Nantucket Airport Master Plan
MASTER PLAN ALTERNATIVE CONCEPTS - PROJECT LIST

0 Years- 5 Years

				FAA Eligible		Total Time Frame	Priority Score	Time Frame				
Project Number	**Section**	**Project**	**Engineers Probabale Cost**	**Yes**	**No**	**0 Years - 5 Years**	**(WV X B)**	**1**	**2**	**3**	**4**	**5**
SAFETY & SECURITY CONCEPTS: 0-5 Years												
7	*Terminal Apron Repaving in 7 Phases*											
	7.2	Area "E"	$2.5M	√		X	197	X				
11	*North Ramp Part 77 Aircraft Tail Heights Concepts*							X				
	11.1	Create New Parking Position	$5K	√		X	194	X				
	11.2	Swap Parking Position		√		X	184	X				
7	*Terminal Apron Repaving in 7 Phases*											
	7.1	Area "A"	$650K	√		X	184	X				
5	*RW 24 Exit Taxiway*											
	7.2	High-Speed Angle Exit Taxiway (Preferred)	$500-830K	√		X	166		X			
2	Separation of Taxiways "E" and "G"		$600K	√		X	164		X			
14	*Information Technology System Upgrades*											
	14.4	Upgrade Voice Telephone System	$300K	√		X	161		X			
5	*RW 24 Exit Taxiway*											
	7.1	Right-Angle Exit Taxiway	See Above	√		X	160					
8	*South Apron Redesign/Expansion*											
	8.1	Partial Build	$7.7M	√		X	159			X		
14	*Information Technology System Upgrades*											
	14.3	Terminal PA System	$350K	√		X	155				X	
10	RW 15 RPZ (Runway Protection Zone) Overlay Zone		$5K	√		X	147				X	
12	*Security System Upgrade*											
	12.1	Vehicular and Pedestrian Access Controls	$300K	√		X	140				X	
14	*Information Technology System Upgrades*											
	14.2	Terminal FIDS System	$25K	√		X	137					X
	14.1	Main Terminal Backbone System	$100K	√		X	127					X
13	Terminal Building to SRE - IT Communication Link		$10K	√		X	122					X
12	*Security System Upgrade*											
	12.3	Video Analytic Intrusion System	$500K	√		X	118					X
11.3	NOTAM Runway 15 Closure		N/A	√		X	91	X				
1	*RW 6 RSA (Runway Safety Area) Concepts*											
	1.1	Existing Irregular RSA	N/A	N/A		X	N/A					X
		Sub Total=	**$ 13.88M**				**Sub Total=**	**$3.66M**	**$1.73M**	**$7.7M**	**$655K**	**$635K**
CAPACITY/TERMINAL AIRFIELD CONCEPTS: 0-5 Years												
1	*Terminal Secure Hold Room Concepts*											
	1.1	Seasonal Tent/Secure Hold Room	$20K		√	X	99	X				
		Sub Total=	**$20K**				**Sub Total=**	**$20k**				
EFFICIENCY-ACCESSORY CONCEPTS: 0-5 Years												
4	Airport Manager's/Thompson House Rehabilitation		$750K		√	X	85		X			
		Sub Total=	**$750K**				**Sub Total=**		**$750K**			
REVENUE-ENHANCEMENTS: 0-5 Years												
10	Wingspan vs. Weight-based Fees		N/A		√	X	145	X				
2	Combo GA Hangars/Commercial Space		$2.5M		√	X	143	X				
8	*Flat Top/Double Wide Re-use*											
	8.1	Former Marine Home Lease Parcel	$20K		√	X	140		X			
9	Airport Rates and Charges		N/A		√	X	140		X			
6	Expand Bunker Area Industrial Development		N/A		√	X	128			X		
7	~~DELTA Parcel/Public Employee Housing/Seasonal Employee Dormitory/Microtel Concept~~		N/A		√	X	120			X		
8	*Flat Top/Double Wide Re-use*											
	8.2	Portion of USPS Lease Parcel	$20K		√	X	120				X	
4	Parking Lot Operations: Hourly vs. Overnight Rates / Access Gate Upgrades		$80K		√	X	119				X	
5	Bunker Road Commericial Vehicle Parking Areas		$15K		√	X	103					X
11	~~Revenue Enhancement Concepts - Flex Space Terminal/GA Building Rental Opportunities~~		N/A		√	X	95					X
12	GA Revitalization/Special Events/Owner Type Group Fly-ins		N/A		√	X	93					X
		Sub Total=	**$2.64M**				**Sub Total=**	**$2.5M**	**$20K+**	**N/A**	**$100K**	**$15K+**
ENVIRONMENTAL-SUSTAINABILITY: 0-5 Years												
3	Coastal Management Initiative (On-Going)		$50K (Per-Year)		√	X	151	X	X	X	X	X
12	Apron Lighting Control/PCL Dimmer Concept		$80K	√		X	128	X				
11	Ramp Electrification		$4M		√	X	115		X			
1	*Solar Array Development*											
	1.1	Bunker Area Solar Development	N/A		√	X	111			X		
10	"Fly Friendly" Aircraft Noise Mitigation Measures (On-Going)		N/A		√	X	105	X	X	X	X	X
6	Advertise Rental Cars/Taxis/Bike/Courtesy Vans		N/A		√	X	98				X	
8	Bike Share/Rental Program		$100K		√	X	97					X
5	Increase NRTA Seasonal Service Frequency		N/A		√	X	94					X
		Sub Total=	**$4.43M+**				**Sub Total=**	**$135K+**	**$4M+**	**$50K+**	**$50K+**	**$150K+**
		(0 - 5 Year Engineer Probable Cost) TOTAL=	**$22.23M+**				**(Per-Year) TOTAL=**	**$6.32M**	**$6.55M**	**$7.75M**	**$805K**	**$800K**

Nantucket Airport Master Plan
MASTER PLAN ALTERNATIVE CONCEPTS - PROJECT LIST

6 Years- 10 Years

Project Number	Section	Project	Engineers Probabale Cost	FAA Eligible: Yes	FAA Eligible: No	Total Time Frame: 6 Years - 10 Years	Priority Score: (WV X B)	Time Frame: 6	Time Frame: 7	Time Frame: 8	Time Frame: 9	Time Frame: 10
SAFETY & SECURITY CONCEPTS: 6-10 Years												
7	*Terminal Apron Repaving in 7 Phases*											
	7.4	Area "B"	$1.28M	√		X	197	X				
	7.5	Area "C"	$1.5M	√		X	197		X			
	7.6	Area "D"	$2.0M	√		X	197			X		
8	*South Apron Redesign/Expansion*											
	8.2	Full Build	$10.5M	√		X	169				X	
6	*RW 33 Exit Taxiway*											
	6.2	High-Speed Exit Taxiway	$1.5M+	√		X	158			X		
2	Relocate Stub Taxiways "A", "B", and "C"		$500K	√		X	143			X		
3	Separation of Taxiways "E" and "F"		$1.4M	√		X	134			X		
12	*Security System Upgrade*											
	12.2	Fiber Optic Intrusion Sensors	$500K	√		X	118					X
9	RW 24 DME/Localizer Facility Relocation - Coastal Flood Hazard Zone (FAA Project)		$750K	√		X	N/A				X	
		Sub Total=	**$ 19.93M**				**Sub Total=**	**$1.28M+**	**$1.5M+**	**$5.4M+**	**$11.25M**	**$500K**
CAPACITY/TERMINAL AIRFIELD CONCEPTS: 6-10 Years												
4	Air Carrier Bypass Taxiway/Hold Areas		$800K	√		X	162		X			
1	*Terminal Secure Hold Room Concepts*											
	1.2	Convert Bag Claim to Hold Room/Tent or Flat Top Reuse, for Bag Claim / Building Renovations	$1.8M		√	X	119					X
		Sub Total=	**$2.6 M**				**Sub Total=**		**$800K**			**$1.8M**
EFFICIENCY/ACCESSORY CONCEPTS: 6-10 Years												
1	Reconstruct North Ramp		$360K	√		X	177	X				
2	*GSE Storage Expansion Concepts*											
	2.1	Expand Existing GSE Footprint	$300K		√	X	121					
	2.2	Construct New GSE Garage (Preferred)	$200K		√	X	119	X				
3	*SRE Storage Expansion Concepts*											
	3.1	Expand Existing Footprint (Preferred)	$2M		√	X	119		X			
	3.2	Construct SRE Storage Annex	$1.2M		√	X	107					
		Sub Total=	**$4.06 M**				**Sub Total=**	**$560K**	**$2M**			
REVENUE ENHANCEMENT CONCEPTS: 6-10 Years												
1	North Apron GA Hangars		$2.25M		√	X	143			X		
		Sub Total=	**$2.25 M**				**Sub Total=**			**$2.25M**		
ENVIRONMENTAL SUSTAINABILITY CONCEPTS: 6-10Years												
3	Coastal Management Initiative (On-Going)		$50K		√	X	151	X	X	X	X	X
1	*Solar Array Development*											
	1.2	DELTA Parcel/Adjacent Runway 24 Solar Array	N/A		√	X	111	X				
4	Convert Airport Maintenance Fleet to Alternative Fuels		$500K		√	X	106			X		
10	"Fly Friendly" Aircraft Noise Mitigation Measures (On-Going)		N/A		√	X	105	X	X	X	X	X
9	Secure Bike Parking/Bike Path Extension		$250K		√	X	98				X	
7	Preferential Parking for Alternatives-Fuel Cars and Additional EV Charging Stations		$45K		√	X	96					X
		Sub Total=	**$845K+**				**Sub Total=**	**$50K+**	**$50K+**	**$550K**	**$300K**	**$345K**
		TOTAL=	**$28.29M+**				**(Per-Year) TOTAL=**	**$1.89M+**	**$4.35M+**	**$8.2M+**	**$11.55M+**	**$2.3M+**

Nantucket Airport Master Plan
MASTER PLAN ALTERNATIVE CONCEPTS - PROJECT LIST

11 Years-20 Years

Project Number	Section	Project	Engineers Probabale Cost	FAA Eligible Yes	FAA Eligible No	Time Frame 11 Years - 20 Years	Priority Score (WV X B)	Time Frame 11	12	13	14	15	16	17	18	19	20
SAFETY & SECURITY CONCEPTS: 11-20 Years																	
7		*Terminal Apron Repaving in 7 Phases*															
	7.7	Area "G"	$ 4.5M	*v*		*X*	177	*X*									
	7.3	Area "F"	$ 3.05M	*v*		*X*	170		*X*								
6		*RW 33 Exit Taxiway*															
	6.1	Full-Length Parallel Taxiway	$ 5.5M+	*v*		*X*	142					*X*					
1		*RW 6 RSA (Runway Safety Area) Concepts*															
	1.2	EMAS with Irregular RSA	($ 5.6M)	N/A		*X*	N/A										
	1.3	200-Foot Runway Shift (Long-Term Preferred)	$ 7.5M	N/A		*X*	N/A										*X*
	1.4	850-Foot Runway Shift	($ 25.5M)	N/A		*X*	N/A										
	1.5	1,450-Foot Runway Shift	($ 30+M)	N/A		*X*	N/A										
		Sub Total=	**$ 20.55M +**				**Sub Total=**	**$4.5M**	**$3.05M**			**$5.5M**					**$7.5M**
CAPACITY/TERMINAL AIRFIELD CONCEPTS: 11-20 Years																	
1		*Terminal Secure Hold Room Concepts*															
	1.4	Building Renovation/Expansion (Long-Term Preferred)	$ 8M		*v*	*X*	131										*X*
	1.3	Convert Bag Claim to Hold Room/Construct New Bag Claim Addition	($ 5M)		*v*	*X*	119										
		Sub Total=	**$ 8 M**				**Sub Total=**					**$345K**					**$8M**
REVENUE ENHANCEMENT CONCEPTS: 6-10 Years																	
3		Potential Large GA Jet Hangars	$ 7M+		*v*	*X*	119							*X*			
		Sub Total=	**$7 M +**				**Sub Total=**							**$7M**			
ENVIRONMENTAL SUSTAINABILITY CONCEPTS: 6-10 Years																	
3		Coastal Management Initiative (On-Going)	$ 50K		*v*	*X*	151	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*
10		"Fly Friendly" Aircraft Noise Mitigation Measures (On-Going)	N/A		*v*	*X*	105	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*	*X*
		Sub Total=	**$ 50K+**				**Sub Total=**	**$50K+**	**$50K+**	**$50K+**	**$50K+**	**$50K+**	**$50K+**	**$50K+**	**$50K+**	**$50K+**	**$50K+**
		TOTAL=	**35.65M+**				**(Per-Year) TOTAL=**	**$4.55M+**	**$3.55M+**			**$5.9M+**		**7.05M**			**$15.6M+**

ANNUAL REPORT – NANTUCKET MEMORIAL AIRPORT FY 2014

Nantucket Memorial Airport (ACK) is one of only two gateways to the island, and on certain days has more aircraft operations than Boston Logan. ACK is a key economic generator for the community and the state. According to a recent MASS DOT study, the airport is responsible for 4,000+ jobs generating $121 million in total payroll (4th in state airports), and is responsible for $401 million in economic impact, the third in state airports. While the airport faces competition with improved ferry service to the mainland, the airport continues to provide the fastest, most convenient access to and from the island with multiple frequencies to various cities.

Operating essentially as a small city with its own fire, security, maintenance, operations and administrative departments, the airport provides for the transportation needs of a variety of customers. From private aircraft owners, commercial service airlines and passengers, corporate jet operators and users to freight carriers, medical transport, military training and VIP transport, the airport supplies the infrastructure and services necessary for these groups to successfully perform their functions.

A primary goal for the airport, has been to become financially self-sufficient, and not reliant on Town subsidies. Through various initiatives, the financial performance of the airport has improved significantly. While still not completely self-sufficient in FY14, the required deficit was reduced by over $800,000 from $1.1M to $304,000. Additionally, the use of Retained Earnings that was budgeted at $1.3M came to only $172,452. These are strong indicators that the financial performance of the airport is improving.

Further improvement to the financial performance is anticipated in FY15 with the institution of a $4.50 Passenger Facility Charge (PFC) that was approved by FAA in May of 2014 for collections to begin in July 2014. Due to the timing of this approval, revenue associated with the collection of the PFC was not able to be part of the 2014 budget. Therefore, although revenue will be collected in FY15, it has not yet been appropriated. The estimated amount of collections for the first year is anticipated to be between $500,000 and $600,000. This income should make the airport financially self-sufficient.by reducing debt service and providing matching funds for FAA and State capital grants.

Once the airport is financially self-sufficient, it must develop a business model that makes it sustainable. Through diversification and increase in non-aeronautical revenues, the airport is working to develop a sustainable business plan. As part of this plan the airport leased four parcels in the Bunker Road area in 2013. During the FY14 time period the airport became aware that portions of the airport had been designated as Formerly Used Defense Sites (FUDS), which is a national defense program that is charged with remediating previously used defense sites that may have created environmental concerns. Portions of the Bunker Road leased areas fall within the area of concern identified by the Army Corp of Engineers, who have been tasked with remediation efforts. While the airport was on schedule to have the next phase of investigation take place in 2035, this schedule was advanced because of the discovery of an Unexploded Ordnance (UXO) in this area. The next phase of investigation is now scheduled to take place in 2015. Due to potential impacts of this work, the Airport Commission cancelled the procurement for two of the parcels and is working with the existing tenants to address concerns related to possible development in this area.

Upon final remediation (possibly 2016) additional Requests for Proposals could be issued for use of this land to generate additional income.

The Airport Master Plan efforts commenced in FY14 with an inventory of existing conditions and facilities, aviation activity forecasts, public outreach efforts and facility requirements being completed. Efforts will continue in FY15 with completion of the entire plan expected in early 2015. The final plan will result in an FAA approved Airport Layout Plan (ALP) which will be used to guide future development of FAA related capital projects over the next five to ten years and beyond. Based on survey data from the Master Plan, the Airport will develop a land use plan that will continue to promote a diversified, sustainable income stream.

In addition to providing services necessary for flight operations, the airport is a leader in supplying land for commercial, non-aeronautical businesses known as Locally Undesirable Land Uses (LULU); businesses that are better located outside of the Historic Core District. Both the airfield and its support facilities and non-aeronautical areas must be managed in an environmentally responsible manner, as the Airport actively manages over 500 acres of Priority Habitat and the associated threatened and endangered species. As part of its environmental stewardship commitment, the Airport has streamlined its major habitat, wildlife, and rare species management obligations into a single adaptive plan. While prescribed fire remains a part of the program, ACK has emphasized large tract mowing on a 3-5 year interval. This not only maximizes the variety of habitat available on a given burn day, but aggressively pursues chronological sequencing on management actions, resulting in a forest structure that maximizes conditions to recruit and retain rare *Lepidoptera* species. The stand structure also has many major positive benefits for preventing, identifying, and controlling the development of hazardous wildlife conditions. Elsewhere on the airfield, recent botanical surveys have shown that the Airport is a well of plant biodiversity. Frequent mowing and maintenance of sand plain grassland habitat free of shrubby encroachment has been a long-term driver of these successful grasslands. Not only have Airport management actions and history contributed to changing paradigms for the State in promoting best management practices, but the Airport is leading in experimental management techniques for promoting the rare perennial, *Lion's foot*. ACK also continues battling invasive species, promoting herbiciding, hand pulling and spoil pile management, contributing to an island consortium of land management groups to promote overall ecosystem health.

The Airport has been working with the Town's Energy Office and the Massachusetts Department of Transportation (Aeronautics Division) under the Carbon Neutral Airport Program to reduce their energy consumption. Municipal energy costs will increase by 25% on March 1, 2015, putting a strain on all municipal operating budgets. For the last 2 years, the Airport has aggressively pursued incentives and programs for reducing energy use. As of this writing, the Airport is identifying land suitable for a 1.5 to 2.2 MW solar installation, facility HVAC upgrades that will save over $20,000 a year, and lighting systems that further reduce energy use with short term simple paybacks. These are not just important steps for the Airport to control its own operating costs: by reducing the peak demand for electricity, the Airport hopes to do its share to avoid an expensive 3rd cable, and its cost implications to residents. These projects are being designed and considered in the context of financial and ecological sustainability: they need to not

only make prudent fiscal sense, but support the Airport's other work in controlling threats to coastal erosion and rare species management

The organizational structure of the airport continued to evolve in FY14 with the creation of Superintendent level positions to oversee the three primary functions of the airport; Aircraft Rescue and Firefighting, Fixed Base Operations and Maintenance. These positions were filled from within the current staff, and are designed to effectively improve coordination and control of daily activities in these areas.

Operationally, the Airport was kept busy as the island experienced the second consecutive winter of significant snow storms. While the crews performed exceptionally well in the various events, some flights continued to be cancelled or delayed because of airport closures at their destinations. During the last major storm in late March, the Airport was able to assist the Town with opening Milestone and Polpis Roads, as the high winds and heavy snow created significant drifting providing challenges for standard road equipment. . Again this year in June the FAA performed their annual certification inspection, which is a thorough three day comprehensive inspection of all facets of airport operations. This inspection is part of the FAA regulatory requirements that the airport must adhere to in order to permit commercial air service operations. The inspection this year yielded zero deficiencies, which is a result of the dedication and commitment of the airport staff.

Construction activity continued at the Airport with the completion of taxiway "Juliet" which improved safety by providing access for larger private aircraft to the taxiway system without having to taxi between multiple aircraft on a congested ramp area. Other airfield construction activities completed in FY14 included replacement of a Visual Approach Slope Indicator (VASI) lighting system with a more modern Precision Approach Path Indicator (PAPI) system on both runways 06 and 33. These improved navigational aids will assist pilots in determining the appropriate approach angle during landing. Additionally on runway 33, the Runway End Identifier Lights (REILS) system were replaced to address the 500' extension of this runway previously completed. It should be noted that the capital funding formula for FAA grants has changed. In the past FAA would fund 95% of eligible times, while the State would fund 2.5% and the airport would be required to make up the difference (2.5%). Currently FAA will fund 90%, the State 5% and the airport will now need to fund 5%.

The major construction effort that was completed in FY14, was the long awaited opening of the Administration/ Fixed Base Operator building. While the Administration and Finance units were relocated I early 2014, the Fixed Base Operation held a grand opening on May 3, 2014. This new facility consolidated airport administrative, finance and FBO functions into one facility. The former FBO building will remain in place to be used for control tower staff during the rehabilitation of the existing control tower which is scheduled to take place in the winter/spring of 2015.

In Fiscal Year 2014, aircraft operations were down 5.72% over 2013 from 126,898 to 119,639. Passenger enplanements for the period were down less than 1% over the previous Fiscal Year from 175,328 to

174,129. In terms of fuel, the number of Jet A gallons pumped in FY2014 was up 2.58% over FY13, from 1,164,958 to 1,194,978. AvGas gallons were down for the period by 1% from 116,007 to 115,078.

In summary, the airport organization has been restructured to better align functions across the various lines of business while efforts continue to improve the financial performance and address the needs of this capital intense operation. Additionally, the Airport continues planning efforts to address the long term capital needs and development of a sustainable business plan that will keep the airport on solid financial ground in the future.

Thomas Rafter, A.A.E.

Airport Manager


BUNKER RD
LD SOUTH RD
UNKNOWN
WAY TO OLD SOUTH RD
MADEQUECHAM-VL