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VTrans

Vermont Agency of Transportation

STATEWIDE AIRPORT BUSINESS PLANS

WILLIAM H. MORSE STATE AIRPORT



Prepared by:

McFarland Johnson

40 Farrell Street | South Burlington, VT 05403-6112 | www.mjinc.com

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1. INTRODUCTION

The William H. Morse State Airport (DDH) is located in southern Vermont, three miles west of Bennington. This area is well served by many airports in Vermont, New York, and Massachusetts. There are nine public use airports within 30 miles (see Table 7) of DDH, as well as numerous private facilities not open to the general public. Because of the high level of competition and the desire of the Vermont Agency of Transportation (VTrans) to efficiently manage Vermont's assets, this business plan has been commissioned. The purpose of this business plan is to recommend potential means of improving the Airport's financial performance, identifying means to enhance regional economic development due to the Airport's presence, and to examine methodologies for increasing operational efficiency

1.1 VTrans Mission and Goals

In order to consider DDH in light of its environment, one must first consider the goals and mission of its operator, VTrans. The VTrans mission statement is as follows:

“Vermont's airport system will be accessible, safe and secure, meeting the needs of its business and recreational users, including implementing new technologies to support the future system. The airport system will be preserved and enhanced, while meeting Federal and State guidance while promoting responsible environmental stewardship and land use compatibility. Vermont's airports will be operated as business-oriented facilities focusing on creating opportunities for a return on the investment and will provide intermodal linkages to national transportation systems.”¹

VTrans' goals are as follows²:

- Provide a system of airports that is accessible for people and goods from both the ground and the air throughout the State.
- Provide intermodal ground access opportunities and/or services such as rental car, taxi, bus, or bike.
- Preserve and enhance Vermont's existing airport system's infrastructure investment through maintenance and rehabilitation to meet future growth and demand as well as providing new infrastructure to meet future needs in support of the national air transportation system when needed.
- Plan for future airport development and protect public investment in airports through promotion of compatible land use in the vicinity of airports.
- Provide a safe and secure system of airports that meets State and Federal guidelines, including routine inspections of airports such as the 5010 Program.
- Seek adequate and stable funding, including FAA assistance, and assure appropriate staffing to support the Agency's mission.

¹ Source: Executive Summary: Vermont Airport System and Policy Plan, September 2006

² Source: Executive Summary: Vermont Airport System and Policy Plan, September 2006

- Make timely, sound infrastructure investments derived from airport master plans and based on priorities that are determined through coordination with Vermont's aviation stakeholders, including use of the Vermont Airport Capital Facilities Program.
- Maintain commercial air service at Rutland State Airport and support its development elsewhere in the State, as well as encourage additional commercial and cargo services where appropriate.
- Maintain an up-to-date integrated database of air and landside facilities including capital plans and improvements, leaseholds, contacts, relevant zoning as well as the system's performance measures.
- Strive to generate appropriate revenues from the operation of the State-owned airports in support of their continued operation and expansion utilizing a business-oriented approach.

1.2 Airport Classification

DDH is classified within the State of Vermont as a Regional Service Airport. Such airports are primarily targeted to serve general aviation (GA) activity, with a focus on addressing the needs of the business aviation sector, including small jet and multi-engine aircraft. These airports also serve a significant role in supporting the local and regional economies and connecting them to the state and national economies³. In the 2007 *Vermont Airport System and Policy Plan* (VASPP), a goal to reclassify DDH as a National Service Airport was put forth.⁴ However, the facilities at DDH do not yet meet the stated standards for a National Service Airport in such critical areas as runway length, taxiway availability, NAVAIDS, lighting and fueling, among others. The VASPP provides several standards that Regional and National Service Airports should meet. Those standards are detailed in Table 1.

The Airport is included in the *National Plan for Integrated Airport Systems* (NPIAS). The NPIAS is a national airport system plan for the development of public use airports in the United States prepared by the FAA. This plan identifies needed improvements in the national airport system for airports that are eligible for federal funding provided through the Airport Improvement Program (AIP). Expenditure of AIP funds is scheduled through the five-year Airport Capital Improvement Program (ACIP). The Airport's role in the NPIAS is that of a general aviation airport.

³ Vermont Airport System and Policy Plan, February 2007, Chapter 3, page 3.12.

⁴ Vermont Airport System and Policy Plan, February 2007, Chapter 7, page 7.7.

Table 1: Recommended Minimum Standards for Morse State Airport

Objective	Recommended Minimum for Morse as a Regional Service Airport	Minimum Standard Met	Minimum Standard Not Met	Recommended Minimum for Morse as a National Service Airport	Minimum Standard Met	Minimum Standard Not Met
Airport Reference Code	B-II	X		C-II		X
Runway Length	5,000'		X	5,500'		X
Runway Width	75'	X		100'		X
Runway Strength	30,000 lbs		X	60,000 lbs		X
Taxiway Requirements	Full Parallel Taxiway		X	Full Parallel Taxiway		X
Approach	Non-Precision 400'/1 mile		X	Precision 200' / ½ mile		X
NAVAIDs	Rotating Beacon, Lighted Wind Indicator / Segmented Circle, REILs, VGSI, Appropriate Non-Precision Approach	X		ILS, ALS, REILs, Rotating Beacon, Lighted Wind Indicator / Segmented Circle		X
Lighting	Medium Intensity Runway and Taxiway Lights	X		High Intensity Runway and Medium Intensity Taxiway Lights		X
Weather Reporting	AWOS or ASOS	X		AWOS or ASOS	X	
Ground Communications	Public Phone, Ground Communication Outlets or Remote Communication Outlets	X		Public Phone, Ground Communications Outlets or Remote Communication Outlets	X	
Hangar Space	52,500 sq. ft.	X		52,500 sq. ft.	X	
Apron Space	30% of based aircraft plus an additional 50%	X		30% of based aircraft plus an additional 75%	X	

Table 1: Recommended Minimum Standards for Morse State Airport

Objective	Recommended Minimum for Morse as a Regional Service Airport	Minimum Standard Met	Minimum Standard Not Met	Recommended Minimum for Morse as a National Service Airport	Minimum Standard Met	Minimum Standard Not Met
Terminal/Administration Building Space	2,500 sq. ft.		X	2,500 sq. ft.		X
Fence Coverage	Entire Airport	X		Entire Airport	X	
Automobile Parking	75 spaces		X	75 spaces		X
Fuel Service	Self-Serve AvGas and Jet-A		X	Self-Serve AvGas and Jet-A		X
FBO Requirements	Full Service		X	Full Service		X
Aircraft Maintenance	Full Service		X	Full Service		X
Ground Transportation	Rental Car Available	X		Rental Car Available	X	

Source: 2007 Vermont Airport System & Policy Plan, Appendix D

1.3 **Desired End Products**

The final report that will result from this analysis includes the following:

- A well-defined mission statement for the airport.
- An evaluation of current airport business operating practices.
- The identification and evaluation of needs, opportunities, and challenges facing the Airport.
- A five-year projection of revenues and expenses at the Airport for the baseline case and alternative scenarios.
- Strategic planning recommendations for the Airport.
- Graphic materials for Airport promotion. These may include color ALPs, photos, and/or brochures depending upon the Airports' needs.
- An economic impact evaluation of the Airport, identifying jobs, income, and total output associated with the facility.

This business plan will describe DDH's role in the community and region and will also address:

- **Airport Financial Performance:** Means to enhance revenue and improve efficiency in order to increase net revenues.
- **Attraction of Corporate Aviation:** Means and methods and needed infrastructure to attract and retain based corporate aviation..
- **Right-Sized Facility Recommendations:** Recommended facility developments that are warranted by current and projected aviation demands.
- **Community Relations:** The value of an Airport in serving its home base must continue to be communicated to the general public and their political representatives. Communication of these benefits helps to justify allocation of resources and support Airport activity and investment.
- **Economic Benefits:** Airport economic benefits are usually stated in terms of jobs, income, and output. In addition intangible benefits that accrue to the airport community may be considered equally important.

1.4 **Report Outline**

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

- Section 1** - Introduction
- Section 2** - Background and Management Structure
- Section 3** - Existing Airport Characteristics
- Section 4** - Baseline Financial and Economic Outlook
- Section 5** - Business Climate and Plan Development
- Section 6** - Recommended Plan

Section 7 - Economic Impact Assessment
Appendix A – Lease Summaries
Appendix B – IMPLAN Results

2. BACKGROUND AND MANAGEMENT STRUCTURE

Understanding the background and management structure of the Airport helps to clarify some of the challenges and opportunities facing the Airport. Management and operational structure affect the ability of the Airport to reach its potential. A clearly defined, current, and realistic mission statement for the Airport provides the oversight framework to benefit from opportunities as they arise. This analysis is geared toward the future and toward positioning the Airport to take the best advantage of its assets and strengths. As such, this section includes:

- Airport Mission and Goals
- Airport Management Structure

2.1 Airport Mission and Goals

As previously mentioned, the Airport's assigned NPIAS role is that of a general aviation airport. The Airport provides a base for recreational and business air transportation services for the local community, the region and for national and international companies in and around the Airport. Although not formally established, based upon the airport's use and character, the Mission Statement for the Airport may be stated as:

The William H. Morse State Airport strives to provide safe and sufficient airport facilities and services to its based aircraft owners and other users of the airport, while operating compatibly with its neighbors and providing a base for regional economic development.

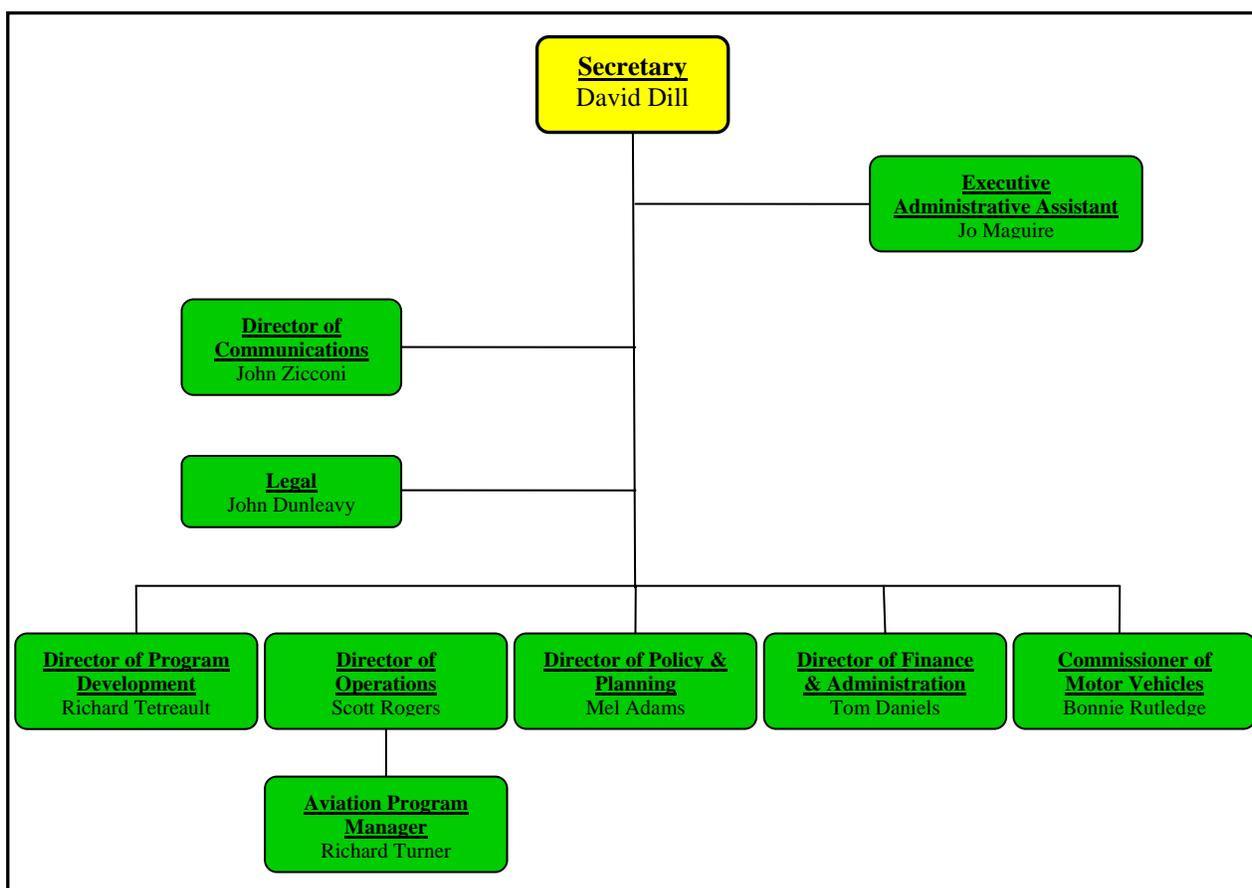
Program goals supporting this mission would include:

- Continue to operate the Airport safely, efficiently, and conveniently.
- Strive to manage expenditures and increase revenues at the Airport.
- Encourage private sector investment in the utilization and development of the Airport's facilities.
- Create an environment that facilitates business activity and access to the region's businesses.
- Pursue funding for implementation of necessary capital improvement projects to improve safety and usability of the Airport.
- Encourage compatible public use of Airport facilities or property, where possible and appropriate.
- Craft a plan of physical development that corresponds to actual market need and implements the most efficient use of limited resources.

2.2 Airport Management Structure

W.H. Morse State Airport is owned by the State of Vermont and managed and operated by the Operations Division of the Vermont Agency of Transportation. The organizational chart for VTrans is shown in Figure 1. The Operations Division is one of five divisions of VTrans; the others being Program Development, Policy and Planning, Finance & Administration, and Motor Vehicles. Within the Operations Division are the Traffic Shop, nine highway maintenance districts, Aeronautics, Rail, and Public Transit. The Program Development Division meets the Operations Division's pavement management, right-of-way, engineering, and environmental needs. The Operations Division's strategic planning and state/Federal relations needs are met by the Policy & Planning Division. The Finance & Administration Division meets the Operations budget and financial needs. The Motor Vehicles Division meets the Operations Division's enforcement needs.

Figure 1: Vermont Agency of Transportation Organization

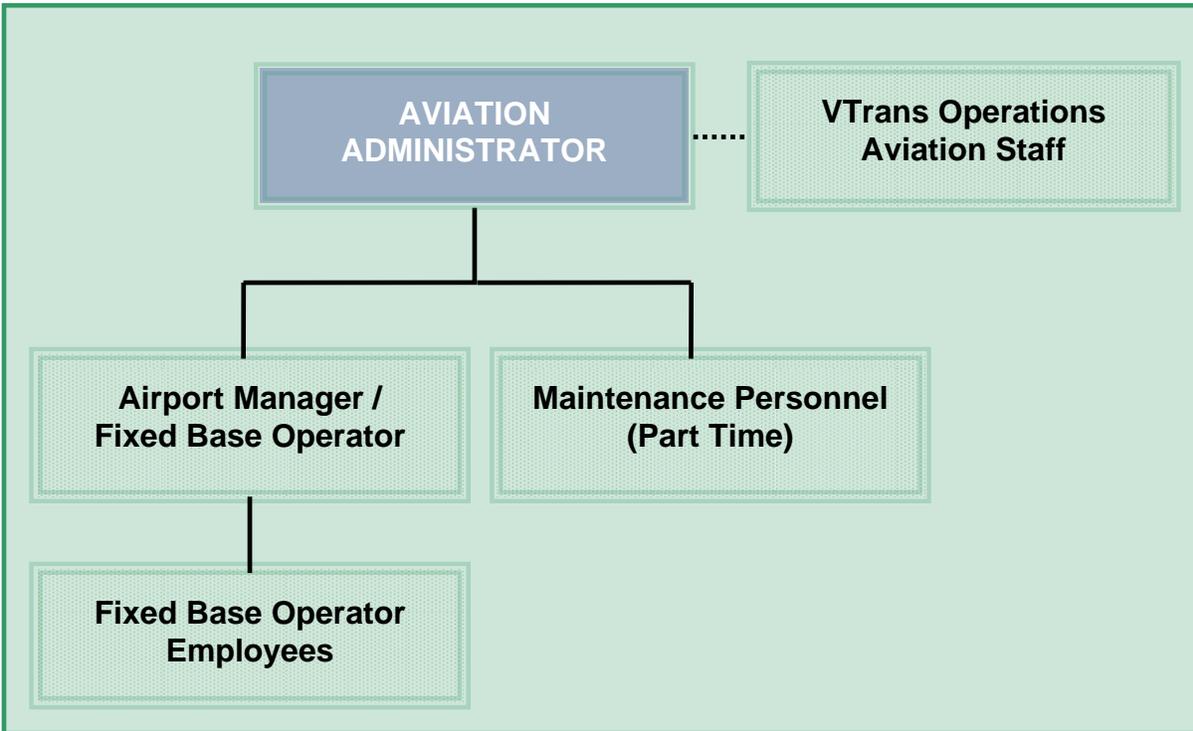


Source: Vermont Agency of Transportation

The Aeronautics program operates and manages the airport, administers airport consultant and airport construction projects, and prepares capital improvement plans and annual state and federal budget requests.

The VTrans Aviation Administrator manages all aspects of the aviation program. Reporting to the VTrans Aviation Administrator are Airport Project Managers, an Airport Leasing Specialist, and a Planning Coordinator. Figure 2 displays the organization chart at Morse State Airport.

Figure 2: William H. Morse State Airport Organization



Source: Vermont Agency of Transportation

3. EXISTING AIRPORT CHARACTERISTICS

3.1 Introduction

W.H. Morse State Airport is located in southwestern Vermont in southern Bennington County to the west of the Bennington town center. Access to the airport is provided via State Route 9. Nearby access to New York State is provided by State Route 7 to the west. Access to Western Massachusetts is accomplished via U.S. Route 7 to the south. State Route 9 continues easterly to connect DDH to the eastern part of the state and Interstate Route 91. U.S. Route 7 and State Routes 71, 67 and 279, provide access from the north. Access on U.S. Route 7 is via four-lane limited access highway in the Bennington area and two-lane limited access highway outside of the Bennington area, while the other routes (with the exception of a small portion of State Route 279), are two-lane unlimited access roads. There are plans to expand the northern part of State Route 279 as a limited access highway to provide better truck access to the region, reduce pollution and improve safety. The nearest Interstate highways are Interstate 91 in eastern Vermont and Interstates 87 and 787 in eastern New York. Interstate 90 (the Massachusetts Turnpike) runs to the south of the Airport. The Airport location is shown in Figure 3.

Runways

The airport has a single asphalt runway that lies in a northwest – southeast alignment. Table 2 summarizes the characteristics of this runway. The 2003 Airport Layout Plan Update indicates that a turf runway at the airport was closed in 1970.

Table 2: Runway Characteristics		
	Runways	
	13	31
Airport Reference Code	B-II	
Length	3,704'	
Width	75 ft'	
Pavement Condition	Fair	
NAVAIDS		
ILS	No	No
VASI	No	No
REILs	Yes	Yes
MALSR	No	No
PAPI	4-light	4-light
Marking	Visual	
Lighting	Medium Intensity Runway Lights	
Touchdown Point	Yes, no lights	
Gross Weight Limitations	Single Wheel: 12,500 lbs	
AWOS/ASOS	ASOS	

Source: AirNav, January 2008 (<http://www.airnav.com/airport/DDH>)
FAA Airport Master Record, as of April 2008

Taxiways

Morse State Airport has two stub taxiways, Alpha & Bravo, connecting the apron to the runway. Table 3 displays characteristics of the taxiways. The current layout of runways and taxiways at the airport is displayed in Figure 4.

Table 3: Taxiway Characteristics		
	Alpha	Bravo
Length	300'	261'
Width	30'	40'
Pavement Condition	Good	Good
Lighting	None	Medium Intensity Taxiway Lights
Type	Stub	Stub
Location / Function	Access to Runway from west side of the apron	Access to Runway from east side of the apron

Source: Airport Layout Plan Update, February 2002.

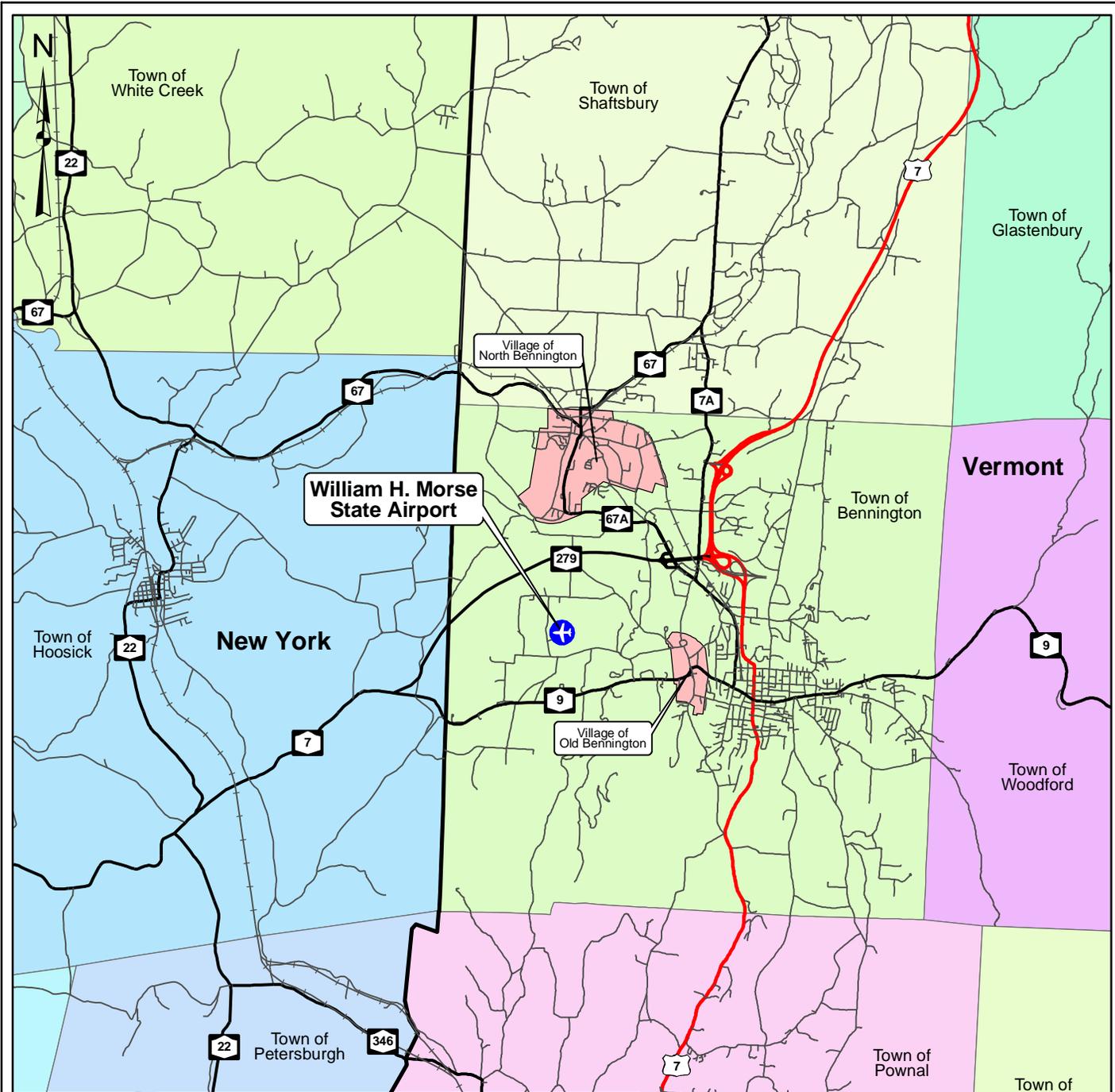
Airport Reference Code

An Airport Reference Code (ARC) is based on two factors. The letters are based the Approach Speed, which is the stall speed of the aircraft multiplied 1.3 times. The Roman numerals are based on the wingspan or tail height of an aircraft, whichever indicates the most demanding design group. Table 4 indicates the groupings to determine the ARC. The ARC for an airport is based on the largest aircraft that regularly uses the airport, with the term “regularly” defined as at least 250 takeoffs annually (500 annual operations). Currently DDH has an Airport Reference Code (ARC) of B-II. This is in line with the Vermont guidelines for a Regional Service Airport⁵. According to the February 2002 update of the Airport Layout Plan, the primary aircraft utilizing the airport at that time was reported to be a Beechcraft 1900. This aircraft has a wingspan of 58 feet, and an approach speed of 117 knots.

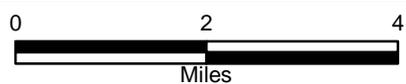
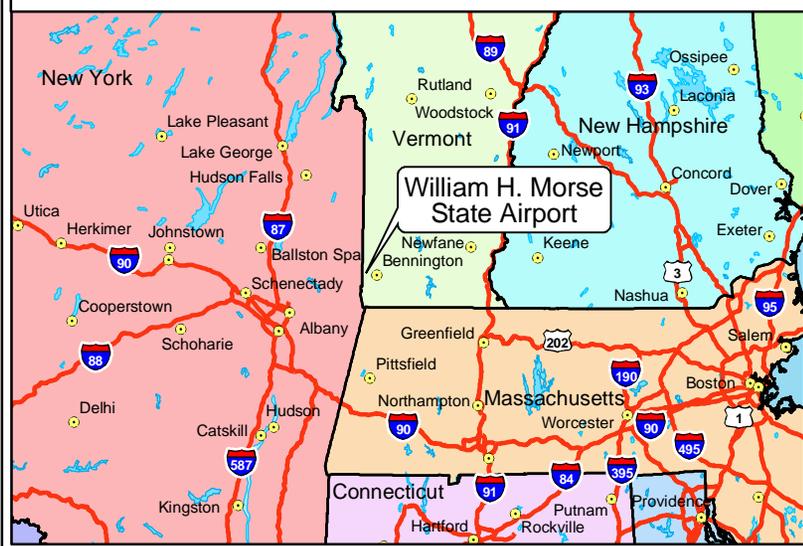
The fleet currently operated by AirNow consists of the Embraer EMB-110P1 Bandierante; the Embraer EMB-110P2 Bandierante; and the Cessna Caravan 675⁶. According to an interview with AirNow, all of their aircraft fly in and out of Bennington, as DDH is their primary maintenance base. The relevant specifications of the EMB-110 are a wingspan of 50.3 feet and an approach speed of 92 knots, which makes it a B-II aircraft for planning purposes. A reference code of B-II serves the airport well as some small-cabin business jets, including most of the Cessna Citation series, the Raytheon Hawker 800 series, and the Dassault Falcon series also fall into this category. Therefore, although the critical aircraft may have changed, the ARC of B-II is still appropriate.

⁵ Vermont Airport System and Policy Plan, Appendix D, Table D-1

⁶ Flight International, March 27, 2007, pg. 71.



REGIONAL LOCATION



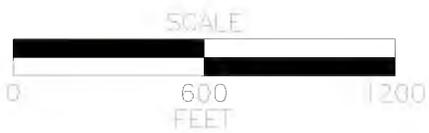
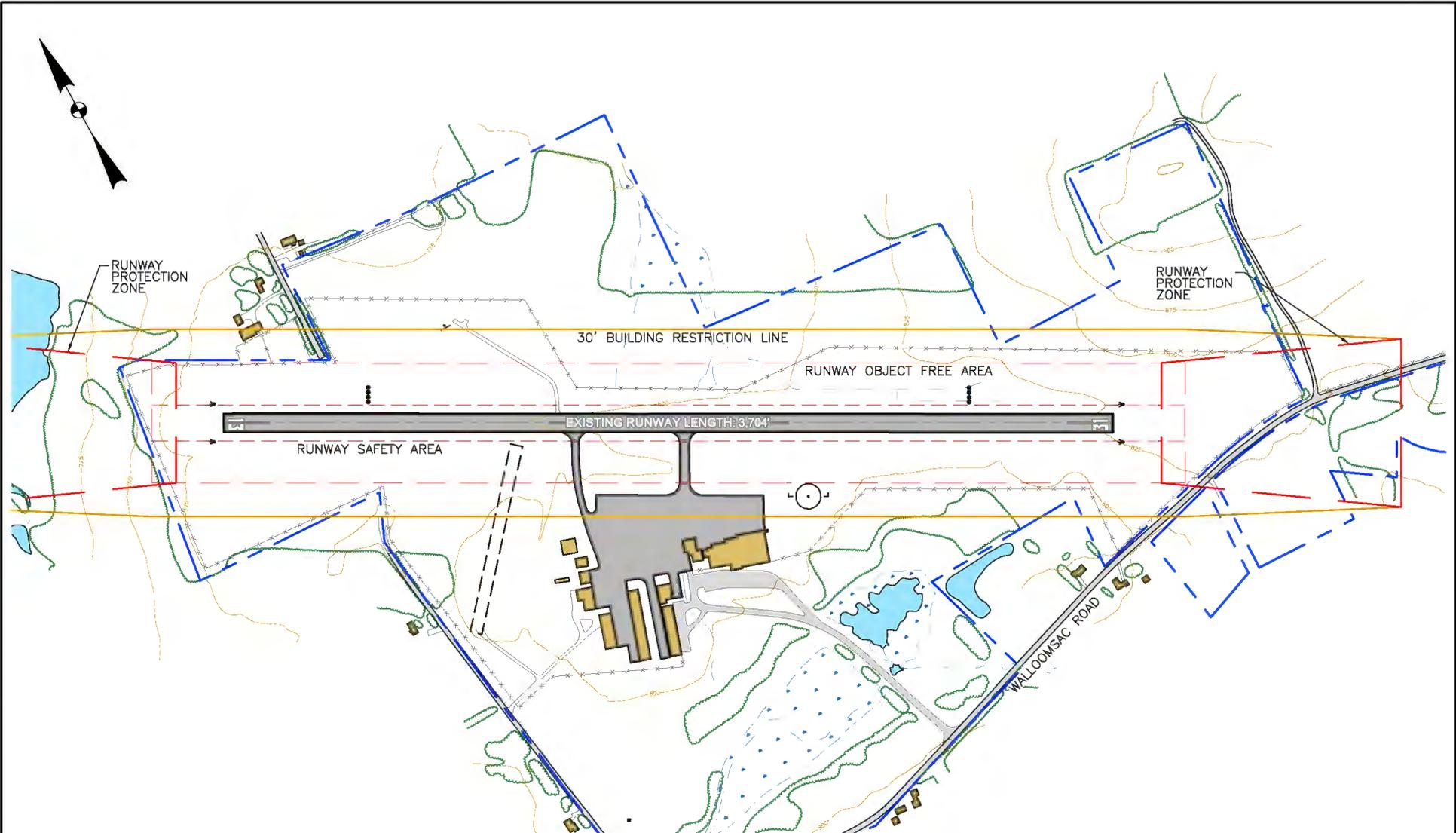
WILLIAM H. MORSE STATE AIRPORT
 BENNINGTON COUNTY, VERMONT

LOCATION MAP

SCALE:	DATE:	FIGURE:
AS SHOWN	MARCH 2008	3

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WILLIAM H. MORSE STATE AIRPORT
BENNINGTON COUNTY, VERMONT

EXISTING LAYOUT

SCALE: AS SHOWN	DATE: NOVEMBER 2008	FIGURE: 4
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Table 4: Airport Reference Code (ARC)		
Aircraft Approach Category	Approach Speed	
A	Less than 91 knots	
B	91 knots or more but less than 121 knots	
C	121 knots or more but less than 141 knots	
D	141 knots or more but less than 166 knots	
E	166 knots or more	
Airplane Design Group	Wingspan	Tail Height
I	Up to but not including 49 feet	Up to but not including 20 feet
II	49 feet up to but not including 79 feet	20 feet up to but not including 30 feet
III	79 feet up to but not including 118 feet	30 feet up to but not including 45 feet
IV	118 feet up to but not including 171 feet	45 feet up to but not including 60 feet
V	171 feet up to but not including 214 feet	60 feet up to but not including 66 feet
VI	214 feet up to but not including 262 feet	66 feet up to but not including 80 feet

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

Obstructions

FAR Part 77

Both runway ends have obstructions. On Runway End 13, there is a hill with a height of 140 feet above the runway elevation, at a distance of 3,500 feet from the runway end. On Runway End 31, there is a mound with a height of 15 feet above the runway elevation at a distance of 550 feet from the runway end. There appears to be no economic justification for removing either of these obstacles.

Runway Protection Zones (RPZ)

The Runway Protection Zone (RPZ) is a controlled area that is generally kept clear of concentrated activity and development. An RPZ is a trapezoidal area that begins 200 feet from each runway end that extends and diverges based on the type of aircraft that the facility expects to serve, and by the approach visibility minima for each runway end. The FAA recommends property acquisition and/or avigation easements within the RPZ to ensure necessary control over these areas. Table 5 describes the RPZ's for the runway ends at the Airport.

Runway	Length (feet)	Inner Width (feet)	Outer Width (feet)	RPZ Acres
13	1,000	500	700	13.770
31	1,000	500	700	13.770

Source: McFarland Johnson, 2008.

Morse State Airport controls a large portion of the land in the Runway Protection Zones. According to the 2002 Airport Layout Plan Update, there was a need for two aviation easements in the short-term to provide the airport control of the entirety of both RPZs. A twelve acre easement is needed at Runway End 13. For Runway End 31, nearly the entire RPZ is under airport ownership with the exception of approximately one acre, upon which an easement should be obtained.

3.2 Existing Airport Activity

At most airports like DDH, private individuals who utilize the Airport for discretionary uses such as recreational flying, flight training, transportation, and business flying generate the majority of aviation activity. However, DDH is not a “typical” General Aviation (GA) airport. The April 2003 report on *The Economic Impact of Vermont’s Public-Use Airports* estimated that 75% of the operations at the Airport were business-related⁷. This is an unusually high number, but helps to demonstrate the value of the Airport to area businesses. This high ratio of business use of this facility also significantly increases the importance and value of the facility as part of the State’s aviation system.

According to AirNow, the airport’s FBO, they themselves are the main user of the facility, as they have their primary maintenance base at DDH, serving its charter and scheduled freight delivery service. This results both in significant traffic and an increased economic impact. As stated previously, AirNow flies three types of aircraft into Bennington, including the Embraer EMB-110P1 Bandeirante, the Embraer EMB-110P2 Bandeirante, and the Cessna Caravan 675. While these aircraft are a part of the AirNow fleet, they are not considered as based aircraft, as Morse simply serves as a maintenance base for the aircraft, while daily operations are completed at other airports across the region. AirNow’s fleet only utilizes the airport when maintenance is needed.

As of April 2005, there were 50 based aircraft at DDH. This total includes 24 single engine aircraft, 18 multi-engine aircraft, 2 helicopters and 6 ultra-light aircraft⁸. Morse State Airport is a non-towered airport, which results in aircraft operations not being recorded. This also severely limits the amount of information available regarding aircraft trips, passengers, and destination. VTrans uses aviation acoustical counters to track aircraft movements, but such

⁷ The Economic Impact of Vermont’s Public Use Airports, April 2003, page 135.

⁸ Source: FAA 5010

counts are not considered to be highly accurate. According to the FAA Form 5010, there were a total of 27,920 operations for the 12-month period ending April 30, 2005, however up to date figures are unavailable. The majority of these operations were typified as local GA operations. This figure is significantly larger than the forecast of operations in the 2002 Airport Layout Plan Update. Further, the high ratio of business use and the fact that the primary user, AirNow, does not consider the bulk of its aircraft to be based at DDH would indicate a much higher itinerant operational count.

3.3 Existing Facilities

Landside facilities support the many activities and services involved in storing and maintaining aircraft and in processing aircraft before and after use of the airside facilities, which include the runways and taxiways. Typical GA airport landside facilities include aircraft hangars and aprons, terminal buildings, aviation fuel facilities, parking lots, and access roads. Well-maintained and affordable landside facilities are important to an airport's efficient operation and success.

Terminal

The Airport's Terminal Building is located south of the runway and offers more than 14,000 square feet of operating space for FBO use, with a small portion dedicated to public uses. The building space includes a pilot lounge, restrooms, vending machines, a briefing room, and office space for AirNow, the Fixed Base Operator (FBO). According to published information, the facility is attended from 7:00 a.m. until 6:00 p.m., 7 days per week, and 364 days per year (closed on Christmas) for public use⁹. The facilities, including the restrooms, are not available to late or early arriving pilots and passengers. This may have some impact on the usage of the facility by business and corporate aircraft. In addition to its space in the terminal, AirNow also has an adjacent 16,000 square foot building used for aircraft maintenance, repairs and parts storage. It is reported by the FBO that they do very little work for aircraft other than their own.



Automobile Access & Parking

A centrally located main automobile parking lot is located south of the Terminal. Access is provided via the two-lane paved access road extending to Wallomsac Road. The parking lot is

⁹ AirNow reported that the facility is in use 24 hours per day for their cargo operations. Their busiest times were from 4:00 a.m. to 7:00 a.m. and 7:00 p.m. to 10:00 p.m.

paved and offers sixty-two short-term parking spaces and forty-eight spaces designated for long-term parking. Parking for the individual hangars is also available adjacent to the buildings.

Aprons

There is a total of 3.7 acres (160,000 square feet) of overall apron area located in front of the terminal and its adjacent FBO facility. Of this, approximately 2.32 acres (100,000 square feet) is allocated to 32 paved tie-down spaces, leaving a net usable area of 1.38 acres (60,000 square feet).

Hangars

There are six hangars at DDH. Many of these are simply parking places for GA aircraft while some have electrical and water service that allows for the tenant/owner of the hangar to use his/her facility for additional purposes.

Fuel Farm

The underground fuel farm is located on the aircraft apron, west of the Terminal. The VTrans-owned fuel farm has the capability to store 12,000 gallons of aviation gasoline (100LL) and jet fuel (Jet-A). This relatively large capacity allows the airport to take advantage of bulk fuel purchase discounts. VTrans has installed a 2,500 square foot concrete pad that protects the area from potential contamination associated with spills while fueling aircraft. 100LL is available 24 hours per day, seven days per week from the self-service fuel pumps located on the aircraft apron west of the Terminal, while Jet-A is available during normal operating hours from full service delivery trucks.

Deicing

Deicing services are not available to general aviation traffic at Morse State Airport. AirNow deices only its own aircraft. The FBO indicated that liability concerns prevented the deicing of aircraft other than their own.

Security

Morse State Airport has security fencing around the entire airport property to prevent access by the public and/or land animals. There has been a history of vandalism to airport equipment, including runway lights, forcing the recent extension of the previous partial airport fencing.

Aircraft Rescue & Firefighting

As an airfield with no scheduled commercial traffic, Morse State Airport does not have Aircraft Rescue & Firefighting services based at the airport. In the event of an emergency, the Town of Bennington Volunteer Fire Department would be the responding agency. The

departments' Bennington Rural Fire Station is located less than a mile from the airport. In the event of a medical emergency, the Bennington Rescue Squad serves the airport. The rescue squad has paid and volunteer paramedics and emergency medical technicians available. Their headquarters are approximately two miles from the airport.

Airfield Maintenance

The Vermont Agency of Transportation District 1 accomplishes maintenance of the facilities at Morse. VTrans District 1 currently has its headquarters in Bennington. VTrans is responsible for the removal of snow and ice during wintry conditions as well as the mowing of the grass at the airport during the summer months.

3.4 Existing Tenants & Users

There are several tenants at the W.H. Morse State Airport, including AirNow, Abacus Automation, and Bennington Iron Works. A brief description of these businesses at the airport is provided below:

AirNow, Inc.

AirNow, Inc. (AirNow) is both the single largest user of the W.H. Morse State Airport and serves as the FBO for the facility. AirNow operates the facilities within the Terminal and provides a briefing room, vending machines, a pilot lounge, and restrooms. Enterprise Rent-a-Car serves the facility, although they are not tenants. As previously noted, these facilities are only available during AirNow's public business hours. There is a pay-telephone located outside the building to allow late arriving pilots to contact a ground transportation provider or other party.



In interviews, AirNow reported providing only fuel and very light maintenance to aircraft other than its own. According to the FAA 5010, they supply preheating, deicing, and starting equipment as well as charter cargo service on-demand; however, when queried, AirNow stated that they do not do deicing for aircraft other than their own, due to liability issues. AirNow also does heavy maintenance such as airframe and power plant repairs for their own aircraft. The FBO provides all fuel services on the Airport.

Corporate Aviation

There are presently two companies that utilize hangar space at the airport. Abacus Automation, a company that designs and buildings custom automation equipment for various companies across the country, operates a hangar at the airport. The hangar houses a Cessna 172L and a Piper PA-23. In addition, Bennington Iron Works, a design and steel construction company based in Bennington, utilizes a hangar at the airport for the storage of an aircraft.

There are eight buildings at DDH. A summary of leases regarding these various buildings is found in Appendix A.

3.5 Bennington Town Plan

A key factor in developing the business plan for DDH is to ensure compatibility with the land use, community and future plans of the region. The Bennington Town Plan was adopted on December 12, 2005. The vision statement from this plan is:

Bennington will remain a unique community, dedicated to retaining its distinctive sense of place while providing opportunities for its residents to enjoy an outstanding quality of life.

The plan includes both a Planned Airport District and an Airport Approach Overlay District. The goal of the plans for these districts is to “enable the continued economic use and enjoyment of the airport and to prevent encroachment of uses that are incompatible with the operation of the airport¹⁰.” The zoning regulations for the Planned Airport District can be found in Table 6. The Approach Overlay District is designed to ensure safe and compatible use of the lands on the approach to the runway.

Within this Town Plan, a number of improvements to the airport are specifically mentioned as being supported by the Town:

- Construction of new security fencing (complete)
- Installation of a Transponder Landing System
- Addition of Precision Approach Path Indicator (PAPI) lights (complete)
- Construction of a runway turnaround (until a parallel taxiway is built)
- Runway Safety Area improvements (elevate grade of area west of runway)
- Removal of obstructions
- Expansion of the airport parking apron.

The Town Plan mentioned the expansion of the runway as a possibility but withheld comment until the Benefit/Cost Analysis was completed. The report was completed in 2005; however an update to the Town Plan has not been undertaken.

¹⁰ Bennington Town Plan, December 2005, Page 24.

Table 6: Allowed Uses in the Planned Airport District
Accessory Use / Structure
Airport
Flight Instruction
Mixed Use
Professional / Business Office ¹¹
Sale and Rental of Aircraft and Aircraft Parts, Accessories, and Equipment
Warehouses ¹²

Source: Town of Bennington Land Use & Development Regulations, February 2004, Pg. 46

Note: There are no uses in the Planned Airport District that require only a Zoning Permit

3.6 Airport Development Plan

There are a variety of development considerations at the William Morse State Airport. The considerations include the following:

Runway Development

The existing Runway 13-31 is 3,704 feet in length, eliminating most corporate jet operations due to both their physical and insurance requirements for more runway length. An October 2005 Benefit-Cost Analysis considered runway extensions to both 4,000 feet and 5,000 feet. The 2008 Airport Layout Plan Update shows an extension of the runway to 4,000'. While this will allow for some limited additional usage of the facility by different types of aircraft, this 300' extension of the runway will have its primary impact on the insurance restrictions of current and potential airport users, which could help to increase facility utilization. However, as of December 2008, the FAA has not approved funding for the extension.

In addition to the Runway itself, the Runway End 13 Runway Safety Area (RSA) is sub-standard, as it is short 100 feet of fulfilling the FAA's length requirement. There is a substantial drop in elevation immediately west of present RSA, which will result in a need for extensive fill (estimated at approximately 12,000 cubic yards of material). RSA adequacy is imperative to the FAA and should be one of the Airports' highest priorities. According to the 2005 Benefit-Cost Analysis, this work was included in the Fiscal Year 2005-2009 Capital Improvement Program, along with removal of obstructions and adding drainage and replacing runway lights. However, the 2008 Airport Layout Plan shows the runway being shifted by 100' to the southeast, thus negating the need to fill this steeply banked area.

Parallel Taxiways / Runway Turnarounds

Currently, Taxiways Alpha and Bravo extend from the apron to the runways. However, an aircraft wishing to depart from or which has arrived at DDH must back taxi on the Airport's only runway. This reduces runway capacity and increases the likelihood of catastrophic runway

¹¹ Limited to those uses for which frequent access and proximity to the airport is an integral part of the office use

¹² Limited to storage and shipping facilities associated with the transfer of freight transported by air

incursions, especially in a non-towered and harsh weather environment such as exists at DDH. Additionally, this procedure is expensive, in both fuel and time, as one aircraft must either wait on the apron or circle the Airport while another clears the runway. The most recent proposed ALP shows the construction of a full parallel taxiway to the south of the existing runway. This will require significant amounts of fill, and will traverse significant wetlands and other difficult terrain.

If the recommended parallel taxiway cannot be constructed in a reasonable period of time, then the 2002 Airport Layout Plan Update recommended the construction of an aircraft turnaround area at the end of the runway or a partial parallel taxiway. This will provide added convenience for pilots and help to ensure safety during the turnaround maneuver. However, the construction of a runway turnaround would need to provide holding space for aircraft outside of the runway obstacle free zone. This would require substantial construction to the side of the runway area. If the full parallel taxiway, as proposed in the current ALP is constructed, these turnarounds will not be needed.

Ground Communications Outlet

Currently, a pilot seeking to depart the Airport under Instrument Flight Rules (IFR) conditions must file a flight plan and obtain clearance from the Terminal Control Area (TCA) before departing. Without a Ground Communications Outlet (GCO), the pilots must use a telephone, and are given a void time of between five and fifteen minutes. If the aircraft has not departed by the expiration of this void time, then a new clearance must be obtained. This makes aircraft operations more difficult in inclement weather conditions, or when an aircraft must wait for another aircraft making an approach to the Airport.

ALP and VASPP Development Plans

The Airport Layout Plan Update is on-going as of this writing, although a preliminary copy of the proposed layout has been obtained and reviewed. The current signed 2002 ALPU shows the following recommended improvements:

1. Study for runway extension (short term). Extend runway (intermediate term).
2. Construct turnaround at the Runway 13 end.
3. Construct an additional 36,000 square feet of apron (short term). Construct an additional 25,000 square feet of apron (long term).
4. Study for parallel taxiway (short term). Construct parallel taxiway (intermediate term)
5. Ground Communications Outlet. Relocate Windcone
6. PAPI at Runway End 13 (complete)
7. Construct a 10-unit T-Hangar (short term). Construct a corporate aircraft hangar (intermediate term).
8. Acquire 4 avigation easements.
9. Construct car parking and access roads for new T-Hangar and Corporate Hangar
10. Establish an Airport Picnic Area with wooden tables and barbeque grills
11. Erect security fencing around the Airport. (complete)

A number of additional improvements for the Morse State Airport are listed in the 2007 VASPP:

1. Twenty-five foot widening of Runway 13/31
2. Installation of a precision GPS approach; Medium-Intensity Approach Lighting System with Runway Alignment Indicator (MALSR)
3. Upgrade runway lighting to High Intensity Runway Lighting (HIRL)
4. Complete a 500 square foot terminal expansion
5. Addition of 34 automobile parking spaces

In addition, the plan indicated that the airport had been allocated funds for a Transponder Landing System (TLS), instrumentation that would provide a precision-approach. The TLS would bring the airport closer to meeting all of the characteristics required for a National Service Airport. Due to necessary improvements to the runway safety areas at the airport, the FAA chose to defer completion of the study due to the potential for changes to the location of the runway thresholds. This project could be pursued at a later date if the runway is relocated to address safety area deficiencies.

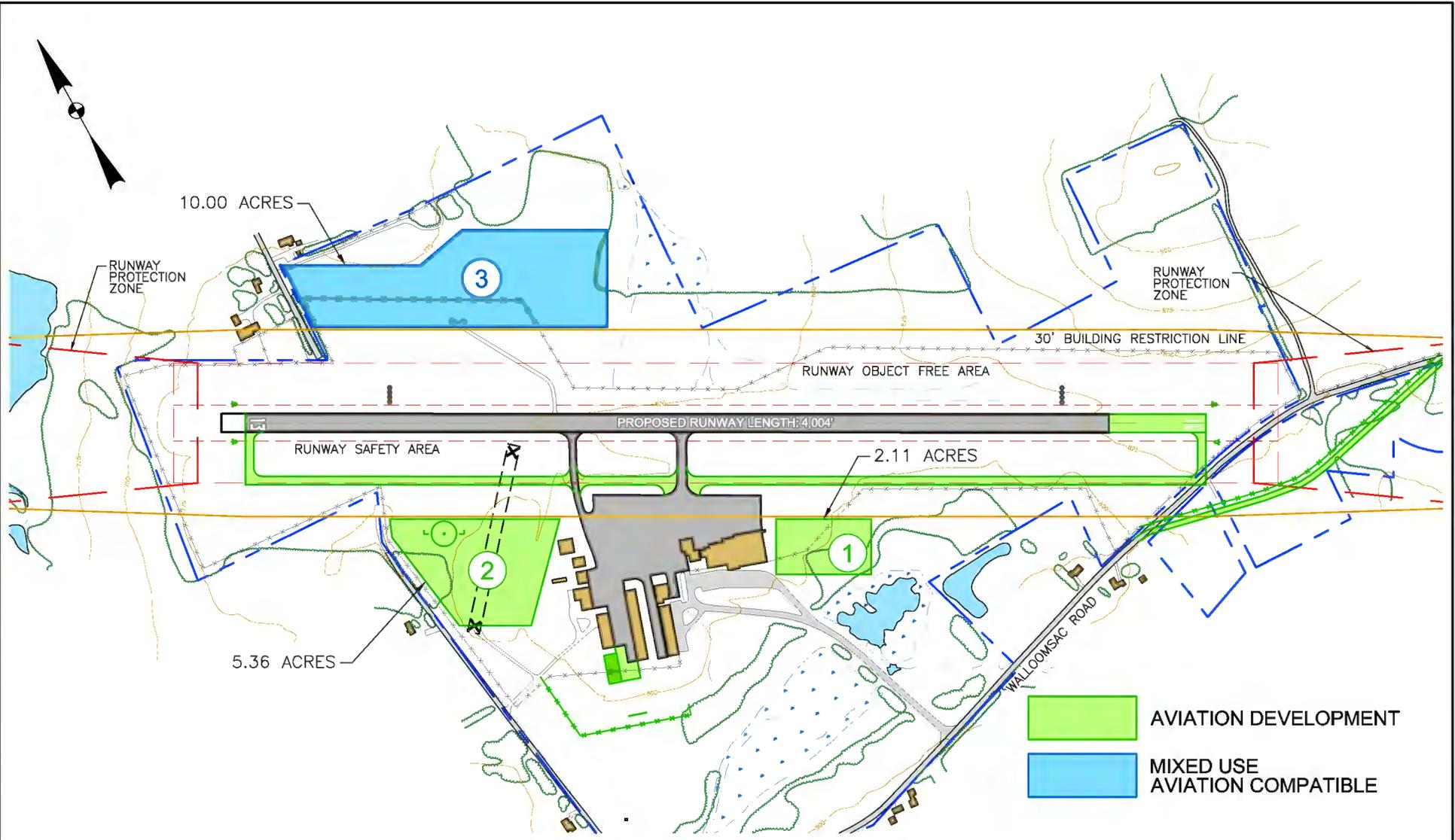
Business Plan Development Plan

The Development Plan completed for this business plan for DDH is illustrated on Figure 5. The Development Plan includes measures being discussed in the DDH Airport Layout Plan Update being prepared as of this writing, along with preliminary areas identified for additional potential development as part of this plan. The Development Plan illustrates both airside and landside improvements that are most feasible at W.H. Morse State Airport, given site specific conditions.

The following areas of the airport are recommended to accommodate facilities development in the future:

Area 1, located adjacent to and southeast of the existing AirNow hangar might allow for the development of an additional hangar, an expansion space for the FBO or for AirNow's cargo transportation services, or aircraft parking.

Area 2, located to the west of the existing private hangars in the area that formerly housed the turf runway. This area could house additional hangars, aircraft tie-downs, or service offerings. The area also appears to have good road access from Town Highway 83 (Airport Road), which could allow for some non-aviation development in the areas furthest away from the runway.



- AVIATION DEVELOPMENT
- MIXED USE AVIATION COMPATIBLE

WILLIAM H. MORSE STATE AIRPORT
BENNINGTON COUNTY, VERMONT

DEVELOPMENT PLAN

SCALE: 1" = 600'	DATE: OCTOBER 2008	FIGURE: 5
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McFarland Johnson
 in association with
R.A. Wiedemann & Associates, Inc.

Area 3, located on the north side of the airport can accommodate primarily non-aviation related development, due to a lack of access to the runway/taxiway system. This area is not severely sloped and has good road access via Town Highway 23 (Airport Road). The existing fence line cuts across the middle of this proposed development area, but the entire area is beyond the Building Restriction Line. A key issue in the development of this area will be the availability of utilities to the area as well as the presence of the ASOS unit, which will limit where structures could be located.

Airport Capital Improvement Program

As the DDH Airport Layout Plan Update is being prepared as of this writing, phasing or construction costs are not available for this report. This section will discuss current funding structures for the airport. DDH is eligible for capital project funding assistance from the FAA through the Airport and Airway Improvement Program (AIP). As an eligible participant in this program, VTrans is required to prepare, update annually, and submit to the FAA a five-year Airport Capital Improvement Program (ACIP) to apply for federal grants. These grants typically fund 90 percent of eligible development costs, with the remaining 10% being funded by the airport operator or other local participants. The ACIP for DDH is prepared as part of VTrans overall Statewide Aviation Capital Plan.

AIP eligible projects include the planning, design, and construction of projects associated with public use non-revenue generating facilities and equipment of the Airport. Typical AIP eligible projects include: Airport Master Plans, Airport Layout Plans; land acquisition and site preparation; airfield pavements, e.g. runways, taxiways, and transient aprons; lighting and navigational aids; safety, security, and snow removal equipment; public use passenger terminal facilities that are not leased for exclusive use; and obstruction identification and removal. Items not typically eligible for AIP funding include revenue generating facilities such as automobile parking facilities, and private-use areas of terminal facilities. Fuel farms and hangars are potentially eligible for funding at non-primary airports if all FAA safety standards are met¹³. The highest funding priority according to FAA's rating procedure is generally given to those projects that are safety-related such as runway safety area improvements, obstruction removal, and facility improvements to meet current FAA Airport Design Standards.

The current Statewide Airport Capital Improvements Program (ACIP) for FY 2007-2011 shows only a single project for DDH: the construction of a snow removal equipment storage building. This project is considered the 41st highest priority for the State.

¹³ Per Vision 100-Century of Aviation Reauthorization Act, "The Secretary may decide at the costs of revenue producing aeronautical support facilities, including fuel farms and hangars, are allowable for an airport development project at a nonprimary airport if the Government's share of such costs is paid only with funds apportioned to the airport sponsor under section 47114 (d)(3)(A) (nonprimary entitlement) and if the Secretary determines that the sponsor has made adequate provision for financing airside needs of the airport."

Local/Private Funding

Local funding of the airport is achieved via a budget determined by the Vermont Agency of Transportation, which is in turn funded by the State of Vermont. Annual budget amounts for the State-operated airports, including Morse, are determined prior to the beginning of the State's fiscal year on July 1st.

Private investors are also a potential source of funds for revenue producing development. Tenants and/or investors may finance the construction of facilities for their own usage or from which they derive income. While direct revenues to the Airport are usually limited to the lease charges for the land underlying the facilities, the sponsor does not need to obtain its own funding for these improvements. Additionally, the increased activity resulting from Airport improvements often increases the number of based aircraft or operations, which in turn generates additional revenue associated with fuel sales and other aviation services. Examples of private investment at airports include aviation business buildings for fixed based operators, fuel facilities, and non-aviation commercial development. However, recent sky rocketing construction costs have reduced the overall private investments at most GA airports. This problem is further exacerbated at DDH by the fact that the FBO does not appear to have any incentive to improve its FBO facilities, as it believes that it actually loses money on the services it does provide to aircraft other than its own.

In the past, private investment at DDH has been limited to enhancement of AirNow's private maintenance facilities, and construction of small individual hangars. VTrans has adopted the practice of providing ground leases for space upon which the lessee may construct their own structure. This is a strategy that many airports of all sizes have chosen in lieu of constructing hangars to lease themselves. This practice results in the construction of facilities and the growth of the Airport, but lessens the control that the Airport has over its property and reduces the Airport's future flexibility to grow and change as needs and/or technology change. This strategy also results in slower growth at the Airport.

3.7 Market Analysis

Airport Market Area

Figure 6 illustrates the Airport service area and other nearby public-use airports. A 30-mile circle is generally assumed to enclose each airport's Airport Service Area (ASA). In addition, two other airports in the Northeast were detailed to provide a regional comparison. These airports are identified in Table 7.

In addition to these nine facilities, there are a number of privately owned, private use airports within the 30-mile service area, as well as a number of heliports and a seaplane base located 33 miles from DDH. These facilities are not further considered because they are believed to have a negligible impact on Morse State Airport.

Many of DDH's competing airports are located in New York and Massachusetts. This is an important factor due to variations in taxation policies among the states. Vermont's taxation policies result in a more unfavorable business environment that drives transactions, particularly large transactions such as the purchase of aircraft and heavy maintenance, to neighboring states.

Table 7: Airport Service Area & Other Comparable Airports

Airport	City & State	Distance from Bennington	Primary Runway Length	NPIAS Designation	Ownership
Airport Service Area					
W.H. Morse State Airport	Bennington, VT	N/A	3,703 ft.	General Aviation	Public (State)
Chapin Field	Cambridge, NY	13 NM	2,130 ft.	N/A	Private
Harriman and West	North Adams, MA	14 NM	4,300 ft.	General Aviation	Public (Municipal)
Mount Snow	West Dover, VT	19 NM	2,650 ft.	N/A	Private
Garnseys	Schuylerville, NY	21 NM	2,600 ft.	N/A	Private
Burrello - Mechanicville	Mechanicville, NY	22 NM	2,600 ft.	N/A	Private
Rensselaer County	Troy, NY	22 NM	2,670 ft.	General Aviation	Private
Round Lake	Round Lake, NY	27 NM	2,028 ft.	N/A	Private
Argyle	Argyle, NY	28 NM	2,400 ft.	N/A	Private
Albany International	Albany, NY	30 NM	8,500 ft.	Primary – Small Hub	Public (County)
Other Comparable Airports					
Dillant - Hopkins	Keene, NH	43 NM	6,201 ft.	General Aviation	Public (Municipal)
Biddeford	Biddeford, ME	126 NM	3,000 ft.	General Aviation	Public (Municipal)

Source: McFarland Johnson, Inc, 2008

Facilities

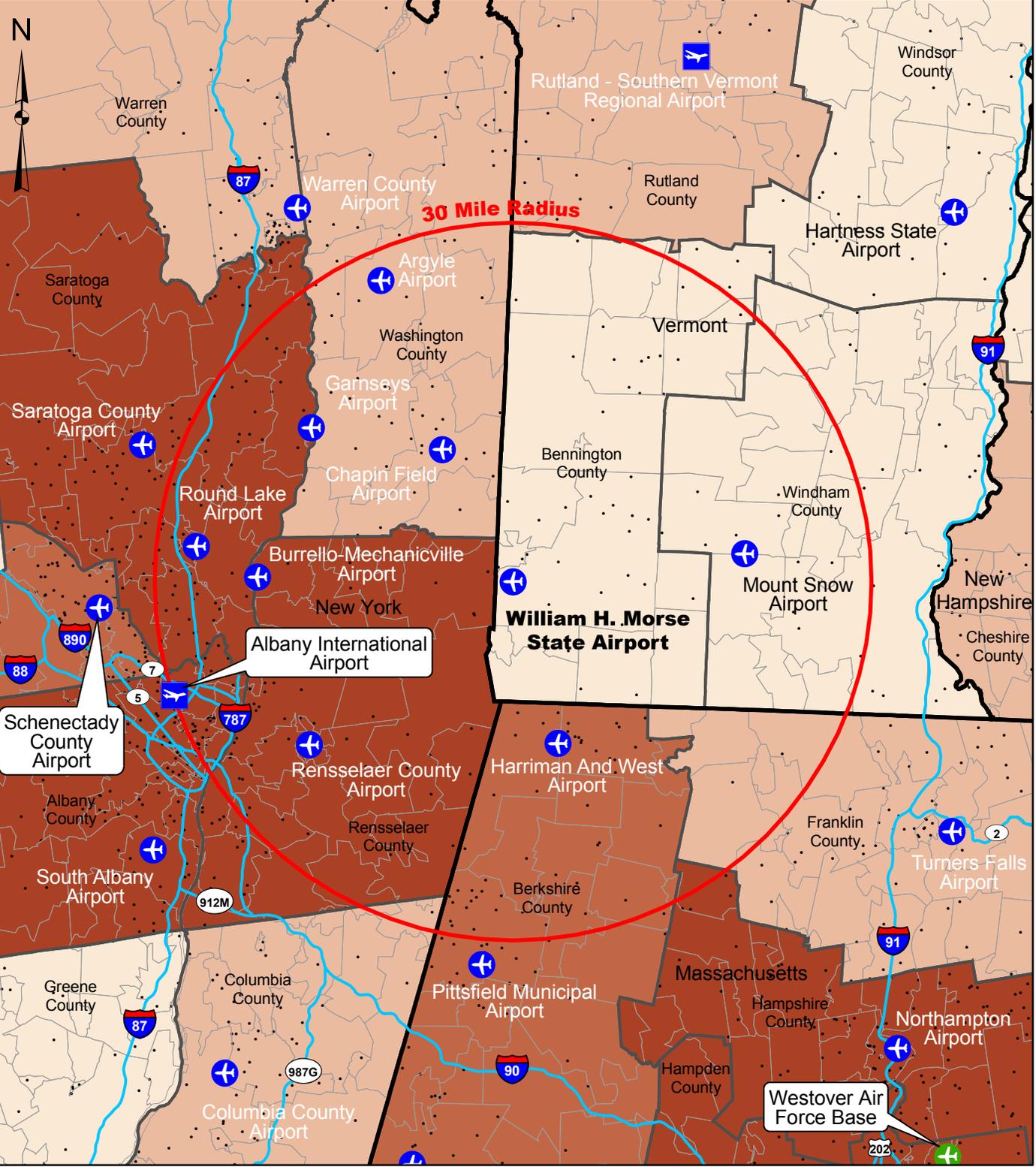
Table 8 provides a comparison of facilities at other airports within the Morse State Airport ASA and at other comparable airports in the Northeast. Over half of the airports have paved runways. Of these, Albany International has the longest at 8,500 feet followed by Dillant-Hopkins with a 6,201 foot runway, and Harriman and West with a 4,300 foot runway. Bennington ranks second in terms of based aircraft in the ASA with 50, second only to Albany.

Aviation Services

Table 9 presents the availability of various aviation services at each of the area airports. Harriman & West, Biddeford, Dillant-Hopkins, and Albany offer a full range of general aviation services. Minimal services are available at Morse, Argyle, and Chapin Field.

Hangars and Tie-downs

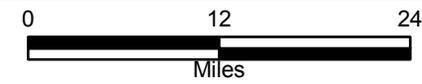
Of the six airports within the Morse State ASA that responded to inquiries, all have tie-down space available for rental and Morse, Harriman & West, Albany, and Mount Snow have hangar space available for rent (the hangars at Argyle are at capacity). In addition, the two comparable airports in the Northeast both have tie-down space available, but hangar space is at capacity. Garnseys does not have hangar space at the airport. Prices for various options available are shown on Table 10. The prices at Morse State Airport are above average for tie-downs when compared to the other airports. The price for conventional hangar space at the airport is on the higher end of the scale. The cost to lease the one heated conventional hangar space at DDH is significantly higher than that at other airports surveyed. AirNow, the FBO, indicates that there is some demand for hangar space at the current prices. The cost of Jet-A and 100LL fuel at Morse State Airport is the highest of the airports surveyed, while Albany International was the lowest. However, fuel prices are a snapshot of a very volatile item which price changes daily.



Population by County

- 0 - 60000
- 60001 - 90000
- 90001 - 120000
- 120001 - 150000
- 150001 +

- ✈ Commercial Service
- + General Aviation
- + Military
- Service Area
- Zip Code Boundaries
- Registered Aircraft



WILLIAM H. MORSE STATE AIRPORT BENNINGTON COUNTY, VERMONT		
SERVICE AREA		
SCALE: AS SHOWN	DATE: NOVEMBER 2008	FIGURE: 6
McFarland Johnson 		

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Table 8: Facility Comparisons

Airport	Owned	Acres	ARC	Number Of Based Aircraft							Runway		Control Tower
				Jet	Multi	Single	Heli	Ultra-light / Gliders	Military	Total	First L x W	Second L x W	
W.H. Morse State, VT	Public	100	B-II	0	18	24	2	6	0	50	3,703' x 75' (Asphalt)	N/A	No
Chapin Field, NY	Private	14	N/A	0	1	20	0	0	0	21	2,130' x 65' (Turf)	2,100' x 63' (Turf)	No
Harriman and West, MA	Public	130	Small	1	2	22	0	7	0	32	4,300' x 100' (Asphalt)	N/A	No
Mt. Snow, VT	Private	35	Small	0	2	5	0	0	0	7	2,650' x 75' (Asphalt)	N/A	No
Garnseys, NY	Private	15	N/A	0	0	4	0	0	0	4	2,600' x 103' (Turf)	9,999' x 750' (Water)	No
Burrello-Mechanicsville, NY	Private	27	N/A	0	0	7	0	1	0	8	2,600' x 21' (Asphalt)	N/A	No
Rensselaer County, NY	Private	65	A-I	0	0	13	0	0	0	13	2,670' x 50' (Asphalt)	N/A	No
Round Lake, NY	Private	66	N/A	0	0	9	0	1	0	10	2,028' x 76' (Turf)	4,000' x 600' (Water)	No
Argyle, NY	Private	13	A-I	0	0	28	1	3	0	32	2,400' x 87' (Turf)	N/A	No
Albany International, NY	Public	1000	D-III	18	15	48	9	0	8	98	8,500' x 150' (Asphalt)	7,200' x 150' (Asphalt)	Yes
TOTAL (Airport Service Area)				19	38	180	12	18	8	275			
Dillant – Hopkins, NH	Public	939	C-II	3	5	70	0	0	0	78	6,201' x 100' (Asphalt)	4,000' x 150' (Asphalt)	No

Table 8: Facility Comparisons

Airport	Owned	Acres	ARC	Number Of Based Aircraft							Runway		Control Tower
				Jet	Multi	Single	Heli	Ultra-light / Gliders	Military	Total	First L x W	Second L x W	
Biddeford, ME	Public	126	A-I	0	2	40	0	0	0	42	3,000' x 75' (Asphalt)	N/A	No
TOTAL				22	45	290	12	18	8	395			

Sources:

Airport Master Records as published January 2008 (<http://www.gcr1.com/5010web/>)

Vermont Airport System and Policy Plan, Appendix D, Page D.2.

New Hampshire State Airport System Plan Update (<http://www.nh.gov/dot/bureaus/aeronautics/sasp/documents/TR2Inventory.pdf>)

Maine Aviation Systems Plan Update (<http://mainegov-images.informe.org/mdot/aviation/pdf/maspu.pdf>)

Table 9: Service Comparison

Airport	Frame Repairs	Power Repairs	Flight Instruction	Charter Service	Avionics	Aircraft Sales	Aircraft Rentals	Other
W.H. Morse State, VT	Major ¹⁴	Major ¹⁴	N	Y	N	N	N	Cargo charter available
Chapin Field, NY	Minor	Minor	Y	N	N	N	Y	
Harriman and West, MA	Minor	Major	Y	Y	Y	Y	Y	Aerial photography services available. Gliding organization on airport.
Mt. Snow, VT	N	N	N	Y	N	N	N	Landing fee includes use of recreational facilities.
Garnseys, NY	N	N	N	N	N	N	N	Open Daylight Hours Only
Burrello-Mechanicsville, NY	N	N	N	N	N	N	N	Runway is asphalt and gravel
Rensselaer County, NY	N	N	N	N	N	N	N	
Round Lake, NY	N	N	N	N	N	N	N	Closed to itinerant aircraft November - April
Argyle, NY	Major	Major	Y	N	N	N	N	
Albany International, NY	Major	Major	Y	Y	Y	Y	Y	Scheduled Passenger and Cargo Service with Customs Facilities Available. Air ambulances available.
Dillant-Hopkins, NH	Major	Major	Y	Y	N	Y	Y	
Biddeford, ME	Major	Major	Y	Y	N	Y	Y	

Source: NYSDOT Airport Listings (<https://www.nysdot.gov/portal/page/portal/divisions/operating/opdm/aviation/directories/listings/>) N=No, Y=Yes, Massachusetts Aeronautical Commission (<http://www.massaeronautics.org/default.asp?pgid=aeroRoot&sid=about>) Airport-Data.com (<http://www.airport-data.com/airport/>) AirNow (www.airnow.com)

¹⁴ According to an interview with the current FBO, these services are no longer available to the public, but rather, only for their own fleet.

Table 10: Rates and Charges Comparison											
Airport	Tie-Down			Conventional Hangars		T-Hangars		Lowest Fuel Price (\$/gallon)			GA Landing Fee
	\$/	Available	Type	\$/month	Available	\$/ month	Available	80ll	100ll	Jet-A	
W.H. Morse State, VT	\$30 / month	Y	Paved	\$4,000 / month (heated)	Y	N/A	N/A	N/A	\$5.89 (s/s) \$6.14 (f/s)	\$6.04 (f/s)	N/C
Chapin Field, NY	No Information Available										
Harriman and West, MA	\$28 / month	Y	Paved	\$150 - \$300 / month	Short Term Only	\$150 - \$300 / month	Short Term Only	N/A	\$5.64 (s/s) \$5.75 (f/s)	\$5.40 (f/s)	Commercial Only \$10 under 12,500 lbs \$20 over 12,500 lbs
Mt. Snow, VT	\$35 / month	Y	Paved	\$300 - \$600 / month	Y	N/A	N/A	N/A	\$6.00 (s/s)	N/A	\$5 plane & pilot; \$3 per passenger
Garnseys, NY	N/C	Y	Turf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/C
Burrello-Mechanicsville, NY	No Information Available										
Rensselaer County, NY											
Round Lake, NY											
Argyle, NY	\$35 / month	Y	Turf	\$250/month	N	N/A	N/A	N/A	N/A	N/A	N/C
Albany International, NY	\$150 / month	Y	Paved	N/A	N/A	\$325 / month	Y	N/A	\$3.60 (s/s) \$4.10 (f/s)	\$4.44 (f/s)	\$30 - \$100
Dillant-Hopkins, NH	\$30 / month	Y	Paved	\$250-\$400 / month	N	\$225 - \$250 / month	N	N.A	\$4.99 (s/s)	\$5.79 (f/s)	\$25 Under 40,000 lbs / \$50 over 40,000 lbs

Table 10: Rates and Charges Comparison

Airport	Tie-Down			Conventional Hangars		T-Hangars		Lowest Fuel Price (\$/gallon)			GA Landing Fee
	\$/	Available	Type	\$/month	Available	\$/ month	Available	80ll	100ll	Jet-A	
Biddeford, ME	Single: \$35 / month Twin: \$45 / month	Y	Paved	Single - \$175 / month Twin - \$300 / month	N	N/A	N	N/A	\$5.69 (s/s)	N/A	N/C

Source: McFarland-Johnson, Inc. Telephone Survey February 2008; AirNav.com, October 2008.

Legend: N/C = No Charge, N/A = Not Available, N=No, Y=Yes, s/s = self-service f/s = full serve

Note: Per its FAA Form 5010, Round Lake offers 100ll fuel and has hangars on airport; however, the airport did not respond to queries regarding rates.

4. BASELINE FINANCIAL AND ECONOMIC OUTLOOK

This section identifies historical revenues and expenses attributable to W.H. Morse State Airport and projects those revenues and expenses to the year 2013. Section 4 considers a baseline scenario with no revenue enhancement projects being undertaken. In other words, what are the financial implications of continuing the Airport's operation as it is today? In a later section, alternative projections of financial performance will be developed based upon suggested improvements.

4.1 Baseline Forecast of Revenues

Information concerning historical revenues centered on the year 2005, with some additional (but incomplete) information for years 2004 and 2006. This data gave an indication of the trends of the revenue base. Table 11 shows those historical revenues, along with estimated tax revenues from the fuel sold at Morse State Airport.

Table 11 - Historical Operating Revenues			
	2004	2005	2006
Leases & Landing Fees	\$36,567	\$38,030	\$40,221
Aviation Fuel Taxes - 100 LL	\$3,750*	\$3,900	\$4,056*
Aviation Fuel Taxes - Jet A	\$1,428*	\$1,485	\$1,544*
Total Revenue	\$41,745	\$43,415	\$45,821

* Estimated

Table 12 presents a conservative forecast of airport operating revenues, which assumes that the status quo will hold and that prices will increase at the rate of the CPI (projected at four percent through the planning period).

Table 12 - Baseline Forecast of Airport Operating Revenues

	2005	2008	2009	2010	2011	2012	2013
Leases & Landing Fees	\$38,030	\$43,503	\$45,243	\$47,053	\$48,935	\$50,892	\$55,045
Aviation Fuel Taxes - 100LL	\$3,900	\$4,387	\$4,562	\$4,745	\$4,935	\$5,132	\$5,551
Aviation Fuel Taxes - Jet A	\$1,485	\$1,670	\$1,737	\$1,807	\$1,879	\$1,954	\$2,113
Total Revenue	\$43,415	\$49,560	\$51,542	\$53,605	\$55,749	\$57,978	\$60,297

4.2 Baseline Forecast of Expenses

Only historical expense data from 2005 was available, and as such, no significant historical trends could be cited. Instead, knowledge of general trends in the aviation industry were applied to the various cost categories and projected into the future. Annual labor costs were increased at two percent, which is one-half the rate of forecast inflation. Historically at other airports, salaries and wages have increased more slowly than the CPI due to personnel turnover and part time employee usage. It is also known that insurance costs have been increasing faster than the rate of inflation. For this analysis, a seven percent rate was used. The cost of the WSI Weather Brief was held constant, while the remaining categories were increased at four percent, which is the projected rate of inflation over the period. Table 13 presents the results.

Table 13 - Historical Airport Operating Expenses

	2005	2008	2009	2010	2011	2012	2013
Airport Manager	\$2,926	\$3,105	\$3,167	\$3,231	\$3,295	\$3,361	\$3,428
District 1 Staff Labor	\$21,588	\$22,909	\$23,368	\$23,835	\$24,312	\$24,798	\$25,294
FBO Agreement	\$12,000	\$13,498	\$14,038	\$14,600	\$15,184	\$15,791	\$16,423
Total Operating-District	\$52,626	\$59,197	\$61,565	\$64,028	\$66,589	\$69,252	\$72,022
WSI Weather Brief	\$2,040	\$2,040	\$2,040	\$2,040	\$2,040	\$2,040	\$2,040
Insurance (\$100K/occurrence deductible)	\$862	\$1,056	\$1,130	\$1,209	\$1,294	\$1,384	\$1,481
Total Operating Expenses	\$92,042	\$101,805	\$105,308	\$108,943	\$112,714	\$116,626	\$120,688

4.3 Baseline Net Operating Income / (Deficit)

When the baseline operational costs are compared with the baseline forecasts of operational revenues, the net operating income/deficit is displayed in Table 14:

Table 14 - Net Operating Income/(Deficit)			
Year	Operating Expense	Operating Revenues	Net Operating Income/(Deficit)
2008	\$101,800	\$49,600	(\$52,200)
2009	\$105,300	\$51,500	(\$53,800)
2010	\$108,900	\$53,600	(\$55,300)
2011	\$112,700	\$55,700	(\$57,000)
2012	\$116,600	\$58,000	(\$58,600)
2013	\$120,688	\$60,297	(\$60,390)

The results of the baseline forecast indicate that if no additional revenue generating measures are undertaken, the State will have to cover a growing shortfall in operating revenues plus provide the local share of capital development projects in order to keep this facility operating.

5. EXTERNAL FACTORS IMPACTING AIRPORT GROWTH

There are numerous factors, outside the direct control of VTrans, or which are unchangeable, that impact the ability of Morse State Airport to grow. This section presents the external positive and negative factors that way on such development.

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

There are a number of factors that now support the potential growth and development of the Morse State Airport. These factors are briefly described below.

Airport Location:

The William H. Morse State Airport is located in Bennington County in southwestern Vermont, situated along Route 9 (Molly Stark Trail) and Route 7 (Ethan Allen Highway). The Airport is west of Bennington and south of North Bennington, roughly equidistant from both towns and is shown in Figure 3-1. In a regional context, Bennington is 14 miles from Williamstown, Massachusetts and 36 miles from Albany, New York, making the Bennington area close enough to other markets to offer a mix of opportunity and competition, yet just far enough removed from metropolitan congestion to enjoy small town hospitality and security. The distance between the Airport and several major regional business centers is as follows:

Nearby Cities	Driving Distance (miles)	Driving Time (hours)
Albany, NY	36	1.0
Springfield, MA	98	2.0
Manchester, NH	126	2.75
Burlington, VT	123	3.25
Boston, MA	180	3.33
Providence, RI	176	3.5
New York City	195	3.75

A map of the Airport Service Area may be found in Figure 5.

Proximity to Albany, NY

The future growth of the Bennington area may benefit from its proximity to Albany, NY. In this regard, there are efforts to encourage and support the development of a technology hub along the Albany/Bennington corridor. Drawing on current technological trends, there may be areas where strategic and complementary opportunities exist between Albany's computer chip manufacturing companies and private and/or public interests in the Bennington area. Rensselaer Polytechnic Institute's Center for Automation Technologies in Troy, NY has partnered with the

Bennington Microtechnology Center to create a microsystems commercialization facility. Air transportation also facilitates a similar strategic partnership between the Bennington Microtechnology Center and the University of Texas at Arlington.

Industrial Development

Historically, three industries have been of great importance to the economic prosperity of the Bennington area: manufacturing, tourism, and agriculture/forestry. While all three of these activities are still important elements in the local economy, the past several decades have seen a steady decline in the prominence of agriculture and forestry and a shift toward different manufacturing segments. In addition, retail trade and service businesses (those related to tourism and others) have emerged in recent years. Among local major employers are manufacturers of electrical equipment, transportation equipment, fabricated metals, apparel, printing, and lumber products.

The Bennington County Industrial Corporation reports that some of the area's major employers include:

Employer	Product/Service	Employees
Southwestern Vermont Medical Center	Healthcare	760
Southwestern Vermont Supervisory Union	Education	625
Mack Molding	Injection moldings and assembly	520
NASTECH	Steering columns	480
State of Vermont	Government	350
Energizer Eveready Battery Co.	Dry cell batteries	320
United Counseling Service	Mental health	215
Bennington College	Education	200
Stanley Tools	Hand tools	170
US Tsubaki, Inc	Sprockets	145
Hemmings Motor News	Publishing	100

Other local businesses include the Bennington Microtechnology Center, Bennington Potters, K and H Products, Mace Security International, National Hanger Company, Krone Optical Systems, T & M Enterprises, William E. Dailey, Inc., and AirNow.

Industrial and Commercial Centers:

One measure of a community's business climate, or economic health, is the extent to which industrial and/or commercial space is available to accommodate business growth. Bennington County Industrial Corporation reported that between 2001 and 2003, vacancy rates dropped from over 20 percent to eight percent, revealing that capacity may be reaching a level where new development is demanded and financially feasible. Currently, the Bennington area boasts one business incubator building and two industrial parks with space available for development:

- ***Shields Drive Industrial Park:*** A 45 acre property zoned for manufacturing or large scale office facilities. Currently, there are five existing business facilities, and 38 acres of undeveloped land. Bennington County Industrial Corporation is developing a Master Plan for the future development of these areas.
- ***Morse Industrial Park:*** Industrial zoned lots located near Route 9 interchange with utility infrastructure. Currently, all existing facilities are occupied, and there remains approximately 20 acres for future development.
- ***Bennington County Industrial Corporation (BCIC) Incubator Building:*** This building was owned and operated by BCIC since 1978, and was sold in 2007 to private interests for a mixed use development. While still in early development stages, this facility is being marketed as one that may accommodate a range of business uses.

State Incentives & Programs:

Review of the local business climate in the Bennington area benefits from an understanding of State incentives and programs available to support the growth and expansion of businesses in the state. Such incentives and programs, in addition to industrial and commercial centers, create an environment where businesses can be allowed to startup and mature within the same community. State incentives and programs available to businesses in Bennington include:

- ***Financial Services Companies Tax Credit:*** Vermont offers a tax credit up to 75 percent off the state income tax, based on a formula that combines the company's in-state payroll and out-of-state revenues.
- ***Sales Tax Exemption:*** Vermont offers a sales tax exemption on certain building materials in excess of \$1 million.
- ***Fuel and Electricity Sales Tax Exemption:*** This exemption applies to sales of electricity, oil and other fuels used directly or indirectly in manufacturing tangible personal property for sales.
- ***Equipment Sales Tax Exemption:*** Machinery and equipment used directly or indirectly in manufacturing tangible personal property for sale.
- ***Industrial Fuels and Raw Materials Tax Exemption:*** Motor fuels, except for railroad and jet fuel; component parts for manufacturing, packaging, and shipping materials; and newspapers and tangible property used as ingredients in the

manufacture of newspapers are exempt from sales taxation. An exemption from property taxation is provided for plants and shrubs in commercial nurseries or greenhouses.

- **Pollution Control Equipment Tax Exemption:** Real and personal property used to control air or water pollution is exempt from property taxation.
- **Energy and Fuel Conservation Measures:** Alternative energy sources used to generate electricity or energy not sold or exchanged may be exempted by municipalities from property taxation.
- **Small Business Investment Tax Credit:** The small business tax credit was retroactively amended (effective January 1, 1998) to allow a credit for the first dollar of investment, not only dollars expended over \$150,000, provided the investment exceeds \$150,000. A company may receive a credit in the amount equal to 5 to 10 percent of its investments within the state of Vermont in plants, facilities, and machinery and equipment. Requirements vary depending upon the number of employees in the business
- **Payroll Tax Credit:** It provides a credit against income tax liability equal to a percentage of increased payroll costs. A company with sales less than \$10 million may receive equal to 10 percent of its increased costs of salaries and wages in the applicable tax year.
- **Research and Development Tax Credit:** It provides a 10 percent tax credit against income tax for qualified research and development expenditures. Qualified R&D expenditures are those included in the IRS code.
- **Workforce Development Tax Credit:** A corporation can receive an income tax credit of 10 percent of its qualified training, education and work force development expenditures.
- **Export Tax Credit:** This provision allows exporting businesses to claim credit against income tax liability. The credit is the difference between income tax calculated under the existing state apportionment formula and the proposed formula, which double weights the sales factor and disregards "throwback" provisions.
- **Brownfields Property Tax Exemption:** Statewide education property tax exemptions are provided for expenditures incurred by a business for the construction of new, expanded or renovated facilities on contaminated property.
- **Vermont's Downtown Development Act:** Incentives include assistance with rehabilitation of certified historic or older buildings, sprinkler system rebates, reallocation of sales tax on construction materials, downtown transportation, related capitol improvement fund, planning grant for qualifying for designation, and others.
- **Tax Increment Financing Districts (TIF):** The Vermont Economic Progress Council can approve applications from municipalities that wish to use the taxes generated on the excess property valuation for interest and principal repayment on bonded debt or prefunding future tax increment financing district debt. The use of TIF districts reduces out of pocket costs for developers whose projects will increase property values. In many cases, project financing by private interests

cannot or should not be burdened by poor public infrastructure, which could make a much-needed project unfeasible if private financing is all that is available.

- **The 504 Loan:** The program provides long term fixed rate financing to business through the sale of guaranteed debentures issued by certified development companies. Loan funds are used for real estate or machinery and equipment but not for working capital or debt payment. The loan is limited to 40% of the project cost and is combined with bank financing and equity. The maximum loan amount is \$750,000 (up to \$1,000,000 for some projects) with loan terms of either 10 or 20 years depending on the use of the loan proceeds.

5.2 Obstacles to Airport Performance

In addition to factors that support growth and development of Morse State Airport, there are a number of factors that present challenges to such growth, and the attainment of stated goals and objectives for the financial performance of the Airport. While the range of obstacles includes any number of external social and economic factors that may be outside the State's ability to affect as the Airport sponsor, this section focuses on Airport-specific factors that can be addressed in some fashion. These potential obstacles include:

- **Potential Runway Extension Limitation:** The runway length at Morse State Airport is 3,704 feet, eliminating most corporate jet operations due to their requirement for more runway length. The existing length may also impact the performance of the eighteen based twin-engine propeller aircraft during hot weather, or when the runway is wet or slippery. As such, businesses that rely on general aviation air transportation for their employees and/or other business needs may be less inclined to settle in the Bennington area. The limited runway length may also limit the potential earnings of the FBO, if the FBO's income is dependent on services delivered to aircraft owned and operated by others.
- **Landside Development Limitations:** The airport has limited landside development capabilities, with just over 7 acres of land available along the flightline. Approximately two acres are situated to the east of the main apron area, which are constrained by a wetland and pond to the south. Additionally, there are just over 5 acres to the west of the main apron area, situated along the east side of Airport Road. This area was once designated as a turf runway and is still used occasionally by local pilots. Once these two areas are developed, further landside development opportunities will require land acquisition. Additionally, the small size of these areas east of the main apron area itself may constrain its development, if market economics require more property for a financially viable project.
- **Slow Socioeconomic Growth:** As mentioned previously, the growth in population and income in Bennington County has been somewhat stagnant in recent years. Population has declined since 2002 and unemployment is at its "structural" low (4.1 percent in 2007). This "structural" low level indicates that there may be a

mismatch between the remaining job opportunities and the skills of those still unemployed, caused by the changing economy. This creates a hurdle for future improvements, because the skills required by growing companies are not available in the Bennington area. Vermont has recognized this as a statewide problem and the State legislature has created the Next Generation Commission to develop a plan to encourage Vermonters to live and work in Vermont. Particular attention is given to the local workforce, its training and critical marketplace needs.

- **Capital Investment Sources:** In the past, the State of Vermont has relied heavily on private investment to finance hangar development at Vermont's airports. If those investment funds are slow in materializing, it could delay aviation growth at the State's airports. The attraction of based aircraft, including corporate/business aviation, relies in part on the availability of hangar facilities.
- **Local Community Support:** It is important for the State to win support for expansion of the runway from the business and residential communities. To date, most Airport users are in support of the runway extension, as are a number of local businesses. However, as evidenced by the absolute decision not to expand the runway to 5,000' and the difficulty the State is running into to get the runway expanded to 4,000', there is significant and vocal local opposition to any growth at DDH. Without the support of the community, the Airport may not reach its potential.

6. RECOMMENDED PLAN

The recommended business plan for Morse State Airport focuses on two primary strategic initiatives, the first of which addresses management and policy actions intended to properly align the State's goals with that of the Airport and local community. The second strategic initiative is one that sets forth a plan of actions for improving the financial performance of the Airport. As noted previously, actions to address cost efficiency issues at the Airport were not identified in this report as the Airport appears to have an efficient operation at present. Therefore, for the purpose of this Business Plan, the improvement of net operating costs at Morse State Airport was addressed as a function of increasing revenues.

6.1 Recommended Management and Policy Actions

While all of the management and policy actions impact revenue enhancement, these recommendations are based on changes to either existing policy or contractual issues. Since these fundamental changes impact areas that are more than just local, this report separates them from other revenue enhancement recommendations.

Policy Recommendation 1: VTrans should examine the role of AirNow and whether the airport and the state aviation system are best served by them continuing in their role of FBO at Morse State Airport.

At present, FBO services at Morse State Airport are provided by AirNow, an airfreight taxi/charter service company and the Airport's single biggest user and tenant. As FBO, AirNow provides limited FBO services, including light maintenance, preheating, fuel services, and terminal operation. AirNow's primary business purpose is to provide time-critical and overnight freight as a feeder operator for the largest delivery companies in the world, regional couriers, and customers in the banking industry. Under the current arrangement at Morse, AirNow has two somewhat divergent roles at the Airport, because the primary purpose of their freight business may not always be aligned with the primary purpose of their FBO role at Morse State Airport. Specifically, AirNow is primarily interested in the success of their air freight taxi/charter operation at Morse State Airport, in addition to other facilities where their aircraft are based. Conversely, VTrans is interested in the efficient operation of Morse State Airport and the provision of services demanded by all airport users, existing and potential.

Traditionally, the business of an airport FBO is to provide various services to users of the airport and to sometimes act as an agent of the airport sponsor (in cases such as collecting landing fees from transient aircraft operators and meet and greet functions). The current arrangement at Morse State Airport does not reflect an airport sponsor/FBO relationship as traditionally envisioned. One example of this is that AirNow does not provide deicing for airport users (other than itself) due to liability issues, thus potentially limiting usage of the airport. Additionally, airport attendance hours are currently set to match the operating hours of AirNow, not the needs of airport users, by not being "open to the public" during its own peak operating hours. Weekend attendance is "on call", and

weekday attendance does not extend through the evening hours when business flights are common, thereby limiting Jet A and ground crew availability to business users

The existing contract between VTrans and AirNow that covers the provision of FBO services offers the state a number of options. Since the contract (A00 155 00) does not provide AirNow with an exclusive right to provide FBO services (Article 13.1), the State is able to bring in a second FBO service provider to operate as a competitor to AirNow. Additionally, the lease may be terminated with four (4) month's notice by either AirNow or the State or at any time by mutual agreement (Article 14.4).

There are a number of factors that must be considered regarding bringing in a second FBO or withdrawing AirNow's rights to provide such services. While AirNow is not providing good service as an FBO, they are a very key tenant and user of the airport, and taking a step that might cause them to leave the airport would be very detrimental to the airport's financial well being. Second, there may not be enough business to support two FBO's at such a small facility. One entity may just capture enough market share to render both FBO's unprofitable. Third, a new company might not wish to invade what is perceived to be AirNow's "territory". Finally, while AirNow may not reap substantial direct profit as the Airport's FBO, it is believed that they save substantial sums by managing the fuel farm and by not paying the 3% fuel flowage fee to the State, which might make them unwilling to cooperate with losing their status.

Therefore, as a first step, it is recommended that VTrans meet with representatives of AirNow to determine their interest in continuing as a full service FBO at Morse State Airport. They may wish to get out of that business and just concentrate on operating their own freight operation. In an interview, AirNow representatives stated that they lose money by acting as the FBO at Morse State Airport. If they wish to continue to serve as the airport's FBO, then the level of service that they are expected to provide should be specified and incorporated into their existing contract. If there is an agreement that AirNow wishes to exit the FBO business at Morse State Airport, then they should be required to continue to fulfill these responsibility until a new FBO can be located and established. An additional solution may include the addition of a small specialty FBO that could share duties at the Airport, and complement the current efforts of AirNow. The first step, however, is to determine AirNow's interests and to measure them against the Airport's needs.

Policy Recommendation 2: VTrans should examine its policy on the construction of facilities at its airports in order to foster more rapid development where warranted.

In general, the State is not an active participant in the construction of new hangar facilities at its airports. While this passive role in airport development may be a financial necessity, it is not the optimum means to grow revenue.

A change to the policy of relying on private funding for facility development will require a number of factors. First, and foremost, will be a source of capital. These

primary sources of capital will be state budgets or FAA grants. However, FAA grants will only become available after the completion of necessary runway improvements to eliminate safety hazards. Local development grants might also be available that could be used in support of facility construction at Morse State Airport as a means of local economic development. VTrans staff will be required to take a more active role in design, construction, management, and leasing of the new facilities. Alternately, the State can procure the services of a management firm that can handle the leasing and management of State-owned hangars at all airports.

Policy Recommendation 3: The State should change its manner of accounting for airport revenues and expenses so that each airport can be tracked individually.

A State accounting system is needed that can record investment allocations, operating costs, and revenues for each airport annually. Currently, the VTrans accounting system permits only aggregate records and analysis of Airport financial performance data. Effective business management of each facility requires that expense and revenue information be available by airport on a cost-category basis.

Policy Recommendation 4: The State should consider adding a clause to their property leases that result in buildings that are constructed on said properties reverting to the State at the end of the lease term.

Current leases are mute on the status of buildings (hangars, etc.) at lease termination. It is a common practice on land leases to include a clause that results in anything that was constructed on the property reverting to the control of the landlord. The State should consider whether it wishes to add such a clause to future leases, as well as whether it should attempt to add this clause to existing leases when, and if, such leases have a reason to be renegotiated. If the State gains ownership of the buildings, it can then lease use of the buildings at market rates for finished construction, rather than just collecting ground rent.

6.2 Revenue Enhancement Recommendations

Revenue Enhancement Strategic Recommendation 1: VTrans and its FBO must find means to attract and retain more business from corporate and business users.

Over time, most airport owners, sponsors, and operators have recognized that corporate/business aviation helps “pay the bills” by providing a higher source of revenue to airports than recreational general aviation. The attraction of based business aircraft or fractional jet service typically provides a boost to fuel sales, maintenance, and demand for other services related to increased jet activity. While recreational/leisure flying is decreasing with increased fuel costs, business flying continues to grow, since price increases can be absorbed into the cost of doing business.

Economic development interests in Bennington assert that business use of the Airport is currently under reported, citing regular use by companies such as Abacus Automation, Nastech, and TPW Management. This assertion is supported by the relatively large number of twin-engine propeller aircraft based at the airport. Eighteen of thirty-seven based fixed wing aircraft are twins, which is an unusually high proportion of twins to total based airplanes, and suggests that business use might make up a significant portion of the airport activity. In addition, Morse State Airport provides the second longest paved runway within the Airport's 30-mile service area (Albany International Airport has a longer runway, but it is a busy commercial airport which focuses on commercial, not GA, service), an area that covers three states, goes through mountainous terrain, and has a limited highway network. In order to capture more activity in the Airport service area, VTrans and the FBO should monitor business use of the Airport to develop an understanding of the types of companies currently using the facility. Marketing efforts can draw on this user profile to better target and attract new corporate users, and to provide needed development for existing users.

The Morse State Airport Development Plan indicates the extension of Runway 13-31 to 4,000 feet, which would reduce operating restrictions on existing aircraft users, and increase the number of potential new users that might be attracted to the area and airport, including the use of Very Light Jets. Discussions with representatives of the Bennington Microtechnology Center have indicated that improved air access to Bennington would benefit their business¹⁵. Presently, six of their engineers and project managers use air travel on a regular basis; the Center's director commutes from Boston. The Center has a strategic partnership with the University of Texas at Arlington, creating significant travel both ways between Bennington and Dallas. Clients of the Center are diverse, with both domestic and international firms visiting the area. While Morse State Airport has virtually no potential to service as a commercial services airport, better facilities might help to convince companies to use their own or charter aircraft to be able to fly right to where they want to be, instead of a more distant commercial facility.

There are a number of action steps that can be taken by VTrans to help to attract more corporate and business aviation users to Morse State Airport. These include:

Revenue Enhancement Action Item 1: Expand the Utility of Runway 13-31

A runway length of 3,704 feet is inadequate for most business and corporate aviation applications. Due to required take off and landing distances, many aircraft, including many twin-engine propeller aircraft and the larger business and corporate aircraft, cannot operate safely on a short 3,704 foot runway without significant operating limitations. Further, many insurance companies will not insure aircraft used on runways as short as the current runway length. There have been a significant number of studies carried out and discussions put forth of what would be an ideal length for the runway at Morse State Airport. This report will not rehash these discussions. However, the best

¹⁵ Telephone conversation with Henry Klim, Director, Bennington Microtechnology Center, December 20, 2007.

chances for improved revenue generation at Morse is related to making the airport more accessible to more types of aircraft, and a longer runway is an important and required means of doing this.

In addition to extending the runway, there are other means of enhancing the utility of the facilities at Bennington. There is currently no ILS or vertical guidance approach for either runway end at Morse State Airport, and the weather minimums associated with existing instrument approaches are relatively high (1062' ceiling above Runway 13 on VOR approaches, and no straight-in instrument approach to Runway 31). As a result, airport availability is reduced and bad weather landings often divert to Albany. The runway pavement condition is considered "Fair" and is also rated only for single-wheel limits of 12,500 pounds, which excludes heavy use by many larger business and corporate aircraft. Addressing any of these issues can help to improve the usability of Morse State Airport, where special vertical guidance approach considerations may be needed to negate the potential impact of a hill in the Runway 13 approach (increased approach angle and threshold crossing height, with a possible displaced threshold).

Revenue Enhancement Action Item 2: Improve the Marketing of Morse State Airport

Efforts to market Morse State Airport should be conducted both by VTrans and the FBO as well as jointly between VTrans, the airport's FBO, the Bennington Area Chamber of Commerce, the Bennington County Industrial Corporation (BCIC), Better Bennington Corporation, and the Town of Bennington. This joint effort will prove to be the most effective means of promoting the joint interest in growing the economic base of the region. While each of these groups might have specific interests, limited resources can be pooled for the greatest good and best chance of success.

There are a number of potential strategies that can be considered, including:

1. Create a new image for Morse State Airport. This can include rebranding the airport to reflect its location; developing a new website that features the airport and its offerings; and/or developing a new logo that makes a statement about the facility. If the airport chooses a new name, the name should be rolled out with as much fanfare as can be generated, such as holding an event at the airport with invited dignitaries and media.
2. The Airport and its FBO should promote themselves and the facility through websites such as www.airnav.com, so that potential users of the facility know the availability of facilities and services.
3. The airport should have links on its website to local ski resorts and other vacation areas, and should have links from those websites back to the airport website.
4. Preparation and distribution of comprehensive materials marketing the airport and the region jointly. These materials can be used to target companies considering locating in the Bennington region and can highlight all that the area has to offer, including aviation services.

5. Cooperating with local ski resorts or vacation areas to develop packages that include charter airfare to Morse State Airport, ground transportation, lodging, ski packages, event tickets, etc.
6. Market the airport to charter carriers which operate aircraft that can utilize the facilities at Morse State Airport. Make potential carriers aware of the benefits of flying their passengers to Morse.
7. Develop marketing materials that can be distributed by the Chamber of Commerce and the BCIC.
8. Supply information about the airport to home builders, developers, and realtors so that such information can be passed on to those who are building or purchasing vacation or second houses in the region.
9. Prepare a “Welcome” package, providing information about Airport services, facilities, and land availability for hangar development, as well as information promoting attractions and amenities enjoyed by those in the Bennington, Vermont region for anyone making inquiries about the airport. This “Welcome” package should not include volumes of information, and therefore should not require significant time or resources to assemble. What is most important is that interested parties receive a positive response within a reasonable period containing enough information to compel further consideration and conversations with VTrans and the FBO.

Revenue Enhancement Strategic Recommendation 2: VTrans should improve the facilities at the airport to make it more attractive to users and the community.

Morse State Airport is in competition with numerous other facilities offering the same or similar and sometimes expanded services to users. While it is the closest airport to Bennington and certain other towns, it is most certainly not the only airport with the ability to serve aircraft wishing to access southwestern Vermont, northeastern Massachusetts, or New York’s Capital Region. Presuming that multiple airports have adequate aviation facilities, potential users will next look towards other factors when deciding which airport to use.

Revenue Enhancement Action Item 3: Improve the Services Available to Transient Aircraft Operators.

Currently, airport users have access to ASOS automated weather reporting data from an onsite facility, WSI weather service, vending machines, a small lounge, restrooms, phone, and a local business directory during prescribed operating hours. Late arrivals can find space for tie-down storage, are asked to sign in with contact information, and can access the terminal through the side door with keypad entry using the Airport’s Unicom code. While these services are adequate they are not “special” in a manner that would make Morse more attractive to transient or based users. Improved lounge facilities and a pilot clean-up area might be attractive to potential facility users. Expanded FBO hours, would also improve the attractiveness to many business users.

The availability of ground transportation for general aviation airport users is important. The State or its FBO might consider offering a courtesy car to complement advance reservation of rental cars, which is currently available from Enterprise Rent-A-Car. Having a full-time staffed rental car counter at Morse State Airport is not economically feasible for the foreseeable future due to limited demand, unless a company chooses to have its main operation there, serving all customers within its operating region from the Airport.

In addition to convenient transportation services, many smaller airports have locally-themed restaurants or cafes that serve both passengers and the surrounding community. A restaurant that serves local needs can be valuable in integrating the airport into the fabric of the community.

Revenue Enhancement Action Item 4: Develop Additional Hangar Space

Policy Recommendation 2, above, discusses the strategic issue of who pays for the development of hangars at Morse State Airport. Public funding, through FAA or State grants, private development by either the FBO or other interested parties, or a hybrid of the two where some facilities are developed using public funds and others using private funds, are the options available to VTrans. FAA funding will not be available for the development of additional hangar space until necessary runway safety hazards at the Airport are corrected and in compliance.

Once the state makes its strategic decision on financing, VTrans should aggressively begin to pursue funding for planning and construction of at least one new conventional hangar. It is believed that conventional hangars will have more utility for the airport in the future as they are more flexible than T-hangar developments (as they can house both smaller general aviation aircraft and larger business aircraft), and their construction is more cost-effective.

The State might also consider putting hangar development opportunities on the open market. The request-for-proposal (RFP) process would quickly identify the potential for third party developer hangar construction. Based upon the number and quality of responses, the State will be able gauge private interests, and determine the extent to which incentives for hangar development may be needed to attract private developers.

Revenue Enhancement Action Item 5: Develop Airport-Owned Land

In spite of topography constraints and wetland areas, there is some land for non-aviation development on and adjacent to the Airport. The Development Plan presented in Section 3 of this Business Plan identifies areas where such development could occur. As indicated on the development plan, there are approximately 10 acres available north of the runway and on the east side of

Airport Road that might be attractive for non-aviation business uses compatible with the airport. Another parcel located adjacent to airport property, situated south of the runway, and across the main stretch of Airport Road. This parcel, which is approximately five acres, would have to be acquired; however, its location along the flightline and its accessibility via Airport Road makes it an attractive location for aviation-related development. While industrial water and sewer connections could be costly to extend from the city (roughly 1.5 miles), such an investment in public infrastructure may yield enhanced tax revenues to the State and local community.

Leadership at the Bennington County Industrial Corporation (BCIC) provided some support for development at Morse State Airport. According to the BCIC, requests for commercial and/or industrial space in the area are frequent, where need ranges from 5,000 to 40,000 square feet of space. However, the County does not have an inventory of available spaces to meet these needs. At the time of this writing (March 2008), the last available and vacant industrial building in Bennington County had been leased, leaving the community with a severe inability to accommodate new or existing business growth in the County. For these reasons non-aviation property development was considered a viable revenue enhancement strategy at Morse State Airport. However, non-aviation development of airport-owned land may result in the airport being required to reimburse the FAA for investments it may have made. FAA permission is also needed to lease such property.

Since VTrans is not really in the business of land development, the State should consider engaging the services of third-party private developers in and around the Bennington County area. Requesting proposals from developers would also provide feedback from the market regarding demand for such development in the Bennington market. If successful, there is a possibility that the local commercial real estate market may even find opportunities to develop such property in ways the State may not have envisioned, and ultimately VTrans would collect land lease fees for these projects while assuming little risk.

Revenue Enhancement Action Item 6: Rationalize Land Rental Fees

Based upon a review of lease agreements at Morse State Airport and analysis of the Airport's service area and general industry guidance, the base ground lease with AirNow is currently at lower than market rates. In fact, a recent rate adjustment was made in a contract amendment, lowering the rate from \$0.09 per square foot to \$0.085 per square foot on a larger area. This appears to be far less than market rate for completed hangar space as has been observed from other State airports, specifically at Rutland (\$0.14 per square foot) and Hartness (\$0.13 per square foot). Land leases at Morse provide for 5-year renewals with Consumer Price Index adjustments at the time of each renewal. The State should

take advantage of these opportunities to increase the rental rate whenever such renewals occur.

For new leases, rates that are higher than those on older leases and which reflect the prevailing market rates for real estate in the area should be pursued. An increase to \$0.15 per square foot for new leases is recommended in the short term. Longer term, these rates could be increased to \$0.20 without exceeding competitive boundaries. To provide further support for rate increases, it is advisable to obtain current statewide and regional data from other airports prior to the negotiation of lease terms.

6.3 Impact on Revenues/Expenses

Quantifying the levels of additional potential revenue that would result from implementing the strategies listed above is highly subjective. The only reasonable method is one where the assumptions for each strategy are stated, along with the resulting impact. Then, if the assumptions are not met, deviations from the predicted revenues can be expected. It is believed that changes in revenues to the State would come primarily from increased airport development and aviation activity.

Changes in Aviation Activity

The first step in determining the impacts of revenue enhancement strategies presented in previous sections of this Business Plan is to predict the change in aviation demand that would occur if each strategy were implemented. Table 15 presents a listing of the potential demand changes along with the assumptions used in estimating demand changes.

Table 15- Potential Demand Changes by Year 2008			
Current Activity		Operations	Based Aircraft
		28,003	37
Demand Change	Assumption		
Corporate/Business Aviation	Derived from marketing business aviation interests, and attracting corporate offices to local business parks.	5%	2
Airport Branding	Airport name change to capture larger market base. Engage FBO, Chamber, Better Bennington, BCIC, City for partnership.	0%	0
Improved FBO Role/Partnership	Strategic planning session(s) with AirNow to determine alignment of goals and future role at Airport.	0%	0
New Terminal Services	Includes courtesy car and other minor impacts to demand.	0%	0

Table 15- Potential Demand Changes by Year 2008			
Hangar Development	Determine role for VTrans in hangar development; two new 5,000 square foot community hangars.	10%	10
Aviation Development	Pursue extension of Runway 13-31 to approximately 4,000 feet.	0%	0
Non-Aviation Property Development	Target Area 1 on the north side of Runway End 13 (east side of Airport Road).	0%	0
Additional/Specialty FBOs	Potential replacement or supplemental addition to the AirNow FBO.	1%	0
Rates and Charges	Negotiate increases in rental rates for AirNow at the expiration of lease.	0%	0
Additional Potential Growth		16%	12
Total Potential Activity		32,483	49

As indicated in Table 15, the key revenue enhancement strategy for the State is the lease of land for hangar development and development of Airport property on the north side of Runway End 13 for non-aviation uses. These developments, along with the other enhancement actions discussed in previous sections, will effectively increase activity at the Airport. In this Business Plan, these strategies are assumed to create sufficient interests to attract a supplemental FBO, tenants to occupy the community hangars, and non-aviation business(es) to operate the new commercial/light industrial space on the north side of Airport property. Without these activities, revenue growth potential at the Airport will be limited.

Impact on Revenues

Drawing on the forecasts of future aviation demand from the development projects discussed above, projections of future financial performance (pro-formas) can be calculated for Morse State Airport based on a number of assumptions. Again, as mentioned for estimating impacts on future aviation demand levels, should the assumptions utilized for the following pro-formas not materialize; deviation from projected revenues can be expected. The following assumptions were used to develop projections for the future performance of the Airport upon implementation of the Business Plan revenue enhancement strategies, as follows:

- **Attraction of Corporate/Business Aviation:** The addition of two based business aircraft such as a Beechcraft King Air or Very Light Jets have a potential to increase VTrans revenues approximately \$10,000 - \$12,000 annually. This estimate is based upon the attraction of two business aircraft and their associated lease agreements and fuel usage. Considering the extent to which conventional hangar rental fees and sales of Jet A fuel contribute to an airport's revenue, it is clear that turboprop aircraft and small jets based at Morse State Airport have enormous potential to change the revenue picture for VTrans at the Airport.

- **Hangar Development:** As stated in a previous section, this Business Plan recommends that the State lease land for the development of hangars at the Airport. If no hangar developers can be found, the State should consider the development of two 5,000 square foot community hangars. If possible, grants (Federal and State) should be used in the development of the conventional hangars. The development of T-hangars as proposed in the Master Plan remains a viable option; however, such facilities should not be financed by the State. Rather, they may occur through private interests and funding.

The range of increased revenue depends upon prevailing rates for hangar space in the market. At Morse State Airport, it is reasonable to expect that the State could lease land for hangar development at Morse State Airport for between \$0.15 and \$0.20 per square foot per year. Leased land for conventional hangar space can return revenues between \$3,000 and \$4,000 per year for a 10,000 square foot conventional hangar, apron, and access footprint. This amount of conventional hangar space should suit the needs of two business/corporate aircraft types (King Air, or VLJs), providing ample storage capacity at the Airport for the near term.

Should private interests pursue the development of the 10-unit T-hangar facility, the structure would require approximately 10,000 square feet, with an additional requirement for access. The access area should accommodate automobile traffic and parking, as well as adequate space for aircraft circulation to individual hangars and to the taxiway and main terminal ramp areas for fuel and maintenance. Depending on site constraints, this requirement could be roughly 10,000 square feet, for a total land area of approximately 20,000 square feet required for the T-hangar development. Based on this land requirement, a land lease at a rate of \$0.15 to \$0.20 per square foot would return \$3,000 to \$4,000 annually to the Airport. Once fully occupied, fuel sales for 10 aircraft would also provide revenue to the State.

- **New or Improved Terminal Services, Amenities, and Activities:** It is difficult to forecast sizeable revenue increases from such activities. Such improvements have a more qualitative than quantitative impact at Airports, as they generally contribute more toward the overall customer experience than operating revenues. However, while terminal services at general aviation airports may not be significant in terms of revenue, the impact on customer satisfaction is valuable, assisting significantly toward establishing an airport as a unique and attractive gateway for travelers. Due to the more qualitative nature of benefits from terminal services and amenities, projections of future revenues at the Airport do not include an estimate of those generated from improved terminal services.
- **Non-Aviation Development:** As discussed, the timing of non-aviation development at the Airport is difficult to predict; therefore, revenues from such development were not included in the marketing pro-forma. Accordingly, this

Business Plan assumes that potential revenues from this development would be realized in the post-2013 period. If undeveloped Airport land is made available for non-aviation purposes, it could be leased for between \$0.15 and \$0.20 per square foot. On this assumption, the 10 acre parcel, fully leased, could generate between \$65,300 and \$87,100 per year.

Table 16 presents a projection of how potential demand increases could impact the revenue picture for Morse State Airport, if the assumptions for each scenario are met.

Table 16 - Potential Increases Resulting from All Revenue Enhancement Strategies							
	2006	2008	2009	2010	2011	2012	2013
Leases & Landing Fees	\$49,120	\$43,503	\$45,365	\$47,132	\$48,899	\$50,666	\$52,434
Revenue from Primary & Secondary FBO	\$1,000	\$2,000	\$3,120	\$4,160	\$5,200	\$6,240	\$7,280
Aviation Fuel Taxes	\$8,267	\$6,057	\$11,371	\$14,144	\$16,918	\$19,690	\$22,464
Total Revenue	\$58,387	\$51,560	\$59,856	\$65,436	\$71,016	\$76,596	\$82,178

Impact on Expenses

The next step in completing the pro-forma for Morse State Airport is an assessment of impacts on future operating expenses. For this analysis, it is assumed that the State would require private interests to construct hangar facilities, no capital costs or debt service expenses were assumed for the State. Therefore, it is reasonable to assume that none of the revenue enhancement strategies will impact or increase the Airport's expenses. Additionally, increased tax revenue from fuel sales requires no investment from the State. Therefore, potential increases in Airport expenses were assumed to increase in accordance with the Baseline Forecasts of Expenses (Table 12).

Comparison of Expenses & Revenues

When the forecast of potential revenue increases resulting from all revenue enhancement strategies is compared to the forecast of baseline operating expenses for Morse State Airport, a forecast of future net operating costs for the Airport can be considered. Table 17 presents this comparison.

Table 17 - Recommended Plan Operating Revenue & Expense Comparison			
Year	Forecast Enhanced Revenues	Baseline Operating Expenses	Forecast Net Operating Costs
2008	\$51,560	\$101,805	(\$50,245)
2009	\$59,586	\$105,308	(\$45,452)
2010	\$65,346	\$108,943	(\$43,507)
2011	\$71,016	\$112,714	(\$41,698)
2012	\$75,596	\$116,626	(\$40,030)
2013	\$82,178	\$120,688	(\$38,510)

Comparison of the baseline operating expenses and forecasted levels of enhanced operating revenues indicates an increasing operating deficit through the five year forecast period. However, unlike the baseline forecast of revenues - which does not consider revenue enhancement strategies - this deficit calculation predicts a decrease over the period, shrinking from a high of -\$50,245 in 2008 to -\$38,510 by 2013. While not eliminating the operating deficit altogether, implementation of the business plan strategies anticipates a reduction of approximately \$78,000 from the projected total deficits through the year 2013. Additional revenues could be earned if strategies more aggressive than those specifically discussed in this business plan are pursued.

6.4 Business Plan Implementation Timeline

A number of recommendations have been made as a part of this Business Plan, all with the ultimate goal of improving financial performance of Morse State Airport. Many of these strategies have additional benefits to the Bennington area, such as creating opportunities for economic development and the related impacts of increased property tax values to local government and job creation for the local community.

Specific recommendations by timeframe are as follows:

Immediate

- **1st Priority - FBO Role and Services:** VTrans should initiate discussions with AirNow as their business partner at the Airport. The goal is to evaluate their role today and seek the alignment of the FBO's mission with that of the State at the Airport.
 - Depending on the outcome of conversations between VTrans and AirNow leadership, determine need for full-service FBO at Airport.
- **2nd Priority - Runway Extension:** VTrans should pursue the extension of Runway

13-31 at Morse State Airport to a length of at least 4,000 feet.

- **3rd Priority - Airport Branding:** VTrans should begin a branding project for the Airport with FBO involvement.
 - As a part of Airport Branding, VTrans should initiate the engagement of local economic development interests and area destinations to develop promotional packages which can be incorporated into Airport marketing efforts.
 - The branding project should conclude with a marketing program, including Internet marketing, direct-mail, aviation publications, etc.
- **4th Priority - Accounting:** VTrans should consider modifying their accounting system to better track costs each year for Morse State Airport.

2010-2012

- **1st Priority - Hangar Development:** VTrans should first consider their role in hangar development at Morse State Airport, and make a determination regarding the processes that will be used to accomplish such projects. Depending on the formal role established for VTrans, the following steps should be taken:
 - For new hangar development, land lease rates should be developed based on reliable sources of prevailing market lease rates at other State or regional competing airports.
 - VTrans should initiate an RFP process to test the local market for quality, third-party developers with a business interest in constructing hangars, and gain insight into local demand for hangars.
 - VTrans should seek FAA and State grant money to finance all or part of the development of any hangars it constructs without private participation. The State will need to correct runway safety hazards at the Airport prior to receiving any funds for hangar development from the FAA.
- **2nd Priority - Attract Corporate/Business Aviation:** Marketing efforts to attract business aviation should be initiated at Morse State Airport.
 - VTrans should work with the FBO and local economic development interests to establish the funding and scope of the marketing program.
 - Marketing via the Internet and possibly other aviation publications should be used to promote Morse State Airport as a destination for general aviation traffic desiring to access area ski and other recreation destinations.
- **3rd Priority - Expand Airport Services:** VTrans should provide a courtesy car and encourage the development of food services or facilities at the Airport for existing users, toward creating a unique customer experience at Morse State Airport.

2013

- **1st Priority - Rates and Charges Adjustment:** Rates for the FBO should be increased at the expiration of the current lease in May, 2011.
 - Conduct informal survey of prevailing rental rates at other regional/competing airports when entering new leases.

Long Term Considerations

- **Create Developable Land:** VTrans should consider the assembly of Airport property to create attractive land development opportunities for non-aviation development at Morse State Airport.

Timetable and Trigger Points

Table 18 presents a timetable and listing of trigger points for implementation of the recommended plan, grouped by type of action (administrative, marketing, etc.).

Table 18 - Action Plan Trigger Points			
Action	Description	Trigger Points	Timeframe
Administrative/Policy			
FBO Role and Services	Initiate discussions with AirNow to determine short and long-term FBO strategy.	Immediate	2009
Hangar Development Method	Examine potential means of hangar development to include developers or State construction	As soon as practical.	2009
System of Accounts	Modify accounting system to better track costs by category and airport.	Immediate	2009
Marketing			
Promotion of Tourism	Coordinate development and promotion of vacation packages in coordination of ski resorts and other area destinations.	As soon as brochures are available.	2009
Branding	Consider renaming Airport to recognize its location in Bennington/Southwest Vermont and the regional market it serves. Follow-up marketing with new logos, website, etc.	Immediate	2009
Market Corporate/Business Aviation	Begin marketing of business aviation using a combination of State and FBO/local economic development partner resources.	As soon as brochures are available.	2010
Market Traditional and/or Specialty FBO	Attract supplemental FBO or aviation business, which complements current FBO.	Once AirNow role determined.	2010
Terminal Services/Amenities			

Table 18 - Action Plan Trigger Points			
Action	Description	Trigger Points	Timeframe
Ground Transportation	Provide a courtesy car in the near term with the goal of attracting a car rental outlet or other transportation service as activity increases through 2012.	Immediate	2010
Airport Development			
Runway Extension	Extend runway by 296' to 4,000' in length.	Immediate	2009
Hangars	Hangar construction should be pursued through continued land leases, State hangar development, and/or offers of land to third-party developers through RFP process for hangar development.	Once critical mass of bank approved tenants is identified.	2010
Fund Development	Seek FAA and State grant money to finance all or part of hangar development accomplished without private participation.	If private developers do not materialize by 2011	2011
Non-Aviation Development Options	Create land opportunities for potential development. Engage local commercial real estate leaders and chamber officials to identify opportunities.	As soon as demand develops and infrastructure is available.	2013
Rates and Charges			
Lease Rate Survey	Initiate a survey of prevailing market lease rates for property at State and regional airports.	Prior to entering new leases	2009
FBO Lease Agreement	Negotiate increase in rental rates for current FBO (AirNow).	Several months prior to the expiration of existing lease agreement.	2011

7. ECONOMIC IMPACT ASSESSMENT

The purpose of this section is to quantify the economic impact and contribution of Morse State Airport to the local economy for both the existing situation and for the Recommended Plan. By showing the existing and newly created jobs, income, and total economic output, a greater understanding of the true impact the Airport has in the Bennington area, and support for Airport projects may be significantly enhanced. This analysis demonstrates the economic impacts of Airport and aviation use within Bennington County by tracing the movement of expenditures through the various economic sectors until the money is exported incrementally from the County through purchases of outside goods and services.

7.1 Goals and Methods of Analysis

The goal of this analysis was to quantify the following economic aspects of Morse State Airport both for existing conditions and for the year 2013 Recommended Plan:

- **Direct Spending:** On-airport spending concerning employment, operations, and capital projects. Direct spending also includes off-airport spending by air travelers for rental cars, hotels, restaurants, etc. associated with the users and provision of airport services.
- **Induced Benefits:** Impacts created by the successive rounds of spending in the local economy until the original direct or indirect impact has been incrementally exported from the local area.
- **Jobs and Income:** Quantify the income generated by aviation and the number of jobs supported by the Airport.
- **Total Output in Dollars:** The combined impacts of direct, indirect, and induced spending.

To conduct the analysis, the study utilized the following simplified process and methodology:

- Collect baseline data from the existing statewide economic impact study¹⁶. These numbers were adjusted for inflation from the year 2003 to the year 2007 effectively increasing the original impacts by 13 percent.
- Apply regional multipliers to direct recommended plan capital costs and projected employment for 2013.
- Describe non-monetary impacts of Morse State Airport and local aviation.

7.2 Results of Analysis

In 2003 VTrans completed an analysis of the economic impact of airports and published the Economic Impact of Vermont's Public-Use Airports. According to that study, Morse State

¹⁶ Source: Simat, Helliesen & Eichner, Inc. (SH&E, Inc.), **Economic Impact of Vermont's Public-Use Airports**, April, 2003.

Airport was estimated to have over \$10.3 million in economic impact in terms of business sales and public sector expenditures. The Airport is regularly used by companies such as Abacus Automation, Nastech, AirNow, and TPW Management in Manchester Center. With a longer runway, more use may be generated from the business community, including the Microtechnology Center in Bennington.

The economic impact methodology first identified the direct spending and employment at Morse State Airport (called direct impacts) for the year 2013 recommended plan. Armed with this information, regional re-spending multipliers derived from IMPLAN software were applied to the data to determine the multiplied impacts of direct spending (called induced impacts). Table 19 presents a summary of Morse State Airport’s direct and induced economic impacts for both the baseline case and the year 2013.

Table 19 - Direct and Induced Economic Impacts				
Item	Year 2003 Impacts	Year 2007 Impacts**	Recommended Plan Add-on Impacts	Total 2013 Impacts
Direct Impacts				
On-Airport Income*	\$1,639,285	\$1,917,732	\$366,816	\$2,284,548
On-Airport Expenditures	\$6,801,825	\$7,957,173	\$1,477,105	\$9,434,278
On-Airport Employment	56	56	9	65
Off-Airport Income*	\$354,803	\$415,069	--	\$415,069
Off-Airport Expenditures	\$828,425	\$969,140	--	\$969,140
Off-Airport Employment	26	26	--	26
Induced Impacts				
Induced Direct and Indirect	\$2,764,446	\$3,234,011	\$657,976	\$3,891,987
Total Induced Employment	44	44	8	52
Grand Total Monetary Impacts	\$10,394,696	\$12,160,324	\$2,135,081	\$14,295,405
Grand Total Income Impacts*	\$2,732,219	\$3,196,310	\$572,064	\$3,770,374
Grand Total Employment Impacts	126	126	17	143

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

** Inflated for CPI change - roughly 13 percent over the period. Employment not inflated.

7.3 Non-monetary Impacts

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

- **Transportation Benefits:** Defined as the time saved and cost avoided by travelers

who use airports rather than the next best alternative. Morse State Airport provides access to the National Air Transportation System.

- **Stimulation of Business:** Airports have been shown in other studies to be an important factor in the attraction and siting of new businesses in a community. This is particularly true for businesses with over 100 employees.
- **Aeromedical Evacuation:** Airports often serve as bases for aeromedical evacuation teams or flight services. This life-saving function has intrinsic value that often cannot be adequately quantified.
- **Recreation:** Roughly 50 percent of commercial airline travel and 60 percent of general aviation travel is for recreational purposes. This includes the valuable tourist trade which brings economic activity to the study region.

All of the above factors point to a value of an airport that is not easily quantified. The impacts that were estimated within the body of this report are only one facet of the overall picture. Morse State Airport enjoys a significance that is much larger than these numbers can estimate. It is part of an increasing scarce system of general aviation facilities that needs support, protection, and appreciation from all the citizens that benefit from its operation, both directly and indirectly.

Appendix A: Lease Summaries

Lessee / Tenant Description	Physical Facilities	Amount	Additional Terms	Term Length	Begin/End Date	Renewal Options
Amendment No. 1 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 42 ft. x 40 ft., a section of Hangar #2, upon which tenant is to own and occupy a portion of the currently constructed 210 ft. x 40 ft. hangar for personal and private use.	\$168.00 per month. The Consumer Price Index (CPI-U) is used for changes to rental fees.	Occupancy after lease termination automatically indicates renewal of previous lease. Lessee may not sublease the premises without written consent of the Lessor. The Lessee may terminate this agreement at any time with 30 days prior notice to the Lessor.	5 years	11/7/2001 11/6/2006	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Amendment No. 1 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 42 ft. x 40 ft., a section of Hangar #2, upon which tenant is to own and occupy a portion of the currently constructed 210 ft. x 40 ft. hangar for personal and private use.	\$168.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Occupancy after lease termination automatically indicates renewal of previous lease. Lessee may not sublease the premises without written consent of the Lessor. The Lessee may terminate this agreement at any time with 30 days prior notice to the Lessor.	5 years	11/7/2001 11/6/2006	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
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Amendment No. 1 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 77 ft. x 60 ft., currently occupied by a 12 ft. x 57 ft. trailer for personal and private use.	\$392.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Not Available	Not Available	1/24/2005	Not Available
Amendment No. 1 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 44.5 ft. x 30 ft., known as T-Hangar #1, upon which tenant is to own and occupy a portion of the currently constructed 60 ft. x 60 ft. hangar for personal and private use.	\$108.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Not Available	Not Available	4/1/2002	Not Available
Amendment No. 1 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 42 ft. x 40 ft., a section of Hangar #2, upon which tenant is to own and occupy a portion of the currently constructed 210 ft. x 40 ft. hangar for personal and private use.	\$168.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Occupancy after lease termination automatically indicates renewal of previous lease. Lessee may not sublease the premises without written consent of the Lessor. The Lessee may terminate this agreement at any time with 30 days prior notice to the Lessor.	5 years	11/7/2001 11/6/2006	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.

Lessee / Tenant Description	Physical Facilities	Amount	Additional Terms	Term Length	Begin/End Date	Renewal Options
Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 44.5 ft. x 30 ft., known as T-Hangar #4, upon which tenant is to own and occupy a portion of the currently constructed 60 ft. x 60 ft. hangar for personal and private use.	\$108.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Occupancy after lease termination automatically indicates renewal of previous lease. Lessee may not sublease the premises without written consent of the Lessor. The Lessee may terminate this agreement at any time with 30 days prior notice to the Lessor.	5 years	10/15/2003 10/14/2008	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Memorandum of Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 44.5 ft. x 30 ft., known as T-Hangar #2, upon which tenant is to own and occupy a portion of the currently constructed 60 ft. x 60 ft. hangar for personal and private use.	\$108.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	No option to purchase or right of first refusal. Lessee may not sublease the premises without written consent of the Lessor.	5 years	10/15/2003 10/14/2008	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 44.5 ft. x 30 ft., known as T-Hangar #3, upon which tenant is to own and occupy a portion of the currently constructed 60 ft. x 60 ft. hangar for personal and private use.	\$108.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Occupancy after lease termination automatically indicates renewal of previous lease. Lessee may not sublease the premises without written consent of the Lessor. The Lessee may terminate this agreement at any time with 30 days prior notice to the Lessor.	5 years	10/15/2003 10/14/2008	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.

Lessee / Tenant Description	Physical Facilities	Amount	Additional Terms	Term Length	Begin/End Date	Renewal Options
Lease between the State of Vermont and Business Air, Inc.	One (1) parcel of land measuring 300 ft. x 50 ft., upon which tenant is to construct, own, and occupy a 290 ft. x 40 ft. hangar.	\$1,581.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Not Available	5 years	7/31/1998 7/30/2003	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Amendment No. 2 to Lease between the State of Vermont and Business Air, Inc.	One (1) parcel of land measuring 30 ft. x 200 ft., contiguous to a 22,100 sq. ft. maintenance facility, upon which tenant is to construct, and own two (2) propane tanks and two (2) storage buildings.	\$2,388.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Not Available	Not Available	5/21/1998	Not Available
Amendment No. 2 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 78 ft. x 55 ft., upon which tenant has constructed and occupies a hangar.	\$343.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Not Available	5 years	9/5/1990 9/4/1995	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Amendment No. 1 to Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 58 ft. x 96 ft. upon which tenant is to own and occupy a portion of the currently constructed hangar for personal and private use.	\$582.00 per month The Consumer Price Index (CPI-U) is used for changes to rental fees.	Not Available	6 years	10/9/1998 10/8/2004	Four (5) year renewals
Memorandum of Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 53 ft. x 53 ft. upon which tenant is to own and occupy a portion of the currently constructed hangar for personal and private use.	Not Available	No option to purchase or right of first refusal. Lessee may not sublease the premises without written consent of the Lessor.	5 years	11/4/2004 11/3/2009	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.

Lessee / Tenant Description	Physical Facilities	Amount	Additional Terms	Term Length	Begin/End Date	Renewal Options
Memorandum of Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 50 ft. x 50 ft. upon which tenant is to own and occupy a currently constructed hangar for personal and private use.	Not Available	No option to purchase or right of first refusal. Lessee may not sublease the premises without written consent of the Lessor.	5 years	7/24/2003 7/23/2008	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Memorandum of Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 80 ft. x 100 ft., known as Hangar Lot 5-A, upon which tenant is to own and occupy a currently constructed hangar for personal and private use.	Not Available	No option to purchase or right of first refusal. Lessee may not sublease the premises without written consent of the Lessor.	5 years	12/5/2005 12/4/2010	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.
Memorandum of Lease between the State of Vermont and a Private Hangar Owner	One (1) parcel of land measuring 80 ft. x 80 ft., upon which tenant is to own and construct a hangar for personal and private use.	Not Available	No option to purchase or right of first refusal. Lessee may not sublease the premises without written consent of the Lessor.	5 years	9/29/2004 9/28/2009	Four (5) year renewals Must give written notice three (3) - six (6) months before the expiration of each existing term if Lessee desires to renew.

Appendix B: IMPLAN Results

Employment

Sector Description		Direct	Indirect	Induced	TOTAL
1	11 Ag, Forestry, Fish & Hunting	0.0	0.0	0.0	0.1
19	21 Mining	0.0	0.0	0.0	0.0
30	22 Utilities	0.0	0.0	0.0	0.0
33	23 Construction	0.0	0.1	0.0	0.1
46	31-33 Manufacturing	0.0	0.1	0.1	0.2
390	42 Wholesale Trade	0.0	0.1	0.1	0.1
391	48-49 Transportation & Warehousing	6.5	0.3	0.1	6.8
401	44-45 Retail trade	0.0	0.1	0.7	0.7
413	51 Information	0.0	0.1	0.0	0.1
425	52 Finance & insurance	0.0	0.1	0.1	0.1
431	53 Real estate & rental	0.0	0.3	0.2	0.5
437	54 Professional- scientific & tech sv	0.0	0.5	0.1	0.7
451	55 Management of companies	0.0	0.0	0.0	0.0
452	56 Administrative & waste services	0.0	1.0	0.1	1.1
461	61 Educational svcs	0.0	0.0	0.2	0.2
464	62 Health & social services	0.0	0.0	0.8	0.8
475	71 Arts- entertainment & recreation	0.0	0.0	0.1	0.1
479	72 Accommodation & food services	2.9	1.0	0.4	4.3
482	81 Other services	0.0	0.0	0.3	0.3
495	92 Government & non NAICs	0.0	0.4	0.0	0.4
Total		9.4	4.0	3.3	16.6

Multiplier: 1.47

Income (\$)

Sector Description		Direct	Indirect	Induced	TOTAL
1	11 Ag, Forestry, Fish & Hunting	0	403	710	1,113
19	21 Mining	0	0	0	0
30	22 Utilities	0	817	804	1,621
33	23 Construction	0	2,460	664	3,124
46	31-33 Manufacturing	0	3,004	1,718	4,722
390	42 Wholesale Trade	0	4,508	3,264	7,772
391	48-49 Transportation & Warehousing	317,302	15,063	1,533	333,898
401	44-45 Retail trade	0	1,535	17,927	19,462
413	51 Information	0	4,516	1,407	5,923
425	52 Finance & insurance	0	4,203	3,780	7,983
431	53 Real estate & rental	0	4,835	3,097	7,932
437	54 Professional- scientific & tech sv	0	19,467	4,190	23,657
451	55 Management of companies	0	352	151	502
452	56 Administrative & waste services	0	14,818	2,148	16,966
461	61 Educational svcs	0	226	4,777	5,004
464	62 Health & social services	0	1	33,789	33,790
475	71 Arts- entertainment & recreation	0	435	1,584	2,019
479	72 Accommodation & food services	49,514	16,967	7,710	74,191
482	81 Other services	0	744	4,884	5,628
495	92 Government & non NAICs	0	14,547	2,210	16,757
Total		366,816	108,901	96,347	572,064

Multiplier: 1.40

Output (\$)

	Sector Description	Direct	Indirect	Induced	TOTAL
1	11 Ag, Forestry, Fish & Hunting	0	1,241	1,044	2,285
19	21 Mining	0	0	0	0
30	22 Utilities	0	3,645	3,590	7,235
33	23 Construction	0	5,413	1,872	7,285
46	31-33 Manufacturing	0	14,686	9,523	24,209
390	42 Wholesale Trade	0	11,921	8,631	20,552
391	48-49 Transportation & Warehousing	1,330,490	24,185	3,524	1,358,198
401	44-45 Retail trade	0	3,868	45,035	48,903
413	51 Information	0	22,181	7,202	29,382
425	52 Finance & insurance	0	11,844	12,689	24,534
431	53 Real estate & rental	0	28,649	17,981	46,630
437	54 Professional- scientific & tech sv	0	46,481	10,500	56,981
451	55 Management of companies	0	1,640	702	2,343
452	56 Administrative & waste services	0	60,245	4,297	64,542
461	61 Educational svcs	0	469	9,232	9,701
464	62 Health & social services	0	4	65,550	65,554
475	71 Arts- entertainment & recreation	0	1,211	4,264	5,475
479	72 Accommodation & food services	146,615	50,034	22,873	219,522
482	81 Other services	0	2,160	11,626	13,786
495	92 Government & non NAICs	0	71,719	56,245	127,964
	Total	1,477,105	361,597	296,380	2,135,081

Multiplier: 1.60

Tax Impact

	Empl. Comp.	Prop. Income	Household Ex	Enterprises Ind.	Bus Tax	Totals
Enterprises (Corporations)						
Corporate Profits Tax				\$12,147		\$12,147
Indirect Bus Tax: Custom Duty					\$1,856	\$1,856
Indirect Bus Tax: Excise Taxes					\$5,003	\$5,003
Indirect Bus Tax: Fed NonTaxes					\$2,268	\$2,268
Personal Tax: Estate and Gift Tax						\$0
Personal Tax: Income Tax			\$42,699			\$42,699
Personal Tax: NonTaxes (Fines- Fees)						\$0
Social Ins Tax- Employee Contribution	\$34,408	\$1,831				\$36,239
Social Ins Tax- Employer Contribution	\$34,917					\$34,917
Federal Government NonDefense	\$69,325	\$1,831	\$42,699	\$12,147	\$9,127	\$135,129
Corporate Profits Tax				\$2,360		\$2,360
Dividends				\$2,692		\$2,692
Indirect Bus Tax: Motor Vehicle Lic					\$988	\$988
Indirect Bus Tax: Other Taxes					\$3,311	\$3,311
Indirect Bus Tax: Property Tax					\$43,830	\$43,830
Indirect Bus Tax: S/L NonTaxes					\$3,571	\$3,571
Indirect Bus Tax: Sales Tax					\$19,842	\$19,842
Personal Tax: Estate and Gift Tax						\$0
Personal Tax: Income Tax			\$13,587			\$13,587
Personal Tax: Motor Vehicle License			\$1,106			\$1,106
Personal Tax: NonTaxes (Fines- Fees)			\$3,692			\$3,692
Personal Tax: Other Tax (Fish/Hunt)			\$527			\$527
Personal Tax: Property Taxes			\$487			\$487
Social Ins Tax- Employee Contribution	\$114					\$114
Social Ins Tax- Employer Contribution	\$457					\$457
State/Local Govt NonEducation	\$571	\$0	\$19,399	\$5,052	\$71,542	\$96,564
Total	\$69,896	\$1,831	\$62,098	\$17,199	\$80,669	\$231,693