Airport. Additionally, non-monetary impacts of the Airport and local aviation in general are discussed.

On-Airport Employment

Information gathered from Airport Management indicated that there were a total of 741 full-time jobs at the Airport while Empire Aero Center was at its peak. At that time, MRO activity at the Airport accounted for approximately 475 jobs. However, with EACs potential exit, and a corresponding decline of jobs at Mid Air USA, total full-time jobs at the Airport have declined to 297. The following is a breakdown of the remaining on-Airport jobs: 180 are contractors performing construction of Capital Improvement Program projects; 49 are aviation related; 14 are associated with Air Traffic Control; 10 are in education (Mohawk Valley

Community College); 6 jobs are with rental car agencies; and, 3 are with the TSA. No part-time employment figures were reported.

Off-Airport Visitor Spending

Every year, air visitors to Oneida County arrive using either general aviation or scheduled airline service. These visitors spend money for rental cars, hotels, and restaurants during their trips and that spending can be attributed to their use of Griffiss. To estimate visitor spending, the number of annual air visitor trips was multiplied times the amount spent per trip.

A method for determining total spending by visitors using Griffiss International Airport was developed based on a per-visitor spending estimate. Essentially, this method first estimates the number of visitors to an airport. Then, an estimated average expenditure per visitor is applied to the total number of visitors, quantifying total visitor spending. To estimate the number of visitors to Griffiss, it was assumed that only the actual airline visitors and transient pilots and passengers would be counted. On the general aviation side, surveys have estimated that the average occupancy of general aviation aircraft is roughly 2.5 passengers per flight[1]. Since transient (itinerant) operations can contain significant numbers of local residents (leaving and coming back to the Airport), only a portion of the itinerant operations could be counted as actual visitors. Again, it was assumed that only 10 percent of total itinerant passengers were actual visitors to the Oneida County area. Based on this methodology, it was estimated that 1,972 visitors will come to the County by way of Griffiss in 2010.

Recent data adjusted for inflation, indicated an average visitor direct spending of $361 per trip in Upstate New York. This amount includes expenditures by visitors who spend money at local hotels, restaurants, travel agencies, and other businesses during their trips. This estimate was multiplied by the estimated number of air visitors to Griffiss International Airport. Using this method, it was estimated that visitors using the Airport in 2010 will expend $712,100.

7.4 Application of Regional Multipliers

Induced economic impacts are the *multiplied effects* of the direct spending impacts. Induced impacts are created by the successive rounds of spending in the local economy until the original direct impact has been incrementally exported from the local area. Thus, the economic impacts of aviation can be felt in parts of Oneida County's economy that are far removed from aviation. Regions that are more economically self-sufficient have higher respending "multipliers" than do regions that are more dependent on regional imports since less of the money is siphoned out of the community for goods and services.

For this study, IMPLAN software was selected as the best input-output model for developing respending multipliers. IMPLAN, developed originally by the U.S. Forest Service, is a comprehensive impact system that is built on a framework of input-output accounting methodology. Since IMPLAN provides a comprehensive system, it is possible to trace impacts of change in one sector on other sectors in a more detailed fashion.

[1] Aircraft Owners & Pilots Association (AOPA) estimate, 2005.

To use the IMPLAN model, the economic impact methodology first identified the direct spending and employment at Griffiss International Airport. To this was added the direct spending of air visitors at off-airport sites such as hotels and restaurants. With this information, regional respending multipliers derived from IMPLAN software were applied to the data to determine the multiplied impacts of direct spending (called induced impacts). Table 22 presents a summary of Griffiss International Airport's direct and induced economic impacts while EAC was operating at its peak, as taken from Appendix C.

Table 22 - Direct and Induced Economic Impacts with Empire Aero Center

ITEM		AMOUNT
Direct Impacts		
Airport-related Income*	(a)	$41,133,775
On and Off-Airport Expenditures (Total including capital costs)	(b)	$167,515,014
Airport-related Employment (Total)	(c)	777
Induced Impacts		
Induced Income Impacts	(d)	$23,949,378
Induced Direct Impacts	(e)	$69,729,365
Total Induced Employment Impacts	(f)	646
Grand Total Dollar Impacts	(b+e)	**$237,244,384**
Grand Total Income Impacts*	(a+d)	**$65,083,152**
Grand Total Employment Impacts	(c+f)	**1,423**

* Includes indirect incomes from visitor spending and capital development. This is a subset of the total impacts and is already included in the output number.

As shown in Table 22, the impacts of Empire Aero Center on the region was significant, with the Airport impact accounting for roughly $65.1 million in incomes, $237.2 million in total output, and nearly 1,425 jobs.

The potential exit of Empire Aero Center from the Airport will have a significant effect on the Airport's broader economic impact in the County. Estimated impacts under this scenario are shown in Table 23.

Table 23 - Direct and Induced Economic Impacts without Empire Aero Center

ITEM		AMOUNT
Direct Impacts		
Airport-related Income*	(a)	$14,732,336
On and Off-Airport Expenditures (Total including capital costs)	(b)	$45,714,157
Airport-related Employment (Total)	(c)	315
Induced Impacts		
Induced Income Impacts	(d)	$7,306,631
Induced Direct Impacts	(e)	$21,216,894
Total Induced Employment Impacts	(f)	195
Grand Total Dollar Impacts	(b+e)	**$66,931,050**
Grand Total Income Impacts*	(a+d)	**$22,038,967**
Grand Total Employment Impacts	(c+f)	**510**

* Includes indirect incomes from visitor spending and capital development. This is a subset of the total impacts and is already included in the output number.

As shown in Table 23, the operation of the Griffiss International Airport in 2010 (without EAC) can be estimated to produce roughly $22.0 million in incomes, $66.9 million in total output, and it sustains 510 jobs.

State and Local Tax Impacts

When discussing economic impacts of aviation, many people are interested in the collective benefits to the local municipalities and the State of New York. One measure of the collective local benefits involves the level of taxes paid to these local governmental units. These tax impacts were estimated by the IMPLAN model for expenditures at the State and local level. Estimated State and local tax impacts from aviation activity at Griffiss International Airport for 2010 totaled $8,045,214. State and local tax impacts of the Airport while EAC was performing at its peak was substantially higher, estimated at approximately $26,216,034.

7.5 Summary of Impact Analysis

As discussed, the economic impact of Griffiss International Airport is dynamic and will continue to expand and contract in the years to come. The effect of Empire Aero Center on the County was significant, with the Airport accounting for roughly $65.1 million in incomes, $237.2 million in total output, and nearly 1,425 jobs. For 2010, this impact will likely decrease to about $22.0 million in incomes, $66.9 million in total output, and it sustains 510 jobs. State and local tax impacts will also decrease to approximately $8.0 million from previous levels of more than $26.2 million.

However, there are a number of non-monetary benefits of aviation that have not been mentioned in this analysis. Some of these benefits include:

- ***Transportation Benefits:*** Defined as the time saved and cost avoided by travelers who use airports rather than the next best alternative. Griffiss International Airport provides critical access to the National Air Transportation System.

- ***Stimulation of Business:*** Businesses have indicated that airports can be an important factor in the attraction and siting of new businesses in a city. This is particularly true for businesses with over 100 employees.

- ***Aeromedical Evacuation:*** Airports often serve as bases for aeromedical evacuation teams or flight services. This life-saving function has intrinsic value that often cannot be adequately quantified.

- ***Recreation:*** Roughly 50 percent of commercial airline travel and 50 percent of general aviation travel is for recreational purposes.

All of the above factors point to a value of an airport that goes beyond economic impact assessments, and is not easily quantified. Thus, the impacts that were estimated within this section are only one facet of the overall picture. The economic activity generated by Griffiss International Airport represents the monetary value of the facility, while these other non-monetary factors describe other features of its intrinsic worth.

Appendix A:
State and Local Incentive Programs

Appendix A
State and Local Incentive Programs

A more complete listing of incentives and programs available to businesses in Oneida County include:

Local Incentives & Programs

- ***Qualified Empire Zone Enterprise (QEZE):*** Enhanced QEZE benefits include:

  - ***Sales Tax Exemptions:*** Qualified Empire Zone Enterprises (QEZEs) receive a 10-year exemption from State sales tax on purchases of goods and services (including utility services) used predominantly in such zone.

  - ***Real Property Tax Credit:*** Qualified Empire Zone Enterprises are allowed a refundable credit against business tax equal to a percentage of real property taxes paid in the zone.

  - ***Income Tax Reduction Credit:*** Qualified Empire Zone Enterprises are allowed a credit against tax equal to a percentage of taxes attributable to the zone enterprise.

  - ***Wage Tax Credit (WTC):*** Available to companies hiring full-time or full-time equivalent employees in the zone. Credits are available for up to five consecutive years. Credits are $1,500 per employee; for employees in special targeted groups the amount is raised to $3,000 per employee per year. In investment zones, this credit is increased by $500 for workers with wages over $40,000. Unused credits can be forwarded indefinitely and new businesses (those that have been taxable for five years or less) are eligible for a 50% refund of unused credits.

  - ***Investment Tax Credit:*** Available to companies making an investment in the zone for depreciable property and/or equipment which is principally used in manufacturing, processing, assembly, industrial waste treatment or air pollution-control facilities, R&D or financial institutions. 10% (8% for personal income tax filers) of the eligible investment can be taken for credit. Unused credits can be forwarded indefinitely and new businesses are eligible for a 50% refund of unused credits.

    - An additional ***Employment Incentive Credit*** equal to 30% of the investment tax credit is available for each of the three years after the Investment Tax Credit (ITC) is claimed if employment is increased when the investment is made. Unused credits can be forwarded indefinitely and new businesses (personal income tax only) are eligible for a 50% refund of unused credits.

- ***Linked Deposit:*** Empire State Development offers the Linked Deposit Program, a public-private partnership that provides businesses with affordable capital based on bank loans at reduced interest rates. These bank loans, subsidized by corresponding "linked" state deposits, offer:
  1. The ability for eligible businesses to obtain loans from commercial banks, savings banks, savings and loan associations, and farm credit institutions.
  2. A two to three percentage points savings on the prevailing interest rate for "Linked Loans," to make borrowing less expensive.
  3. A maximum loan amount of $500,000 for two years
  4. Loans - up to $50,000 for: machinery and/or equipment, real property acquisition, inventory purchase, and working capital.

- ***Zone Capital Credits:*** A 25% tax credit is available for personal or corporate income tax payers for eligible investments in certified zone businesses, or contributions to approved community development projects. There is a lifetime limit of $100,000 in zone capital credits per contributor for Community Development Projects and $100,000 lifetime limit in zone capital credits per investor in a Direct Equity Investment project.

State Incentives & Programs

- ***NYS Sales Tax Refund:*** A refund of the State portion [4%;4.375% in the MTA region] of the sales tax is available for the purchase of building materials used in the construction, expansion or rehabilitation of industrial or commercial property located in a zone. Empire Zone certification is not a requirement to receive this benefit; however, the purchaser must be buying for a property in the zone.

- ***Qualified Emerging Technology Incentive Program (QETC):*** To be eligible for the QET program, companies must meet these criteria:
  - Provide products or services that are classed as “emerging technology,” such as new media, IT, biotech, cleantech, and other high tech areas
  - Annual product sales under $10MM and gross revenue under $20MM in the previous tax year
  - 100 full-time employees or less, with at least 75% based in NYS
  - NY-based research and development spending over 6% of net sales

- ***Brownfield Cleanup Program:*** Provides tax credits for the remediation and redevelopment of brownfield sites in New York state.

- ***Build Now-NY:*** Locations that are ready for commercial development and can minimize delays that businesses normally face in the permitting and environmental review process providing a substantial benefit for companies.

- ***Centers of Excellence:*** Supports high technology ventures through a collaborative approach among the State, academia, private venture capital

companies and other private and public sector parties.

- ***Empire State Development:*** Division for Small Business: Programs, services and incentives specifically for small businesses.

- ***Enhanced Commercial/Industrial Performance Program:*** Offers several strategies to obtain financial incentives for energy efficiency projects.

- ***Entrepreneurial Assistance Program:*** Provides instruction, training, technical assistance and support services to individuals who have recently started their own business or are interested in starting a business.

- ***Environmental Research and Development:*** Offers financial assistance for research, development and demonstration projects that lead to measurable pollution prevention and economic development outcomes.

- ***Export Assistance:*** Offers additional resources to companies seeking new partners and opportunities in international markets.

- ***Government Procurement:*** Helps businesses sell to state, federal and local governments.

- ***Manufacturing Assistance Program:*** Encourages manufacturers to invest in projects that will significantly increase the productivity and competitiveness of their operations by providing capital grants of up to $1 million.

- ***New York State Energy Research and Development Authority:*** Offers technical services and capital financing to help businesses identify and implement cost-effective, energy-efficient measures.

- ***New York State's Division of Minority- and Women-owned Business Development:*** Assists the state's minority and women's business community to access all the services offered by Empire State Development.

- ***No Personal Property Tax:*** Unlike many other states, which tax both real property and personal property, property taxes in New York State are imposed on real property only. Personal property, whether tangible or intangible, is exempt from state and local taxes.

- ***Peak-Load Reduction Program:*** Incentives to offset the costs of up to 65% of energy saving capital improvements.

- ***Power for Jobs Program:*** Helps businesses reduce costs, preserve and create jobs and boost economic growth.

- ***Real Property Tax Abatement:*** To encourage development, expansion, and

improvement of commercial property, a 10-year property tax abatement is available to offset increased assessments due to improvements to business and commercial property.

- ***Research and Development Tax Credit:*** Investments in research and development facilities are eligible for a 9% corporate tax credit. Additional credits are available to encourage the creation and expansion of emerging technology businesses, including a three-year job creation credit of $1,000 per employee and a capital credit for investments in emerging technologies.

- ***Semiconductor Manufacturing Initiative (semi-NY):*** Encourages semiconductor manufacturing in New York State. The cornerstone of semi-NY is shovel-ready fab sites located in Tech Valley and across the state.

- ***Small Business Innovation Research/Small Business Technology Transfer Program:*** Stimulates the high-tech innovation of small businesses and provides opportunity to profit from the commercialization of their technologies.

- ***Taxes & Incentives:*** New York offers a variety of incentives to companies expanding or relocating in Tech Valley.

- ***Technology Transfer Incentive Program:*** Assists businesses in moving new technology and ideas from the lab to the marketplace.

- ***Workforce Development:*** Offers assistance to small and large businesses attempting to meet the challenges of creating new products, entering new markets and improving production.

Energy Savings

Thriving economies depend on reliable energy supplies and competitive pricing to drive economic growth. The restructuring of New York State's monopolistic electric industry has provided more choices to customers and delivered approximately $4.4 billion in rate reductions since 1966. New York State and the electric and gas utilities serving the State offer a variety of energy cost saving programs that help businesses reduce costs, preserve and create jobs, and boost economic growth. An example is New York State's successful Power for Jobs Program, which provides 450 megawatts of low cost electricity to businesses that remain and expand in the State. Since 1997, Power for Jobs has helped to create and retain over 300,000 jobs at over 450 businesses. In accordance with the program, after a company fulfills the requirement to retain or create a specific number of jobs, it receives energy cost savings that range from 10 to 25% depending on usage and local utility delivery charges.

In addition, New York State offers technical services and capital financing to help businesses identify and implement cost-effective, energy-efficient measures. Technical services include engineering feasibility studies, technical training on energy efficient technologies, and engineering support for project financing proposals. The energy-related technical assistance and

capital financing programs are available to industrial, commercial, not-for-profit and private institutions.

The highly successful Build Now-NY Program offers "shovel ready" pre-approved, pre-permitted sites that include competitive energy prices. Another program grants reduced electric and gas rates to eligible companies locating within New York State Empire Zones.

Further savings are available directly through New York State's electric and gas utilities. They offer rate discounts to companies that build new facilities, occupy vacant space, relocate to benefit from alternative energy sources, move or expand in areas designated as economically distressed, and move to or expand in areas with underutilized utility infrastructure. For more information on New York State's energy cost savings programs, contact Empire State Development Corporation.

Appendix B:
Energy Survey

Appendix B Energy Survey

B.1 Introduction

An overview assessment of Building 45, 48, 100, 101, 220, 221 and 504 was conducted to review the energy efficiency of the buildings to develop recommendations to reduce utility costs. The buildings visible envelop, heating, electrical lighting and utility infrastructure systems were included in the survey, along with review of recently prepared previous building surveys.

B.2 Executive Summary

The Oneida County Department of Aviation has made many improvements in recent years to several of these buildings (45, 100, 101, 220, and 221) including new roof and wall insulation and energy efficient lighting replacements. The improvements are noted in the existing building assessment portion C-3 below.

The resulting focus of the energy survey was to evaluate removing the buildings heating source from the Griffiss Central Steam Plant and to provide natural gas heating in each of the subject buildings. New underground gas services by National Grid will be required to each building. No costs have yet been provided by National Grid to provide the underground gas utility service extension to each building.

A tabulation of the heating utility cost reduction measures is as follows:

Heating Utility Cost Reduction Measures

Bldg. #	Description	Estimated[(1)] Saving / Yr	First[(2)] Cost	Payback
45 Fire Station	Convert steam / fuel oil heat to natural gas: Install 2 high efficient natural gas boilers and related work.	$18,300	$60,000	3.3 Yrs.
	Insulate east ½ of roof needing replacement, assumes 10,000 sq. ft. from R5 to R30, converted to natural gas heat.	$2,900	$60,000	21 Yrs.
48 Hangar	Convert LP boiler to natural gas. Cost savings of natural gas at $10.10 / million BTU vs LP at $14.48 / million BTU	$4,300	$1,000	0.23 Yrs.
100 Hangar / Offices	Convert steam heat to natural gas – 2 hangars to radiant overhead gas heat.	$196,700	$942,000	4.8 Yrs.
	Complete new HVAC systems for the center portion offices	$ 11,100	$328,000	29 Yrs.

101 Hangar / Offices	Convert 4 hangars to overhead radiant gas heat. Convert offices to natural gas boiler heat / packaged rooftop gas heat	$384,800 $ 55,200	$2,800,000 $ 570,000	7.3 Yrs. 10.3 Yrs.
220 Hangar	Convert steam heat to natural gas. New boiler, reuse recently installed steam distribution / equipment	$30,500	$90,000	3.0 Yrs.
221 Hangar	Convert steam heat to natural gas New boiler, reuse recently installed steam distribution / equipment.	$34,500	$90,000	2.6 Yrs.
504 Tower	Convert steam heat to natural gas New gas boilers and related work.	$3,600	$60,000	16.7 Yrs.
(1) Based on cost and usage of winter 2008 / 2009 energy used. (2) Building improvement construction cost only, does not include permits, engineering fees, hazardous materials testing / abatement, or underground gas service utility cost.				

NYSERDA, FAA or other funding sources may be available to offset or reduce some of the construction costs of the projects to Oneida County, but would require additional investigation and feasibility studies not part of this survey report.

Section C.4 Energy, Cost, and Saving Recommendations discuss these heating system changes in more detail.

The lighting in most areas is either new or already fluorescent or high-bay sodium lighting which is energy efficient. A small energy savings will be realized during any space renovation with T12 fluorescent converted to T5 or T8 fluorescent. Building 101 hangar and high / low bay areas contain older high bay sodium lighting which can be converted to T5 fluorescent, however wattage reduction is very minimal to provide equivalent light levels. Most of these areas during the walk through were unoccupied with the majority of the lighting turned off. Lighting replacement in Building 101 yields the following:

Lighting Utility Cost Reduction Measure

Bldg. #	**Description**	**Estimated[(1)] Savings / Yr**	**First[(2)] Cost**	**Payback**
101 Hangar and High / Low Bay	Replace 440,000 sq. ft of high bay sodium lighting with T5HO, multiple switching	$28,400	$1,640,000	50 $\pm$ Yrs.
(1) Based on cost and usage of winter 2008 / 2009 energy used. (2) Building improvement construction cost only, does not include permits, engineering fees, hazardous materials testing / abatement.				

Although T5HO lighting replacement does not yield attractive simple payback, the lighting quality is better (whiter light), has instant on versus delay start on, and multiple switching opportunities for various light level flexibility.

Solar heating potential was investigated using Solarwall^{R}, a south facing vertical black wall panel system to preheat ventilation air into the hangar portions of various buildings. The Solarwall manufacturer's representative had previously provided an analysis for the hangar portion of Building 100 in May 2009. This analysis was updated using the improved roof and wall insulation values, and the lower cost of natural gas in lieu of steam costs. Additional analysis was done for hangar Buildings 48, 220, and 221. A large portion of Solarwall heating costs savings is derived from reducing the heat stratification near the roof. This heat stratification will, or already has been, reduced significantly by the installation and use of large paddle fans and the future conversion to gas radiant heat. Paybacks will be in excess of 10 years based on the provided analysis output when this reduced roof heat loss considered, unless a significant portion of the construction cost can be offset by NYSERDA or other grants and incentives for this renewable energy application.

Solar domestic water heating is not practical for the buildings that were investigated due to the small usage of hot water. Hot water is primarily used in hand washing lavatories and break room sinks. Currently the hot water is provided with small 50-80 gallon tank type electric water heaters located in several locations throughout the larger buildings. Commercial or industrial solar hot water has been found to be most applicable to facilities that consistently use large amounts of hot water such as commercial laundries, hotels, food service, fitness clubs, car washes and similar facilities.

Solar photovoltaic use at Griffiss International Airport would supplement utility energy usage and would provide energy savings. Photovoltaic arrays would be installed on the roofs of the hangers to capture available sunlight during the day when the energy usage of the buildings is greatest. The Monetary Payback Time for installing a photovoltaic system would be dependent on a number of different factors: incentives and rebates available to the end-user, cost of electricity from the utility, and net-metering implementation by the utility. Typical payback periods are around 14 years. Photovoltaic systems typically last 25+ years and require little to no maintenance once they are installed. Additional research would need to be conducted to get a better idea of how Griffiss International Airport could utilize a roof installed photovoltaic system.

B.3 Existing Building Assessment

1. Building #45:

    a. General: Building #45 is the airport fire station constructed in 1981, and consists of equipment storage and maintenance garage area plus offices for a total of 18,383 square feet area. The building is occupied generally 24 hours / day, 7 days / week.

b. Envelope: The metal panel walls and doors are insulated and are in good condition. Building has minimal windows, windows are in good condition. Roof over equipment bays is reported to be in poor condition needing replacement. Office area roofing has been recently replaced with increased insulation and is in excellent condition.

c. Heating and Ventilating: The building has two (2) heat sources, the underground fed central Griffiss boiler plant steam as well as a single oil-fired steam boiler. In the past, the boiler was used in mild fall and spring weather, with the Griffiss steam used in cold winter conditions. The steam is converted to hot water in heat exchanger with hot water circulated throughout the building to unit heaters and air handlers. The heat to rooftop units is a separate glycol hot water loop for freeze protection. All heating equipment is operational and in fair to good condition. The age of the rooftop air conditioning equipment is unknown but is likely several years old if not original to 1981.

d. Electrical Lighting: The building interior lighting has been mostly upgraded and replaced to modern efficient T8 fluorescent fixtures and are in good to excellent condition.

2. Building #48:

a. General: Building 48 is a newly constructed (2009) corporate hangar, 15,000 square feet.

b. Envelope: This newly constructed metal building is well insulated with R38 vinyl faced batt insulation with insulated doors.

c. Heating and Ventilating: This new building is heated with an LP gas fired hot water boiler. Hot water unit heaters are located along the perimeter walls. Four (4) large paddle fans are located at the underside of the roof to provide air movement in summer and to destratify the heat in winter.

d. Lighting: This building has high efficiency T5 fluorescent lighting throughout.

3. Building #100:

a. General: Building 100 was built in 1943 and consists of hangars at the east and west ends with a 3-story office building in the middle. Total floor area is 175,245 square feet.

b. Envelope: Office walls are of masonry construction, brick exterior and concrete block interior in good condition. Roof has been recently insulated and replaced, in excellent condition, along with the hangar roofs. The hangars have recently had large portions of the metal walls and doors insulated with rigid insulation, original hangar clerestory glazing has been insulated and covered with metal siding.

c. Heating and Ventilating: The building is heated from the central Griffiss steam plant. The 130 psi steam is reduced to 20 psi $\pm$ and distributed

throughout the complex. Office building is a combination of perimeter steam radiation with some non-electric control valves added, and steam unit heaters. Radiated heat from the steam and condensate piping overheats the office building. Pipe insulation is missing on some sections of piping. Cooling systems are comprised of split system fan coils above the ceiling with roof mounted condensing units or individual window air conditioners, old and inefficient. Hangars are heated with large fan heaters with steam coil that pull air from the curved barrel roof area and discharges it from the sides of the hangar down low. In floor trench heaters, fan driven with steam coil, are located at the hangar doors to provide additional heat when the doors are open. Large ceiling paddle fans have been added to the hangars to circulate heat down in winter and to provide summer air movement. With the new roof and wall insulation, the large fan heaters are not needed except in colder temperatures, due to the heat radiation from the steam piping.

d. Lighting: The building has fluorescent lighting in the office building, while the hangars have been recently upgraded to efficient T8 fluorescent lighting fixtures that replaced the original mercury vapor and HID high bay fixtures.

4. Building #101:

a. General: Building 101 is the largest of the subject buildings and is a total of 470,000 square feet constructed in 1943. A small addition was added in 2005 to the 2 west hangars to accommodate 747's. The majority of the building was most recently leased to Empire Aero Center (EAC).

b. Envelope: The steel frame metal walled facility insulation condition is unknown, however the center clerestory portion has had the glazing covered with siding and rigid insulation applied to the interior to significantly reduce heat loss. In addition, the roof has been well insulated and is in excellent condition. Very little window glazing remains, except in the office portions of the building on the south side.

c. Heating and Ventilating: The building is heated from the central Griffiss steam plant. This 130 psi steam is reduced to 30 $\pm$ psi and distributed throughout the building. Hangar Bay 6 is a separate lease and has its own steam flow meters. A central meter records the entire steam flow to the building. The hangars are heated with large fan heaters with steam coil that pull air from the curved barrel roof areas and discharges it from the sides of the hangar down low. In floor trench heaters, fan driven with steam coil, are located at the hangar doors to provide additional heat when the doors are opened. One hangar bay has been renovated as a paint booth with the large fan steam heaters ducted to outdoor louvers with large roof exhaust fans. Office areas are heated with hot water air handlers along the south side of the hanger with split system Dx cooling units. A steam to water heat exchanger provide the heating hot water. The EAC tenant has installed a building energy management system with

motorized steam control valves and fan variable speed drives to operate the existing system as efficiently as possible.

d. Lighting: Office areas have fluorescent lighting, age and condition unknown. Hangars and core areas have mostly old high bay sodium light fixtures. Large areas of the building were observed to be unoccupied with most lighting turned off.

5. Building #220:

a. General: Building 220 is a maintenance hangar for smaller aircraft built in 1942 totaling 19,200 square feet, with office and storage space located within. This hangar was renovated in 2009. Generally occupied one shift, 5 days / week.

b. Envelope: The walls, doors and roof of this hangar have been insulated with rigid board insulation and new metal siding and roofing in excellent condition.

c. Heating and Ventilating: The building is heated from the central Griffiss steam plant. The 130 psi steam is reduced to 20 $\pm$ psi distributed to unit heaters and air handlers in the hangar. Majority of piping and insulation is new, along with all new equipment and electronic controls in excellent condition. The office areas are air conditioned with small split system cooling coils in the ducted air handling units. Ceiling paddle fans also exist.

d. Lighting: The building interior lighting has been replaced with modern efficient T8 fluorescent fixtures and are in excellent condition.

6. Building #221:

a. General: Building 220 is a maintenance hangar for smaller aircraft built in 1942 totaling 19,200 square feet, with office and storage space located within. This hangar was renovated in 2009. Generally occupied one shift, 5 days / week.

b. Envelope: The walls, doors and roof of this hangar have been insulated with rigid board insulation and new metal siding and roofing in excellent condition.

c. Heating and Ventilating: The building is heated from the central Griffiss steam plant. The 130 psi steam is reduced to 20 $\pm$ psi distributed to unit heaters and air handlers in the hangar. Majority of piping and insulation is new, along with all new equipment and electronic controls in excellent condition. The office areas are air conditioned with small split system cooling coils in the ducted air handling units. Ceiling paddle fans also exist.

d. Lighting: The building interior lighting has been replaced with modern efficient T8 fluorescent fixtures and are excellent condition.

7. Building #504:

a. General: Building #504 is the airfield control tower operated by the FAA, occupied 24 hours / days 7 days per week. The building was constructed in 1981, 10 stories totaling 5,900 square feet.
b. Envelope: Concrete and masonry construction original to 1981, insulation value unknown. This tall narrow structure with small wall areas has no windows except at the top levels.
c. Heating and Ventilating: The building is heated from the central Griffiss steam plant. The 130 psi steam is reduced to 20 ± psi in the basement. A steam to hot water heat exchanger is located in the first floor mechanical room. Building is primarily hot water heat, with low pressure steam used in the main air handler pre-heat coil. The central station air handler that serves the building is located on the 7th floor and also contain a chilled water coil to provide air conditioning to the building. The outdoor air cooled chiller was recently repaired and renovated and is in good operating condition. Temperature controls are older pneumatic type but operating adequately.
d. Lighting: Lighting is mostly original to the building and is primarily T12 fluorescent, Several rooms not normally occupied are equipped with occupancy sensor light controls to reduce lighting energy use.

B.4 Energy, Cost, and Savings Recommendations

1. Building #45:

a. Envelope: When the roofing over the equipment bay area is replaced, the insulation should be upgraded to R30 insulation.
b. Heating and Ventilating: When natural gas service is available at the building the oil fired steam boiler should be removed, and all the steam equipment and steam heat exchangers removed. Provide two high efficiency modulating natural gas condensing boilers 95% + efficient to generate the required building heating hot water. LP gas could also be used for this conversion in this building.
c. Lighting: Conduct a more in depth review of the operation of facility and existing lighting controls and install multiple switching in larger areas for reduced lighting opportunities, and install motion detection switching in storage rooms, bathrooms, and frequently unoccupied areas to automatically shut off lighting in rooms when not in use.

2. Building #48:

a. Envelope: This newly constructed building is well insulated, no additional insulation or other improvements are needed.
b. Heating and Ventilating: This new boiler can be easily connected to natural gas when the underground gas main is brought to the building.

No energy savings will be realized, however natural gas is generally less expensive than LP gas.

c. Lighting: This newly constructed building currently has energy efficient lighting.

3. Building #100:

a. Envelope: Any original single pane windows should be replaced with insulated double pane glazing as part of an office renovation project. Exterior office walls should be studded out and insulated as well during any office renovation project.

b. Heating and Ventilating: When natural gas service is available at the building, the building steam heat, in both the office and hangars, should be removed and replaced as part of a complete building HVAC replacement. The office building could be provided with natural gas-fired hot water high efficiency boilers. New hot water radiation and hot water air handling systems with new cooling provisions provided throughout all floors of the office building. In the hangars, large natural gas radiant heat system at the perimeters can be provided to replace the steam heating systems. Ducted natural gas furnaces and packaged rooftop units can be used in adjacent hangar office areas and additions.

c. Electrical Lighting: Replace any older fluorescent lighting with new T5 and T8 fluorescent lighting in the office areas as they are renovated. Provide motion sensor control in storage rooms, toilet rooms and other non-continuously occupied spaces. The approximately quantity, locations and conditions of the office lighting that may be replaced was not determined or able to be calculated for this portion of the building.

4. Building #101:

a. Envelope: Any original single pane windows should be replaced with insulated double pane glazing as part of an office renovation project. Exterior office walls should be studded out and insulated as well during any office renovation project.

b. Heating and Ventilating: When natural gas service is available at the building, the building steam heat, in both the office and hangars, should be removed and replaced as part of a complete building HVAC replacement. The office building could be provided with natural gas-fired hot water high efficiency boilers. New hot water radiation and hot water air handling systems with new cooling provisions provided throughout all floors of the office building. In the hangars, large natural gas radiant heat system at the perimeters can be provided to replace the steam heating systems. Ducted natural gas furnaces and packaged rooftop units can be used in adjacent hangar office areas and additions. The paint booth hangar will require natural gas-fired makeup air heaters to provide tempered make-up air to replace the exhausted air during painting

operation. If the paint booth will be used extensively in the heating season, a heat recovery system should be evaluated for the exhaust and makeup air systems.

c. Lighting: Replace any older fluorescent lighting with new T5 and T8 fluorescent lighting in the office areas as they are renovated. Provide motion sensor control in storage rooms, toilet rooms and other non-continuously occupied spaces. The hangars and core areas high bay sodium lighting fixtures can be replaced with high efficiency T5 fluorescent lighting fixtures. Provide for individual switching of rows of fixtures in each hangar and core area to allow for lower lighting levels for reduced energy consumption.

5. Building #220:

a. Envelope: This newly renovated building is well insulated with R21 rigid board insulation with insulated doors.

b. Heating and Ventilating: When natural gas service is available at the building, the underground steam service shall be valved off and capped. Construct a new boiler room near the steam entrance to install a new energy efficient steam boiler, natural gas fired. Boiler room to be either exterior attached or interior of the hangar but separated by walls with the only access to boiler room from the exterior. Connect the steam and condensate from the new boiler to the newly renovated steam and condensate systems in this hangar.

c. Lighting: This newly renovated building has high efficiency T8 fluorescent lighting throughout.

6. Building #221:

a. Envelope: This newly renovated building is well insulated with R21 rigid board insulation with insulated doors.

b. Heating and Ventilating: When natural gas service is available at the building, the underground steam service shall be valved off and capped. Construct a new boiler room near the steam entrance to install a new energy efficient steam boiler, natural gas fired. Boiler room to be either exterior attached or interior of the hangar but separated by walls with the only access to boiler room from the exterior. Connect the steam and condensate from the new boiler to the newly renovated steam and condensate systems in this hangar.

c. Lighting: This newly renovated building has high efficiency T8 fluorescent lighting throughout.

7. Building #504:

a. Envelope: Additional wall insulation can be added as part of interior renovations, but will have minimal impact as the walls likely already contain some insulation when built in 1981. When the control tower windows need replacing, they shall be energy efficient insulating type, low-e and tinted to reduce solar heat gain as much as possible. The roof should be insulated to R30 if not already done so when reroofed, however due to the minimal roof area, energy savings will be small compared to cost resulting in lengthy payback.

b. Heating and Ventilating: When natural gas service is available at the building, the underground steam service shall be valved off and capped. Install (2) two high efficiency natural gas modulating condensing boilers in the first floor mechanical room, direct vented through the exterior wall. Replace low pressure steam piping and coil in the air handler with a separate glycol hot water loop and heat exchange system.

c. Electrical Lighting: Replace any older fluorescent lighting with new T5 and T8 fluorescent lighting throughout the office areas. Provide motion sensor control in storage rooms, toilet rooms and other non-continuously occupied spaces.

B.5 Calculations Methodology

1. Calculations for energy savings potential of the measures used the recent 2008 – 2009 energy consumption and costs provided by Oneida County, along with estimated quantities, hours of operation and average local weather data parameters. Savings can vary significantly depending on the severity of the heating season, frequency of operation of the large hangar doors, and variations in thermostat set points and occupancy schedules. Order of magnitude construction costs were derived using estimated construction cost per sq. ft. and unit costs adjusted for tall spaces.
2. McFarland-Johnson, Inc. has no control over costs or the price of labor, equipment of materials, or over the Contractor's method of pricing that the opinions of probable construction costs provided herein are to be made on the basis of the McFarland-Johnson, Inc. qualifications and experience. McFarland-Johnson, Inc. makes no warranty expressed or implied as to the accuracy of such opinions as to bid or actual costs.

This report has been prepared based on certain key assumptions made by McFarland-Johnson, Inc. which substantially affect the conclusions and recommendations of this report. These assumptions, although thought to be reasonable and appropriate, may not prove true in the future. McFarland-Johnson's conclusions and recommendations are conditioned upon these assumptions.

K:[nysdot/16622.05/reports/Griffiss;]appendix c

HEATING ENERGY COSTS AND USAGE SUMMARY
Provided by Oneida County Department of Aviation

Steam Cost (08/09 season) MLB = 1,000 LB

Bldg. 45 $14.96 / 1,000 lbs x 1 lbs / 940 x 10^6 = $15.92 / million BTU
Bldg. 100 + 504 $17.37 / 1,000 lbs = $18.48 / million BTU
Bldg. 101 $24.77 / 1,000 lbs = $26.35 / million BTU
Bldg. 220 $22.74 / 1,000 lbs = $24.19 / million BTU
Bldg. 221 $21.43 / 1,000 lbs = $22.80 / million BTU

Steam Usage (08/09 Season)

Bldg. 45	$46,590	3,114 MLB = 2.927 x 10^9 BTU ÷ 18,383 SF = 159,232 BTU / SF / Year
Bldg. 100 + 504	$375,559	21,621 MLB = 2.032 x 10^{10} ÷ 181,145 SF = 112,196 BTU / SF / Year
Bldg. 101	$640,362	25,845 MLB = 2.429 x 10^{10} ÷ 470,000 SF = 51,690 BTU / SF / Year
Bldg. 220	$61,470	2,703 MLB = 2.541 x 10^9 ÷ 19,200 SF = 132,334 BTU / SF / Year
Bldg. 221	$74,027	3,455 MLB = 3.248 x 10^9 ÷ 19,200 SF = 169,151 BTU / SF/ Year

Natural Gas Cost – Large General Service Rate 3

Delivery + Supply (2/09)
$0.10172 + $.90808 = $1.01 / Therm (100,000 BTU)
Or $10.10 / million BTU

LP Costs

4.24 lbs / gal x 21,650 BTU / lbs = 91,796 BTU / gal
1,000 BTU x $\frac{1 \text{ gal}}{91{,}796 \text{ BTU}}$ = $\frac{10.89 \text{ gal}}{\text{MBTU}}$ x $\frac{\$1.33}{\text{gal.}}$ = $14.48 / million BTU

Fuel Oil

$2.00 / gal x 140,000 BTU / gal
1 x 10^6 BTU x $\frac{1 \text{ gal}}{140{,}000 \text{ BTU}}$ x $\frac{\$2.00}{\text{gal.}}$ = $14.28 / million BTU

Appendix C:
Economic Impacts/IMPLAN Results

Appendix C
Economic Impacts/IMPLAN Results

The following represents the IMPLAN results as described in Section 7, including the economic impacts of the Airport with and without Empire Aero Center.

Griffiss Economic Impact, 2010: With EAC

Employment

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	0	1	2	3
Mining	0	0	0	0
Utilities	0	1	1	2
Construction	180	3	1	184
Manufacturing	0	10	5	15
Wholesale Trade	0	9	7	16
Transportation & Warehousing	3	12	73	88
Retail trade	534	82	6	623
Information	2	13	4	19
Finance & insurance	0	18	11	30
Real estate & rental	6	15	6	27
Professional- scientific & tech services	0	30	7	37
Management of companies	30	4	1	35
Administrative & waste services	0	32	7	38
Educational services	10	1	9	20
Health & social services	2	0	72	74
Arts- entertainment & recreation	3	4	8	14
Accommodation & food services	8	104	34	146
Other services	0	11	23	34
Government & non NAICs	0	14	4	19
Total	777	363	283	1,423

Multiplier: 1.83

Income

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	$0	$21,157	$29,836	$50,994
Mining	$0	$4,098	$116	$4,213
Utilities	$0	$56,973	$76,186	$133,159
Construction	$7,515,903	$122,418	$64,736	$7,703,056
Manufacturing	$0	$513,612	$216,308	$729,920
Wholesale Trade	$0	$511,660	$401,530	$913,190
Transportation & Warehousing	$51,250	$310,937	$1,840,273	$2,202,460
Retail trade	$30,367,942	$4,765,218	$298,020	$35,431,180
Information	$62,849	$690,900	$208,295	$962,045
Finance & insurance	$0	$1,057,974	$681,236	$1,739,210
Real estate & rental	$232,303	$513,907	$153,301	$899,511
Professional- scientific & tech services	$0	$1,627,213	$350,270	$1,977,483
Management of companies	$2,254,850	$280,048	$64,980	$2,599,879
Administrative & waste services	$0	$974,667	$212,329	$1,186,995
Educational services	$343,745	$13,385	$257,951	$615,081
Health & social services	$92,224	$3,350	$3,115,684	$3,211,257
Arts- entertainment & recreation	$44,250	$54,932	$120,043	$219,225
Accommodation & food services	$168,460	$1,706,308	$576,603	$2,451,370
Other services	$0	$303,477	$486,194	$789,671
Government & non NAICs	$0	$961,782	$301,471	$1,263,253
Total	$41,133,775	$14,494,017	$9,455,361	$65,083,152

Multiplier: 1.58

Output

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	$0	$133,409	$175,717	$309,126
Mining	$0	$13,090	$361	$13,451
Utilities	$0	$277,238	$370,732	$647,970
Construction	$17,632,298	$297,660	$159,323	$18,089,280
Manufacturing	$0	$2,301,711	$1,594,911	$3,896,622
Wholesale Trade	$0	$1,357,320	$1,065,171	$2,422,491
Transportation & Warehousing	$106,811	$727,648	$4,352,778	$5,187,237
Retail trade	$141,447,440	$9,257,618	$708,840	$151,413,904
Information	$209,273	$3,029,699	$1,016,191	$4,255,163
Finance & insurance	$0	$4,146,727	$2,586,723	$6,733,450
Real estate & rental	$1,084,550	$3,093,050	$5,206,189	$9,383,789
Professional- scientific & tech services	$0	$3,260,828	$752,841	$4,013,669
Management of companies	$5,482,116	$680,869	$157,983	$6,320,968
Administrative & waste services	$0	$2,958,891	$523,192	$3,482,083
Educational services	$700,372	$31,888	$535,966	$1,268,225
Health & social services	$246,892	$8,828	$5,927,687	$6,183,407
Arts- entertainment & recreation	$106,811	$137,955	$318,316	$563,082
Accommodation & food services	$498,452	$5,281,635	$1,778,478	$7,558,565
Other services	$0	$835,839	$1,226,227	$2,062,066
Government & non NAICs	$0	$2,678,258	$761,581	$3,439,839
Total	$167,515,014	$40,510,158	$29,219,207	$237,244,384

Multiplier: 1.42

Tax Impact

Enterprises (Corporations)	Total	Empl. Comp.	Prop. Income	Household Ex	Enterprises	Ind. Bus Tax	Totals
Corporate Profits Tax					$1,660,896		$1,660,896
Indirect Bus Tax: Custom Duty						$172,169	$172,169
Indirect Bus Tax: Excise Taxes						$411,891	$411,891
Indirect Bus Tax: Fed NonTaxes						$206,244	$206,244
Personal Tax: Estate and Gift Tax							$0
Personal Tax: Income Tax				$4,579,042			$4,579,042
Personal Tax: NonTaxes (Fines- Fees							$0
Social Ins Tax- Employee Contribution		$2,860,021	$1,115,681				$3,975,702
Social Ins Tax- Employer Contribution		$3,003,392					$3,003,392
Federal Government NonDefense	Total	$5,863,413	$1,115,681	$4,579,042	$1,660,896	$790,305	$14,009,337
Corporate Profits Tax					$622,109		$622,109
Dividends					$707,662		$707,662
Indirect Bus Tax: Motor Vehicle Lic						$38,848	$38,848
Indirect Bus Tax: Other Taxes						$684,425	$684,425
Indirect Bus Tax: Property Tax						$3,977,256	$3,977,256
Indirect Bus Tax: S/L NonTaxes						$104,156	$104,156
Indirect Bus Tax: Sales Tax						$3,340,926	$3,340,926
Personal Tax: Estate and Gift Tax							$0
Personal Tax: Income Tax				$1,963,477			$1,963,477
Personal Tax: Motor Vehicle License				$33,487			$33,487
Personal Tax: NonTaxes (Fines- Fees				$355,810			$355,810
Personal Tax: Other Tax (Fish/Hunt)				$7,392			$7,392
Personal Tax: Property Taxes				$34,701			$34,701
Social Ins Tax- Employee Contribution		$71,117					$71,117
Social Ins Tax- Employer Contribution		$305,969					$305,969
State/Local Govt NonEducation	Total	$377,086	$0	$2,394,867	$1,329,771	$8,145,611	$12,247,336
Total		$6,199,859	$1,115,681	$6,973,910	$2,990,667	$8,935,916	$26,216,034

Griffiss Economic Impact, 2010: Without EAC

Employment

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	0.0	0.8	0.6	1.4
Mining	0.0	0.1	0.0	0.1
Utilities	0.0	0.3	0.4	0.7
Construction	180.0	0.9	0.4	181.3
Manufacturing	0.0	4.1	1.7	5.8
Wholesale Trade	0.0	2.9	2.4	5.3
Transportation & Warehousing	2.8	11.0	24.5	38.3
Retail trade	79.0	14.6	2.1	95.8
Information	2.0	3.9	1.3	7.2
Finance & insurance	0.0	4.6	3.8	8.4
Real estate & rental	6.0	3.6	2.0	11.6
Professional- scientific & tech services	0.0	15.7	2.5	18.2
Management of companies	23.0	1.0	0.3	24.3
Administrative & waste services	0.0	7.9	2.3	10.1
Educational services	10.0	0.2	3.1	13.3
Health & social services	2.0	0.1	24.1	26.2
Arts- entertainment & recreation	2.7	1.5	2.7	6.8
Accommodation & food services	7.8	17.8	11.5	37.1
Other services	0.0	6.2	7.6	13.8
Government & non NAICs	0.0	2.9	1.5	4.3
Total	315.3	99.8	94.8	509.9

Multiplier: 1.62

Income

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	$0	$17,465	$10,023	$27,489
Mining	$0	$3,909	$39	$3,948
Utilities	$0	$23,820	$25,631	$49,451
Construction	$7,515,903	$36,364	$21,682	$7,573,949
Manufacturing	$0	$214,653	$72,595	$287,248
Wholesale Trade	$0	$165,816	$134,891	$300,706
Transportation & Warehousing	$51,250	$284,793	$615,354	$951,397
Retail trade	$4,492,636	$840,337	$99,868	$5,432,841
Information	$62,849	$203,226	$69,934	$336,009
Finance & insurance	$0	$261,580	$228,224	$489,804
Real estate & rental	$232,303	$118,379	$51,567	$402,249
Professional- scientific & tech services	$0	$951,828	$117,524	$1,069,352
Management of companies	$1,728,718	$72,975	$21,801	$1,823,495
Administrative & waste services	$0	$248,384	$71,213	$319,597
Educational services	$343,745	$4,040	$86,203	$433,988
Health & social services	$92,224	$3,247	$1,046,330	$1,141,801
Arts- entertainment & recreation	$44,250	$21,721	$40,210	$106,181
Accommodation & food services	$168,460	$293,227	$193,266	$654,952
Other services	$0	$173,708	$162,885	$336,592
Government & non NAICs	$0	$196,768	$101,150	$297,918
Total	$14,732,336	$4,136,241	$3,170,390	$22,038,967

Multiplier: 1.50

Output

NAICS Aggregated Sector	*Direct*	*Indirect*	*Induced*	*Total*
Ag, Forestry, Fish & Hunting	$0	$100,988	$59,044	$160,032
Mining	$0	$12,505	$121	$12,626
Utilities	$0	$115,910	$124,724	$240,634
Construction	$17,632,298	$87,193	$53,362	$17,772,852
Manufacturing	$0	$1,099,612	$535,395	$1,635,007
Wholesale Trade	$0	$439,872	$357,835	$797,707
Transportation & Warehousing	$106,811	$666,463	$1,455,490	$2,228,765
Retail trade	$20,925,744	$1,702,042	$237,566	$22,865,350
Information	$209,273	$863,943	$341,304	$1,414,520
Finance & insurance	$0	$1,001,072	$866,391	$1,867,463
Real estate & rental	$1,084,550	$707,110	$1,741,726	$3,533,386
Professional- scientific & tech services	$0	$1,771,918	$252,570	$2,024,489
Management of companies	$4,202,955	$177,422	$53,004	$4,433,381
Administrative & waste services	$0	$696,966	$175,466	$872,432
Educational services	$700,372	$9,453	$179,165	$888,989
Health & social services	$246,892	$8,557	$1,990,733	$2,246,183
Arts- entertainment & recreation	$106,811	$54,325	$106,619	$267,755
Accommodation & food services	$498,452	$906,442	$596,120	$2,001,014
Other services	$0	$489,017	$410,905	$899,923
Government & non NAICs	$0	$512,891	$255,653	$768,544
Total	$45,714,157	$11,423,702	$9,793,192	$66,931,050

Multiplier: 1.46

Tax Impact

Enterprises (Corporations)	Total	Total	Empl. Comp.	Prop. Income	Household Ex	Enterprises	Ind. Bus Tax
Corporate Profits Tax					$521,721		$521,721
Indirect Bus Tax: Custom Duty						$43,811	$43,811
Indirect Bus Tax: Excise Taxes						$104,811	$104,811
Indirect Bus Tax: Fed NonTaxes						$52,481	$52,481
Personal Tax: Estate and Gift Tax							$0
Personal Tax: Income Tax				$1,517,727			$1,517,727
Personal Tax: NonTaxes (Fines- Fees							$0
Social Ins Tax- Employee Contribution		$1,015,034	$314,516				$1,329,550
Social Ins Tax- Employer Contribution		$1,065,917					$1,065,917
Federal Government NonDefense	Total	$2,080,950	$314,516	$1,517,727	$521,721	$201,102	$4,636,017
Corporate Profits Tax					$195,417		$195,417
Dividends					$222,291		$222,291
Indirect Bus Tax: Motor Vehicle Lic						$9,885	$9,885
Indirect Bus Tax: Other Taxes						$174,160	$174,160
Indirect Bus Tax: Property Tax						$1,012,060	$1,012,060
Indirect Bus Tax: S/L NonTaxes						$26,504	$26,504
Indirect Bus Tax: Sales Tax						$850,138	$850,138
Personal Tax: Estate and Gift Tax							$0
Personal Tax: Income Tax				$655,354			$655,354
Personal Tax: Motor Vehicle License				$11,158			$11,158
Personal Tax: NonTaxes (Fines- Fees				$118,703			$118,703
Personal Tax: Other Tax (Fish/Hunt)				$2,460			$2,460
Personal Tax: Property Taxes				$11,660			$11,660
Social Ins Tax- Employee Contribution		$25,240					$25,240
Social Ins Tax- Employer Contribution		$108,590					$108,590
State/Local Govt NonEducation	Total	$133,829	$0	$799,334	$417,708	$2,072,748	$3,423,620
Total		$2,200,356	$314,516	$2,317,062	$939,430	$2,273,850	$8,045,214