

*New Hampshire*  
**DOT**  
Research Record



Airport Master Plan and  
Preservation Study  
For  
Hampton Airfield

Final Report

Prepared by Hoyle, Tanner & Associates, Inc. for the New Hampshire Department of Transportation in cooperation with the U.S. Department of Transportation, Federal Highway Administration





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<b>16. Abstract</b> <p>The number of airports in the nation is on a decline. This reality has been documented by multiple sources, and is perhaps best illustrated by the number of public-use facilities nationwide that have closed over the past several years. In 2001, the Aircraft Owners and Pilots Association (AOPA) documented that the annual closure rate for public-use airports is one every two weeks. At its worst, the public-use airport annual closure rate averaged one a week. While most closures have been to privately-owned, public-use facilities, municipally-owned, public-use facilities are not immune to this trend. Regardless of ownership, nearly every one of these closures has been a general aviation facility. This has diminished the overall capacity of the nation's system of airports during a time of increased air traffic activity and in time, will affect those facilities supporting commercial passenger service by leaving fewer airports to accommodate growing demand. While negative effects to commerce and both local and national economies are certain, airport closures also threaten to undermine the community access provided by general aviation.</p> <p>Understanding this threat to public-use airports, the NHDOT Bureau of Aeronautics decided to analyze Hampton Airfield as a case study. This small but active airport has endured many of the same challenges as airports much larger. One of the most impressive differences is the fact that the private owners have done so with very limited outside financial support. For this reason, the various aspects of the Hampton Airfield's operation have been evaluated and documented in this report. This information has been used to develop tools that are intended to help promote, preserve, and protect not only Hampton Airfield, but other public-use airports facing similar challenges in New Hampshire and throughout the country. An Airport Preservation Tool Box was developed concurrently with this study and is intended primarily as a resource for airport stakeholders and proponents. The toolbox was published in 2008 and can be accessed through the NHDOT, Bureau of Aeronautics' website.</p>			
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# Hampton Airfield

## Airport Master Plan and Preservation Study

Hoyle, Tanner Project Number: 035618

SPR: 14282L



**January 2009**

Prepared for:  
**New Hampshire DOT**  
**Bureau of Aeronautics**

Prepared by:  
**Hoyle, Tanner**  
& Associates, Inc.

150 Dow Street  
Manchester, New Hampshire 03101  
603-669-5555  
603-669-4168 fax  
[www.hoyletanner.com](http://www.hoyletanner.com)



*Planting Seeds...*

Hampton Airfield  
North Hampton, NH



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## Introduction

### **NEED FOR PRESERVATION**

Most people involved in the aviation industry can attest to the fact that the number of airports in the nation are on a decline. This reality, which has been documented by multiple sources, is perhaps best illustrated by the number of public-use facilities nationwide that have closed over the past several years. In 2001, the Aircraft Owners and Pilots Association (AOPA) documented that the annual closure rate for public-use airports is one every two weeks. At its worst, the public-use airport annual closure rate averaged one a week.

While most closures have been to private-use facilities, public-use facilities are not immune to this trend. This is perhaps best illustrated by the highly publicized closure of Meigs Field in downtown Chicago. Regardless of ownership, nearly every one of these closures has been a general aviation facility. This has diminished the overall capacity of the nation's system of airports during a time of increased air traffic activity. In time, the loss of general aviation airports will affect those facilities supporting commercial passenger service by leaving fewer airports to accommodate growing demand. These impacts to the transportation infrastructure are far reaching. While negative effects to commerce and both local and national economies are certain, airport closures also threaten to undermine the community access provided by general aviation.

### **OBJECTIVE OF PLAN**

Understanding this threat to public-use airports, NHDOT Bureau of Aeronautics decided to analyze Hampton Airfield as a case study. This small but active airport has endured many of the same challenges as airports much larger. One of the most impressive differences is the fact that the private owners have done so with very limited outside financial support. For these reasons, the various aspects of the Hampton Airfield's operation have been evaluated. This information has been used to develop tools that are intended to help promote, preserve, and protect not only Hampton Airfield, but other public-use airports in New Hampshire facing similar challenges. An *Airport Preservation Tool Box* was developed concurrently with this study and is intended primarily as a resource for airport stakeholders and proponents. The document was published in 2008 and can be accessed through the NHDOT, Bureau of Aeronautics' website.



The success at Hampton Airfield has been due to the owner's ability to utilize a combination of different resources. These have helped to generate the revenue required to maintain the airport's unique environment where aviation interests can be fostered, grow, and ultimately be shared with others. While the preservation of Hampton Airfield will certainly require a continuation of past efforts, changes in the industry and surrounding environment will necessitate additional resources. Unfortunately much of this will rely on assistance and programs that are not controlled by the airport owner.

Though this study was multifaceted, its focus was on the preservation of Hampton Airfield. In order to achieve this goal, an airport master plan was conducted in order to both document and gain a greater understanding of the airport as well as its history. The primary components of this study include the following elements:

- Airport Master Plan
- Plan Set consisting of 7 Graphics
- Preservation Plan
- Airport Ownership Transition Effects
- Stormwater Pollution Prevention Plan (SWPPP)
- Economic Analysis
- Business Plan Update

## Chapter 1 Existing Conditions

### PURPOSE OF STUDY

While this study incorporates traditional master plan elements, it has primarily been commissioned as a research effort. The New Hampshire Department of Transportation (NHDOT) Bureau of Aeronautics is using the Hampton Airfield as a case study on airport preservation. As a privately owned, public-use facility, the Hampton Airfield has endured some of the most significant challenges facing general aviation facilities today. Regardless, this unique facility serves very specific portions of the aviation industry and has been successful at doing so for decades. **Exhibit 1-1** provides an aerial depiction of Hampton Airfield.

This study will investigate how to preserve Hampton Airfield. The first portions of the study will analyze existing and future elements of the airport that will help develop preservation tools for Hampton Airfield as well as other public use airports in the state. Since there were no previous airport master plans conducted, much of the information used in this chapter came from published news articles, property maps, site visits, and documentation provided by the airport owner. **Appendix A** has been included to provide reference to acronyms commonly used in this report and the industry.

### AIRFIELD HISTORY

The original airport in the Hampton area can be traced back to 1927 when an airplane was kept in a field off High Street. Known as the A.T. Johnson Flying Field, the town of Hampton leased the land from the owners in 1933 and operated it as an airport until the end of World War II. Similar to many airports today, the airfield was closed as a result of the pressure from surrounding development.

In 1945, the current Hampton Airfield was created. The owners at that time bought seventeen parcels of land under the guise of starting a Gladiola farm. Instead, the property was cleared, leveled for a runway, and the first hangar built. This hangar, which still stands today, houses the airport manager's office, restaurant, and other uses.

The airport was purchased by the current owners in 1976 who have made numerous improvements including the construction of seven nested tee hangars, containing 57 units. The primary function of the airport is to provide instruction in tail dragger aircraft. In fact, Hampton Airfield has offered continuous Piper Cub training since 1946. As of 2008 Hampton Airfield has

been designated as the New England representative for the new Light Sport aircraft, the American Legend Cub, and continues operation with both the classic antique Cubs as well as the new production model.

### Exhibit 1-1 Aerial View of Hampton Airfield



### AIRPORT SETTING

Hampton Airfield is comprised of nearly 36 acres located in northeastern Rockingham County, New Hampshire. The majority of the airfield is located in the town of North Hampton, less than two miles southeast of the town's center. There is a small parcel of the airfield that lies in the town of Hampton.

Commercial passenger service airports located in close proximity include: Portland International Jetport, 47 nautical miles (nm) northeast; Portsmouth International Airport at Pease, 7 nm north; and Manchester-Boston Regional Airport, 28 nm west. There are also a



number of public and privately owned general aviation facilities within a 40 nm mile radius, including multiple private heliports.

### **Landside Access**

The airfield is easily accessed via Lafayette Road (U.S. Route 1) just minutes away from Interstate 95 and Routes 101, 27, 151, and 111. The west side of the airport is directly accessible from Lafayette Road via an entrance road that opens into the automobile parking lot for the Airfield Café and Hampton Airfield Inc. fixed based operator (FBO). Facilities on the east side have access via a gravel road coming off Cedar Road, which is on the north side of the airport property.

The airfield has a partial wildlife and perimeter fence; however, it does not encompass the entire airfield property. The current fenced area includes one electric slide gate located at the north end of the field off Cedar Road. This entrance provides access to the hangars on the east side of the field. There is also a manual gate that allows access to a private hangar with office space in the northwest corner of the airfield.

### **Ownership and Management**

The private owners of Hampton Airfield are ultimately responsible for the property while a full-time airport manager is charged with the day-to-day operations of the airfield. Hampton Airfield is one of nine privately owned, public-use airports in the State of New Hampshire.

Hampton Airfield has received funds from the NHDOT Bureau of Aeronautics under the State and Local grant program. The airport also qualifies and has received monies from the Airport Property Tax Reimbursement Grant program and the Airport Operating Fee Returns program.

**Exhibit 1-2  
Original Hangar Building**



The airport is not eligible to receive federal airport improvement program (AIP) grants at this time. This is due to the fact that it is not currently included in the National Plan of Integrated Airport Systems (NPIAS), which is used as a guide for the programming of federal airport improvement funds.

The majority of the revenue used to cover the airfield operating and maintenance expenses is generated from hangar rent, tiedown fees, fuel sales, and leaseholds with the various tenants

on the airfield. These revenues and other potential funding sources will be addressed in later sections.

### **Surrounding Land Use**

The land use for Hampton Airfield has been designated by the town of North Hampton as Transportation/Utilities. This is compatible with the surrounding Commercial and Industrial land uses. Hampton Airfield also has a residential fly-in community component, as twelve (12) lots were sold with taxiway easements to the turf runway. It should be noted that while many of these lots are owned by individuals that currently do not have an aircraft; the rights to do so are transferable upon sale of the individual parcels.

### **AIRFIELD FACILITIES**

The airside facilities generally include those required to support the movement and operation of aircraft. While this most certainly involves the airport's runway and taxiway system, it also includes navigational aids, airport buildings, fuel facility and aircraft parking areas.

### **Runway System**

Runway 2-20 is the single turf runway that has a published length of 2,150 feet and a width of 170 feet. A survey of the endpoints conducted by NHDOT on August 14, 2007 resulted in an overall runway length of 2,153 feet. This difference is addressed further in the chapter on facility development considerations. The length and width is delineated using yellow cone shaped markers spaced approximately 200 feet apart along the sides of the runway. The Runway 20 threshold at the north end has been displaced approximately 300 feet due to its proximity to Cedar Road. To access the ends of Runway 2-20, aircraft frequently taxi along the west side of the runway. Likewise, some pilots utilize the gravel road along the east side of Runway 2-20 to position their aircraft on or off the runway.

The most recent safety inspection documents that the condition of Runway 2-20 is considered to be good. However, the inspection did reveal "some soft dirt and rutting on the runway surface along the east side of the runway near the hangar access road." The runway also has low intensity runway lights which are installed on top of the yellow cone markers. On the Runway 2 end, the landing threshold is delineated using three

**Exhibit 1-3  
Typical Lighted Runway Marker**





inboard lights on each side. The displaced threshold on the Runway 20 end is marked with a single red/green light on each side.

### Takeoff and Landing Aids

Perhaps the most basic takeoff and landing aid is the windsock, which indicates wind direction and speed. Currently, there are two windsocks on the airfield. One is on top of a T-hangar (Building 500), and the other is illuminated and located on top of the maintenance hangar occupied by Sandhill Aviation.

### Buildings

There are 19 buildings currently located on the airfield property. **Table 1-1** provides a list of these facilities.

**Exhibit 1-4  
T-hangar Buildings**



A majority of the airport buildings are used for the storage of aircraft. Of the 19 buildings, seven are T-hangar facilities which provide open stalls for 17 aircraft and fully enclosed stalls for 40 aircraft. All of the current T-hangar facilities are located on the west side of the runway. Along the east side of Runway 2-20 there are six private box hangars, approximately 3,800 square foot (SF) each. Also on the east side is the Flight School Hangar. In addition to the aircraft used for training, this 6,000 SF building accommodates other aircraft depending on the seasonal activities occurring at the airfield.

**Exhibit 1-5  
Private Box Hangars**

The remaining five buildings are all located on the west side of the runway, north of the T-hangar facilities. As described previously, one of these buildings includes the original 1945 hangar, which is currently used by the FBO and a restaurant. Just next to the original hangar is a smaller building which is used by the EAA and the remaining three buildings are primarily used for different aviation related maintenance and aircraft restoration operations.





## Aircraft Parking Area

Currently there is only one area designated for the parking or tiedown of aircraft. This space is located on the west side of Runway 2-20 just north of the T-hangar facilities. There are 21 designated tiedown spots in this unpaved area.

**Table 1-1  
HANGAR AND BUILDING DATA**

Building	Type	Size (SF)	Constructed	
1	FBO/Restaurant (Original 1945 Hangar)	Wood	1,200	1945
2	Maintenance Building	Steel	3,100	1955
3	Maintenance Building	Steel	1,900	2004
4	Maintenance Building	Steel	5,000	1995
5	Building 100 - Open T-Hangar (8 units)	Wood	7,700	1977
6	Building 200 - Open T-Hangar (9 units)	Wood	8,500	1978
7	Building 300 - Enclosed T-Hangar (6 units)	Steel	7,500	circa 1980
8	Building 400 - Enclosed T-Hangar (6 units)	Steel	7,500	circa 1980
9	Building 500 - Enclosed T-Hangar (9 units)	Steel	10,600	1988
10	Building 600 - Enclosed T-Hangar (10 units)	Steel	11,900	1988
11	Building 700 - Enclosed T-Hangar (9 units)	Steel	11,200	2006
12	Experimental Aircraft Association Building	Wood	625	2000
13	Flight School Hangar	Steel	6,000	circa 1980
14	Building 1 – Box Hangar	Steel	3,800	2005
15	Building 2 – Box Hangar	Steel	3,800	2005
16	Building 3 – Box Hangar	Steel	3,800	2003
17	Building 4 – Box Hangar	Steel	3,800	2003
18	Building 5 – Box Hangar	Steel	3,800	2001
19	Building 6 – Box Hangar	Steel	3,800	2001

Source: Airport Records, 2007.

## AIRFIELD TENANTS AND SERVICES

Hampton Airfield is presently home to 82 airplanes and a number of on-airport businesses. Of the 82 based aircraft, there were 75 single-engine, three ultra-lights, three helicopters, and one glider documented in 2007. As a focal point for the restoration of antique and classic aircraft, there are a number of tail dragger aircraft, including a significant number of Piper Cubs and biplanes, based at Hampton Airfield.

While most of the on-airport businesses provide aviation related services, perhaps the best known is The Airfield Café. Having opened in the early 1990's, this restaurant is popular to both driving and flying customers. Inside and outside seating offer views of the airfield that have created a gathering spot for aviation enthusiasts of all ages. Located in what was the original 1945 hangar, the restaurant shares the modified building with Hampton Airfield Inc., a full service FBO. In the front half of the building there is the FBO/airport office, pilot shop, a small flight instruction area, and restrooms.

**Exhibit 1-6  
FBO/Restaurant Building**



The EAA group at Hampton Airfield is actually Chapter 15 of the organization's Vintage Aircraft Association. This chapter of the EAA retains and restores different aircraft by the group as well as those of its individual members. There are a number of businesses that also specialize in the maintenance and restoration of aircraft at Hampton Airfield. In addition to Hampton Airfield Inc. FBO, these include Sinclair Aircraft Antique Restorations, Golden Age Restorations, Sandhill Aviation and Rye Ledge Aero.

One of the newest businesses at Hampton Airfield is the dealership for American Legend Cub which specializes in the sale, training, service, and rental of light sport aircraft. Besides the light sport Cubs aircraft, single engine Cessna 172 aircraft can be rented. Running Man Courier Service operates out of the smallest maintenance building on the west side and Enterprise Rent-a-Car brings vehicles out to the airfield as needed.

There are also a number of aviation businesses that are primarily seasonal due to the type of service they provide, especially sight seeing

**Exhibit 1-7  
Airfield View from Restaurant**





biplane and helicopter rides. Aerial advertising or banner towing operations are also conducted by Giant Aerial Billboards and Sky Lines Aerial Ads during the warmer months.

**Table 1-2** provides a list of the 16 current tenants at Hampton Airfield.

**Table 1-2  
EXISTING TENANTS**

<b>Tenants</b>	<b>Employees</b>
Hampton Airfield, Inc	6
Airfield Café	12
Sinclair Aircraft Restorations	4
Sandhills Aviation	3
Golden Age Aircraft	1
Giant Aerial Advertising	2
Sky Lines Aerial Advertising	2
Steel Fab Engineering	2
Advanced Roofing	4
Running Man Courier	2
New England Light Sport Aircraft	2
Coady Marine	1
Caron Associates	1
Mello Lander Group	2
Independent Flight Instructors	6
Dreams of Flight	1
<b>Total</b>	<b>51</b>

Source: Airport Owners, 2008.

### **Aviation Fuel**

The airfield’s newly renovated fueling facilities include a 3,000 square foot concrete fueling apron and two underground fuel storage tanks. These tanks, which were installed in 1988 with a leak monitoring system, provide 10,000 gallons of 100LL Avgas and 5,000 gallons of automobile fuel (Mogas). Hampton Airfield is the only public-use airport in New Hampshire that offers Mogas. Both tanks use an above ground pump and dispensing system. The paved fueling apron also provides a stable location for helicopters to land on when purchasing fuel.

### **Utilities**

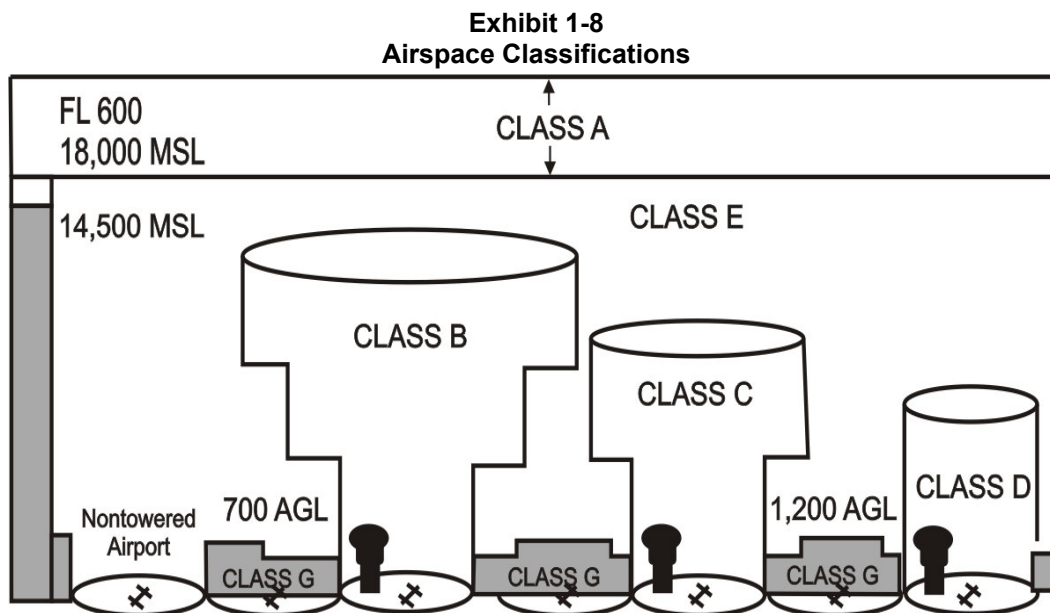
The FBO/Restaurant, three maintenance, and newest T-hangar buildings located west of Runway 2-20 all have water service from the town of North Hampton. The seven buildings located east of Runway 2-20 have water service that is provided by a single private well. Each

of the buildings with water service utilizes on-site septic tanks with leaching fields for wastewater.

## SURROUNDING AIRSPACE

Controlled airspace is referred to as Class A, B, C, D, or E and uncontrolled airspace as Class G (see **Exhibit 1-8**). Generally speaking, Class A airspace begins at 18,000 feet above mean sea level (AMSL), continues upward, and is used to manage enroute aircraft traffic. Class B airspace surrounds the nation's busiest airports such as Boston Logan International Airport. Class C surrounds airports with high traffic levels, but not as high as Class B airports. Area airports with Class C airspace include Manchester-Boston Regional Airport and Portland International Jetport. Class D surrounds those airports with an air traffic control tower (ATCT) not located in Class B or C airspace. Class E airspace is any other controlled airspace. The Portsmouth International Airport at Pease has Class D airspace as well as some Class E associated with the approaches to Runway 34.

Regardless of the fact that Hampton Airfield is a non-towered airport, a portion of the airspace above the airport is controlled. This airspace, which is designated as Class E, begins at 700 feet above ground level (AGL) and extends upward to 17,999 feet AMSL, where it meets with the overlying controlled airspace (Class A). The uncontrolled airspace between the surface and 699 feet AGL is designated as Class G airspace. As a non-towered airport, the Common Traffic Advisory Frequency (CTAF) is used for communication between aircraft operating to and from Hampton Airfield. Even though the airport is non-towered and the airspace designated as uncontrolled, there are still specific operating rules, pilot requirements, and equipment requirements.





## CONCLUSION

The above descriptions do not provide an exhaustive account for every specific detail and facet of Hampton Airfield. The purpose of this overview was to provide sufficient facility data for subsequent analyses of this report. For example, the following chapter will document the historic activity at the airfield and then apply different methodologies to project the based aircraft and annual operations for the airport.



## Chapter 2

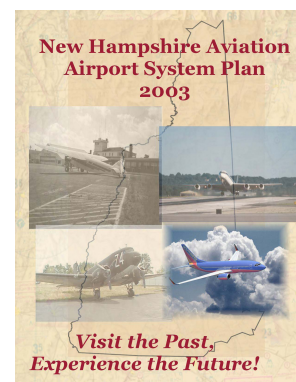
# Aviation Activity Forecasts

### OVERVIEW

Projections have been prepared for the number of based aircraft and annual operations expected to occur at Hampton Airfield from 2007 through 2027. This 20-year period is the typical planning horizon for aviation planning studies. The forecasts were developed using previous analyses conducted for the NHDOT and industry data from the FAA. In order to ensure the best information available was utilized, these sources were coupled with information obtained during interviews with the airport owner.

### 2003 New Hampshire Aviation Airport System Plan

The only previous projections for Hampton Airfield were those included as part of the *2003 New Hampshire Aviation Airport System Plan*. This plan helps guide the NHDOT Bureau of Aeronautics with the development of the State's public-use airports. There are nine planning regions used to group the public-use airports. Along with the Portsmouth International Airport at Pease, activity data for Hampton Airfield is included within the Rockingham region.



### General Aviation Industry Trends

Hampton Airfield only supports general aviation activity. Such facilities are an important component of the national airports system, providing air services to approximately one fifth of the United States population. There are many elements of aviation that make up the broad definition of general aviation activity, as it includes all segments of the aviation industry except for commercial air carriers and the military. For Hampton Airfield, this activity is primarily related to pilot training, sightseeing, aircraft sales, fuel sales, aircraft maintenance and restoration, aerial advertising, and other forms of recreational flying.

Decreases in general aviation activity were experienced across the nation in the late 1980's and early 1990's. A large part of this was directly attributable to increasing product liability costs, as well as increasing operating costs. Unfortunately, this period, which was also affected by a national recession, ultimately forced the closure of many manufacturers of general aviation aircraft. Congress responded to the severe downturn with the passage of the General Aviation Revitalization Act of 1994. The signing of this act provided a renewed era of growth for the general aviation market, which helped the industry recover.



However, between 2001 and 2003 the general aviation industry declined, due primarily to an economic downturn and impacts from the tragic events of September 11<sup>th</sup>. Results of these downturns materialized in the first months of 2001 with a decrease in the number of general aviation aircraft shipments and activity. Further, the lingering effects of September 2001 only made the situation worse for general aviation, which to some extent is still affecting the industry today.

Fortunately, the 2007 FAA Aerospace Forecasts document that for the third year in a row (2003 to 2006), general aviation aircraft shipments have reversed the downward trend. U.S. manufacturer shipments in 2006 were up 10.1 percent over 2005 with a total of 3,146 units. The FAA expects this positive growth to continue, especially as more manufacturers enter into the general aviation market. Most of these new entrants include previous kit aircraft builders who have become production companies and the companies building aircraft in the very light jet and light sport markets.

According to the 2007 FAA Aerospace Forecasts, the overall number of active general aviation aircraft is expected to increase 1.4 percent annually through 2020. Similarly, the annual operations conducted by general aviation aircraft are projected to increase 2.0 percent annually through 2020. These FAA forecasts assume that the regulatory environment will not significantly change, that fractional ownership will continue to expand, and that the industry and government programs will continue to be successful. While the 2007 projections are fairly recent, they may not have fully anticipated the continued increase in operating costs or lingering threat of FAA imposed user fees for general aviation.

## **PROJECTIONS OF BASED AIRCRAFT**

The number of aircraft owners projected to use Hampton Airfield as their base is an important consideration when planning hangar and tiedown space. Projections of based aircraft also provide one indication of the anticipated growth in flight activity. For Hampton Airfield, growth in the number of based aircraft is expected to occur throughout the 20-year planning period. This growth has been estimated using the different methods described in the following sections.

### **Historic Growth**

A common approach for projecting based aircraft is to simply apply the historic growth rate experienced over a set timeframe. Since Hampton Airfield is a privately owned airfield, annual counts are not consistently documented. Therefore, the current level (2007) was compared to the count made in 2000 as part of the *2003 New Hampshire Aviation Airport System Plan* forecasts. During this seven year period based aircraft increased from 70 to 82. When this average annual growth (2.3 percent) is applied to the 20-year planning horizon, the result is 129 based aircraft by 2027.

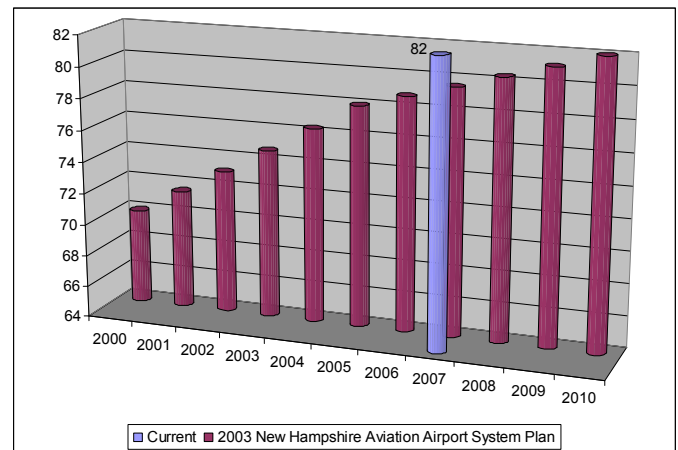


## 2003 New Hampshire Aviation Airport System Plan Based Aircraft Projections

The *2003 New Hampshire Aviation Airport System Plan* utilized population projections for the nine different regions across the state to project the number of based aircraft at individual airports. This was done simply by taking the market share of each airport within its respective region and holding that share constant throughout the forecast period. For each airport in the state both short term (2000 to 2005) and long term (2005 to 2010) projections were developed.

With the exception of a few airports in the North Country region, this methodology yields different growth rates for the short and long terms of each airport. For Hampton Airfield, the average annual growth for the first five year period is 2.2 percent and then 1.0 percent for the second five year period, resulting in an estimate of 82 based aircraft by 2010. As shown in **Exhibit 2-1**, the airport has already exceeded this projection, reaching 82 aircraft in 2007.

**Exhibit 2-1**  
**Previous Projection of Based Aircraft**



While the *2003 New Hampshire Aviation Airport System Plan* stopped at 2010, the projection can still be utilized to estimate the activity at the end of this study's planning period (2027). In fact, there are two ways this can be done. The first would be to extrapolate the long term (2005 to 2010) growth to estimate a figure for 2027. Applying the long term average annual growth (1.0 percent) would yield 97 based aircraft by 2027. The second option is to utilize the overall average growth projected in the *2003 New Hampshire Aviation Airport System Plan* with the current level of based aircraft. When applied to the current based aircraft count for 2007, this average annual growth, which is 1.6 percent between 2000 and 2010, would result in 113 based aircraft by 2027.

## National Active Fleet Forecasts

Data obtained from the 2007 FAA Aerospace Forecasts shows the nation's active general aviation aircraft increasing at an average of 1.4 percent through 2020. The FAA projection includes the new aircraft expected to be added to the fleet each year as well as those that are taken out of service. If this rate is applied to the 2007 count for Hampton Airfield, 108 based aircraft would be expected by 2027.



**Table 2-1  
PROJECTIONS OF BASED AIRCRAFT**

	2007	2012	2017	2027
Historic Growth	82	92	103	129
2003 System Plan Extrapolated	80	84	88	97
2003 System Plan Overall Growth	82	89	96	113
National Active Fleet	82	88	94	108

Source: Hoyle, Tanner & Associates, Inc., 2008.

### SELECTED BASED AIRCRAFT FORECAST

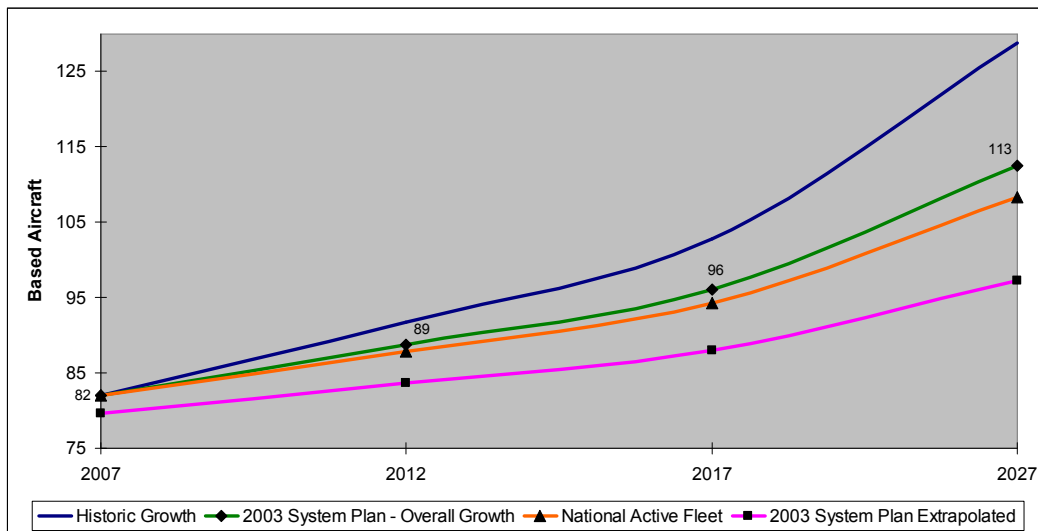
While there should be no constraints to the forecast of based aircraft, some issues need to be considered. One is the space available to accommodate additional aircraft. Fortunately, this is not considered a constraint as there are a number of locations that could be utilized for additional hangar or tiedown space. For example, the airport owners currently have plans to build a second row of six private hangars on the east side of the airfield. In addition there are twelve (12) privately owned residential parcels that have deeded access to the airfield. Three (3) currently have an aircraft, and others may in the future.

Another consideration is the additional aircraft that would most likely utilize Hampton Airfield if a paved runway were provided. A paved runway at Hampton Airfield would help eliminate some of the seasonal limitations such as slow acceleration during muddy conditions or the ability to maintain the runway during the winter. It would also potentially attract additional operators of more modern aircraft, including many with tricycle landing gear configurations and those with retractable gear. In fact, it was estimated by the airport owner that 30 or 40 more aircraft would call Hampton Airfield home if the runway was paved.

Considering the above, there is a significant potential for additional aircraft to be based at Hampton Airfield in the future. **Exhibit 2-2** graphically compares the projections considered. The historic projection is considered unrealistic as it is difficult to support a rate of growth for Hampton Airfield that is significantly higher than the growth expected in the nation's overall general aviation fleet. Likewise, the extrapolation of the *2003 New Hampshire Aviation Airport System Plan* is unlikely as it only results in 15 additional aircraft over the next 20 years. It

makes sense that this projection is low given that the number of based aircraft today has already met those expected in the *2003 New Hampshire Aviation Airport System Plan* for 2010.

**Exhibit 2-2  
Forecast of Based Aircraft**



Of the two remaining projections, the use of the overall growth from the *2003 New Hampshire Aviation Airport System Plan* for Hampton Airfield was selected. There are two primary reasons why this estimate was preferred over the projection using growth in the nation's general aviation fleet. First, the overall growth rate from the *2003 New Hampshire Aviation Airport System Plan* best represents the actual growth experienced at Hampton Airfield over the past seven years. Second, Hampton Airfield serves specific segments of the general aviation industry and it is not expected for this to change given the unique characteristics of the airport and its users.

## PROJECTIONS OF ANNUAL AIRCRAFT OPERATIONS

The FAA defines an operation as either a single aircraft landing or takeoff. Under this definition, touch and go training procedures are considered two operations (one arrival and one departure). At Hampton Airfield, recreational flying activities make up the majority of the operations. The following describes the different projections considered for the 20-year planning period.

### Historic Growth

As with the based aircraft projection, past activity levels were evaluated to determine whether they could predict future aircraft operations for Hampton Airfield. It should be noted that all historic activity levels are only estimates given there is no air traffic control tower at the airfield.



This is apparent when the operations documented for 2000 are compared to those of 2007. The annual operations over this seven year period only vary by 10 operations (37,500 to 37,510). If this rate of change were applied to project future activity, there would be 37,539 annual aircraft operations expected by 2027.

### **2003 New Hampshire Aviation Airport System Plan Projections of Activity**

Activity projections in the *2003 New Hampshire Aviation Airport System Plan* are based on a methodology which applies an average number of operations per based aircraft. Because of this, the resultant short and long term growth rates are identical to those described for the based aircraft projections. Likewise, it is possible to utilize the projections to develop two different estimates of the annual operations expected by the end of the 20-year planning period. If the long term growth (1.0 percent) estimated in the *2003 New Hampshire Aviation Airport System Plan* were extrapolated out, the result would be an estimate of 51,695 annual aircraft operations by 2027. If the overall growth (1.6 percent) is applied to the level of operations documented for 2007, the result would be an estimate of 51,060 annual aircraft operations by 2027.

### **National Projection of General Aviation Activity**

Another projection was generated by applying the growth rate expected for the industry nationwide. General aviation operations at those airports with either an FAA or Federal Contract air traffic control tower are documented in the 2007 FAA Aerospace Forecasts. From 2000 to 2006, operations at these facilities declined, much of which was attributed to the impacts that the tragic events of September 11<sup>th</sup>, then rising insurance, and finally increases in fuel costs had on the industry. However, the FAA sees an end to this decline and projects growth in the nation's general aviation operations at an average annual rate of 2.0 percent through 2020. When applied to the 2007 level for Hampton Airfield, this national growth projection results in 55,738 annual aircraft operations by 2027.

### **Operations per Based Aircraft**

For non-towered airports, the FAA suggests projecting the level of activity using the forecast of based aircraft. Under this methodology, the FAA recommends assuming 538 annual operations per based aircraft for public-use general aviation airports that are not included in the National Plan of Integrated Airport Systems (NPIAS). While the *2003 New Hampshire Aviation Airport System Plan* utilized an operations per based aircraft model, it employed historic averages which were applied to the based aircraft projections (which have already been exceeded). This difference justified creating a new operations per based aircraft projection. Applying the FAA's recommended operations per based aircraft results in 60,794 annual aircraft operations by the year 2027.



**Table 2-2  
 PROJECTIONS OF ANNUAL AIRCRAFT OPERATIONS**

	2007	2012	2017	2027
Historic Growth	37,510	37,517	37,524	37,539
2003 System Plan Extrapolated	42,483	44,619	46,863	51,695
2003 System Plan Overall Growth	37,510	40,516	43,764	51,060
National Activity	37,510	41,414	45,724	55,738
Operations per Based Aircraft	37,510	47,882	51,648	60,794

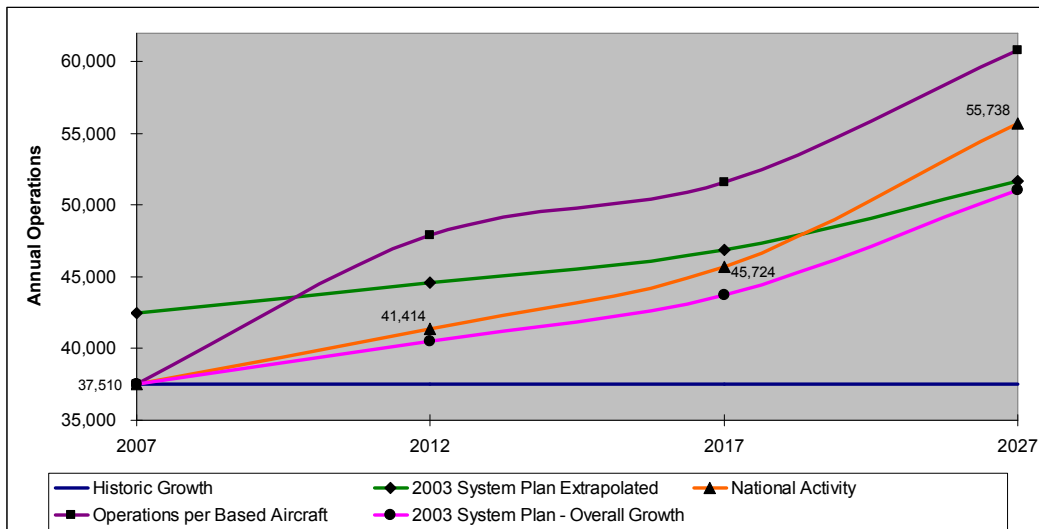
Source: Hoyle, Tanner & Associates, Inc., 2008.

### SELECTED FORECASTS OF ANNUAL AIRCRAFT OPERATIONS

Each of the projections for annual aircraft operations is illustrated in **Exhibit 2-3**. Immediately the projections based on historic growth and the extrapolation of the *2003 New Hampshire Aviation Airport System Plan* were eliminated. For the historic projection, an increase of only 29 annual aircraft operations over the next 20 years is not realistic, especially given the increase in based aircraft expected over the same period. The extrapolation of the *2003 New Hampshire Aviation Airport System Plan* is not considered viable since it starts at a level for 2007 that is above the activity documented for that year.

In order to select the best projection, some industry and local trends must be considered. For example, new product offerings, such as the light sport aircraft will boost activity at airports like Hampton Airfield, especially given the current increases in the cost to operate general aviation aircraft. In fact, Hampton Airfield is home to the classic Piper Cub and the new Legend Cub flight school which provides training exclusively in the light sport aircraft for the new Light Sport Pilot license. In addition to flight training, the airport is currently experiencing an increase in rotorcraft traffic. While these factors indicate growth for Hampton Airfield, there is not enough evidence to suggest the activity will exceed the growth expected across the nation as a whole.

**Exhibit 2-3  
Forecast of Annual Aircraft Operations**



Given the above, the operations per based aircraft projection was eliminated from further consideration. As shown in **Exhibit 2-3**, while the operations per based aircraft growth parallels that of the national activity, the projection is at a much higher level than what has historically occurred at Hampton Airfield. This is best illustrated by the steeper rise between 2007 and 2012 which is indicative that the airport does not currently produce the average number of operations per based aircraft as suggested by the FAA methodology. However, it is felt that the growth in activity will exceed the expected growth in based aircraft. This primarily has to do with the additional flight training and rotorcraft operations described above.

Overall the projection which utilizes the expected national growth is considered the most reasonable. If a paved runway surface were provided in the future, an increase in aircraft operations would most likely occur beyond those forecasted. Similarly if general aviation user fees are instituted by the federal government, airports like Hampton Airfield will most likely see additional activity as recreational users and flight training would seek out those airfields where operating costs are minimized. If these or other issues were to occur, an alternative growth scenario would need to be considered.

**Table 2-3  
SUMMARY OF ACTIVITY FORECASTS**

	Based Aircraft	Annual Operations
Base Year 2007	82	37,510
Forecast 2012	89	41,414
2017	96	45,724
2027	113	55,738

Source: Hoyle, Tanner & Associates, Inc., 2008.

## Chapter 3

# Facility Development Considerations

### **INTRODUCTION**

Many small airports, whether publicly or privately owned, face increasing pressure to close. For every airport operator, the daily challenges of protecting the existing facilities are demanding enough, not to mention enhancing them for future capability. For privately owned facilities, the demands are even greater since financial resources and airport development options are limited even more by the few funding mechanisms available. The following sections provide information that should be considered for planning any future airport improvements. Since Hampton Airfield is privately owned, these facility developments are offered only to provide options that could enhance the safety, activity, services, and revenues associated with the airport operation.

### **PLANNING AND DESIGN CRITERIA**

Airports that receive federal funding are required to utilize the planning and design criteria published by the FAA in their various Advisory Circulars, Orders, and other government document series. Even though Hampton Airfield is not obligated to follow FAA standards, this section provides an overview of the FAA planning and design guidelines that are reasonable goals to strive for regardless of airport type.

While many of the FAA's guidelines cannot physically be accommodated, these criteria are useful in identifying potential improvements. The reason is that all airports need to be maintained and developed according to the characteristics of the most demanding aircraft expected to use the facility on a regular basis. For this reason, most of the FAA planning and design guidelines are based on a critical aircraft, which is defined as the aircraft with the most demanding approach speed, wingspan, and weight that conducts a minimum of 500 operations per year. An Airport Reference Code (ARC) is then established based on specific characteristics of that aircraft.

Aircraft Approach Category

- A < 91 knots
- B 91 - 121 knots
- C 121 - 141 knots
- D 141 - 166 knots
- E > 166 knots

Airplane Design Group

- I < 49'
- II 49' - 78'
- III 79' - 117'
- IV 118' - 170'
- V 171' - 213'
- VI 214' - 262'

**Exhibit 3-1  
Piper Cub**



Approach Speed: 52 knots  
Wing Span: 35.6'

According to the airport owner, the most demanding aircraft that utilizes Hampton Airfield on a regular basis is the Piper Cub, as illustrated in **Exhibit 3-1**. This aircraft requires an ARC of A-I, which will be utilized for Hampton Airfield in this study.

Since Runway 2-20 is not paved and utilized by aircraft weighing less than 12,500 pounds, it is considered to have the Small Aircraft Exclusively designation.





## Runway Guidelines

As the primary airfield component, runways need to have the physical length, width, and surface strength to accommodate the critical aircraft. Currently Runway 2-20 has an overall length of 2,153 feet, is 170 feet wide, and limited to visual approaches only.

In addition to the physical characteristics, there are a number of other safety related surfaces that are recommended per FAA guidelines. Some of the more prominent elements include the runway safety area, object free area, obstacle free zone, and protection zones. The sizes of these surfaces for Hampton Airfield are shown in **Table 3-1**. Descriptions for each surface and how they might be applied at Hampton Airfield are addressed in various sections of this study.

## Runway Surface Considerations

Three improvements to the current turf runway surface should be taken into consideration. The first is simply to regrade Runway 2-20. The intent is to eliminate the soft dirt and rutting that has been documented in past safety inspections. Therefore, as part of the regrading effort, it may be necessary to remove soil from some locations and replenish those areas and other rutted areas with a suitable fill. Given the 20-year timeframe of this study, the regrading of the runway is recommended periodically depending on wear.

The second improvement is to install an irrigation system along the perimeter of the runway. Such a system would help maintain the growth of grass during the drier months of the year, which would help minimize erosion and rutting.

The final consideration is to provide a paved runway surface. As described in the activity forecasts, such a surface would enhance the ability to serve a number of general aviation aircraft. Paving a runway creates a smooth surface that is easier for nearly all aircraft to use, especially during wet conditions. A paved runway is also erosion resistant and less difficult to maintain with respect to snow and ice removal though it is more expensive to maintain.

**Table 3-1**  
**RUNWAY DESIGN CRITERIA (ARC A-1)**

Runway Width	60'
Runway Safety Area	
Width	120'
Length (beyond end)	240'
Runway Object Free Area	
Width	250'
Length (beyond end)	240'
Runway Obstacle Free Zone	
Width	250'
Length (beyond end)	200'
Runway Protection Zone	
Inner Width	250'
Outer Width	450'
Length	1,000'

Source: FAA Advisory Circular 150/5300-13  
 Change 13, "Airport Design."

Note: All dimensions are for runways serving A-I aircraft (Small Aircraft Exclusively) with visual and not lower than ¾ mile approach visibility minimums except for Runway Protection Zone which is for visual and not lower than 1 mile approach visibility minimums.



Providing a paved runway would increase the ability to serve a number of different users as well as have the potential to expand the base aircraft level which in turn would increase the revenue generating potential of the airport through additional leaseholds and fuel sales. This option would have to consider the fact that the existing fleet of antique and tail dragger aircraft still require an unpaved runway surface. Therefore, if paving the runway is considered an option, it should only be done if an unpaved runway surface would also be made available. Otherwise, the attraction of new aircraft would be quickly offset by the loss of the core users and operations that occur today.

There is not enough space at Hampton Airfield in its current configuration to provide both a paved and turf runway surface per FAA guidelines, which requires a minimum centerline separation between parallel runways of 700 feet, when the airport has only visual approaches. Due to this standard, providing a paved runway surface at Hampton Airfield would be considered a partially paved, single runway.

The easterly side of existing turf Runway 2-20 would remain, while a full length, 60-foot wide paved surface would be provided on the westerly side. The placement of the paved portion of the runway was selected by the airport owner as he also owns a strip of land off the approach end of Runway 2. The parcel provides protection for the Runway Safety Area (RSA), discussed below. Easement acquisition for adjacent parcels within the RSA should be considered.

If constructed, the leading edge of the paved portion of Runway 2-20 would need to be specially prepared to allow the safe transition of aircraft back and forth from turf and paved surfaces. The sensitive seem area will need to be closely monitored and likely require regular maintenance to ensure the safe transition of aircraft.

### **Runway Safety Enhancements**

To the extent feasible, it is recommended that the airport maintain the FAA safety related surfaces listed in **Table 3-1**. The following descriptions of these surfaces include potential safety issues. It should be noted that the surfaces described will apply even if the runway is paved in the future.

**Runway Safety Area (RSA)** – A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overrun, or veer off the runway. The RSA, which is centered on the runway centerline, needs to be: (1) cleared and graded with no potentially hazardous ruts, humps, depressions, or other surface variations; (2) drained by grading or storm sewers to prevent water accumulation; and (3) capable, under dry conditions of supporting the occasional passage of aircraft without causing structural damage to the aircraft. Finally, the RSA must be free of objects, except for those that need to be located in the safety area because of their function.

As documented in the 2007 NHDOT safety inspection, “At the approach end of Runway 2, the area south of the runway end does not conform to RSA dimensions and grading specifications due to depressions and generally uneven terrain.” While the area just south of the runway does not quite meet the RSA grade standards, it is open and free of obstructions. Consideration should be given to acquiring any land to the south of the runway or at least exploring the ability to obtain permission from the current owner(s) to correct the grade to meet the RSA standards. Another option would be to displace the Runway 2 threshold approximately 240 feet north to meet RSA standards.

On the north end, the Runway 20 threshold has been displaced approximately 300 feet. This displacement, which is addressed in the airspace section, accommodates the required 240 foot RSA on this end of the runway.

**Runway Object Free Area (ROFA)** - The ROFA is centered on the runway centerline. Standards for the ROFA require clearing the area of all ground objects protruding above the RSA surface. Except where precluded by other clearing standards, it is acceptable to place objects that need to be located in the ROFA for air navigation or aircraft ground maneuvering purposes and to taxi and hold aircraft in the ROFA. Objects non-essential for air navigation or aircraft ground maneuvering purposes are not to be placed in the ROFA. This includes parked airplanes.

As documented in the 2007 NHDOT safety inspection, “On the east side of the Runway 2 end, the brush, cement debris pile, earthen embankment, and the pine tree near the hangars do not meet ROFA clearing standards.” There are also a number of trees to the southwest of the Runway 2 threshold that do not meet ROFA clearing standards. As suggested for the RSA, consideration needs to be given to acquiring any land to the south of the runway or at least exploring the ability to obtain an easement from the current owner(s) to clear the ROFA. Another option would be to displace the Runway 2 threshold approximately 240 feet north. As described for the RSA, the 300 foot displaced Runway 20 threshold provides the space required for the 240 feet ROFA on the north end of the runway.

**Runway Obstacle Free Zone (ROFZ)** - The ROFZ is a three-dimensional volume of airspace centered on the runway that supports the transition of ground to airborne operations (or vice versa). The ROFZ clearing standards prohibit taxiing, parked airplanes, and other objects, except frangible navigational aids or fixed-function objects (such as signage), from penetrating this zone.

As shown in **Table 3-1**, the width of the ROFZ and ROFA are the same. Because of its classification, Hampton Airfield falls into one of the few instances where the widths of these surfaces overlap. The difference is that while aircraft are allowed to taxi through the ROFA, they are not allowed to penetrate the ROFZ. As a result, the movement of aircraft along the western side of Runway 2-20 or the movement of vehicles or aircraft



along the gravel road on the east side of Runway 2-20 impact ROFZ clearing standards. This will be addressed in the section on taxiway area considerations.

**Runway Protection Zone (RPZ)** - A RPZ, or clear zone as it was formerly named, is a two-dimensional trapezoidal shaped area beginning 200 feet beyond the end of the area usable for takeoff or landing. When possible, airports should maintain control of each runway's RPZ in order to keep the area clear of incompatible objects and activities. Such control is much easier to achieve and maintain through the acquisition of sufficient property interests in the RPZs.

The RPZs off each end of Runway 2-20 extend well beyond the current airport property boundary. However, ownership of the land within the RPZ is not required. As described above, the intent of these areas is to define a space that should have additional consideration given with respect to the types of uses allowed. Unfortunately, even at federally funded airports, there is little ability to control the types of uses in these areas without purchasing the land. This issue will be addressed further as part of the preservation plan related to protecting the airfield environment.

### Runway Length Considerations

Currently Runway 2-20 is published as having a length of 2,100 feet. Based on the NHDOT runway endpoint survey conducted on August 14, 2007, this figure needs to be updated to reflect the true runway length of 2,153 feet. The runway is also published as having a 300 foot displaced threshold for Runway 20. While this is correct and still required, the aeronautical publications do not accurately inform pilots of the actual runway length available for different operations.

The FAA has a method where the lengths available, including the safety related surfaces, are declared. While typically not applied to small general aviation airports, declared distances are the only formal way to inform pilots what length is actually available. Under declared distances, four different lengths are calculated for operations to/from a specific runway end. These distances are used by pilots to determine whether or not their aircraft (in a given configuration) can safely takeoff or land within the available distances. Declared distances include:

TORA	Takeoff Run Available
TODA	Takeoff Distance Available
ASDA	Accelerate Stop Distance Available
LDA	Landing Distance Available

The use of declared distances is typically limited to those airport facilities that cannot provide certain design standards without shifting the landing thresholds and/or departure points of a runway. As a result, the application of declared distances are runway specific and require FAA approval. The table below delineates the declared distances calculated for Runway 2-20 using the safety related surfaces described above.



Operation	Runway 2	Runway 20
TORA	1,853'	2,153'
TODA	2,153'	2,153'
ASDA	1,853'	2,153'
LDA	1,853'	1,853'

Declared distances have never been officially published for use by aircraft operating into or out of Hampton Airfield. Therefore, if this option is considered, the airport owner should contact the NHDOT, Bureau of Aeronautics representative that conducts the annual airport inspection for the FAA to coordinate inclusion of declared distances into Hampton Airfield's Airport Master Record (FAA Form 5010-3).

### Taxiway Guidelines

The purpose of any taxiway system is to support the operational activity and enhance the safety of aircraft ground movements. Taxiways also act to improve the capacity of the existing runway system by allowing aircraft to move on and off the active runway in an efficient fashion.

Similar to the runway environment, all taxiways should have both safety areas and object free areas established. These as well as the minimum offset distance between the runway and parallel taxiway centerlines help ensure adequate wingtip clearance. The FAA dimensions for taxiways for Hampton Airfield are shown in **Table 3-2**.

**Table 3-2  
 TAXIWAY DESIGN CRITERIA (ARC A-1)**

Taxiway Width	25'
Taxiway Safety Area (width)	49'
Taxiway Object Free Area (width)	89'
Minimum Distance to Parallel Runway Centerline	200'

Source: FAA Advisory Circular 150/5300-13 Change 13, "Airport Design."

Note: For runways serving Design Group I aircraft (Small Aircraft Exclusively).

### Taxiway Area Considerations

Aircraft routinely taxi along the full length of the west side of Runway 2-20. On occasion, aircraft also utilize the gravel road along the east side of Runway 2-20 for ground maneuvering. This access road, which comes off Cedar Road, runs parallel to approximately 1,500 feet of the runway, ending at the southernmost box hangar on the east side of the airport. Neither alignment is capable of meeting the minimum FAA guidelines delineated in **Table 3-2**. As described above, due to the limited lateral space along the runway, both currently impact the ROFZ when aircraft or vehicles move through these areas.

Because the FAA's taxiway guidelines cannot physically be accommodated at Hampton Airfield without significant impacts to the existing facilities, only two alternatives exist. The first includes continuing to use the current, non-standard separation, routes for the movement of aircraft along the sides of the runway. The second would involve instituting FAA accepted procedures



to have aircraft back taxi on the runway in order to get to the runway ends without a designated parallel taxiway. It can be argued as to which option provides the safest operating environment.

## AIRSPACE ISSUES

The airspace around public-use airports is protected by the imaginary surfaces defined in Federal Aviation Regulation (FAR) Part 77, "Objects Affecting Navigable Airspace." Since these imaginary surfaces are designed to enable aircraft to safely fly into and out of an airport, any objects that penetrate these surfaces are considered obstructions. When possible, these obstructions should be removed. While there are a number of different imaginary surfaces, only the Primary Surface, Approach Surfaces, and Transitional Surfaces are addressed in this chapter.

**Primary Surface** - A rectangular area centered on the runway centerline and extending a distance of 200 feet beyond the runway end, when the runway is paved. If the runway is not paved, the Primary Surface ends at the runway ends. The width of the Primary Surface is based on the type of approach a particular runway has, while the elevation follows, and is the same as that of the runway centerline, along all points. For Hampton Airfield, a 250 foot wide Primary Surface between each runway end is required.

**Approach Surfaces** - These surfaces begin at the end of the Primary Surface and slope upward at a ratio determined by the runway category and type of instrument approach available to the runway end. The width and elevation of the inner end conforms to that of the Primary Surface. For both ends of Runway 2-20, the Approach Surfaces extend out a distance of 5,000 feet to an outer width of 1,250 feet. This trapezoid surface slopes upward one foot for every 20 feet horizontal and away from the Primary Surface.

**Transitional Surfaces** - A sloping area beginning at the edges of the Primary and Approach Surfaces that extend upward and outward at a 7:1 ratio. As the name implies, these surfaces connect the Primary and Approach Surfaces to the other imaginary surfaces which begin 150 feet above the established airfield elevation.

## Evaluation of Existing Obstructions

By definition, the Primary Surface extends to each end of an unpaved runway. Therefore, for Runway 2-20 this creates a 250 foot wide by 2,153 foot long rectangle around the runway. Since this surface has the same width as the ROFA and ROFZ, it also has the same obstructions described previously. However, these obstructions are only to the sides of the runway since the Primary Surface does not extend beyond the runway ends. In addition, some of the hangars to the east and west of Runway 2-20 are considered obstructions as they penetrate the Transitional Surfaces which come off of the sides of the Primary Surface. The Transitional Surfaces along with the other FAR Part 77 surfaces are depicted as part of the Airport Layout Plan (ALP) drawings. For the purposes of this section, it should be noted that



these hangar obstructions have been properly mitigated with red obstruction lights per FAA guidelines.

For the 20:1 Approach Surface to Runway 2, there are a number of trees that have been identified as obstructions during the 2007 NHDOT safety inspection. The controlling obstruction is the object that would require the steepest slope to the runway end to clear. In this case it is one of the trees previously described that is located within the southwest corner of the ROFA. As suggested, consideration needs to be given to acquiring any land to the south of the runway or at least exploring the ability to obtain an easement from the current owner(s) to clear the vegetative obstructions to the Runway 2 Approach Surface.

On the north end, the approach slope that would extend up and out from the Primary Surface would have a number of obstructions due to the trees located north of the airport. In addition, Cedar Road also runs perpendicular to the runway centerline and beneath the Approach Surface. FAR Part 77 requires a 15-foot vertical clearance between any Approach Surface and a public road. While there are certainly vegetative obstructions north of Runway 2-20, this vertical clearance is the primary reason that the Runway 20 threshold has been displaced 300 feet. At a 20:1 slope, the 300 foot displacement ensures the required vertical clearance, especially given the fact that the displaced threshold is at a slightly higher elevation than the portion of Cedar Road that lies beneath the Approach Surface.

Regardless, there are still a number of trees that penetrate the Approach Surface to the displaced Runway 20 threshold. It should be noted that the airport owner has recently purchased additional land to the north of the airfield. This recent acquisition along with agreements from adjacent land owners has facilitated the clearing of numerous vegetative obstructions to Runway 20 that are north of Cedar Road. In addition, the airport owner is trying to establish “low flying aircraft” signs along Cedar Road, even though the proper vertical clearance is being maintained per FAR Part 77. The airport owner is trying to install the signs as a precaution to warn motorists using Cedar Road.

### **Potential to Establish an Instrument Approach**

During times of inclement weather, instrument approaches enable pilots to safely descend into the airport environment for landing. Prior to Global Positioning Satellites (GPS), the establishment of an instrument approach required either specific equipment on the airfield or close proximity to a navigational aid. GPS technology makes it possible to establish instrument approach procedures at smaller airports without the need to install equipment or incur maintenance costs.

There are two basic categories for instrument approaches: precision and non-precision. Both provide course guidance to the runway centerline they serve. The degree of horizontal guidance increases with the sophistication of the instrument approach aid, which is reflected through the minimum operating parameters for each approach. The primary difference between a precision and non-precision approach is that the precision approach will also have vertical





guidance to a specific runway end. This allows an aircraft to descend safely on an established glidepath to the runway, even when the runway environment is not yet in sight.

The FAA typically requires a minimum runway length of 3,200 feet to establish even the most basic non-precision instrument approach. However, for unpaved runways, the ability to establish some non-precision approaches exists on a case-by-case basis, which is determined by the regional FAA Flight Standards personnel.

What is critical to consider for Hampton Airfield is that the establishment of any non-precision instrument approach would increase the size of the FAR Part 77 surfaces. The current Primary Surface would double in width from 250 feet to 500 feet wide. At this width, 10 of the airport buildings and one building off airport property would lie within the Primary Surface. Unlike some obstructions that can be lighted in the Transitional Surfaces, such penetrations are not allowed to the Primary Surface of an airport with an instrument approach.

Similarly, the Approach Surface for any runway with a non-precision approach would become wider at the inner end with the Primary Surface and at the outer end. The slope of the Approach Surface would remain at 20:1 since the runway is considered to have the Small Aircraft Exclusively or Utility designation.

Because of the impacts that would result to surrounding buildings and other obstructions, it is not considered likely for any instrument approach procedures to be established at Hampton Airfield utilizing current FAA guidelines. Therefore, no provision for an instrument approach is included in this study.

## **AIRFIELD ENVIRONMENT**

A number of airfield facilities are necessary to support different types of aircraft operations. Considerations to enhance the airfield lighting, airfield markers/signage, and other navigational aids are addressed in the following sections.

### **Airfield Lighting**

Runway airfield lighting is required for airports intended to be utilized for nighttime operations. The existing low intensity runway edge lights installed on top of the yellow cone markers for Runway 2-20 are considered non-standard due to their spacing. While the width of Runway 2-20 is published at 170 feet, the lighted cones are each 100 feet from the centerline, outlining a useable area greater than that which is published. According to FAA guidelines, runway edge lighting should be placed 2 to 10 feet from the edge of the area designated for runway use. In fact, the FAA recommends using 2 feet on runways that are not used by jet aircraft.

Consideration should be given to either moving the runway lighting system in or changing the useable runway width that is published in the various flight information publications.

Runway edge lights should be uniformly spaced at a distance not greater than 200 feet apart along the sides of the runway. In addition, the lights should be configured such that fixtures are placed opposite of each other and perpendicular to the runway centerline. The runway ends or thresholds are used as the starting point from each end with any adjustments required made toward the middle of the runway. At Hampton Airfield, this is the case for the longitudinal spacing, but some of the lights (and yellow cone markers) do not meet the recommended configuration.

As part of the runway edge lighting system, the identification of the runway end, or threshold, is of major importance to a pilot during landing and takeoff. Therefore, runway ends and thresholds are equipped with special lighting to aid in the approach to or identification of the runway end.

Currently the Runway 2 end is correctly delineated with three standard inboard threshold lights on each side of the runway. These threshold lights, which are also installed on top of the yellow cone markers, have a two-color (red/green) lens, placed across the end of the runway. When landing on Runway 2, the green half of the lens faces the approaching aircraft, indicating the beginning of the usable runway. The red half of the lens faces the aircraft on takeoff or landing on Runway 20, indicating the end of the usable runway. While the configuration of these threshold lights is correct, some thought must be given to changing the two inboard lights on each side to frangible light fixtures (ones that break away on impact).

At the north end of the runway there are two yellow cone markers without lights, one yellow cone marker with a light, and one stand alone light fixture. These all should be replaced with three standard inboard runway end lights on top of the appropriate yellow cone markers. Unlike those at the Runway 2 end, the fixtures at the north end should have lenses that are completely red.

Finally, the Runway 20 displaced threshold lights are non-standard as there is only one single red/green light on each side. Displaced thresholds should also have three light fixtures on each side; however, they need to be configured outboard of the runway edge lights. Two additional fixtures on each side should be installed with red/green lenses. The green side of the lens would be for operations to the south while the red side would be for operations to the north. Therefore, at night when pilots are approaching Runway 20, the first set of lights seen are the all red runway end lights, indicating an unsafe area to land, then 300 feet down, the green lights identify the location of the displaced threshold, indicating the beginning of the area usable for landing. For operations in the opposite direction, both sets would appear red indicating the end of the useable runway (displaced threshold) as well as the physical end of the runway.

### **Airfield Markers/Signage**

The yellow cone markers used to delineate the length, width, and displaced threshold of Runway 2-20 are in good condition. However, as described for the runway lighting, the spacing of these markers does not delineate the same runway width as that which is in the various flight



information publications. As with the runway lights, the markers should be moved in or the published width of Runway 2-20 should be changed. Additional markers should also be considered to match the lighting improvements described previously.

### **Takeoff and Landing Aids**

The only takeoff and landing aids currently used at Hampton Airfield are the two windsocks described previously. These require occasional replacement due to wear. A lighted wind cone should be installed as close to the center of the airfield as possible. The potential location of a lighted wind cone is shown on the ALP drawing set.

## **AIRPORT FACILITIES**

The following sections address the various airport facilities required to support the expected activity over the 20-year planning period. These include the requirements for hangar facilities, aircraft parking areas, aviation fuel storage, and airfield fencing.

### **Hangar Buildings**

Hangars are one of the most desirable means for aircraft storage at any airport when offered at reasonable rates. Most hangar space is used by the aircraft based at the airfield with only a small percentage used by itinerant traffic (usually for maintenance or occasional overnights). There are both T-hangars and box hangars at Hampton Airfield.

T-hangar buildings house individual stalls, each capable of storing one aircraft, typically a single-engine or a light multi-engine aircraft. T-hangars can be fully enclosed or an open stall (sometimes referred to as shade hangars) configuration. Box hangars are a fully enclosed building typically capable of holding multiple aircraft. These are also referred to as storage, clearspan, or corporate hangars.

Of the 82 based aircraft at Hampton Airfield, approximately 85 percent or 70 are stored in a hangar at any given time. Of these, 17 are stored in open T-hangars, 40 in enclosed T-hangars, and the remaining in the different box hangars. The number in the various box hangars tends to change due to seasonal operators. Regardless, the climate of the area and the types of aircraft at the Hampton Airfield (many have fabric covered wings and fuselages) creates the demand for more hangar facilities. This demand is expected to continue into the future. As such, of the 113 based aircraft forecasted to be at the Hampton Airfield by 2027, approximately 96 of those aircraft will likely desire hangar space.

Conservatively, this translates into the need to plan for 26 new hangar spaces over the next 20 years. With the same split between T-hangars and box hangars, 20 more T-hangar stalls and six box hangars will be required to accommodate this demand. Since the demand for different hangars can and will vary over time, it is suggested that both types of facilities be planned. At a

minimum, two additional T-hangar buildings with 10 stalls each and the six new box hangars currently envisioned by the airport owner should be planned.

### **Aircraft Parking Areas**

Continuing the analysis for hangar facilities above, only 15 percent or 12 of the 82 based aircraft are currently parked outside. Of these a majority are parked in the designated tiedown area. This is the unpaved area on the west side of Runway 2-20, north of the existing T-hangar buildings. A number of the other aircraft in this group may or may not be parked outside as they are associated with the few private lots that were sold with taxiway easements to the runway.

Of the 113 based aircraft forecasted to be at the Hampton Airfield by 2027, 17 of those aircraft should be expected to utilize the designated tiedown area (12 existing and 5 new). Given that this space is able to accommodate 21 aircraft, it appears that there is adequate space throughout the planning period. However, this does not consider the fact that nearly all of the itinerant aircraft visiting Hampton Airfield also use the tiedown area.

It is difficult to determine what the average or even peak demand would be for itinerant aircraft parking requirements. This is due to the different operators, activities, and events that are held throughout the year at Hampton Airfield. Given that most of these aircraft are only coming in on a short-term basis for such events as the annual aviation flea market, only unpaved aircraft parking areas are required. For this reason, the ALP drawing identifies additional space on the west side of the Hampton Airfield, which is not needed for other facilities, for itinerant tiedown space. For example, itinerant aircraft are typically accommodated north of the designated tiedown area next to the Airfield Café and Experimental Aircraft Association (EAA) building.

### **Aviation Fuel Storage**

The current 10,000 gallon 100LL Avgas and 5,000 gallon automobile fuel (Mogas) tanks provide sufficient volume for the quantity sold without needing excessive deliveries to replenish the on-hand supply. Traditionally, the airport sold a total of approximately 50,000 gallons combined each year. In more recent years that figure has dropped to roughly 24,000 gallons. In either case, it is fully anticipated that the recently renovated fueling facilities will provide adequate storage requirements for the activity projected at Hampton Airfield through 2027.

### **Airfield Fencing**

As Hampton Airfield continues to grow, a permanent separation between the airside and landside operations should be considered. Previously it was noted that the current wildlife and perimeter fence do not fully encompass the airport property. While there are no requirements for securing the entire airfield perimeter, additional fencing would enhance the security of aircraft, buildings, and other property at Hampton Airfield.



Unfortunately, a full perimeter fence located along the airport property line is not probable as it would impact some of the safety related surfaces associated with the runway. The best example of this is to the south of Runway 2-20 where any fencing would penetrate the RSA and Primary Surface. This is another reason why additional land on the south side of the airport should be considered for acquisition. Regardless, additional fencing should be installed where possible to keep the general public and wildlife from accessing locations that are considered active airfield operating areas. To facilitate this, any future building site plans should include acceptable fencing and access gate modifications to ensure the best separation between airside and landside operations is maintained.

## **LANDSIDE FACILITIES**

An integral yet often overlooked aspect of an airport's operation is that which is not directly related to aircraft operations. The landside facilities such as local street access, automobile parking, and utilities are equally critical to consider. The following sections address these elements in general for Hampton Airfield.

### **Airport Access**

All of the facilities open to the public are located on the west side of Hampton Airfield. The current access to these facilities off Lafayette Road (U.S. Route 1) is adequate. Access to the private facilities on the east side is via a gravel road which is also occasionally utilized for the movement of aircraft. As described in the taxiway section, there are limited options to change the mix of use for the gravel road. Regardless, improvements to the airport signage along U.S. Route 1 should be considered to enhance the roadside visibility of the airport businesses.

### **Automobile Parking**

At many general aviation airports, a number of automobiles are parked in the various hangar areas while the aircraft are in use. Given the limited space at Hampton Airfield, this practice is necessary to accommodate the different users of the airport. However, the ability to access the hangar areas should be limited to authorized users. This highlights the need for additional perimeter fencing described previously as well as for adequate public automobile parking areas. Therefore, any future buildings at the Hampton Airfield that would serve the general public should include the space necessary for automobile parking (paved or unpaved).

### **Utilities**

It was described previously that a number of the airfield buildings currently have water service either from the town of North Hampton or the private well on the east side. The wastewater is handled through the use of on-site septic tanks with leaching fields. The need for additional water and wastewater facilities will depend on the type of activity that is being conducted in each new building and the related building codes.

### **Self Serving Fuel System**

Installation of a card reader system would allow fuel purchase transactions at the existing fueling facilities. An element of the current management philosophy is to keep the payment of fuel sales as a personal transaction. This proven method, which requires only a short walk to the FBO/restaurant hangar, enables the people at the airport to meet the visiting pilots. In respect of this business practice, the card reader system might only be installed to handle fuel sales during non-business hours.

### **LAND ACQUISITION**

Whenever possible, the option to acquire additional property for runway protection, aviation related development, and land use compatibility should be considered by any airport owner. Even though there are options to develop the current airport property, the potential for non-compatible development around the airport will always exist. Since the 'fly-in community' of Reddington Landing exists on the approach end of Runway 20, this area is adequately protected. Land or easement acquisition is focused on the area within the approach to Runway 2, an area currently containing private residences which do not have deeded access or the expectation of access to Hampton Airfield.

In short, as development pressure builds in the areas surrounding the airport, the window of opportunity to acquire any additional land at a reasonable cost diminishes. For these reasons, consideration must be given to the identification of land parcels that should be monitored for potential acquisition.

### **SUMMARY OF FACILITY DEVELOPMENT CONSIDERATIONS**

**Table 3-3** provides a summary of the suggested improvements and facility enhancements over the 20-year planning period. Some additional facilities will also be planned and included as part of the final ALP and Capital Improvement Program to enhance the airport. The order in which these improvements are listed does not have any relation to the priority or phasing of such projects.



**Table 3-3**  
**SUMMARY OF FACILITY DEVELOPMENT CONSIDERATIONS**

<b>Category</b>	<b>Suggested Improvements</b>
Runway 2-20	Periodically Regrade Surface Install Irrigation System along Runway Perimeter Provide A Partially Paved Runway Improve Safety Area South of Runway 2-20 Improve Object Free Area South of Runway 2-20 Consider Applying Declared Distances for Aeronautical Publications
Taxiways	Taxiway/Taxilane Access to New Facilities
Airfield Environment	Periodic Clearing of Runway Obstructions Correct Non-Standard Runway Edge Lights and Markers Correct Non-Standard Runway End and Displaced Threshold Lights Install Lighted Wind Cone Near Midpoint of Runway 2-20
Airport Facilities	Construct 20 T-hangar Units Construct Box Hangar Space for at least 6 Aircraft Provide Additional Tiedown Areas for Itinerant Aircraft Parking Install Additional Airfield Perimeter Wildlife/Security Fencing
Other Facilities	Improve Roadside Signage to Airport Provide Public Automobile Parking Spaces (as required) Install Water and Wastewater Utilities (as required) Acquire Land (as required)

Source: Hoyle, Tanner & Associates, Inc., 2008.



## Chapter 4

# Preservation Plan

### OVERVIEW

In the course of this study a variety of actions were discussed that would help preserve Hampton Airfield, specifically, and public-use/private-owned airports, generally. It is clear from those discussions with the owners of Hampton Airfield and with the study advisory committee, made up of municipal, state, and airport-tenant stake holders, that the key to assisting such airports is to provide financial assistance. This can be done through direct grants, provision of facilities, or operating cost relief. There are limited programs available in New Hampshire to provide such assistance. Those that are, are typically underfunded and, therefore, minimally effective. Other programs are not available to privately owned entities. The following sections discuss the most promising programs and, where changes would be required to make them useful to Hampton, identifies what those changes would be. Discussion related to the possible development of new aviation and non-aviation related opportunities follows.

#### Direct, Monetary Assistance

These programs provide funds for airport infrastructure capital improvements, a key to maintaining an airport's viability.

#### Airport Improvement Program

Most public-use airports are publicly owned, making them eligible for planning, engineering and construction funds from the FAA's Airport Improvement Program (AIP). The AIP is user-financed through taxes on the users of the U.S. air transportation system. For eligible, general aviation airports listed in the National Plan of Integrated Airport Systems (NPIAS), the AIP grants currently cover 95% of project costs, typically. Hampton Airfield is not currently an NPIAS airport and is, therefore, not eligible for this significant AIP funding.

There ARE privately owned airports within the NPIAS. Per the 2009-2013 edition of the NPIAS, there are 1,040 privately owned/open to the public airports within the U.S., 102 of which are included in the NPIAS. Only those privately-owned airports that meet a need within the air transportation system of the U.S. that cannot be met by a publicly owned airport are included. Any publicly-owned airport with minimum facilities within 20 miles of a privately-owned airport will "trump" the privately-owned airport for inclusion. This bias is to channel the public funds that make up the AIP toward public facilities unless there is no other alternative to provide service.



Advocacy by the NHDOT, Bureau of Aeronautics would be required for Hampton to be included in the NPIAS. The agency would have to declare Hampton Airfield a reliever airport in order for it to be eligible for funding under the NPIAS. The unique service provided by the airport is the basic training in trail-dragger aircraft on a turf field. Though such an “incubator” of aviation skill is critical to the long-term viability of the air transportation system, it is unlikely such advocacy by NHDOT would be accepted by the FAA. The NPIAS focus is on air transport, not training, so Hampton’s unique contribution may not be recognized. However, this hindrance is not impossible to overcome as is evident by both Montauk Airport in Montauk, New York, as well as Sussex Airport in Sussex, New Jersey. These two airports are examples of privately-owned for public-use airports on the east coast of the country that are currently included in the NPIAS, and regularly receive funding for their development.

### **State-Local Grants**

The NHDOT, Bureau of Aeronautics, as part of its annual budget, has incorporated Grant Programs of 50-50 match between the state and an airport for airfield repairs and improvements. This is a program available to the Hampton Airport. Once funded in excess of \$100,000, the program currently has only \$24,000 allocated. It will require an increase in funding at least to its 1991 level of \$100,000 to be at all effective in meeting the needs of Hampton, or any airport. A recent initiative supported an increase to \$125,000, though the program was not successful. A current NHDOT, Bureau of Aeronautics initiative calls for an increase in the state’s portion of the match to 80%.

Advocacy for such an increase in the legislature is difficult but should be an industry goal. Organizations such as the Aviation Users Advisory Board, Granite State Airport Management Association, and Aviation Association of New Hampshire should develop a coordinated program of education and advocacy for restoring these “50-50 funds” on the basis of the need to maintain the state’s existing air transportation infrastructure.

### **Rural Airport Capital Revolving Loan Fund**

This is a low cost capital revolving loan fund (RSA 423:11) available from the Department of Transportation for capital improvements. The state may have a total obligation of up to \$750,000. The purpose of the loan is to enhance and rehabilitate all non-commercial service airports open to the public in municipalities with populations of 14,000 or less. Hampton Airfield meets these criteria and this program **does** include privately-owned airports. As it is a state-backed loan, the interest rate is typically much lower than a commercial loan. This loan fund is significantly under-utilized as only one airport has utilized \$70,000 of the \$750,000 available. The term of this loan must be 5 – 20 years and can be applied for at any time. It is a loan and, of course, must be repaid, but can be effective in smoothing cash flow peaks associated with capital projects.

### **Provision of “Public Benefit”**

Using public monies to “enrich” a privately owned entity by providing facilities or equipment can only occur if there is a clear public benefit to be gained. There are such benefits that would warrant facility improvements at Hampton Airfield through partnerships with a public school system or municipality, as described, below.

### **Educational Training Programs**

Hampton Airfield is a major aviation educational center, providing extensive pilot training. Aviation training grants and programs should be pursued from private foundations, organizations and grant programs in addition to federal and state funded programs. The possibility of collaborative relationships with host community high schools and colleges for business internships and cooperative experiential learning opportunities could also open doors for state and federal funding as well as afford opportunities for property tax relief.

If Hampton Airfield can establish a partnership with a public school to serve as a remote learning academy, an argument could be made that any airport area dedicated for such use should be exempt from all or a portion of local property tax. Additionally, the school could pursue state or federal sources available for fit up and maintenance of the dedicated area. There is no formal program for this approach. However, working in collaboration with a school system it is possible, assuming the school is willing.

### **Public – Private Partnerships**

In order for an airport to become eligible for loans or grants directed at “municipal entities” for development, some form of a partnership with the host community needs to be established. A host community benefits from the airport since it provides employment, recreational opportunities, and affords a unique transportation alternative for business and commerce within the region. A public/private partnership could conceivably be established for commercial / economic development activity so that CDBG or CDFA funds could be secured. Designating the airport as a regional emergency preparedness mobilization site could open doors for homeland security funds. Shared participation in some aspects of the airport operation (restaurant, hangar space or office rental) could legitimize local, public investment either in cash or some type of enterprise grant. Establishing a relationship with the local high school or area colleges for cooperative business educational programs such as managing the restaurant, marketing, facilities maintenance, or mechanical maintenance might afford opportunities for tax abatements or relief, based upon public benefit uses within selected areas of the overall facility. Specifically, at Hampton Airfield, designating a portion of the restaurant / management office area as an Emergency Operations Center for local emergencies might afford access to grants to upgrade the facility (or parts of it).



All of the ideas suggested are possible but it will be dependent upon a strong working relationship with a creative school district or municipal government. Designating any airport as a regional emergency mobilization site in cooperation with local police, emergency management and fire agencies is a particularly realistic possibility for most small airports with typical facilities.

### **Reduction of Operating Costs**

The owners of Hampton Airfield have expressed that reduction of operating costs is the single most effective thing that could be done to maintain the viability of the airport. The same is true of any small, privately owned airport. Actions to reduce a privately owned airport's operating costs were analyzed as to possible public actions and "pooling" of some expenses to achieve economies of scale. Each is discussed, in turn, below.

### **Tax Reductions**

Hampton Airfield is currently participating in a tax reimbursement program. A copy of the NHDOT, Bureau of Aeronautics letter to the airport, and map illustrating qualifying areas are provided in **Appendix B**. The tax reimbursement program available from the State of New Hampshire is currently funded at a level of \$17,500 per annum, up from \$15,500 in 2007. There are currently 9 privately owned for public-use airports eligible for the tax reimbursement program in New Hampshire. The program was instituted in part as an alternative to the ineligibility of airports for the application of current use, which strives to preserve open spaces.

As discussed below, if local discretionary easements or legislative action to expand the applicability of current use to gain airport tax relief meet with resistance, the tax reimbursement program should be increased to \$35,000 through legislative action. NHDOT, Bureau of Aeronautics indicated that the program would be fully funded at these higher levels of relief, and will therefore provide a significant benefit.

Qualifying airports must first pay all property taxes owed. The airport owner may then apply to the NHDOT, Bureau of Aeronautics for a reimbursement grant in the amount of the portion of property taxes paid on qualified public-use areas of the airport. In general, those areas include:

- Runways
- Runway Protection Zones (RPZs)
- Taxiways
- Aircraft Parking Areas
- Terminal Buildings
- Weather, Navigation, and Communication Facilities



Current Use (New Hampshire RSA 79-A) assessment provides a property tax incentive to qualifying landowners who agree to maintain their land in an undeveloped condition. The assessment is based on the capacity of the land to produce income in its current use – whether it is managed as farm or forest, or unmanaged open space. It is in the public interest to encourage preservation of open space, thus providing a healthful and attractive outdoor environment for the state’s citizens, maintaining the character of the state’s landscape, and conserving the land. Public use airports have pursued placing portions of their property into current use. This sort of modification would require legislative action.

A more promising route for tax reduction is in the form of a discretionary easement. In accordance with RSA 79-C:3, a discretionary easement on open space land shall be considered to provide a demonstrated public benefit if it provides a least one of several public benefits. Section (e) of RSA 79-C:3 includes the preservation of an airport, as defined in RSA 422, as one of those benefits, excluding the value of any buildings, runways, or other structures, where: (1) the airport serves, or contributes to satisfying, the air transportation needs of the municipality or of its region, or (2) the continuation of the airport serves to preserve natural habitat or open space which might otherwise be potentially affected by development. Hampton Airfield has not pursued a discretionary easement but it is a viable option for lowering, or stabilizing, the airport’s property taxes. As with any attempts to reduce a small community’s tax base, a discretionary easement application could be met with some resistance. Its advocacy will require careful articulation of benefits versus costs.

The process to obtain a discretionary easement requires an application to be filed with the municipality by April 15. A public hearing is required and the Board of Selectmen would then make a decision regarding the granting of such an easement. The nature of the public benefit use identified will determine the restrictions that may be placed on the airport by the easement.

The North Hampton Assessor indicated that of the land value of \$992,600, the majority of the value is the runway which is excluded from a discretionary easement. There is approximately \$150,000 of value that potentially could qualify. This, multiplied by the tax rate of \$16.82, is a potential tax saving of \$2,523 off the Hampton Airport current tax bill of approximately \$28,000. The value would be reduced from full value to possibly the same as current use. The major reason for such a minor reduction is that the runway area and hangars are excluded from consideration in accordance with RSA 79-C:3(e).

The runway and aircraft hangars are the heart of any airport. To exclude those items from a tax relief device specifically targeted to preserve airports does not make sense. Advocacy for amending RSA 79-C to allow consideration of the value of the runway and other public use areas as part of a discretionary easement should be undertaken by NHDOT, Bureau of Aeronautics with support of the New Hampshire aviation industry groups such as the Aviation Users Advisory Board, Granite State Airport Management Association, and Aviation Association of New Hampshire.



If there is legislative resistance to expansion of the discretionary easement language of RSA 79-C, alternative approaches that could be pursued are, in order of descending usefulness, 1) make the runway and hangars the ONLY items eligible for the discretionary easement, 2) make any runway eligible only up to a certain length, say 2,000', or 3) amend RSA 79-A to allow application of current use assessments to airports.

### **Insurance Reductions**

Insurance costs have become a major cost item for private airports since the terrorist attacks of September 11, 2001. Finding means to reduce those payments would be a major benefit to Hampton Airfield and all privately owned airports.

The purchasing of insurance at a lower cost through the Local Government Center and/or the Public Risk Management Exchange (PRIMEX) was investigated. Due to the current stringent insurance regulations regarding public entities such as municipalities and schools, joining either of the pools is not an option for privately owned – public use airports. Neither LGC nor Primex could expand to include private local airports due to both IRS requirements and a specific exclusion from Primex on airports due to risk.

PRIMEX, however, has been in discussion with a reinsurance carrier and could conceivably facilitate discussion with the airport(s) that could result in a much lower insurance cost. It would make sense for NHDOT, Bureau of Aeronautics to pursue this notion as well as contacting the state insurance commissioner for assistance in exploring any possible insurance-reduction scenarios such as classifying local airports as a “group” based upon their unique public transportation benefit.

### **Pooling of Purchases/Bidding**

As a private airport, the option of purchasing through a municipality or joining a bid for services, fuel, equipment, or physical improvements such as paving cannot be done. To be able to do this legislation would need to be introduced that enables host municipalities to extend such purchasing or bidding opportunities to local airports for selective use where there is a clear and defensible public benefit. The definition of public benefit would probably need to be expanded in this area to avoid undue enrichment. By focusing such “pooled” purchases on the public use areas of the airport, such “undue enrichment” would be avoided. At Hampton Airfield, for instance, NHDOT, Bureau of Aeronautics already maintains a graphic that denotes such public use areas and could apply it to defining items eligible for pooled purchase, such as materials for grading and maintenance of the turf runway, a portion of the cost of equipment based on the portion of time it is used on those public areas, runway light maintenance, a runway sprinkler system, etc.

A variation on this idea would be to have the private airports form a recognized coalition so they all could purchase and bid with larger volumes. Once established, the group could conceivably expand their buying power further by establishing an informal alliance for coordinated purchasing with some or all of the host communities. For example, if the airport were to schedule paving in conjunction with municipal projects they could save on mobilization cost and could conceivably negotiate a price close or equal to the municipal bid simply by virtue of timing. To allow the coupling of private and public purchasing as described in the first paragraph, above, will require legislative advocacy by NHDOT, Bureau of Aeronautics and the New Hampshire aviation industry. The forming of an airport coalition would only require some organization leadership by an industry group such as the Granite State Airport Management Association.

### **Summary of Action Recommendations and Initiative Leaders**

#### Legislative Actions

1. Increase 50-50 grant funds to \$100,000 – NHDOT, Bureau of Aeronautics/Industry
  - Acceptance of 80-20 initiative
2. Tax relief amendments (if item #8, below, is unsuccessful)
  - RSA 79-A Current Use applicability to airports
  - Increase tax reimbursement program to \$35,000
3. Allow public/private purchasing pooling – NHDOT, Bureau of Aeronautics/Industry/LGC

#### Administrative Actions

4. Inclusion in the NPIAS – NHDOT, Bureau of Aeronautics
5. Explore insurance options with PRIMEX – NHDOT, Bureau of Aeronautics/PRIMEX/Insurance Commissioner

#### Industry Actions

6. Establish educational partnership(s) – Hampton Airfield
7. Establish municipal partnership(s) – Hampton Airfield
8. Discretionary easement application, RSA 79-C – Hampton Airfield/North Hampton
9. Explore insurance pool options – Hampton Airfield/GSAMA/Insurance Commissioner
10. Form industry purchasing coalition - Hampton Airfield/GSAMA





## **DEVELOPING NEW OPPORTUNITIES**

The aviation industry is very cyclical in nature and reacts quickly to changes in the national economy. This elasticity has a direct effect on many of the revenue sources utilized to maintain the operation of any airport. As such, the creation of revenue streams not directly related to aviation enable an airport to offset some of the lulls inherent in the aviation industry. Even without fluctuations from the economy, the aviation revenue generated at Hampton Airfield suffers from seasonal changes. This is most pronounced during the winter months when many of the businesses cease operations. Also, the amount of snow and ice can have a debilitating effect on aviation activity. Because the runway is turf, it is not always easy to remove snow and ice without doing significant damage to the runway surface. The result is that there are many times when the airfield is simply unavailable for takeoffs and landing during the winter. Similarly, on extremely cold days many of the antique aircraft and the Piper Cubs cannot operate due to mechanical limitations and engine performance during these conditions.

These examples illustrate the importance of having revenue sources that do not completely depend on aviation activity. Perhaps the best example at Hampton Airfield is the restaurant that was established in the early 1990's. Open every day of the year, the Airfield Café generates activity even on those days when the airfield may be closed due to inclement weather. This also creates a steady interest and exposure to aviation that exists even on the days when the planes are not flying.

## **OUTREACH**

The ability to communicate and reach out to the various entities within the community surrounding an airport is essential for airport preservation. In many instances, the pressure or opposition against an airport is directly related to a lack of understanding or communication. Airport stakeholders need to be proactive in helping to communicate the value that an airport creates for a community. Often, area citizens as well as local leaders are misled or just unaware of, the significant benefits and services aviation provides.

Historically, Hampton Airfield has been exceptional at creating positive community relations. This cooperative support is evident by the success of the Airfield Café noted above as well as the various events which the airport regularly hosts.

One example of the airport's outreach spirit is a Boy Scout camporee hosted by the airport in 2006. The three day event provided the Boy Scouts the opportunity to fulfill the requirements for their 'Aviation Merit Badge' at an actual operating airport.



The Town of North Hampton's annual egg hunt, 'Egg Scramble Egg-Stravaganza' is also hosted at Hampton Airfield.

"We are really excited about the installation of our Helix Wind Turbine. It offers us the opportunity to be part of our nation's energy solution. Our airport is frequently visited by school children in the area. We plan on helping kids understand wind power through an information display where they can track the power being generated by the turbine. We believe this affordable technology will be a viable energy solution which will help us to improve our bottom-line by producing some of our own energy." Statement by Mike Hart, owner of Hampton Airfield.





This past summer, the 30<sup>th</sup> Annual Aviation Flea Market Fly-In was held at Hampton Airfield. The self proclaimed ‘giant’ event boasted vendors from all over New England and fly-ins from across the country. Aviation proponents are advised to attend as there are strictly aviation related items for sale.

The Airfield Café earned acclaim in the 2<sup>nd</sup> edition of the *\$100 Hamburger*, a book which provides reviews of airport restaurants, ice-cream stands, etc. The book’s title is based on the aviation slang term describing a pilot who is looking for an excuse to fly, and decides to eat at a nearby airport.

The children and their families participating in these events had the opportunity to experience a positive taste of aviation through the outreach of the airport owners. Such efforts are critical to generate support in the community that translates into political support, a willingness to grant tax relief, supportive zoning, and numerous other “good neighbor” benefits.

A sampling of articles and other anecdotal information relating to Hampton Airfield’s outreach activities is provided in **Appendix C**.

## **CASE STUDIES**

Numerous case studies relating to airport preservation were reviewed. For purposes of this study, a few success stories identifying actions which resulted in or assisted with the preservation of an airport are presented in **Appendix D**. The majority of the ideologies contained in those case studies are discussed in this chapter.

## **PRESERVATION - PRIVATE VS PUBLIC SALE**

As a privately owned piece of property, the future of Hampton Airfield is dependent on the objectives of both the current owner as a potential seller, and a future buyer. The property is currently (2008) on the market for \$2.5M with the intention of the current owner to only sell to a buyer willing to keep the property an active airport. This section examines the effects of a sale, either to another private entity or to a public entity.

First, any sale must start with an offer of the property to the state of New Hampshire in accordance with RSA Title XXXIX, Chapter 422, Section 422:19 which gives the state the right of first refusal for any airport. While the statute is designed to preserve open-to-the-public airports, as a practical matter the state does not want to be the owner-operator of airports because of the acquisition and operating costs. Consequently, it is highly unlikely any funds would be appropriated to buy or operate the airport. Most recently, the state has been



negotiating to DIVEST its operating responsibility at the state-owned Skyhaven Airport in Rochester, NH.

If the state or any other public entity were to buy the property, it would most likely only be to preserve the airport as an important part of the state system of airports and/or as a non-burdensome, open space-preserving local land use. As such, there would be no dramatic impact to the tenants or users of the airport. It would continue to operate as an airport and its continued existence as an airport would be more assured. Public ownership brings with it more eligibility for public funding and a single land use role – transportation facility.

Acquisition by a private entity leaves the future of the airport in a more tenuous position, though the current owners have worked very hard to put elements in place that will require a private buyer to continue the airport's operation. For instance, the housing lots south of the airport have deeded access to an "active runway" to allow fly-in homes. Any action that would close the runway would, potentially, generate legal action to enforce those deeded rights because of the diminution of value such a loss would cause. If, however, an alternative use of the airport's land were valuable enough, those deeded access properties could be bought as part of the total land acquisition and the access requirement extinguished. So the disposition of the land in a private sale is very much dependent on the good will of the buyer to carry out the intentions of the present owner to keep the airport active. Unfortunately, as economic conditions change for the initial buyer, or as subsequent sales are made, the intention of the current owners becomes more remote and subject to competing, more lucrative land uses. This reality makes more critical the implementation of some of the land use control devices, such as discretionary easements, described previously if the airport sale is going to be private.

If Hampton Airfield were to close, the most immediate impact would, of course, be on the airport tenants. The lack of an active airport would require all but two of the tenants to relocate or go out of business as they are aviation-related enterprises. Only the courier service and the restaurant are non-aviation, though the restaurant would most likely go out of business because its "ambiance" is built around the proximity to aviation activity. The 80+ based aircraft would, of course have to relocate. Some, such as the tail-dragger and ultralight aircraft which prefer turf operations, and others looking for a low operating cost environment, would likely cease flying all together. Based on the judgment of the current owner of the flying habits of the current tenants, approximately half, 40 aircraft would likely disappear from the New Hampshire fleet if Hampton Airfield were to close. Approximately 14 aircraft would relocate to Pease, as they are higher end, some being complex aircraft. The remaining aircraft are likely to relocate to Pease, Skyhaven, or similar airports such as Little Brook in Maine based on aircraft types and locations of the aircraft owners' residences.

Closure of the airport will have a significant impact on the communities of Hampton and North Hampton. A thirty five acre parcel of land adjacent to the commercial strip of US Route 1, zoned Industrial/Commercial, will almost certainly become an intensively developed area.



There will be a loss of open space and a need to provide more community services (fire, police) to the area than required by the airport. While the parcel's development may result in increased tax revenues, studies by the Society for Protection of NH Forests have shown that open space typically generates a net savings for communities when comparing tax revenue generated versus the cost of providing services. Additionally, the traffic on US Route 1 is already so heavy that the North Hampton police chief expressed concern for the safety of the additional traffic generated by an intensive development of the Hampton Airfield site.

Besides the tangible losses to the communities of open space and increased congestion, there would be an intangible loss of a community "destination" and "neighborhood supporter". The local restaurant, plane watching, Scout events, flea markets, and other community events would be lost to the communities. In an area that has been rapidly urbanizing, such community features the airport brings should be cherished and protected. The communities should proactively participate in some of the administrative and legislative initiatives listed previously in this chapter as "enlightened self interest".

## Chapter 5

# Environmental Considerations

### INTRODUCTION

The National Environmental Policy Act (NEPA) of 1969 is a key piece of legislation designed to raise environmental awareness of a number of industry practices. The policy requires affected industries, including airports, to fully consider the impacts a proposed project would have on the environment before capital improvement projects are funded. Though Hampton Airfield is not currently receiving federal funds through NPIAS, inclusion in the program is possible within the 20-year planning period of this master plan. Additionally, considering the potential environmental impacts of developments proposed by this master plan is a best management practices approach and will certainly assist Hampton Airfield maintain positive community relations.

### WETLANDS AND WATER QUALITY

Water quality standards, the control of discharges into surface and subsurface waters, the development of waste treatment management plans and practices and the issuance of permits for discharges and for dredged or fill material were established under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977. To meet water quality standards the U.S. Environmental Protection Agency (EPA) requires owners of industrial facilities such as air transportation facilities to complete a Stormwater Pollution Prevention Plan (SWPPP), file a Notice of Intent (NOI) and obtain stormwater permits.

Stormwater Pollution Prevention Plans assure that run-off from a facility does not carry industrial pollutants into nearby Municipal Separate Storm Sewer Systems (MS4's) or any water bodies of the United States. The operator of the facility evaluates potential pollution sources at the site and selects/implements appropriate measures to prevent or control discharge of pollutants in stormwater. A SWPPP was developed concurrently with this airport master plan and is bound as a separate document. **Exhibit 5-1** illustrates stormwater runoff directionality in relation to the existing airport facilities.

Current airport wetland information was provided by the airport owners and verified by mapping obtained from the Rockingham County Planning Commission. Neither source indicates wetlands within the existing airport property.

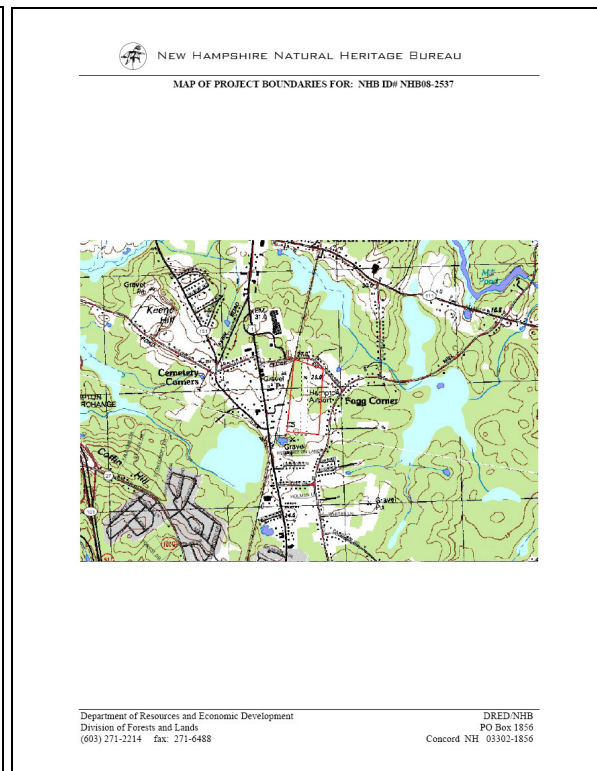
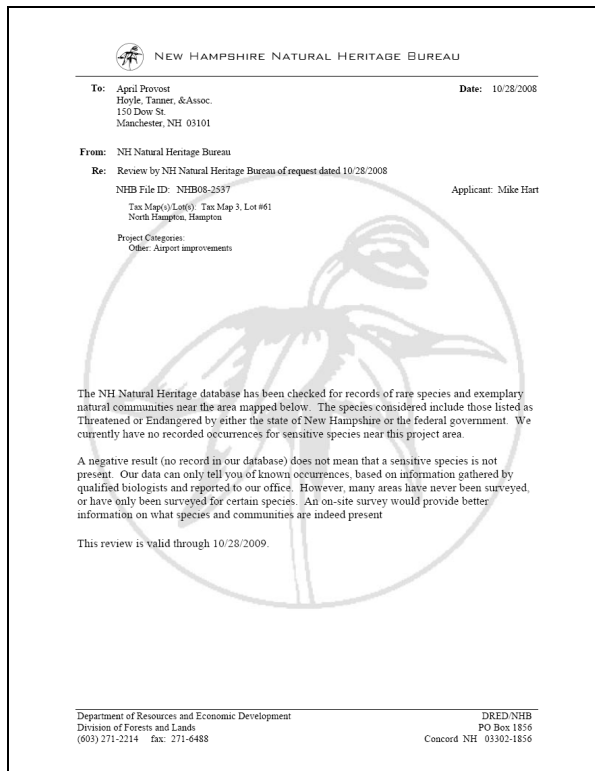




## WILDLIFE HABITAT

Congress passed the Endangered Species Act in 1973 due to concerns that many flora and fauna species were at risk. According to the U.S. Environmental Protection Agency website, “The Endangered Species Act provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found.”<sup>1</sup>

The New Hampshire Natural Heritage Bureau was contacted to inquire about rare species and exemplary natural communities at Hampton Airport. The agency maintains lists for both the state of New Hampshire as well as the federal government. As is shown in the response letter below, there is no current record of occurrences for sensitive species near the project area.



Full size copy of the New Hampshire Natural Heritage Bureau’s response letter is provided in **Appendix E**.

1 United States Environmental Protection Agency, “Finding Answers,” *Endangered Species Act*, 2004, < <http://www.epa.gov/region5/defs/html/esa.htm> > (October, 2005).





## **HISTORIC, ARCHAEOLOGICAL, ARCHITECTURAL, AND CULTURAL RESOURCES**

The National Historic Preservation Act of 1966 and the Archeological and Historic Preservation Act of 1974 are intended to ensure no significant impact to any resource of historic, cultural or archaeological significance occurs. The New Hampshire Division of Historical Resources (DHR) was contacted to provide guidance relevant to proposed developments at Hampton Airfield.

The DHR response letter indicated that the agency no longer conducts file searches. DHR does maintain files on archaeological and above-ground resources, which the airport owner or other stakeholder could examine to determine whether any of the above mentioned resources exist within airport property. The letter also stated, 'in order to make a determination of eligibility and proceed with Section 106 review, the DHR will require an adequately completed Project Area Form that will address the above-ground resources. In addition, a Phase Ia Archaeological Survey will be required to investigate the archaeological potential within the proposed study area'.

Copy of the DHR's response letter is provided in **Appendix E**.

## **AIRCRAFT NOISE AND LAND USE**

Noise from aircraft is one of the most controversial issues facing airports today. Aircraft noise is a prominent indicator to the public that there is an airport operating locally. Even at general aviation airports such as Hampton, noise complaints can be the most prevalent commentary regarding airports from the general public.

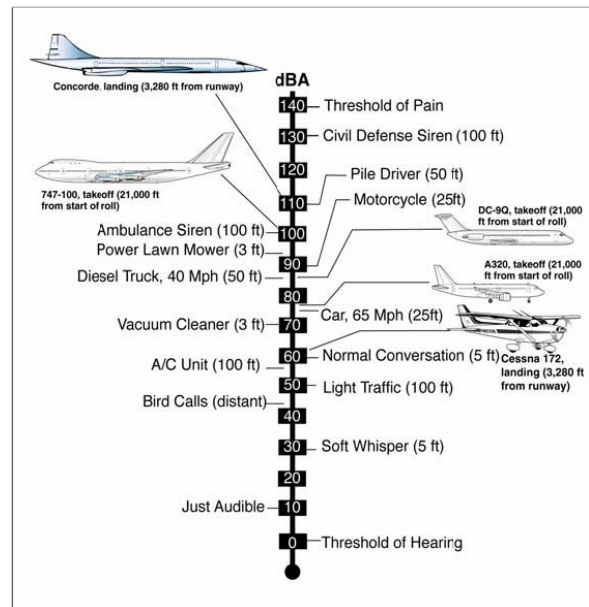
FAA software and in-depth airport noise studies are often utilized to determine potential noise impacts of an airport on its surrounding community. Though these studies certainly have their place and provide great planning tools, they simply are not called for at an airport such as Hampton at this point in time. Rather than devoting a lot of time and resources on such a study, the guiding principles that govern them have been used.

Noise contours generated from the studies previously mentioned would be created using annual day-night average sound levels (DNL) for a specific airport. The contours represent noise levels in and around the airport, with the solid contours connecting DNL levels of the same magnitude. The DNL represents average daily noise levels that occur over a 24-hour period, with a 10-decibel penalty added to the noise levels of aircraft operating between the hours of 10:00 PM and 7:00 AM. The penalty is based on the premise that there is a greater sensitivity to noise events occurring at night, when it is generally quieter and most residents are either sleeping or relaxing. The contours identify which areas are likely to have noise concerns. Generally, FAA regulations consider those residential areas falling within the 65 DNL contour to be subject to noise disturbance, whereas commercial and industrial areas are considered capable of

absorbing higher noise levels given the nature and character of the land use within these classifications.

The 65 DNL is typically used as the benchmark for disturbance as it is the point which aircraft noise interferes with normal conversation, the average speaking voice.

In general, noise levels are loudest on the airport, surrounding the runway itself. Noise levels diminish with increasing distance from the runways and runway ends. Typical aircraft utilizing Hampton Airfield are the size of the Cessna 172 identified on the FAA’s noise barometer to the right or smaller. The airport’s critical aircraft, the Piper Cub, generates less noise than the 172 for each single noise event being a takeoff or landing. Given the typical aircraft generate less noise at the source than the 65 DNL threshold, it is reasonable to determine that the 65 DNL is contained within Hampton Airfield’s existing property.

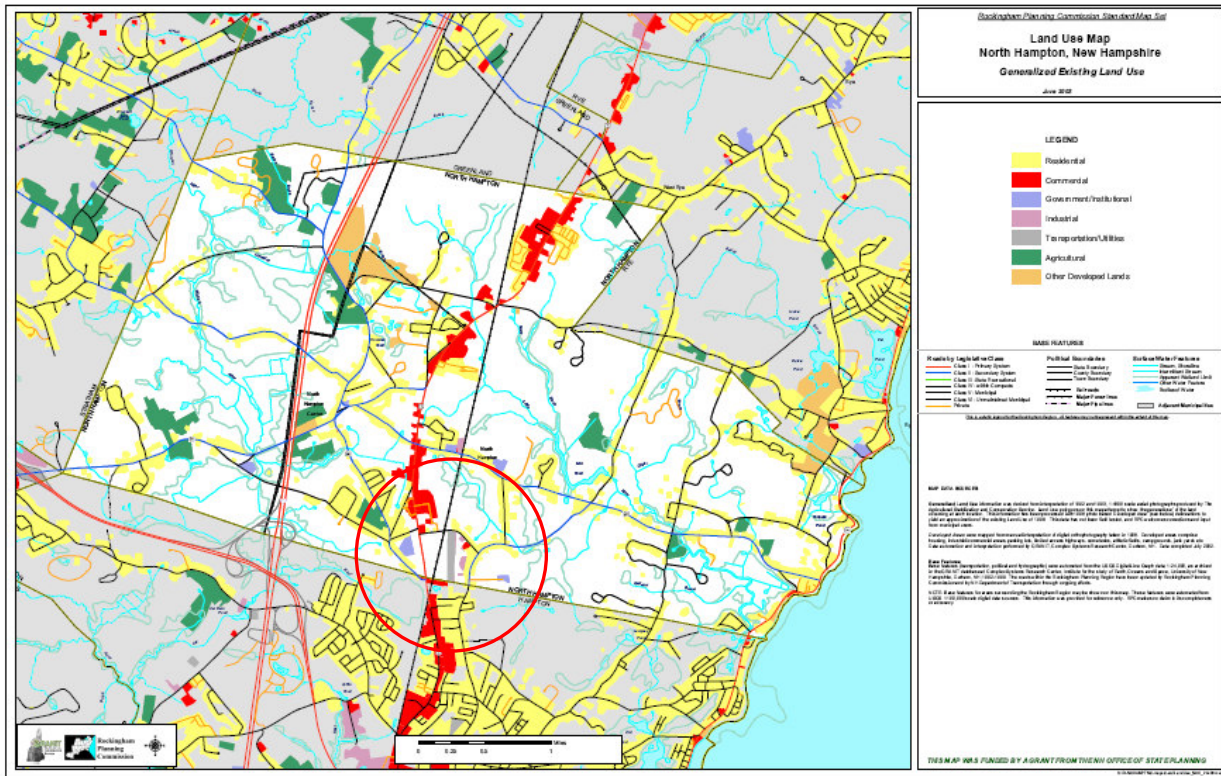


Source: [www.faa.gov](http://www.faa.gov), *Noise and Its Effect on People*

Since no major changes to the airport’s existing fleet mix are expected, it is also assumed that there will be no significant noise impacts in the 20-year planning period of Hampton Airfield.

### Adjacent Land Use Impacts Related to Noise

The land use map below developed by the Rockingham Planning Commission identifies Hampton Airfield, indicated by a red circle, as transportation/utilities type uses. Residential and commercial land use designations are also identified for parcels adjacent to the airport.



Hampton Airfield is somewhat unique in that it is designed as a ‘fly-in’ community, which means its neighbors expect access to the adjacent airport. In fact, several have deeded access to the airport’s runway. Though residential communities are not typically considered compatible with airports, they are in the case of Hampton Airfield because of the expectation of access. For this reason, all designated land uses both on and off-airport property, are considered compatible. A critical element for the preservation of the airport is for the towns of Hampton and North Hampton to maintain the compatible land uses around the airport through zoning regulations and proactive land use planning.



## Chapter 6

# Airport Layout Plan Drawings

## INTRODUCTION

This chapter describes the Airport Layout Plan (ALP) drawing set or plan set, which provides physical detail of the overall development plan for the 20-year planning period of this study. The drawings are intended to serve as planning and reference tools for the airport owner, FAA, and NHDOT Bureau of Aeronautics.

The ALP set consists of seven separate drawings, which have been prepared on a computer-assisted drafting system to graphically depict the current Hampton Airfield facilities, suggested improvements, and imaginary safety surfaces. This drawing set includes:

→ Cover Sheet	1 of 7
→ Existing Airport Layout Plan	2 of 7
→ Ultimate Airport Layout Plan	3 of 7
→ Airport Layout Plan Data Sheet	4 of 7
→ FAR Part 77 Airspace Surfaces (Ultimate)	5 of 7
→ Runway 2-20 Plan and Profile	6 of 7
→ Land Use Plan and Property Map	7 of 7

Reduced, 11 by 17 inch copies of the plans are included at the end of this chapter. A brief description of each drawing is provided in the following sections.

## COVER SHEET

Drawing one of seven, the Cover Sheet lists the subsequent drawings within the ALP set. Also referred to as the Title Sheet, the drawing provides a map depicting the general location of Hampton Airfield within the State of New Hampshire and the Towns of North Hampton and Hampton.



## **EXISTING AND ULTIMATE AIRPORT LAYOUT PLAN**

The Existing ALP, drawing two of seven, provides both a reference document to identify the airfield's existing facilities, i.e. runway, taxiways, buildings and other facilities, and a presentation document to identify the beginning point of this study.

The Ultimate ALP, drawing three of seven, depicts all of Hampton Airfield's existing facilities as well as the detail of the ultimate 20-year development plan documented by this study.

## **AIRPORT LAYOUT PLAN DATA SHEET**

The ALP data sheet, drawing four of seven, provides notations of airside related information about Hampton Airfield.

## **FAR PART 77 AIRSPACE SURFACES (ULTIMATE)**

The airspace surfaces shown on Drawing five were developed utilizing the criteria found in Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*. The Runway 2-20 alignment, and length are utilized in this drawing in order to protect the airspace and approaches associated with the future runway configuration. This Federal criterion has been established for use by local planning and land use jurisdictions to control the height of objects in the vicinity of the airport.

## **RUNWAY 2-20 PLAN AND PROFILE**

The runway plan and profile, drawing six of seven, illustrates Runway 2-20 and the approach areas immediately beyond the ends of the runways at Hampton Airfield in both plan and profile views.

Details on each drawing are provided for objects that penetrate the appropriate criteria related to these surfaces. Obstructions are shown with obstruction elevation, and impact (penetration) to the various surfaces. It should be noted that no budget was provided to conduct an obstruction survey. Therefore, obstacle locations were digitized using the March 11, 2004 aerial photo, while their respective elevations were estimated during field visits and incorporated with data provided as a result of a recent NHDOT, Bureau of Aeronautics inspection. All elevations are representative of average situations only.



## **LAND USE PLAN AND PROPERTY MAP**

The Airport Property Map, Drawing seven, is intended to accurately show all of the details associated with the current airport property. Since an independent boundary survey and title search was not conducted or budgeted, this property map was developed using the information provided by the current airport owner. Details contained on the sheet describe the known features of the airport property, as well as the documentation of source data and any limitations.

The Rockingham Planning Commission provided the current land use designations both on and off-airport property.

## **SUMMARY**

The preceding chapters have identified the anticipated level of activity for the Hampton Airfield, converted that demand into facility needs, and investigated the alternatives available to address the demand. From the alternatives analysis a set of development actions were selected for use in preparing the ALP drawing set. The final step in the process is to identify the development schedule for implementing the proposed improvements and the cost associated with those actions.





VICINITY MAP  
NOT TO SCALE

# HAMPTON AIRPORT NORTH HAMPTON, NEW HAMPSHIRE

# MASTER PLAN



LOCATION MAP  
NOT TO SCALE

STATE PROJECT NO. SPR-14282L  
NORTH HAMPTON PROJECT NO. 035618

## INDEX TO DRAWINGS

1. COVER/TITLE SHEET
2. ALP (EXISTING FACILITIES)
3. ALP (ULTIMATE FACILITIES)
4. ALP DATA SHEET
5. PART 77 SURFACES
6. RUNWAY 2-20 PLAN AND PROFILE
7. LAND USE AND PROPERTY MAP

**JANUARY, 2009**

STATE OF NEW HAMPSHIRE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF AERONAUTICS

APPROVED BY: \_\_\_\_\_  
DIRECTOR

DATE: \_\_\_\_\_

HAMPTON AIRFIELD  
NORTH HAMPTON, NEW HAMPSHIRE

APPROVED BY: \_\_\_\_\_  
AIRPORT OWNER

DATE: \_\_\_\_\_

### DESIGNER'S STATEMENT REGARDING COMPLIANCE

These plans and specifications have been prepared to the best of my knowledge and belief, in accordance with the list of current FAA Advisory Circulars for AIP projects provided by the FAA in a list dated Jul 1st 1999. Known deviations from FAA standards were approved by FAA letters, (see job file), and are discussed in the project engineering report and/or other official project documents.

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

REV4																			
REV3																			
REV2																			
REV1																			
REV.	DESCRIPTION	DR. BY	CKD. BY	APPD. BY	DATE														
												150 Dow Street Manchester, NH 03101-1227 Tel 603-669-5555 Fax 603-669-4168 www.hoyletanner.com <small>Hoyle Tanner &amp; Associates © 2008</small>		SCALE: NOT TO SCALE DATE: DECEMBER, 2008		PROJECT NO. SHEET OF 1 7		DRAWING NO.	

FILE: H:\2008\New HAMPSHIRE\PLAN\TitleSheet.dwg  
 PLOT DATE: Jan 05, 2009 - 11:37am



FACILITY NO.	DESCRIPTION
1	FBO/RESTAURANT (ORIGINAL 1945 HANGAR)
2	MAINTENANCE BUILDING #1
3	MAINTENANCE BUILDING #2
4	MAINTENANCE BUILDING #3
5	BUILDING 100 - OPEN T-HANGAR (8 UNITS)
6	BUILDING 200 - OPEN T-HANGAR (9 UNITS)
7	BUILDING 300 - ENCLOSED T-HANGAR (6 UNITS)
8	BUILDING 400 - ENCLOSED T-HANGAR (6 UNITS)
9	BUILDING 500 - ENCLOSED T-HANGAR (9 UNITS)
10	BUILDING 600 - ENCLOSED T-HANGAR (10 UNITS)
11	BUILDING 700 - ENCLOSED T-HANGAR (9 UNITS)
12	EXPERIMENTAL AIRCRAFT ASSOCIATION BUILDING
13	FLIGHT SCHOOL HANGAR
14	BUILDING 1 - BOX HANGAR
15	BUILDING 2 - BOX HANGAR
16	BUILDING 3 - BOX HANGAR
17	BUILDING 4 - BOX HANGAR
18	BUILDING 5 - BOX HANGAR
19	BUILDING 6 - BOX HANGAR

150 Dow Street  
 Manchester, NH 03101-1227  
 Tel 603-669-5555  
 Fax 603-669-4168  
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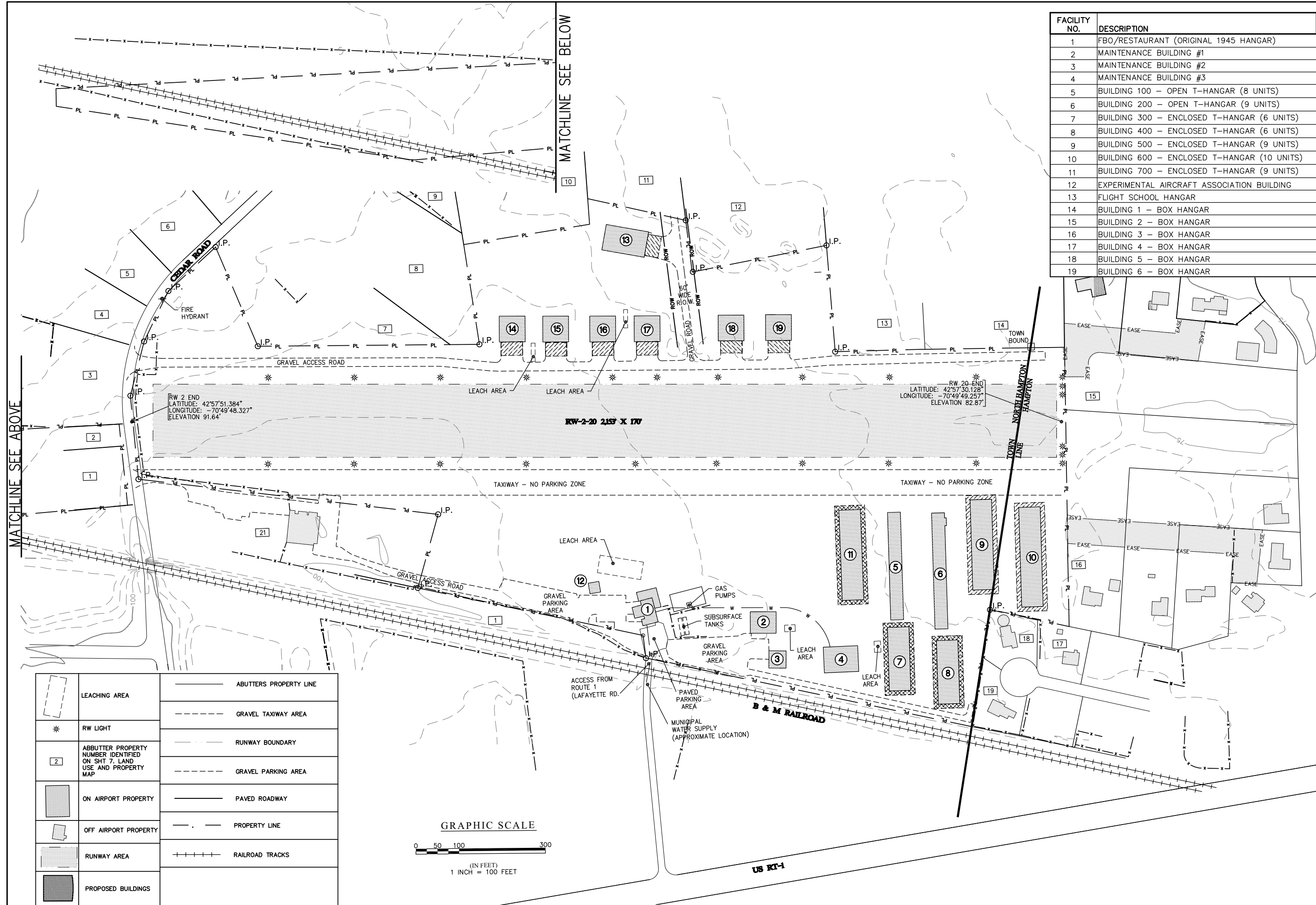
HAMPTON AIRFIELD  
 NORTH HAMPTON, NH  
**AIRPORT LAYOUT PLAN  
 EXISTING FACILITIES**

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 State Proj. No.: SPR-14282L

DRAWING NO.

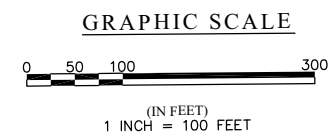
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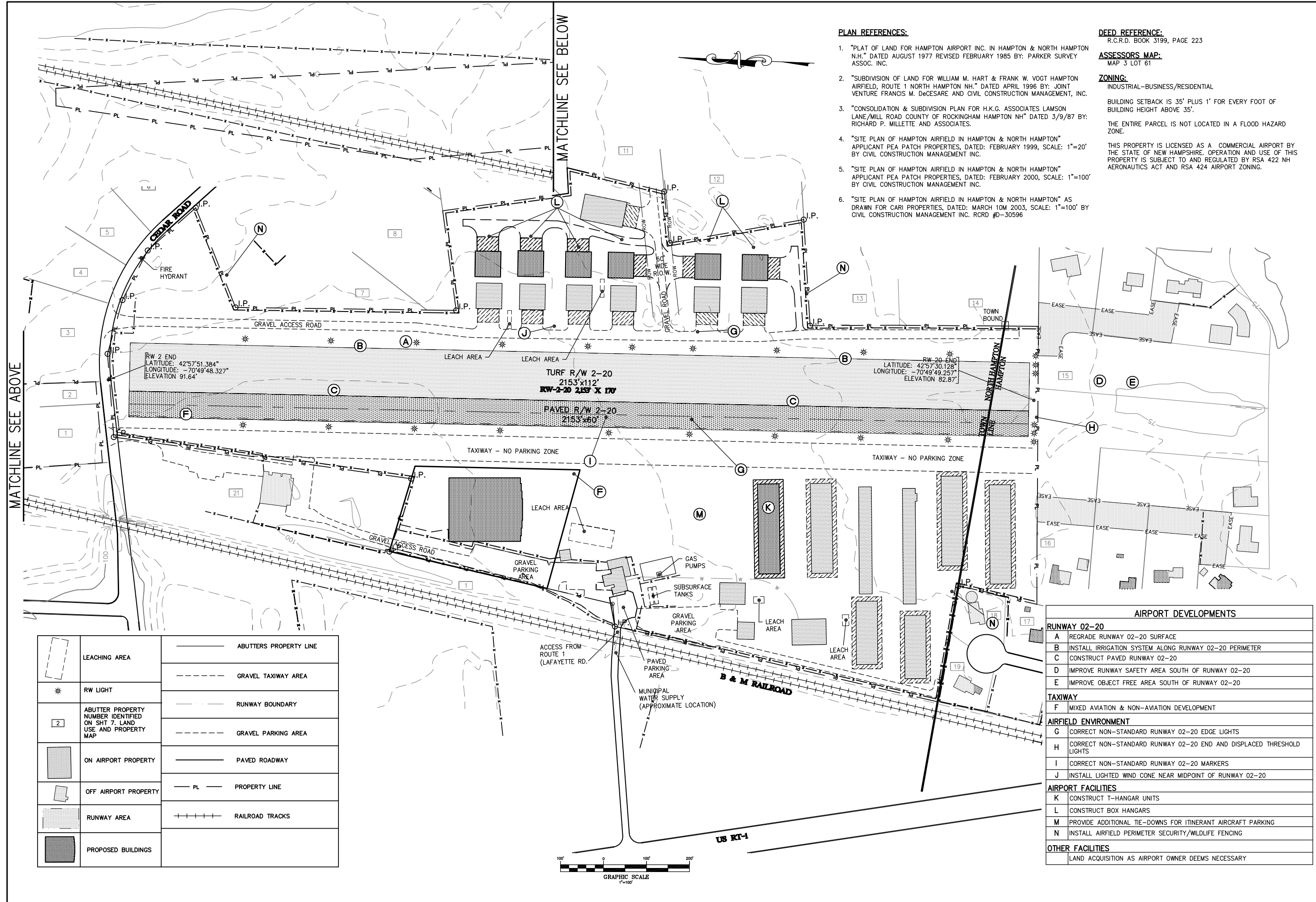


MATCHLINE SEE BELOW

MATCHLINE SEE ABOVE

	LEACHING AREA		ABUTTERS PROPERTY LINE
	RW LIGHT		GRAVEL TAXIWAY AREA
	ABUTTER PROPERTY NUMBER IDENTIFIED ON SHT 7, LAND USE AND PROPERTY MAP		RUNWAY BOUNDARY
	ON AIRPORT PROPERTY		GRAVEL PARKING AREA
	OFF AIRPORT PROPERTY		PAVED ROADWAY
	RUNWAY AREA		PROPERTY LINE
	PROPOSED BUILDINGS		RAILROAD TRACKS





**PLAN REFERENCES:**

- "PLAT OF LAND FOR HAMPTON AIRPORT INC. IN HAMPTON & NORTH HAMPTON N.H." DATED AUGUST 1977 REVISED FEBRUARY 1985 BY: PARKER SURVEY ASSOC. INC.
- "SUBDIVISION OF LAND FOR WILLIAM M. HART & FRANK W. VOGT HAMPTON AIRFIELD, ROUTE 1 NORTH HAMPTON NH." DATED APRIL 1996 BY: JOINT VENTURE FRANCIS M. DeCESARE AND CIVIL CONSTRUCTION MANAGEMENT, INC.
- "CONSOLIDATION & SUBDIVISION PLAN FOR H.K.G. ASSOCIATES LAMSON LANE/MILL ROAD COUNTY OF ROCKINGHAM HAMPTON NH" DATED 3/9/87 BY: RICHARD P. MILLETTE AND ASSOCIATES.
- "SITE PLAN OF HAMPTON AIRFIELD IN HAMPTON & NORTH HAMPTON" APPLICANT PEA PATCH PROPERTIES, DATED: FEBRUARY 1999, SCALE: 1"=20' BY CIVIL CONSTRUCTION MANAGEMENT INC.
- "SITE PLAN OF HAMPTON AIRFIELD IN HAMPTON & NORTH HAMPTON" APPLICANT PEA PATCH PROPERTIES, DATED: FEBRUARY 2000, SCALE: 1"=100' BY CIVIL CONSTRUCTION MANAGEMENT INC.
- "SITE PLAN OF HAMPTON AIRFIELD IN HAMPTON & NORTH HAMPTON" AS DRAWN FOR CARI PROPERTIES, DATED: MARCH 10M 2003, SCALE: 1"=100' BY CIVIL CONSTRUCTION MANAGEMENT INC. RCRD #D-30596

**DEED REFERENCE:**

R.C.R.D. BOOK 3199, PAGE 223

**ASSESSORS MAP:**

MAP 3 LOT 61

**ZONING:**

INDUSTRIAL-BUSINESS/RESIDENTIAL  
 BUILDING SETBACK IS 35' PLUS 1' FOR EVERY FOOT OF BUILDING HEIGHT ABOVE 35'.  
 THE ENTIRE PARCEL IS NOT LOCATED IN A FLOOD HAZARD ZONE.  
 THIS PROPERTY IS LICENSED AS A COMMERCIAL AIRPORT BY THE STATE OF NEW HAMPSHIRE. OPERATION AND USE OF THIS PROPERTY IS SUBJECT TO AND REGULATED BY RSA 422 NH AERONAUTICS ACT AND RSA 424 AIRPORT ZONING.

MATCHLINE SEE ABOVE

MATCHLINE SEE BELOW

R/W 2 END  
 LATITUDE: 42°57'51.384"  
 LONGITUDE: -70°49'48.327"  
 ELEVATION 91.64'

R/W 20 END  
 LATITUDE: 42°57'30.128"  
 LONGITUDE: -70°49'49.257"  
 ELEVATION 82.87'

	LEACHING AREA		ABUTTERS PROPERTY LINE
	RW LIGHT		GRAVEL TAXIWAY AREA
	ABUTTER PROPERTY NUMBER IDENTIFIED ON SHT 7, LAND USE AND PROPERTY MAP		RUNWAY BOUNDARY
	ON AIRPORT PROPERTY		GRAVEL PARKING AREA
	OFF AIRPORT PROPERTY		PAVED ROADWAY
	RUNWAY AREA		PROPERTY LINE
	PROPOSED BUILDINGS		RAILROAD TRACKS

AIRPORT DEVELOPMENTS	
<b>RUNWAY 02-20</b>	
A	REGRADE RUNWAY 02-20 SURFACE
B	INSTALL IRRIGATION SYSTEM ALONG RUNWAY 02-20 PERIMETER
C	CONSTRUCT PAVED RUNWAY 02-20
D	IMPROVE RUNWAY SAFETY AREA SOUTH OF RUNWAY 02-20
E	IMPROVE OBJECT FREE AREA SOUTH OF RUNWAY 02-20
<b>TAXIWAY</b>	
F	MIXED AVIATION & NON-AVIATION DEVELOPMENT
<b>AIRFIELD ENVIRONMENT</b>	
G	CORRECT NON-STANDARD RUNWAY 02-20 EDGE LIGHTS
H	CORRECT NON-STANDARD RUNWAY 02-20 END AND DISPLACED THRESHOLD LIGHTS
I	CORRECT NON-STANDARD RUNWAY 02-20 MARKERS
J	INSTALL LIGHTED WIND CONE NEAR MIDPOINT OF RUNWAY 02-20
<b>AIRPORT FACILITIES</b>	
K	CONSTRUCT T-HANGAR UNITS
L	CONSTRUCT BOX HANGARS
M	PROVIDE ADDITIONAL TIE-DOWNS FOR ITINERANT AIRCRAFT PARKING
N	INSTALL AIRFIELD PERIMETER SECURITY/WILDLIFE FENCING
<b>OTHER FACILITIES</b>	
	LAND ACQUISITION AS AIRPORT OWNER DEEMS NECESSARY

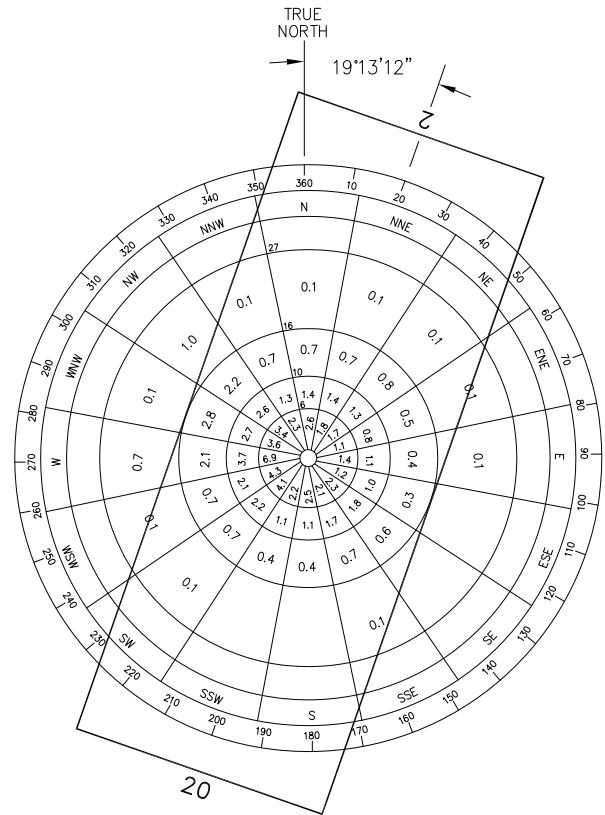
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 ULTIMATE FACILITIES**

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 State Proj. No.: SPR-14282L  
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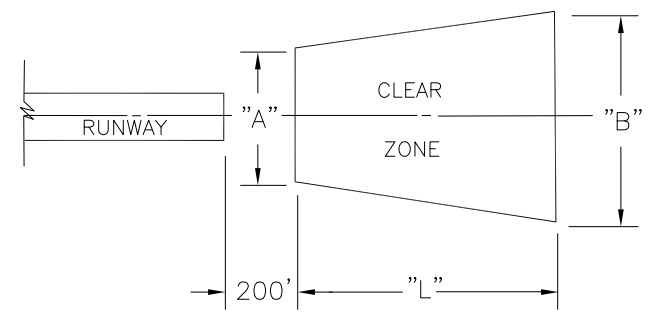
**ALL WEATHER WIND ROSE**

1956-1970

△ = 11.8% CALMS + 0-1 KTS  
 TOTAL OBSERVATIONS: 128,618  
 RUNWAY 2 46.7%  
 20 66.5%  
 COMBINED=97.4%

NOTE:  
 WIND ROSE DATA OBTAINED FROM PORTSMOUTH INTERNATIONAL AIRPORT AT PEASE.

RUNWAY PROTECTION ZONE DATA					
RUNWAY	CATEGORY	APPROACH SLOPE	"L"	"A"	"B"
2-20	A-1	A-1 SMALL AIRCRAFT EXCLUSIVELY	1000'	250'	450'

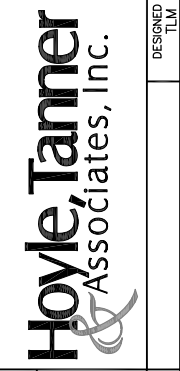


AIRPORT DATA		
ITEM	EXISTING	ULTIMATE
AIRPORT ELEVATION (U.S.G.S. - M.S.L.)	93'	SAME
AIRPORT REFERENCE POINT (ARP)	LAT. 42-57-45.3220N ESTIMATED LONG. 070-49-43.1910W	SAME
MEAN MAX TEMPERATURE HOTTEST MONTH	82° F	SAME
DISTANCE FROM CITY OF HAMPTON	2 MILES NORTH OF HAMPTON, NH	SAME
LAND OWNED (ACRES)/AIRPORT AREA FEE	36	SAME
OWNER	PEA PATCH PROPERTIES LLC	SAME
OPERATIONAL ROLE (NPIAS)	N/A	N/A
MEG. DECLINATION: (1985)	16° W	VARIES
AIRPORT REFERENCE CODE/AIRPORT DESIGN CODE	A-1, SMALL AIRCRAFT EXCLUSIVELY	SAME

AIRPORT DESIGN CRITERIA: A-1, SMALL AIRCRAFT EXCLUSIVELY	
DESIGN ELEMENT	DESIGN CRITERIA (FT)
RUNWAY	
LENGTH	
WIDTH	60
RUNWAY SAFETY AREA (RSA)	
WIDTH	120
LENGTH BEYOND RUNWAY END	240
RUNWAY OBSTACLE FREE ZONE (ROFZ)	
WIDTH	250
LENGTH BEYOND RUNWAY END	200
RUNWAY OBSTACLE FREE AREA (ROFA)	
WIDTH	250
LENGTH BEYOND RUNWAY END	240
TAXIWAY/TAXILANE	
TAXIWAY WIDTH	25
TAXIWAY SAFETY AREA (TSA) WIDTH	49
TAXIWAY OBJECT FREE AREA (TOFA) WIDTH	89
RUNWAY SEPARATION STANDARDS	
RUNWAY CENTERLINE TO TAXIWAY/TAXILANE CENTERLINE	150
RUNWAY CENTERLINE TO AIRCRAFT PARKING AREA	125
TAXIWAY/TAXILANE SEPARATION STANDARDS	
TAXIWAY CENTERLINE TO PARALLEL TAXIWAY CENTERLINE	69
TAXIWAY CENTERLINE TO A FIXED OR MOVABLE OBJECT	44.5
NOTES:	
DESIGN CRITERIA PER FAA AC 150/5300-13 v 14 FOR THIS CATEGORY AIRPORT. THESE DIMENSIONS ARE ADVISORY ONLY, FOR 7B3.	

RUNWAY DATA		
ITEM	RUNWAY 02-20	
	EXISTING	ULTIMATE
PHYSICAL LENGTH	2,153'	SAME
WIDTH	170'	60'
	RUNWAY 02	RUNWAY 02
RUNWAY 2 END COORDINATES	LATITUDE: 42° 57'51.384"	SAME
	LONGITUDE: -70° 49'48.327"	SAME
	RUNWAY 20	RUNWAY 20
RUNWAY 20 END COORDINATES	LATITUDE: 42° 57'30.128"	SAME
	LONGITUDE: -70° 49'49.257"	SAME
RUNWAY ELEVATION	RUNWAY 02: 82.9'	SAME
	RUNWAY 20: 91.6'	SAME
TRUE BEARING	RUNWAY 02: 020	SAME
	RUNWAY 20: 200	SAME
SURFACE MATERIAL	TURF	SAME
EFFECTIVE GRADIENT (%)	0.40%	SAME
CLASSIFICATION/APPROACH CATEGORY	RUNWAY 02: VISUAL	SAME
	RUNWAY 20: VISUAL	SAME
APPROACH MINIMUMS	RUNWAY 02: NOT LOWER THAN 1-MILE	SAME
	RUNWAY 20: NOT LOWER THAN 1-MILE	SAME
VISUAL/APPROACH AIDS	RUNWAY 02: WINDSOCK	LIGHTED WINDCONE
	RUNWAY 20: WINDSOCK	LIGHTED WINDCONE
INSTRUMENT APPROACHES/ NAVIGATIONAL AIDS	RUNWAY 02: REILs	SAME
	RUNWAY 20: DISPLACED THRESHOLD LIGHTS	SAME
RUNWAY LIGHTING	LIRLS	SAME
RUNWAY MARKING	RUNWAY 02: NONE	SAME
	RUNWAY 20: NONE	SAME
CRITICAL AIRCRAFT (WING SPAN)	PIPER CUB (35.6')	SAME
CRITICAL AIRCRAFT APPROACH SPEED	52 KTS	SAME
AIRPLANE DESIGN GROUP	I, SMALL AIRCRAFT EXCLUSIVELY	SAME
AIRCRAFT APPROACH CATEGORY	A	SAME
PARALLEL TAXIWAY	TURF	SAME
TAXIWAY LIGHTING	NONE	SAME

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 Manchester, NH 03101-1227  
 Tel 603-669-5555  
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HAMPTON AIRFIELD  
 NORTH HAMPTON, NH

**DATA SHEET**

REV.	DATE	DESCRIPTION

PROJ. No.: 035618  
 FILE NAME:  
 HMPDATA  
 State Proj. No.: SPR-14282L

LAST SALED BY: JDS ON November 22, 2009

IN: 1000018000 MASTER PLAN/AMPHIBIOUS

10/2009/18/1000018000 MASTER PLAN/AMPHIBIOUS

DRAWN BY: DDS  
 CHECKED BY: JRL

DESIGNED BY: TLM

DATE: JANUARY, 2009

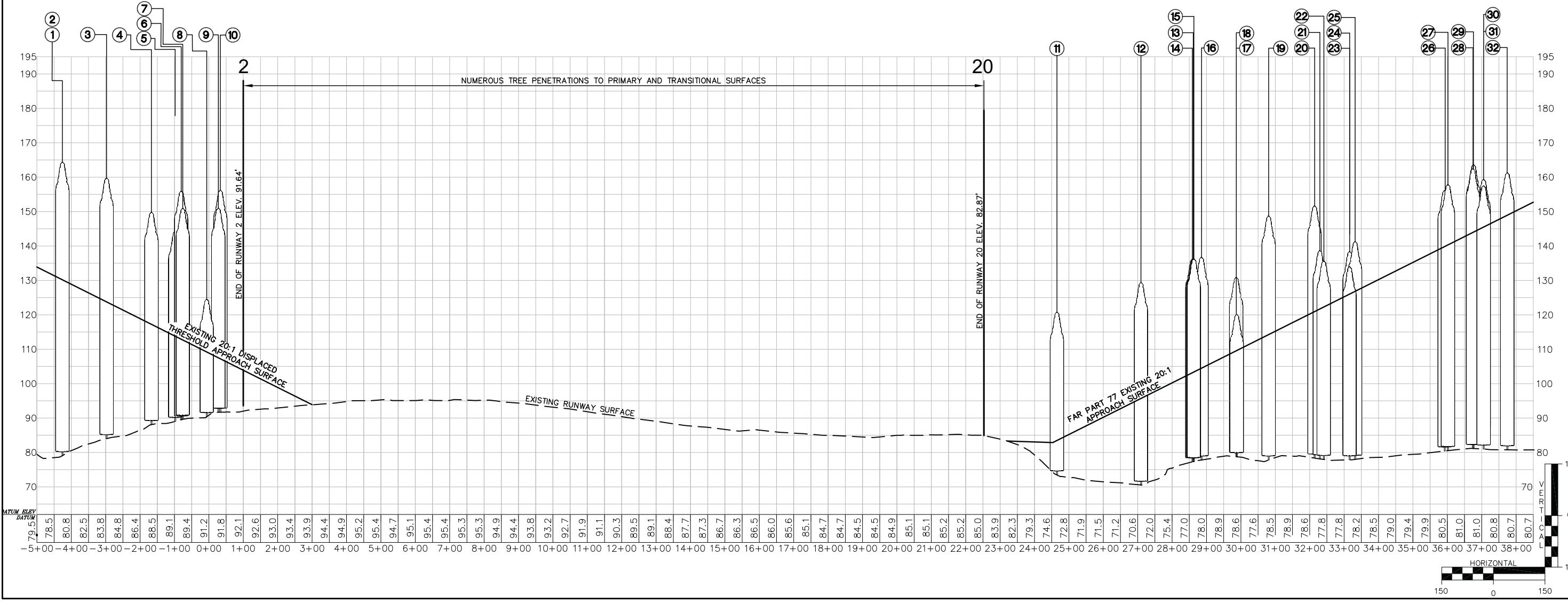
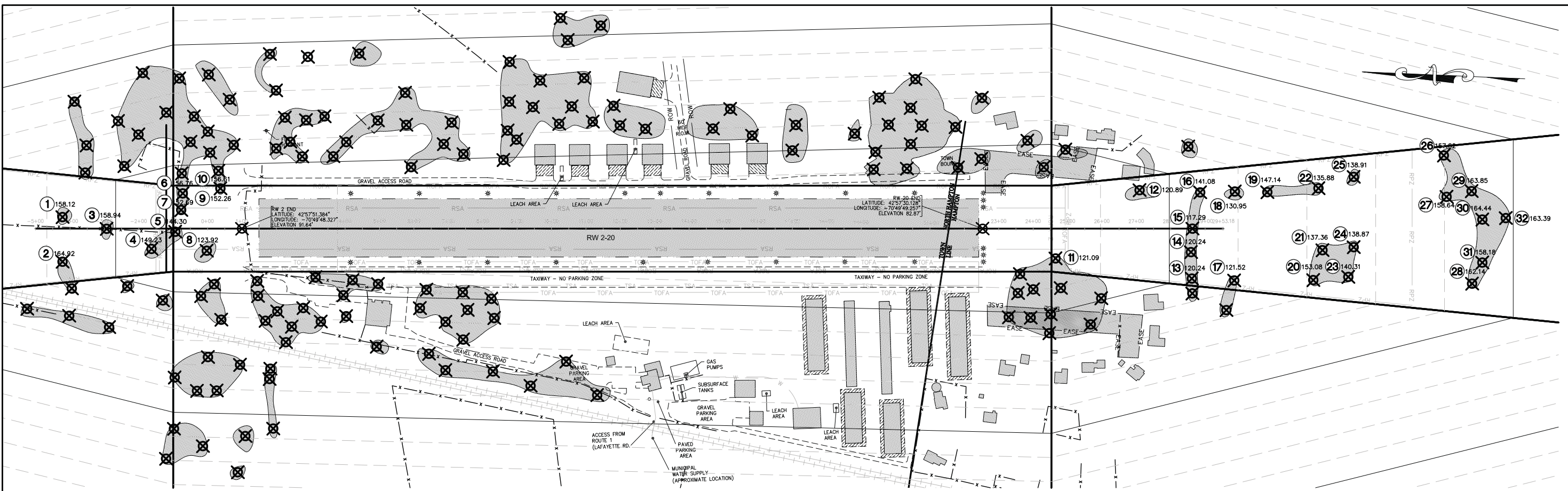
SCALE: NONE

DO NOT SCALE DRAWING









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**Hoyle, Tanner & Associates, Inc.**

HAMPTON AIRFIELD  
 NORTH HAMPTON, NH  
**RUNWAY 2-20  
 PLAN & PROFILE**

REVISIONS	DESCRIPTION	DATE	BY

PROJ. No.: 035618  
 FILE NAME: HMP1PLN\_PROF  
 State Proj. No.: SPR-14282L

DRAWING NO. **6**

SHEET 6 OF 7

DESIGNED BY: TLM  
 DRAWN BY: DDS  
 CHECKED BY: JRL

DATE: JANUARY, 2009  
 SCALE: 1"=150'

DO NOT SCALE DRAWING

LAST SAVED BY: DDS ON December 19, 2008



- RESIDENTIAL
- COMMERCIAL
- GOVERNMENT/INSTITUTIONAL
- INDUSTRIAL
- TRANSPORTATION/UTILITIES
- AGRICULTURAL
- OTHER DEVELOPED LANDS



RW 2 END  
 LATITUDE: 42°57'51.384"  
 LONGITUDE: -70°49'48.327"  
 ELEVATION 91.64'

RW 20 END  
 LATITUDE: 42°57'30.128"  
 LONGITUDE: -70°49'49.257"  
 ELEVATION 82.87'

RW-2-20 215' X 170'

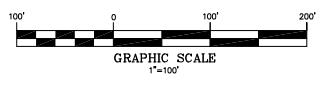
TAXIWAY - NO PARKING ZONE

TAXIWAY - NO PARKING ZONE

**NOTES:**  
 PROPOSED STRUCTURES MARKED WITH A DOUBLE ASTERISK(\*\*) WERE SHOWN ON PREVIOUS REFERENCED SITE PLANS APPROVED BY THE TOWN. AT THIS TIME THEY HAVE NOT BEEN CONSTRUCTED.

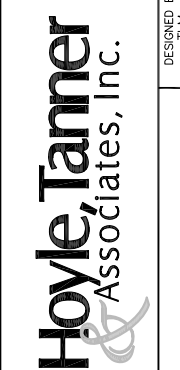
**PARKING INFORMATION:**  
 RESTAURANT/OFFICE BUILDING AND AIRPORT PATRONS 38 SPACES INCLUDING 3 HANDICAPPED.

MAP/LOT	OWNER INFORMATION
1. 7/48	TOWN OF NORTH HAMPTON
2. 7/46	JONATHAN W. & LOUANN J. KIMBALL 25A CEDAR RD NORTH HAMPTON, NH 03862
3. 7/42	JON KIMBALL 25A CEDAR RD NORTH HAMPTON, NH 03862
4. 7/41	DORR FAMILY TRUST 17340 SAN CARLOS BLVD#685 FORT MYERS BEACH, FL 33931
5. 7/39	ALESANDRA LIES & JENNIFER HINERMAN 21 CEDAR RD NORTH HAMPTON, NH 03862
6. 7/37	NANCY & AMONDA WARF 19 CEDAR RD NORTH HAMPTON, NH 03862
7. 3/61-3	DOUGLAS WOOD IRREVOCABLE TRUST, DOUGLAS WOOD TRUSTEE 12 CEDAR RD. NORTH HAMPTON, NH 03862
8. 3/61-2	EDWARD & ROBERTA STEAD 10 CEDAR RD. NORTH HAMPTON, NH 03862
9. 3/60	PATRICIA ROBINSON & ELIZABETH TYSON 6 CEDAR RD. NORTH HAMPTON, NH 03862
10. 3/59	LOUIS E. KNOX 4 CEDAR RD. NORTH HAMPTON, NH 03862
11. 3/57	CHERYL E. HART REVOCABLE TRUST 20 MILL RD. NORTH HAMPTON, NH 03862
12. 3/56	MICHAEL C. & SARA A. CASWELL 16 MILL RD NORTH HAMPTON, NH 03862
13. 3/53	RALPH A. & PATRICIA A. O'CONNOR 10 MILL RD. NORTH HAMPTON, NH 03862
14. 3/49	MARGARET T. BARRY REVOCABLE TRUST MARGARET T. BARRY TRUSTEE MILL RD. NORTH HAMPTON, NH 03862
15. 57/45	JON & ANNE CADE 5 CESSNA WAY HAMPTON, NH 03842
16. 57/46	FRANK & SABRINA SETA 8 PIPER LANE HAMPTON, NH 03842
17. 43/20-H07	ROBERT M. & JANICE C. JOHNSON 43 REDDINGTON LANDING HAMPTON, NH 03842
18. 43/20-H06	JOSEPH N. & DENISE M. ARDAGNA 45 REDDINGTON LANDING HAMPTON, NH 03842
19. 43/20-H05	KEVIN S. & DEANNE M. DURANT 46 REDDINGTON LANDING HAMPTON, NH 03842
20. 7/49	GUILFORD TRANSPORTATION INDUSTRIES, IRON HORSE PARK, NO. BILLERICA, MA
21. 7/30	BLACK MARBLE REAL ESTATE TRUST PO BOX 1740 NORTH HAMPTON, NH 03862



HAMPTON AIRFIELD  
 NORTH HAMPTON, NH  
**LAND USE AND PROPERTY MAP**

150 Dow Street  
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 CHECKED BY: JRL  
 DATE: JANUARY, 2009  
 SCALE: 1"=100'

REV. NO.	DESCRIPTION	DATE

PROJ. No.: 035618  
 FILE NAME: HMP.TLNDUSE  
 State Proj. No.: SPR-14282L  
 DRAWING NO.  
**7**  
 SHEET 7 OF 7

LAST SAVED BY: DDS ON December 22, 2008

H:\2008\HMP\MASTER PLAN\HMP.TLNDUSE.DWG

C:\Program Files\Autodesk\AutoCAD 2009\AutoCAD.exe

Chapter 7

## Financial Analysis and Business Plan

### INTRODUCTION

This section of the Hampton Airfield study focuses on financial issues concerning Hampton Airfield as they relate to the value of the airport, its viability, as well as its ability to continue to operate self sufficiently. Analysis is provided in the following topics:

- Provision of cost estimates for the developments discussed in Chapter 3, *Facility Development Considerations*.
- Economic Impact Analysis
- 1975 Hampton Airfield Business Plan Update

### CAPITAL IMPROVEMENT PLAN

A capital improvement plan (CIP) represents a cost estimate for implementing the existing developments of Hampton Airfield as well as those proposed by the master planning process. Though scheduling is typically provided for projects within the short-term, 5 years, it was not conducted for this study. A staging schedule is generally tied to the anticipation of receiving federal and state funding, which do not currently apply to Hampton Airfield.

It is recommended that the airport owner view the CIP as a constantly evolving document. The costs provided are in 2008 dollars. Planning for the airport developments should remain flexible and incorporate annually updated estimates of costs and priorities as viewed by the owner.

**Table 7-1** depicts Hampton Airfield's proposed developments.





**Table 7-1  
Capital Improvement Plan**

<b>Projects: Development Plan</b>	<b>Construction / Acquisition Cost</b>	<b>Engineering / Contingency Cost</b>	<b>TOTAL PROJECT COST</b>
Improve Safety Area South of Rwy 2-20	\$34,000		\$34,000
Improve Object Free Area South of Rwy 2-20	\$15,000		\$15,000
Correct Non-standard Rwy 2-20 Edge Lights and Markers	\$7,000		\$7,000
Replace Non-standard Rwy 2-20 End and Displaced Threshold Lights	\$3,700		\$3,700
Regrade Rwy 2-20 Turf Surface	\$80,000		\$80,000
Install Irrigation System	\$200,000	\$50,000	\$250,000
Install Lighted Wind Cone	\$17,000		\$17,000
Construct Bay of 10-unit T-hangars	\$810,000	\$202,500	\$1,012,500
Provide Additional Tie-down Spaces	\$7,500		\$7,500
Install Airfield Perimeter Wildlife/Security Fencing	\$137,000		\$137,000
Construct Paved Rwy 2-20 (2,150' by 60')	\$281,800	\$70,400	\$352,200
Construct 6 Box Hangars (Cost Per Each)	\$296,900	\$74,200	\$371,100
Land Acquisition	Market Price To Be Determined		
<b>Total</b>	<b>\$1,889,900</b>	<b>\$397,100</b>	<b>\$2,287,000</b>

Source: Hoyle, Tanner & Associates

## ECONOMIC IMPACT ANALYSIS

A study of Hampton Airfield's impact and influence on the Town of North Hampton and surrounding community's economy was conducted in order to provide a better understanding of what the airport and its economic activities provide for the area.

The primary economic impact of any airport is the direct economic activity that occurs within its businesses. For Hampton Airfield, this information was derived utilizing financial information provided by the airport owner for the baseline year of 2006. As was previously noted in this report, aviation-related operations at the airport are cyclical. An average figure for the number of employees at the airport was therefore used. It should be noted that the Airfield Cafe employs approximately 16 additional part-time employees during the warmer months.

A frequently used tool called the regional Input-Output Modeling System (RIMS II) was utilized to calculate Hampton Airfield's economic impact. The Bureau of Economic Analysis, an agency



of the Federal Department of Commerce, developed RIMS II. The multipliers identified by the modeling system are specific to both the State of New Hampshire, as well as the transportation industry. The methodology measures the significance of the airport as an industry in terms of output, earnings, and the employment it generates and is consistent with that advocated by the FAA. **Table 7-2** provides the findings of the analysis.

**Table 7-2  
 Economic Impact Analysis**

	Direct Impact	Multiplier	Total Impact
Output			
Operating Expenditures, Payroll, and Capital Improvements Total	<b>\$312,259</b>	<b>1.9228</b>	<b>\$600,412</b>
Employment			
Number of Jobs	<b>51</b>	<b>37.1</b>	<b>1,892</b>

Source: Hoyle, Tanner & Associates, Inc., 2008.

While the study results detail the airport’s economic value and impacts as an operating unit, the results do not indicate the full benefit to its local community. The methodology does not measure the transportation benefits travelers receive from general aviation, which include increased schedule flexibility, time savings, convenience, efficiency, security, and privacy. Although general aviation has historically provided most of these service values, they are intangible in that there simply is not a recognized method to quantify their impact.

An essential impact of Hampton Airfield occurs through its gateway function for local businesses, travelers, and pilot training. The facilities that the airport provides are clearly advantageous, not to mention unique. The airport is an investment in public transportation infrastructure, a part of the airport owner’s commitment to business enhancement that benefits the surrounding community.

## **BUSINESS PLAN**

A business plan is a decision support tool that provides an analysis of the fiscal structure of an organization and makes recommendations for improvements. The analysis includes an examination of Hampton Airfield’s current and historical financial condition, as well as the projected conditions based on the proposed future developments. The airport owner provided a



copy of the original business plan for the airport from 1975 as well as updated financial information, which were used in this analysis.

## Airport Revenue

Airports such as Hampton Airfield generate revenue through a variety of means for aviation dependent users, aviation-related activities, as well as non-aviation sources such as leases from tenants who are only connected to the airport by their location. Some revenues, such as fuel flowage fees, are directly related to the amount of aviation activity that takes place at the facility, while rents and others are less so. Nonetheless, all these components combined are critical to the success or failure of any business. The following are major revenue elements that should be identifiable in an airport lease, along with average rates and charges for comparable airports in the New England region.

- **Land Rent:** Land is an airport's major resource and the airport should be compensated for its use. Airport land should be leased, not sold, and at rates comparable to commercial and industrial rates in the area. Land at comparable airports in southern Maine and New Hampshire is currently leasing for between \$0.10/SF to \$0.15/SF per year with varying lease terms. Property on which tenants build their own facility often carries lease terms of 20 years in order for the tenant to obtain conventional financing. Typically, the land lease includes a reversionary clause in which any improvements revert back to the airport after a predetermined period, usually at the end of the lease. At Hampton Airfield, the owner has been the hangar developer so land ownership control is not a factor.
- **Facility Rent:** Airports should be adequately compensated by users who rent or lease space in airport-owned facilities such as terminal buildings, and hangars. Area tie-downs for aircraft range from \$5 to \$25 per day for transient users to between \$30 and \$110 per month for based aircraft. T-hangars or similar covered facilities for aircraft storage range in price from \$250 to \$450 per month depending on the condition of the hangar and whether heat and utilities are provided. Office and large hangar space ranges widely and is currently leasing for between \$2/SF and \$20/SF per year.
- **Access Fees:** In the case of Hampton Airfield, the owner of this public-use airport permits access to its facilities by adjacent land owners. This type of arrangement is commonly referred to as 'through-the-fence' operations. Land owners adjacent to airport property are not only allowed, they have deeded access rights to Hampton Airfield. Typically, through-the-fence operations are discouraged, as they tend to dilute the market available to on-airport tenants. But in Hampton Airfield's case, the access adds value to the surrounding properties and provides incentive for preservation of the airport.



- **Fuel Flowage Fee:** The fuel flowage fee is a predetermined charge owed to the airport for each gallon of fuel purchased by the users of the airport. Local airports currently charge between \$0.04 and \$0.08 per gallon. At Hampton Airfield the owners also operate the fuel concession so their “fuel flowage fee” is the profit on each gallon sold.
  
- **Service Fees:** These are charges to direct users of the airport. Typical examples are fees assessed to transient aircraft for parking, overnight storage, and landing fees. Though aircraft parking fees are common, landing fees are not well received in smaller general airports such as Hampton Airfield.

### Airport Revenue and Expenditure Trends

Airport revenues are divided into two categories, operating and non-operating revenues. Operating revenues are generated through direct airport activities such as rent for buildings, hangars, and land, fuel sales, and services provided to tenants and users. Included in the historic operating revenue reported for the airport is revenue generated from leases for non aviation-related organizations such as the courier service and restaurant. Non-operating revenues are generated through interest on accounts and excise taxes on aircraft.

Airport expenditures are also divided into two categories, operating and capital costs. Operating expenditures are those costs associated with running the day-to-day operations of the airport such as staff salaries, insurance, and fuel. Most operating expenses at the airport are relatively fixed, that is they do not vary significantly with the level of aviation activity. Capital expenditures are those costs associated with constructing, renovating or maintaining infrastructure items such as repairing rutting in the turf runway or constructing new hangars.

A detailed list of airport revenue and expenses for five years, 2002 through 2006, as provided by the airport owner are available in **Appendix F. Table 7-3** below provides a summary of the data.

**Table 7-3**  
**Summary of Airport Revenue and Expenditures**

	2002	2003	2004	2005	2006
Gross Revenue	\$325,825	\$320,623	\$369,491	\$338,908	\$376,868
Total Expenses	(\$355,369)	(\$338,813)	(\$386,298)	(\$339,650)	(\$312,259)
Net Other Income	\$101	\$7,282	(\$36)	\$287	\$28
Net Income	<b>(\$29,443)</b>	<b>(\$10,908)</b>	<b>(\$16,771)</b>	<b>(\$1,029)</b>	<b>\$64,638</b>

Source: Hoyle, Tanner & Associates, Inc., 2008.



## Revenue Enhancement Opportunities

Recent operating results at Hampton Airfield have demonstrated the viability of the facility. Maintaining a positive financial operation is basic to the continued operation of Hampton Airfield. The two keys to achieving that condition in the future are additional hangar development to enhance revenue, and cost control to keep competitive in the price-sensitive GA market the airport serves.

The owner has planned for, and the airport layout plan shows, an array of new hangars that will, of course, only be developed as the market and the economy dictate. Cost control is the part of the financial picture most in the control of those interested in preserving Hampton Airfield. The importance of cost control emphasizes the importance of the measures discussed as preservation initiatives in Chapter 4. Those cost control measures should be pursued through joint efforts of the owners, NHDOT, Bureau of Aeronautics, and the legislature to help insure the preservation of Hampton Airfield.

Appendix A  
Aviation Acronyms



AC	Advisory Circular	DOT	Department of Transportation
ADA	Americans with Disabilities Act	EA	Environmental Assessment
ADF	Automatic Direction Finder	EIS	Environmental Impact Statement
ADG	Airplane Design Group	EPA	Environmental Protection Agency
ADO	Airport District Office	ERG	Effective Runway Gradient
AFD	Airport/Facility Directory	FAA	Federal Aviation Administration
AFSS	Automated Flight Service Station	FAAP	Federal Aid Airport Program
AGL	Above Ground Level	FAR	Federal Aviation Regulation
AIP	Airport Improvement Program	FBO	Fixed Base Operator
ALP	Airport Layout Plan	FCT	Federal Contract Tower
ALS	Approach Light System	FEMA	Federal Emergency Management Agency
AMSL	Above Mean Sea Level	FOD	Foreign Object Debris
AOA	Airport Operations Area	FONSI	Finding of No Significant Impact
ARC	Airport Reference Code	FSS	Flight Service Station
ARFF	Aircraft Rescue and Fire Fighting Facilities	FTZ	Foreign Trade Zone
ARP	Airport Reference Point	GA	General Aviation
ARPT	Airport	GAMA	General Aviation Manufacturers Association
ARTCC	Air Route Traffic Control Center	GAO	General Accounting Office
ARTS	Automated Radar Terminal System	GPS	Global Positioning Satellites
ASL	Above Sea Level	GS	Glide Slope
ASOS	Automated Surface Observation System	HIRL	High Intensity Runway Lights
ASR	Airport Surveillance Radar	HITL	High Intensity Taxiway Lights
AST	Above Ground Storage Tank	HIWAS	Hazardous In-flight Weather Advisory Service
ASTM	American Society for Testing and Materials	IAP	Instrument Approach Procedure
ASV	Annual Service Volume	ICAO	International Civil Aviation Organization
ATC	Air Traffic Control	IFR	Instrument Flight Rules
ATCT	Air Traffic Control Tower	ILS	Instrument Landing System
ATIS	Automatic Terminal Information Service	IM	Inner Marker
AVGAS	Aviation Gasoline	IMC	Instrument Meteorological Conditions
AWOS	Automated Weather Observing System	INM	Integrated Noise Model
BRL	Building Restriction Line	LAAS	Local Area Augmentation System
CAD	Computer Aided Design	LAHSO	Land and Hold Short Operations
CAT I-III	Category I, II, III ILS Approach	LLWAS	Low-Level Wind Shear Alert System
CIP	Capital Improvement Program	LOA	Letter of Agreement
CTAF	Common Traffic Advisory Frequency	LOC	Localizer
DA	Decision Altitude		
DH	Decision Height		
DME	Distance Measuring Equipment		
DNL	Day-Night Sound Level		





MALS	Medium Intensity Approach Lighting System	RCO	Remote Communications Outlet
MALSF	Medium Intensity Approach Light System	REIL	Runway End Identification Lights
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights	RNAV	Area Navigation
MB	Marker Beacon	ROFA	Runway Object Free Area
MDA	Minimum Descent Altitude	RPZ	Runway Protection Zone
MGW	Maximum Gross Weight	RSA	Runway Safety Area
MIRL	Medium Intensity Runway Lights	RVR	Runway Visual Range
MITL	Medium Intensity Taxiway Lights	RVZ	Runway Visibility Zone
MM	Middle Marker	RW	Runway
MOA	Military Operating Area	SEL	Sound Exposure Level
MSA	Metropolitan Statistical Area	SSALS	Simplified Short Approach Lighting System
MSL	Mean Sea Level	TAC	Technical Advisory Committee
NAS	National Airspace System	TACAN	Tactical Air Navigation
NAVAIDS	Navigational Aids	TAF	Terminal Area Forecasts
NCP	Noise Compatibility Program	TAP	Terminal Area Plan
NDB	Non-Directional Beacon	TDZ	Touchdown Zone
NEM	Noise Exposure Map	TDZE	Touchdown Zone Elevation
NOAA	National Oceanic and Atmospheric Administration	TERPS	Terminal Instrument Procedures
NOTAM	Notice to Airmen	TOFA	Taxiway Object Free Area
NPI	Non-precision Instrument	TRACON	Terminal Radar Approach Control Facility
NPIAS	National Plan of Integrated Airport Systems	TRSA	Terminal Radar Service Area
NPL	National Priority List	TSA	Transportation Security Administration
ODALS	Omnidirectional Approach Light Systems	TW	Taxiway
OFA	Object Free Area	USGS	United States Geological Survey
OFZ	Object Free Zone	VASI	Visual Approach Slope Indicator
OM	Outer Marker	VFR	Visual Flight Rules
PA	Precision Approach	VHF	Very High Frequency
PAPI	Precision Approach Path Indicator	VMC	Visual Meteorological Conditions
PAX	Passengers	VOR	VHF Omni-Directional Radar Beacon
PIR	Precision Instrument Runway	VORDME	VHF Omni-Directional Radar Beacon with Distance Measuring Equipment
PMPP	Pavement Maintenance Management Program	VORTAC	VHF Omni-directional Range Beacon with Tactical Aircraft Approach and Navigation
PVC	Poor Visibility and Ceiling Conditions	WAAS	Wide Area Augmentation System
RAIL	Runway Alignment Indicator Light		

Appendix B

NHDOT, Bureau of Aeronautics  
Airport Tax Reimbursement



**THE STATE OF NEW HAMPSHIRE**  
**DEPARTMENT OF TRANSPORTATION**



**CAROL A. MURRAY, P.E.**  
*Commissioner*

**JEFF BRILLHART, P.E.**  
*Assistant Commissioner*

November 8, 2006

George Forrest  
Hampton Airfield  
9A Lafayette Road  
North Hampton, NH 03862

Dear George:

As you know, since Hampton Airfield is a privately-owned, public use airport, it is eligible for partial reimbursement of property taxes paid. Per State law (RSA 72:38), after paying all property taxes owed, the airport owner may apply to the New Hampshire Department of Transportation, Bureau of Aeronautics for a reimbursement grant in the amount of the portion of property taxes paid on the qualifying areas of the airport.

Prior to processing this year's property tax reimbursement grant applications, the Bureau of Aeronautics intends to apply uniform standards to each of the nine airports in the program for the purpose of better identifying those areas that qualify for reimbursement. Those standards, which apply only to airport property, are as follows:

- Runways: Qualifying area shall be 250 feet wide (125 feet either side of centerline) and 200 feet beyond the runway ends.
- Runway Protection Zones (RPZ): The RPZ is trapezoidal in shape and centered about the extended runway centerline. The RPZs begins 200 feet beyond the runway ends. They then flare out to a width of 450 feet at a length of 1,000 feet. The areas underlying the RPZs shall be qualifying areas provided these areas are undeveloped and remain so.
- Taxiways: Qualifying areas shall be 90 feet wide (45 feet either side of the taxiway centerline) for the length of the taxiway. For paved taxiways with widths greater than 90 feet, the actual width of the pavement shall be utilized for calculating the qualifying area.
- Aircraft Parking Areas: Qualifying areas shall be open-air aircraft parking areas available for public use as measured by the Aeronautics staff.

George Forrest  
November 8, 2006  
page 2 of 2

- Terminal Buildings: Qualifying areas shall be the percentage of the terminal buildings that are available for public use without charge.
- Weather, Navigation, and Communication Facilities: Qualifying areas are areas utilized for weather, navigation and/or communication facilities for which the airport owner receives no compensation from third parties.
- Miscellaneous Areas: Qualifying areas shall be those areas that, due to the unique layout of the airport, prohibit their use for purposes other than aviation by the public.

A representative from the Bureau of Aeronautics will be contacting you in the near future to schedule a visit to Hampton Airfield for the purpose of identifying and measuring the qualifying areas outlined above. We hope this effort will provide a more consistent approach to this program for all its applicants. Should you have any questions or concerns, please do not hesitate to call me at (603) 271-1677 or email me at [mpouliot@dot.state.nh.us](mailto:mpouliot@dot.state.nh.us).

Sincerely,



Michael G. Pouliot  
Aviation Planner  
Bureau of Aeronautics

FACILITY NO.	DESCRIPTION
1	FBO/RESTAURANT (ORIGINAL 1945 HANGAR)
2	MAINTENANCE BUILDING #1
3	MAINTENANCE BUILDING #2
4	MAINTENANCE BUILDING #3
5	BUILDING 100 - OPEN T-HANGAR (8 UNITS)
6	BUILDING 200 - OPEN T-HANGAR (9 UNITS)
7	BUILDING 300 - ENCLOSED T-HANGAR (6 UNITS)
8	BUILDING 400 - ENCLOSED T-HANGAR (6 UNITS)
9	BUILDING 500 - ENCLOSED T-HANGAR (9 UNITS)
10	BUILDING 600 - ENCLOSED T-HANGAR (10 UNITS)
11	BUILDING 700 - ENCLOSED T-HANGAR (9 UNITS)
12	EXPERIMENTAL AIRCRAFT ASSOCIATION BUILDING
13	FLIGHT SCHOOL HANGAR
14	BUILDING 1 - BOX HANGAR
15	BUILDING 2 - BOX HANGAR
16	BUILDING 3 - BOX HANGAR
17	BUILDING 4 - BOX HANGAR
18	BUILDING 5 - BOX HANGAR
19	BUILDING 6 - BOX HANGAR

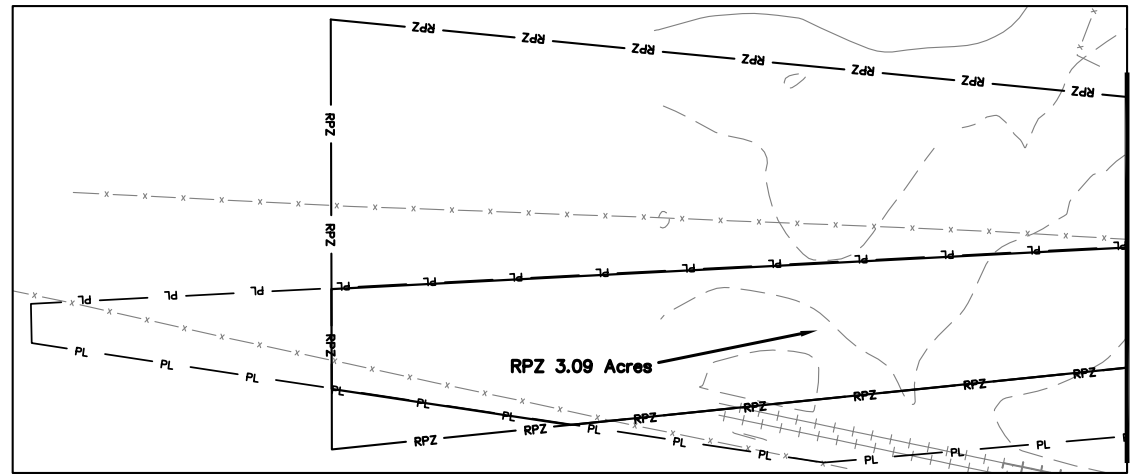
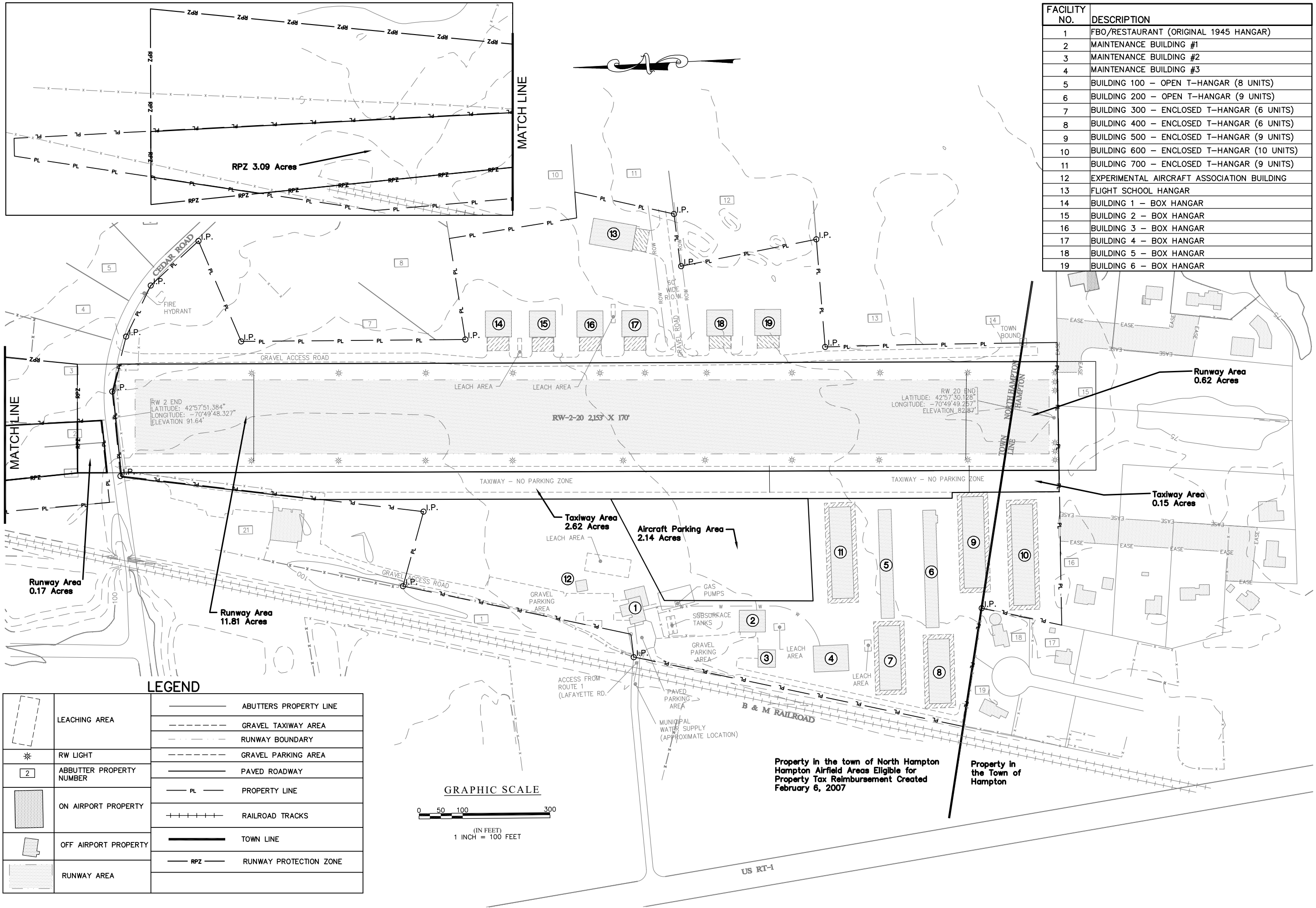
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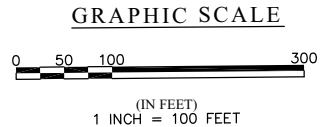
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**LEGEND**

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[Symbol]	RW LIGHT	[Symbol]	GRAVEL TAXIWAY AREA
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[Symbol]	ON AIRPORT PROPERTY	[Symbol]	GRAVEL PARKING AREA
[Symbol]	OFF AIRPORT PROPERTY	[Symbol]	PAVED ROADWAY
[Symbol]	RUNWAY AREA	[Symbol]	PROPERTY LINE
		[Symbol]	RAILROAD TRACKS
		[Symbol]	TOWN LINE
		[Symbol]	RUNWAY PROTECTION ZONE



Property in the town of North Hampton  
 Hampton Airfield Areas Eligible for  
 Property Tax Reimbursement Created  
 February 6, 2007

Property in  
 the Town of  
 Hampton

Appendix C

## Hampton Airfield Articles

http://www.aopa.org/pilot/dayinthelife/postcards/hampton.html



[AOPA Pilot Home](#) | [Current Issue](#) | [Back Issues](#) | [Multimedia Features](#) |

▶ [AUGUST 2007](#): VOLUME 50 / NUMBER 8

MEMBER ONLY CONTENT | WEB EXCLUSIVE



## Hampton, New Hampshire

The way it should be

BY DAN NAMOWITZ

[PRINTER-FRIENDLY VERSION](#)

Hampton Airfield is located in a scenic and vital region of the New Hampshire seacoast, within easy travel time of Boston, the celebrated lighthouses and shopping of coastal southern Maine, and travel hubs at Boston's Logan International Airport, the Manchester-Boston Regional Airport in New Hampshire, Pease International Tradeport in nearby Portsmouth, New Hampshire, and Portland, Maine. A family-owned grass strip where students learn how to fly the old-fashioned way, Hampton Airfield is a place to meet new friends and savor aviation the way it used to be — the way it should be. Once you've arrived, stay a while and take advantage of the multitude of activities, dining, and cultural amenities available along the coast. You won't have to travel far to find a variety of amusements that will keep you happy and busy regardless of the duration of your stay.

### What to do

Thousands of people are drawn each year to Hampton Beach, the wide ocean beach that is just a quick ride from Hampton Airfield. Warm ocean water and a sand beach make this popular spot located on Route 1A hard to beat. Other popular sand beaches such as Old Orchard Beach, Maine, are within convenient driving time.

Isle of Shoals, a handful of rocky islands a few miles off the New Hampshire coast are a base for fisherman and a retreat for artists. The islands also are home to the White Island Lighthouse, the Shoals Marine Laboratory, summer homes, and the Oceanic Hotel, site of the Unitarian conferences. Perfect for a summer day trip, several excursion companies offer frequent trips to the islands.

Portsmouth, New Hampshire's coastal city, offers a variety of activities and entertainment from its beautiful seaside Prescott Park, with flower gardens and a summer arts festival, to dining and historic attractions such as the Strawberry Banke museum. For some more splashy fun there's Water Country, New England's largest water park.

Plum Island, an 11-mile barrier island off the coast of nearby Newburyport, Massachusetts, offers a variety of outdoor recreation from nature walks to offshore fishing trips, windsurfing, kayaking, and boating.


The Seacoast's largest brewery, Redhook Brewery, is located at the Pease International Tradeport, 35 Corporate Drive, Portsmouth, New Hampshire Daily tours available.

### Where to eat

The classic airport restaurant called The Airfield Café is located on Hampton Airfield. Hungry for breakfast? Try the Morning Glory. Nearby Portsmouth and York, Maine, offer countless choices of fine dining, seafood, Caribbean, French,

**Slide Show**

Hampton, New Hampshire



◀ PREV 3 of 7 NEXT ▶ ENLARGE

The atmosphere in the cafe is pure GA.

Having trouble seeing the slide show? Download the latest [Adobe Flash Player](#).

**WEBLINKS**

- [Hampton Airfield \(7B3\)](#)
- [Portsmouth International Airport at Pease \(PSM\)](#)
- ▶ [Hampton Area Chamber of Commerce](#)
- ▶ [Hampton Airfield](#)
- ▶ [The Airfield Café](#)
- ▶ [Hampton Beach](#)
- ▶ [Old Orchard Beach Chamber of Commerce](#)
- ▶ [PortsmouthNH.com](#)
- ▶ [Greater Newburyport Chamber of Commerce & Industry](#)
- ▶ [Plum Island, Massachusetts](#)
- ▶ [Redhook Ale Brewery](#)
- ▶ [AOPA Online Travel](#)



Thai, "rustic American," and other cuisine.

### Where to stay

A large selection of bed-and-breakfasts, hotels, and motels abounds throughout this scenic tourism region that encompasses the coastal communities of northern Massachusetts, New Hampshire, and extreme southern Maine. See *AOPA's Airport Directory* for more information.

### Flying in

Hampton Airfield is located on the short stretch of seacoast within New Hampshire between northern Massachusetts and Maine, located on U.S. Route 1. In addition to Boston's Logan International Airport, there is airline service to Manchester, New Hampshire, about an hour's drive west, and Portland, Maine, about an hour north. Flying into Hampton (7B3), which is located just south of Class D airspace at Pease International Tradeport, is a straightforward proposition facilitated by prominent visual checkpoints.

The 2,100-foot grass Runway 2/20 is 170 feet wide, smooth and well marked. Note that the airport's common traffic advisory frequency (122.8 MHz) is different from the frequency that operates the pilot-controlled lighting (122.4 MHz). The airport is located about 18 nm north of the most northerly lateral extent of Boston's Class B airspace. Check temporary flight restrictions carefully; Hampton is sometimes affected by presidential visits to the Bush family compound in Kennebunkport, Maine, as also depicted on the northern side of the New York sectional chart.



Driving to the area is easy as Hampton Airfield is just short distance from Interstate 95 either from Boston or from points in Maine. If coming from the Manchester New Hampshire, area and points west, head east on NH Route 101 about 30 miles toward Portsmouth. Then join Route 111N to Lafayette Road.

What do you think? Send us feedback!

Sign up for ePilot

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# FLY HAMPTON!

Coastal New Hampshire provides the backdrop for one of the most authentic grass fields in New England. The little airfield of Hampton preserves the grassroots of aviation while other general aviation airports are rapidly becoming facilities closed to all but the wealthy. After 31 years under Mike and Sheryl Hart's watch, Hampton has grown slowly, but steadily, to become a vibrant place dedicated to flying by the seat-of-your pants.



Hampton has a long tradition of involvement in aviation. Peter Randall, local historian and author of "Hampton: A century of town and beach 1888-1988", reports that: "Pioneer aviator Harry N. Atwood flew his biplane over the town in May 1912 en route from Saugus, Massachusetts, to Portland, Maine. A few months later, people got a closer look at the plane when Atwood landed on the Hampton River in July. While flying along the coast, he had become lost in a fog bank off Rye Beach, circled around, and finally recognized Hampton River, where he landed."

The town took soon after a more proactive approach to flying by inviting J. Chauncey Redding, manager of the Saugus Aviation School to the 1915 Carnival Week, where he performed a few aerial displays. For many years, Bob Fogg, a local pilot, and his airplane were a popular feature at the beach, landing on the sand, and picking up passengers for sightseeing trips.

In February 1927, the local paper mentioned the project of the "Hampton Aviation Grounds". In August of the same year, the readers learned that an airplane has been stationed in a field behind High Street. By September, a Barnstorming show was based at A.T. Johnson Flying Field, as it became known. With three planes the team was performing stunts over the beach and town, and offered rides.

In 1933, a special town meeting authorized the lease of a piece of land situated between Winnacunnet Road and High Street from their owners to create an airport.

During WWII, all the airports within 40 miles of the coastline were limited to civil defense activities. After the war, with the GI Bill in full swing, a group of local investors decided to capitalize on this new craze and re-create an airport in Hampton. They approached the owners of 17 contiguous parcels of land in the pretense of using it to farm gladiolas. Even before the ink on the contracts dried, the bulldozers leveled out the land to carve out a runway. The airport ran sleepily for years, and by 1975, was not much to look at.

Mike Hart's business plan when he acquired Hampton Airfield was to keep it as a grass field and to cater to the Antique/Classic community. The flight school started immediately with taildragger instruction. It now has 2 piper Cubs and 2 Cessna 172s, supported by a team of 6 instructors. Hampton harbors a fleet of 86 airplanes, 25 or so of them being in the Antique/Classic category, amongst them 5 biplanes, including Mike Hart's pride: the 1929 New Standard D-25 N928V, c/n 125.

During one trip at some far off airport, he stumbled upon a big biplane in a hangar he identified as a New Standard. He recounts:

"The asking price was \$ 50,000, which was way out of line. The airplane also was in fair shape. For some 12 years, I looked around for a good New Standard, and there was none. I went back after all that time, but the airplane was gone. I learned that it had been moved to Toledo Express. I flew in and went to the FBO. The price was the same \$ 50,000. By this time, it was a better deal."

"The airplane had a 450 HP, so we needed to get it back to standard category. We were just planning on changing the engine. After we got into it, we discovered a whole bunch of problems, so we ended up building a brand new airplane. It took eleven years, and much more money than expected. However, this is, in my view, the most fun you can have in aviation, because the people are having so much fun. We give 3 to 400 rides a year."



The future seems assured:

"I retired last March after 30 years with Northeast and Delta. I learned to fly at a grass strip very similar to this one, instructed there before joining Northeast Airline, which moved my wife and I to Boston. About 10 years after acquiring the airfield, we bought a house on Mill Road. We have a hangar in our backyard and direct access to the taxiway. It is easy to run the airport, because we are right there."

The primary function of Hampton Airfield is instruction in the delicate art of taming the taildragger, with an emphasis on operation and restoration of antique and classic airplanes. Grassroots aviation at its best...

By Gilles Auliard

See Hampton Airport Ad Page 12

WANTED: Man to Run Small Airport!

Hampton Airport Is FOR SALE





fly-indining

# Hampton, New Hampshire

The Airfield Cafe



Hosts Joe, Theresa, and Scott Aversano pose under a Ford Tri-Motor (above). Diners enjoy front-row seats (left) to the grass airstrip (below).

by Cal Thomas

Pattern altitude is a mere 900 ft. MSL, so be sure to give yourself time to descend before entering the traffic pattern. The airstrip is very wide, nearly 175 ft., creating the optical illusion that the runway is much shorter than its ample 2,100 ft. Airport manager George Forrest says that most pilots don't have trouble landing here, but the few who do tend to arrive much higher and faster than necessary. Do you remember practicing those short-field procedures? As long as you keep an eye on your aiming point and manage your airspeed you should have no trouble at all.

If arriving from the north, fly down the coastline, remaining east of the mouth of Great Bay (Portsmouth Harbor). Continue until you can look over your right shoulder and see straight down PSM's runway about 5 nm away (with a length of 11,000 ft., it's a space shuttle alternate and very visible),

**A**s "romantic adventurers," we pilots often think of the days of biplanes, barnstorming, and friendly grass fields with torn shirttails hanging from the walls of the flight school. Hampton Airfield is that romantic vision come to life. Arriving here truly is like taking a step back in time, and Joe Aversano's popular Airfield Cafe embodies the feel of that era. Parked in the grassy areas around the cafe's deck are aircraft ranging from a 1930s biplane to a brand new Piper or Cessna. Hampton is a friendly New England gathering place that stirs a sensation similar to the feeling you have when returning to your old hometown. Nearly every time I've dropped in, I've met someone new or reconnected with someone from a prior visit. Even if we don't remember names, we recognize each other by our airplanes.

## Flying There

Hampton Airfield is in southern New Hampshire, 2 nm north of the town of Hampton and 7 nm south of Portsmouth. Although the Class D airspace for Pease International Tradeport Airport (PSM) looms just 2 nm to the north, some easily recognizable landmarks such as roads, highway tollbooths, and coastal contours make pilotage easy. Therefore, it should be no problem to remain clear of the Class D en route to Hampton.

The grass Runway 2/20 is nearly always in good shape and reasonably smooth. I've seen many Mooneys and Bonanzas there, but be sure to check NOTAMs and call ahead in the winter or during the March/April "mud" season.

©George A. Kouini





then turn to a heading of about 260° to the Hampton Airfield. If you stay along the shoreline, you'll be clear of the Pease Class D that starts 1.5 nm inland. If you're northwest, follow I-95 south and request a transition from Pease tower on 128.4 MHz.

From the south, be sure to remain clear of Boston Class B airspace. Flying just west of Bedford (BED) between 2,700 and 3,900 ft. MSL, you will remain beneath the 4,000 ft. MSL floor of the Class B and above the 2,600 ft. MSL ceilings of both the Bedford and Lawrence (LWM) Class D areas. Once north of Boston, follow I-95 north across the Merrimac River into New Hampshire, remaining just west of the highway. About 19 nm past the river, you will find a line of tollbooths. Make a 90-degree right turn from there and you will easily spot the field (and four large hangars on the east side) about a mile away. If the wind dictates landing to the north, continue another 1/2 mile up the highway beyond the tollbooths, and your inbound turn will place you on a near-perfect 45-degree entry for left traffic, Runway 2. If landing to the south on Runway 20, cross over the field and head for the prominent Boar's Head peninsula which juts about 1/2 mile into the Atlantic Ocean. Make an inbound turn over Boar's Head as your 45-degree entry point and you'll be indistinguishable from the locals.

Of course, none of us would consider leaving the ground without checking with our favorite Flight Service Station for NOTAMs and TFRs, but there are two items of note when making the trek to Hampton. If our Commander-in-Chief happens to be making a family visit, a TFR around prohibited area P-67 will be

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extended to 30 nm from Kennebunkport, Maine, encompassing Hampton, which is just 28 nm away. During this time, you can still fly in and out of Hampton, but you'll need to file an ADIZ flight plan, squawk a discreet transponder code, and be in continuous two-way radio contact with ATC. If Air Force One's arrival or departure times



©George A. Kounis

at PSM coincide with your arrival at Hampton, further restrictions may be in effect. Since TFR procedures tend to vary, I recommend contacting Bangor Flight Service for a current interpretation, (866) 295-3835. Also, be aware that the Seabrook nuclear facility is 4 nm south of the field; you can fly over, but don't linger.

If the CTAF frequency, 122.8 MHz, is quiet, you can request an airport advisory and George will be happy to oblige. There are 60-foot-tall trees at the approach end of Runway 20, a 300 ft. displaced threshold, and a slight upslope at that end of the field. Just use your standard short field procedure and all should be fine; remember ground rolls are shorter on grass.

Once on the ground, taxi along the west side of the field, just outside the yellow cones that mark the runway edges. The tiedown area is in front of the deck of the Airfield Cafe, and aircraft generally park facing south.

Both 100LL and MOGAS are available and reasonably priced. Please bring cash or your checkbook, neither the airport nor the restaurant takes credit cards.

## History

Hampton Airport opened as a gladiola farm and private airstrip in 1945, just after the U.S. government restriction on airfields near the seacoast was lifted. Apparently the gladiola seeds didn't take, but the aviation roots certainly did. Hampton is one of the few fields in the U.S. to have continuously offered flight training in Piper Cubs since 1945. These classic airplanes were new then and there was even a dealership on the field. In 1946, the airport served as a training center for WWII veterans, and continues today to offer flight instruction in Cubs, a Stearman, as well as the ubiquitous Cessna 172.

Since acquiring the property in 1975, Mike and Cheryl Hart have retained the atmosphere of an aerodrome from the days of old. Even the fairly recent addition of six privately-owned 60 x 60-ft. hangars on the east side of the field causes little distraction from the old-time feel, but they do make the field much easier to spot from the air.

Local legend has it that Norseman explorer Leif Ericsson's brother, Thorvald, was killed by locals at Boar's Head sometime around 1004 A.D. after seizing the land and killing the natives to build his own seacoast home. True or not, I wouldn't buzz the houses that stand there today.

## The Airfield Cafe

Aside from just enjoying the airport experience, the best reason to visit Hampton is for the food. In June 1996, Joe Aversano was considering a career change and got a tip from a neighbor that there might be an opportunity to resurrect the little cafe at the airport. Ironically,



Top: The Dakota Aviation Museum's DC-3 pays a visit. Above: John Kounis and Jessica Ambats plan their next flight over lunch, with views of the airfield. Left: The flight school's L4 Cub refuels next to the cafe.



though he lived just off the south end of the runway, Joe had never actually visited the airport. Attracted by the airport's activity, community, and a "good feeling" about the airport's owners, Mike and Cheryl Hart, he decided to accept the challenge.

It was a full family affair from the beginning, and Joe's daughter Theresa and son Scott are still part of the regular staff. Having once owned a restaurant and obviously not fearing hard work, the Aversanos spruced up the menu, stabilized the hours, and created a warm, friendly, family-like atmosphere. The transformation has made the restaurant a favorite destination for both locals and pilots from all around the Northeast.

Peering out from the comfy booths, you'll see a large collection of vintage aviation paraphernalia and model airplanes, such as a Ford Tri-motor, a Curtiss Jenny, and an inverted Pitts Special, hanging from the rafters; if you look closely, you may even spy some WWII-era ladies' undergarments. The wooden beams, knotty pine walls, and period signs like Coca Cola's "your thirst takes wings" and "Texaco Sky Chief Gasoline" make you feel like you really are visiting the era of the barnstormers.

While there is a great window view of the airport's goings-on from inside, the best seats in the house are the picnic tables on the large deck, only yards from the runway.

A front row seat to what many call a weekend vintage airshow is hard to beat.

If the atmosphere isn't enough to attract us aviation romantics, there is always the food. The Airport Cafe has a large menu including a number of introductory specials they are always trying out. According to Theresa, the "Create an Omelet" is a breakfast favorite. Choose as many items as you like including scallions, green peppers, mushrooms, tomatoes, onions, bacon, ham, sausage, and choice of cheese, \$5.25 for a two-egger, and \$5.75 for a three-egger. The omelet also includes Joe's "famous home fries" (don't even think about asking him for the recipe) and toast. While they don't brag about it, the homemade Anadama bread is not to be missed. Another popular breakfast is a traditional Eggs Benedict, \$5.25, as is the Morning Glory: two eggs any style, ham, bacon or sausage, famous home fries, and toast (make it Anadama), \$4.75. The buttermilk pancakes are enormous, a real ten inches, \$3.75 for three and \$4.25 with blueberries, strawberries, or apple topping. Hint: if you ask nicely for some "Lenny Cakes," named for a long-time local pilot, you might talk your wait-staff into serving a slightly smaller, more manageable version.

A local favorite for lunch is the Lobster Roll, \$9.50; folks come from all around, including the neighborhood competition, for this treat. I also highly recommend the smoked turkey or Virginia Baked Ham Club, \$5. New England clam chowder is a standard and is as good as you will find at any upscale New England seafood house, \$3.25-\$4.25. Burgers are a prominent feature on the menu with about seven versions cooked to order including the Red Baron, spiced up with Cajun and cayenne seasonings, and the Barnstormer, topped with bacon, \$4.50-\$6. By all means, save some room for some locally made cheesecake and strawberry shortcake, \$2.50. Frappes are a good, lighter alternative starting at \$3.25. If you're ready for a walk around the airport, you can have an ice cream cone to go, \$2.25.

What is the secret to the Airfield Cafe's success? Joe claims it's because they never buy cheap ingredients, but from what I can tell, it's really the people that make it great. Again, remember to bring cash or your checkbook since they don't take credit cards, 7 a.m.-2 p.m., (603) 964-1654, [www.hamptonairfield.com](http://www.hamptonairfield.com).

## What to Do

When you walk across the grass from the tiedowns to the cafe's large deck, you'll see numerous vintage airplanes, from a beautifully restored 1929 New Standard biplane to a couple of Wacos, a few Stearmans, a French-built Stampe, and a menagerie of Piper Cubs and other taildraggers. Until recently, The Dakota Aviation Museum's Northeast Airlines DC-3

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was in residence and was pretty exciting to see taking off and landing on the 2,100-ft. grass strip. While no longer based here, the DC-3 still drops in for a visit now and again. Hampton is also home to modern-day aircraft like a handful of Cessnas and Cherokees hangared near the 1931 Stinson Jr. (S).

Wander into the airport office/flight school and you will indeed see torn "first solo" shirttails (with recent dates) lining the walls. The rate sheet boasts two Piper Cubs, two Stearmans, and Cessna 172s on the flight line. And, back in the corner is a box of airplane toys for the many kids that come to visit—a number of whom have moved from the



Photos ©Jeff Brown



Above: John Hannigan climbs in a 1943 Boeing PT17 Stearman.

Left: Torn shirttails contribute to the vintage feel of the flight school.

master flight instructor Jeff Brown will do wonders for your stick and rudder skills. The rental rate for a Cub is \$75/hr. and \$35/hr. for the instructor; the Stearman is \$190/hr., dual only. Schedule tailwheel instruction at least one week in advance.

The easiest way to enjoy the simple pleasure of an open cockpit is on a 20-minute "thrill ride" over the coast and seaside mansions in the antique 1929 New Standard biplane, \$50 per person with a two-person minimum. The world really does look different with the salt air blowing through your hair. The airport office/flight school is open seven days, 8 a.m.–sunset, (603) 964-6749.

The airport hosts three big, **annual events**: the Aviation Flea Market, where you can find everything from spare parts and aircraft tow bars to t-shirts and aviation books (May 21–22, 2005); the biplane fly-in, which attracts antiques, classics, experimentals, and aerobatic biplanes (early July); and the fall pig roast where any pilot can participate in spot landing and flour-bombing competitions (on or near Labor Day). For details and dates contact the airfield, (603) 964-6749, [www.hamptonairfield.com](http://www.hamptonairfield.com).

After many years of seeking the \$100 hamburger, the Aversano's Airfield Cafe experience remains one of the best values for my aviation fuel dollar. Visiting with the friendly folks at the cafe is on par with the great breakfast and lunch fare. Add in front-row runway seating and a little sunshine, and it's an unbeatable outing. The Hampton Airfield is a real "feel at home" place whether you're a local Hamptonite or a fly-in visitor. As Joe and George continuously say, "The people at this airfield are just incredible!" As a semi-frequent recipient of their hospitality, I couldn't agree more. ■



©Jessica Ambats

toy planes to the real planes. If you haven't yet had the experience of **flying a taildragger** or just want to add some variety to your logbook, an hour of instruction in a J-3 Cub or Stearman with

**7B3**

## Hampton Airfield

Hampton, NH • N 42° 57.8' W 070° 49.7' • Elevation: 93 ft.

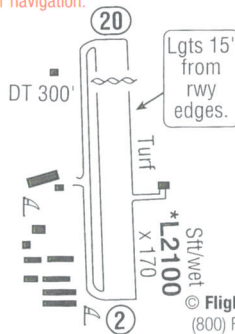
**Sectional Chart:** New York

**Pattern Altitude:** 900 ft.



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Not to be used for navigation.



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### FREQUENCIES

**CTAF:** 122.8

**Boston Approach:** 125.05

**Bangor FSS:** 122.25

**NOTES:** Many aircraft without radios. Watch for banner tow operations and wildlife on runways.

**RUNWAYS:** 2/20 2,100 x 170 ft. Turf. Lighted. Activate LIRL Rwy 2/20 122.4 MHz or call (603) 964-6749.

**SERVICES:** Hampton Airfield. Tiedowns: \$5. Fuel: 100LL \$2.80, no credit cards. Open 8 a.m.–5 p.m. (603) 964-6749.

**PHONES:** Airport office (603) 964-6749.



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Boy Scouts of America Historical Division Daniel Webster Council holds "Aviation Merit Badge" camporee at the Hampton Airfield. Perfect weather and airplane rides for all the scouts made this Saturday of the three day event one to remember.

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1. Garry wrote about this gallery two years ago

Hey John,  
Great photos!!! It was really awesome to have you spend the day with the boys. You've captured the excitement of the day on film and the article that accompanied the pics said it all. Great Job. Special thanks to Seacoast News for showing support for the boys.

Garry Dolan, Assistant co-ordinator  
Boy Scout Historic District Fall Camporee Committee

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Appendix D  
**Case Studies**



# Why Your Community Needs Its Airport

Because once it's gone, it's gone forever.

*By David Esler*

**A** dearth of open space suitable for urban development has combined with the need for cash-strapped municipal governments to seek short-term tax revenues, creating a “perfect storm” in the ongoing assault on general aviation airports.

Last year, *B&CA* reported the targeting of general aviation airports by real estate

developers (see “How to Save Your Airport,” March 2005) in order to gain land for new housing, offices and stores as a growing trend. However, in the intervening months, it appears to have gained sufficient momentum to be reclassified as an accepted practice by the land-development industry. For financially beleaguered city and county governments — as well as politicians soliciting PAC campaign contributions — these proposals can appear extremely attractive.

According to Henry Ogrodzinski,

president and CEO of the National Association of State Aviation Officials (NASAO), these developers are “the enemy” when it comes to general aviation airports, “because they are looking for large plots of land to turn into housing and strip malls, anything that they can make a buck on. They very often convince the local politicians that the airport is a drag on the tax base, and ‘Boy, wouldn’t it be better if we could put up 1,500 condos or attract some industry to put on that land?’ So it is the developers who are often the ‘first



**Santa Monica Municipal Airport (SMO), from the air. Interstate 10 runs from the top center to the upper left; Clover Park is the green patch to the left of the airport. SMO's right (south) side is actually the border between Santa Monica and Los Angeles. Corbis/Douglas Slone**

movers' in this scenario." NASAO and its state aeronautics members devote much of their energies to defending airports, especially general aviation relievers.

The second mover is the politicians. "They may be convinced that it's better for the community's tax base," Ogradzinski continued, "or they may, in their self-interest, be angling for a campaign contribution, so sometimes they are honestly convinced, and at other times, they're brought over by a slick developer with a nice rich PAC at his disposal."

### 'Aviation-Haters'

The third group of players in the airport endgame is an amalgamation of anti-noise advocates and "people in the community who either hate the airport or aviation in general — they are way beyond being just 'NIMBYs' ['not in my back yard'] — who agree with the developers and see them as saviors of sorts," Ogradzinski observed. "They would rather have anything there than the airport."

On the other hand, as it did at Buchanan Field (CCR) in Concord, Calif., this constituency may realize the proposed construction replacing the airport "will screw up their lives in other ways, like creating unbearable congestion, and that the airport and its noise isn't such a bad idea after all," Ogradzinski said. When a major West Coast developer proposed replacing CCR with 6,500 residences, a collection of malls and offices, and a college campus, anti-noise advocates in the already congested San Francisco Bay-area bedroom community were persuaded to become partisans for the airport. Described in our report last year, the proposal was ultimately rejected by the airport's operator, Contra Costa County, which had assumed its ownership as an obligated land-grant airport after World War II. An enhancement plan to improve the airport is currently under way.

"So you have a number of things going on there," Ogradzinski continued, "some rational, some based on enlightened self interest, and some deriving from plain greed and irrational dislike of aviation. Nevertheless, I don't think most people get up in the morning with the idea that they're going to close the local airport."

But it's not just general aviation airports that are under a seemingly relentless chipping away throughout the country.

Steve Brown, the NBAA's vice president for operations and a former FAA deputy administrator, claimed that the state of U.S. general aviation fields "is only part of a slow deterioration that places pressure on all classes of airports across the country. In general, because the overall economy has been reasonably healthy, whether you're talking about an air carrier airport, a general aviation reliever, even a military field, all categories of airports are being subjected to huge pressures from real estate developers eyeing the land they occupy. And as local authorities make short-term decisions in the hope of gaining some tax revenues, this places all airports under more pressure than ever before."

Historically, more private-use airports succumb to the developers' bulldozers every year, but this doesn't relieve the pressure on public-use facilities. "The military would say the same thing, as would representatives of the airlines," Brown said. "They're all engaged, to the best of their abilities, in trying to protect the airport facilities they still have. There are some places where airports can be expanded, but they are typically not where the capacity is needed the most."

### Unprotected

Brown cited the late Meigs Field, arguably one of the most beautifully sited airports in the nation prior to Chicago Mayor Daly's midnight raid on the facility a few years back, as "clearly the most visible closure in recent memory. Beyond losing the field entirely, though, what was tragic about Meigs was the fact that its closure sent a terrible signal to other mayors and city councils around the country. Fortunately, so far, we haven't had any others that have come up like that."

Meigs fell under the plow because Chicago had no federal obligations to keep it open, the city's Department of Aviation having never accepted FAA Airport Improvement Program (AIP) grants on behalf of the field. At the time and as we reported last year, it was generally assumed that airports that had applied for and accepted AIP funding with its binding agreements were protected from closure for at least 20 years — per grant. And that's federal law. But since then, dangerous precedents have been set in which airport authorities in at least two states have used congressional intervention to essentially annul FAA requirements to either keep fields open or not restrict their operations

## Composing a 'Values Checklist' for Your Airport

A good way to get started with an airport-advocacy program is by composing a "values checklist" listing the strengths and weaknesses of the facility. Here are some areas to consider when getting started:

► Is the airport really serving the community or region in its present state? Using the guidelines stated in this report (both the main story and sidebars, especially those describing state aeronautical programs) justify all the reasons why the airport benefits your community. (See also next point.)

► In today's Darwinian economic paradigm, an airport has to be an "engine" for commerce. How is your airport generating or otherwise supporting commerce in your community or region? If not, why not? Are all the regionally based corporations and businesses in your area aware of the airport's potential value as a node in the national air transportation system? What about public-service agencies, e.g., police, fire and EMS operators?

► For that matter, is your airport truly part of the national transportation system? How easy is it to access the airport with surface transportation?

► What are the safety and noise issues connected with keeping the airport open? How is it situated in terms of residential development? If noise is a continuing issue, what is the airport management doing to allay residents' complaints? How clear, or otherwise unobstructed, are the approaches? What is the airport's safety record up to now? Has there been a pattern of accidents? If so, are there changes that could be made to reduce accidents and still retain the airport?

► What is the condition of the airport's facilities? FBO(s)? Other support businesses, e.g., repair stations, avionics shops, restaurant, etc.? Runway and ramp condition? Hangar space? Landing and nav aids? Control tower? Fire protection and security (a given, in the post-9/11 environment). Is it worth it to apply for FAA Airport Improvement Program (AIP) grants? How difficult would the process be in the individual case of your airport?

if they're encumbered with open obligations from AIP grants.

In the first instance Jackson Hole, Wyo., was successful in instituting noise restrictions at its airport (JAC) after the state's congressional delegation inserted language into an unrelated House bill stipulating that the airport could bar access to Stage 2 aircraft despite FAA nondiscrimination rules. This gives one pause to wonder if the move emboldened the city of Rialto, Calif., to employ the same tactic in order to close Art Scholl Memorial/Rialto Municipal Airport (L67) for real estate development.

"This one represents a really scary precedent," AOPA Vice President Bill Dunn told *B&CA*, "as local development interests were able to go over the FAA's head on an AIP obligation by appealing to their congressman, Representative Jerry Lewis [R-Calif.]. In the waning hours of the 2005 congressional session, he attached an amendment to the Federal Highway Transportation Bill allowing the city of Rialto to close the airport and sell the land to developers."

It seems FAA grants were originally used to purchase more than half of the 453-acre

facility's property. "And get this," Dunn said angrily, "although \$15 million in AIP funding has been invested in the airport, *the spoils of the sale don't go to the FAA* — 55 percent goes to the city and 45 percent to San Bernardino International Airport [a converted U.S. Air Force base]. So the FAA gets back the unamortized portion of the airport development grants, less the acquisition of the land . . . [or] about \$300,000 on the sale of property, which has been valued at more than \$4 million! The good news, if there is any, is that it literally took an act of Congress to close the airport. These vehicles don't come along that often. For them . . . a lot of things aligned at the right time to make this happen. There are 153 based aircraft at that airport which will now have to be relocated."

In their defense, Rialto officials claim Art Scholl Memorial is a "money pit" and that the city can no longer afford to operate it. However, the AOPA believes the municipality intentionally allowed the field to deteriorate to the state where it cannot support itself through traditional forms of revenue like ramp and hangar rents and fuel flowage fees.

"Most elected officials have never seen a

## ALL CATEGORIES OF AIRPORTS ARE BEING SUBJECTED TO HUGE PRESSURES FROM REAL ESTATE DEVELOPERS EYING THE LAND THEY OCCUPY.

development plan they don't like," Dunn said. "In many instances, what we're finding is the flat land of the airport is the last developable property in most communities. Instead of having to level a hilltop, all they have to do to make an airport into a shopping center is bulldoze what's there and start over."

### Clear Need for Capacity at Existing Airports

Looking at the bigger picture beyond the real-estate crunch and the threat it poses to the general aviation relievers in terms of potential closures, there is a clear need across the board for more capacity at the nation's busiest airports. With sales picking up, more than a thousand aircraft are being added to the overall fleet every year, and operators are flying more than ever before, increasing the pressure on airport infrastructures for more runways and runway extensions, better lighting and additional nav aids.

"In the places where that is needed, like Los Angeles, it is a virtual impossibility," the NBAA's Brown said. "In fact, what is normally happening is that there are proposals for enacting even more constraints, so it is going in the wrong direction in that respect, [and] that's largely a failure of local zoning."

The New York metropolitan area is a similar story. While the Port Authority of New York and New Jersey has brought some improvements to Teterboro (TEB) in the form of new taxi configurations, run-up areas and ramps, and revised approach procedures designed for more efficiency, Brown claimed "there is really no prospect of lengthening runways or adding additional ones there or at any of the primary air carrier airports."

Consequently, business aviation advocates must be alert to local initiatives limiting the usefulness of airports or restricting their operations, "because we can't afford to lose any of the access we have," Brown pointed out. "Any time there is an opportunity through technology or some limited airport

grants to improve the service, capacity or efficient use of the existing infrastructure, people need to get behind that and optimize what we have.”

Returning the spotlight to Los Angeles, Brown cited Van Nuys (VNY), ranked the world’s busiest general aviation airport and, with more than 450,000 operations annually, among the top 20 busiest U.S. facilities, as a prime example of the wrong-way trend to limit capacity. Of the 800 aircraft based at VNY, more than 120 are jets.

“Van Nuys was in the middle of orange groves in the 1940s and -50s, and now there isn’t buildable space within a seven-mile radius of the airport,” Brown said. So with no room for expansion and thousands of homes and businesses butted up to the fences, considerable pressure is being placed on the field’s operator, Los Angeles World Airports (LAWA), to limit operations.

This culminated in 2005 with the commission of an FAR Part 161 noise study. Ongoing, the study, required by the Airport Noise and Capacity Act (ANCA) when an airport operator desires to institute proprietary noise controls (i.e., a noise limit specific to the airport), is expected to continue for at least another year. “They are looking at the potential economic benefit and cost of limiting operations at Van Nuys,” Brown said.

“I was there [in June] to meet with the LAWA and city reps, their contractors doing the study, and our members based on the airport. Basically, we got a sense of where they are in the process, the kind of public outreach they will take and its schedule, and how they will gather the economic information on the costs and benefits. I was satisfied that the people engaged in performing the study are qualified and professional.”

On the other hand, Brown wasn’t satisfied that all the factors that should be considered in the VNY Part 161 study — the “impact points” — have been put on the table. “That will be the role of the NBAA and our members. At Van Nuys, a lot of the people we talked to say they regularly operate nonstop between the East and West Coasts, and one of the things under consideration is a reduction in the hours of operation of the airport. This measure, if adopted, would reduce the working day and limit the flexibility of those operators, thereby diminishing the usefulness of the airport.”

If the number of operations is lowered at VNY, Brown predicted, fewer tax revenues will flow to the city from the businesses that depend on the airport. Ironically, LAWA itself claims the airport contributes a whopping \$1.2 billion annually to the Southern California economy and that the facility “creates job, promotes business and

## The FAA's Position on Acts of Congress to Close Airports

*B&CA* asked the FAA's Airport Safety and Standards Division director, David Bennett, what the aviation authority's position was regarding the use of congressional legislation to override federal grant obligations so airports could either be restricted or shut down. Here's his response:

"We think the general laws relating to airport access are very clear and support the FAA's position in enforcing reasonable access to airports and keeping them open in accordance with federal obligations such as AIP funding and surplus property disposal," Bennett said. "I think the exceptions you cite [the Jackson Hole Stage 2 ban and Rialto airport closure] show that it takes a law to do that [i.e., discriminate against a class of aircraft or close an obligated airport]. Only two or three airports per decade are released from these obligations, so it's vary rare. The acts of Congress show that that's what it takes. It would be of interest to us, however, if it became widespread."

Concerning encroachment outside the fence lines, Bennett admitted that this "can be a problem. Incompatible land use adjacent to the airport can act to restrict the utilization of the airport. We agree with NASAO [National Association of State Aviation Officials] that local governments should not condone land use that will ultimately restrict airports. We have put out model standards that we encourage local governments to adopt and assist them in a number of ways, all of it short of control by the federal government. But we do expect local jurisdictions to do all they can for their airports, communities and the NAS."

### Pressure Points

When a general aviation airport is closed, *B&CA* asked, is additional pressure placed on other airports in an area, particularly the commercial hubs? "If an airport is federally obligated," Bennett answered, "it is because we have found it to be an important part of the national airport system, both in terms of

access and, in many cases, to relieve commercial airports of GA traffic. But we also understand that they can be important just for access to the community as well as reducing congestion at the bigger airports."

Bennett cited the FAA's National Plan of Integrated Airport Systems as the linchpin of the U.S. airports system and the basis for identifying candidates eligible for AIP grants. In that regard, NPIAS currently recognizes more than 3,300 airports deemed significant to national air transportation and thus qualified to apply for the funding. It also includes estimates of the amount of AIP money needed to underwrite infrastructure development to raise airports to current design standards and add capacity to those considered congested. The FAA is required to provide Congress with a five-year estimate of AIP-eligible development every two years.

The current report, covering 2005-2009, states that 98 percent of the U.S. population resides within 20 miles of an NPIAS-funded airport, based on data from the 2000 census. Quoting from the report: "The NPIAS is comprised of all commercial service airports, all reliever airports and selected general aviation airports. It includes 3,344 of the 5,280 U.S. airports that are open to the public. . . ."

Concerning the density of NPIAS airports in terms of their accessibility by the general population, the report claims that "Commercial-service airports are within 20 miles of 66 percent of the population (77 percent when reliever airports are included). When general aviation airports are also included, 98 percent of the population is within 20 miles of a[n] NPIAS airport. Of the total U.S. population of 287 million people, all but 5.4 million live within 20 miles of a[n] NPIAS airport."

The full report can be found in the airports section of the FAA Web site at [www.faa.gov](http://www.faa.gov).

provides vital general aviation and emergency services."

### If You Can't Ban 'Em, Restrict 'Em

Meanwhile, at nearby Santa Monica Airport (SMO), local authorities, goaded by ongoing noise complaints, have been agitating for some time to shorten the field's single 5,000-foot runway (3/21). "The reality here, though," Brown pointed out, "is that they want to limit the size of aircraft that can access the airport to reduce both noise and the number of operations."

According to Brown, the need for more capacity among Los Angeles' airports also "reinforces the tragedy" of the loss of El Toro Marine Air Station in Orange County to aviation when the base was closed in 1999 and the space approved for mixed development. "There we had all the infrastructure we needed to expand in the Basin, and the elected officials just couldn't get it together to do it."

Still in the Golden State, Oceanside, just

north of San Diego, is framing its attack on its airport in an alternative land use study intended to decide "the highest and best use" of the property occupied by its airport (OKB). As in Rialto, the city claims it can't afford to operate the airport, but the AOPA believes the city government is determined to neglect the field.

"There was some discussion that one of the 'big box' stores wanted to build an outlet there," the AOPA's Dunn said. "Two of the five members of the Oceanside City Council support keeping the airport open, and three want to close it and reuse the land. [One council member also serves as mayor.] We're working closely with the Oceanside Airport Association, and I'm heading out there in a couple days and will spotlight these issues in the local media."

The airport has received AIP grants, but according to Dunn, the "party of three" thinks it can pay the FAA back. "It's an uphill battle. I think it's a winnable issue, though, as there's an election later this year for two of the council seats."

Another threat to airports of all stripes is incompatible land use around airfields, resulting in encroachment that creates all sorts of problems, ranging from potential safety risks to noise complaints and restricted operations. Some airport advocates believe that in cases where local governments have been unable to close airports outright, allowing incompatible land use (e.g., building homes and commercial structures along the fence lines), is evolving into a tactic to ultimately gain control of the land for development. As John Sibold, Washington state's director of aviation, pointed out to *B&CA*, permitting encroachment is often the first step in an orchestrated plan to close the airport.

This apparently is what's going on at still another Southern California airport, Jacqueline Cochran Regional in the desert community of Riverside, where the county that owns the field is considering a proposal by developers to modify the land-use compatibility agreement with the airport so



they can build 883 residences on 279 acres of buffer property.

“The expected impact, based on our experience in these issues,” Dunn said, “will be complaints about safety and noise and attempts to enact curfews and limit aircraft types accessing the field. It’s an obligated airport, but they will still try. Like so many local governments, [the entities that run these airports] are infatuated by the short-term money and lose sight of the value of the long-term airport.”

### Creating Tension

Washington’s Sibold observed that “allowing things in that don’t sit well in an airport environment, you will create tension between the airport and the community.” This then increases the likelihood of encouraging even more public opposition, stoking an adversarial climate, which is just the opposite of what the airport needs.

“If you allow a garbage facility next to a residential area, you will create tension,” Sibold said. “So why do that when you can zone for compatible uses? In cases where it does happen [in Washington], then we say, ‘OK, then you need to cluster it and provide open areas of green space.’ We look at safety data, and where aircraft might lose an engine or have a problem in the pattern.”

Ratcheting up the density of housing in the airport area is then guaranteed to produce more complaints from residents. And despite how quiet modern aircraft are under Stage 3 and 4 rules, noise then becomes a “perception issue.” This can all be avoided with proper planning and zoning, Sibold believes from his own experience running Washington’s DOT Aviation Division.

Despite the California examples cited here, Dunn and others interviewed for this report believe that the state has put together one of the best systems in the country for preventing inappropriate land use around its airports. (Sibold said Washington has patterned its successful airport-defense program after California’s.) That’s especially good since in 2004, California was host to 263 public-use airports, the third highest in the United States behind Texas (369) and Alaska (312). The California system requires every county in the state to have an airport land-use commission, or ALUC, and to maintain a comprehensive use plan for acreage within two miles of an airport that specifies what is or is not compatible with the facility.

“At Cochran Field, Riverside County is trying to get the land-use plan changed to allow higher [building] densities in response to the developer’s plan,” Dunn explained.

“It is NASAO’s position that inappropriate land use around airports hastens the

injury or demise of those airports,” Ogradzinski said. “If you allow encroachment up to the fences or industry to erect a tower at the end of the runway, you are endangering your airport. Many times, I’ve gone to the FAA and pointed these things out, and they’ve responded that ‘Zoning is not our business — it is the locality’s business.’ So I knew this would become a difficult row to hoe [as] . . . there

were limits to what both the federal government and the states could do.”

So three years ago, NASAO and the FAA began working together on a land-use initiative intended to create a national framework for protecting land around airports from inappropriate use. “Both organizations compiled a joint statement of agreement on the subject. It’s not just about noise,” Ogradzinski said, “it’s about

compatibility. What could be built nearby that would detract from the airport's safety and usefulness? Remember, these are essential public facilities. You have to protect them as such."

### Do You Really Need Your Airport?

With modern city governments being pulled in so many directions by ever-escalating — and often conflicting — demands for services from residents and business, with declining tax bases, unemployment issues, crime, educational needs and all the other problems that fill our nightly news reports, how can they be convinced of the importance of retaining a cash-neutral or cash-draining municipal airport when developers are telling them how much money they can rake

in by replacing it with condos and strip malls? How do you persuade a community that it needs its airport as a fully functional, unencumbered public asset?

First, as NASAO's Ogradzinski observed, "If the airport doesn't have a 'champion,' it's toast." He meant someone like Toyota Motors Gulfstream captain Pat Carey, who took on the leadership role in the late 1990s to save Hawthorne Airport (HHR) in Los Angeles. (In recognition of his efforts, Carey received a *B&CA* Vision Award in 2002.)

Then the champion — either an individual or a group — must begin an organized campaign to educate local officials, residents, and business and industry as to the value of the airport as a public asset. The first place to start is by compiling a

"values" checklist. Then a liaison must be established with the public to show how the airport and general aviation not only touch their lives personally but what it represents to the future growth of the area, that it's a long-term asset benefiting the overall economy and quality of life.

The AOPA has long described general aviation airports as portals to the larger world, and Ogradzinski agrees. "I'm very often on the road, and when I'm talking about GA airports, I describe them as local gateways to the world — with your airport you can get anywhere in the world, you have access not only to the National Airspace System but the international airspace system. If you order something on line and don't live in a metropolitan area, you will in

## Practicing 'Airvangelism' in Oklahoma

Out in Oklahoma — the birthplace of business aviation, according to state aviation director Vic Bird — they practice what they call "airvangelism."

"Airvangelism is an awareness campaign, letting average citizens know just how important the aerospace industry is in our state," Bird told *B&CA*. "The second part of it involves telling them how important their GA airports are. I simply make people aware of something they take for granted."

Aerospace is one of Oklahoma's top three industries, providing more than 140,000 jobs, a \$5 billion payroll and industrial output of \$12 billion a year. "From the time of Clyde Cessna, who started in Oklahoma, aviation has been important here," Bird said, proudly. "We are recognized as one of the six major centers in the world for MRO, and accordingly, American Airlines has established its largest maintenance base in Tulsa. Additionally, we have the U.S. Air Force Logistics Center at Tinker Air Force Base, employing 26,000 people and providing a \$3.5 billion impact in the state."

But it was the 111 general aviation airports distributed throughout Oklahoma that Bird wanted to talk about, especially about their value in attracting both industry and business aviation to the state.

"For example, Idabel, Okla., in the southeast corner of the state, hosts significant Weyerhaeuser Forest Products and Tyson Foods operations, employing 2,300 people, and one of the reasons why both of these companies sited there is because of the presence of the airport [404] with its 5,000-foot runway. The town is not close to any commercial airport: It's at least 2.5 hours from DFW, at least three hours from Fort Smith, and four hours from Oklahoma City. Being able to get there in a business jet is important to those two companies.

### Business Jets Replace Greyhounds

"And we have examples of that all over our state," he continued, "major corporations like Michelin and Dollar General, which have, respectively, a plant and a distribution center in Ardmore collectively employing 2,000. Ardmore has two jet-capable airports [ADM and 1FO], and both companies have identified those airports as reasons for being there. Business doesn't come calling in a Greyhound bus

today — it arrives in a business jet."

There was a time when Idabel had some concern about sponsor commitment at its airport, Bird said, "but 10 years ago there was a strong focus on what the airport could mean in terms of economic development in that community, and since then, it has been well protected. My predecessor assisted in that regard, but it was a grassroots recognition of the role the airport played that saved it. Those fields are truly a way to the world for communities like this, a real lifeline."

Oklahoma hasn't been greatly confronted by airport closure threats of late, but Bird did mention one field that he has concerns about. "The airport at Grand Lake [309], a major tourist attraction, has fallen into the hands of a private individual," he said, "and that has caused concern with us and the FAA, because together, we have about \$1.5 million invested there. We want to get it back under public control. There is massive development in that area, lots of home building, and we'd feel better if it's back in public hands because there are developers who'd like to get that land."

Grand Lake had been owned jointly by the county and a public trust. As part of a settlement following a series of lawsuits involving the trust, it wound up being conveyed to the airport manager. "He's said he intends to keep it public but has to make money from it," Bird said. "He wants to construct 'hangar-homes,' which the FAA adamantly opposes, and so we don't know what his next move might be. The AOPA has weighed in on it on behalf of us, as did the EAA [Experimental Aircraft Association], and the NBAA adopted a resolution supporting our efforts to get it back to a public facility. We are pursuing this in both federal and state courts."

Bird contends that the birthplace of business aviation was Oklahoma as a direct result of the oil boom centered in the Tulsa area in the early 20th century. "Companies like Phillips Petroleum chartered Wiley Post to fly their executives around," he said, "and they learned quickly that they could get there faster by aircraft. All of the refiners started flight departments here in the 1920s and 1930s. We have really deep aviation roots. It's a legacy we aim to protect."

all likelihood have to rely on a FedEx, UPS or DHL general aviation aircraft bringing your package to your local airport. So the airport is a hub of commerce and your community's front door to the world."

The public-service argument is even more compelling, especially in the wake of last year's hurricanes that devastated the Gulf Coast. "Look at the aftermath of those storms," Ogrodzinski said. "General aviation airports became staging areas for the National Guard, the Red Cross and other NGOs [non-governmental organizations]. I spoke to several airport operators after Katrina and Rita, and those airports became places where people went because the airport had fuel, or it had large buildings still standing that could be used for shelter. So they gravitated naturally to the airport to find it not only a place of comfort and solace but their lifeline to emergency services, because there was nothing left in the community to fill that gap."

And since every airport is part of a larger network, "aviation alphabet organizations" were able to arrange critical resources and services to be transported from other unaffected airports to those requiring assistance.

"My point," Ogrodzinski concluded, "is that clearly in terms of natural disasters, hurricanes, fires, flooding or heavy rains, these airports serve as lifelines. How are we going to get supplies in or evacuate people if we don't have airports?"

At the NBAA, the business aviation lobby is taking the approach in its airport-advocacy efforts of promoting the fact that airports exist for reasons other than just tax benefits and are part of essential infrastructure, serving a broad range of purposes. "It's a never-ending crusade as to why it's important to keep visible the full value of airports on a local and national basis," Brown said. "We are often seen as a small special interest as compared to the broader public and all of their issues, so we need to develop a public understanding of the value of airports to their lives in the same context as highway and rail infrastructure."

So what do you tell cash-poor municipal governments struggling to provide basic services to their communities? Why should they avoid the siren call of the developers who promise them a short-term financial solution to their problems in exchange for their airport's land?

"I try to find out what the community thinks of its airport and of itself," Ogrodzinski said. "For example, some communities are tourist destinations interested in luring people to the area, or they often talk about tax breaks to attract business to the area. I will remind them that the CEO of that company they want to give the tax break to so it will put its plant there



Aurora/Getty Images

Airplanes illuminate the night sky while coming and going from Van Nuys Airport, California.

will fly into the community's airport in a company aircraft. In other words, the airport is an important business asset to support sustainable local development.

"It's important to tell people who are not aviation oriented that we have a national system of airports," he continued, "and that if they are, for whatever their reasons, interested in closing their local airport, they need to know they are pulling an important brick out of their wall, that is, disconnecting themselves from a national transportation system."

Dunn at the AOPA added, "What we ask them is if they want to close the interstate off-ramps to their communities. We tell them the NAS is an interstate system in the sky, that one mile of asphalt on a road takes you one mile, while a mile of runway will take you anywhere in the world. The U.S. Department of Commerce recently updated the impact of GA airports in its 'RIMS-II' economic model and discovered that, for every dollar generated on an airport, another \$2.53 is generated in the community it serves, and that equates to jobs and payroll. Many businesses will locate a facility based on the presence of a GA airport.

"If they have a developer in their midst who's committed tens of millions of dollars to the city treasury, sure, it's an uphill battle," Dunn continued. "It's always a challenge. But the message we have got to get across is that whether your airport is a



## How Washington State Encourages Compatible Land-Use Planning Around Its Airports

It's not just the land within the airport boundaries, stupid. As ever more airports are saddled with noise and operational restrictions due to encroachment by homes and commercial properties, the importance of compatible land-use planning has never been more obvious.

As John Sibold, Washington state's aviation director, pointed out to *B&CA*, often allowing encroachment of inappropriate real-estate development signals the first step toward ultimately closing the field. Consequently, encouraging proper land-use planning is a major component in the Washington DOT's airport preservation program.

"The best way to describe our role is that we are tasked with preserving the state aviation system, with the understanding, of course, that the airports are controlled by local ownership," Sibold said. "Because of that fact, our job can be difficult, and we approach it several ways." In addition to providing money and resources to airports, especially smaller fields that can't qualify for federal grant money, the state vigorously pushes a compatible land-use program. "I'm the [airport] custodian here," Sibold explained. "I don't own the system, so I have to encourage local jurisdictions to protect their public assets."

Thus, Washington's airports program isn't as much about advocacy as it is a vehicle for presenting airports as transportation assets and providing assistance to local jurisdictions for proper land-use planning. "We try to convince them not to adopt land-use measures incompatible with the airport, often the first step to closure," Sibold continued. "So in the 1990s, the Washington DOT Aviation Division, following a model developed in California, was able to convince the state legislature to pass a law requiring local jurisdictions to protect airports as essential public facilities."

The second step was an amendment to that legislation recognizing that, for certain assets deemed to be essential public facilities, like airports, a higher standard of protection was needed. "The legislature accepted how difficult it is to [site new airports] . . . in these times, so it is essential to protect what you already have."

So the legislators gave the Aviation Division authority to provide technical assistance to land-use authorities, counties and cities. "It requires that when they are updating their comprehensive land-use plans and get to aviation, they are required to contact us so that we can come in and give them advice as to what has to be protected. We have done that in the majority of counties in the state — 60 of them."

In the case of airports and land use, the Aviation Division approaches local jurisdictions, and attempts to work with their officials and planners to develop policy and zoning that meets the intent of the law. "Different approaches are taken with each airport, as every situation is unique," Sibold said. "In urban environments, for example, it's more difficult because the land is more valuable. What we ask of them is to zone it for aviation and light industrial use so there won't be a negative impact by building the wrong structures close to the airport."

### Development Attracts Development

Being able to affect this process is essential for the long-term health of the airport because, as Sibold put it, when you allow certain development to occur, it will attract other development. "Since small airports are often unable to pay for themselves with the business that's generated on the field, municipalities don't see them as high in value, so they'd rather take that land and develop it. So it's important to get a head start at airports that don't yet have land-use problems so they can be zoned for protection and to keep their operators focused on that pro-airport philosophy. Where you have airports closing, it's where there is a lot of urban pressure." Although Washington recently lost privately owned Evergreen Airport in Vancouver, Sibold claimed the program has been generally successful in defending the state's other fields.

For cases where a jurisdiction disagrees with the state's airport land-use policies, a mechanism has been written into the law allowing airport users to file complaints with the state's Growth Management Hearings Board if they believe that the airport's policy doesn't follow the intent of the law. "The

Hearings Board takes cases from individuals from both sides of the argument as to whether or not the policies of the airport comply with the intent of the law," Sibold said. "In all of our cases where these complaints were filed, the jurisdiction was required to go back and revise its policies to do a better job of protecting the airport from incompatible land use.

"The state has the authority to file, as well," he continued, "but we rarely do, as we believe it's the public's responsibility. The legislature was clear — they don't want Big Brother in there, they want people to negotiate with each other [since] they recognize that every issue is different. Every jurisdiction has to get public comment from our agency on our plan. We're only addressing land-use outside the airport boundaries. All land use within the boundaries, if it's federal, is subject to approval through the master plan process."

The "problem" state aeronautical commissions face in these times of restricted municipal budgets boils down to this, Sibold said: "If you have an extreme urban environment and are running out of land, any property like the airport is an important tax base, maybe the only one. If you can't figure out the value of the airport in a way that makes sense, then there's pressure to close it."

But public assets don't always have a financial rate of return — there may be cost associated with them that must be absorbed or justified by the long-term value they return to the community, in the case of general aviation airports, as key components in the transportation infrastructure. "One big mistake that we [as a nation] made in the past was selling off our rail systems," Sibold pointed out, "and look what happens now when you want to build a light-rail system.

"When people argue with me on the money and jobs issues," he continued, "I tell them that it's not about the 'rich pilots with their toy airplanes,' it's about the transportation asset. You're supposed to be thinking about the future. There may be cases where there are multiple airports [in one location], but you have to think long and hard about giving even one of them up." In

Washington, the compatible land-use program is the primary tool in Sibold's toolbox for creating awareness of that present and future value.

### Get Involved in the Process

Sibold said airport backers can assist the state in protecting these public assets by getting involved carefully and intelligently in the political decision-making process — that is, not being adversarial but working with local jurisdictions as advocates for transportation. This can take the form of appointments to boards or even running for office. “When communities take away airports, where do they think these airplanes are going to go? You have to plan for the future, and if you're turning the landing fields into retail development, those facilities will never come back. The aviation opposition votes and gets onto city councils, so if you're worried about that, you'd better run for office.”

When Sibold and his people approach a community engaged in discussions to chuck the airport for strip malls and big box stores, “we find the pro-aviation council members who will sway the others. You have to find reasonable people who understand it, and you have to understand that it gets political.” So it's to the airport advocates' advantage to get involved in the master planning process and offer acceptable compromise solutions.

But again, the approach that airport advocates, especially pilots, take must be carefully considered to avoid polarizing the situation; i.e., it's a good idea to work with people, not against them, toward a compromise that preserves the airport and allays the reservations of the anti-aviation factions within the community. Yes, this is hard work and always tedious, but according to Sibold, you get more by being a positive force for the future of transportation in your area than by opposing the process.

Sibold, an active pilot who flies his own Cessna 180 on “slick” floats, occasionally gets frustrated with activist pilots who, just like the city councils that see only the short-term profits to be reaped from replacing the airport with development, fixate only on the airport and not on the future and the challenges facing the community.

“They don't look at the big picture,” he said. “You have to be involved in the modern-day issues, what needs to be done to allow airports to survive. In public parks, they're doing multiple-use activities, in one case up here combining a seaplane base with a lakeshore park. That's a good model for airport advocates to look at — that is, multiple use that is compatible with the airport. You gotta' be smart about this, and it takes work.”

Pilots must be sufficiently savvy to understand that “in today's environment, you have to be careful and politically sensitive — you don't want to create a problem that didn't exist before,” Sibold warned. “Pilots and operators and advocacy groups have to understand how to ‘work’ the community and be aware of the sensitivities around the airport. You can't all of a sudden raise enormous issues about the airport; you have to be in step with the community when you talk about further development of the airport, to work with them and have public meetings so people fully understand what you're doing. You can't do any of this in a vacuum any more.”

Sibold cited Blaine Airport (4W6) on the Canadian border, whose management put together a master plan to extend the runway, “and when the master plan went out for comment, people objected to all the money that was going to be dumped into [an] airport ‘with very little usefulness.’ What got published was what it was going to cost, and that's all people saw, not the arguments in favor of the airport and the future of aviation in the area. You can't look at the value of the airport today — you have to project the need, say, 20 years out. . . . The public should have been more involved along the way. You can't just go and raise major issues around the airport that will create consternation without first working hand in hand with the community.”

So Sibold urged airport supporters to “figure out the ways to make the airport valuable to your community. If the numbers don't support it, you have to show people the public asset value that the airport represents. It's about how the government has to provide certain public resources.”

large one or a small GA field, you have single-engine piston aircraft being delivered at a higher rate than ever per quarter, more people are flying, and we have to keep the airports open.”

### Maintaining the Status Quo

It being nearly impossible to expand an airport today, let alone site a new one, just retaining what we have is a full-time job for all stakeholders. “[It] requires vigilance and the willingness to step forward and be active with local officials and city councils to make it apparent how valuable airports are in terms of social values,” Brown at the NBAA said. “When you look at post-Katrina and the role those airports [on the Gulf Coast] played to help preserve the economic fabric of those areas, you see the value of the community airport.”

Brown cited a panoply of airport advocacy resources the NBAA makes available to its members to assist them in articulating those values to the government entities controlling the destiny of their airports. Listed on the organization's Web site ([www.nbaa.org](http://www.nbaa.org)), they include an airport advocacy CD that enumerates the aforementioned values airports provide the community and suggestions on how to develop airport support groups that can work with local government as well as citizen neighbors to develop broad-based support.

From the alphabet groups to state aeronautics departments vested with preserving their aviation assets to individuals engaged in the front lines of the ongoing fight, everyone *B&CA* talked with said community involvement is the key to success.

In his peregrinations around the country, Ogrodzinski said he's seen examples of airports getting “adopted” by local groups in exchange for having use of some of the facilities for their meetings. “Not only that, but they get exposed to aviation and learn about what it does for the community. Some airport managers will open their hangars for community affairs. This is true community outreach. You have to build a network of support and then engage the local media, which is always looking for newsworthy stories.”

This support can also counter news from the pro-development side explaining why the airport should be deep-sixed in favor of big-box stores and subdivisions. The more people get to know their airport — its expanses, its typically light activity, its relative quiet — the better they can appreciate its merits against its would-be successor. And just as the citizens of Concord discovered, in the end the airport looks like a pretty neighbor, just the way it is. **B&CA**

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## NJ Leads Nation in Airport Preservation, Aims to Be First in GA Airport Security

Nov '05

By Jack Elliott

In this time of constant threats to the existence of general aviation airports, the New Jersey Division of Aeronautics has announced that it leads the nation in airport preservation. In addition, the state is aiming to become the first in the nation to have surveillance cameras at all public use GA airports.



Tom Thatcher, director of the Division of Aeronautics, announced that the Aircraft Owners and Pilots Association has recognized the state for its airport preservation program. AOPA, with 400,000 plus members, is the largest pilot organization in the world.

"New Jersey has become far and away the national model for developing and implementing policies and practices to help preserve and protect the general aviation infrastructure," said Roger Cohen, AOPA's vice president of regional affairs, in a letter to Thatcher.



The principal means of preserving airports in New Jersey is a state law introduced by Assemblyman Alex DeCroce and passed in 2000, which enables the state to buy development rights from GA public use airport owners. Based on the Farmland Preservation Act, the owner is paid for the development rights. In return, the airport owner can't sell the airport to a developer. The property must remain an airport in perpetuity.

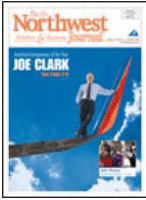
It's a win-win situation. The airport owner gets a considerable sum for the development rights (usually at least a million dollars), and he still owns the land and the airport, and can continue to operate it. The state is assured that it will not lose a part of its airport system and it preserves open space. Prior to the enactment of the Development Rights Act, New Jersey had lost 14 airports since 1982.

The state has purchased the development rights of three airports. Two others have accepted offers for the purchase of those rights at their airports and five more airports have requested offers for their development rights. Several others are contemplating such action. In addition, the state has purchased three airports outright: Aeroflex-Andover, Greenwood Lake and South Jersey Regional.



Federal Aviation Administration statistics indicate that from 2002 through the end of 2004, 45 public use airports throughout the country were abandoned. That number could be cut significantly if other states were able to get development rights laws passed.

The New Jersey Division of Aeronautics is also seeking to become the national leader in yet another vital airport concern--security. The state hopes to be the first to have video surveillance cameras at all public use GA airports in the state.



"The cameras will be installed at all 32 core airports in New Jersey, but it will not be limited to those airports," said Thatcher. "There will be several cameras installed at each airport to provide full coverage of each facility."

Tests are currently underway at the first three airports before the system is put out for bid. At South Jersey Regional Airport, one of the three at which tests are being conducted, Thatcher reported that within two weeks of installation images were released to police for an investigation.

"The system can perform six functions," Thatcher said. "It can provide deterrence and detection. It will impede illegal activities. It will evaluate a threat and it will provide a means of communications and a means of response."



The department's primary focus will be on those public airports that currently have no security systems in place, but have a large number of based aircraft. Larger general aviation airports in the state, such as Teterboro and Morristown, already have surveillance systems in place.

Teterboro, which is operated by the Port Authority of New York & New Jersey, comes under the jurisdiction of the Transportation Security Administration, and the airport is fully covered by surveillance cameras. At Morristown there are numerous cameras under private jurisdiction. There are a substantial number of corporate hangars at Morristown and they have extremely strict security regulations and top-rated security systems.



The state's security system will be paid for with funding from the New Jersey Transportation Trust Fund.

"The system will monitor and record video images from multiple locations at each facility," Thatcher said. "The images recorded will be archived for three to six months."

When the system is fully operational, both airport managers and law enforcement personnel will be able to view real-time and archived images of the airports from any computer on the Internet.

"It will require a password and security access, which will be available only to law enforcement and emergency responders and to airport managers," Thatcher said. "I think we will be the first state to install this security system in all of our core general aviation airports, those at which 90 percent of the state's aircraft are based."



The system will provide security from terrorist groups, as well as protection against vandalism, aircraft break-ins and thefts of aircraft and avionics equipment.

*For more information on airport development rights, contact Tom Thatcher at 609-530-2907.*

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Appendix E

## Environmental Considerations



## New Hampshire Natural Heritage Bureau

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**To:** April Provost  
Hoyle, Tanner, & Assoc.  
150 Dow St.  
Manchester, NH 03101

**Date:** 10/28/2008

**From:** NH Natural Heritage Bureau

**Re:** Review by NH Natural Heritage Bureau of request dated 10/28/2008

NHB File ID: NHB08-2537

Applicant: Mike Hart

Tax Map(s)/Lot(s): Tax Map 3, Lot #61  
North Hampton, Hampton

Project Categories:  
Other: Airport improvements

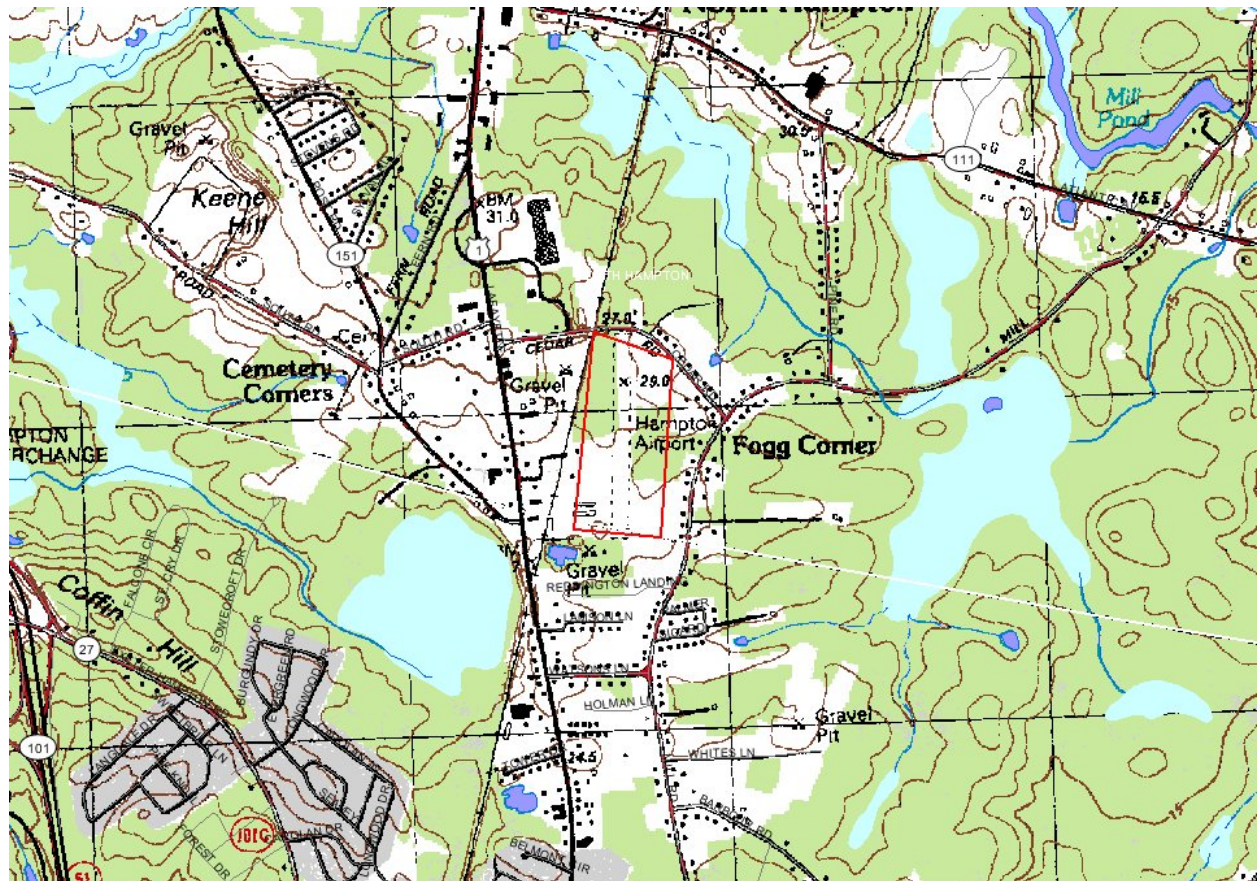
The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present

This review is valid through 10/28/2009.



MAP OF PROJECT BOUNDARIES FOR: NHB ID# NHB08-2537



RECEIVED

DEC 05 2008



HOYLE, TANNER

NEW HAMPSHIRE DIVISION OF HISTORICAL RESOURCES

State of New Hampshire, Department of Cultural Resources  
19 Pillsbury Street, Concord, NH 03301-3570  
TDD Access: Relay NH 1-800-735-2964  
[www.nh.gov/nhdhr](http://www.nh.gov/nhdhr)

603-271-3483  
603-271-3558  
FAX 603-271-3433  
[preservation@dcr.nh.gov](mailto:preservation@dcr.nh.gov)

December 1, 2008

Tracy McAllister  
Hoyle, Tanner & Associates  
150 Dow Street  
Manchester, NH 03101

Re: Hampton Airfield Master Plan  
Hampton, NH  
NHDHR #425

Dear Ms. McAllister:

Thank you for initiating project review with the New Hampshire Division of Historical Resources pursuant to Section 106 of the National Historic Preservation Act of 1966, as amended. We appreciate the opportunity to become involved with the project during preparation of the Master Plan. The DHR can not make an informed comment on the project's potential effects on historic properties eligible for or listed on the National Register of Historic Places at this time. The DHR no longer conducts file searches, but welcomes you to conduct research during the hours of 8-4 Monday through Friday. The DHR maintains files on archaeological and above-ground resources that may exist within your proposed project area. Please contact Tanya Kress ([Tanya.kress@dcr.nh.gov](mailto:Tanya.kress@dcr.nh.gov)) at 603-271-6568 to schedule an appointment.

In order to make a determination of eligibility and proceed with Section 106 review, the DHR will require an adequately completed Project Area Form that will address the above-ground resources. In addition, a Phase Ia Archaeological Survey will be required to investigate the archaeological potential within the proposed study area. The determination of eligibility is necessary in order to meet the requirements of Section 106 of the National Historic Preservation Act of 1966, (16 U.S.C. 470f). Federal law states that Section 106 shall be complied with if projects are federally funded, permitted, or licensed, and it directs the project sponsor to comply with the identification and evaluation of cultural resources that are eligible for the National Register of Historic Places. If the property has not been previously surveyed and the State Historic Preservation Office considers the area potentially sensitive for cultural resources, it is



then the responsibility of the project proponent to continue the identification process. In order to meet the requirements of Section 106, the DHR directs you to the DHR website at <http://www.nh.gov/nhdhr/106consult.html> for a list of qualified architectural history consultants and archaeologists to complete the identification and evaluation of historic properties.

If the property is eligible for National Register listing, we would then consult with FAA and the public to confirm whether the work will result in an adverse effect. If the work is found to be adverse, the project will require additional consultation with our office to try and find ways to avoid, minimize, or mitigate the adverse effect. If the work is found not to be adverse, then Section 106 responsibilities will be completed for this project.

Should you have any questions or concerns in the meantime, please feel free to call me at 603-271-6628.

Sincerely,

A handwritten signature in cursive script, appearing to read "Nadine Peterson", with a long horizontal flourish extending to the right.

Nadine Peterson  
Preservation Planner

cc: Michael Hart



Appendix F

## Revenue and Expense History

7:55 PM

08/26/06

Accrual Basis

**Hampton Airfield Inc.**  
**Profit & Loss Prev Year Comparison**  
**January through December 2003**

	Jan - Dec 03	Jan - Dec 02	\$ Change
<b>Ordinary Income/Expense</b>			
<b>Income</b>			
<b>400 · Sales Aircraft Rental/Training</b>			
411 · Aircraft Sales	51,000.00	4,212.86	46,787.14
412 · Discounts Recieved	47.85	14.30	33.55
414 · Inventory Sales	65,244.96	66,229.88	-984.92
415 · Inventory Adjust	0.00	23.64	-23.64
416 · Rental Income Aircraft Storage	153,527.15	150,238.83	3,288.32
400 · Sales Aircraft Rental/Training - Other	122,357.41	157,927.75	-35,570.34
<b>Total 400 · Sales Aircraft Rental/Training</b>	392,177.37	378,647.26	13,530.11
<b>410 · Misc Income</b>			
410.1 · Grants	11,474.08	13,681.41	-2,207.33
410 · Misc Income - Other	67.80	-11,050.00	11,117.80
<b>Total 410 · Misc Income</b>	11,541.88	2,631.41	8,910.47
<b>499 · Uncategorized Income</b>	0.00	-2,648.90	2,648.90
<b>Total Income</b>	403,719.25	378,629.77	25,089.48
<b>Cost of Goods Sold</b>			
500 · Cost of Goods Sold	46,196.51	52,804.98	-6,608.47
501 · Cost of airplanes sold	36,900.00	0.00	36,900.00
<b>Total COGS</b>	83,096.51	52,804.98	30,291.53
<b>Gross Profit</b>	320,622.74	325,824.79	-5,202.05
<b>Expense</b>			
Books	67.49	0.00	67.49
Discount	0.00	-18.36	18.36
Federal Withholding	15.42	0.00	15.42
Freight & Delivery Chgs	222.34	345.40	-123.06
Hanger Construction	900.00	0.00	900.00
Loan on Aircraft	-7,327.32	0.00	-7,327.32
Loan Payable	14,000.00	0.00	14,000.00
Paid Out Instructor	12,383.94	15,690.04	-3,306.10
Post 15 Aviation Exploreres	107.40	0.00	107.40
Security	127.25	68.25	59.00
600 · Adjustments	-24,186.08	0.00	-24,186.08
<b>601 · Utilities</b>			
601.1 · Gas	2,255.21	1,543.64	711.57
601.2 · Electriity	4,932.77	7,674.46	-2,741.69
601.3 · Water	2,758.00	2,684.37	73.63
601.4 · Telephone	2,767.80	3,022.80	-255.00
601.5 · Garbage	1,730.57	1,607.27	123.30
<b>Total 601 · Utilities</b>	14,444.35	16,532.54	-2,088.19
602 · Legal & AccountingFees	7,950.00	9,560.00	-1,610.00
<b>603 · Office Supplies</b>			
603 - 1 · Medical Office Supplies	109.95	0.00	109.95
603 · Office Supplies - Other	11,505.24	7,104.68	4,400.56
<b>Total 603 · Office Supplies</b>	11,615.19	7,104.68	4,510.51
<b>604 · Equipment Purchase</b>			
604.1 · Finders Fees	1,088.95	0.00	1,088.95
604 · Equipment Purchase - Other	-29,000.00	0.00	-29,000.00
<b>Total 604 · Equipment Purchase</b>	-27,911.05	0.00	-27,911.05
605 · Fire Insurance	741.66	0.00	741.66
<b>608 · Repairs &amp; Maintenance</b>			
603.4 · Hanger Repair	20.79	0.00	20.79
608.1 · Building Repairs	8,169.95	6,639.38	1,530.57
608.2 · Equipment Repairs	4,373.39	2,441.12	1,932.27
608.3 · Grounds Keeping	13,075.13	6,453.31	6,621.82
608 · Repairs & Maintenance - Other	624.16	2,970.92	-2,346.76
<b>Total 608 · Repairs &amp; Maintenance</b>	26,263.42	18,504.73	7,758.69
609 · Advertising	7,263.91	6,435.18	828.73

	Jan - Dec 03	Jan - Dec 02	\$ Change
<b>610 - Aircraft</b>			
610.1 - Aircraft Operating	-2,906.00	16,154.04	-19,060.04
610.2 - Aircraft Lease	8,032.50	0.00	8,032.50
610.3 - Aircraft Maintenance	47,661.84	71,878.80	-24,216.96
610.4 - Aircraft Registration	436.70	164.00	272.70
610.5 - 41V Restoration	29,299.94	0.00	29,299.94
610.6 - Drug Test	289.00	469.00	-180.00
<b>Total 610 - Aircraft</b>	<b>82,813.98</b>	<b>88,665.84</b>	<b>-5,851.86</b>
<b>614 - Interest Expense</b>			
683 - Aircraft Loan Interest	1,223.71	1,155.62	68.09
<b>Total 614 - Interest Expense</b>	<b>1,223.71</b>	<b>1,155.62</b>	<b>68.09</b>
<b>615 - Bad Checks</b>	<b>5,750.21</b>	<b>120.80</b>	<b>5,629.41</b>
<b>617 - Bank Service Charges</b>	<b>681.73</b>	<b>257.09</b>	<b>424.64</b>
<b>618 - Education / Prof Development</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>619 - Insurance</b>			
619 - 4 - Compliance Insurance	1,341.00	0.00	1,341.00
619.1 - Liability Insurance	22,307.16	25,929.11	-3,621.95
619.3 - Disability Insurance	22.65	0.00	22.65
619.5 - Work Comp	1,058.00	1,542.70	-484.70
619 - Insurance - Other	3,571.34	4,180.00	-608.66
<b>Total 619 - Insurance</b>	<b>28,300.15</b>	<b>31,651.81</b>	<b>-3,351.66</b>
<b>620 - Crossing Lease</b>	<b>0.00</b>	<b>400.00</b>	<b>-400.00</b>
<b>621 - Rent</b>	<b>90,900.00</b>	<b>84,000.00</b>	<b>6,900.00</b>
<b>622 - Depreciation Expense</b>	<b>37,760.31</b>	<b>42,523.94</b>	<b>-4,763.63</b>
<b>624 - Licenses and Permits</b>	<b>24.00</b>	<b>48.00</b>	<b>-24.00</b>
<b>640 - Finance Charge</b>	<b>0.00</b>	<b>5.05</b>	<b>-5.05</b>
<b>656 - Payroll Expenses</b>	<b>25,750.00</b>	<b>28,059.65</b>	<b>-2,309.65</b>
<b>661 - Bad Debts</b>	<b>5,620.19</b>	<b>0.00</b>	<b>5,620.19</b>
<b>665 - Business Travel &amp; Ent</b>	<b>0.00</b>	<b>200.00</b>	<b>-200.00</b>
<b>675 - Dues and Subscriptions</b>	<b>297.00</b>	<b>512.00</b>	<b>-215.00</b>
<b>682 - Taxes</b>			
682-8 - Fed Gasoline Tax	2,607.75	0.00	2,607.75
682-9 - State Gasoline Taxes	753.76	24.00	729.76
682.7 - State	470.00	492.00	-22.00
682.8 - IRS Penalty	7.58	0.00	7.58
682.9 - Payroll taxes	3,568.87	0.00	3,568.87
<b>Total 682 - Taxes</b>	<b>7,407.96</b>	<b>516.00</b>	<b>6,891.96</b>
<b>699 - Miscellaneous</b>			
Off field Gas	0.00	312.69	-312.69
699 - Miscellaneous - Other	15,155.65	2,717.70	12,437.95
<b>Total 699 - Miscellaneous</b>	<b>15,155.65</b>	<b>3,030.39</b>	<b>12,125.26</b>
<b>6999 - Uncategorized Expenses</b>	<b>450.00</b>	<b>0.00</b>	<b>450.00</b>
<b>Total Expense</b>	<b>338,812.81</b>	<b>355,368.65</b>	<b>-16,555.84</b>
<b>Net Ordinary Income</b>	<b>-18,190.07</b>	<b>-29,543.86</b>	<b>11,353.79</b>
<b>Other Income/Expense</b>			
<b>Other Income</b>			
N H Aero Fund	5,249.31	0.00	5,249.31
701 - Interest Income	32.85	100.69	-67.84
703 - Other Income	2,000.00	0.00	2,000.00
<b>Total Other Income</b>	<b>7,282.16</b>	<b>100.69</b>	<b>7,181.47</b>
<b>Net Other Income</b>	<b>7,282.16</b>	<b>100.69</b>	<b>7,181.47</b>
<b>Net Income</b>	<b>-10,907.91</b>	<b>-29,443.17</b>	<b>18,535.26</b>

	<u>% Change</u>
<b>Ordinary Income/Expense</b>	
<b>Income</b>	
<b>400 · Sales Aircraft Rental/Training</b>	
411 · Aircraft Sales	1,110.6%
412 · Discounts Recieved	234.6%
414 · Inventory Sales	-1.5%
415 · Inventory Adjust	-100.0%
416 · Rental Income Aircraft Storage	2.2%
400 · Sales Aircraft Rental/Training - Other	-22.5%
<b>Total 400 · Sales Aircraft Rental/Training</b>	<u>3.6%</u>
<b>410 · Misc Income</b>	
410.1 · Grants	-16.1%
410 · Misc Income - Other	100.6%
<b>Total 410 · Misc Income</b>	<u>338.6%</u>
<b>499 · Uncategorized Income</b>	<u>100.0%</u>
<b>Total Income</b>	<u>6.6%</u>
<b>Cost of Goods Sold</b>	
500 · Cost of Goods Sold	-12.5%
501 · Cost of airplanes sold	100.0%
<b>Total COGS</b>	<u>57.4%</u>
<b>Gross Profit</b>	-1.6%
<b>Expense</b>	
Books	100.0%
Discount	100.0%
Federal Withholding	100.0%
Freight & Delivery Chgs	-35.6%
Hanger Construction	100.0%
Loan on Aircraft	-100.0%
Loan Payable	100.0%
Paid Out Instructor	-21.1%
Post 15 Aviation Exploreres	100.0%
Security	86.5%
600 · Adjustments	-100.0%
<b>601 · Utilities</b>	
601.1 · Gas	46.1%
601.2 · Electriity	-35.7%
601.3 · Water	2.7%
601.4 · Telephone	-8.4%
601.5 · Garbage	7.7%
<b>Total 601 · Utilities</b>	<u>-12.6%</u>
602 · Legal & AccountingFees	-16.8%
<b>603 · Office Supplies</b>	
603 - 1 · Medical Office Supplies	100.0%
603 · Office Supplies - Other	61.9%
<b>Total 603 · Office Supplies</b>	<u>63.5%</u>
<b>604 · Equipment Purchase</b>	
604.1 · Finders Fees	100.0%
604 · Equipment Purchase - Other	-100.0%
<b>Total 604 · Equipment Purchase</b>	<u>-100.0%</u>
605 · Fire Insurance	100.0%
<b>608 · Repairs &amp; Maintenance</b>	
603.4 · Hanger Repair	100.0%
608.1 · Building Repairs	23.1%
608.2 · Equipment Repairs	79.2%
608.3 · Grounds Keeping	102.6%
608 · Repairs & Maintenance - Other	-79.0%
<b>Total 608 · Repairs &amp; Maintenance</b>	<u>41.9%</u>
609 · Advertising	12.9%

	<u>% Change</u>
<b>610 - Aircraft</b>	
610.1 - Aircraft Operating	-118.0%
610.2 - Aircraft Lease	100.0%
610.3 - Aircraft Maintenance	-33.7%
610.4 - Aircraft Registration	166.3%
610.5 - 41V Restoration	100.0%
610.6 - Drug Test	-38.4%
<b>Total 610 - Aircraft</b>	<u>-6.6%</u>
<b>614 - Interest Expense</b>	
683 - Aircraft Loan Interest	5.9%
<b>Total 614 - Interest Expense</b>	<u>5.9%</u>
<b>615 - Bad Checks</b>	4,660.1%
<b>617 - Bank Service Charges</b>	165.2%
<b>618 - Education / Prof Development</b>	0.0%
<b>619 - Insurance</b>	
619 - 4 - Compliance Insurance	100.0%
619.1 - Liability Insurance	-14.0%
619.3 - Disability Insurance	100.0%
619.5 - Work Comp	-31.4%
619 - Insurance - Other	-14.6%
<b>Total 619 - Insurance</b>	<u>-10.6%</u>
<b>620 - Crossing Lease</b>	-100.0%
<b>621 - Rent</b>	8.2%
<b>622 - Depreciation Expense</b>	-11.2%
<b>624 - Licenses and Permits</b>	-50.0%
<b>640 - Finance Charge</b>	-100.0%
<b>656 - Payroll Expenses</b>	-8.2%
<b>661 - Bad Debts</b>	100.0%
<b>665 - Business Travel &amp; Ent</b>	-100.0%
<b>675 - Dues and Subscriptions</b>	-42.0%
<b>682 - Taxes</b>	
682-8 - Fed Gasoline Tax	100.0%
682-9 - State Gasoline Taxes	3,040.7%
682.7 - State	-4.5%
682.8 - IRS Penalty	100.0%
682.9 - Payroll taxes	100.0%
<b>Total 682 - Taxes</b>	<u>1,335.7%</u>
<b>699 - Miscellaneous</b>	
Off field Gas	-100.0%
699 - Miscellaneous - Other	457.7%
<b>Total 699 - Miscellaneous</b>	<u>400.1%</u>
<b>6999 - Uncategorized Expenses</b>	<u>100.0%</u>
<b>Total Expense</b>	<u>-4.7%</u>
<b>Net Ordinary Income</b>	38.4%
<b>Other Income/Expense</b>	
<b>Other Income</b>	
N H Aero Fund	100.0%
701 - Interest Income	-67.4%
703 - Other Income	100.0%
<b>Total Other Income</b>	<u>7,132.3%</u>
<b>Net Other Income</b>	<u>7,132.3%</u>
<b>Net Income</b>	<u><u>63.0%</u></u>



**Hampton Airfield Inc.**  
**Profit & Loss Prev Year Comparison**  
 January through December 2005

	Jan - Dec 05	Jan - Dec 04	\$ Change
<b>Ordinary Income/Expense</b>			
<b>Income</b>			
<b>400 - Sales Aircraft Rental/Training</b>			
412 - Discounts Recieved	-0.07	58.97	-59.04
414 - Inventory Sales	78,856.49	76,028.76	2,827.73
415 - Inventory Adjust	-14,843.48	5,387.87	-20,231.35
416 - Rental Income Aircraft Storage	188,895.43	168,102.44	20,792.99
418 - Sales Commission	5,000.00	0.00	5,000.00
400 - Sales Aircraft Rental/Training - Other	135,113.78	168,172.19	-33,058.41
<b>Total 400 - Sales Aircraft Rental/Training</b>	393,022.15	417,750.23	-24,728.08
<b>410 - Misc Income</b>			
Insurance proceeds	1,654.94	0.00	1,654.94
410.1 - Grants	5,236.70	8,013.10	-2,776.40
410.2 - Airport Property Tax Reimburse	2,504.71	2,809.13	-304.42
<b>Total 410 - Misc Income</b>	9,396.35	10,822.23	-1,425.88
<b>489 - Returned Check Chrg</b>	0.00	0.00	0.00
<b>Total Income</b>	402,418.50	428,572.46	-26,153.96
<b>Cost of Goods Sold</b>			
500 - Cost of Goods Sold	63,510.28	59,081.27	4,429.01
<b>Total COGS</b>	63,510.28	59,081.27	4,429.01
<b>Gross Profit</b>	338,908.22	369,491.19	-30,582.97
<b>Expense</b>			
<b>Books</b>	0.00	286.89	-286.89
Discount	0.00	0.00	0.00
Freight & Delivery Chgs	687.53	1,166.13	-478.60
Paid Out Instructor	21,869.63	18,256.85	3,612.78
Security	0.00	52.25	-52.25
600 - Adjustments	6,365.93	619.11	5,746.82
<b>601 - Utilities</b>			
601.1 - Gas	1,375.23	1,883.28	-508.05
601.2 - Electricity	6,387.50	6,323.19	64.31
601.3 - Water	1,099.00	1,794.19	-695.19
601.4 - Telephone	2,965.85	3,360.86	-395.01
601.5 - Garbage	1,886.64	1,647.70	238.94
601.6 - Internet Web	1,401.97	30.00	1,371.97
601 - Utilities - Other	0.00	147.38	-147.38
<b>Total 601 - Utilities</b>	15,116.19	15,186.60	-70.41
602 - Legal & Accounting Fees	3,588.25	9,087.00	-5,498.75
603 - Office Supplies			
603 - 1 - Medical Office Supplies	35.94	0.00	35.94
603 - Office Supplies - Other	2,271.78	6,632.09	-4,360.31
<b>Total 603 - Office Supplies</b>	2,307.72	6,632.09	-4,324.37
<b>604 - Equipment Purchase</b>			
Small Tolls	588.32	274.41	313.91
604 - Equipment Purchase - Other	400.00	-3,654.40	4,054.40
<b>Total 604 - Equipment Purchase</b>	988.32	-3,379.99	4,368.31
<b>608 - Repairs &amp; Maintenance</b>			
QualifiedState	15,131.86	7,960.86	7,171.00
603.4 - Hanger Repair	0.00	83.84	-83.84
608.1 - Building Repairs	2,428.89	1,748.41	680.48
608.2 - Equipment Repairs	2,580.96	5,315.90	-2,734.94
608.3 - Grounds Keeping	856.77	338.98	517.79
608.4 - Fuel Tank Maintenance	1,709.77	2,110.50	-400.73
608 - Repairs & Maintenance - Other	578.61	215.23	363.38
<b>Total 608 - Repairs &amp; Maintenance</b>	23,286.86	17,773.72	5,513.14
609 - Advertising	7,791.42	9,333.90	-1,542.48

	Jan - Dec 05	Jan - Dec 04	\$ Change
<b>610 · Aircraft</b>			
Insurance	32,502.66	9,235.00	23,267.66
Simulator Lease	1,922.80	0.00	1,922.80
610.1 · Aircraft Operating	17,723.82	13,068.92	4,654.90
610.2 · Aircraft Lease	1,250.00	5,103.10	-3,853.10
610.3 · Aircraft Maintenance	50,569.17	65,443.23	-14,874.06
610.4 · Aircraft Registration	315.20	347.20	-32.00
610.5 · 41V Restoration	0.00	0.00	0.00
610.6 · Drug Test	95.00	424.00	-329.00
610 · Aircraft - Other	2,689.53	0.00	2,689.53
<b>Total 610 · Aircraft</b>	<b>107,068.18</b>	<b>93,621.45</b>	<b>13,446.73</b>
<b>614 · Interest Expense</b>			
683 · Aircraft Loan Interest	2,505.52	2,700.22	-194.70
<b>Total 614 · Interest Expense</b>	<b>2,505.52</b>	<b>2,700.22</b>	<b>-194.70</b>
<b>615 · Bad Checks</b>	<b>0.00</b>	<b>1,640.02</b>	<b>-1,640.02</b>
<b>617 · Bank Service Charges</b>	<b>174.16</b>	<b>348.00</b>	<b>-173.84</b>
<b>618 · Education / Prof Development</b>	<b>0.00</b>	<b>29.95</b>	<b>-29.95</b>
<b>619 · Insurance</b>			
619.1 · Liability Insurance	0.00	24,847.11	-24,847.11
619.5 · Work Comp	2,200.00	2,712.85	-512.85
619.6 · Building Insurance	3,904.00	2,331.00	1,573.00
<b>Total 619 · Insurance</b>	<b>6,104.00</b>	<b>29,890.96</b>	<b>-23,786.96</b>
<b>620 · Crossing Lease</b>	<b>600.00</b>	<b>600.00</b>	<b>0.00</b>
<b>621 · Rent</b>	<b>72,000.00</b>	<b>52,420.00</b>	<b>19,580.00</b>
<b>622 · Depreciation Expense</b>	<b>22,383.88</b>	<b>92,932.98</b>	<b>-70,549.10</b>
<b>624 · Licenses and Permits</b>	<b>48.00</b>	<b>48.00</b>	<b>0.00</b>
<b>656 · Payroll Expenses</b>	<b>39,550.00</b>	<b>25,230.00</b>	<b>14,320.00</b>
<b>661 · Bad Debts</b>	<b>392.43</b>	<b>3,345.45</b>	<b>-2,953.02</b>
<b>665 · Business Travel &amp; Ent</b>	<b>1,254.53</b>	<b>0.00</b>	<b>1,254.53</b>
<b>670 · Contributions</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>
<b>675 · Dues and Subscriptions</b>	<b>743.00</b>	<b>559.00</b>	<b>184.00</b>
<b>682 · Taxes</b>			
682-8 · Fed Gasoline Tax	0.00	3,642.74	-3,642.74
682-9 · State Gasoline Taxes	0.00	1,092.21	-1,092.21
682.1 · Federal	112.00	898.10	-786.10
682.7 · State	512.00	484.65	27.35
682.9 · Payroll taxes	3,026.10	1,623.48	1,402.62
<b>Total 682 · Taxes</b>	<b>3,650.10</b>	<b>7,741.18</b>	<b>-4,091.08</b>
<b>699 · Miscellaneous</b>	<b>1,074.43</b>	<b>176.00</b>	<b>898.43</b>
<b>Total Expense</b>	<b>339,650.08</b>	<b>386,297.76</b>	<b>-46,647.68</b>
<b>Net Ordinary Income</b>	<b>-741.86</b>	<b>-16,806.57</b>	<b>16,064.71</b>
<b>Other Income/Expense</b>			
<b>Other Income</b>			
701 · Interest Income	28.76	35.52	-6.76
<b>Total Other Income</b>	<b>28.76</b>	<b>35.52</b>	<b>-6.76</b>
<b>Other Expense</b>			
750 · State Income Tax	316.00	0.00	316.00
<b>Total Other Expense</b>	<b>316.00</b>	<b>0.00</b>	<b>316.00</b>
<b>Net Other Income</b>	<b>-287.24</b>	<b>35.52</b>	<b>-322.76</b>
<b>Net Income</b>	<b>-1,029.10</b>	<b>-16,771.05</b>	<b>15,741.95</b>

	<u>% Change</u>
<b>Ordinary Income/Expense</b>	
<b>Income</b>	
<b>400 · Sales Aircraft Rental/Training</b>	
412 · Discounts Recieved	-100.1%
414 · Inventory Sales	3.7%
415 · Inventory Adjust	-375.5%
416 · Rental Income Aircraft Storage	12.4%
418 · Sales Commission	100.0%
400 · Sales Aircraft Rental/Training - Other	-19.7%
<b>Total 400 · Sales Aircraft Rental/Training</b>	-5.9%
<b>410 · Misc Income</b>	
Insurance proceeds	100.0%
410.1 · Grants	-34.7%
410.2 · Airport Property Tax Reimburse	-10.8%
<b>Total 410 · Misc Income</b>	-13.2%
<b>489 · Returned Check Chrg</b>	0.0%
<b>Total Income</b>	-6.1%
<b>Cost of Goods Sold</b>	
500 · Cost of Goods Sold	7.5%
<b>Total COGS</b>	7.5%
<b>Gross Profit</b>	-8.3%
<b>Expense</b>	
<b>Books</b>	-100.0%
Discount	0.0%
<b>Freight &amp; Delivery Chgs</b>	-41.0%
Paid Out Instructor	19.8%
Security	-100.0%
600 · Adjustments	928.2%
<b>601 · Utilities</b>	
601.1 · Gas	-27.0%
601.2 · Electriity	1.0%
601.3 · Water	-38.8%
601.4 · Telephone	-11.8%
601.5 · Garbage	14.5%
601.6 · Internet Web	4,573.2%
601 · Utilities - Other	-100.0%
<b>Total 601 · Utilities</b>	-0.5%
602 · Legal & AccountingFees	-60.5%
603 · Office Supplies	
603 - 1 · Medical Office Supplies	100.0%
603 · Office Supplies - Other	-65.8%
<b>Total 603 · Office Supplies</b>	-65.2%
604 · Equipment Purchase	
Small Tolls	114.4%
604 · Equipment Purchase - Other	111.0%
<b>Total 604 · Equipment Purchase</b>	129.2%
608 · Repairs & Maintenance	
QualifiedState	90.1%
603.4 · Hanger Repair	-100.0%
608.1 · Building Repairs	38.9%
608.2 · Equipment Repairs	-51.5%
608.3 · Grounds Keeping	152.8%
608.4 · Fuel Tank Maintenance	-19.0%
608 · Repairs & Maintenance - Other	168.8%
<b>Total 608 · Repairs &amp; Maintenance</b>	31.0%
609 · Advertising	-16.5%

	<u>% Change</u>
<b>610 · Aircraft</b>	
Insurance	252.0%
Simulator Lease	100.0%
610.1 · Aircraft Operating	35.6%
610.2 · Aircraft Lease	-75.5%
610.3 · Aircraft Maintenance	-22.7%
610.4 · Aircraft Registration	-9.2%
610.5 · 41V Restoration	0.0%
610.6 · Drug Test	-77.6%
610 · Aircraft - Other	100.0%
<b>Total 610 · Aircraft</b>	<u>14.4%</u>
<b>614 · Interest Expense</b>	
683 · Aircraft Loan Interest	-7.2%
<b>Total 614 · Interest Expense</b>	<u>-7.2%</u>
<b>615 · Bad Checks</b>	-100.0%
<b>617 · Bank Service Charges</b>	-50.0%
<b>618 · Education / Prof Development</b>	-100.0%
<b>619 · Insurance</b>	
619.1 · Liability Insurance	-100.0%
619.5 · Work Comp	-18.9%
619.6 · Building Insurance	67.5%
<b>Total 619 · Insurance</b>	<u>-79.6%</u>
<b>620 · Crossing Lease</b>	0.0%
<b>621 · Rent</b>	37.4%
<b>622 · Depreciation Expense</b>	-75.9%
<b>624 · Licenses and Permits</b>	0.0%
<b>656 · Payroll Expenses</b>	56.8%
<b>661 · Bad Debts</b>	-88.3%
<b>665 · Business Travel &amp; Ent</b>	100.0%
<b>670 · Contributions</b>	100.0%
<b>675 · Dues and Subscriptions</b>	32.9%
<b>682 · Taxes</b>	
682-8 · Fed Gasoline Tax	-100.0%
682-9 · State Gasoline Taxes	-100.0%
682.1 · Federal	-87.5%
682.7 · State	5.6%
682.9 · Payroll taxes	86.4%
<b>Total 682 · Taxes</b>	<u>-52.9%</u>
<b>699 · Miscellaneous</b>	510.5%
<b>Total Expense</b>	<u>-12.1%</u>
<b>Net Ordinary Income</b>	95.6%
<b>Other Income/Expense</b>	
<b>Other Income</b>	
701 · Interest Income	-19.0%
<b>Total Other Income</b>	<u>-19.0%</u>
<b>Other Expense</b>	
750 · State Income Tax	100.0%
<b>Total Other Expense</b>	<u>100.0%</u>
<b>Net Other Income</b>	<u>-908.7%</u>
<b>Net Income</b>	<u><u>93.9%</u></u>

**Hampton Airfield Inc.**  
**Profit & Loss**  
 January through December 2006

	Jan - Dec 06
<b>Ordinary Income/Expense</b>	
<b>Income</b>	
400 · Sales Aircraft Rental/Training	
412 · Discounts Recieved	387.05
414 · Inventory Sales	95,892.93
415 · Inventory Adjust	7.08
416 · Rental Income Aircraft Storage	205,518.78
400 · Sales Aircraft Rental/Training - Other	142,043.87
<b>Total 400 · Sales Aircraft Rental/Training</b>	<b>443,849.71</b>
410 · Misc Income	
410.1 · Grants	8,147.53
410.2 · Airport Property Tax Reimburse	0.00
410 · Misc Income - Other	1,961.99
<b>Total 410 · Misc Income</b>	<b>10,109.52</b>
489 · Returned Check Chrg	8.00
<b>Total Income</b>	<b>453,967.23</b>
<b>Cost of Goods Sold</b>	
500 · Cost of Goods Sold	77,098.95
<b>Total COGS</b>	<b>77,098.95</b>
<b>Gross Profit</b>	<b>376,868.28</b>
<b>Expense</b>	
Discount	3.00
Federal Withholding	8.29
Freight & Delivery Chgs	251.75
Paid Out Instructor	20,308.50
600 · Adjustments	125.00
601 · Utilities	
Oil	516.35
601.1 · Gas	2,187.13
601.2 · Electriity	8,105.94
601.3 · Water	1,323.96
601.4 · Telephone	3,332.97
601.5 · Garbage	2,313.24
601.6 · Internet Web	2,046.80
<b>Total 601 · Utilities</b>	<b>19,826.39</b>
602 · Legal & Accounting Fees	3,406.75
603 · Office Supplies	2,798.67
604 · Equipment Purchase	
Small Tolls	548.48
604.1 · Finders Fees	135.00
604 · Equipment Purchase - Other	-548.48
<b>Total 604 · Equipment Purchase</b>	<b>135.00</b>
608 · Repairs & Maintenance	
Qualified State	6,772.44
608.1 · Building Repairs	334.00
608.2 · Equipment Repairs	1,334.55
608.3 · Grounds Keeping	2,732.36
608.4 · Fuel Tank Maintenance	5,809.15
608 · Repairs & Maintenance - Other	3,767.19
<b>Total 608 · Repairs &amp; Maintenance</b>	<b>20,749.69</b>
609 · Advertising	5,546.75



	<u>Jan - Dec 06</u>
<b>610 · Aircraft</b>	
<b>Insurance</b>	27,712.31
<b>Simulator Lease</b>	1,167.95
<b>610.1 · Aircraft Operating</b>	18,675.31
<b>610.2 · Aircraft Lease</b>	498.58
<b>610.3 · Aircraft Maintenance</b>	50,689.86
<b>610.4 · Aircraft Registration</b>	278.00
<b>610.6 · Drug Test</b>	779.00
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<b>Total 610 · Aircraft</b>	99,801.01
<b>614 · Interest Expense</b>	
<b>683 · Aircraft Loan Interest</b>	1,748.32
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<b>Total 614 · Interest Expense</b>	1,748.32
<b>617 · Bank Service Charges</b>	135.40
<b>619 · Insurance</b>	
<b>619.5 · Work Comp</b>	2,884.51
<b>619.6 · Building Insurance</b>	4,018.00
	<hr/>
<b>Total 619 · Insurance</b>	6,902.51
<b>620 · Crossing Lease</b>	600.00
<b>621 · Rent</b>	72,000.00
<b>622 · Depreciation Expense</b>	11,491.56
<b>624 · Licenses and Permits</b>	99.80
<b>640 · Finance Charge</b>	20.00
<b>656 · Payroll Expenses</b>	41,370.96
<b>661 · Bad Debts</b>	433.99
<b>675 · Dues and Subscriptions</b>	522.00
<b>682 · Taxes</b>	
<b>682.7 · State</b>	514.97
<b>682.8 · IRS Penalty</b>	1.96
<b>682.9 · Payroll taxes</b>	3,456.41
	<hr/>
<b>Total 682 · Taxes</b>	3,973.34
	<hr/>
<b>Total Expense</b>	312,258.68
	<hr/>
<b>Net Ordinary Income</b>	64,609.60
<b>Other Income/Expense</b>	
<b>Other Income</b>	
<b>701 · Interest Income</b>	28.06
	<hr/>
<b>Total Other Income</b>	28.06
	<hr/>
<b>Net Other Income</b>	28.06
	<hr/>
<b>Net Income</b>	<u><u>64,637.66</u></u>