EAST HAMPTON AIRPORT

MASTER PLAN REPORT

Prepared for the
Town of East Hampton

DRAFT

Submitted By

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In Association with

DY Consultants

YOUNG ENVIRONMENTAL SCIENCES, INC.

April 24, 2007

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Chapter I - Existing Conditions and Facilities

The following sections provide background and information regarding the facilities that currently exist at East Hampton Airport. These facilities are depicted in detail on Figure 1, Existing Airport Layout. The specific types and quantities of facilities identified in these sections will be evaluated by the Town officials and the community in conjunction with forecast demand and established planning criteria to determine future needs for the Airport.

A. Description of Existing Conditions and Facilities

East Hampton Airport consists of 610 acres including the 56.166 acres of East Hampton Industrial Park.

Airside facilities include runways, taxiways, lighting, and navigational aids. Characteristics of the runway and taxiway system at the Airport are described in the following sections:

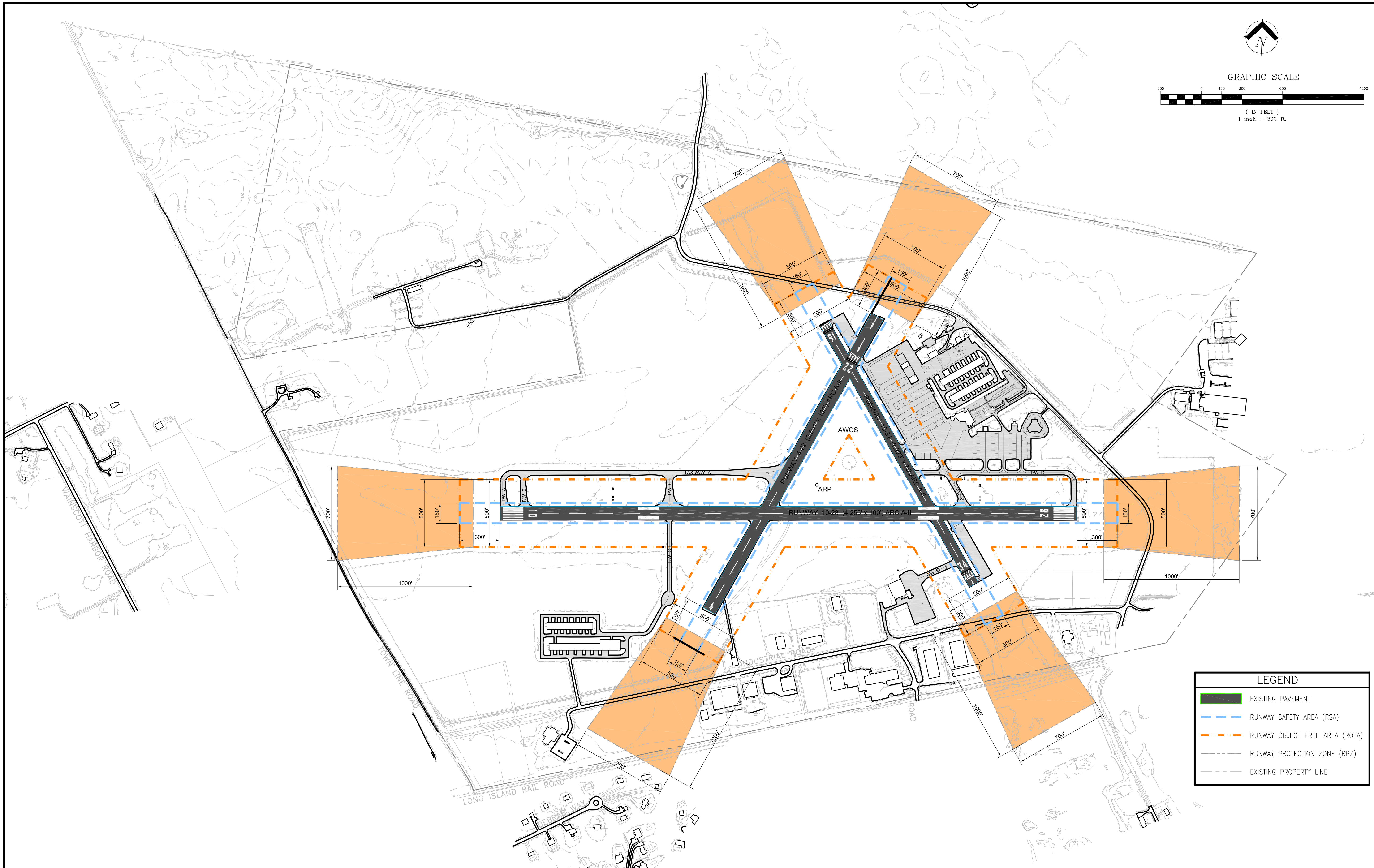
1. Runways

East Hampton Airport was constructed in 1936. The Airport was built with three runways, 10/28, 4/22 and 16/34. The primary runway is Runway 10-28, which is 4,255 feet long by 100 feet wide. The majority of the traffic is handled by this runway as it is dimensionally the largest runway, provides more navigational measures and equipment to pilots, and is structurally in the best condition. In addition, this is the only runway with an FAA approved straight-in instrument approach procedure for use by pilots on approach to the airport during inclement weather conditions. The FAA has documented the pavement to be in good condition; however, the distresses found are low to high severity longitudinal and transverse cracking. Runway 10-28 is rated differently depending on the segment of the runway. Approximately 50% is rated for 60,000 lbs with a PCN of 23, 25% is rated for 48,000 lbs. with a PCN 15, and 25% is rated for 36,000 lbs. with a PCN of 9.

The secondary runway is Runway 16-34; which is 2,223 feet long by 75 feet wide. It is considered a crosswind runway used by small, piston engine aircraft. Performance characteristics of private and corporate jet aircraft prevent utilization of this runway due to its shorter length. Currently, Runway 16-34 pavement is considered by the FAA to be in fair condition. The predominant distresses observed are high severity block cracking, low severity raveling and weathering, and low to high severity longitudinal and transverse cracking. The runway is rated for 12,000 lbs. on approximately 80% of the runway. The

PCN and remaining 20% is not ratably due to the type of sub-base that exists underneath the pavement.

Runway 4-22 is another secondary crosswind runway used only by small General Aviation aircraft due to its length of 2,501 feet and width of 100 feet. This runway has recently been closed due to a condition analysis of the pavement by the FAA. The FAA has rated this runway as failed. The runway distresses observed include high severity block cracking, low severity raveling and weathering, low to high severity longitudinal and transverse cracking and low to high severity alligator cracking. The runway is rated for 60,000 lbs. (PCN of 23) except for the small portion adjacent to taxiway G which is rated for 12,000 (no PCN available). Use of the runway for taxiing operations is currently permitted; however, the pavement has failed and should be reconstructed to support aircraft and vehicles regardless of its use.



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EAST HAMPTON AIRPORT

EXISTING LAYOUT PLAN

EAST HAMPTON AIRPORT
SUFFOLK COUNTY, NEW YORK
FIGURE 1
DATE PREPARED:
SHEET OF

This runway system and its physical characteristics are described further in Table I-1.

TABLE I-1
RUNWAY SYSTEM CHARACTERISTICS

Characteristics	10-28	4-22	16-34
Use	Primary	Closed	Secondary
Length	4,255'	2,501'	2,223'
Width	100'	100'	75'
Strength (1,000's lbs)	Varied SW 36-60	SW-12 (80%)	Varied SW 60
Condition	Good	Failed	Fair
Composition	Asphalt/grooved	Asphalt	Asphalt
Wind Coverage (All Weather) 10.5 Knots 13 Knots	 86.93% 92.93%	 87.01% 92.02%	 87.58% 92.93%
Safety Area Condition	Non-standard	Non-standard	Non-standard
Markings	Non-Precision	Visual	Visual
Lighting	Medium Intensity	None	None

Source: FAA Airport Master Record Form 5010 (June 8, 2006) and Savik & Murray, LLP

1. (cont.) Taxiways

The taxiway system at the airport consists of seven taxiways, all in generally good condition. All three runways at the Airport are served by two partial parallel taxiways. Table I-2 describes the taxiways and their characteristics.

TABLE I-2
TAXIWAY CHARACTERISTICS

Taxiway	Condition	Dimension	Description
Taxiway A	Good	25' Wide	Partial parallel Taxiway. In good condition but needs cracks repaired in the pavement. There are fifty-eight edge lights and six signs.
Taxiway B	Good	35' Wide	In good condition but needs crack repairs. The taxiway has thirteen lights and two signs.
Taxiway C	Good	40' Wide	In good condition but needs crack repairs. There are twelve edge lights and three signs.
Taxiway C South End	Good	25' Wide	The taxiway is in good condition. There is one sign. There are no edge lights.
Taxiway D	Good	35' Wide	In good condition but needs cracks repaired. There are fifty edge lights and they are in fair condition. Also, there are four signs in fair condition.
Taxiway E	Good	35' Wide	In good condition but needs cracks repaired. There are fourteen edge lights and three signs.
Taxiway F	Good		Has no edge lights, nor does it have any signs.
Taxiway G	Good	40' Wide	In fair condition but needs cracks repaired. The taxiway has zero edge lights and two unlighted signs.

Source: Savik & Murray, LLP

2. Aprons

There are several aircraft parking aprons on the airport. These aprons are leased to the fixed based operators (FBOs) on the Airport, Sound Aviation and Myers Aero Service. FBOs offer services and the tie down locations for based and transient aircraft at the Airport. The pavement of both aprons is in fair condition.

2. (cont.) Terminal Area

The East Hampton Airport Terminal Area constructed in 1994 consists of the terminal building and its adjacent 60,000 square foot aircraft parking apron. The building is a 10,260 square foot wooden structure with concrete footings. It is in good condition and is equipped with utilities such as restrooms, sanitary system, electric, and telecommunications. There are several counters and offices inside the terminal including Hertz car rental desk to serve pilots of transient aircraft, Sound Aviation's customer services desk, the Airport Manager's Office, and the Airport attendant desk. The aircraft parking apron is a 60,000 square foot asphalt parcel that can accommodate approximately 5 transient aircraft. Transient means aircraft that are based at other airports, but fly into East Hampton. Transient aircraft typically would use East Hampton Airport to pick up or drop off passengers who are local residents or visit the area temporarily for the purpose of business or tourism. Additionally, there are numerous tiedown spots available.

Land and Building Use

The airport property is comprised of aviation and non-aviation uses. The East Hampton Industrial Park is located on airport property.

The aviation uses include thirteen hangars, four (4) buildings and nine (9) vacant parcels. The 13 hangars have a total of 64 units for aircraft storage, as shown in Table I-3.

The non-aviation uses include fourteen (14) building parcels and eight (8) vacant parcels, as shown in the table below.

The hangars, buildings, and vacant parcels are color coded on the airport facilities plan as shown in Figure I-2.

TABLE I-3
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
1	Aviation Use	Flight School	455 Sq. Feet	Wood	Fair	Flight School	Yellow-framed building with blue window trim. Utilities include electricity and telecommunications throughout the building.
2	Aviation Use	Hangar	4,326 Sq. Feet	Metal	Fair	Sound Aircraft Services	The hangar includes the following utilities: gas, electric and telecommunications.
3	Aviation Use	Hangar	4,743 Sq. Feet	Metal	Fair	Sound Aircraft Services	In the outside corner of the building there is a bench mark from the 1956 United States Coast and Geological Survey labeled as J372. Also Includes the following utilities: gas, electric, and telecommunications.
4	Aviation Use	Hangar	3,119 Sq. Feet	Concrete Block	Fair	Myers Aero Service	The hangar is in need of repairs such as scraping and painting. The building has water, electricity, telecommunications and oil heat.
5	Aviation Use	Hangar	873 Sq. Feet	Metal	Fair	Pegasus Transfer	This T-hangar is used to store small aircraft. Only electricity is provided.
6	Aviation Use	Hangar	1,600 Sq. Feet	Metal	Fair	Munson/Ryan	Utilities include gas and electricity
7	Aviation Use	Hangar	924 Sq. Feet	Metal	Poor	Jay Andreassi	This T-hangar is used to store a small aircraft.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
8	Aviation Use	Hangar	15,525 Sq. Feet	Metal	Good	Hampton Hangars, Inc.	The tenants have 13 hangar units within the building. Utilities include gas, electric, and water.
9	Aviation Use	Hangar	15,525 Sq. Feet	Metal	Good	Hampton Hangars, Inc.	The tenants have 13 hangar units within the building. Utilities include gas, electric, and water.
10	Aviation Use	Passenger Terminal	10,260 Sq. Feet	Wood	Excellent	Town of East Hampton	Facilities include restrooms and a sanitary system, electric, water and telecommunications. The Terminal also includes the Airport Managers Office, Hertz and Enterprise car rental offices, Sound Aircraft Services offices, Airport Attendants desk, and a common area.
11	Aviation Use	Hangar	993 Sq. Feet	Wood	Poor	Hampton Transfer	Is in need of scraping and paint repairs. The only utility present in this building is electricity.
12	Aviation Use	Hangar	5,546 Sq. Feet	Metal	Good	East Hampton Hangar Condominium, Inc.	There are six hangar units within the building. The structure contains gas and electric utilities.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
13	Non-Aviation Use	Vacant	2.59 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
14	Non-Aviation Use	Vacant	2.617 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
15	Vacant	Vacant	3.72 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
16	Vacant	Vacant	2.497 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
17	Aviation Use	Fire Rescue	2,423 Sq. Feet	Metal	Good	Town of East Hampton (leased to the Fire District Training Facility, Inc.)	The fire truck currently housed at this facility is a 1988 Oshkosh T1500 with capacity for 1,500 gallons of water and 200 gallons of foam. The equipment is also used for emergencies off the airport. Utilities include gas, water, sanitary systems, electricity and telecommunications. The Fire Training Facility is also currently storing a flatbed pick- truck at this facility.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
18	Vacant	Vacant	1.03 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
19	Vacant	Vacant	1.03 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
20	Non-Aviation Use	Commercial	0.918 Acres	Metal	Good	Ron Sullivan	There is a 5,400 sq. foot building on the site with the following utilities: Water, sanitary systems, electricity, and telecommunications.
21	Non-Aviation Use	Commercial	0.918 Acres	Metal	Good	GT Power Systems	The building is a 6,750 sq. foot, multi-tenant structure with the following utilities: water, sanitary systems, electricity, and telecommunications.
22	Non-Aviation Use	Commercial	1.836 Acres	Metal	Good	Mapeasy	The building is a 7,650 sq. foot structure with the following utilities: water, sanitary systems, electricity, and telecommunications.
23	Vacant	Vacant	1.84 Acres	Vacant	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
24	Aviation Use	Hangar	10,237 Sq. Feet	Metal & Concrete	Good	East Hampton Executive Terminal	The present utilities are gas (propane), water, sanitary systems, electricity, and telecommunications.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
25	Potential Aviation Use	Vacant	2.37 Acres	Vacant	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
26	Potential Aviation Use	Vacant	2.47 Acres	Vacant	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
27	Non-Aviation Use	Vacant	0.672 Acres	Vacant	N/A	Town of East Hampton	This is a scenic easement and is part of Site No. 26. Development is restricted on this lot.
28	Non-Aviation Use	Vacant	2.16 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
29	Non-Aviation Use	Vacant	1.836 Acres	None	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
30	Non-Aviation Use	Commercial	12,150 Sq. Feet	Wood	Good	Phoenix House	This building is used for personal rehabilitation with the following utilities: gas, water, sanitary systems, electricity and telecommunications.
31	Aviation Use	Vacant	N/A	N/A	N/A	Town of East Hampton	This vacant wooded area is used as the Runway Protection Zone for Runway 4.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
32	Non-Aviation Use	Commercial	1.836 Acres	Metal	Good	Pinewood Studios Building	This storage building is 3,307.5 sq. feet.
33	Non-Aviation Use	Commercial	2.75 Acres	Metal	Good	Local Television, Inc.	This building is 10,712 sq. feet with the following utilities: gas, electricity, water, sanitary systems, and telecommunications. Building sites No. 32 and 33 also have a common building which straddles the two building lots. This building is 26,325 square foot metal prefabricated structure. The building itself is in good condition.
34	Non-Aviation Use	Vacant	0.51 Acres	N/A	N/A	Town of East Hampton	This parcel is a wooded vacant lot.
35	Non-Aviation Use	Pavement	1.7 Acres	N/A	Good	East Hampton Police and East Hampton Fire Department	This site is mostly paved and is used for vehicle storage.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
36	Non-Aviation Use	Commercial	5.65 Acres	Metal	Good	East Hampton Fire District Training, Inc. East Hampton Police	The fire training facility is an 11,700 sq. ft. structure which contains the following utilities: gas, water, sanitary systems, electricity, and telecommunications. There is also a bathroom addition that is vinyl sided. The East Hampton Police Station is a 14,400 sq. ft. structure which contains the following: a security system, gas, water, sanitary systems, electricity, and telecommunications
37	Non-Aviation Use	Commercial	2.22 Acres	Metal	Good	39 Industrial Road, LLC	This building is 17,325 sq. feet with the following utilities: gas, water, electricity, sanitary systems, and telecommunications.
38	Non-Aviation Use	Commercial	3.67 Acres	Metal	Good	41 Industrial Road, LLC	The site has two (2) multi-tenant buildings, 18,900 sq. feet and 9,450 sq. feet respectively. Both buildings include the following utilities: gas, water, sanitary systems, and telecommunications.
39	Aviation Use	Vacant	2.83± Acres	N/A	N/A	Town of East Hampton	This partially cleared site consists of the runway 16 Runway Protection Zone.
40	Non-Aviation Use	Commercial	1.67 Acres	Wood	Good	The Country School	This building is a 7,200 sq. foot structure. This area is used for child daycare. The present utilities are water, sanitary systems, electricity, and telecommunications.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

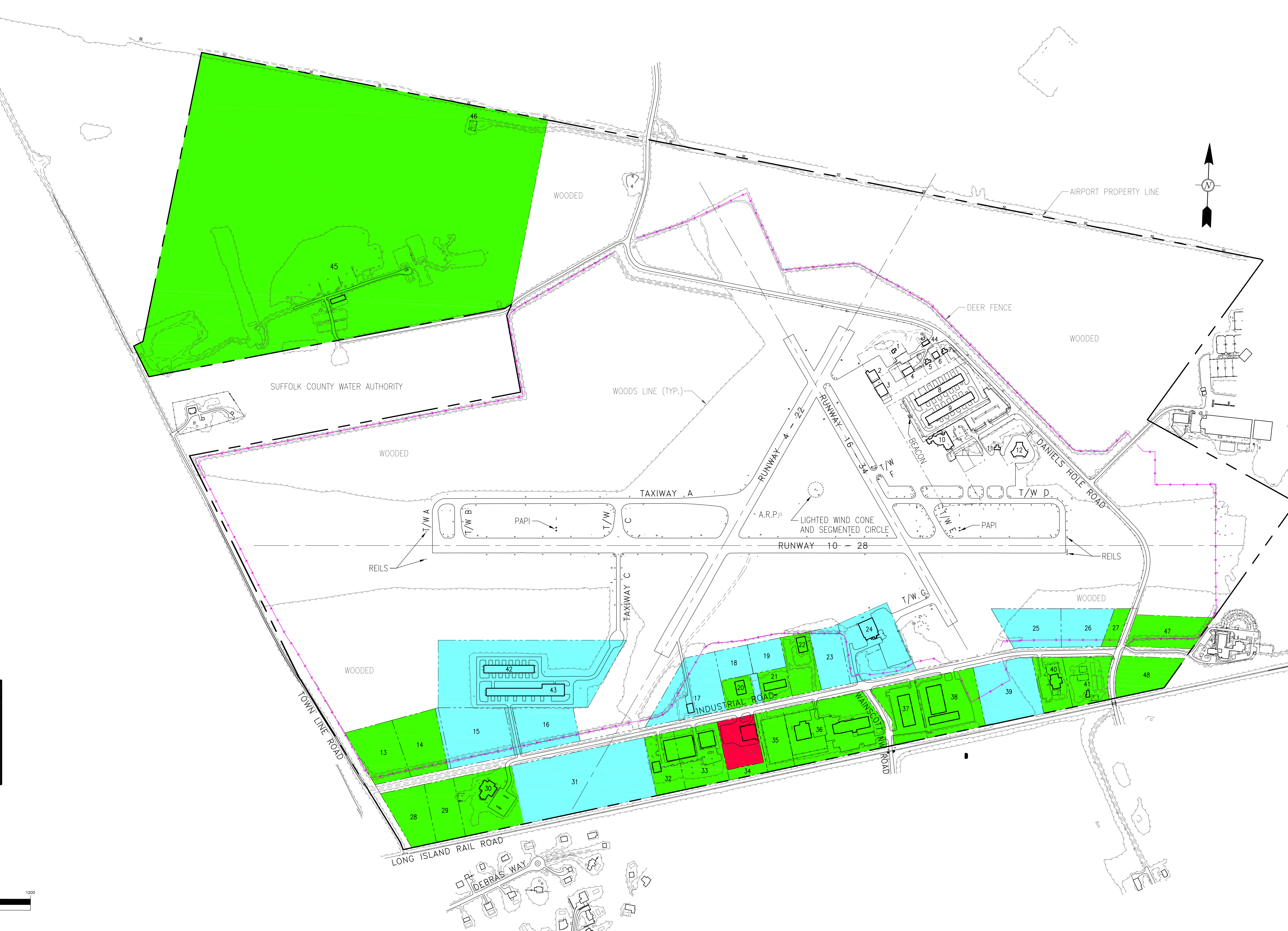
Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
41	Non-Aviation Use	Commercial	2.04 Acres	Greenhouse	Fair	Jane Lappin d/b/a Wainscott Farms, Inc.	There are three (3) greenhouses that are each 2,250 sq. feet.
42	Aviation Use	Hangar	8,100 Sq. Feet	Metal	Good	East End Hangars	This hangar structure contains 14 hangar units. The building includes the following utilities: gas and electricity.
43	Aviation Use	Hangar	27,125 Sq. Feet	Metal	Good	East End Hangars	This hangar structure contains 11 hangar units and has the following utilities: gas, water, sanitary systems, and electricity.
44	Aviation Use	Fuel Farm	N/A	N/A	Good/Poor	Town of East Hampton	The overhead canopy is in need of repair. The drainage scuppers and leaders have corroded and are missing in several areas. The steel framing needs to be scraped and painted. Fuel trucks are parked on site. These conditions indicate the fuel storage capacity is grossly undersized.
44	Aviation Use	Fuel Farm – AVGAS	8,000 Gallon Tank	N/A	Good	Town of East Hampton	The Town owns and sells the fuel to Sound Aircraft Services and Myers Aero Services for distribution to the users. The tank receives deliveries of almost 7,000 gallons once a week during the summer months and once a month other than the summer months.

TABLE I-3 (Cont'd)
EAST HAMPTON AIRPORT FACILITY INVENTORY

Facility Number	Facility Use	Building Type	Size	Type of Construction	Condition	Owner/ Tenant	Description
44	Aviation Use	Fuel Farm – Jet A	12,000 Gallon Tank	N/A	Good	Town of East Hampton	The Town owns and sells the fuel to Sound Aircraft Services and Myers Aero Services for distribution to the users. The tank receives deliveries of almost 9,000 gallons per day during the summer months and 9,000 gallons twice a week other than the summer months.
45	Non-Aviation Use	Commercial	96.7 Acres	N/A	N/A	Maidstone Fire Arms	This mostly wooded site without structures is the home of the Maidstone Gun Club.
46	Non-Aviation Use	Cell Tower	N/A	N/A	N/A	AT&T	The cell tower is situated on the Maidstone parcel.
47	Non-Aviation Use	Vacant	2.5 Acres	Vacant	N/A	Town of East Hampton	This parcel is a vacant wooded lot.
48	Non-Aviation Use	Vacant	2.1 Acres	Vacant	N/A	Town of East Hampton	This parcel is a vacant wooded lot.

AIRPORT FACILITIES
TOTAL ACREAGE = 609.80

1. FLIGHT SCHOOL BUILDING
2. HANGAR – SOUND AIRCRAFT SERVICES
3. HANGAR – SOUND AIRCRAFT SERVICES
4. HANGAR – MYERS AERO SERVICE
5. HANGAR – PEGASUS TRANSFER
6. HANGAR – MUNSON/RYAN
7. HANGAR – JAY ANDREASSI
8. HANGAR – HAMPTON HANGARS, INC.
9. HANGAR – HAMPTON HANGARS, INC.
10. TERMINAL BUILDING
11. HANGAR – HAMPTON TRANSFER
12. HANGAR – EAST HAMPTON HANGAR CONDOMINIUM, INC.
13 VACANT – NON AVIATION CHILD DEVELOPMENT CENTER OF THE HAMPTONS
14. VACANT – NON AVIATION CHILD DEVELOPMENT CENTER OF THE HAMPTONS
15 VACANT
16. VACANT
17. FIRE RESCUE BUILDING
18. VACANT
19. VACANT
20. RON SULLIVAN – NON AVIATION
21. GT POWER SYSTEMS – NON AVIATION
22. MAPEASY – NON AVIATION
23. VACANT
24. HANGAR – EAST HAMPTON EXECUTIVE TERMINAL
25. VACANT
26. VACANT
27. VACANT – SCENIC EASEMENT
28. VACANT – NON AVIATION CHILD DEVELOPMENT CENTER OF THE HAMPTONS
29. VACANT – NON AVIATION CHILD DEVELOPMENT CENTER OF THE HAMPTONS
30. A.A.P.L.E., INC. BUILDING
31. VACANT
32. PINEWOOD STUDIOS BUILDING
33. LOCAL TELEVISION, INC. BUILDING
34. VACANT
35. EAST HAMPTON POLICE AND EAST HAMPTON FIRE DEPARTMENT BUILDING
36. EAST HAMPTON POLICE AND EAST HAMPTON FIRE DEPARTMENT BUILDING
37. 39 INDUSTRIAL ROAD, LLC BUILDING
38. 41 INDUSTRIAL ROAD, LLC BUILDING
39. VACANT
40. THE COUNTRY SCHOOL BUILDING
41. JANE LAPPAN D/B/A WAINSCOTT FARMS, INC. BUILDING
42. HANGAR – EAST END HANGARS
43. HANGAR – EAST END HANGARS
44. AIRPORT FUEL FARM
45. MAIDSTONE FIRE ARMS
46. AT&T CELL TOWER
47. VACANT
48. VACANT



LEGEND

- NON AVIATION USE
- AVIATION USE
- NON-AVIATION PRIVATE PROPERTY
- DEER FENCING

GRAPHIC SCALE
300 0 150 300 600 1200
(IN FEET)
1 inch = 300 ft.

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EAST HAMPTON AIRPORT

EAST HAMPTON AIRPORT
SUFFOLK COUNTY, NEW YORK
EXISTING AIRPORT FACILITIES PLAN
FIGURE 2
DATE PREPARED:
SHEET OF

3. NAVAIDS

Aircraft navigating from one airport to another operate using Visual Flight Rules (VFR) or Instrument Flight Rules (IFR). The term VFR refers to rules that govern the procedures for conducting flight under visual conditions. The term IFR refers to a set of rules governing the conduct of flight under instrument meteorological conditions. Each of these terms is also used to indicate a type of flight plan.

Whether a pilot files a VFR or IFR flight plan depends on the weather conditions at the departing and arriving airports, whether or not ATC services are required, and the class(es) of airspace the pilot will be flying through. For example, all aircraft flying in Class A airspace (above 18,000 feet MSL) must file an IFR flight plan. As a result, most commercial activity is conducted under an IFR flight plan. Aircraft flying IFR rely on navigational aids for enroute navigation from origin to destination, and on final approach to an airport.

Navigation Aids present at East Hampton Airport include the Hampton VOR. The acronym VOR stands for Very High Frequency Omni-directional Radio Range. The Hampton VOR is located approximately 3.5 nautical miles (nm) southwest of the airport in the Town of Southampton. VORs provide a system of radio navigation to aircraft by broadcasting a VHF radio signal encoding both the identity of the station and the angle to it. This information tells the pilot in what direction he lies from the VOR station and is used to navigate to and from other VORs and NAVAIDs along the destination route.

AirScene

AirScene Program can be used to see flight paths, aircraft type, tail numbers, altitude, velocity, runway and type of operation. The program retains data for three years. There are five towers which are located in: 1) Noyac, 2) Amagansett, 3) Southampton Hospital, 4) Maidstone, and 5) on terminal roof. AirScene works by triangulation of transponder codes, but will not supply information unless aircraft has a Transponder. Mode S Transponders will reveal Tail #, type of aircraft, etc. and Mode C Transponders only reveal altitude and velocity. The disadvantages of the system are that the equipment cannot detect when an aircraft has executed a missed approach.

Weather Equipment

Weather equipment consists of a Digi Wax (through antenna on roof of terminal) which aids UNICOM operator to give Airport Advisories.

Sound Aviation has certified weather equipment that allows them to give Barometric Pressure readings. There is a notation on the approach plates advising pilots to obtain their local altimeter setting from Sound Aviation via the Common Traffic Advisory Frequency (CTAF). Information from the Westhampton Airport must be used if it cannot be obtained locally; however, the approach minimums are raised.

An Automated Weather Observation System (AWOS) is currently being designed for installation. An AWOS would provide an official weather reporting/observing source at the Airport. The design has been financed with local funds.

4. Visual Aids

Precision Approach Path Indicators (PAPIs) are located on Runway 10 and Runway 28. FAA owned Runway End Identifier Lights (REILs) are located on Runway 10. Town owned REILs are located on Runway 28. The PAPIs and REILs require continuous maintenance. The rotating beacon is located near the main terminal and is in fair condition, requires rehabilitation. The existing wind cones are in poor condition.

5. Lighting and Signage

The existing runway and taxiway edge lights and airport signs are in fair to poor condition. The cabling is poor. Rehabilitation of cable, lights and signs is required.

6. Roads/Parking Areas

Access to the Airport is provided off Daniel's Hole Road directly into the Airport auto parking area. Parking for approximately 117 automobiles is available and are divided as follows:

14	Employee
4	Handicapped
9	30-Minute Parking
22	Hertz Rental Car
65	Regular

The parking area is separated from the airfield by a security fence. The parking lots and main entrance pavements are in good condition. Hertz has a current, month to month contract for 22 designated parking stalls. Enterprise car rental also uses the parking lot; however, does not have a contract. They currently occupy part of the grassy area adjacent to the parking lot. Airport personnel have reported that there normally is several Enterprise vehicles present in the lot on any given day. Consideration should be given to coordinating new contracts with the car rental companies.

According to the Airport Manager, the current parking is inadequate. Persons not utilizing the airport use the parking facility to store their vehicles. This lot has become a "park and ride" for local residents and vacationers as they are limited to allowable parking spaces at their homes or rentals. Consideration should be given to constructing additional parking facilities elsewhere to accommodate these vehicles. The airport could consider charging a fee to park in the airport lot. This may discourage others from using the lot for other than airport usage.

The entrance roads to the FBO's are in poor condition with potholes and cracked pavement. These areas also lack adequate drainage facilities.

7. Emergency, Security and Fire Equipment

The East Hampton Police Department is located on Industrial Road within airport property.

The Fire Rescue Building (Building Site 17) is located on the south side of the airfield and is operated by the East Hampton Fire Department. The East Hampton Fire Department is a volunteer fire department.

Security consists of locked gates and motorized gates. The fencing system consists of deer fencing, short chain link fences and wire fencing with wood posts. The airport lacks adequate security. A security camera system is currently being designed for placement at key area locations to be monitored by airport management.

8.Boundary's/Topography

East Hampton Airport is located approximately 3.4 miles west of the Village of East Hampton, in Suffolk County. The Airports elevation is 55.5 feet above mean sea level; its geographic location is latitude 40º57'12"North and longitude 72º15'37"W.

The airport currently consists of 610 acres based on tax map information. The Airport is owned and operated by the Town of East Hampton. Industrial Road and Daniels Hole Road are local roadways within the airport property. The airport is relatively flat with some higher elevations to the west and south.

9. Vegetation and Adjacent Land/Non-Contiguous Owned Parcels.

During the spring and summer of 1999, the Town of East Hampton Planning Department and volunteer Hugh McGinnis conducted a study of the vegetation and breeding birds at the Airport. The vegetation of the Airport is a patchwork comprised of a good variety of native prairie species, areas of roadside lawn species, and areas of heartland plants. These grow upon typical dry, sandy Pine Barrens soils which have been cleared, scraped, and seeded at various times since the Airport was first constructed.

A number of NYS protected plant species were identified on the property. These include Pine Barrens Sandwort (*Minuartia caroliniana*) in the central triangle area, Bird's Foot Violet (*Viola pedata*) at the western end of Runway 10-28 and at the Daniel's Hole Road end of Runway's 4-22 and 16-34, and a *Spiranthes* orchid in the area northwest of Runway 4-22.

There are two bird species at the Airport and they include Grasshopper Sparrows (*Ammodramus savannarum*) and the Eastern Bluebirds (*Sialia sialis*) which are both classified as species of special concern in New York State. The Grasshopper Sparrow is declining rapidly in the northeast.

According to the Town of East Hampton, management of airfields for native grassland flora and fauna has been successfully accomplished on a variety of private, public and military airfields by the Massachusetts Audubon Society and the US Fish and Wildlife. The small size and low direct flight of grassland birds do not pose a threat to aircraft and the management of grassland vegetation for these species can help to discourage the large flocking birds which are more likely to damage aircraft.

In most recent years the Airport contains mostly alien species and fewer native plants than the areas which were cleared at earlier times. This difference is quite dramatic in the areas which were cleared for the repaving of Runway 10-28 where it appears that the imported topsoil used in that project was full of alien seeds.

10. Annual Revenue Summary

Revenue to support the Airport is derived from leases, landing fees, vending machines, Jet Fuel and Avgas sales, interest on investments, cell tower and local taxes. This is currently being further evaluated in another study.

B. Historic and Existing Airport Uses

The Airport is comprised of a number of parcels obtained by indentures and quit claim deeds during the 1930’s and the 1940’s from Suffolk County and Arnold Porter. Essentially, the land for the East Hampton Airport was donated to the Town. The original three runway configuration of the Airport still exists, with the exception of a few modifications to the runway pavement and dimensional characteristics. For the past 70 years, the airport has adapted to industry modernization and accommodated many new generations of aircraft.

1. Volume and Distribution of Aircraft Traffic and Based Aircraft

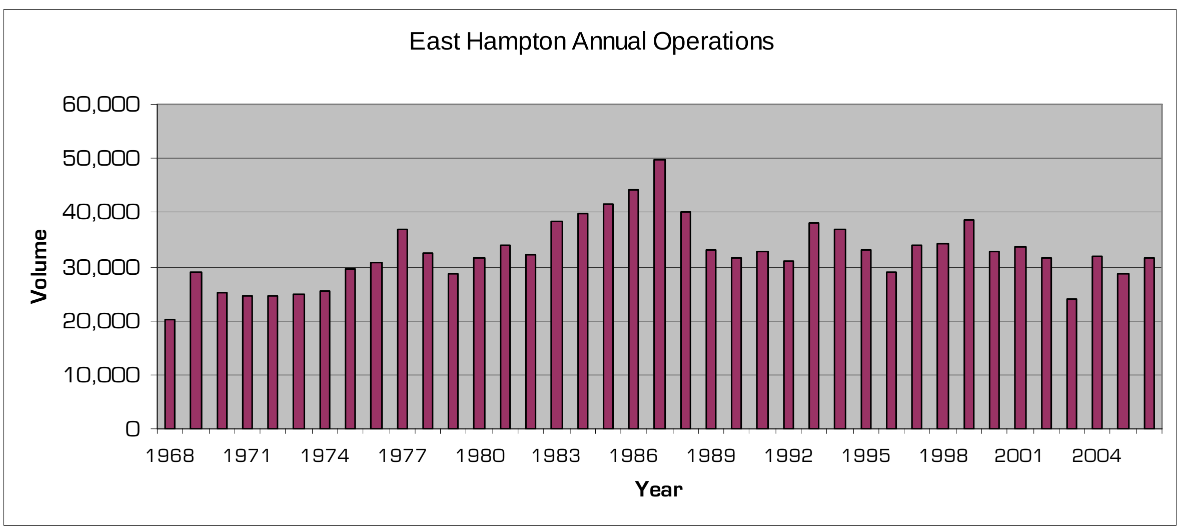
Aircraft operations consist of the total number of landings and takeoffs from an airport and can be classified as either local or itinerant. Local Operations consist of aircraft activity remaining within the Airport traffic pattern or within sight of the airport, aircraft departing to or arriving at a local practice area within a 20 nm radius, or aircraft executing simulated instrument approaches. Itinerant Operations are based aircraft (airport tenants) and transient aircraft (non-tenants), including air taxi and charter operations, flying in excess of 20 nm to or from East Hampton Airport.

Aircraft operations at East Hampton Airport have been difficult to document and track over the years since it is an uncontrolled airport, meaning there is no control tower located at the airport to record air traffic movements. Traditionally, the only method to track operations to and from an uncontrolled airport would be to use and interpolate data supplied by FAA reports or Airport Logbooks. However, in May of 2005, the Airport acquired a state-of-the-art, real-time flight tracking system known as AirScene. This system is used to provide an accurate count of operations and can monitor an aircraft’s location, flight path, and altitude as well as aircraft registration data, if available. This system was funded and installed by the Town of East Hampton and became fully operational in January 2006 due to some initial technical and operational difficulties. The data and information appear to be very reliable today.

Airport Logbooks

According to records provided by Airport management that date back to 1968, East Hampton experienced 28,616 annual aircraft operations during 2005. Over the most recent 10-year period between 1996 and 2005 (see Table I-6); annual operations have averaged 31,845 with a high of 38,636 in 1999 and a low of 24,138 in 2003. This low-point is significant in that, as with other general aviation airports in the region, operations have declined possibly due to rising aviation fuel prices and the increased cost of aircraft insurance. In fact, airport operations for 2005 at East Hampton Airport are still 10 percent below the previous year 2004. The following Figure I-3 and Table I-4, below show the annual operations totals over various years. It must be noted that the Airport Logbooks do not account for night operations. After-hours occurs when the Attendant's office is closed for the day and nobody is there to record aircraft movements.

FIGURE I-3
EAST HAMPTON AIRPORT TOTAL ANNUAL OPERATIONS (1968 – 2006)



Source: Airport Manager Records

TABLE I-4
ANNUAL AIRCRAFT OPERATIONS

YEAR	TOTAL OPERATIONS
1996	28,850
1997	33,966
1998	34,332
1999	38,636
2000	32,718
2001	33,784
2002	31,584
2003	24,138
2004	31,834
2005	28,616
2006	31,562

Source: Airport Manager Records

FAA Data

The Airport Master Record (FAA Form 5010-1) was also reviewed to obtain information on the FAA's estimation of the Airport's local and itinerant aircraft operations for 2005. This information is derived from FAA estimates. The interpolated FAA value for the total amount of operations from April 2004 to April 2005 (the FAA's inspection calendar year for East Hampton Airport) is 54,250 as underlined in red on Figure I-2 below.

FIGURE I-4
EAST HAMPTON AIRPORT MASTER RECORD

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 07/31/2006
AFD EFF 06/08/2006
Form Approved OMB 2120-0015

> 1 ASSOC CITY: EAST HAMPTON
> 2 AIRPORT NAME: EAST HAMPTON
3 CBD TO AIRPORT (NM): 03 W
4 STATE: NY
6 REGION/ADO: AEA/NYC
LOC ID: HTO
5 COUNTY: SUFFOLK NY
7 SECT AERO CHT: NEW YORK
FAA SITE NR: 15167.*A

GENERAL

10 OWNERSHIP: PU
> 11 OWNER: TOWN OF EAST HAMPTON
> 12 ADDRESS: 159 PANTIGO RD
EAST HAMPTON, NY 11937
> 13 PHONE NR: 631-324-4140
> 14 MANAGER: JIM BRANDIGE
> 15 ADDRESS: PO BOX 836
EAST HAMPTON, NY 11937
> 16 PHONE NR: 631-537-1130
> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0800-SS

18 AIRPORT USE: PUBLIC
19 ARPT LAT: 40-57-34.4800N ESTIMATED
20 ARPT LONG: 072-15-06.6620W
21 ARPT ELEV: 56 SURVEYED
22 ACREAGE: 570
> 23 RIGHT TRAFFIC: NO
> 24 NON-COMM LANDING: YES
25 NPIAS/FED AGREEMENTS: NGVY
> 26 FAR 139 INDEX:

SERVICES

> 70 FUEL: 100LL A
> 71 AIRFRAME RPRS: MAJOR
> 72 PWR PLANT RPRS: MAJOR
> 73 BOTTLE OXYGEN: NONE
> 74 BULK OXYGEN: NONE
75 TSNT STORAGE: HGR TIE
76 OTHER SERVICES: CHTR INSTR SALES

FACILITIES

> 80 ARPT BCN: CG
> 81 ARPT LGT SKED: DUSK-DAWN
> 82 UNICOM: 122.700
> 83 WIND INDICATOR: YES-L
84 SEGMENTED CIRCLE: YES
85 CONTROL TWR: NONE
86 FSS: NEW YORK
87 FSS ON ARPT: NO
88 FSS PHONE NR: 631-471-7181
89 TOLL FREE NR: 1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	100
91 MULTI ENG:	27
92 JET:	4
TOTAL:	131
93 HELICOPTERS:	1
94 GLIDERS:	
95 MILITARY:	
96 ULTRA-LIGHT:	

OPERATIONS

100 AIR CARRIER:	10,000
102 AIR TAXI:	11,200
103 G A LOCAL:	7,000
104 G A ITNRNT:	26,000
105 MILITARY:	50
TOTAL:	54,250
OPERATIONS FOR 12 MONTHS ENDING	04/05/2005

RUNWAY DATA				
> 30 RUNWAY IDENT:	04/22	10/28	16/34	
> 31 LENGTH:	2,501	4,255	2,223	
> 32 WIDTH:	100	100	75	
> 33 SURF TYPE-COND:	ASPH-P	ASPH-G	ASPH-F	
> 34 SURF TREATMENT:				
35 GROSS WT: SW	8	60	8	
36 (IN THSDS) DW				
37 DTW				
38 DDTW				
> 39 PCN:				
LIGHTING/APCH AIDS				
> 40 EDGE INTENSITY:		MED		
> 42 RWY MARK TYPE-COND:	BSC - G / BSC - G	NPI - F / NPI - F	BSC - G / BSC - G	- / -
> 43 VGSI:	/	P2L / P2R	/	/
44 THR CROSSING HGT:	/	55 /	/	/
45 VISUAL GLIDE ANGLE:	/	3.00 / 3.00	/	/
> 46 CNTRLN-TDZ:	N - N / N - N	N - N / N - N	N - N / N - N	- / -
> 47 RVR-RVV:	- N / - N	- N / - N	- N / - N	- / -
> 48 REIL:	N / N	Y / Y	N / N	/
> 49 APCH LIGHTS:	/	/	/	/
OBSTRUCTION DATA				
50 FAR 77 CATEGORY:	A(V) / A(V)	A(NP) / A(NP)	A(V) / A(V)	/
> 51 DISPLACED THR:	/ 380	/	57 / 106	/
> 52 CTLG OBSTN:	TREES / TREES	TREES / POLE	ROAD / TREES	/
> 53 OBSTN MARKED/LGTD:	/	/	/	/
> 54 HGT ABOVE RWY END:	37 / 43	36 / 36	16 / 10	/
> 55 DIST FROM RWY END:	241 / 214	1,427 / 355	220 / 234	/
> 56 CNTRLN OFFSET:	80R / 70L	70R / 257R	0B / 99L	/
57 OBSTN CLNC SLOPE:	1:1 / 0:1	34:1 / 4:1	1:1 / 3:1	/
58 CLOSE-IN OBSTN:	Y / Y	N / N	Y / N	/
DECLARED DISTANCES				
> 60 TAKE OFF RUN AVBL (TORA):	/	/	/	/
> 61 TAKE OFF DIST AVBL (TODA):	/	/	/	/
> 62 ACLT STOP DIST AVBL (ASDA):	/	/	/	/
> 63 LNDG DIST AVBL (LDA):	/	/	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 024	LNDG FEE FOR ALL TRANSIENT ACFT TO INCLUDE TOUCH AND GO OPERATIONS.
A 033	RWY 04/22 RY 04/22 CRACKED WITH VEGETATION GROWING THROUGH.
A 033	RWY 16/34 RY 16/34 CRACKED WITH VEGETATION GROWING THRU, STANDING WATER.
A 052	RWY 04 +45 FT TREES, 285 FT FM THLD BOTH SIDES CTRLN.
A 052	RWY 16 +4 FT FENCE 220 FM THLD BOTH SIDES CTRLN.
A 052	RWY 22 +36 FT TREES 327 FT FM THLD BOTH SIDES CTRLN.
A 052	RWY 28 +46 FT TREES 850 FT FM THLD BOTH SIDES CTRLN; +13 ROAD, 491 FT FM THLD, BOTH SDIES CTRLN.

111 INSPECTOR: (S) 112 LAST INSP: 04/05/2005 113 LAST INFO REQ:

Source: FAA Form 5010-1; http://www.5010web.com

Operations calculated up to April 2005 are highlighted in yellow. The operations are broken down by Air Carrier, Air Taxi, GA Local, GA Itinerant, and Military. Total annual operations are underlined in red.

AirScene

Since January 2006 to the present, AirScene data has used to supplement airport management records. The system has helped airport management to retain more accurate operational data; however, it is not used as a sole source of information due to some inconsistencies. AirScene does not account for aircraft that execute missed approaches or do not have the proper type of transponder. Essentially, AirScene data is used to supplement the information gather manually by airport employees.

Values derived from the different methods of calculating operations at East Hampton Airport appear to be inconsistent. The Airport's logbooks describe that for the year 2005, a total of 28,616 operations took place. The FAA (from 2004-2005) indicates a yearly total of 54,250. Airport logbooks supplemented by AirScene data indicate the 31,562 operations took place in 2006.

Given the apparent capabilities of the new AirScene equipment and accuracy of manual Airport Logbook entries, it might be safe to assume that FAA projected levels of activity have been overestimated by around 25,000 operations a year or nearly 90%. This number (54,250 annual operations) is also listed in the FAA's Terminal Area Forecast (TAF), which is the official forecast of aviation activity at FAA facilities. The TAFs primary function is to provide the FAA with specific forecasting data so it can develop its budget and planning needs for all FAA-funded airports around the country. However, this forecasted data is estimated based on historical information, industry trends, inferences regarding factors that effect passenger demand, etc. Much like the FAA Airport Master Record, it cannot represent an exact calculation of operations for an uncontrolled airport. FAA data is probably less accurate than the other methods since it is simply and estimation based on interpreted information. For instance, the Airport Master Records describes that there were 10,000 air carrier operations at the Airport despite the fact that East Hampton is not an air carrier airport. Conclusively, a safe method of estimating current activity at East Hampton Airport would be to assume that operations are at a level consistent with the Airport Logbook's and AirScene data reports, quantifiably somewhere in the 30,000 operations per year range.

Based Aircraft

A based aircraft is an aircraft that is stationed at an airport on a permanent basis. East Hampton Airport provides facilities in support of small to medium sized based general aviation aircraft. The majority of these are either small single engine or small multi-engine aircraft.

The number of based aircraft has remained stagnant over the last 15 years at East Hampton Airport. In fact, Airport records show that 99 aircraft were based at the Airport in 1992. The airport master record showed 100 in 2005. Today there are approximately 101 based aircraft. Of those, approximately 4 are helicopters, 5 jet aircraft, and 92 piston aircraft reported by Airport management. The actual number fluctuates slightly between seasons. Of the smaller piston aircraft approximately half of those are twin engine aircraft and half are single engine aircraft.

Surrounding Airports

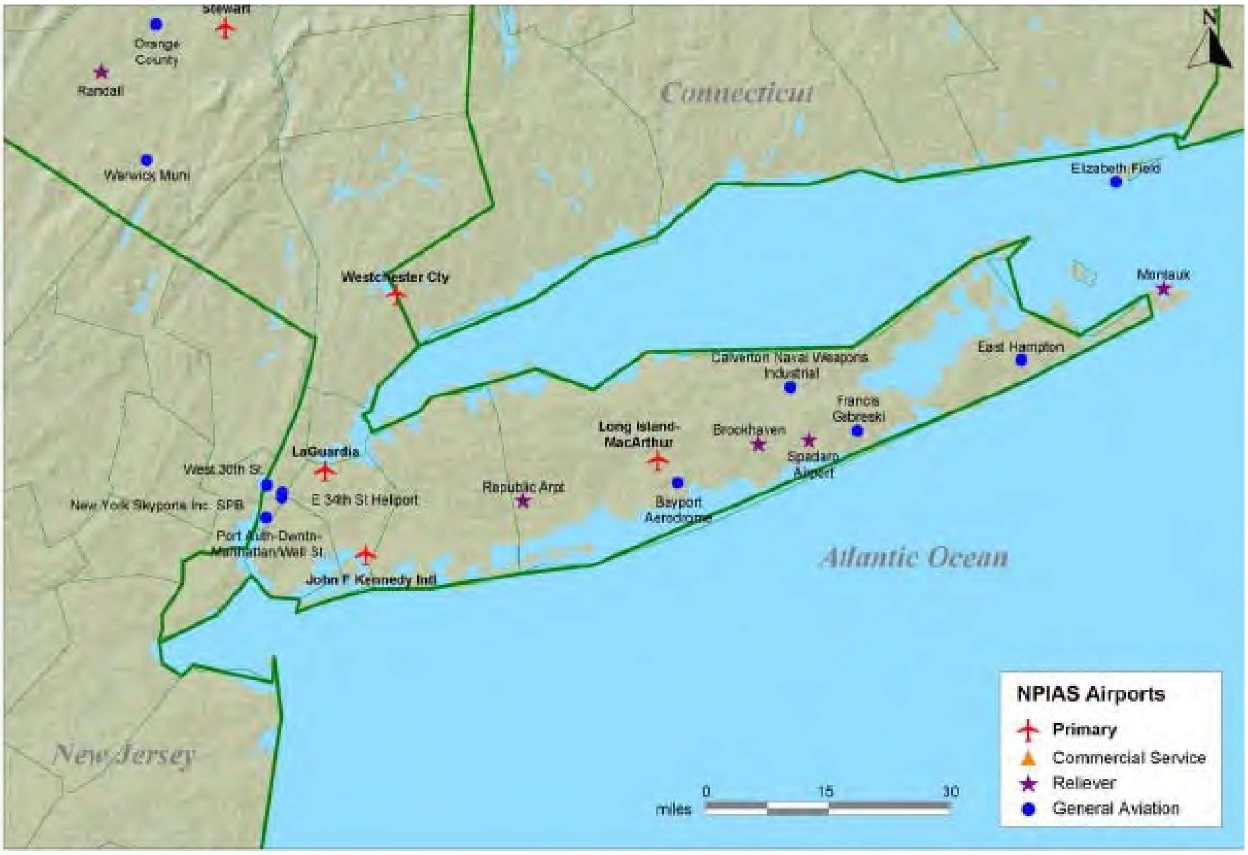
Currently, there are eight other public-use airports throughout Suffolk County. These facilities are privately owned or owned and operated by a municipality or town. In addition, there are three airports restricted for private use only. The public-use airports provide services ranging from aircraft fueling to commercial passenger service. Gabreski and Montauk Airports are within East Hampton's Primary Service Area, which is defined as those points within an approximate 30-minute drive from East Hampton Airport. Due to such close proximity, Airports located in the Primary Service Area have the potential to operationally impact one another. Table I-5 and Figure I-5 on the next page provide basic information and locations for each of these surrounding airports.

TABLE I-5
OTHER AIRPORT FACILITIES IN SUFFOLK COUNTY

AIRPORT NAME	LONGEST RUNWAY	LIGHTING	APPROACH PROCEDURE	FBO SERVICES	OTHER ITEMS
East Hampton Airport	4255' X 100'	MIRL	Yes	Yes	PAPIs, REILs, Wind Indicator
Francis S. Gabreski (Westhampton)	9,000' X 150'	HIRL	Yes	Yes	ATCT, PAPIs, REILs
Republic	6,827' X150'	HIRL	Yes	Yes	ATCT, PAPIs REILs
Long Island. MacArthur	7,002' X 150'	HIRL	Yes	Yes	ATCT, PAPIs REILs, VASI
Spadaro	2,200' X 20'	None	No	Yes	Wind Indicator
Montauk	3,258' X 85'	MIRL	Yes	No	Wind Indicator, PAPI
Bayport	2,740' X 75' (Turf)	None	No	Yes	Wind Indicator, VASI
Mattituck	2,200' X 60'	None	No	Yes	Wind Indicator
Brookhaven	4,224' X 150'	MIRL	Yes	Yes	VASIs, REILs

Source: FAA Form 5010-1; http://www.5010web.com

FIGURE I-5
LOCAL AIRPORTS INCLUDED IN NPIAS



Source: National Plan of Integrated Airport Systems; http://www.faa.gov

The based aircraft totals for the surrounding airports were also obtained from the FAA Airport Master Record previously shown in Figure I-4 and are shown below in Table I-6:

TABLE I-6
BASED AIRCRAFT AT SUFFOLK COUNTY AIRPORTS

AIRPORT	TOTAL	SINGLE ENGINE	MULTI-ENGINE	JET	ROTOR	MILITARY	GLIDERS
Republic	**537**	394	87	33	23	-	-
Long Island. MacArthur	**254**	157	23	45	21	8	-
Brookhaven	**217**	200	10	-	-	-	7
East Hampton	**101**	62	30	5	4	-	-
Francis S. Gabreski	**100**	68	14	3	2	11	2
Bayport	**61**	61	-	-	-	-	-
Spadaro	**35**	35	-	-	-	-	-
Montauk	**30**	25	5	-	-	-	-
Mattituck	**28**	28	-	-	-	-	-
TOTAL	**1,363**	**1,030**	**169**	**86**	**50**	**19**	**9**

Source: FAA Form 5010-1; East Hampton Airport Management Records

East Hampton Airport falls within the normal range in terms of based aircraft for airports offering similar services and facilities. Francis S. Gabreski Airport, located roughly 25 miles from East Hampton Airport bares the closest resemblance, as outlined in red in the table above. Both are classified by the FAA as General Aviation Airports, offer nearly the same services and accommodations, and experience comparable seasonal traffic fluctuations further described below.

2. Seasonal Traffic Variations

East Hampton Airport has two distinct seasonal demand characteristics: during the summer season (usually defined as Memorial Day to Labor Day), itinerant aircraft are clearly the largest user group on the Airport. During the rest of the year, local operations make up a much larger component of overall operations.

East Hampton Airport's status as a non-towered facility again requires that estimates based on historic records maintained by the airport are used to determine these peaking characteristics. As such, information samples were obtained from the Airport's operational logs and were augmented by discussions with Airport Management. As expected, peak-month operations are conducted during the summer months from May through September with August typically being the busiest. Monthly operations decrease during the winter months. Table I-7 presents a comparison and breakdown of the peak season, summer months at East Hampton Airport for years 2005 and 2006.

TABLE I-7
SUMMER PEAKS (2005 VS. 2006)

OPERATIONS	JUN			JULY			AUG		
	2005	2006	% Chg.	2005	2006	% Chg.	2005	2006	% Chg
Jet	790	330	(58.2)	850	707	(16.8)	410	850	107.3
Rotor	1,222	761	(37.7)	976	1,326	35.9	804	1,449	80.2
SEME	3,154	1,688	(46.5)	2,780	3,257	17.2	2,170	4,020	85.3
Other AirScene	-	305	-	-	331	-	-	532	
Totals	5,634	3084	(45.3)	4,883	5621	15.1	3,637	6851	88.4
Touch & Go's	468	176	(62.4)	277	375	35.4	253	414	63.6

Source: East Hampton Airport Management Records

i. Peak Hour, Day, Weekend, Month

Generally accepted aviation planning practices typically calculate the peak-month as 10 percent of the yearly total. However, East Hampton's unique seasonal demand characteristics drive the peak-month up to nearly 22 percent. The average-day of the peak-month is simply the peak-month divided by 30 or 31 days (depending on the month). Airport management has conveyed that is presumable to account for an additional 20% of operations, which take place at night when the office is unmanned and unable to count operations. The peak-hour is generally seen as 12 percent of the average-day of the peak-month. The results of these concepts are outlined in Table I-8 as follows:

TABLE I-8
PEAKING CHARACTERISTICS

TIME FRAME	OPERATIONS
Peak Month (August)	6,851
Average Day/Peak Month	221
Average Day Plus Night (+20%)	265
Peak Hour	32 (1 op. every 1 min. 52 seconds)

Source: DY Consultants

Forecasts

East Hampton Airport, as previously discussed, provides services to the customers based at the Airport and to itinerant general aviation and charter aircraft. However, the based aircraft are the primary patron and user of the Airport's facilities and are, therefore, an excellent indicator of the potential customers that will utilize the Airport's facilities in the future. In short, based aircraft can help predict what the future demands of the airport will be. This is known as forecasting. It should be noted that due to the wide variability of forecasting, East Hampton will not consider this analysis as a major part in assessing future airport planning efforts.

To begin the forecasting effort, data was collected and analyzed from four sources to identify possible trends in based aircraft at the Airport:

(1) Federal Aviation Administration (FAA) Form 5010-1, which indicates the estimated number of based aircraft, number of annual operations, and aircraft mix at the Airport for a specific year;

(2) Forecasts from the previous Master Plan (1989);

(3) The FAA's Terminal Area Forecast (Years 2006 – 2025); and (4) the New York State Aviation System Plan (1998).

Given the age of some of these documents, the only common analysis year is 2012. As such, Table I-9 presents a comparison of the based aircraft forecasting data collected from various sources for the year 2012:

TABLE I-9
FORECAST COMPARISON

PLANNING DOCUMENT	FORECAST (2012)
FAA Form 5010-1	129
FAA Terminal Area Forecast	129
New York State Aviation System Plan (1998)	132
Master Plan Update (1989)	173

Source: As noted

Based on FAA Form 5010-1 Airport Master Records and Table I-6 "Based Aircraft at Suffolk County Airports" it can be determined that East Hampton Airport currently accommodates approximately 7.4 percent of the based aircraft located within Suffolk County. Furthermore, the Airport maintains over 43 percent the total based aircraft located at the "East End Airports," specifically Westhampton, East Hampton and Montauk Airports. At the county level, review of the 2005 FAA Aircraft Registry Database indicates that 940 aircraft are registered in Suffolk County and 475 in Nassau County (included since there are no airports located in this county). Unfortunately, the absence of historical FAA records regarding county registered aircraft but precludes the use of this data for forecasting purposes; but does present an accurate representation of the current presence of general aviation on Long Island.

The methodology employed for this study takes the most recent based aircraft data set (2006) and applies the FAA growth rates anticipated for the industry to each individual category, which are then combined to arrive at the Airport's total forecast of based aircraft through the year 2026. A 20-year planning scenario is typical to provide any visible change in aviation demand. While the FAA forecasts only cover the years through 2017, an assumption was made that change adjustment rates will continue through 2025. There appears to be only a slight increase in forecasted based aircraft using this method.

Table I-10 presents the growth rates for the various general aviation aircraft categories and Table I-11 presents the based aircraft forecast for East Hampton:

TABLE I-10
FAA GROWTH RATES BY AIRCRAFT CATEGORY

AIRCRAFT CATEGORY	PREDICTED ANNUAL GROWTH RATE (%)
Single Engine	0.3
Multi-Engine	0.1
Jets	6.0
Helicopters	2.7

Source: FAA Aerospace Forecasts 2006-2017

TABLE I-11
EAST HAMPTON AIRPORT GENERAL AVIATION BASED AIRCRAFT FORECAST

YEAR	TOTAL	SINGLE ENGINE	MULTI-ENGINE	JET	HELICOPTERS
1992	99	-	-	-	-
2005	101	62	30	5	4
2006	101	62	30	5	4
2007	102	62	30	6	4
2008	103	63	30	6	4
2009	104	63	30	7	4
2010	105	63	30	7	5
2011	105	63	30	7	5
2012	106	63	30	8	5
2013	107	64	30	8	5
2014	107	64	30	8	5
2015	108	64	30	9	5
2016	109	64	30	10	5
2017	110	64	30	10	6
2018	111	64	30	11	6
2019	112	65	30	11	6
2020	113	65	30	12	6
2021	114	65	30	13	6
2022	116	65	31	14	6
2023	117	65	31	14	7
2024	118	65	31	15	7
2025	120	66	31	16	7

Source: DY Consultants

Customarily, a ratio of operations to based aircraft should be established to develop airport activity forecasts at general aviation airports. This ratio is calculated by analyzing historical aircraft operations data if available, and dividing the annual operations for a given year by the number of known based aircraft for the same year. This ratio is applied to forecasted based aircraft volumes to determine forecasted annual operations.

While historical data exists for East Hampton's annual operations, the corresponding based aircraft data is unavailable except for the planning assumption that based aircraft totals have remained stagnant since 1992 at approximately 100 aircraft. Based on that assumption, Table I-12 presents the operations per based aircraft over the last 14 years.

TABLE I-12
OPERATIONS PER BASED AIRCRAFT

YEAR	ANNUAL OPERATIONS	BASED AIRCRAFT	OPERATIONS PER BASED AIRCRAFT
1992	31,167	99	315
1993	37,964	100	380
1994	36,830	100	368
1995	33,212	100	332
1996	28,850	100	289
1997	33,966	100	340
1998	34,332	100	344
1999	38,636	100	387
2000	32,718	100	327
2001	33,784	100	338
2002	31,584	100	316
2003	24,138	100	241
2004	31,834	100	318
2005	28,616	101	283
2006	31,562	101	313

Source: DY Consultants

Fluctuations in the volume of operations per based aircraft can be generally attributed to weather conditions, increase aircraft operating costs, construction, or the inconsistencies in the flight school and charter/air taxi markets. Based on the information contained in Table 12, annual operations per based aircraft have averaged approximately 326 since 1992 and 300 since 2001. Given the uncertainty of recent general aviation trends, it will be conservatively estimated that East Hampton's operations per based aircraft total will equal 313 (the average between the two results) for forecasted years. I turns out that 313 operations per based aircraft per year is what was estimated for last year (2006). This is considered the ratio or predictor of based aircraft to operations.

It is then applied to the forecast period. Table I-13 illustrates the predicted annual aircraft operations until the year 2025.

TABLE I-13
ANNUAL AIRCRAFT OPERATIONS FORECAST USING RATIO

FORECAST					
ITEM	**2006**	**2010**	**2015**	**2020**	**2025**
Based Aircraft (Airport Records)	101	105	108	113	120
Based Aircraft Operations Ratio	313 (from table 12)	313	313	313	313
Total Annual Operations	31,613	32,865	33,804	35,369	37,560

Source: DY Consultants

Projected annual operations obtained using the based aircraft predictor can be analyzed further to estimate the proportion of based aircraft to itinerant aircraft. Table I-14 presents the monthly operations reports for 2006. It is broken down into how many and of what percentage based versus itinerant aircraft account for the total, with the help of the Airport operational logs.

TABLE I-14
LOCAL & ITINERANT OPERATIONS (2006)

Month:	Total	Local	%Total	Transient	%Total
January	**942**	482	51	460	49
February	**815**	435	53	380	47
March	**1029**	483	47	546	53
April	**1192**	402	38	790	62
May	**1882**	1004	53	878	47
June	**2779**	1070	39	1709	61
July	**5290**	1543	29	3747	71
August	**6319**	1950	31	4369	69
September	**3123**	1461	47	1662	53
October	**1887**	917	49	970	51
November	**1520**	841	55	679	45
December	**1662**	1400	84	262	16
Total	**28,440**	11988	42	16452	58

Source: Airport Records

During the summer season itinerant aircraft are predominantly the largest user group on the Airport. As the above data indicates, during the "off season," local operations make up a slightly larger component of the overall operation. The year was broken down into quarters and the middle month of each quarter was selected for review. Table I-15 shows that August's itinerant operations equaled 69 percent of total operations.

TABLE I-15
LOCAL & ITINERANT OPERATIONS (2006)

MONTH	LOCAL	%	TRANSIENT	%	TOTAL
February	435	53	380	47	815
May	1004	53	878	47	1882
August	1950	31	4369	69	6319
November	841	55	679	45	1,520

Source: Airport Management Records

The Airport Master Record (FAA Form 5010-1) data was also reviewed to obtain FAA information on local and itinerant aircraft operations. East Hampton's percentage breakdown of GA local/itinerant operations was estimated at 21/79, respectively. This does not reflect the Airports Records annual average. Given the accuracy of data supplemented by AirScene, it should again be safe to assume that the levels that the FAA estimates are higher than what is occurring at East Hampton Airport. Again, the *average* operational composition calculated in Table I-15 was mean value of 52 percent itinerant and 48 percent local. The estimated breakdown is demonstrated in Table I-16 below:

TABLE I-16
RATIO BETWEEN BASED AND ITINERANT AIRCRAFT

FORECAST					
ITEM	**2006**	**2010**	**2015**	**2020**	**2025**
Total Annual Operations	31,562	32,865	33,804	35,369	37,560
Total Itinerant Operations (52%)	16,412	17,090	17,578	18,392	19,531
Total Local Operations (48%)	15,150	15,775	16,226	16,977	18,029

Source: DY Consultants

Fleet Mix

An aircraft fleet mix is defined as the physical characteristics of a population of aircraft. Aircraft can be fixed wing or rotorcraft, be large (more than 12,500 lbs) or small (12,500 lbs or less) and have one or more engines and/or types. The aircraft mix and operations forecast is generated again by analyzing recent based aircraft mix trends. This information is used to determine the ratio used to project future based aircraft mix and operations. For the purposes of this analysis, it was assumed that the current 2006 fleet mix percentages would be applied to each of the forecast years. The unknown AirScene totals were carried over from year to year.

Table I-17 presents the aircraft mix for East Hampton Airport.

TABLE I-17
AIRCRAFT MIX

FORECAST					
ITEM	**2006**	**2010**	**2015**	**2020**	**2025**
Based Aircraft Mix					
Single Engine	62	63	64	65	66
Multi Engine	30	30	30	30	31
Jet	5	7	9	12	16
Rotor	4	5	5	6	7
TOTAL BASED AIRCRAFT	**101**	**105**	**108**	**113**	**120**
Annual Aircraft Operations					
Single Engine	16,059	16,317	16,576	16,835	17,094
Multi Engine	3,176	3,176	3,176	3,176	3,176
Jet	3,158	4,424	5,688	7,584	10,112
Rotor	5,787	6,573	6,761	7,074	7,512
Other AirScene	3,382	3,382	3,382	3,382	3,382
TOTAL ANNUAL OPERATIONS	**31,562**	**33,821**	**35,583**	**38,051**	**41,276**

Source: DY Consultants

Further discussion of aircraft fleet mix at East Hampton Airport will occur later in this study.

3. Airport Traffic Pattern

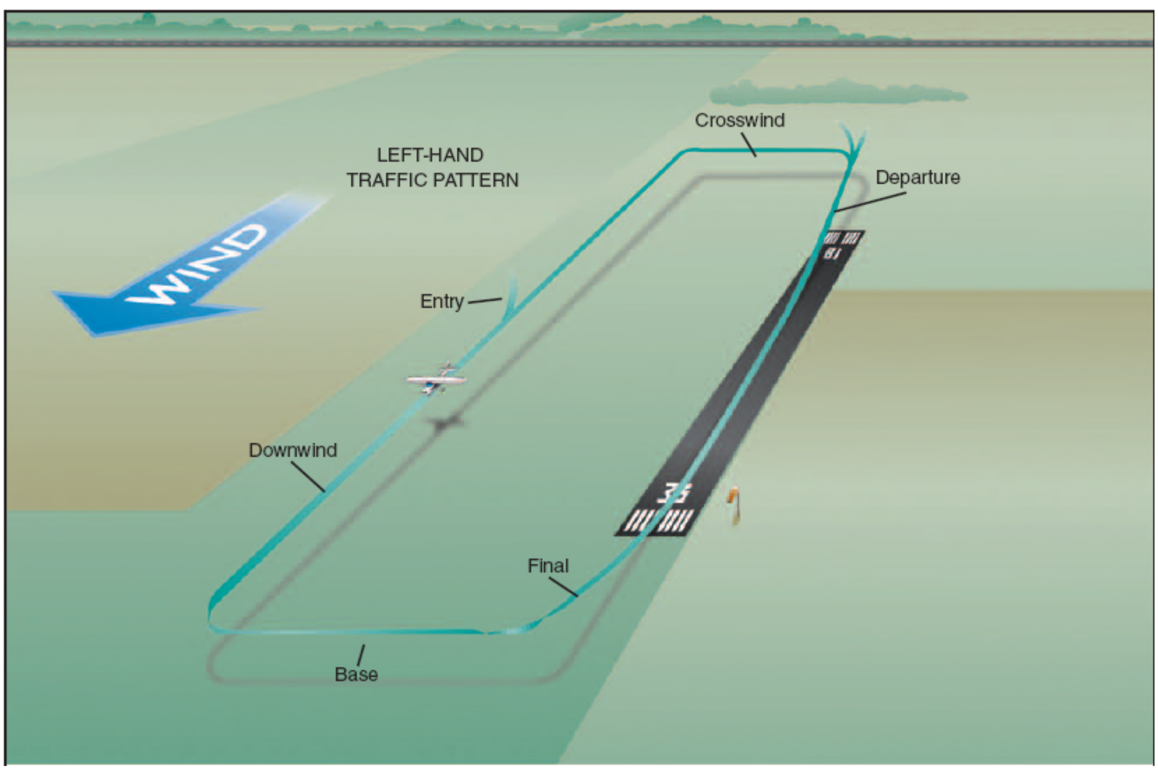
To maximize safety and standardize visual approaches to airports, the FAA prescribes certain standards for airport traffic patterns in the Aeronautical Information Manual (AIM). The AIM is further supplemented for pilots by the "Airplane Flying Handbook," FAA Publication FAA-H-8083-3A. The purpose of the airport traffic pattern is to provide a standard for entry into and operation in the airport environment for landing aircraft and aircraft performing touch and go's. This term does not typically apply to helicopters due to their unique operating characteristics. The standard altitude for flight in the pattern is 1,000 ft. above airport elevation for piston aircraft and 1,500 ft. for jets, unless established otherwise. The typical area over which the traffic pattern is flown is ½ mi. to 1 mi. lateral distance from the airport. The FAA recommends left hand traffic patterns, meaning all turns made by aircraft are to the left, at non-towered airport. However, for reasons of noise mitigation, environmental benefit, or obstruction avoidance; right hand traffic patterns are endorsed in specific cases. The standard pattern is essentially a rectangle flown around the airport and is comprised of different operating segments or phases. See Figure I-6 below. Its specific size and shape are largely dependent on several factors including:

1. Aircraft Performance Characteristics: Slower aircraft, typically single and twin piston engine aircraft will fly a smaller and lower pattern than faster jet aircraft.

2. Other Traffic: At uncontrolled airports, pilots are responsible for avoiding other aircraft. A pilot may have to lengthen or shorten a segment of the pattern to adjust for conflicting traffic entering the pattern, departures from the airport, or other landing aircraft.

3. Airport Specific Procedures: For specific safety reasons or other unique characteristics an Airport may alter the traffic pattern and publish the procedures in the Airport Facility Directory (AFD).

FIGURE I-6
STANDARD AIRPORT TRAFFIC PATTERN



Source: Airplane Flying Handbook/ FAA Publication FAA-H-8083-3A

The standard segments of the Airport Traffic Pattern are:

1. Upwind leg- A flight path parallel to the landing runway in the direction of landing. The upwind leg is essentially the same as the departure leg, but is generally attributed to aircraft that stay in the Traffic Pattern during Touch and Go's. The upwind leg is typically flown along an imaginary extended runway centerline up to a point that is 300 ft. below the standard Traffic Pattern Altitude (TPA). Depending on the performance characteristics of the aircraft, this is normally achieved by 1/2mi. to 1 mi. from the departure end of the runway.

2. Crosswind leg- A flight path at right angles to the landing runway off its takeoff end. Turns to the crosswind leg are made from upwind leg and are usually executed by a pilot who wants to remain in the traffic pattern. The crosswind leg is flown until the aircraft reaches TPA and an appropriate lateral distance from the runway.

3. Downwind leg- A flight path parallel to the landing runway in the opposite direction of landing. This leg is flown at standard TPA. The downwind leg is usually flown at a 1/2 mi. to 1 mi. of lateral distance from the landing runway. Once abeam the threshold a descent is initiated and continued until angle 45 degrees from that point is achieved. For itinerant aircraft, the downwind leg is the recommended location of entry into the airport traffic pattern. These aircraft normally join the pattern at TPA at the mid-point of and 45 degree angle to the downwind leg.

4. Base leg- A flight path at right angles to the landing runway off its approach end and extending from the downwind leg to the intersection of the extended runway centerline. Depending on the performance characteristics of the aircraft flying the pattern, the normal distance away from the airport is between ½ mi. and 1 mi. The descent for landing is normally continued during this leg.

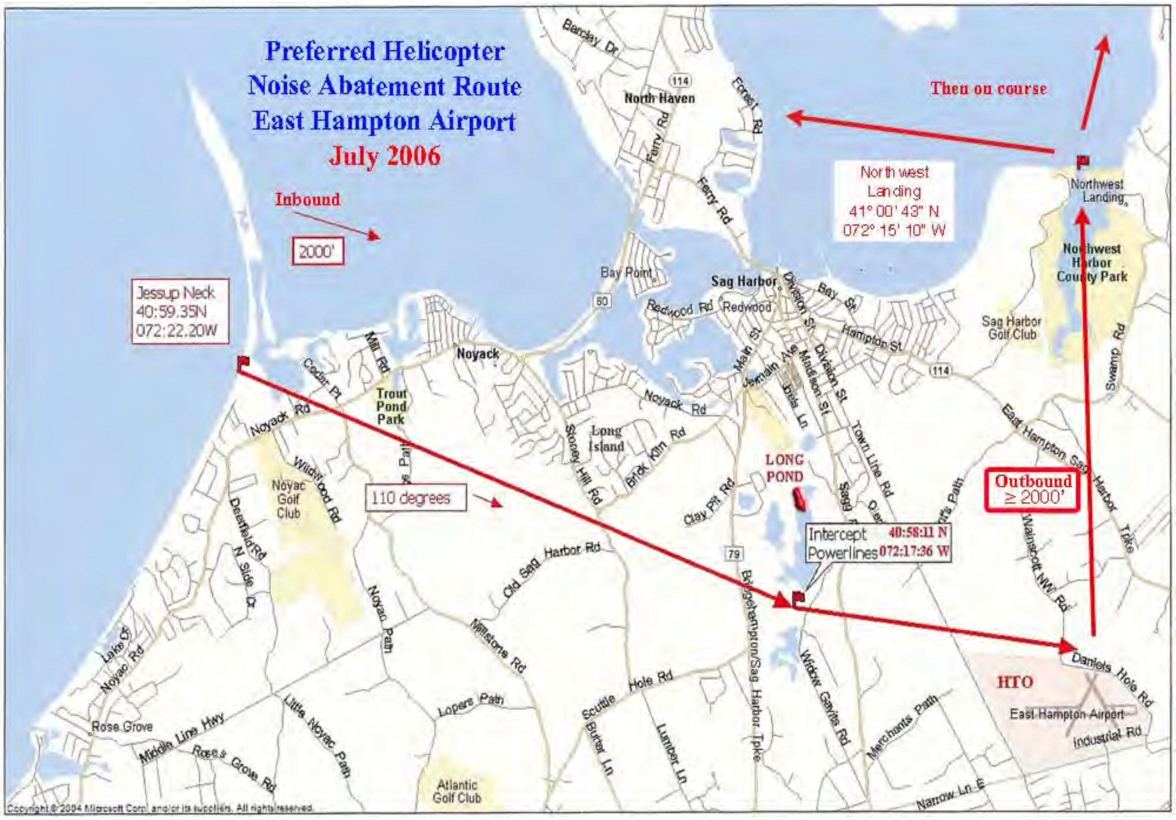
5. Final approach- A flight path in the direction of landing along the extended runway centerline from the base leg to the runway. The pilot aligns the aircraft with the runway and normally begins 3 degree stabilized approach to landing aided by the airport visual aids (described in later sections).

6. Departure leg- The flight path which begins after takeoff and continues straight ahead along the extended runway centerline. The departure climb continues until reaching a point at least $^1/_2$ mile beyond the departure end of the runway and within 300 feet of the traffic pattern altitude. Aircraft will typically depart the area in accordance with noise abatement procedures recommended by the Airport and continue on the route to their intended destination.

Patterns Specific to East Hampton Airport

Currently, all patterns flown for Runways 4-22, 16-34, and 10-28 are published and generally expected to be executed as left hand turns. The TPA recommended by the Airport is the standard 1000 ft. above ground level. The TPA information is published in addition to frequencies, preferred noise abatement routes, and requested helicopter entry and exit routes in a variety information documents available to pilots. Also, information can be distributed locally to pilots. East Hampton Airport promotes a preferred helicopter arrival and departure path. As previously stated, the conventional airport traffic pattern is primarily for fixed-wing traffic (airplanes). Helicopters normally rely on instructions from an Air Traffic Control Tower or locally accepted and supported routes. Handouts such as the one used at East Hampton are a popular method for distributing preferred helicopter routes. The following figure is the preferred helicopter route at East Hampton Airport.

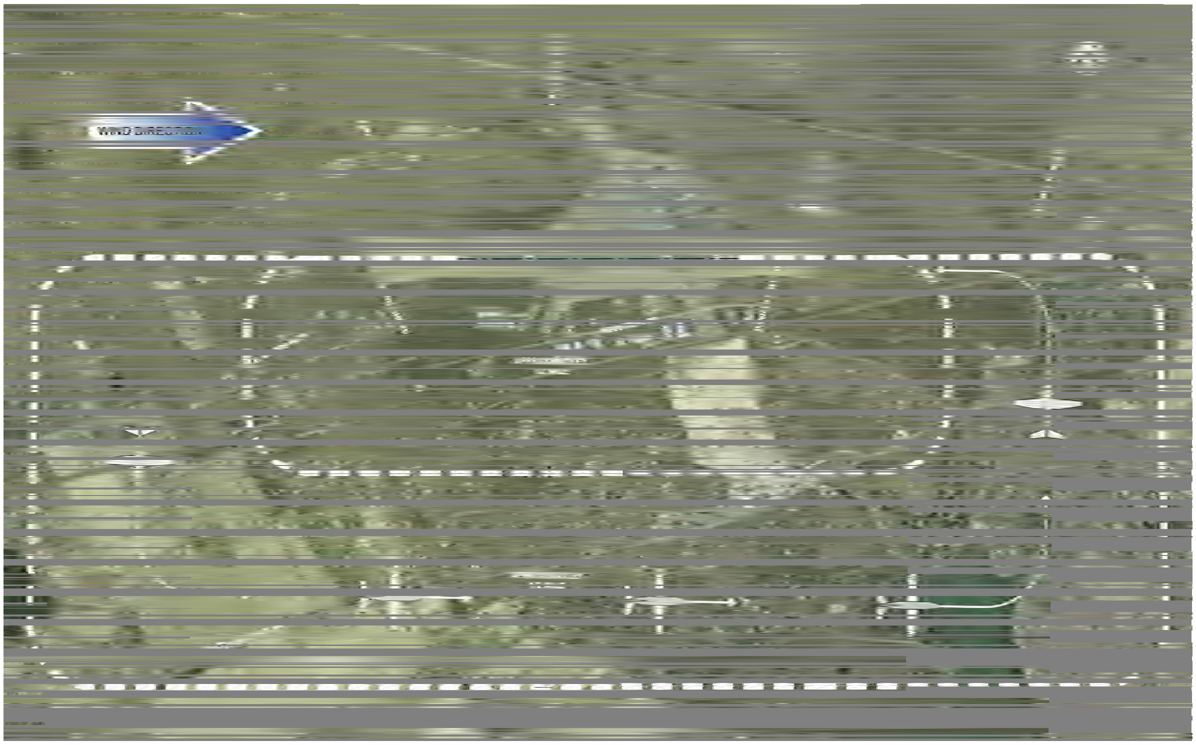
FIGURE I-7
EAST HAMPTON AIRPORT: LOCAL PROCEDURES AND INFORMATION HANDOUT



Source: East Hampton Airport Management

The next figure shows the standard airport traffic pattern transposed onto an aerial photograph of East Hampton Airport. Runway 28 appears to be the favored runway in terms of movements based on discussion with the Airport and was chosen as the landing runway for the diagram to demonstrate the most common operational scenario. The dashed line closest to the airfield represents a traffic pattern flown by smaller, slower, aircraft at a half mile of lateral distance from the airport. The outer dashed line delineates the traffic pattern typically flown by larger, faster jet aircraft at the recommended 1 mi. lateral distance limit. The area in between these two paths is hashed to demonstrate the whole area of land that will fall underneath the typical traffic pattern.

FIGURE I-8
AREA COVERED BY STANDARD TRAFFIC PATTERN FOR RUNWAY 28



Source: DY Consultants/Graphic by Google Earth

The next figure presents a three dimensional depiction of the standard left hand traffic pattern for Runway 10-28 at a half mile lateral distance. Typical aircraft altitudes are shown for each segment of flight.

FIGURE I-9
STANDARD TRAFFIC PATTERN AND ALTITUDES FOR RUNWAY 10-28

Source: DY Consultants/Graphic by Google Earth

Figure I-10 below shows the recommended helicopter overlaid on an aerial photograph of the area. This route was previously determined by the Airport to have the greatest benefit to its noise abatement program. Helicopter traffic predominantly comes from Manhattan or other areas west of the Airport. Both arriving and departing helicopters are recommended to fly specific route at specific altitudes. The inbound aircraft are taken along the northern shore of Long Island and then proceed on a south-easterly heading of 110˚ to the Airport at an altitude of 2,055 feet. Outbound helicopter traffic proceed on the northerly heading at an altitude of 2,055 ft. until to intercepting the northern shore of Long Island, where they can proceed on course to their destination.

FIGURE I-10

RECOMMENDED HELICOPTER ARRIVAL/DEPARTURE

Source: East Hampton Airport Handouts/Graphic by Google Earth

Visual Aids/Final Approach

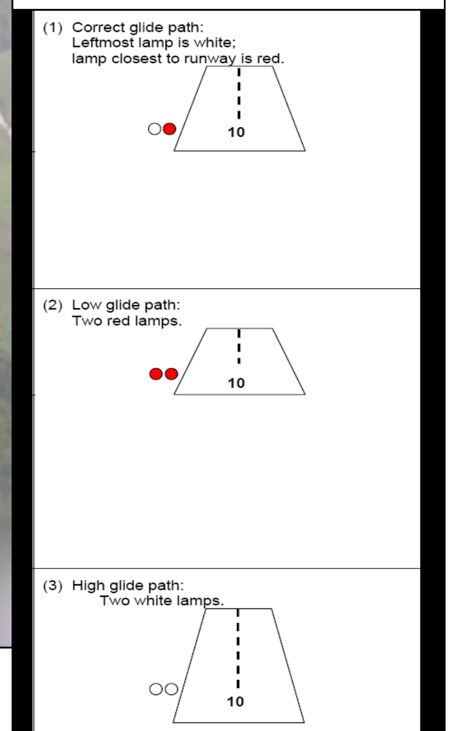
Many airports have a variety of Visual Aids (or simply VISAIDs) to assist pilots in making a safe and controlled visual approach to the airport. One type of VISAID is the Visual Glide Slope Indicator (VGSI), of which there are many kinds. The type that East Hampton Airport provides on both ends of its main Runway 10-28 is the Precision Approach Path Indicator (PAPI). The PAPI system provides approach slope information by supplying visual cues to the pilot on final approach to land at the airport. It has an effective visual range of about 5 miles during the day and up to 20 miles at night. The system operates by providing a definite white and red light projection pattern along the desired descent path up until the point of touchdown on the runway. The PAPI system at East Hampton Airport is a 2 box configuration and consists of single horizontal bar with two sharp transition multi-lamp units, referred to as lamp housing assemblies (LHAs). The LHAs are located on a line perpendicular to the runway centerline, at a distance from the runway threshold chosen to provide the proper height for an aircraft to cross the threshold of the runway and safely execute a landing.

Each LHA projects a split beam of light, the upper segment being white and the lower segment being red. The transition from white to red or vice versa occurs within a vertical angle of 5 minutes of arc at the beam center and results in a well-defined corridor of light consisting of white (top) and red (bottom) beams.

FIGURE I-11
THE PILOT'S VIEW OF THE PAPI ON FINAL APPROACH

rce: www.islagrandeflying.com

FIGURE I-12: VISUAL CUES



Source: Aeronautical Information Manual

The standard Glide Path Angle (GPA) is 3 degrees, meaning an aircraft descends at a slope of 3 degrees along the final approach until landing. FAA standards provide a tolerance for an increase in the GPA up to 4 degrees for non-jet runways. The PAPI equipment must be sited and aimed so that it defines an approach path with adequate clearance over obstacles and a minimum threshold crossing height. East Hampton Airport's PAPI GPAs are 3 degrees for both runways.

Approaches

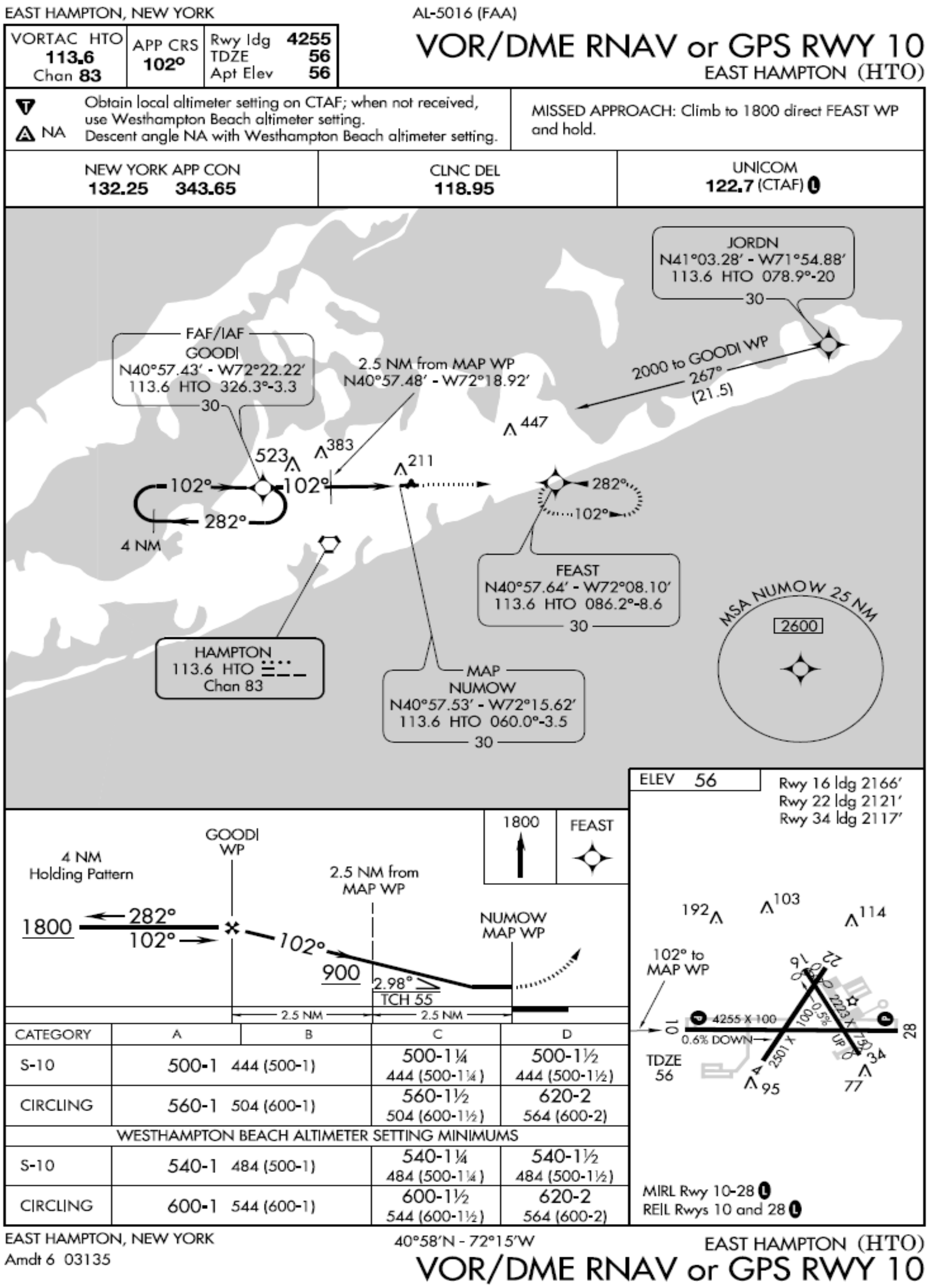
The method of aircraft flight is largely determined by weather. The FAA has divided and assigned certain criteria to good weather and fair weather. These two separate categories mandate different rules of flight. They are described as follows:

> VFR (Visual Flight Rules): Applies in meteorological conditions where the reported cloud ceiling is 1000 ft. and visibility is 3 miles or more.
>
> IFR (Instrument Flight Rules): Applies in conditions where the reported ceiling is less than 1,000 ft. and visibilities are less than 3 mi.

During VFR conditions, the standard airport traffic pattern described above is used. There are special "Instrument Approach Procedures" that must be followed when IFR conditions prevail. Additionally, aircraft operating during these conditions are under constant control of Air Traffic Control and operate under an IFR Flight Plan. The purpose of the instrument approach is to bring a pilot to a point where they are on a stabilized approach course that is aligned with the runway and can maneuver to land by use of navigational aids and flight instruments. Therefore, the approach patterns will be much different during IFR conditions compared to the traffic pattern during VFR conditions. It must also be noted that many operators, particularly of large jet aircraft, only operate under IFR flights plans even in VFR weather conditions. Therefore, the instrument approaches at an airport may be more frequently used than expected.

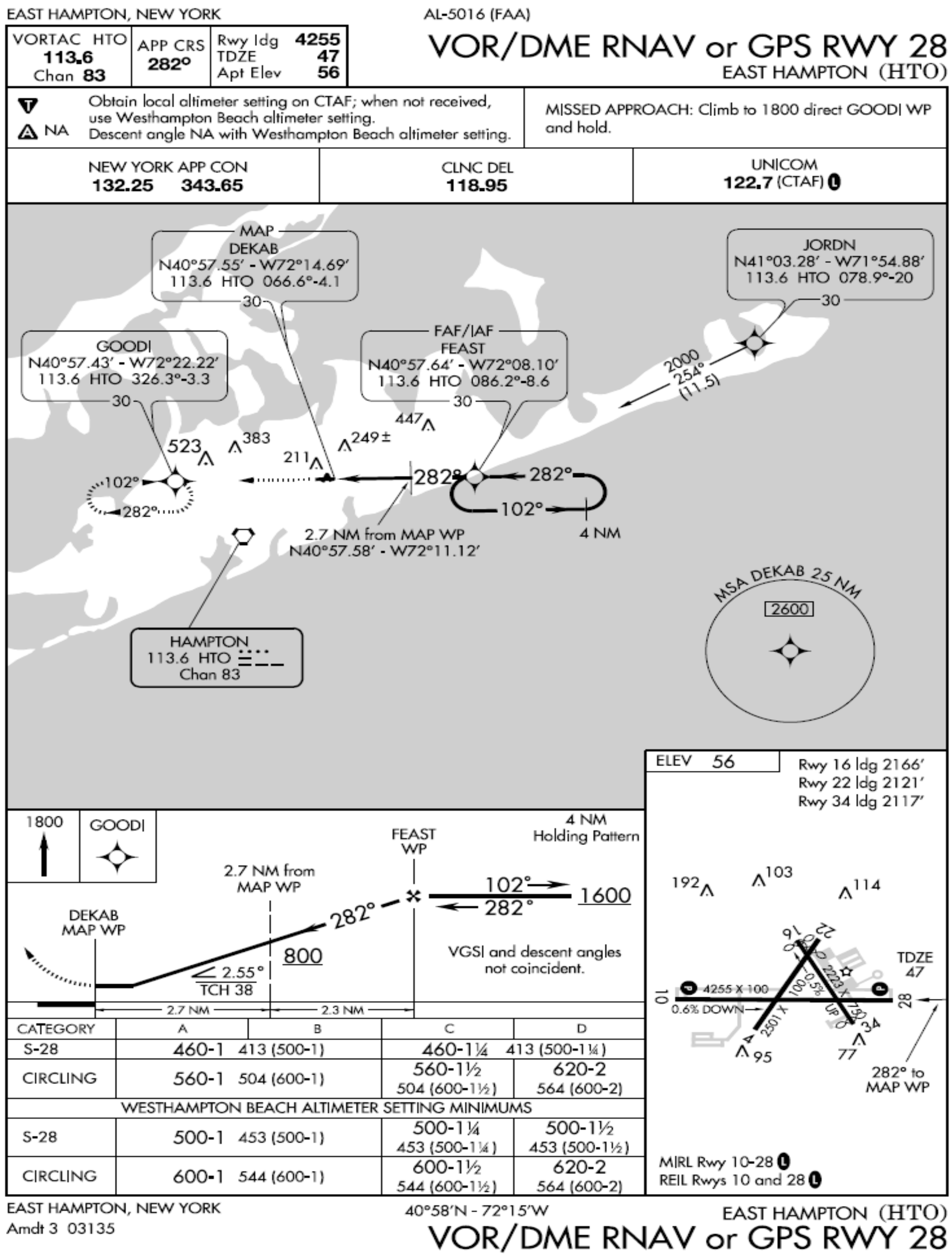
East Hampton Airport has three separate approaches published. See Figures I-13, I-14, and I-15.

FIGURE I-13
APPROACH PROCEDURE



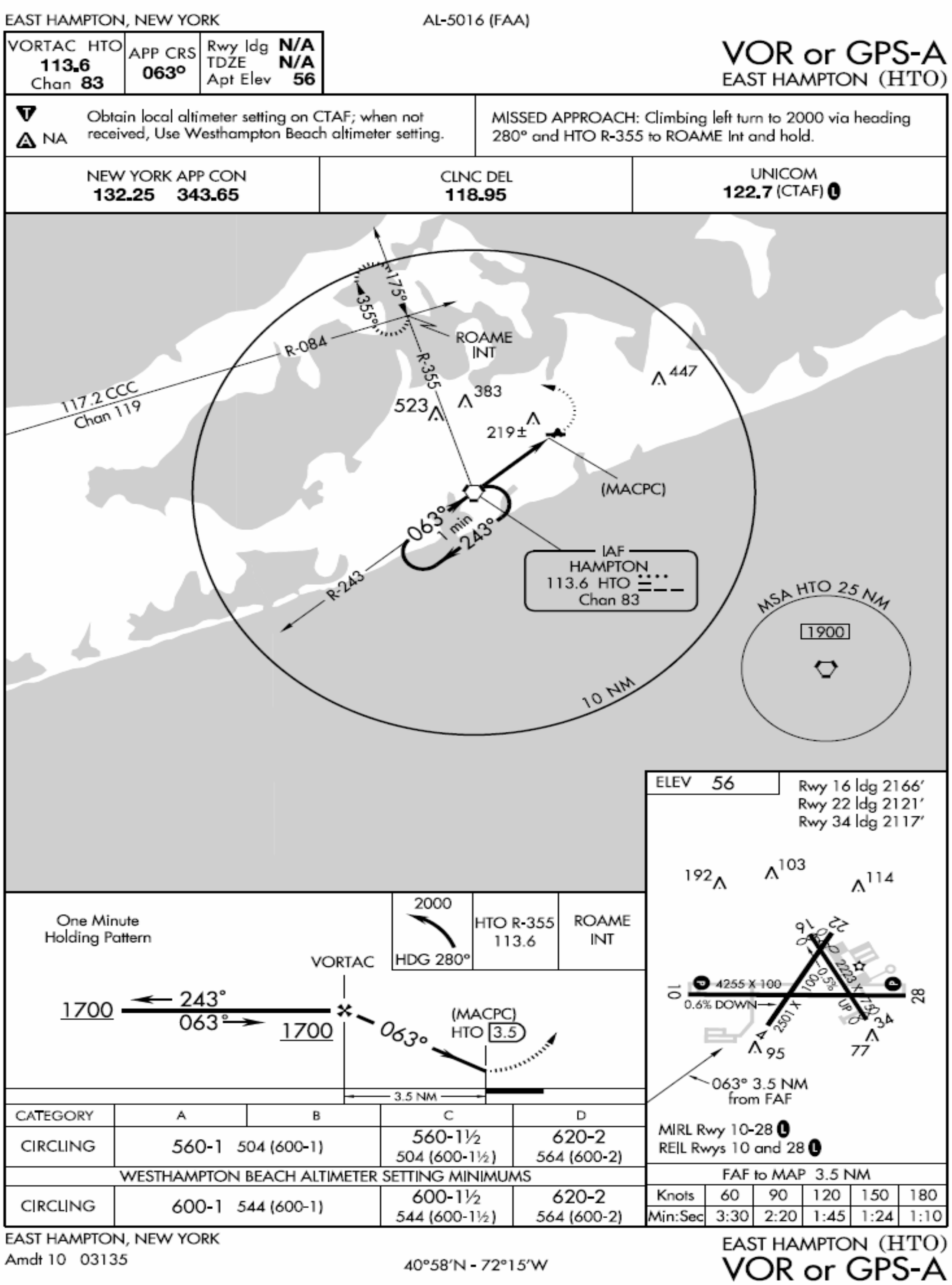
Source: www.naco.faa.gov

FIGURE I-14
APPROACH PROCEDURE



Source: www.naco.faa.gov

FIGURE I-15
APPROACH PROCEDURE



Source: www.naco.faa.gov

4. Meteorological Conditions

Wind conditions are of prime importance in determining runway use and orientation. The prevailing wind and visibility conditions determine the direction in which takeoffs and landings may be conducted and the frequency of use for each available runway.

For the purpose of this study, the terms visual flight rules (VFR) and instrument flight rules (IFR) are used as measures of ceiling and visibility. VFR conditions occur when the ceiling is at least 1,000 feet and visibility is three miles or greater. During these conditions, pilots fly on a see-and-be-seen basis. IFR conditions occur when the ceiling is less than 1,000 feet or visibility drops below three miles.

The orientation of runways for takeoff and landing operations is primarily a function of wind velocity and direction, together with the ability of aircraft to operate under adverse conditions. As a general rule, the primary runway at an airport is oriented as closely as practicable in the direction of the prevailing winds. The most desirable runway configuration will provide the largest wind coverage for a given maximum crosswind component. The crosswind component is the vector of wind velocity and direction which acts at a right angle to the runway. Further, runway wind coverage is that percent of time in which operations can safely occur because of acceptable crosswind components.

Table I-18 depicts how the crosswind value is determined based on the Airport Reference Code.

TABLE I-18
MAXIMUM RECOMMENDED CROSSWIND

Airport Reference Code	Design Crosswind Value (knots)	Type of Aircraft
A-I and B-I	10.5	Twin Otter
A-II and B-II	13.0	Beech King Air
A-III, B-III, and C-I through D-III	16.0	G-V
A-IV through D-IV	20.0	B747

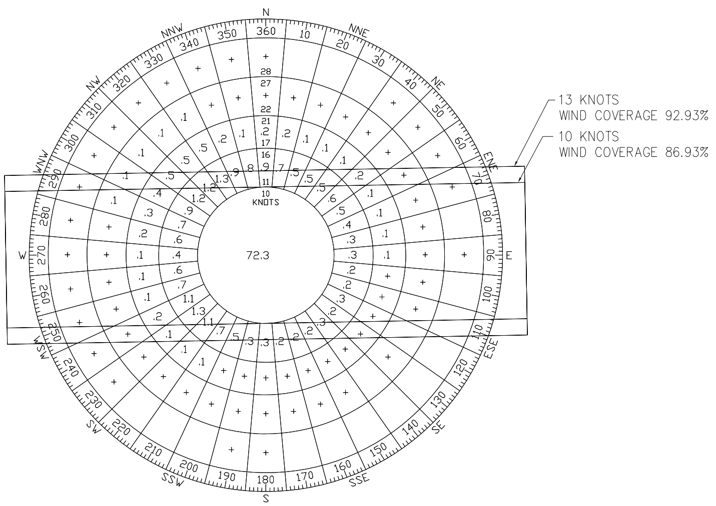
Source: DY Consultants

According to FAA objectives, runways should be oriented so that aircraft may land at least 95% of the time with 90° crosswind components not exceeding 13 knots for Runways 4-22 and 16-34 and 16 knots for Runway 10-28. A combination of the three runways at East Hampton Airport exceeds the criteria and provides more than the recommended 95% wind coverage at 10.5 knots, suitable for the smallest aircraft.

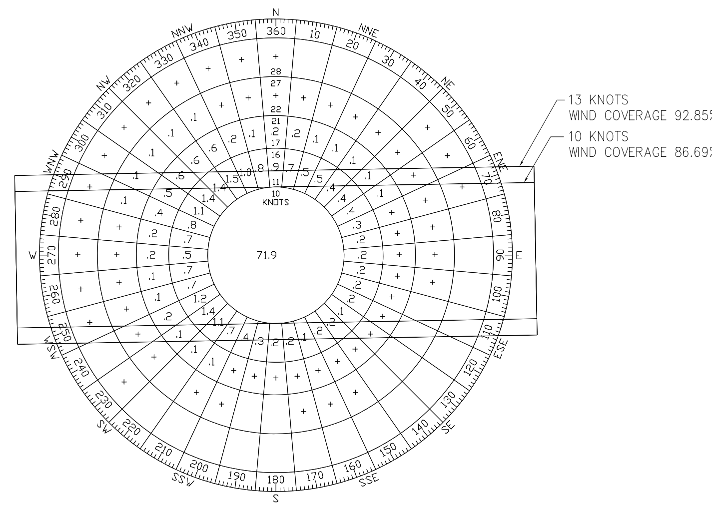
All-weather, VFR, and IFR wind roses were developed for East Hampton Airport using information gathered from the weather observations taken over a 10-year period from Frances S. Gabreski Airport, Westhampton Beach, for the 24 hour period from 1996 to 2005. As shown on the wind roses depicted on Figure I-16, I-17 and I-18, Runways 10-28, 4-22, and 16-34 provide combined all-weather wind coverage of 99.97% for a 13 knot crosswind and 99.79% for a 10.5 knot crosswind. These figures exceed the recommended coverage and provide acceptable coverage for the smallest aircraft 99.79% of the time. The percentages are shown in the following figure:

FIGURE I-15
WIND ROSE FOR RUNWAY 10-28

ALL WEATHER RW 10-28



VFR RW 10-28



IFR RW 10-28

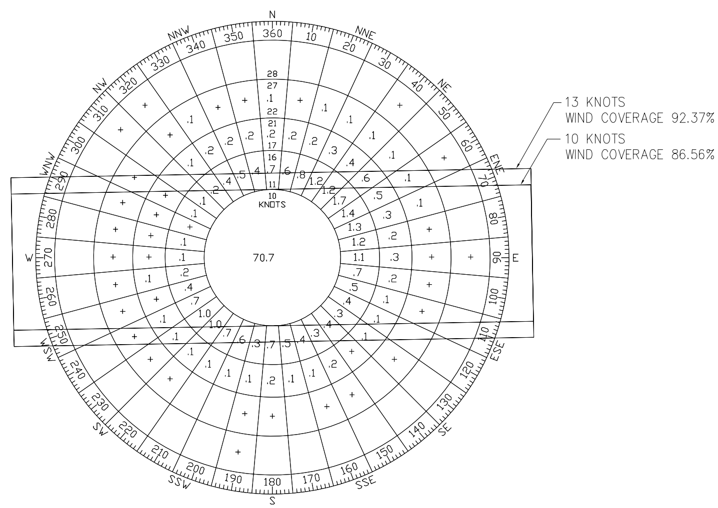
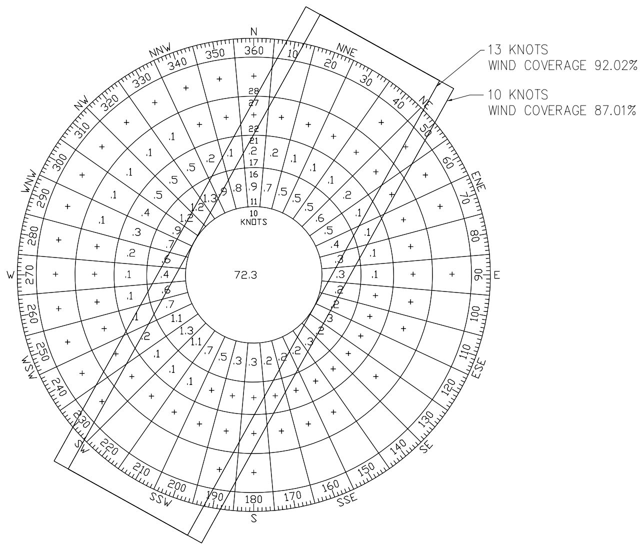
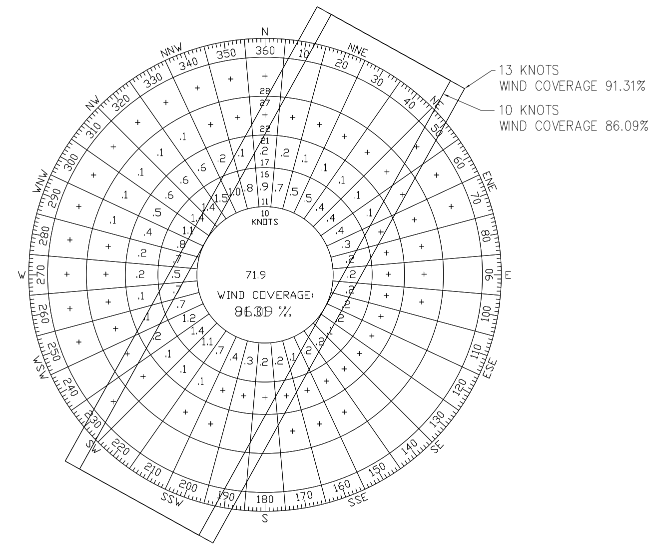


FIGURE I-17
WIND ROSE FOR RUNWAY 4-22

ALL WEATHER RW 4-22



VFR RW 4-22



IFR RW 4-22

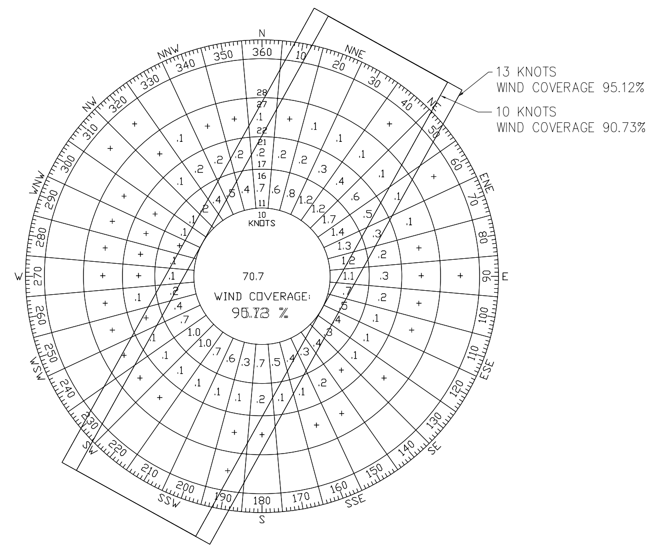
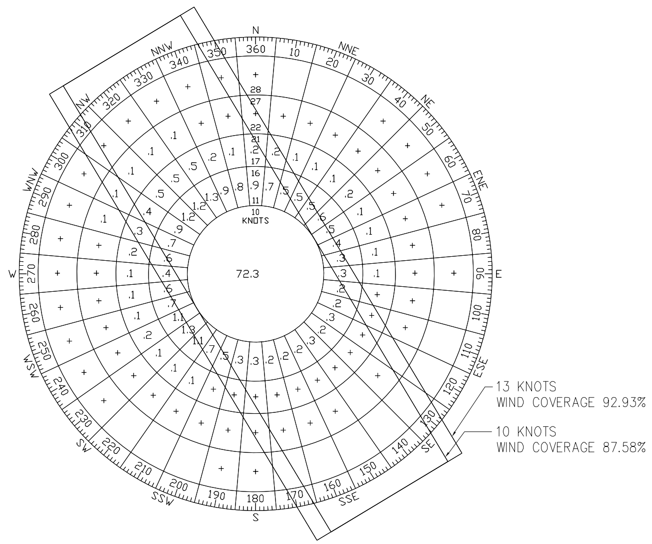
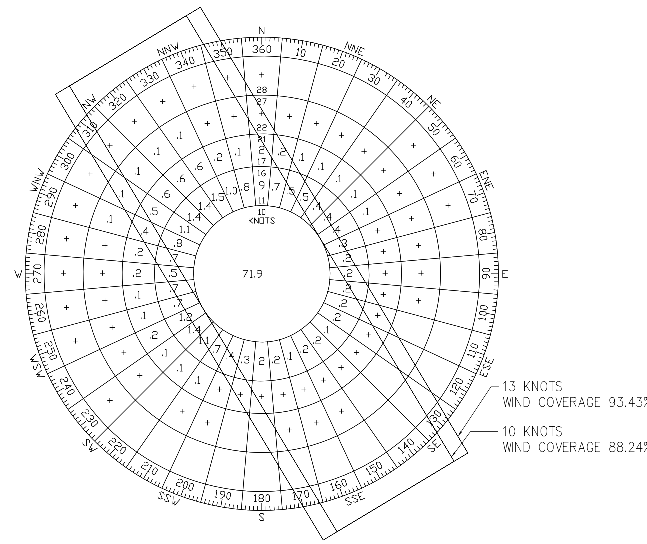


FIGURE I-16
WIND ROSE FOR RUNWAY 16-34

ALL WEATHER RW 16-34



VFR RW 16-34



IFR RW 16-34

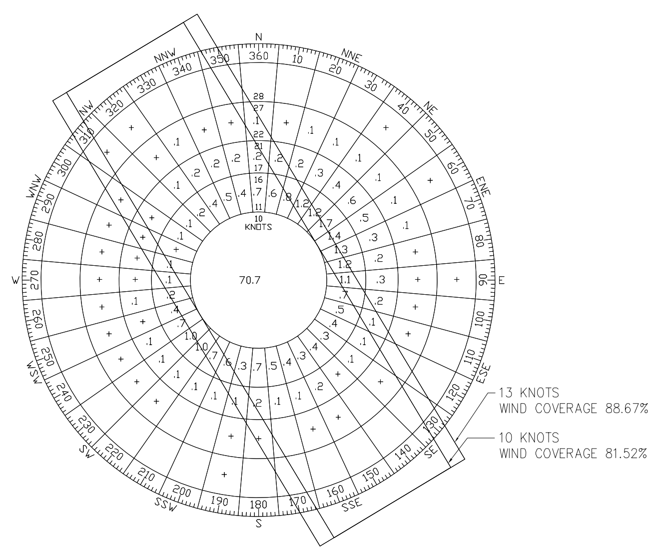


TABLE I-19

PERCENT WIND COVERAGE									
RUNWAY	12 MPH (10.5 Knot)			15 MPH (13 Knot)			18 MPH (16 Knot)		
	ALL WEATHER	VFR	IFR	ALL WEATHER	VFR	IFR	ALL WEATHER	VFR	IFR
10-28	86.93%	86.69%	86.56%	92.93%	92.85%	92.37%	97.70%	97.76%	97.03%
16-34	87.58%	88.24%	81.52%	92.93%	93.43%	88.67%	97.98%	98.24%	95.93%
4-22	87.01%	86.09%	90.73%	92.02%	91.31%	95.12%	96.58%	96.19%	98.35%
COMBINED	99.79%	99.80%	99.73%	99.97%	99.98%	99.95%	100.0%	100.0%	100.0%

WIND ROSE DATA

Source: National Oceanic & Atmospheric Administration, National Climatic Data Center, Asheville, North Carolina and DY Consultants

With Runway 4-22 closed, Runways 10-28 and 16-34 still provides the FAA's criteria of 95% wind coverage. For 10.5 knots there is 96.25% coverage and for 13 knots there is 98.97% coverage for all-weather. The following table depicts the combinations and their coverage's for all three runways.

TABLE I-20
THREE RUNWAY COMBINATION WIND DATA

PERCENT WIND COVERAGE									
RUNWAY	12 MPH (10.5 Knot)			15 MPH (13 Knot)			18 MPH (16 Knot)		
	ALL WEATHER	VFR	IFR	ALL WEATHER	VFR	IFR	ALL WEATHER	VFR	IFR
10-28 16-34	96.25%	96.58%	95.57%	98.97%	99.14%	97.69%	99.78%	99.85%	99.32%
10-28 4-22	94.50%	93.97%	97.02%	97.62%	97.37%	98.78%	99.19%	99.11%	99.55%
16-34 4-22	96.76%	96.83%	95.67%	98.85%	98.88%	98.39%	99.66%	99.67%	99.54%

Source: National Oceanic & Atmospheric Administration, National Climatic Data Center, Asheville, North Carolina and DY Consultants

5. Inventory of Planning Data and Past Proposals

Prior to this study there were many attempts to update the Airport Master Plan to no avail. The most current Master Plan and approved Airport Layout Plan (ALP) was completed by TransPlan, Inc. in 1989. Before this submission, Hoyle Tanner worked on a Master Plan in the early 1980's, which met with resistance from the community.

After the TransPlan approval, C&S Engineers, Inc. and Tri-State Engineering also submitted Master Plans; however, these were also not adopted by the Town of East Hampton.

The Town of East Hampton has a specific direction for how they would like the Airport to be, which has been overlooked by the past submissions. The main goal is to keep the airport small in size and scale and attempt to become self-supporting. The past documents have looked at larger aircrafts such as the Challenger 600, which would cause Daniel's Hole Road to be relocated and hence, enhance and grow the airport by allowing larger aircraft to enter the airport.

This study will be focusing on how to maintain the existing Airport through various alternatives discussed later in the study.

6. AIP Grants, Assurances, and Durations

AIP Grants

Under the Airport Improvement Program (AIP), authorized by Title 49 of the United States Code (U.S.C.), financial assistance is provided to airports in the form of Federal Grants. The goal of the program is to ensure the development of a nationwide system of public-use airports adequate to meet the current projected growth of civil aviation. Airports who participate in the Program are included in the National Plan of Integrated Airport Systems (NPIAS) and receive funding for airport planning and development projects based on the safety and operational priorities of the airport and airway system.

East Hampton Airport is included in the *National Plan of Integrated Airport Systems 2001-2005 (NPIAS)*. This planning document includes 3,364 existing airports that are significant to national air transportation and estimates that $46.2 billion in infrastructure development that is eligible for Federal aid will be needed over the next five years to meet the needs of all segments of civil aviation. Airports with significant commercial service account for 82 percent of the total development needs. The FAA administers the Airport Improvement Program through the NPIAS, which supports the FAA's strategic goals for safety, system efficiency, and environmental compatibility by identifying the specific airport improvements that will contribute to achievement of those goals. Recent grants accepted by East Hampton Airport are as follows:

TABLE I-21
GRANT HISTORY

Year	Work Type
1983	Rehabilitate Runway
1990	Install Apron Lighting and Construct Taxiway
1991	Airport Master Plan Study
1992	Acquire ARFF Equipment
1992	Install Signs, Improve Building, Construct Taxiway and Apron, Improve RSA
1993	Construct Terminal
1993	Improve Building, Install VGSI
1993	Expand Apron
1993	Improve Access Road
1994	Install Guidance Signs, Perimeter Fencing
1995	Acquire Security Equipment, Install Guidance Signs
1996	Improve Service Road, Construct Apron, Install Apron Lighting, Improve Drainage
1996	Rehabilitate Runway
1997	Rehabilitate Runway, Install Guidance Signs, Construct Apron, Expand Apron
1997	Rehabilitate Runway, Rehab Runway Lights, Install NAVAID's
1997	Miscellaneous Study
2001	Rehabilitate Apron

Grant Assurances and Durations

After accepting funds from FAA-administered airport financial assistance programs, recipients must agree to certain obligations (or assurances). These assurances, known commonly as Grant Assurances, require the recipients to maintain and operate their facilities safely and efficiently and in accordance with specified conditions. They appear either in the application for Federal assistance and become part of the final grant offer or in restrictive covenants to property deeds. The duration of these obligations depends on the type of recipient, the useful life of the facility being developed, and other conditions stipulated in the assurances.

A copy of the typical assurances associated with accepting a Federal Grant is located in Appendix A. Typical industry interpretation and practices accept the following to be true for an Airport still obligated under FAA Grant Assurances:

- When accepting grants, the sponsor is obligated to comply with the assurances associated with the grant.
- The Airport Sponsor receiving the grant must operate the airport as a public use airport for 20 years upon its receipt.
- The airport must be operated and maintained as per FAA standards.
- Revenues generated on airport must remain on airport.

East Hampton Airport grant status is in effect and the airport is currently obligated to operate under and comply with all Grant Assurance stipulations. Additionally, the Airport is still in the FAA's National Plan for Integrated Airport Services and is eligible for additional grant under the AIP Program at this time.

Due to past conflicts associated with the issuance and acceptance of certain previous grants, the Committee to Stop Airport Expansion, a private group, reached an agreement with the FAA in January of 2005 regarding the duration of the Assurances associated with those grants in question. Specifically, a settlement agreement was filed with the U.S. District Court holding that certain Assurances would no longer be enforceable after December 31, 2014. See Appendix B for a copy of this agreement.

C. Off-Airport Environment and Community Setting

1. Socioeconomic Profile

The Town of East Hampton covers the eastern half of Long Island's South Fork in Suffolk County. The 2000 year-round population in East Hampton, including both the incorporated Village of East Hampton and the portion of Sag Harbor that lies within the Town, was 19,719.

Population information for East Hampton is difficult to assess with complete accuracy as it probably does not include all of the visitors, people who live in illegal housing or workers in group "summer shares". Because of the transient nature of the summer population, seasonal figures are likely to be more than the year-round information. The seasonal population estimates for the Town of East Hampton were reached by the Suffolk County Planning Department by estimating an average of 4.5 persons per household in seasonal homes throughout the Town, assuming a guest factor of 1.2 for year-round households in Town, and assuming four guests per motel room.

As indicated above in 2000 there were 19,719 year-round residents and an estimated 71,906 seasonal residents in the Town of East Hampton, totaling an estimated peak season population of 91,625 residents.

The median income reported in the census represents the middle value arrived at by dividing the income distribution into two equal groups, one having incomes above the median, and the other having incomes below the median. According to the 2000 census the median household income for the Town of East Hampton was $52,201, compared to $65,288 in Suffolk County.

Per capita income is an average obtained by dividing aggregate income by total population of an area. The per capita income is higher for the Town of East Hampton than in Suffolk County, $31,300 and $26,577 respectively. The higher per capita income is likely the result of the higher wages earned by a small segment of the East Hampton population that is averaged into the per capital income figure, as well as the fact that children under 18 made up a lesser percentage of the population in East Hampton than in the County.

Six percent of the households in East Hampton have incomes of $200,000 or greater, whereas only 4.1 percent of households Countywide have incomes of $200,000 or greater. The lower median household income in East Hampton is in part a result of the higher number of single-person households in East Hampton than in Suffolk County, and the higher number of seniors in East Hampton, many of whom are on a fixed income.

2. Regulatory Framework

i. Town Noise Ordinances

Town Ordinances

The entire Town code is furnished through a link on the current Town website. Three pertinent Chapters are discussed in detail below. These include Chapter 73 - Aircraft, Chapter 75 – Airport, and Chapter 185 – Noise.

Chapter 73 – Aircraft

Helicopters are prohibited from landing or operating in the Town except on Gardiner's Island, the East Hampton Airport and Montauk Airport. Seaplanes are prohibited from seven waterways throughout the Town including Three Mile Harbor, Fort Pond, Northwest Creek, Napeague Harbor, Wainscott Pond, Georgica Pond and Hog Creek. Exceptions are provided for in flight emergencies or medical, police or military emergencies. Penalties for violations are specified.

Chapter 75 – Airport

Local regulations specify that all aircraft operations shall conform to FAA regulations as well as local regulations. The regulation prohibits negligent operation and requires extreme caution and vigilance. In the event of an accident, the airport manager shall be notified. Disabled aircraft and vehicles must be removed. The ordinance provides for suspending an operator's right to use the Airport as a consequence of performing "unsafe, low or noise-provoking" maneuvers. The airport manager shall specify areas for loading and unloading of passengers, use of vehicles or pedestrians. Aircraft shall have the right of way over all ground vehicles. The use and operation of ultra light vehicles is prohibited. During taxi and start up, all aircraft must avoid damage due to turbulence, or exhaust blast. Aircraft must be kept under full control at all times and towed in the event that safety concerns exist.

Landing fees are specified for corporate, revenue producing and non-commercial single engine and twin engine aircraft, greater or lesser than 12,500 pounds ranging from five to 100 dollars.

The ordinance specifies terms of use for engine operation, use of runway and taxiways, operation by authorized individuals, care in operations, limiting taxiing speed, preflight run-ups, holding areas, and refueling and fuel storage practices. It specifies approvals for fueling trucks, restrictions to prevent fires, proper response to fuel spills and handling of hazardous materials, sign posting, and conformance of commercial activities to local and FAA regulations.

Penalties include suspension of airport use rights for 90 days and monetary fines.

Article II of Chapter 75 provides for public hearings concerning airport improvements and internal reviews of any airport improvements for consistency with the current Master Plan or Airport Layout Plan.

Chapter 185 – Noise (currently being amended)

This Chapter provides provisions for noise control within the Town.

Specifically prohibited are excessive noise emissions that may cause hearing loss, injure public health, cause a nuisance, exceed specified exposure standards or interfere with the comfortable enjoyment of life. Loud speakers and PA systems may not be operated between 9:00 PM and 9:00 AM, barking dogs must be controlled and excessive idling by stationary vehicles is prohibited. Noise pollution is generally prohibited.

Standards that apply at the property lines in residential districts allow a maximum of 65 dBA during the 7:00 AM to 7:00 PM day period and 50 dBA during the overnight period. Equivalent standards in octave bands are also provided.

Standards that apply in commercial or industrial districts are five decibels higher or 70 dBA during the day and 55 dBA during the over night from 7:00 PM to 7:00 AM.

Exceptions are provided for indoor and outdoor service equipment and construction activities between 7:00 AM and 8:30 PM, agricultural activities from 6:00 AM to 8:00 PM, alarms, church bells, properly equipped motor vehicles, snow removal equipment, emergency signals and athletic or recreational activities on Town property. Also exempted are organized civic activities, noise from properly equipped aircraft, fireworks, carnivals and parades, public speaking, emergencies or utility repairs.

Monetary penalties are specified and range from $50 to $1,000.

ii. Comprehensive Town Planning Issues

The Town of East Hampton Comprehensive Plan, May 2005 was the product of a four –and-a-half year effort involving two administrations of the Town Board several planning consultants, the Town Planning Department, the Town Department of Natural Resources, the Town Office of Housing and Community Development, the Town Attorney's Office and special counsel, Seventeen Comprehensive Plan Subcommittees, numerous business, civic citizen, professional and environmental organizations and the community at large. The Vision Statement articulating the overall image of what the community would like to be is excerpted below:

"East Hampton is defined by the unique character of its hamlets, villages and countryside. East Hampton's beaches are rated among the world's best. The land supports one of the highest concentrations of rare and endangered species in New York State. The farmland is rated the best in the state. The Nature Conservancy has designated the area as one of the "Last Great Places" in the Western Hemisphere. The woodlands are diverse and healthy where they are undisturbed. The harbors and bays are among the cleanest in the state. The Town is rich in historic and cultural resources. Development has not obliterated the natural and scenic characteristics once covering all of Long Island.

The Town treasures and is committed to sustaining this rich array of natural and cultural resources, authentic sense of place, rural character, and the people who make it unique. East Hampton is and will continue to be a "green" community, a leader in protecting the environment, saving energy and preserving open space. Future development should be harmonious with the existing character of the community. Residents and visitors should have the option to use alternative transportation (train, bus, shuttle, walk, bike, etc.) as an alternative to their cars for daily needs. A diverse population should continue to have opportunities to engage in a variety of livelihoods ranging from traditional agriculture and fishing to clean technology and the arts. The seasonal economy of second homeowners and visitors, based largely on the pristine natural and rich cultural resources, helps support a vibrant, diverse year-round community and should be encouraged to continue. Although real estate continues to become very expensive, the Town's affordable housing programs strive to enable long-time residents to retire and year-round employees to live here. East Hampton is and should continue to be a wonderful place to live, work, raise a family, enjoy life and connect with the natural environment."

Recommendation #72 of the Comprehensive Plan specifically pertains to the East Hampton Airport: "Develop and updated Airport Master Plan acceptable both to aviation interests and the local community with an emphasis on safety and noise abatement." Another recommendation pertaining to a portion of the Town Airport land holdings is contained in the **Plan for Wainscott** section of the Comprehensive Plan, as quoted below:

" The 107.3 acre undisturbed Town-owned parcel adjacent to Daniel's Hole Road, currently zoned Commercial Industrial (CI), is not currently nor should it be used in the future for airport or commercial purposes, but should remain as part of the core groundwater protection area. It is part of the contributing area to the largest capacity SCWA well field in East Hampton and is part of the largest contiguous block of the Pine Barrens Site Type in the entire Town. Rezoning this parcel from CI to Parks and Conservation should be considered after completion of the updated Airport Master Plan and consultation with the Federal Aviation Authority (FAA)."

iii. Noise Abatement

The discussion below comprehensively reviews candidate noise abatement strategies at East Hampton Airport including those made in the past that have been implemented, those that may be studied further during the planning process, and those that may be contemplated in the future as circumstances change.

Basically, there are only three physical strategies that can be used to reduce the adverse effects of aircraft noise in adjacent community areas. First, the source noise can be reduced, such as has occurred through improvements in propulsion technology or result from thrust management procedures. Second, the distance between the source and the receiver can be increased such as by relocating flight tracks. Third, the receiver can be protected such as with increased structural noise attenuation. While none of these measures are perfect solutions, all can be helpful in achieving an optimal mix.

Many additional noise abatement recommendations are rooted in two other areas. First, airport traffic must be monitored and analyzed. This provides a record for public scrutiny and understanding, facilitates interactions between airport management and the user community, objectively documents movement data over the long term and otherwise permits a factual portrait of real world circumstances. Second, a program of communications and accountability must be created. This permits the registration of noise complaints, communications with the user community, publication of records and recommendations, and fosters continuing improvements in program development based on perceived needs.

Noise Abatement Recommendations – HMMH

Earlier in the noise abatement planning process, a series of recommendations were advanced by Harris, Miller, Miller and Hanson. These included the deployment of an aircraft monitoring and tracking system, Air Scene by Rannoch Corporation. This system includes the integration of noise monitoring data to associate specific aircraft movements with observed noise levels. This system was installed in 2005 and has been operational since although incorporation of field noise measurement data has yet to be implemented.

Other HMMH recommendations included increasing helicopter altitudes to 2,000 feet which has been implemented along with a revised departure route shown elsewhere in this document.

HMMH recommended publication of a noise abatement advisory insert page for fixed wing pilots detailing the National Business Aircraft Association close thrust management departure procedure, detailing voluntary restrictions during the night period, voluntary limits on touch and go operations during the night period, and notices of the monitoring system installation and contact information for the airport.

They also recommended the publication of sound insulation guidelines, continuing liaison with the Noise Abatement Committee and retaining a trained noise abatement officer.

Airport Noise Abatement Advisory Committee

The Airport Noise Abatement Advisory Committee has considered at length a variety of noise abatement recommendations. These include many that were advanced by HMMH and as well as others.

Under actions requiring no further analysis, they have recommended the hiring of a noise abatement officer, endorsed the establishment of a flight tracking and noise monitoring system, and the installation of an Automated Weather Observation System (AWOS). The AWOS is also endorsed by the Airport Manager as it will allow a re-designation of the airspace between 700 feet mean sea leve MSL and ground level in areas around the airport. Recently, the Committee has unanimously endorsed the establishment of a seasonal control tower subject to eventual review to establish that it is not growth inducing.

They have also recommended consideration of a number of measures that require additional research. These recommendations include development of alternative helicopter routes, consideration of a displaced threshold on Runway 28, and consideration of the traffic implications of rehabilitating Runways 4/22 and 14/32.

The Committee recommends study of the use of differential landing fees to discourage use during the night period and other management techniques for heavier and noisier aircraft. Similarly, the Committee recommends consideration of an FAR Part 161 Study for the establishment of restrictions on Stage 2 aircraft both fixed wing and helicopters. They also recommend investigation of a night curfew on operations and a ban on Touch and Goes on summer weekends and continuing efforts to discover new and more effective techniques for noise control. They also recommend consideration engine run up enclosures and designated locations for maintenance engine run ups.

Other Noise Abatement Techniques

There are a variety of strategies for noise abatement that have been utilized by airports both domestically and internationally. The most common include the following:

Preferential runway use is employed in circumstances where clear differences in land use compatibility permit diverting traffic to the runway or runway ends that have the highest degree of compatibility. Similarly, rotational runways use can be used to avoid excessive noise impact in particular neighborhoods.

Noise abatement flight tracks can be used in certain circumstances to avoid over flying sensitive community areas. Similarly, traffic pattern altitudes can be raised or in some cases relocated to avoid over flight of sensitive areas.

Single event noise limits have been used at some airports. This techniques uses established hierarchical rankings of aircraft by noise level such as published by the FAA to determine the maximum allowable noise emission levels by aircraft, typically measured at the approach measurement point approximately one nautical mile (2000 meters) from the runway end. The installation of a permanent noise monitoring system allows for establishment of a single event noise limit based on a continuing measurement basis, i.e., it allows pilots to fully exploit quiet flying techniques and provides direct feedback to the pilot about actual noise emission levels.

Prior permission rules are used to screen out aircraft that are excessively heavy and noisy, to permit the distribution of noise abatement recommendations prior to arrival, and to otherwise regulate access on a case by case basis. Often, prior permission rules are used in combination with weight limits to discourage use by heavier vehicles thereby reducing pavement wear and attendant maintenance costs.

Voluntary restraints are commonly used to discourage night period traffic. An important concept in reducing noise impact stems from the use of voluntary agreements of differing kinds. What may be difficult to achieve through regulation can, in some cases, be achieved through informal agreements among airport users. This can be especially effective at smaller airports where the community of users is of limited size.

Federal procedures under FAR Part 161 govern the adoption of airport access restrictions. Conformance with these procedures is recommended when the objective is the regulation of Stage 2 aircraft including helicopters. While it is expensive to formally comply with these regulations, Stage 2 aircraft, which are typically much noisier than aircraft that comply with the lower noise emission limits embodied in Stage 3 and Stage 4 regulations, cannot be over ridden by federal authority once the procedural requirements are satisfied.

Land use regulation for areas around airports can be used to guide sensitive uses away from areas under flight tracks or in airport adjacent areas.

For certain aircraft, there are various hardware modifications such as multi bladed propellers or hush kits in the case of older turbine powered aircraft to reduce noise emission levels. There are a variety of flight techniques as well that can reduce the adverse impact of aircraft noise.

There are a variety of additional techniques that have been commonly used in the past at air carrier airports although these are of limited application at East Hampton. These include noise budgets, quotas or other restrictions on cumulative noise levels, and formal or informal curfews. These techniques have largely been prohibited under current federal regulations since loss of federal grant support is the typical direct consequence of the adoption of prohibited restrictions. The East Hampton Airport may become independent of federal support in 2014, making these prohibitions on access restrictions moot. Caution is advisable in considering the freedom that this eventual independence may allow since it has been recognized that even in cases where environmental considerations merit restraints on interstate commerce, these must be reasonable, non arbitrary and non discriminatory. Generally, local authority is prohibited from placing undue burdens on interstate commerce.

In determining the techniques and specifications for noise abatement measures, an exclusive prerogative of the airport proprietor, the following guidelines are recommended. First, it must be understood that there is no perfect solution and unwanted effects on adjacent land uses are unlikely to be entirely eliminated. The objective then becomes one of obtaining the greatest degree of utility with the least resultant environmental impact. Second, noise abatement planning is sequential beginning with the least restrictive solutions and eventually considering more aggressive strategies only when lesser measures fail.

iv. Scoping Recommendations and Complaints

In preparation for the Master Plan and EIS exercise, a scoping session was held at 4:00 PM on January 25, 2005 at the East Hampton Town Hall meeting room. The full proceedings were video taped for reference.

The consulting team consisted of Tom Murray, Savik and Murray, Mr. Robert Grotell of DY Consultants and Henry Young of Young Environmental Sciences. Mr. Murray introduced himself and the two other team members. Robert Grotell summarized the steps in the master planning process and Mr. Young explained the environmental procedures.

A total of 19 local individuals spoke. Generally, four speakers supported the airport and its expansion, and 15 were concerned about a series of environmental and growth issues, primarily aircraft noise. The noise abatement committee presented an extensive formal review of concerns and recommendations for consideration.

Airport supporters drew attention to the economic benefits at the airport, support for local businesses and the vital air transportation services that the airport provides. There was continuing support for retaining Runway 4/22 and federal financing. There were concerns about the extent of local sponsorship. One commenter stressed the potential for integrating the airport into an intermodal transportation program.

Environmental concerns related primarily to aircraft noise and growth. East Hampton residents were concerned about fixed wing aircraft noise whereas Southampton residents stressed helicopter noise. Other issues mentioned included the sole source aquifer below the airport, adequacy of fire protection, growth trends over the last decade, the potential for further runway extension, the intensity of summer weekend noise, vibrations from helicopters, and low flying aircraft.

Several speakers expressed concern about costs and financing alternatives. Several speakers praised the inclusion of Southampton residents. Other individual concerns included the technique of noise analysis, consideration of a lower weight limit, and the establishment and enforcement of arrival and departure routes for helicopters. The meeting concluded at approximately 7:00 PM.

Chapter II - Background and Long-Term Future Planning

A. Airport Role

Airport Role Statement

The Role Statement for the East Hampton Airport articulates the intended functions, values, priorities and governing principles that will apply to the facility. The role statement provides a general description of the type and function of the airport without specifying the regulations. While non-binding, the role statement provides a framework for decision making, helping to define that which is "in bounds" from what is "out of bounds." It can serve as a reminder to both the airport user community and the adjacent residential community that there is a reasonable, non discriminatory body of principles which are being use to shape public policy now and in the future.

The East Hampton Airport is owned, maintained and operated for the benefit of the Town and its residents. The airport continues to be classified as a General Aviation Airport under federal criteria. Its primary role is the accommodation of light aircraft traffic. Aircraft operating at greater weights will be accommodated on condition without unjust discrimination. The airport is also managed with the objective of providing emergency access and facilitation of all other public and community responsibilities. The size and operation of the airport takes into consideration the needs of East Hampton and Southampton residents for protection from excessive noise disturbance and adverse environmental impacts.

The Town is committed to observing the highest standards of safety, and efficiency and observes all appropriate federal and state standards in terms of layout, operation and maintenance. The facility shall not be allowed to deteriorate, but instead shall be improved and maintained in an exemplary manner to best serve light aircraft.

East Hampton Airport is located in an environmentally sensitive area overlying the largest high quality drinking water resources in the entire town. Several of the largest capacity public water well fields are adjacent to the airport. This natural resource merits long term protection through restraints on the extent and intensity of airport development and utilization.

Control of noise and adverse environmental impacts at the airport is consistent with current Town goals for improved quality of life and land and water conservation. These goals recognize that protecting the environment is essential for improving the Town's seasonal and year round economy. These controls are achieved through reasonable, non arbitrary and non discriminatory management practices. These may limit the maximum size of aircraft to be accommodated, regulate excessive peak demand during the summer season and otherwise adjust use patterns such as for helicopter access to minimize community disturbances.

The Town honors all reasonable obligations to the airport user community through customary due process without constraints except those that diminish the health, well being, and welfare of the community. The Town may from time to time establish and enforce such regulations as are needed to balance these conflicting goals. These actions will be within the envelope of existing federal procedures. This will preserve the opportunities for the user community to negotiate acceptable solutions and adjust to forthcoming changes in an orderly manner without imposing financial hardships.

The Town endeavors to operate and maintain the airport as economically and efficiently as possible with the costs of doing so being fairly allocated among those users who benefit from its utility; self sufficiency being the preferred management objective. However, recognizing the vast long term benefits associated with environmental conservation of the area, a degree of public support may be incumbent upon the Town. Thus, certain public resources may be needed to augment the income derived from transportation related fees to assure continued protection of the local community residents as well as the land and water resources themselves. This shall be a local public responsibility unaltered by the prospective availability of federal, state or private resources. The airport shall have a complimentary goal of facilitating economic improvement through support of education, commerce and industry consistent with the maintenance of the highest standards of long term environmental quality and quality of life for existing as well as future citizens.

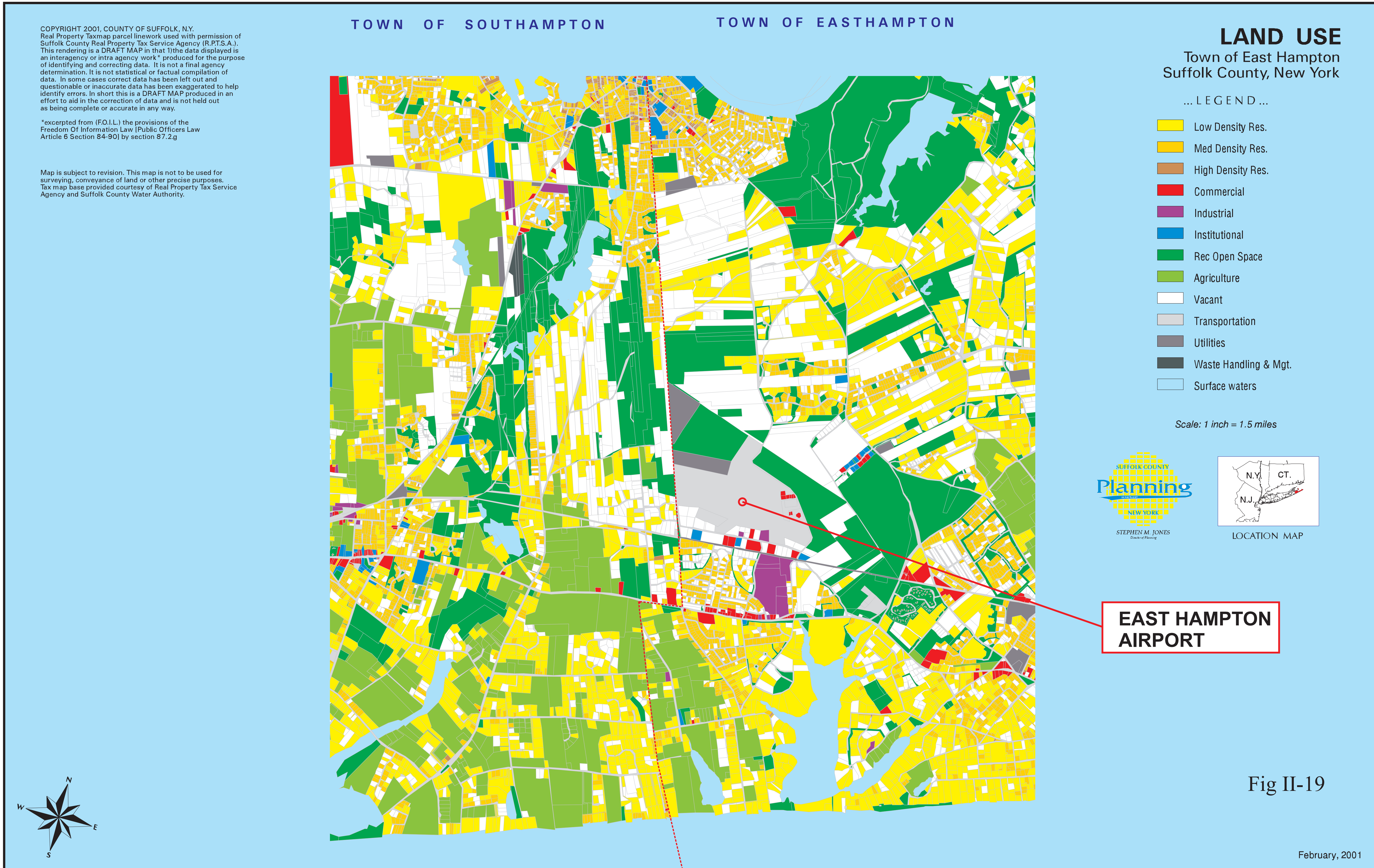
B. Off-Airport Considerations

1. Land Use

East Hampton Airport is located in the Hamlet of Wainscott, which is the western gateway to the Town of East Hampton. It extends from the Village of Sag Harbor to the Atlantic Ocean. Wainscott is the smallest of all planning areas in East Hampton and with 20.63% of its area vacant, has the highest percentage of vacant land. Residential and protected open space each comprises approximately 27% of the land area, as shown in Figure II-19.

The greatest intensity of development is concentrated within a core area between the railroad tracks and Montauk Highway. To the north of the development core is the Town Industrial Park which will be discussed further in Chapter III, and the Airport. Bordering the Southampton Town Boundary to the northwest of the Airport is a public well field and a future water tower site. Two active well field sites straddle the border of Wainscott: one at the boundary with the Village of Sag Harbor and the second along NYS Route 114 opposite Goodfriend Drive.

The land to the north of the Airport represents the Town's largest block on intact Pine Barrens Woodlands. Most of Wainscott's preserved and vacant areas are within this area. These woodlands overlie the Town's deepest and largest area of groundwater recharge. There are a handful of light commercial industrial uses situated in two subdivisions extending into this woodland block.


COPYRIGHT 2001, COUNTY OF SUFFOLK, N.Y.
Real Property Taxmap parcel linework used with permission of Suffolk County Real Property Tax Service Agency (R.P.T.S.A.). This rendering is a DRAFT MAP in that 1)the data displayed is an interagency or intra agency work* produced for the purpose of identifying and correcting data. It is not a final agency determination. It is not statistical or factual compilation of data. In some cases correct data has been left out and questionable or inaccurate data has been exaggerated to help identify errors. In short this is a DRAFT MAP produced in an effort to aid in the correction of data and is not held out as being complete or accurate in any way.
*excerpted from (F.O.I.L.) the provisions of the Freedom Of Information Law [Public Officers Law Article 6 Section 84-90] by section 87.2.g
Map is subject to revision. This map is not to be used for surveying, conveyance of land or other precise purposes. Tax map base provided courtesy of Real Property Tax Service Agency and Suffolk County Water Authority.
TOWN OF SOUTHAMPTON
TOWN OF EASTHAMPTON
LAND USE
Town of East Hampton
Suffolk County, New York
... LEGEND ...
Low Density Res.
Med Density Res.
High Density Res.
Commercial
Industrial
Institutional
Rec Open Space
Agriculture
Vacant
Transportation
Utilities
Waste Handling & Mgt.
Surface waters
Scale: 1 inch = 1.5 miles
SUFFOLK COUNTY
Planning
NEW YORK
STEPHEN M. JONES
N.Y.
CT.
N.J.
LOCATION MAP
EAST HAMPTON AIRPORT
N
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February, 2001

Fig II-19

2. Ambient Sound

Ambient sound refers to the level of sound that occurs at a given site and may include a variety of transportation noises. The background sound level is that which exists in a given setting absent the distinguishable event related noise. Statistically, the L90 level is customarily chosen as the key level reported by a sound level meter that defines the background level. This is the numerical level that is exceeded 90 percent of the time during a monitoring session. This number is variable and is dependent upon the location and duration of the noise monitoring period. Typical residual noise levels may be as high as 50 to 55 decibels in residential locations that are in a village setting, 40 to 50 decibels in suburban style residential neighborhoods and as low as 30 to 40 decibels in rural residential locations with substantial setbacks from the roadside and large separation distances from adjacent homes. Isolated homes may show L90 levels as low as the mid to high 20 decibel range.

Ambient sound levels may drop as much as 10 decibels at night. These sound levels are influenced primarily by mechanized noise including motor vehicles, yard equipment, air conditioners, and other human activities. Naturally occurring sounds such as birds, animals, insect life, wind, rain, leaves rustling, and water movement will also be included in noise monitoring samples setting a floor of 25 to 50 decibels. These levels actually contain very little energy and there may be significant variation without greatly changing the individual's perception of the acoustical environment. Further, since natural sounds may actually be valued by local residents, these levels may not represent an unwanted element in the acoustical environment. A bird song may register on the sound level meter but might not fit the definition of noise which is unwanted sound.

It is reasonable to assume that regardless of location within the Town, ambient sound levels are low in comparison to more densely developed and much more widespread residential areas in the region. This low level has several important influences on the residential listener. First, because of the generally low ambient, mechanical noises including aircraft can be intrusive even at relatively low peak noise levels. Since there are few competing sounds, transportation noise of all sorts will be perceived to have a longer duration since relatively little sound masking occurs. Finally, even when relatively few noise events occur and their peak intensity is modest, on a cumulative basis transportation related noise may dominate the acoustical environment, i.e., exceed all other sources combined, at a surprisingly low numerical level. Thus, considerable adverse reaction can be expected to transportation noise even at very low threshold levels contrary to expectations derived from surveys in relatively urbanized areas. In many residential areas of East Hampton and Southampton, residents' expectations may resemble those of users of a national park or rural recreation area more than a suburban or urban neighborhood.

The results obtained during past noise monitoring studies in the East Hampton are discussed below.

2003 Noise Monitoring Exercise

A total of seven sites were monitored in early summer 2003. These were extensive and lengthy exercises, a minimum of six days and a maximum of 14 days at the individual sites. A thorough set of statistics were accumulated including the L90 statistic, the customary index of the ambient, at each of the seven sites. The exercise also included noting the L1 or top one percent of the noise samples and similarly the L10, and the L50. The results were reported in a series of graphs for each site. While this graphic display does not show specific numerical values, throughout the data, the L90 and L50 levels are relatively closely spaced. This means that that for over half of the total monitoring time, the sites predominantly quiet absent aircraft or other intermittent sound. Generally, all sites showed a low ambient with some site showing exceptionally low values.

A second, even more extensive effort was accomplished in late August covering ten sites an addition of three sites to the original seven studied previously. The length of the monitoring period was generally less in the second set of measurements. A site by site review of the ambient sound environment is provided below.

Site 1 – 11 Highview Drive, Wainscott

During early summer, the L90 at this site showed highs in the 32 to 55 decibel range with lows in the 20 to 28 decibel range over 14 days of monitoring. Somewhat higher levels were found six days of monitoring during the late summer. L90 highs were found in the 40 to 50 decibel range while lows were in the 24 to 30 decibel range. This is characteristic of a quiet rural residential site with occasional loud events from helicopters. L90 levels below 30 decibels are exceptional.

Site 2 – 93 Merchants Path, Bridgehampton

During the 12 days of early summer measurements, L90 highs were in the 40 to 56 decibel range while reported lows were in the 30 to 40 decibel range. Six days of monitoring in the late summer readings were higher with maximum L90 levels in the 51 to 58 decibel range with lows ranging from 40 to 46 decibels. Although slightly higher readings were obtained during the quieter periods of the day than at Site 1, the result are similar, i.e., a very quiet ambient.

Site 3 – 244 Widow Gravitts, Bridgehampton

This was the site of 13 total days of measurement in early summer. Located in the rear yard of a residence, the highest L90 readings were found to range from 38 to 58 decibels. Lows ranged from 20 to 35 decibels with the majority below 30 decibels. Late summer readings were again found to be higher than in early summer; l90 highs in the 51 to 58 range and lows in the 40 to 45 decibel range.

Site 4 – 75 West Gate, Wainscott

This site, the backyard of a residence, was noted during the first round of measurements to have considerable background noise from nearby construction activities. During the 13 days of monitoring, L90 levels were found to range from highs of 39 to 56 decibels and lows of 25 to 33 decibels. Higher readings were found during the second six day round of measurements; L90 highs in the 52 to 58 decibel range and lows in the 38 to 43 decibel range. These measurements, while slightly higher than the previous sites, were consistent with a subdued ambient sound level.

Site 5 – Georgica Estates Tennis Courts, East Hampton

This site is a recreation area where noise monitoring was conducted for a ten day period in early summer and a ten day period in late summer. L90 high range readings were 45 to 55 during early summer with lows in the 35 to 45 decibel range. Late summer readings were the 42 to 54 decibels at the highest and 27 to 34 decibels at the lowest. These are essential the same during both periods and consistent with the other sites, very quiet.

Site 6 – Ross School Athletic Fields, Wainscott

This open grassy field was not in use during either the initial six days or the final two days of monitoring. Given the absence of sound sources, the site showed highs in a lower range than previous sites, 35 to 44 decibels during early summer and 52 decibels during follow up measurements. Lows were in the 29 to 38 decibel range during early summer and 40 during the latter measurement period.

Site 7 - 136 East Main Street, East Hampton Village

This site is more urban than the previous sites selected. It was monitored initially for six days and subsequently for a second six day period. During early summer maximum L90 levels ranged from 43 to 52 decibels and the lows ranged from 37 to 43 decibels. Similar results were obtained in late summer with maximums ranging from 45 to 58 decibels and lowest L90 readings ranging from 38 to 44 decibels. While somewhat higher ambient sound levels were found at this site almost certainly due to its more urban location, it would still be characterized as a typically quiet residential site.

During the second round of monitoring, three additional sites were canvassed.

Site 8 – Town Line Road

This site, very close to the end of Runway 10/28 was chosen as an ideal location for aircraft monitoring and observation. During six days of monitoring, the L90 highs ranged from 48 to 53 while lows ranged from 35 to 40 decibels. While a slightly high ambient existed at this site than many others, it remained relatively quiet.

Site 9 – Greenleaf Lane, Wainscott

This residential site was monitored for six days. L90s showed highs in the 48 to 58 decibel range and lows in the 39 to 42 decibel range. These results were somewhat higher than at other residences and more typical of a suburban rather than rural environment.

Site 10 - 44 Woodruff Lane, Bridgehampton

A total of five days of readings were accumulated at this residence. Consistent with other home sites, L90s at their maximum ranged from 42 to 52 decibels and lows ranged from 29 to 43 decibels.

2006 Airport Noise Monitoring Program

A series of sites were monitored during the summer of 2006 using the Solo Data Logging Integrating Sound Level Meters furnished with the Rannoch Air Scene aircraft tracking equipment. These instruments were programmed to obtain one second long average noise level readings in A weighted decibels on the slow response setting. Using supplementary batteries, these units were deployed at a series of sites for as long as five to six days. The resulting data files were transferred to Excel software which was used to obtain four measurements. The first was a series of time history graphs allowing a visual inspection of noise level data broken into six hour long blocks. From these readings the long term average sound level was calculated (Leq), the Day Night Average Sound Level (DNL or Ldn) was calculated and the data was sorted to obtain the L90 level for each six hour data array. Each of these exercises resulted in a series of graphs and data summaries shown in Appendix C. The results are summarized below.

8 Oak Drive North, Noyac

Monitoring took place on July 14 through July 16. Peak noise levels were found to be in the high 60 to low 70 dB range. The long term average was 46.9 dB and the Ldn was 50.5. L90 levels ranged from a low of 26 dB to a high of 40.6 dB. These represent exceptional low background noise levels.

Georgica Estates

Noise monitoring began on July 28 and ended on August 4. Peak noise events were frequent usually in the 60 to 70 dB range, but with occasional peaks above 80 dB. The long term average sound level was 48.8 dB and the Ldn was 53.7 dB. The L90 background noise level ranged from 37.3 dB to 45.8 dB.

179 Northside Drive, Noyac

Monitoring commenced on July 29 and ended on August 2. Peak noise levels were primarily in the 60 dB range with occasional peaks above 70 dB. The long term average sound level was 47.2 dB. The Ldn was 51.6 dB. The L90 levels ranged from a low of 37.5 dB to a high of 41.5 dB.

2229 Deerfield Road, Southampton

Noise monitoring began on August 31 and was completed on September 4. Peak noise events were recorded from the low to mid 60 dB range with occasional peaks in the low 70 dB range.

50 Mill Hill Lane, East Hampton

Monitoring began on July 14 and ended on July 18. Peak noise levels were primarily above 70 dB with occasional lower readings in the mid 60 dB range. The long term average (leq) was 49.0 dB. The Ldn was 59.9, a relatively high reading. The L90 levels ranged from a low of 33.1 dB to a high of 43.7 dB.

East Hampton Airport

Noise levels in the Runway 10 Approach and the Runway 28 Approach were measured simultaneously from August 24 to August 28. As might be expected noise levels were considerably higher than at residential sites. Peaks for the Runway 10 Approach were consistently above 90 dB. Peak noise levels for the Runway 28 Approach were even higher, consistently above 90 dB with occasional peal levels as high as 110 dB.

For the Runway 10 Approach, the measured Leq was 61.7 dB and the Ldn was 65.3. These levels are clearly being influenced by overflying aircraft and occasional on airport aircraft sound. The background noise levels remained low, consistent with residential locations, with a low of 33.1 dB and a high of 43.7 dB.

The Runway 28 Approach showed similar levels. The long term average (Leq) was 64.8 dB and the Ldn was 65.6. Background (L90) noise levels were also consistent with other sites with a low of 39 dB and a high of 44.1 dB.

Summary

All monitored sites showed relatively low background readings as would be expected in a predominantly rural area or low density village. Some variations occurred between monitoring sessions at the same site. However, these are variations involved comparatively small amounts of energy and may result from slight differences in the equipment used. Sound level meters vary more than might be expected due to such factors as internal noise, differences in temperature and humidity, and factors such as human activities and animal and insect sounds. Regardless of these minor differences, every site showed low ambient noise levels at both the high and low end of the ranges measured. All these sites including two on the airport itself would be considered quiet and predominantly rural. For example, outdoor background noise levels were consistently below levels that are suitable for a bedroom environment, i.e., below 45 dB.

C. Local Transportation System

1. Relationship to Airport

The Town of East Hampton owns and operates the airport. The ground transportation system that provides access to the Airport consists of highways, railroads, state routes and public roads. The Airport's main entrance is on Daniels Hole Road located off NYS Route 27, Montauk Highway.

2. Inter-modal Hub

Yearly increases in summer season traffic congestion are a significant problem facing the Town of East Hampton. According to the Town of East Hampton Comprehensive Plan the Town must look to other modes of travel, particularly rail and bus, to accommodate the increased summer population and manage the overwhelming demand on its roadway system.

Recommendations included long-term parking areas, a railroad terminal, bus depot, and freight depot and discharge area would offer practical alternatives to various traffic generators throughout Town. This would likely involve the development of a parking area on the southern end of the Airport property adjacent to Daniels Hole Road and development of a railroad terminal. Those departing the area either by train, bus or by air could park their cars at the transportation center. Taxi and bus service would complement the accessibility of the facility.

While the above-mentioned recommendations have been discussed by various Town Citizen Advisory Committees and background documents contributing to the officially adopted Town of East Hampton Comprehensive Plan, the only consensus on this issue reached after the 4 ½ year planning effort was that the Town should coordinate with other agencies and transportation providers to provide improved public transportation with greater interconnectivity and that further evaluations of concepts such as transportation hubs need to be conducted.

D. Design Aircraft

Airports and their associated runways, taxiways, and terminals are not arbitrarily designed nor developed. Typically they have been or will be designed to accommodate the needs of the most demanding type of aircraft that is likely to use the airport and one that is consistent with the Airport's role within the community. This should generally be done by determining the design aircraft or, more formally, the critical aircraft; which for planning purposes will typically be the most demanding aircraft that has 500 or more itinerant operations annually or has scheduled service. Itinerant operations again are defined as based aircraft (airport tenants) or transient aircraft (non-tenants), including air taxi and charter operations, flying in excess of 20 nm to or from East Hampton Airport.

It is important to understand that choosing a particular Airport Reference Code (ARC) and a design aircraft does not restrict aircraft that fall into a higher design category from operating at the Airport. The ARC is used for planning purposes when determining the ideal design for the airport for that category. It is a standard set by the FAA for airport design and does not govern a pilot's actions. Aircraft currently using the Airport are in excess of the A-II criteria. They are still operating at the airport based on performance and operational adjustments of the aircraft.

Careful consideration must be given when selecting a realistic design aircraft. The design criteria for the entire airport will be based upon it. This selected aircraft, or list of aircraft that are similar in nature, will be evaluated for their runway length demands, impact on the community, etc. Criteria associated with the physical and operational requirements of the critical aircraft to airport design standards are organized into the concept of the ARC. The ARC is derived from two different components of the critical aircraft, its size and speed. Specifically, the wing span and the approach speed of the critical aircraft when landing. The criteria have been established by the FAA in Advisory Circular 150/5300-13 "Airport Design" and are outlined in Table II-22 as follows:

TABLE II-22
AIRPORT REFERENCE CODE CRITERIA

Aircraft Approach Category	Approach Speed		Airplane Design Group	Wingspan
Category A	Less than 91 knots		Group I	Less than 49 ft.
Category B	91 knots up to but not including 121 knots		Group II	49 ft. up to but not including 79 ft.
Category C	121 knots up to but not including 141 knots		Group III	79 ft. up to but not including 118 ft.
Category D	141 knots up to but not including 166 knots		Group IV	118 ft. up to but not including 171 ft.
Category E	166 knots or more		Group V	171 ft. up to but not including 262 ft.

Source: Federal Aviation Administration Advisory Circular 150/5300-13 Change 10 *Airport Design*.

There are a number of alternatives with subsequent aeronautical impacts that can be assessed to determine what ARC and critical aircraft would best suit East Hampton Airport. The Town of East Hampton, as owner and operator of the Airport, can choose to maintain the current conditions otherwise known as the "do nothing approach." This would entail retaining the current ARC designation of A-II with the Twin Otter as the critical aircraft, as per the last approved Airport Master Plan.

Another option would be to select a classification based on current usage of the Airport. Based on customary industry practices and interpretation it is understood that the ARC can not be decreased at this point in time due to federal grant assurances obligating the Airport to maintain its current availability to the flying public.

For example, aircraft are being flown at weights lower than their full capacity to allow them to utilize the existing length of the runway. This decision is made by the pilot after consideration of aircraft performance characteristics and operational capabilities is made. However, this does not usually mean that selection of a critical aircraft is a meaningless effort. Imposing a specific set of design requirements will ensure that there are no uncertainties pertaining to the safety standards that must be maintained by the airport.

The following is a listing of design aircraft under consideration for East Hampton Airport. These airplanes are being considered based upon historical factors, future trends, existing condition, and local community impacts.

Design Aircraft Alternative # 1-"Twin Otter"
Existing Design Aircraft

Taken from the last adopted and approved 1989 Airport Master Plan, it is understood that the current ARC selected for East Hampton Airport is A-II. This determination was based on the acceptance of the DeHavilland DHC-6, otherwise known as the Twin Otter, as the critical aircraft. The Twin Otter was certificated in the mid 1960's, has an approach speed of 75 knots and a wingspan of 65 ft., and is capable of holding up to 20 passengers. It was considered the most demanding aircraft using or expected to use the airport in 1989.

FIGURE II-20
TWIN OTTER

Source: Photo by Richard Hunt, UK1989

Jets were not considered from a facilities requirement standpoint due to lack of accommodating pavement. More modern jet aircraft require longer and wider runways due to performance characteristics such as higher approach speeds and more formidable pavement strengths due to heavier operating weights. In 1989 the runway characteristics were as described in Table I-23 below.

TABLE II-23
AIRFIELD SPECIFICATIONS IN 1989

Runway	Length (ft.)	Width (ft.)	Weight Bearing Capacity (lbs.)
10-28	4242	75	Single Wheel 8,000
16-34	2220	75	Single Wheel 8,000
4-22	2501	75	Single Wheel 8,000

Source: 1989 East Hampton Airport Master Plan

The weight bearing capacity is likely to have had the most substantial impact in deterring jet aircraft at the time. This value is a realistic estimate of how much weight the pavement of a runway, taxiway, or parking apron could handle without being adversely impacted under normal conditions and levels of activity. Typical jet aircraft have gross weights much heavier than 8,000 lbs. Today, the pavement on Runway 10-28 has a Single Wheel Weight Bearing Capacity of 60,000 lbs. and it is understood that many of the taxiways and aprons are strengthened for such heavier aircraft. The width of Runway 10-28 was also increased from 75 ft. to 100 ft. This width may be associated with the design criteria for ARC B-II runway that has an instrument approach with visibility minimums less than ¾ mi. or a critical aircraft that falls in Design Group C or higher.

Currently the Twin Otter does not accurately represent the definition of the critical aircraft for East Hampton Airport. Moreover, the aircraft fleet mix at today at the Airport is also much different than it was in 1989. It is understood that the regular charter service provided by the Twin Otter at the time ceased operating many years ago and the demand was likely absorbed by more modern aircraft. Industry trends could also be an important factor in understanding the increased presence of larger, faster, jet aircraft at East Hampton Airport. Since the 1980's, jet aircraft have become more technologically advanced, readily available, affordable, and thus popular. Trends in general aviation appear to show a preference for use of private jets for conducting business or tourism, especially in the post September 11th era. Charter companies have capitalized on this by marketing the concept of "Fractional Ownership," which is essentially timeshare purchases in private jets. NetJets and Citation Shares are two such companies with a varied fleet of jet aircraft that frequently operate at

East Hampton Airport. Additionally, the economy, affluence of the local community and its residents, and increased popularity of the area for summer housing and tourism are some possible reasons for the upgrade in fleet mix and the increased use of the airport. The industry has changed since the 1980's. In summary, jet aircraft in the past two decades have appeared to dominate the particular facet of the general aviation market that has developed to support the demand for transport and access to East Hampton and its adjacent communities.

Facilities Implications of the Twin Otter

As already stated, the selection of the critical aircraft should be consistent with the Airport's role within the community. The decision to maintain the Twin Otter as the critical aircraft is indicative of support for the "do nothing approach". If is chosen, only the present design standards that pertain to ARC A-II/Twin Otter combo would need to be maintained. However, it is understood that the present Runway Safety Area lengths for runway 10-28 and 4-22 do not meet standard, as they are intercepted by Daniels Hole Road. Several concepts for mitigating this present deficiency will be present later on in this study.

Design Aircraft Alternative # 2-"Challenger 600"
Design Aircraft of 1994 and 2002 Master Plans

Prior to this study, it is understood that there were several attempts to update the Airport Master Plan for East Hampton Airport. However, these plans apparently were never adopted. The selection of the critical aircraft in these prior reports reflects the above mentioned trends toward business jets. Two separate studies, one completed in 1994 and another in 2002, recommended the Challenger 600 as the critical aircraft to represent a middle ground for the mix of Category B, C, and D jets operating at the Airport. This aircraft would require an increase to meet ARC C-II standards for Runway 10-28. The Challenger 600 has an approach speed of 125 knots and wingspan of 64 ft., 4 in. This aircraft is a twin engine general aviation jet, certificated to hold up to 19 passengers depending on configuration.

FIGURE II-21
CHALLENGER 600

Source: www.avbuyer.com

The prior studies recommended reducing the ARC designation for Runways 16-34 and 4-22 specifically. They recommended that these existing runways be designed to serve smaller piston engine aircraft since their lengths prohibited them from accommodating jet aircraft. These studies proposed that the critical aircraft for Runways 16-34 and 4-22 should be the twin engine, turbo-prop Beechcraft Baron (ARC B-I) based on their lengths at the time.

FIGURE II-22
BEECHCRAFT BARON

Source: www.aircraftdealer.com

Facilities Implications of the Challenger 600 and Baron

If the Challenger 600 is chosen as the critical aircraft, some dimensional adjustments may be necessary at the Airport, potentially an increase runway length. The take-off performance characteristics of the Challenger 600 with the most extreme conditions present (aircraft at full passenger capacity and full fuel, on a hot day) will require more than the 4,242 ft. of runway at East Hampton Airport. (Exact runway length requirements will be determined later during the study). An analysis of alternatives for runway safety area compliance will likely be required. Additionally, for planning purposes the airport may need to consider additional hangars and fuel storage to accommodate the needs of this aircraft.

Design Aircraft Alternative #3-"Citation V"
"Largest Based Aircraft as Design Aircraft"

As previously stated, the critical aircraft is used as a planning tool to determine the necessary development of the airport to meet the aeronautical demands while minimizing local impacts. However, East Hampton Airport has been operating with a critical aircraft that has not been present in the fleet mix since the 1980's. The mix of aircraft at the Airport has even changed since the conclusion of the two previous studies.

Today, using the technical definition, the critical aircraft for East Hampton Airport could be the Cessna Citation V, or C 560 according to ICAO code, which has a passenger seating capacity of 8-10 people, a wingspan of 52 ft., and an approach speed of 100 knots. This aircraft is highly popular with current charter companies and fractionals operating at the Airport and conducts more than 500 operations per year. The Citation V would increase the current ARC for the Airport from A-II for all runways to a B-II for Runway 10-28.

FIGURE II-23
Citation V

Source: www.speedwings.ch

Runway 16-34 and 4-22 today typically serve single engine aircraft. The width of Runway 4-22 has been increased to 100 ft; its length has remained 2,501 ft. as described in the official 1989 Master Plan. The length and width of Runway 16-34 has also remained unchanged. Both of these runways could serve the GA community as simply Category B Design Group I (ARC B-I) runways. The critical aircraft for these two runways could again be the Beechcraft Baron from Figure II-23 or another aircraft similar in size and performance that fits into the ARC B-I criteria.

Facilities Implications of the Citation C V and Baron

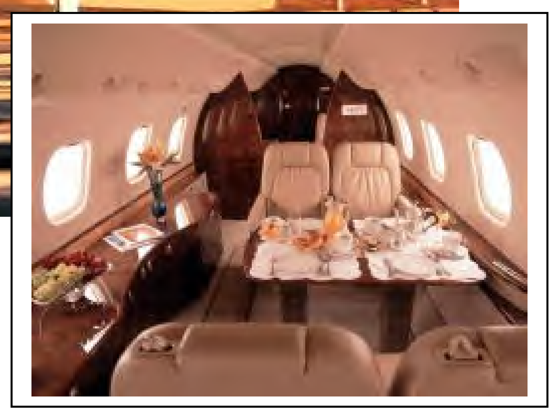
Selection of this aircraft would support a limited growth strategy in terms of the Airport's role within the community. The Citation V has needs similar to, but not as demanding as the Challenger 600. Potential modifications of the Airport may include a runway extension to comply with the aircraft's worst case scenario take-off requirements, increased hangar space, and greater fuel storage and supply capabilities. The B-I designation of the smaller runways might include decreasing the standards. Runway safety area compliance analysis will likely be necessary.

Design Aircraft Alternative # 4-"Very Light Jets"
Possible Trend

The concept of "Very Light Jets" or "VLJs" is brand new to the industry. In fact, most manufacturers are still only taking orders or in the final stages of certification. The appeal of the VLJ is that they can diversify the cost and structure of charter and corporate aircraft fleets, allow access to smaller airports by requiring less runway length for takeoff and landing, and are affordable for the wealthier pilot who would like to own and fly his or her own jet.

There are at least 17 manufacturers of the various models of VLJs. Typically each jet can be operated by a single pilot and is large enough to carry between 6 and 10 passengers. An average wingspan between the various models is 40 ft. with an approach speed of approximately 90 knots, putting it into the A-I ARC Category. The media has been calling this aircraft "the Flying Minivan." An example of a VLJ would be the Eclipse 500.

FIGURE II-24
ECLIPSE'S VERSION OF THE VLJ



www.aerospace-technology.com

The following tables show the various manufacturers and models of these jets and their associated production information.

TABLE II-24
PROTOTYPES BUILT AND UNDERGOING FLIGHT TESTING

Design	Manufacturer	Seats	Max. Cruise	Cost	Sold	Certification
Eclipse 500	Eclipse Aviation [1]	6	375 knots	$1.49 million	2,400	July 26, 2006
Citation Mustang	Cessna [2]	6	340 knots	$2.62 million	240	2006
Adam A700 AdamJet	Adam Aircraft Industries [3]	7	340 knots	$2.28 million	282	2006
Diamond D-Jet	Diamond Aircraft [4]	5	315 knots	$0.93 million	125	early 2008
ATG Javelin	Aviation Technology Group [5] Israeli Aircraft Industries [6]	2	530 knots	$2.80 million	> 100	early 2008
Spectrum Aero Model 33	Spectrum Aeronautical [7]	9	415 knots	$3.65 million		Q1 2008
Excel-Jet Sport-Jet	Excel-Jet [8]	5	340 knots	$1.00 million		early 2008
Honda HA-420 HondaJet	Honda [9]	6-8	420 knots	one-off-production announced		production announced

TABLE II-25
CURRENTLY UNDER DEVELOPMENT

Design	Manufacturer	Seats	Max. Cruise	Cost	Sold	Certification
Embraer Phenom 100	Embraer [10]	6-8	380 knots	$2.85 million		mid 2008
Epic Jet	Epic Aircraft [11]	7	390 knots	$2.10 million		early 2008
Vantage Jet	Eviation Jets [12]	10	424 knots	$3.00 million		late 2007

TABLE II-26
HOMEBUILT DESIGNS

Aerocomp Comp Air Jet	Aerocomp [13]	8	320 knots	< $0.87 million		
Viper Jet	Viper Aircraft [14]	2	460 knots			
Maverick Leader III	Maverick Jets [15]	4	472 knots			

TABLE II-27
DORMANT OR CANCELLED PROJECTS

Avocet ProJet	Avocet Aircraft [16]	6	365 knots	$2.00 million		cancelled 2006
Safire Jet	Safire Aircraft [17]	6	380 knots	$1.40 million		dormant 2005
Century Jet	Century Aerospace [18]	6	370 knots	$2.70 million		dormant 2001

Source: www.wikipedia.com

Facilities Implications

Modifications to the existing airfield and facilities at East Hampton Airport might be appropriate if the VLJ is considered as the design aircraft. Runway safety area compliance analysis will be required. However, it is likely that these aircraft are too new to the industry to anticipate what impacts they might have on the existing infrastructure. The only basis for forecasting future popularity of these aircraft is the reported amount on order by the various manufacturers.

Design Aircraft Alternative #5-"King Air 90"

Another alternative selection for the critical aircraft at East Hampton Airport could be the King Air 90 produced by the Beech Aircraft Company, now a division of Raytheon Aircraft. The King Air 90, also know as the B-90 or F-90, was originally manufactured in 1964 and is equipped for seating two crew and five passengers. It powered by dual turbo-propeller engines and is considered by the FAA as a small aircraft, since its maximum take-off weights is less than 12,000 lbs. The King Air has an approach speed of 108 knots and wingspan of 45.9 ft.; requiring an ARC designation of B-I if chosen as the critical aircraft.

FIGURE II-25
BEECH KING AIR 90

Source: www.aircraftdealer.com

Facilities implications

This aircraft, like the Citation V, is consistent with the limited growth strategy. Selection of the King Air 90 as the critical aircraft for East Hampton Airport would allow for simple modifications of the airfield in its existing condition. Runway safety area analysis will be required. A potential decrease in length and width for Runway 10-28 could be considered.

Summary

Each potential critical aircraft and its associated ARC classification will likely have varying impacts in the general areas described in the table. These impacts will be examined in much greater detail in the following section.

III. Airport Facilities and Planning

Typically, airport planning studies identify a design aircraft and utilize the standards that pertain to this family of aircraft. In the past, at least two Master Plan studies were undertaken using this format and were ultimately not approved by the Town Board.

This document takes a unique approach toward developing a plan for East Hampton Airport. This study develops specific objectives for the airport first and then secondly proposes a design aircraft that would meet that objective. A major consideration in developing these specific objectives was the effect upon the community.

Four (4) objectives were used in developing alternatives for potential projects at the East Hampton Airport:

No Action. This alternative assumes that no changes are made at the airport. The airport would continue operating in its present condition and the impacts upon the airport would remain the same. The design aircraft would remain the same as identified in the approved Master Plan (Twin Otter). All non-compliance issues will be identified while reviewing projects under this scenario.

Alternative #1. This alternative looks at potential alterations to the airport that would considerably minimize environmental impacts, even if it would not meet the demands of the present air traffic at East Hampton Airport. This alternative considered providing the airport with design standards associated with small airplanes. The design aircraft assumed in this case is the Beech Baron, which currently operates at East Hampton airport. This aircraft is not representative of the current mix of traffic, since many larger aircraft currently operate at the airport.

Alternative #2. This alternative utilizes the existing airside and landside facilities as much as possible while increasing safety and controlling the impact upon the surrounding community. Alterations to the existing airfield are kept to a minimum, while complying with the appropriate FAA standards. The airfield is configured in such a manner as to meet the design standards typically associated with a Citation 560. The Citation 560 is a current user of the airport and meets the requirements for a design aircraft at the present moment.

Alternative #3. This alternative assumes the most demanding aircraft presently using the field will remain the most demanding aircraft in the future. The plans, that would accommodate this scenario, would include expansion projects to meet the standards for the most demanding airplane. The most demanding airplane using East Hampton Airport presently is the Bombardier Challenger 604. This alternative may include runway extensions and road relocations, which would have the greatest effect upon the environment.

Alternative #3 assumed a portion of the field would continue to be used by small airplanes. Specifically, sections discussing Runway 4-22, Runway 16-34 and Taxiways assume that current small airplanes would continue using these facilities.

While establishing design aircraft, special consideration was given to the Twin Otter and Very Light Jets (VLJs). The Twin Otter no longer is applicable to East Hampton, but its design standards were used in analyzing the No Action Alternative. The performance of a VLJ would allow this aircraft to utilize minimal facilities and would have the capability of using the airport under any of the alternatives. As a result, it was not used as a design aircraft. See next section entitled "Twin Otter – Current Design Aircraft" for a more in-depth discussion of these aircraft.

The following figure shows the three aircraft under considered:

FIGURE III-26
POTENTIAL DESIGN AIRCRAFT

B-I – "Beech Baron"

B-II -"Cessna Citation 560"

C-II – "Challenger 604"

Source: www.aircraftbuyer.com

Twin Otter – Current Design Aircraft

The Twin Otter will be used as the design aircraft for the No Action Alternative since it was the design aircraft for the 1989 Master Plan, which is the current and valid version of the document. When the 1989 Master Plan was conducted, this aircraft had an established passenger transport operation at the airport and was considered to be the most demanding aircraft with or expected to have 500 or more operations.

The Twin Otter should be excluded from design aircraft consideration since its presence is either infrequent or non-existent today for many reasons including:

- The charter company previously providing service to the Airport is no longer operating.
- The presence of the Twin Otter is not prevalent in Airport Operations Logbooks and AirScene records.
- The Twin Otter appears to be obsolete according to recent developments and current industry preferences. Due to fuel economics, desired passenger comfort level, and technological advancements leading to increased operating efficiency and safety; more modern jet aircraft are preferred by many private aircraft owners and charter companies.
- Based on trends, small turbo-prop powered aircraft likely will not provide the same level of satisfaction and efficiency and may not cater to the upscale clientele of East Hampton Airport.

Very Light Jet (VLJ)

The VLJ is new to the industry, and therefore difficult to forecast its impact or interpret any trends. Currently, these aircraft are in the final stages of production. They are not presently operational in the industry and the only way to gauge their future presence would be based upon orders placed through the various manufacturers.

The VLJ may or may not cater to the clientele specific to East Hampton Airport. VLJs appear to be more popular in the private ownership arena because these aircraft are authorized for single pilot operation and are capable of using shorter runways. It appears that larger, more luxurious private jets are the predominant customer of East Hampton Airport.

Regardless, of the VLJs potential future trends, this aircraft would have little impact upon the design of East Hampton Airport.

Specific Projects

The majority of this chapter analyses specific projects or alterations to the airport. Each project or alteration is presented as follows;

- Effect upon Aircraft Activity
- Description of the Improvement
- Compliance with Applicable Standards
- Conclusion and Impacts
- Applicability to Alternatives and their Objectives

There are some proposed projects that are not affected by the selection of a critical aircraft at East Hampton Airport. The following sections consist of a mixture of projects and concepts for the airport, some are contingent upon the design aircraft selection and some are not.

This chapter is used as a basis for developing comprehensive airport plans for the four (4) objectives established for this study. A table is provided at the end of this chapter, summarizing the actions that would be taken to meet these objectives. Chapter 5 will present each of these alternatives, utilizing this summary table.

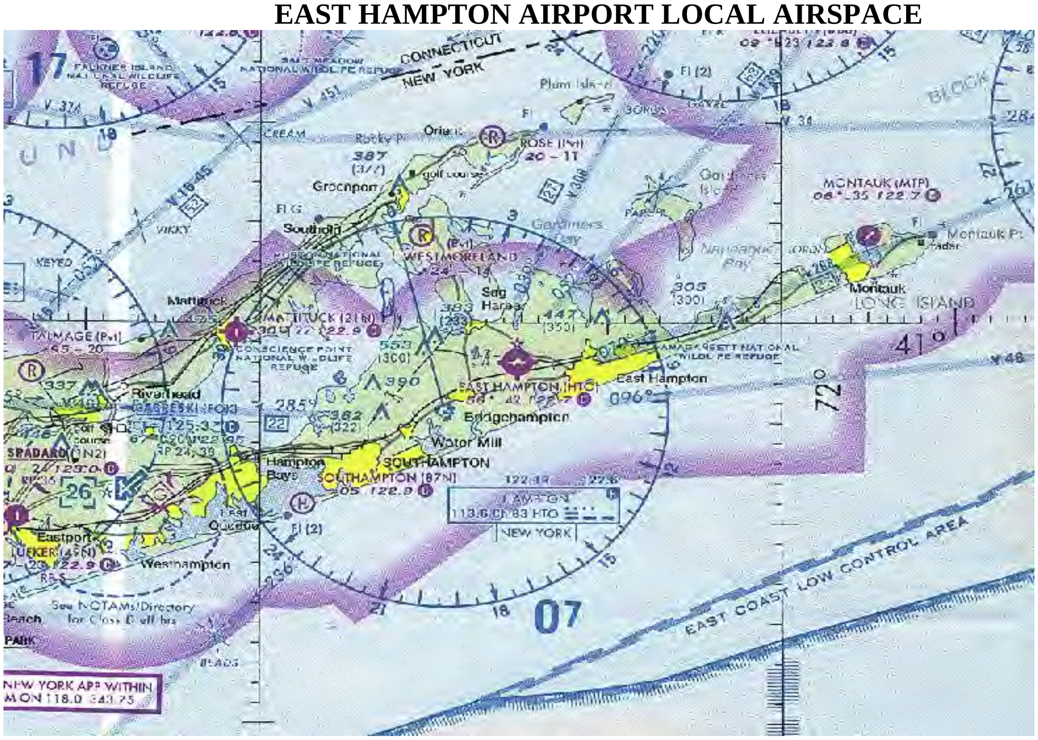
A. Airspace Vicinity and Use

Airspace classes have different and very specific requirements. Class A, B, C, D and E Airspace are Controlled Airspace. Class G Airspace is Uncontrolled Airspace. East Hampton Airport physically exists within Class G or uncontrolled airspace. Specifically, this means that there is no Airport Traffic Control Tower (ATCT) located at the Airport and there is no Terminal Radar Approach Control (TRACON) or Air Route Traffic Control Center (ARTCC) coordination required within this airspace. Class G airspace is the only class that is considered uncontrolled, and is prescribed to areas where Air Traffic Control is not deemed necessary or can not be provided due to lack of radar or other limitations. Typically, it can be assumed that all airspace in the United States that is not classified as Class A, B, C, D, or E is classified as Class G airspace.

Normally Class E airspace begins at ground level or at an altitude of greater than 700 feet above the surface. It extends up to 18,000 ft. MSL, where it abuts Class A airspace. At uncontrolled airports with official weather reporting equipment (such as an AWOS), Class E airspace will extend down to the surface.

The following graphic provides a depiction of the airspace surrounding East Hampton Airport. The areas inside the soft edge of the shaded purple border are delineated as Class E (controlled airspace). This particular airspace begins at an altitude of greater than 700 feet above the surface and extends upward to 18,000 ft. where it abuts Class A airspace. All the airspace beneath 700 feet within the soft edge of the shaded purple border and the areas on the outside of the hard edge of the border is considered Class G, uncontrolled airspace. East Hampton Airport is in Class G Airspace and is located in the center of this image.

FIGURE III-27
EAST HAMPTON AIRPORT LOCAL AIRSPACE



Source: DOT-New York Sectional Aeronautical Chart (May 2006)

Operating criteria for aircraft in Class G Airspace is less restrictive than for aircraft operating in Class E Airspace. Required visibility and required cloud separation distances are slightly less demanding than Class E airspace criteria.

Airspace classifications are used for delineating operating rules for pilots and for providing ATC service. The installation of an AWOS, described in the next section, will change the Airport's airspace from Class G to Class E. As such, required visibility and cloud separation distances will become slightly more restrictive, and Air Traffic service will extend to the surface. The type and frequency of traffic at the Airport will not be impacted. As a result, Airspace will not be considered as a component of the alternatives presented later in the report. However, it is helpful to have an understanding of airspace as we proceed into the rest of the Chapter.

1. Automated Weather Station

An Automated Weather Observation Station (AWOS) provides current and accurate weather conditions specifically for the Airport. AWOS systems automatically measure meteorological conditions including cloud height, visibility, wind speed and direction, temperature, barometric pressure, and the dew point. The AWOS electronically analyzes the data, which is then broadcasted via weather reports that can be received on aircraft radios or from a regular telephone. The AWOS does not predict weather but sends current information to weather offices where forecasts are produced using this information. The information is transmitted to a computer station which can be displayed in the Airport Terminal Building. The weather information is beneficial to pilots in developing their flight plans. AWOSs vary in size, dimensions, and capabilities depending on the manufacturer.

Currently, an AWOS is being designed for installation at East Hampton Airport. The proposed AWOS would be located in the triangle between the three runways. Typical system components consist of:

1. Airfield Equipment:
    a. 30 ft. tower
    b. Wind Speed Sensor
    c. Wind Direction Sensor
    d. Ambient Temperature Sensor
    e. Pressure Sensor
    f. Cloud Height Censor (Ceilometer)
    g. Visibility Sensor
    h. Data Collection Processor

i. AWOS Data Link (UHF Transmitter with antenna)

2. Indoor/Attendants Office Equipment
   a. AWOS Data Processor
   b. AWOS Data Link Receiver and Antenna
   c. Operator Terminal
   d. VHF Voice Subsystem
   e. VHF Transmitter and Antenna

FIGURE: 28
AUTOMATED WEATHER OBSERVATION STATION

http://www.nashuaairport.com

Installation of an Automated Weather Observation Station (AWOS) at East Hampton could potentially have a positive impact on its users and the surrounding community. East Hampton Airport currently does not have an all inclusive official weather system. There are benefits to the airport and its users associated with installing an AWOS including:

Increased safety- An AWOS is advantageous to the safe and economic operation of any airport. Few things change quicker than the weather. An AWOS would provide a more reliable source of weather information. Currently, the closest source of official weather information is Westhampton Gabreski Airport. By definition, installing an AWOS at an airport allows the airspace to change from uncontrolled to controlled. Specifically, the airspace at East Hampton Airport would change from Class G to Class E. Subsequently, pilots on IFR flight plans would be required to maintain communication with Air Traffic Control all the way down to ground level. For aircraft that are operating under Visual Flight Rules (VFR), the Airspace operational clearance requirements and criteria becomes more restrictive (see preceding section on Airspace).

With an AWOS, pilots intending to land would be better informed of the weather conditions at East Hampton Airport and would be able to decide further away from the airport whether it is appropriate for them to continue or divert to another location. In the absence of an AWOS pilots will descent and will be much closer to the airport before deciding to continue or to divert to another airport.

Potentially Reduced Diversions- Presently, pilot requests for barometric pressure values for East Hampton Airport are supplied via radio from ground-based personnel at Sound Aviation. The barometric pressure value is required, as it is used to set the altimeter of an aircraft correctly. This method, for obtaining barometric pressure, is not always available. If the setting can not be obtained from the FBO (Sound Aviation), the values for Gabreski must be used and instrument approach minimums are increased. An AWOS at East Hampton Airport would automatically provide barometric pressure and visibility to pilots. It would enable pilots to make their decision to land or not land much further from the airport.

Make the Airport more user friendly- The pilots will have advanced notice of the weather conditions at the airport and will be able to make informed decisions on whether to continue the approach or travel to another airport. This added service to the flying community provides a friendlier atmosphere to its users.

The effect upon the community of East Hampton and adjacent communities to East Hampton Airport are minimal:

- ***Official weather reporting-*** An AWOS would provide an official National Weather Service weather reporting system and source as well as a means for maintaining official weather records in the Town of East Hampton.

- ***Change in Traffic-*** It is highly unlikely that installation of an AWOS would noticeably impact the community. Based upon installations at other airports an AWOS does not attract new traffic. The AWOS does serve the existing traffic better.

  However, a slight risk of some change in operations/traffic at the Airport may exist. An AWOS may slightly decrease the amount of traffic at the Airport, since pilots will be able to determine if the current local weather conditions are not favorable enough to land at East Hampton Airport. This condition would result in aircraft possibly diverting their travel to another airport or canceling their flight altogether.

  Make the Airport more community friendly- When aircraft are diverted to other airports, convenience is compromised. Passengers are forced to find alternative means of getting to their destination which could include renting a car or taking a car service to drive to East Hampton, or even taking the railroad. Both methods could potentially be time consuming and annoying to the local community who rely on the Airports for transportation.

A design for an AWOS is currently being prepared for public bidding for East Hampton Airport. The FAA is currently reviewing FAA Form 7460 – Notice of Proposed Construction or Alteration.

The installation of an AWOS will be considered as a component of each of the alternatives presented later in the report, except for the No Action Alternative

2. Control Tower

The purpose of an Airport Traffic Control Tower (ATCT) is to provide for safe, orderly, and expeditious flow of traffic on and in the vicinity of an airport. Towers equipped with the appropriate radar also provide for the separation of IFR aircraft in the terminal areas. The tower size, and to a certain extent, the method of operation generally depends on the number of aircraft operations conducted at the airport. ATCTs normally exist at busier airports and have different characteristics depending on the classification of the surrounding airspace. Once an ATCT is established, the airspace above it will be classified as Class B, C, or D as per FAA Airspace Regulations. A definition of airspace classes is provided earlier in this Chapter. The construction, operation, and maintenance of ATCTs can be Governmental or privatized.

A control tower would not alter airplane traffic at the Airport. The type of traffic would not change at East Hampton Airport due to the installation of a tower.

The construction of ATCTs was initially a financial responsibility of the Federal Aviation Administration (FAA). Criteria for establishing a control tower was developed and published in 1951. FAA ATCTs are established by the FAA through the F&E Program and Airport Improvement Program or the Federal Contract Tower (FCT) Program.

Criteria outlined by the FAA for qualifying for a Federal ATCT are published in the Federal Aviation Regulations (FAR) Part 170. According to Part 170.13 of the regulation, the following requirements along with general facility design standards must be met before an airport can qualify for a Federal ATCT:

(1) The airport must be open to and available for use by the public;
(2) The airport must be included in the National Plan of Integrated Airport Systems;
(3) The airport owners/authorities must allow the airport to operate for a long enough period to permit the amortization of the ATCT investment;
(4) The FAA must be furnished appropriate land without cost; and
(5) The airport must meet specified benefit-cost ratio criteria.

It is unlikely that East Hampton Airport will qualify for an FAA ATCT based on its current seasonal usage as it relates to the benefit-cost ratio. In all likelihood, a private company would need to operate a tower at East Hampton Airport.

There are several different private companies offering ATCT Services to airports that would not otherwise qualify for an FAA sponsorship. Examples of firms that provide this service are:

- Robinson-Van Vuren Associates, Inc.
- Midwest Air Traffic Control Services Inc.
- EuroControl Jobs Section: Europe
- Serco ATC
- Walker Air Traffic Services Incorporated

The cost of installation and operation of an ATCT without federal funding would normally be absorbed by the airport through user fees/other revenue sources, or through the local municipality. Financial considerations include operating costs such as staffing, maintenance, equipment, supplies, and leased services; and investment costs such as facilities, equipment, and operational start-up funds as this money will come from local resources.

For East Hampton Airport, the facility requires a clear line of site between controllers and the Airport and surrounding airspace. The best location for the proposed facility would be on the South side of the Airport, about midfield of Runway 10-28.

Construction of the ATCT would be consistent with the Alternatives #2 and #3. As a result, the ATCT will be considered as a component of both alternatives presented later in the report.

The tower can also be provided by modifying the existing terminal building with an elevated cab. The infrastructure is generally in place, and some structural enhancements will need to be made to support this addition to the building. At the proper height, this location will have the needed line of sight to all portions of the field, as well as the approaches to the runways.

The tower will require FAA approval for the selected site and an airspace analysis will be implemented to ensure compliance to FAA standards. The construction of the tower will also require local approval from the Town's Building Department. In addition, the nature of this project would warrant an environmental review.

East Hampton Airport appears to have a largely seasonal demand. A control tower could potential be a useful commodity during this peak period. Construction of an ATCT at East Hampton Airport could potentially have a large operational impact on its users and the surrounding community. Operational impacts on the airport could include:

a. ***Increases air and ground safety-*** ATCTs oversee air/ground operations of aircraft.
b. ***Allow positive control of aircraft in the airspace/airport environment-*** An ATCT could provide air and ground traffic procedural instructions, ensure aircraft separation, and facilitate aircraft requests.
c. ***Provide a method to reinforce Airport Traffic Patterns-*** ATC instructions, except in the event of an emergency, are mandatory. Therefore, an ATCT at the Airport could reinforce Traffic Patterns and Approach Procedures.
d. ***Help implement recommended noise abatement procedures-*** An ATC could provide instructions that could protect noise sensitive areas.

Potential impacts on the community of East Hampton and those adjacent to East Hampton Airport might include:

- ***Potentially help limit areas negatively impacted by noise-*** Aircraft compliance with Airport Noise Abatement Procedures would be promoted via ATCT instruction.
- ***Change in Traffic-*** It is highly unlikely that installation of an ATCT would noticeably impact the community. An ATCT would not likely attract new or additional traffic to the Airport; it would simply better serve the existing traffic. However, a slight risk of some change in operations/traffic at the Airport may exist.

An ATCT is not required at East Hampton, but could provide some of the above listed benefits. It is important to note that these impacts would provide the greatest benefit during the peak season months between May and October. Refer to the Forecasting Section in Chapter Two. The mix of small and large aircraft and helicopters is more diverse and operations are increased during the peak season. Operating a seasonal ATCT to provide services to these aircraft would be more practical approach to providing this service.

Many private companies offering air traffic control can supply their services on a temporary basis. This means that the Airport and its surrounding airspace would be staffed during the busy summer season and then become uncontrolled during the off season. The operation can be set up in an existing facility on the airfield.

3. Potential Flight Track Adjustments

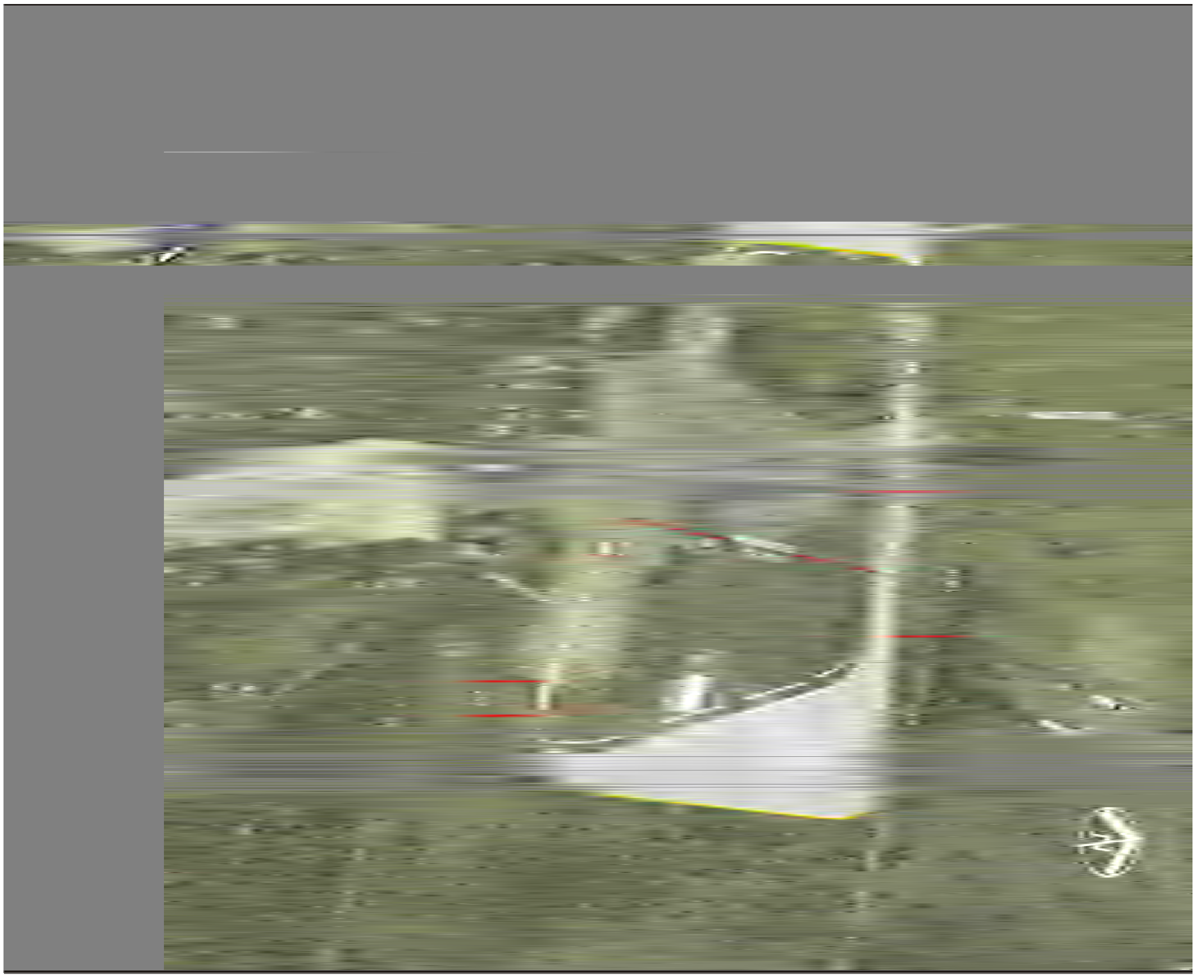
Airport Traffic Pattern

As already described in Chapter 1, standard Airport Traffic Patterns, executed with left-hand turns and flown 1000 ft. above ground level (1500 ft. for jet aircraft), exist for all runways at East Hampton Airport. *The traffic patterns for Runways 10-28, 16-34, and 4-22 appear in the following figure.*

For legitimate reasons such as noise abatement, terrain avoidance, or other significant safety concerns the airport traffic pattern may be reversed (with approval from the FAA). Typically this means only the direction (left hand turns vs. right hand turns) would be changed. Altering the height of traffic pattern is unusual as it is a potential compromise to the safe operation of aircraft while supplying little or no noise benefit. Changing the direction of the pattern from left to right, or vice versa, flips the traffic pattern from one side of the runway to the other.

The following figure depicts a birds eye view of a non-standard pattern (right handed turns) flown for Runway 28. With a right hand pattern a pilot would remain on the North side of Runway 28. This is the opposite of the current procedures where left turns are made resulting in traffic flow over the South side of Runway 28.

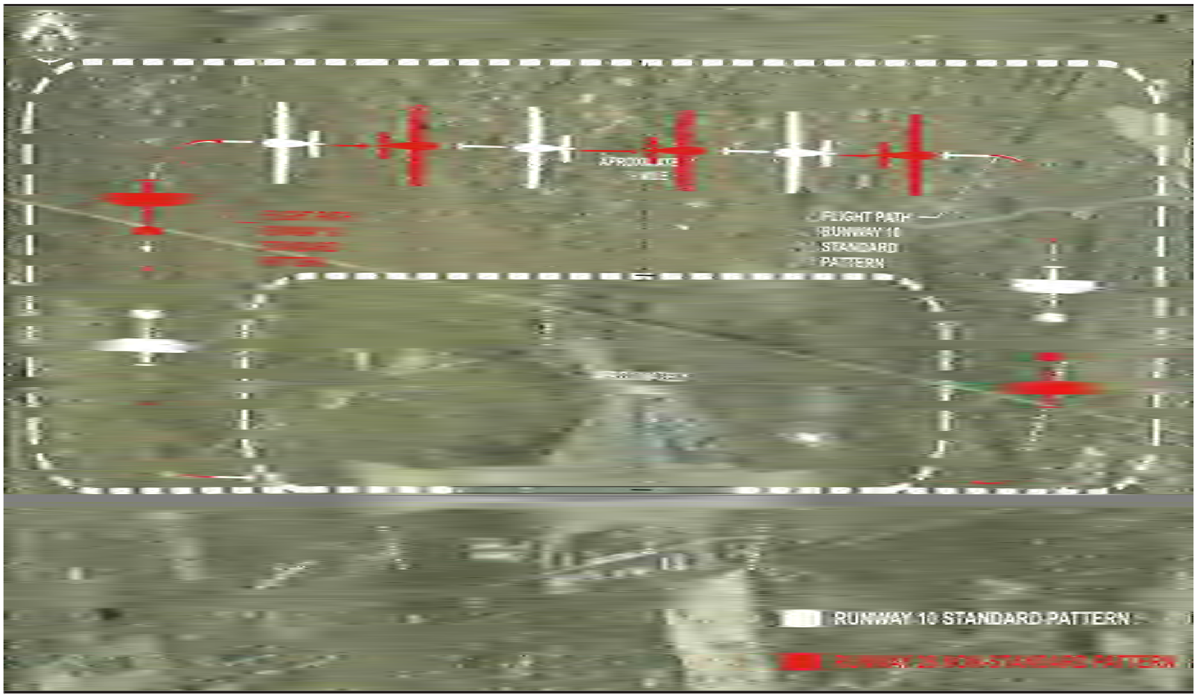
FIGURE III-29
3-D RUNWAY 28 RIGHT HAND TRAFFIC PATTERN



Source: DY Consultants

The figure below depicts the flow of traffic if a left-handed, standard traffic pattern for Runway 10 and a right-handed, non-standard traffic pattern for Runway 28 were utilized. Note that all operations for both ends of Runway 10-28 remain on the North side of the runway.

FIGURE III-30
STANDARD/NON-STANDARD TRAFFIC PATTERN COMBO

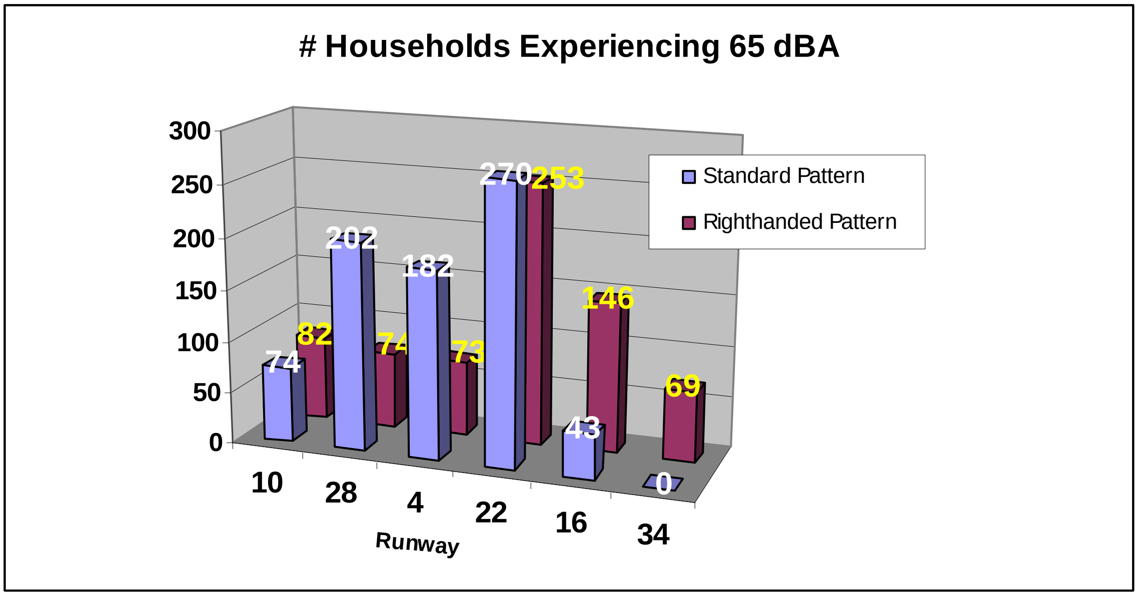


Source: DY Consultants

The designation of traffic pattern direction depends on circumstances specific to each airport. At East Hampton Airport, there are no terrain, obstruction, or safety concerns that would favor one particular direction to another. However, noise disturbances may be affected by a change in Traffic Pattern direction.

The next figure depicts the results of a general noise analysis done for each runway traffic pattern at the Airport. The number of occurrences where a household experienced a noise event at the 65 dBA level based on a Beechcraft Baron flying a standard and non-standard traffic pattern for each runway is displayed.

FUIGURE III-31
AIRPORT TRAFFIC PATTERN NOISE ANALYSIS



Source: Young Environmental Sciences

It appears that the combination of traffic patterns which produces the least noise disturbance would be as follows:

Runway 10-28:

Rwy 10: Standard

Rwy 28: Non-Standard

This would result in the traffic flow remaining to the North of the runway.

Runway 4-22:

Rwy 4: Non-Standard

Rwy 22: Non-Standard

Traffic would remain on both sides of the runway.

Runway 16-34:

Rwy 16: Standard

Rwy 34: Standard

Traffic would remain on both sides of the runway.

It is possible that impacts to the community might exist if the traffic pattern where changed according to the above configuration. However it is important to note that the 65 dB noise contour is not an authorized federal or industry standard or limitation. The 65 dB contour was evaluated since it is the instantaneous noise level used by the Town of East Hampton for ground noise control purposes. Currently, it appears that some potentially noise sensitive areas adjacent to the Airport exist. Changing the traffic pattern according to the Town's ground noise standards may be beneficial in terms of airport noise mitigation. Further noise analysis should be done at the completion of the study.

In terms of aircraft operations, changing the direction of traffic flow may be an inconvenience to the users of the Airport who are accustomed to a set method of operation. However, the type and frequency of the traffic would not change. In terms of safety, the FAA recommends implementation of a standard traffic pattern at non-towered airports. Standardization is important at such airports to ensure that safe and orderly aircraft operations into and out of the airport. Moreover, left-handed patterns serve as the standard since they promote the greatest visibility during turns for the Captain or Pilot in Command who sits on the left side of the cockpit.

A change in Traffic Patterns at the Airport does not necessarily impact the intent of Alternatives #1, #2 and #3. As a result, the Traffic Pattern will not be considered as a component of each of the alternatives presented later in the report.

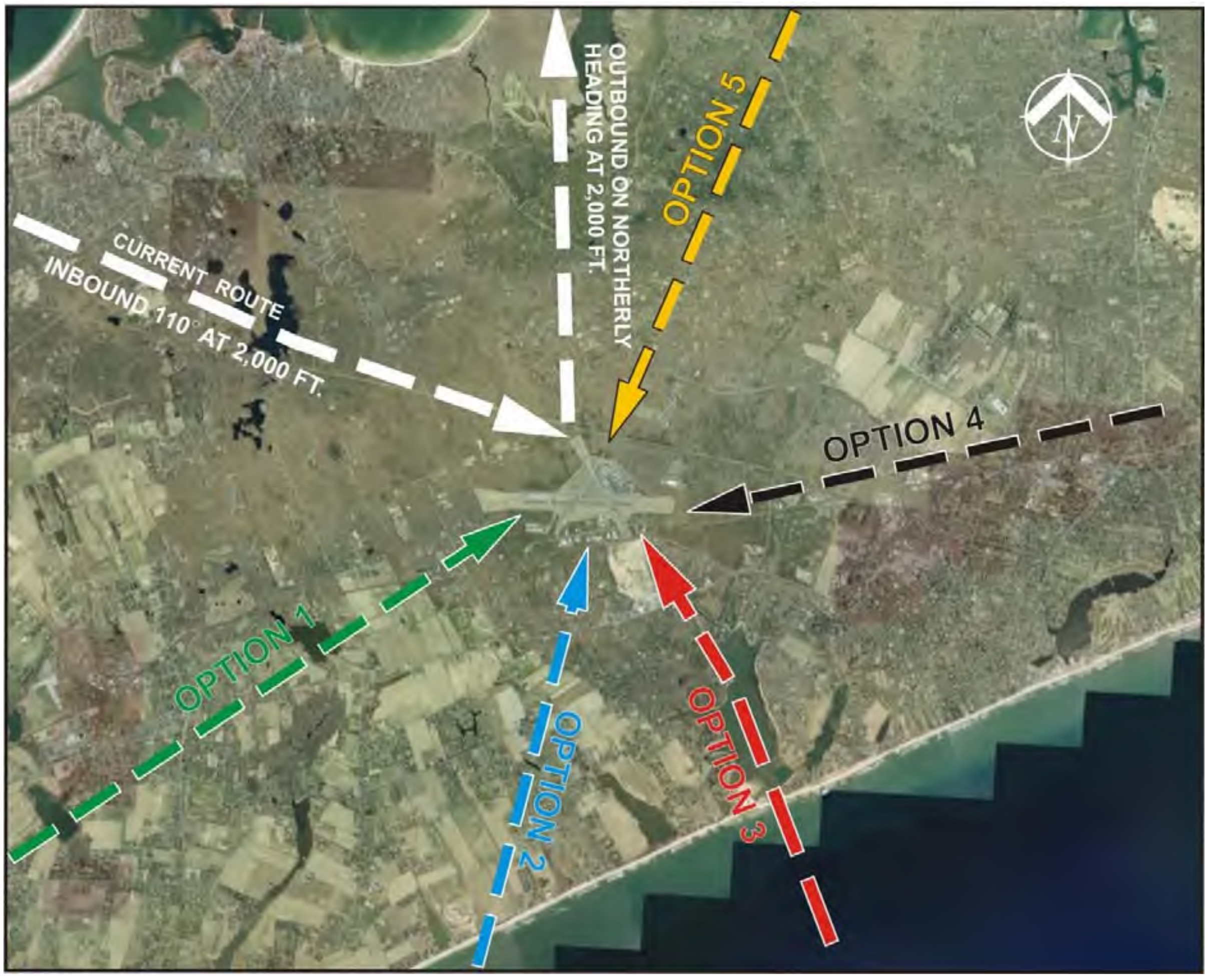
Preferred Helicopter Routes

As previously described in Chapter 1, preferred helicopter routes exist for entering and departing the East Hampton Airport operating environment. Again, these routes are advisory in nature. This means that they can only be recommended not enforced.

Helicopters are most prevalent during the peak, summer months. The majority of noise complaints received by the Airport are caused by helicopter operations during this time. The established preferred routes are a result of deliberation recommendations made by HMMH, a consulting firm hired to conduct of noise study at the Airport. The routes were refined by Airport Management to determine the best possible method of helicopter entry and exit. These routes have seemed to generate the least amount of noise complaints.

The following figure depicts the preferred routes (shown in white). Additionally, some other options for the preferred routes are included.

FIGURE III-32
OPTIONS FOR PREFERRED HELICOPTER ROUTES



Source: DY Consultants

The Airport is in compliance with all FAA helicopter arrival and departure procedures. The following is an analysis of how the current and other pursuable options may impact the community and the users of the Airport.

Current Route:

The current preferred route for arrivals is from the Northwest. It is flown over the Town of Southampton. This course is considered to be the route that has the least impact on local residents in terms of noise. This is based on the noise complaint history.

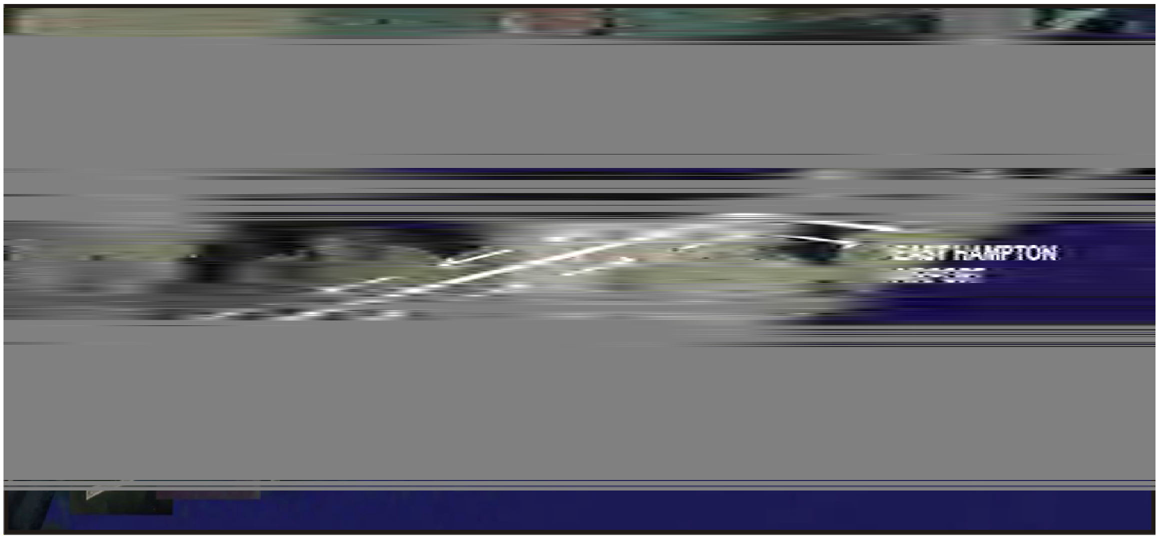
Departures are currently advised to navigate due north until reaching the shoreline at Northwest Landing, where they should proceed on course to their destination. The route exists above the area to the north of the Airport, which is both zoned and occupied by Parks and Conservation Land within the Town of East Hampton. Noise complaint data appears that it favors this route as well.

The preferred routes are flown at an altitude of 2000 ft. or above, which is the altitude recommended by HMMH and the Airport Manager. This altitude is thought to minimize the annoyance to the community below.

Additionally, the preferred helicopter entry and exit route is conducive with the most popular course flow outside of the airport environment. The majority of the helicopter traffic that uses East Hampton Airport originates from and returns to Manhattan. Flights proceed on course along Long Island's northern shore when operating to or from East Hampton Airport. Aircraft easily adjoining the preferred approach and departure route for the Airport, as described above. The illustration below depicts the flight path a helicopter might take during a typical flight.

FIGURE III-33

TYPICAL MANHATTAN-EAST HAMPTON HELICOPTER ROUTE



Source: DY Consultants

It should be noted that, due to the requests of pilots, the current routes will likely be reversed in the near future. This means that the arrival route will request plots to remain north of the Airport until reaching Northwest Landing and then turn to approach the Airport on a southerly heading at 2,000 ft. above ground level. The departure route will request pilots to fly on a northwesterly heading at 2,000 ft. above ground level until reaching the shoreline and proceeding on course.

Option 1:

Changing the Helicopter Approach/Departure routes for the Airport to a westerly direction would likely impact the community of Southampton. The property line separating the Town of East Hampton and the Town of Southampton is collocated with the western edge of the Airport. It appears that the land underneath this potential flight path currently exists as residential property. There are currently many noise complaints from this area from helicopters that stray from the recommended route. Rerouting all helicopter traffic over these areas may increase noise disturbances and complaints in these areas.

There are no significant Airport or user related impacts with this approach. It is similar to the current preferred arrival route into the Airport, but is slightly less direct and or convenient to users of the Airport.

Option 2:

Option 2 requires helicopters to approach and depart the airport to/from a southwesterly heading. The property underneath this route exists within Southampton and is currently occupied for mostly agricultural purposes.

Airport users may be inconvenienced operating via this Option, as it would decrease the distance they must divert from their course along the north shore of Long Island. Helicopters traveling inbound to East Hampton Airport would break off from their easterly heading and head southbound to approach the Airport at the proper angle. Similar impacts would exist for departing helicopters. This option may also increase noise disturbances to residents of the Town of Southampton based on current complaint data. However, impacts may be potentially less than Option 1.

Option 3:

This option requires helicopters to approach and depart the airport to/from the south. Ideally, the route could be flown over Georgica Pond, remaining over the water as much as possible, and then directly to the Airport to minimize time over residential areas. Helicopters traversing such a route might create noise impacts to the community surrounding Georgica Pond below. Based on the current land use map, the area is primarily zoned for low and medium density housing immediately to the South of the Airport extending to the ocean.

Airport users may be inconvenienced in terms of operating time and costs from this preferred route, as it would increase operating time to maneuver Southbound from their typical flight path and adjoining the route. Delays and increase costs may result. Similar impacts would exist to departing aircraft.

Option 4:

This option would require helicopter traffic to enter the airport from the east. The property underneath this route belongs to East Hampton and is primarily zoned for recreational open space in addition to smaller areas zoned for agriculture and medium density residential property. Noise impacts would likely exist to the community below.

Additionally, this preferred route may be an inconvenience to the users of the Airport. An approach from the east would require pilots to pass the airport, turnaround, and then back-track to the Airport to land. This may result in increased flight time and operating costs. Similar impacts would exist to departing aircraft.

Option 5:

This option would require helicopter traffic to enter/depart the airport to/from the northeast. The land use underneath this route consists of a mixture of agriculture, vacant and low-medium density residential use within the Town of East Hampton. Noise impacts would likely exist to the community below.

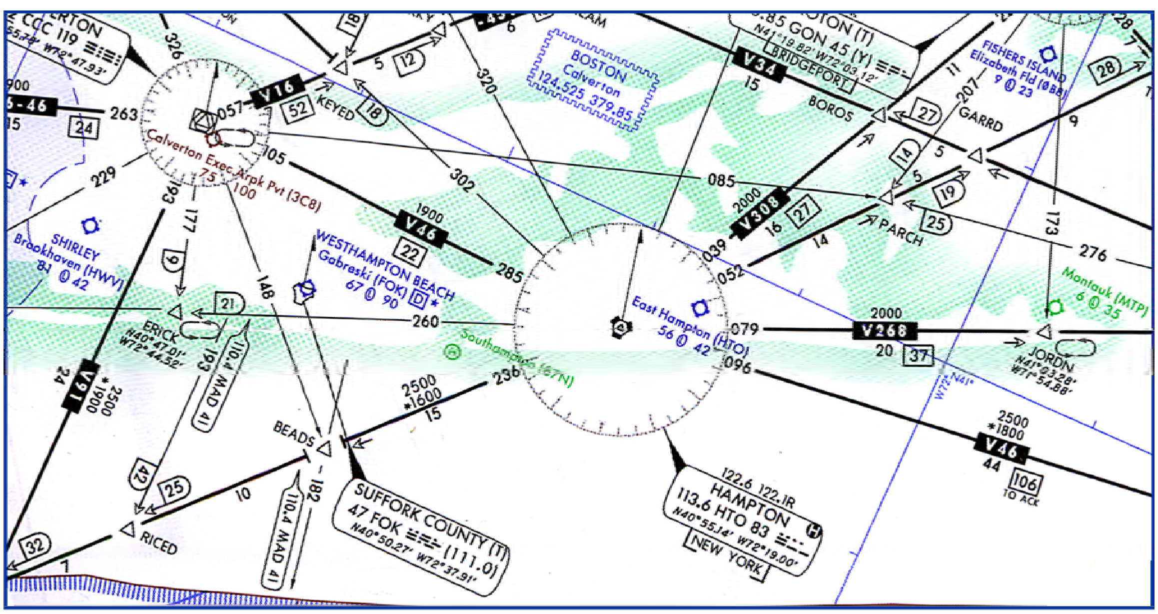
This route may also be an inconvenience to the users of the Airport. An approach from the northeast would require pilots from their typical route and fly past the airport, turnaround, and then backtrack to land. This again results in increased operating flight time and operating costs. Similar impacts would occur for departing aircraft.

These options can be considered independent of the Alternative Options for the Airport, and thus will not be categorized into any one Alternative. The preferred route will be incorporated into the final Alternative in Chapter 5. Additionally, changing the direction of preferred route may be an inconvenience to the users of the Airport who are used to a set method of operation. However, the type and frequency of the traffic would not change.

IFR Enroute Low Altitude Airways

There are other flight tracks that have the potential to impact the Airport and the surrounding community. IFR Enroute Low Altitude Airways are known in the US as "Victor Airways" (below 18,000 feet MSL) and "Jet Routes" (at and above 18,000 ft). These routes are shown below. Essentially, they are published navigation routes used by aircraft operating on instrument flight plans. These airways are established by the Federal Aviation Administration and provide a nationwide network of "air highways." The set up consists of a framework of airways linking VOR's (described in Section 4) and airports. Airways are set up based on specific angles to or from a particular VOR station providing a means for aircraft to navigate from the departure location, transition from point to point enroute, and to arrive in the vicinity of the destination airport or adjoin an instrument approach for landing.

FIGURE III-34
FLIGHT TRACKS



Source: FAA IFR Low Altitude Charts

Shown in the Figure are the Victor Airways that are in the immediate area of East Hampton Airport. The thin and thick lines define the airways or routes navigated by aircraft. The Hampton VOR exists approximately 3.5 nautical miles (nm) and is located in the middle of the figure. It is likely that these airways do not impact the Town of East Hampton or its residents due to the altitudes required on each airway, between 2,000 and 2,500 feet MSL.

The FAA Air Traffic Division is the governing body and as such determines improvements and alterations in the National Airspace System including airways. In the event that a flight track adjustment were requested or potentially considered necessary, further analysis and study of the impacts of potential changes would be necessary to evaluate the overall impact on safety and efficiency of the framework. The FAA would manage such an evaluation.

4. GPS and Alternative Navigational Enhancements

There are various forms of Navigational Aids (NAVAIDs) and navigational systems available to pilots today. These systems are owned and operated by various entities including the FAA, the military, private enterprise, or individual states and airports. The FAA has the statutory authority to establish, operate, and maintain air navigation facilities. Additionally, the FAA prescribes the operational standards for any of these aids which are utilized for instrument flight in controlled airspace. Technology advances must be smoothly incorporated into the National Aerospace System and are done so with close supervision. Therefore, it is not normally the responsibility of an airport operator to coordinate the type of navigation used for the approaches to its runways.

The basic methods used for Instrument Approaches today include Area Navigation (RNAV), VOR Navigation, Instrument Landing System (ILS), and GPS Navigation. These concepts are described below with the associated potential impacts to East Hampton Airport.

Area Navigation (RNAV)

Area Navigation (RNAV) is a method of navigation that allows aircraft to operate on any desired course based on location references to a station, rather than navigating directly to and from designated stations. This method helps to limit enroute distance, reduce congestion, and allow instrument flight plans into airports without NAVAIDs.

The United States developed the concept of RNAV in the 1960s. The first such routes were published in the 1970s. Published RNAV routes are no longer in use today, but the navigation concept is still in place. Navigation systems which provide RNAV capability include VOR/DME, DME/DME, LORAN C, GPS, OMEGA and self contained Inertial Navigation Systems (INS) or Inertial Reference Systems (IRS). Instrument approaches available at East Hampton Airport are supplemented with this RNAV navigation.

RNAV is not used today as an independent system, but rather a system that operates using other forms of navigation such as VOR and GPS. This means that an Airport is not responsible for supplying any type of physical equipment to allow RNAV approaches. Current trends in the industry point towards the increased reliance on GPS systems, while the RNAV users decline. The FAA may eventually examine how RNAV approaches can be reduced at airports throughout the country; however, this will not likely impact East Hampton Airport since a GPS Approach is also available.

VOR Navigation

There is a VOR, or Very High Frequency Omni-directional Radio Range, Instrument Approach available to the users of East Hampton Airport. The East Hampton VOR is located approximately 3 miles from the Airport in the Town of Southampton. It is owned, operated and maintained by the Federal Aviation Administration.

A VOR is a ground-based transmitter that provides a system of radio navigation to aircraft by broadcasting a VHF radio signal encoding both the identity of the station and the angle to it. This information tells the pilot in what direction he lies from the VOR station in relation to the earth's magnetic North and is used to navigate to and from other VORs and NAVAIDs along the destination route. A nationwide network of "air highways", known in the U.S. as "Victor airways" (below 18,000 feet MSL) and "jet routes" (at and above FL180), exists linking VORs and airports.

FIGURE III-35
VOR ANTENNAE

Source: www.sri.com

VORs became the major radio navigation system in the 1960s, when they took over older systems. However, with the advent of GPS and Satellite Navigation, the concept of the VOR has become somewhat outdated. Firstly, VOR transmitters and receivers are expensive to install and maintain. In addition VORs have limited maximum ranges of between 25– 130 nm; which means that an extensive network of stations needs to be used to provide reasonable coverage along main air routes. Aircraft fly along these routes from one VOR station to the next. This results in an overall flight path that is longer than it would be if the route was flown directly from origin to destination. The VOR network is also a major cost to the FAA in terms of maintenance as well as to Airlines and other users who operate by means of this system.

The 2001 Federal Radio-Navigation Plan includes a schedule to extend the phasing out of most land-based radio navigation systems to allow more time to transition to GPS. It appears that during the year 2010, the industry will begin to start reducing the amount of VOR and VOR based approaches to an amount that is minimally required. After a smooth transition to GPS system is achieved, the remaining system will be phased out, with a much reduced number remaining to provide a back up system of approach and navigation.

All three approaches at the Airport are based on the East Hampton VOR. However, these approaches can also be executed via GPS navigation. Therefore, the Airport will not likely need to be concerned with drastically changing its approaches once the VOR system has been phased out.

Instrument Landing System (ILS)

An ILS is used to provide aircraft with vertical and lateral navigation information during approach and landing to an airport. It consists of a ground-based antenna (known as the Localizer) which provides lateral navigation. Another antenna (know as the Glide Slope) provides vertical guidance. Both antennas are located on the Airport, usually near the ends of the runway. Transmitters known as marker beacons provide distance information to identify the location of an aircraft on the approach (fixes). They are normally located off airport property or at the outer edge of it. A visual component to this system is the installation of an approach lighting system that extends beyond the end of a runway.

Currently, an ILS system is not available to the users of East Hampton Airport. Although ILS systems are currently prevalent within the National Airspace System, the number of ILS systems will be reduced as more GPS-based approach systems are integrated into the airspace system and equipment becomes accepted and available to users. The phase-down may be similar to the phase-down of the VOR network moving from full coverage, down to minimal necessity, and to possibly a basic backup network. However, the time frame for this to occur may be longer and the specifics are still open to change. Therefore, an ILS system is probably not a practical planning effort for East Hampton Airport. Additionally, an ILS system would make the Airport's safety surface criteria more stringent where compliance with them may not be possible without major modifications to the airfield.

GPS Navigation

Increased GPS, or Global Position System, presence is a result of the Government's efforts to modernize the U.S. transportation infrastructure. Today, GPS has become a primary and most cost effective method of navigation. This satellite based concept requires very little or no physical equipment to be maintained by an airport or the FAA.

FIGURE III-36
MODERN GPS-EQUIPPED COCKPIT

Source: www.bruceair.com

The transition to a National Airspace System primarily relying on the use of GPS based navigation has begun. GPS modernization is a multi-phase effort to be executed over the next 15 plus years. Additional modifications to the system are planned to enhance the ability of GPS to support both civil and military users. This effort resides primarily with the government and the users of the NAS and will not likely be a concern for airports.

Similar to East Hampton Airport, many airports across the nation provide non-precision approaches that are a combination of GPS and other traditional NAVAIDs. Both straight in approaches to East Hampton Airport can be flown as GPS, VOR, or a combination of both.

To conclude, as the technology and subsequent accuracy and availability of air navigation advances increase; the transportation infrastructure will change accordingly. It is a process that occurs deliberately and over many years. Today, the United States air navigation system is leaning towards increased use of GPS and other satellite-based methods of navigation. The older systems for executing Instrument Approaches at East Hampton Airport will likely be phased out and replaced by GPS in the years to come. The Airport will not likely be affected by this, as it is a federal government responsibility to determine the schedule to ensure a smooth transition into the newer technology era.

Therefore, physical navigation system enhancements will not be included in any of the Alternatives. The alternatives would assume that the capabilities of the existing navigational aids would be supplemented with GPS approaches of similar visibility minimums. There would be no added ability to utilize the airport under inclement weather and it will have no effect on aircraft traffic.

B. Airside Improvements

Airside Improvements under review in this section include modifications to runways, taxiways, and airport geometric concepts to accommodate the four Alternatives. Each Alternative will be the basis for planning and setting these dimensional standards at the airport. Additionally, a Design Aircraft is tied to each Alternative. Therefore, options for Design Aircraft as they pertain to East Hampton Airport will have varying effects on the physical layout of the airfield, including; Runway Length, Runway Safety Areas (RSAs), FAR Part 77 Approach Surfaces, Runway Object Free Areas (ROFAs), and Runway Protection Zones (RPZs). A description each of these concepts is given below:

Runway Length Explained

Anticipating the runway length desired at an airport is the primary goal for airfield analysis, since most geometry standards are based on the location of the runway. The planning methodology used may differ from one airport to another depending on the circumstances.

One method for determining runway length calculates a length based on the performance requirements of each specific Design Aircraft. Calculations are made to estimate how much runway an aircraft will use during takeoff and landing taking into account atmospheric and environmental variables. These include changes in temperature, pressure, condition of the runway (whether it is dry or wet from precipitation), runway grade or slope, and the airport's elevation above mean sea level. Formulas, charts, and graphs exist in the Aircraft Flight Manual (AFM) and/or the Pilots Operating Handbook (POH) so that real-time conditions can be accounted for and runway length requirements are estimated as accurately as possible. The AFM/POH contains the information and instructions prescribed by the manufacturer that a pilot should comply with to operate the aircraft safely.

Required landing/take-off distance calculations are time critical in nature and the pilot or dispatcher responsible for a specific flight will make these calculations as close as possible to departure. This is because the above mentioned variables are dynamic in nature and a change could affect the aircraft's performance requirements. For example, as temperature increases, air becomes less dense and reduces an aircraft's performance efficiency resulting in an increased distance required for takeoff from a runway.

By using conditions that are likely to occur at an Airport, required runway length can be determined. The AFM/POH for each of the Design Aircraft associated with the four Alternatives was used to determine a potential runway length. The same variables were used for each aircraft:

1. Aircraft at Maximum Take-Off or Maximum Landing Weight
2. Temperature of 80˚ F (the mean daily maximum temperature during the hottest month at East Hampton Airport)
3. 0 (Zero) Knot Headwind
4. Pressure Altitude at Sea Level
5. Standard Day (Air Pressure & Humidity)
6. Runway gradient of 1% (plus or minus condition that favors a longer length used)
7. No Take-Off or Departure Obstacles
8. Aircraft Special Components (on/off condition that favors a longer length used)

These conditions were applied to each of the Design Aircraft. For Runway 10-28, the results are as follows:

a) No Action Alternative-Twin Otter
The Twin Otter is associated with the No Action Alternative. In this case, the existing runway length of 4,255 ft. will remain the same.

a) Alternative #1-Beech Baron
The landing distance required was estimated at 1,625 ft. The estimated take-off length required was 1,700 ft.

b) Alternative #2-Citation 560
The landing distance required was estimated at 2,816 ft. The estimated take-off length required was 4,225 ft.

c) Alternative #3 -Challenger 604
The landing distance required was estimated at 2,800 ft. The estimated take-off length required was 6,700 ft.

Large aircraft such as the Challenger have requirements in excess of the existing runway lengths at East Hampton Airport using these variables. However, according to the AFM/POH, these aircraft can still operate safely and in accordance with the manufactures specifications by adjusting another element of the departure; weight. Larger and heavier aircraft will require a longer length of runway to be able to accelerate up to the speed necessary to achieve flight regardless of environmental and atmospheric variables. By decreasing aircraft weight, runway length required for take-off can be decreased. Certain aircraft using East Hampton Airport take advantage of this, allowing them to safely and legally operate with the existing runway dimensions.

Another method for determining runway length within the industry comes from the "Airport Design Software Program," developed and endorsed by the FAA. Information about it can be found in FAA Advisory Circular 150/5325-4A "Runway Length Requirements for Airport Design." This program provides recommended runway lengths for broad categories of aircraft based on size and approach speed. Aircraft are considered either small (meaning they have a Maximum Certificated Takeoff Weight (MTOW) of less than 12,500 lbs.) or large (having an MTOW of 12, 500 lbs or greater.) The large group is then classified into two additional weight categories; those greater than 60,000 pounds or those 60,000 pounds or less. Additionally, general environmental and atmospheric variables that can be expected at the airport are considered. These include airport elevation, temperature, runway slope, length of typical trips conducted by aircraft, and runway condition (wet vs. dry). The aircraft size categories are further broken down by lengths that an estimated percentage of airplanes in a specific size category can operate with that length.

When East Hampton Airport's information was input into the software, the following runway lengths that pertain to the design aircraft choices were recommended:

AIRPORT AND RUNWAY DATA

Airport elevation . . . .…………………. . . . .…	**56 feet**
Mean daily maximum temperature of the hottest month	**80.10 F.**
Maximum difference in runway centerline elevation . . . . . . …...	**24 feet**
Length of haul for airplanes of more than 60,000 pounds	**500 miles**
Wet and slippery runways	

RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN

Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes . . . .… .	**2420 feet**
95 percent of these small airplanes . . . .…. .	**2970 feet**
100 percent of these small airplanes . . . . …….. .	**3520 feet**
Small airplanes with 10 or more passenger seats . . . . …..	**4100 feet**
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load	**5280 feet**
75 percent of these large airplanes at 90 percent useful load	**6920 feet**
100 percent of these large airplanes at 60 percent useful load	**5500 feet**
100 percent of these large airplanes at 90 percent useful load	**7710 feet**
Airplanes of more than 60,000 pounds . . . . …. .	**Approximately 5030 feet**

REFERENCE: Chapter 2 of AC 150/5325-4A, Runway Length Requirements for Airport Design.

These numbers again pertain to a grouping of aircraft. The four potential Design Aircraft would likely fall into the above groups as follows:

a) No Action Alternative - Twin Otter

The Twin Otter is associated with the No Action Alternative. In this case, the existing runway length of 4,255 ft. will remain the same.

b) Alternative #1 - Beech Baron

The Beech Baron would fall into the small airplane category with less than 10 passenger seats. The FAA "Airport Design Software Program," gives a range of runway lengths from 2,420 ft up to 4,100 ft. for this category of aircraft. The actual runway length requirement for the Beech Baron is 1,700 ft. based on manufacturer performance specifications. Therefore, the lower limit of runway lengths for this category of aircraft will be used. A runway length of 2,450 ft. (rounded up to the nearest 50 ft increment) for this group would be sufficient.

c) Alternative #2 - Citation 560

The Citation 560 falls into the large airplane weight category that is greater than 12,500 lb. MTOW but 60,000 lbs. or less. Even though the FAA "Airport Design Software Program," gives a range of runway lengths from 5,280 ft up to 7,710 ft for this category of aircraft, the actual runway length requirement for the Citation 560 is 4,225 ft. based on manufacturer performance specifications. Since the existing Runway 10-28 length is 4, 255 ft, and because this aircraft can only operate on Runway 10-28, we will use 4,255 as the runway length for this alternative

d) Alternative #3 - Challenger 604

The Challenger also falls into the weight category that is greater than 12,500 lb. MTOW but 60,000 lbs. or less. The FAA "Airport Design Software Program," gives a range of runway lengths from 5,280 ft up to 7,710 ft for this category of aircraft. The actual runway length requirement for the Challenger 604 is 6,700 ft. based on manufacturer performance specifications. Therefore 6,700 ft will be used as the required runway length for this alternative.

Runway Approach Surface Explained

14 CFR FAR Part 77 establishes standards for determining objects affecting navigable airspace. It provides for aeronautical studies of obstructions to air navigation, to determine their effect on the safe and efficient use of airspace. The standards apply to existing and proposed man-made objects, objects of natural growth, and terrain.

Standards for determining obstructions state that an existing object, including mobile objects and potential future objects are considered an obstruction to air navigation if it is taller than any of the following heights or surfaces:

1. A height of 500 feet above ground level at the site of the object;
2. A height that is 200 feet above ground level or above the established airport elevation, whichever is higher, within 3 nautical miles of the established reference point of an airport with a runway no longer than 3,200 feet in length and that height increases the proportion of 100 feet for each additional nautical mile of distance from the airport up to a maximum of 500 feet;
3. A height within a terminal obstacle clearance area, including an initial approach segment, a departure area, and a circling approach area, which would result in the vertical distance between any point on the object and an established minimum instrument flight altitude within that area or segment to be less than the required obstacle clearance;
4. A height within an en route obstacle clearance area, including turn and termination areas, of a Federal airway or approved off-airway route, that would increase the minimum obstacle clearance altitude; and
5. The surface of a takeoff and landing area of an airport or any imaginary surface established under §77.25, §77.28, or §77.29. However, no part of the takeoff or landing area itself will be considered an obstruction.

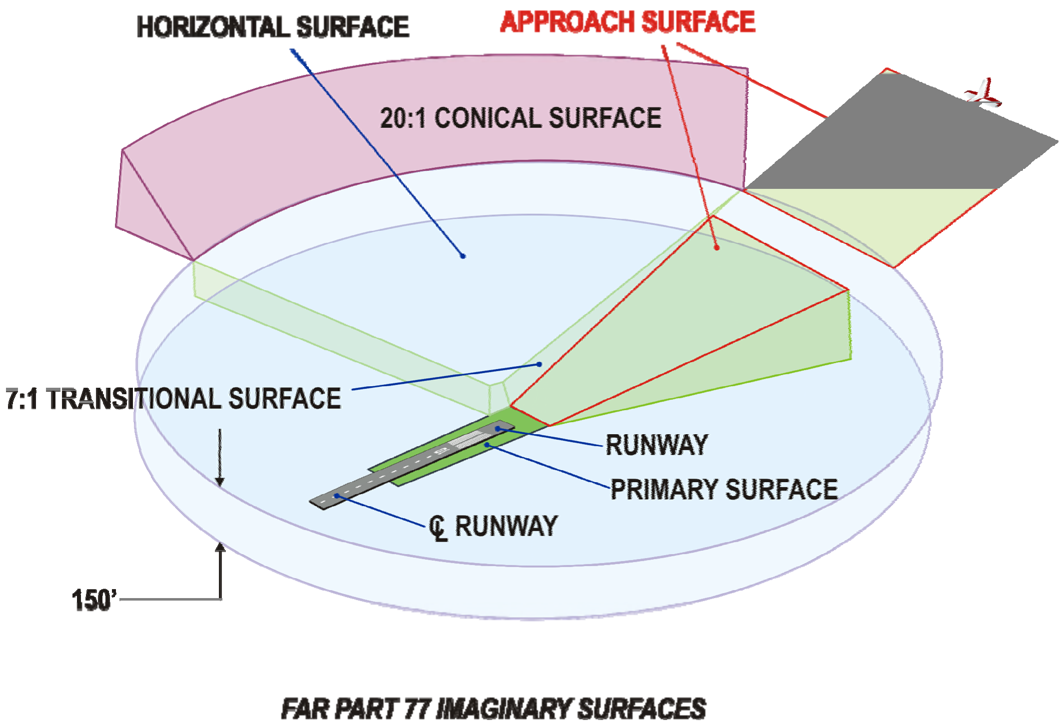
Additionally, the following heights are added to roads or other traverse ways that may impact the FAR Part 77 surface:

1. 17 ft. for an Interstate Highway, where over crossings are designed for a minimum of 17 ft. vertical distance.
2. 15 ft. for any other public roadway
3. 10 ft. for the height of the highest mobile object that would normally traverse a private road.
4. 23 ft. for a railroad.
5. An amount equal to the height of an object that would normally traverse a waterway or any other traverse way.

East Hampton Airport is considered a civil airport under Part 77 regulations. All applicable surfaces of this regulation apply; however only the Approach Surface as it pertains to our runway analysis will be described in this Chapter.

The FAR Part 77 Approach Surface begins at the end of the runway primary surface, (which is 200 feet beyond the location of the runway end). It is a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end. An approach surface is applied to each end of each runway based upon the type of approach available or planned for that runway end.

FIGURE III-37
FAR PART 77



Penetrations to the FAR Part 77 Approach Surface can be mitigated by installing Visual Glide Slope Indicators, lighting and marking obstructions, and/or threshold displacement. This will be at the discretion of the FAA. Threshold displaced is the most severe form of mitigation. Displacing a threshold means that the landing threshold of the runway is moved further down to provide the required clearance. Essentially, the runway is shortened for landing purpose. The existing threshold used for departing aircraft on that same runway may remain. Criteria for determining the new threshold siting location is described in FAA Advisory Circular 150/5300-13. It is based on the runway type and the instrument approaches available at the airport.

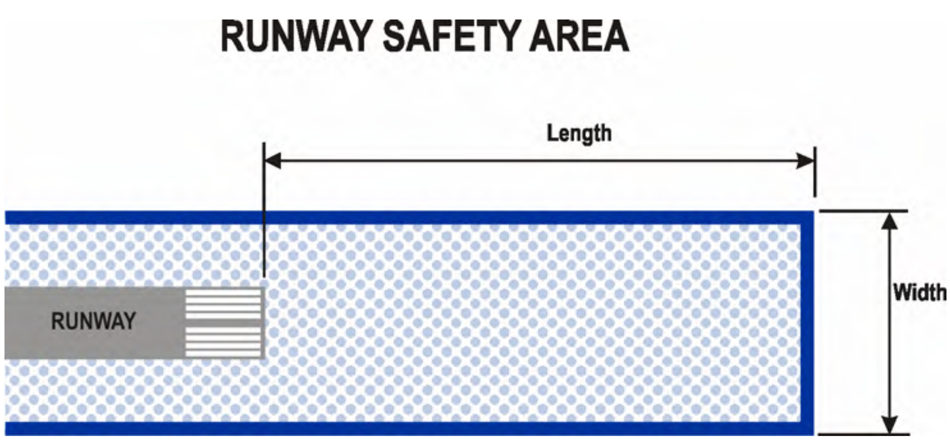
Airport Safety Surface Geometry Explained

As the Design Aircraft changes, the airfield geometry concepts and dimensional requirements will change. These standards can be found in FAA Advisory Circular 150/5300-13, which is the industry standard for federally obligated airports. The following concepts apply to East Hampton Airport and are primarily based on the ARC of the Design Aircraft:

Runway Safety Area (RSA):

The Runway Safety Area is a rectangle centered along the runway and extends a certain distance widthwise from the centerline and lengthwise beyond the end of the runway a specified distance. The dimensions are based on the Airport Reference Code of that runway and the type of instrument available for that runway. The RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations to reduce the risk of damage to airplanes in the event of an undershoot, overshoot or excursion from the runway. Additionally, it must also have proper drainage, be capable of supporting snow removal and emergency equipment under dry conditions, and be free of objects that functionally do not need to be located in the RSA.

FIGURE III-38

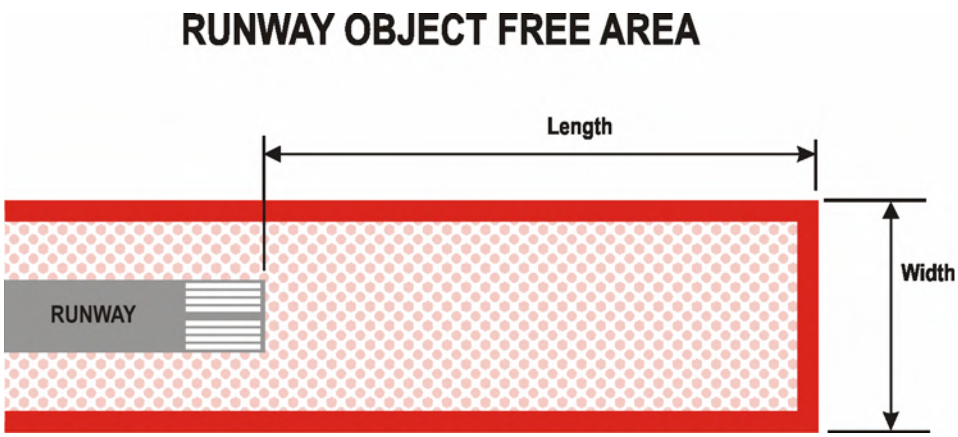


Source: DY Consultants

Runway Object Free Area (ROFA)

ROFA standards require the clearing of all above ground objects protruding above the RSA edge elevation non-essential to air navigation or ground maneuvering. The dimensions are based on the Airport Reference Code of that runway and the type of instrument available for that runway. It is acceptable to place objects that need to be located in the ROFA for air navigation or aircraft ground maneuvering purposes and to taxi and hold aircraft in the ROFA.

FIGURE III-39

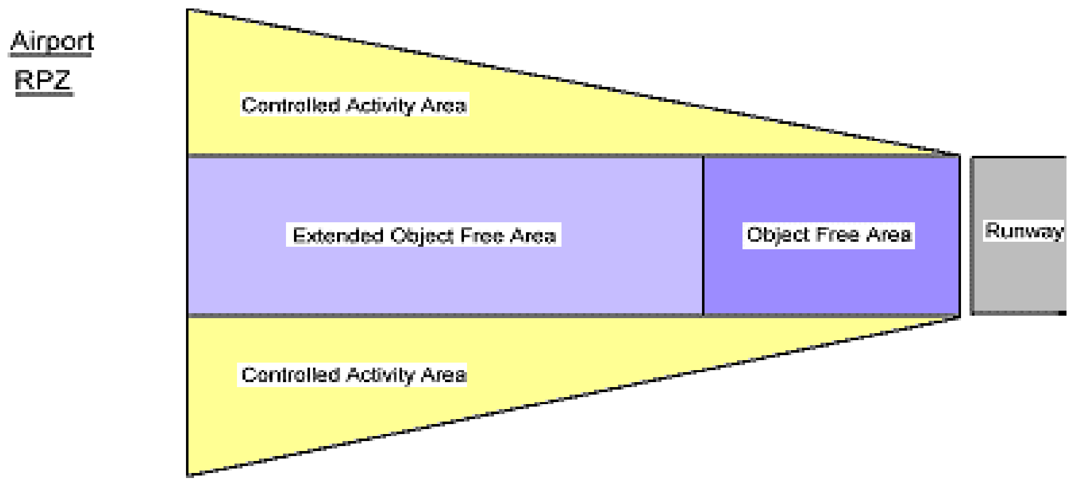


Source: DY Consultants

Runway Protection Zones (RPZ)

An RPZ is an area of controlled activity used to enhance the protection of people and property on the ground. Trapezoidal in shape, it is located 200 ft. beyond each runway end and centered along the runway centerline. The dimensions are based on the Airport Reference Code of that runway and the type of instrument approach available for that runway. The RPZ length and width required increases as the severity of demand of either of these factors increases. As such, it is common that the footprint of this surface will extend outside of airport property. Ideally, an airport would acquire such property or at least clear the area of all objects, however it is not required. There are provisions for compatible land use in these areas. Certain uses are permitted as long as they do not create a wildlife attractant, are outside of the runway object free area, and do not interfere with NAVAIDs. Land uses that are prohibited include residences and places of public assembly. Fuel farms and automobile parking should not be located in the RPZ.

FIGURE III-40
RUNWAY PROTECTION ZONE



Source: www.wsdot.wa.gov

Table 28 at the end of the following Runway Analysis section can be used to provide a quick comparison of runway distance requirements and airfield geometry concepts mentioned above. The runway distances displayed are based on the Aircraft Flight Manual (AFM) and/or the Pilots Operating Handbook (POH) and the most demanding environmental conditions such as a hot summer day, wet runway, etc.

1. Runway Analysis

The following sections, paragraph i through iii, provide a detailed description of how the four alternatives apply to the runways at East Hampton Airport.

i. Runway 10-28

The following is an analysis of four (4) potential alternatives for Runway 10-28.
They include:

1. No Action Alternative
2. Alternative #1
3. Alternative #2
4. Alternative #3

Each alternative was based upon a development option to meet the intent of the alternative. A particular alternative aircraft was assumed for each scenario to determine design standards (such as runway length and safety area dimensions) for that particular aircraft or group of aircraft. This aircraft is called the Design Aircraft.

Runway 10-28 No Action Alternative:

The No Action Alternative is based upon the present runway configuration. The current Design Aircraft designated from the last approved Master Plan is the Twin Otter (Airport Reference Code of A-II). This aircraft is not representative of the types of aircraft actually using Runway 10 – 28 and is rarely present at the airport. Actually larger and more demanding airplanes make up the majority of the fleet mix at East Hampton Airport. Higher performing aircraft, such as the Citation V and the Gulfstream G-V, are regularly taking off and landing on this runway during the peak season. The design standards associated with this family of aircraft that actually utilize this runway, are more demanding and require greater clearance requirements than the standards that are associated with the outdated Design Aircraft, the Twin Otter. The design standards are not appropriate for the actual utilization of the runway.

Under the No Action Alternative, the runway in its existing configuration would be maintained. The Twin Otter is a small aircraft with an Airport Reference Code of A-II. The existing runway length of 4,255 ft. would be maintained. The existing runway width of 100 feet would also remain. Runway markings and shoulders will also remain the same.

The current 100 ft. width of Runway 10-28 is more representative of the Design Criteria applicable to today's typical users of the airport, such as the Citation and the Gulfstream. The runway length is more than required for the Twin Otter. A runway length of 4255 feet at East Hampton is capable of servicing higher performing jets, such as the Citation and the Gulfstream.

Should the Twin Otter be maintained as the Design Aircraft, the following is a brief description of standards associated with this aircraft and a status of compliance with these standards.

In addition, the following safety standards will be maintained:

> **FAR Part 77 Approach Surface:** Specifically for the Twin Otter, the inner edge of the approach surface (which starts 200 ft. from the end of the runway) is 500 feet in width; it expands uniformly to a width of 2,000 feet, and extends for a horizontal distance of 5,000 feet at a slope of 20:1. These standards are for a runway with a non-precision instrument approach with visibility minimums greater than ¾ mile for small propeller driven aircraft with maximum takeoff weight less than 12,500 lbs. Visibility or Approach minimums describe the worst weather condition (in terms of visibility) that an appropriately equipped aircraft and pilot can land.
>
> The Approach Surface to Runway 10 is clear of obstructions and is in compliance with FAR Part 77's imaginary approach surface.
>
> Vehicular traffic on Daniels Hole Road is an obstruction to FAR Part 77 (which assumes a vehicle height of 15 ft on a public roadway) for aircraft on approach to Runway 28. Even though a vehicle on Daniel's Hole Road is an obstruction to FAR Part 77, further investigation using Threshold Siting Criteria contained in Advisory Circular 150/5300-13 Chg 10 reveals that the Runway 28 end would need to be displaced approximately 150 ft. due to vehicles on Daniel's Hole Road.

This is determined using Table A2.1 “Approach/Departure Requirements Table” with a Runway Type titled “Approach ends of runways expected to support instrument straight in night operations, serving approach category A and B aircraft only”.

RSAs: The extended Runway Safety Area (RSA) dimensions for the Twin Otter would be 300 feet beyond the end of the runway by 150 feet wide. There would be no impact on Runway 10-28, as the standard RSA at both ends are currently available for the Design Aircraft.

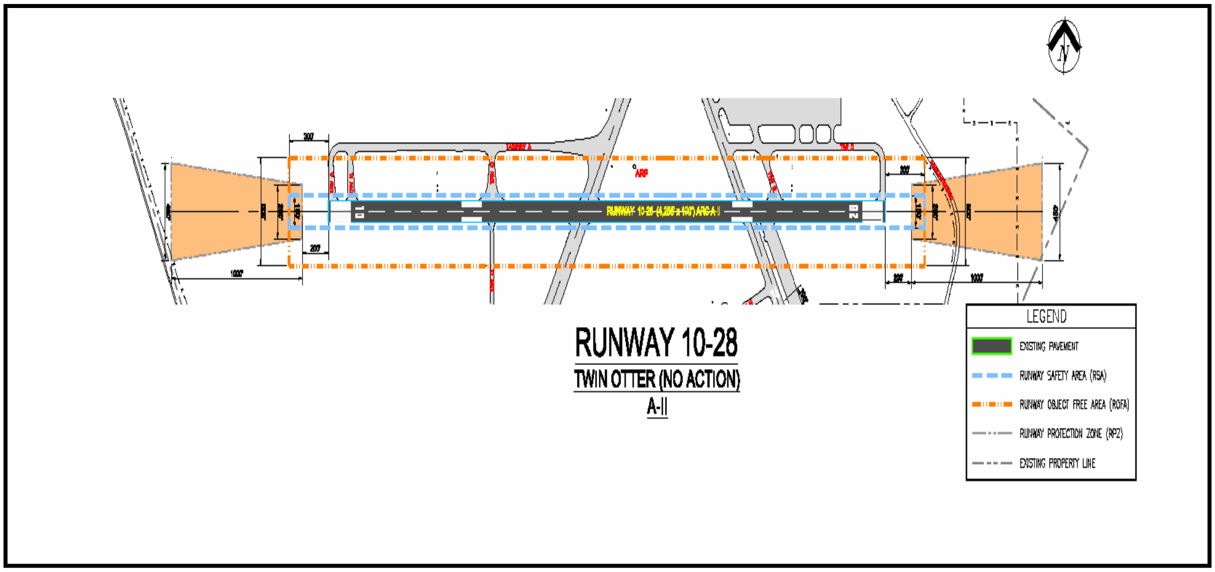
ROFAs: The Runway Object Free Area (ROFA) measures 300 feet off the end of each runway and 500 feet wide (250 feet from either side of centerline) for small A-II aircraft. The Twin Otter is considered a small aircraft, since its maximum takeoff weight is less than 12,500 lbs. The Runway 10 end currently meets these standards. The Runway 28 end substantially meets these standards with a length of 298 ft and a width of 498 ft. This is due to Daniels Hole Road.

RPZs: The Runway Protection Zone (RPZ) dimensions (which begin 200 ft. from the end of the runway) measure 250 feet for the inner width, 450 feet for the outer width, and 1,000 feet in length. These RPZ dimensions are specifically for runways serving aircraft in Approach Categories A and B (such as the Twin Otter) with visibility minimums not lower than 1 mile. The RPZ is a two dimensional area of land that should be either owned or under the control of the airport. In its current configuration the RPZ requirements are satisfied at both ends of the runway.

Impacts: Additional impacts to the airfield under this scenario would be minimal and insignificant since the runway would basically stay in its current configuration.

This alternative is inappropriate and is not addressing the concerns of the airport and the community. This Alternative is assuming a design aircraft that is outdated and not an actual reflection of the operations of the field under its current usage or under a realistic projected use of the East Hampton Airport.

FIGURE III-41
NO ACTION ALTERNATIVE



Source: DY Consultants

Runway 10-28 Alternative #1:

This alternative is based upon developing a plan that would provide minimal impact upon the community with little regard to the demands of the airport by the flying public. This may be achieved by designing the runway to service exclusively small (12,500lbs or less) aircraft. The design standards associated with this type of aircraft would lower noise levels and require less land disturbance to physically accommodate infield development. The Beech Baron is an example of this and may be considered as a design aircraft since it is a small aircraft weighing under 12,500 lbs and is categorized as Airport Reference Code B-I.

Aircraft more demanding than the Beech Baron are currently using Runway 10-28. This alternative will decrease runway length and dimensional safety standards for the Baron. As a result, the runway dimensions applicable to a Baron would not be appropriate for the current fleet mix at East Hampton Airport.

According to a standard FAA Airport Design Computer Program, the recommended runway length for aircraft within the family of aircraft similar to the Baron is 2,450 feet. The standard runway width for a B-I aircraft on a visual and non-precision instrument runway (greater than ¾ statute mile visibility) is 60 feet. Therefore, Runway 10-28 would be reduced to 2,450 feet long by 60 ft wide.

This alternative proposes to reduce the runway length by eliminating 1805 feet of runway. To achieve this reduction in length, 1605 feet of the runway can be removed from the west end and 200 feet from the east end of the runway. The runway would be narrowed by 20 feet on both sides of the runway. All edge lights and threshold lights would be relocated to the standard offsets from the runway edges and ends. Site grading, drainage and other utility work will be necessary to achieve the intent of this alternative. In addition, the runway markings and the airfield sign system would be modified and relocated to the correct locations for this smaller runway. The PAPI system which provided pilots with a visual guidance while descending to the runway would be relocated at the western end of the runway for the new runway threshold. Because the western end of the runway would no longer exist, the parallel taxiway servicing the western portion of the runway would also be removed.

FAA would not view this alternative favorably because;

1. Larger aircraft that are of significant presence at the Airport would not be able to operate with these reduced runway lengths, and the FAA would view this as restricting traffic.

2. The current length and width were constructed with FAA funds and they would object to the reduction.

Compliance to FAA standards under this alternative are summarized as follows:

Part 77 Approach Surface: The inner edge of the approach surface (which starts 200 ft. from the end of the runway) is 500 feet in width, expands uniformly to a width of 2,000 feet, and extends for a horizontal distance of 5,000 feet at a slope of 20:1.

The Runway 10 Approach end would be relocated significantly towards the east and away from potential obstructions. The surface would be clear of obstructions and would be in compliance with FAR Part 77's imaginary approach surface.

Vehicular traffic on Daniels Hole Road is an obstruction to FAR Part 77 (which assumes a vehicle of 15 ft height on a public roadway). Further investigation indicates that a separation distance of 500 feet from the end of the runway to the inner edge of the road would be required as per Threshold Siting Criteria contained in Advisory Circular (AC) 150/5300 Chg 10. Removing 200 feet from the Runway 28 end, would allow the Runway 28 approach to be unobstructed.

RSAs: The extended Runway Safety Area (RSA) dimensions for the Beech Baron would be 240 feet beyond the end of the runway by 120 feet wide (60 feet from either side of the runway centerline). Under this alternative, standard RSAs would be available at both ends of the runway.

ROFAs: The Runway Object Free Area (ROFA) measures 240 feet off the end of each runway and 250 feet wide (125 feet from either side of centerline). The standard ROFA at both ends would be available under this alternative. Daniels Hole Road is located just beyond the end of the ROFA at the 28 end.

RPZs: Under this alternative, the Runway Protection Zone (RPZ) dimensions (which begins 200 ft. from the end of the runway) are 250 feet for the inner width, 450 feet for the outer width, and 1,000 feet in length. These RPZ dimensions are specifically for runways serving aircraft in Approach Categories A and B (such as the Baron) with visibility minimums not lower than 1 mile. Under this alternative, the RPZ requirements would be satisfied at both ends of the runway.

Impacts: From an aeronautical standpoint, impacts to the airfield under this scenario would be significantly negative. A shorter runway would not support the current fleet mix.

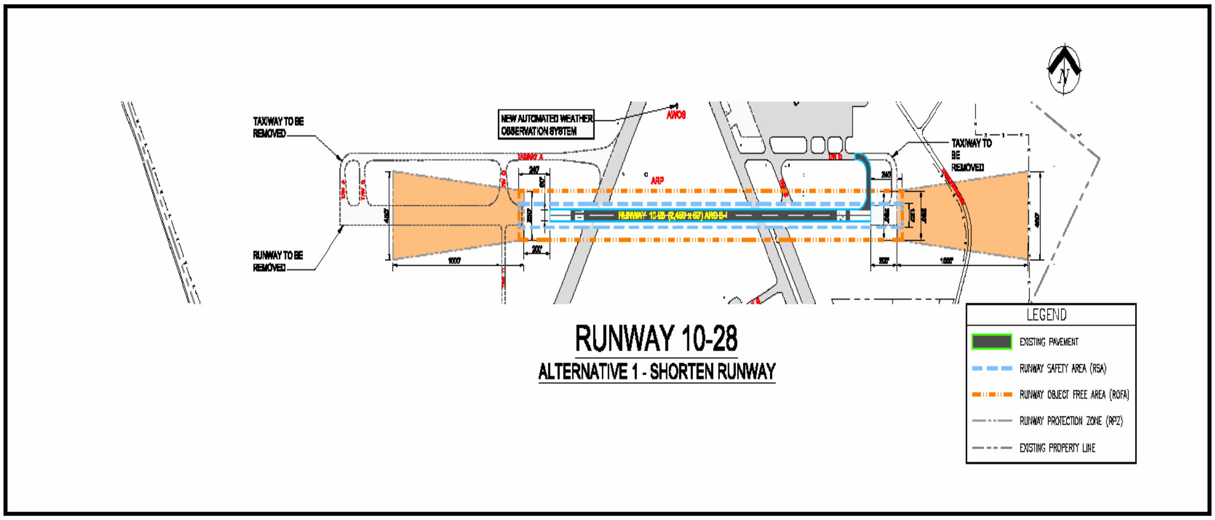
a. The present demand placed upon the airport would not be satisfied. The current usage of the airport includes high end traffic and is a result of the demographics associated with the surrounding community. The airport is being utilized by private and corporate entities with significant levels of disposable income. This results in jet traffic similar to the Citation V and various models of Gulfstream jets. These jets and all other jets would be precluded from using Runway 10-28 due to insufficient length.

b. This airside option would not be acceptable for the airport's current use or its projected aircraft use. The Beech Baron would not be indicative of a current or future design aircraft and would not be appropriate for East Hampton Airport. This alternative would not be considered a realistic projection of the airport. This alternative assumes that the current use of the airport would diminish and that small propeller type aircraft would be the only users of the airport. Based upon forecasts and past activity, this scenario is not likely to occur.

The environmental impacts would be minimized due to the type of traffic that would use a smaller runway. In addition to the type of aircraft, the quantity of traffic would significantly be reduced, should the facilities not be made available to a portion of the present traffic (by reducing the length of Runway 10-28).

The effect on noise would be reduced on Runway 10-28. The overall effect upon the surrounding community regarding noise may not be significantly different. It could be anticipated that high end turbo jet traffic may be substituted with additional helicopter traffic. The introduction of helicopter traffic often has a greater negative impact with regard to noise levels. In this case, the locations within the flight path of helicopters would be impacted as a result of this option.

FIGURE III-42
ALTERNATIVE 1



Source: DY Consultants

Runway 10-28 Alternative #2:

This alternative is based on accommodating current fleet mix without extensive changes to the runway such as lengthening the runway. This concept looks at maximizing the use of the existing runway configuration and determining appropriate usage while complying with FAA Standards. The Cessna Citation V (C 560) was used as the Design Aircraft. Using this aircraft as the design aircraft slightly increases the physical demands on the airport from A-II to B-II standards. The definition of a Design Aircraft is the most demanding airplane that will have at least 500 operations per year at East Hampton Airport. Presently, the Citation V is the most demanding aircraft that can utilize the existing runway length with over 500 operations annually.

Using the aircraft performance data specific to the Cessna Citation, a length of 4,225 feet would be required for typical conditions during the summer months. Runway length for the Citation 560 was analyzed using performance charts provided by the manufacturer. While reviewing runway length requirements, conservative assumptions were made on environmental considerations and actual data was used regarding the physical conditions of the runway (such as gradients). Based upon the analysis, the critical length requirement was 4225 feet for takeoff operations.

It should be noted that this length is based upon the current usage of the airport by FAR Part 91 Operators. FAR Part 91 Operators are all flights that are not governed by FAR Part 121 Rules, which pertain to flights by entities that are in business to transport individuals by air such as scheduled air carrier and air taxi operations. Airplanes operating under FAR Part 121 would require greater runway lengths. This alternative assumes that the airport will continue to operate under FAR Part 91 operations.

The existing runway length of 4,255 ft. available on Runway 10-28 is more than adequate to support operations of the Citation V based on the aircraft performance data. The existing length of 4,255 ft. or the maximum required runway length of 4,225 feet obtained from the Cessna Citation V performance charts in the Aircraft Flight Manual would be ideal.

Additionally, the standard width for a B-II runway with a non-precision instrument approach with visibility minimums not lower than ¾ mi. is 75 feet, meaning the current pavement on Runway 10-28 could be reduced 25 feet from its current width of 100 feet. There would be airport user related impacts associated with this reduction. Specifically, the runway width requirement for the next higher Design Group (Approach Category C) is 100 ft. Currently, there are infrequent operations of this size of aircraft. Decreasing the runway width would not likely reduce the presence of these aircraft at the airport; however, operational safety impacts may exist. The runway width can remain as is, requiring no change.

If the runway width is reduced, the existing runway edge lights, depending on their age, would either need to be moved in or replaced. Moving the edge lights would be an extensive project that would be considered a capital improvement. There would be no need to remove or add pavement. The runway would be narrowed by providing a runway edge marking and maintaining the existing pavement along the edges as a shoulder. The runway itself would be maintained by asphalt overlays and routine maintenance repairs.

Under this alternative, there would be a need to displace the Runway 28 end to provide appropriate clearance over vehicles on Daniels Hole Road for aircraft landing from the east. This would involve remarking the pavement, adding threshold lights at the displaced threshold for Runway 28, and relocating the PAPI to provide visual guidance to the displaced threshold.

The following FAA Standards were reviewed with regard to this alternative. These standards are based upon the Airport ARC B-II with approach minimums one mile or greater.

> **Part 77 Approach Surface:** Specifically for the Cessna Citation (ARC B-II) with current approach minimums, the inner edge of the approach surface (which starts 200 feet from the beginning of the runway) is 500 feet in width, expands uniformly to a width of 3,500 feet, and extends for a horizontal distance of 10,000 feet at a slope of 34:1.
>
> The existing airfield configuration does not currently meet the obstruction clearance criteria (FAR PART 77) for the approach to Runway 28 but does for Runway 10. Vehicular traffic on Daniels Hole Road currently is an obstruction to the FAR Part 77 Approach Surface for Runway 28. Even though a vehicle on Daniel's Hole Road is an obstruction to FAR Part 77, further investigation using Threshold Siting Criteria contained in AC 150/5300-13 Chg 10 reveals that the Runway 28 end would need to be displaced approximately 150 ft. This distance is arrived at by using Table A2.1 "Approach/Departure Requirements Table" with a

Runway Type titled "Approach ends of runways expected to support instrument straight in night operations, serving approach category A and B aircraft only".

RSAs: The extended Runway Safety Area (RSA) dimensions required would be 300 feet long by 150 wide (75 feet from either side of the runway centerline). There would be no impact to the existing or reduced runway length for Runway 10-28, as the standard RSA at both ends are currently available.

ROFAs: The Runway Object Free Area (ROFA) measures 300 feet long of the end of each runway and 500 feet wide (250 from either side of the runway centerline). There would be no impact to the existing Runway 10-28, as the standard ROFA at both ends are currently available.

RPZs: The Runway Protection Zone (RPZ) dimensions (which start 200 ft. from the end of the runway), measure 500 feet for the inner width, 700 feet for the outer width, and 1,000 feet in length. These RPZ dimensions are specifically for runway serving aircraft in Approach Categories A and B (such as the Cessna Citation) with visibility minimums not lower that 1 mile. In its current configuration the RPZ requirements are satisfied at both ends of the runway.

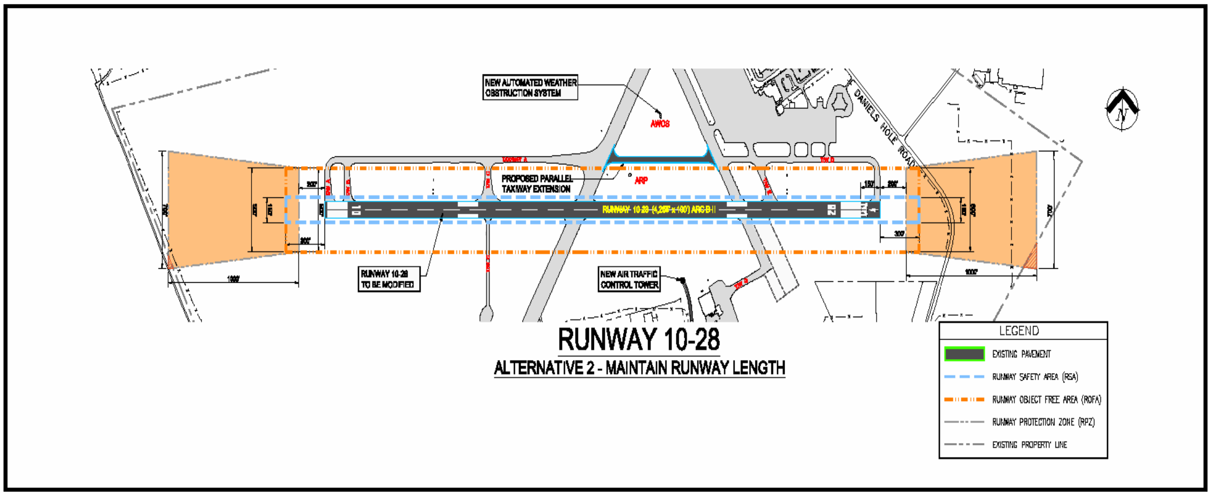
Impacts: There would be no impacts to the operation of the Citation and smaller aircraft. The design standards applied to the runway would be appropriate for a Citation. However aircraft larger than the Citation would be impacted. Some would be unable to use this runway due to its landing length or they would have to reduce their weight. Operationally, airplanes will land further to the west due to the displaced threshold.

In all likelihood this alternative would not have any effect on the type of traffic utilizing the airport. Although the design standards will be for the Citation V, the occasional use of this runway by more demanding aircraft may continue to occur. This alternative does limit the capability of the more demanding planes and does deter planes from using the runway that are in an Airport Reference Code (ARC) greater than the Citation 560.

The displacement of the runway will lessen the noise impact of the aircraft landing from the east. It will not be a significant reduction but will have some effect.

FIGURE III-43

ALTERNATIVE 2



Source: DY Consultants

<u>Runway 10-28 Alternative #3</u>:

This alternative provides a plan that would be considered unconstrained and would involve additional runway length to Runway 10-28. This concept assumes the availability of land to increase runway length and to mitigate environmental impacts that would result from this development. The intent of this alternative is to provide a runway that complies with the design standards that are associated with the most demanding aircraft that presently uses the airport.

A representative of this class of airplane currently using Runway 10-28, is the Challenger 604 (also known as the CL-604). Most of the time, this aircraft is able to operate on Runway 10-28 only through the use of weight restrictions. The CL 604 is a large aircraft (maximum takeoff weight greater than 12,500 lbs) with an Airport Reference Code of C-II. Use of this aircraft as the Design Aircraft would greatly increase the physical requirements of Runway 10-28, as well as the setback distances necessary to satisfy safety standards.

Using the Airplane Flight Manual for the CL 604, the required runway length would be 6,700 ft. Since the required width would be 100 ft for a runway with an ARC of C-II, with visibility minimums greater then one mile, no modification to the existing width would be necessary. A runway length of 6,700 ft. would require an extension of 2,445 ft. This runway will not fit within the existing airport boundary. Road relocation would be necessary to provide the required runway length.

The runway would be extended to the east by 2,445 ft with a new pavement section. The pavement section must be of substantial strength to withstand the load of the Challenger aircraft. The existing runway may require strengthening to structurally accept the operations of the Challenger. The western end of the runway would remain in its present location. A Runway Safety Area (RSA) of 1,000 ft in length beyond the end of the runway would need to be established for this high performing aircraft. The RSA for both ends would require grading and stabilization to support this aircraft without damage under a rare occurrence, should an airplane undershoot or overshoot the runway.

A parallel taxiway to service the runway extension would be necessary to access the new runway end in a safe environment. The taxiway would be constructed with a width of 35 ft. The taxiway centerline to runway centerline separation would be 300 ft. The existing and remaining parallel taxiway would not require relocation. Similar to the runway, there may be a need to strengthen the taxiway to accept the loading of the Challenger.

A major relocation of Daniels Hole Road would be necessary to provide compliance to the RSA requirements as well as providing the necessary clearance to the FAR Part 77 Approach Surface.

Other miscellaneous work associated with this alternative includes necessary airfield lighting, signing, marking, PAPI relocation, grading and drainage improvements to accommodate this extensive runway extension.

The following analysis provides FAA Standards and methods needed for this alternative. These standards are required for the design aircraft (the Challenger) with visibility minimums of one mile or greater:

> **Part 77 Approach Surface:** The inner edge of the approach surface (which starts 200 feet from the end of the runway) is 500 feet in width, expands uniformly to a width of 3,500 feet, and extends for a horizontal distance of 10,000 feet at a slope of 34:1. The approach to Runway 10 is clear of obstructions. In order to provide a clear approach to Runway 28, we need to use "Threshold Siting Criteria" contained in AC 150/5300-13 Chg 10. The appropriate distance between Daniel's Hole Road and the landing threshold for Runway 28 is 500 ft. This distance is arrived at by using Table A2.1 "Approach/Departure Requirements Table" with a runway type titled "Approach ends of runways expected to support instrument straight in night operations, serving greater than approach category B aircraft". Even though the threshold siting criteria would require 500 ft between the Runway 28 landing threshold and Daniels Hole Road, the RSA and the ROFA standards would require 1000 ft.
>
> **RSAs:** The extended Runway Safety Area (RSA) dimensions for the Challenger would be 1000 feet beyond the end of the runway by 500 feet in width (250 feet from either side of the runway centerline). In order to satisfy the RSA requirements for this alternative, Daniels Hole Road would be relocated (1,000 ft + 2,445 ft = 3,445 ft) from the present Runway 28 threshold to satisfy this condition.

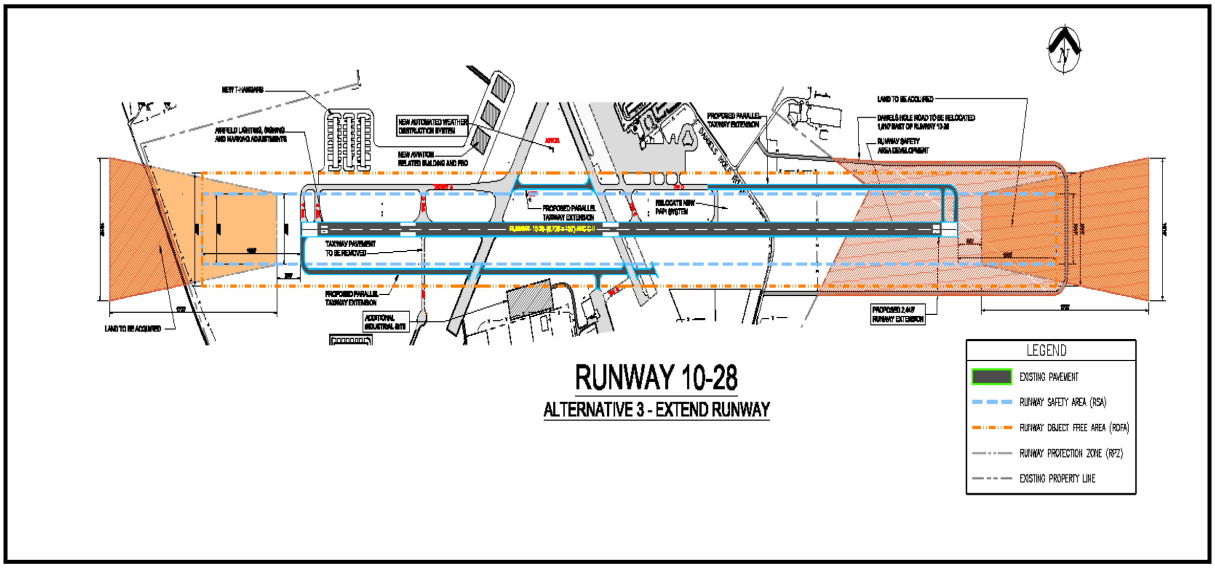
ROFAs: The Runway Object Free Area (ROFA) dimensions require 1,000 feet off the end of the runway by 800 feet in width (400 feet from either side of centerline. Daniels Hole Road would be relocated (1,000 ft + 2,445 ft = 3,445 ft) from the present Runway 28 threshold to satisfy this condition.

RPZs: The Runway Protection Zone (RPZ) dimensions required measure 500 feet for the inner width, 1,010 feet for the outer width, and 1,700 feet in length. The airport should own or control the RPZ at each end. The township owns the land containing the RPZ on the approach end of Runway 10, however under this alternative, the Town would have to acquire land on the approach end of Runway 28 in order to own the land for the extension and the RPZ.

Impacts – This alternative would have severe impacts to the airport and its environment. It would require the acquisition of off airport land on the east side of the airport. It also would require the relocation of Daniels Hole Road. Due to the nature of the project, an Environmental Impact Statement Study would be implemented for a project of such magnitude. It would support unlimited use of the Challenger and may result in limited use by even larger aircraft. Noise levels would increase and have a major impact to adjacent housing since the Runway 28 threshold would be located closer to residential areas. This type of expansion would be costly and require a major construction project.

In general, this alternative would completely satisfy the requirements necessary for the most demanding aircraft presently using the airport. It would also have the greatest impacts to the local community due to the type of traffic and the relocation of the runway end towards a residential development.

FIGURE III-44
ALTERNATIVE 3



Source: DY Consultants

ii. Runway 4-22

The following is an analysis of four (4) potential alternatives for Runway 4-22. Each alternative will be analyzed based on a selected usage of the runway. Prior to being closed Runway 4-22 was utilized by single engine and small twin engine aircraft.

Runway 4-22 No Action:

This alternative analyzes Runway 4-22 as it exists with no changes using the ARC of A-II from the last valid Master Plan conducted in 1989.

The current runway length of 2,501 ft is sufficient to serve small general aviation aircraft. The current runway width of 100 ft is larger than what would be required (60 ft) for the type of aircraft that use this runway.

The pavement condition for Runway 4-22 has deteriorated such that the runway is currently closed. There are no parallel taxiways associated with this runway and the Runway 22 approach end was displaced 380 ft due to trees in the approach as well as vehicles on Daniel's Hole Road.

Daniel's Hole Road is located within the Runway Safety Area (RSA) and the Runway Object Free Area (ROFA) on the northern end of the runway (Runway 22 approach end). The required dimensions of the RSA are 300 feet beyond the end of the runway and 150 feet in width. The required dimensions for the ROFA are 300 feet beyond the runway end and 500 feet in width. If active, the runway would not be in compliance with the required RSA and ROFA. The Runway 22 approach end would need to be shortened by approximately 228 ft to meet the RSA and ROFA required dimensions.

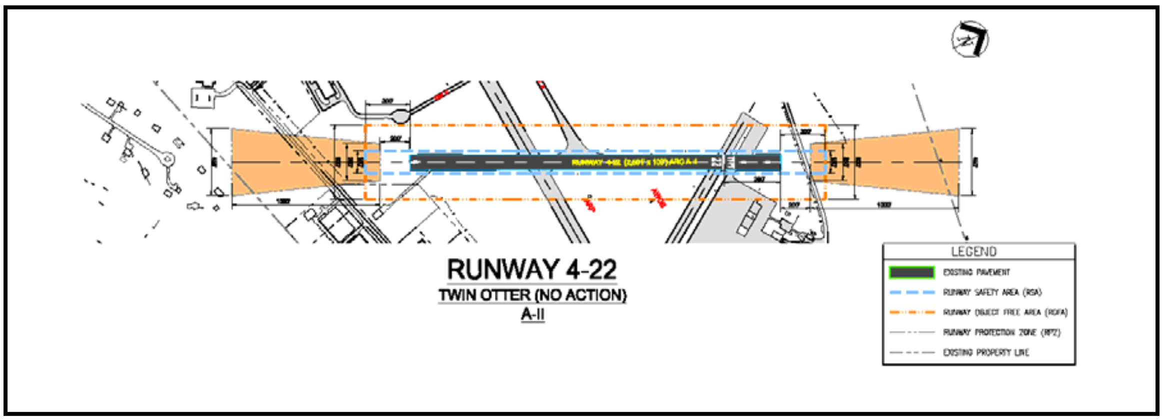
Currently the Runway 22 threshold is displaced 380 feet due to trees in the approach as well as a 15 foot vehicle on Daniel Hole Road. If the trees were removed and the Runway 22 approach end was shortened by 228 ft (to meet RSA and ROFA), there would be no need for a displaced threshold.

The approach surfaces for Runway 4 are clear of obstructions, and this end of the runway meets the requirements for the RSA and the ROFA.

The RPZs for this runway are substantially, although not completely on airport property, and are in compliance with FAA standards.

Although it is not marked to the standards of a taxiway, the runway is being used as a taxiway. The condition of the pavement is very poor and its ability to serve as a taxiway is limited in duration. The runway will require action to be taken to standardize this pavement section. The No Action alternative (with the runway in its present closed condition) would transfer the majority of small traffic to Runway 16-34. Due to compliance issues, the No Action is not feasible for Runway 4-22.

FIGURE III-45
NO ACTION ALTERNATIVE



Source: DY Consultants

<u>Runway 4-22 Alternative #1</u>:

This alternative would convert Runway 4-22 into a taxiway with a width of 35 ft, which would be sufficient for use by single engine and small twin engine general aviation aircraft. There would be no further landings or takeoffs associated with this runway, thereby minimizing environmental impacts for this particular runway.

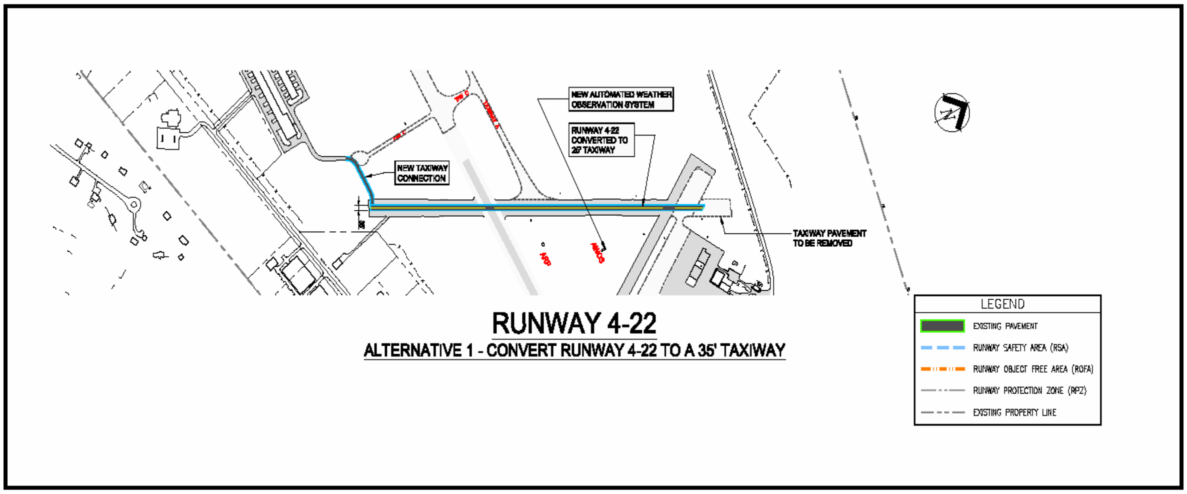
This would require the rehabilitation of the center 35 ft of the existing pavement and the removal of the remainder outside 35 ft. Taxiway edge lights would need to be installed along with appropriate taxiway markings. Additional discussion of the physical requirements needed to convert this runway to a taxiway is included in the taxiway section of this chapter.

This would be an improvement over the current use of this pavement which is in poor condition and provide for the permanent closure of Runway 4-22 which is not needed to provide adequate wind coverage at the airport. The closure of this runway would eliminate air traffic to both of these approaches to Runway 4-22 (from the north and south). This would limit the areas affected by noise impacts.

The impact, upon the airport as a whole, would be negligible since there would be no net increase/decrease in traffic as a result of closing Runway 4-22. Traffic would shift to the other two runways, causing a slight increase in traffic to the other two runways. This alternative would have a positive impact on safety, since back taxiing on Runway 4-22 would be eliminated.

This alternative to Runway 4-22 may also be considered in Alternative #2 for the airport since it has been determined that all three (3) runways may not be required to satisfy crosswind conditions at the airport.

FIGURE III-46
ALTERNATIVE 1



Source: DY Consultants

<u>Runway 4-22 Alternative #2</u>:

The intent of this alternative is to maximize the use of the existing airfield with minimal changes, while addressing any compliance issues.

Under this alternative, obstructing trees in the approach to Runway 22 would be removed. Runway 4-22 would be shortened on the north end by approximately 126 feet to bring the RSA and ROFA inside of Daniels Hole Road. The Runway 22 threshold would require a displacement of 60 for a 15 ft vehicle on Daniels Hole Road. The entire runway would be rehabilitated. The width would be reduced to 60 feet. At a length of 2,375 ft, the runway would be able to accommodate single engine and small twin engine aircraft as it did prior to being closed. Runway edge lights would need to be reinstalled along with appropriate markings.

The FAA standards would be addressed as follows;

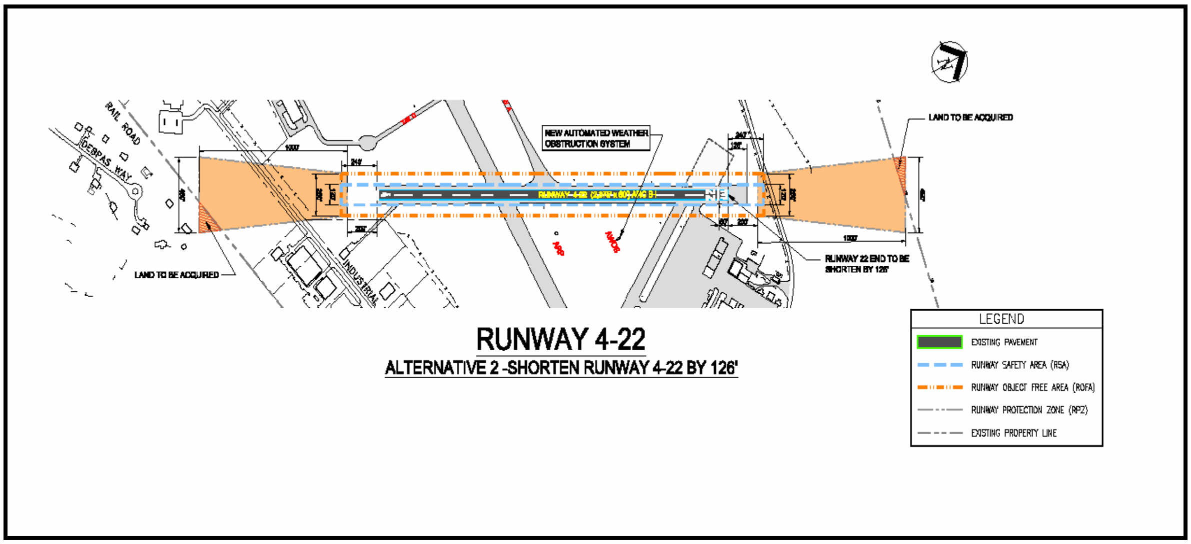
> **Part 77 Approach Surface**: The inner edge of the FAR Part 77 approach surface (which starts 200 ft. from the end of the runway) would be 250 ft in width, and would expand uniformly to a width of 1,250 ft, and would extend for a horizontal distance of 5,000 feet at a slope of 20:1. The approach surface for Runway 4 is clear of obstructions. Currently, the approach surface for Runway 22 is displaced 380 ft due to trees in the approach and vehicles on Daniel's Hole Road. Shortening the runway on the north end by 126 ft. and removing obstructing trees would require a displacement of 60 ft. due to vehicles on Daniels Hole Road, (using the Threshold Siting Criteria contained in AC 150/5300-13 Chg 10)
>
> **RSAs –** The Runway 4 approach end has the required Safety Area length and width (240 ft long by 120 ft wide). Currently, the Runway 22 approach end Safety Area does not meet these standards since Daniels Hole Road is located within the RSA. If the runway was shortened by 126 ft on the north end, RSAs for both ends of the runway would meet these dimensional requirements.
>
> **ROFAs –** The Runway Object Free Area (ROFA) measures 240 feet off the end of each runway and is 250 feet wide (125 feet from either side of centerline). The Runway 4 approach end ROFA meets these required dimensions. The Runway 22 approach end does not meet these dimensions since Daniels Hole Road is located

within the ROFA. If the runway was shortened by 126 ft on the north end, ROFAs for both ends of the runway would meet these dimensional requirements.

RPZs – Reducing runway length by 126 ft from the north end would leave 0.21 acres off airport property. On the south end, 0.3 acres are off airport property. Both RPZs would be in compliance with FAA Standards.

Under this alternative, the runway length would be shortened by 126 ft to 2375 feet. This would have minimal impact since most single engine and small twin engine aircraft would still be able to utilize this runway.

FIGURE III-47
ALTETRNATIVE 2



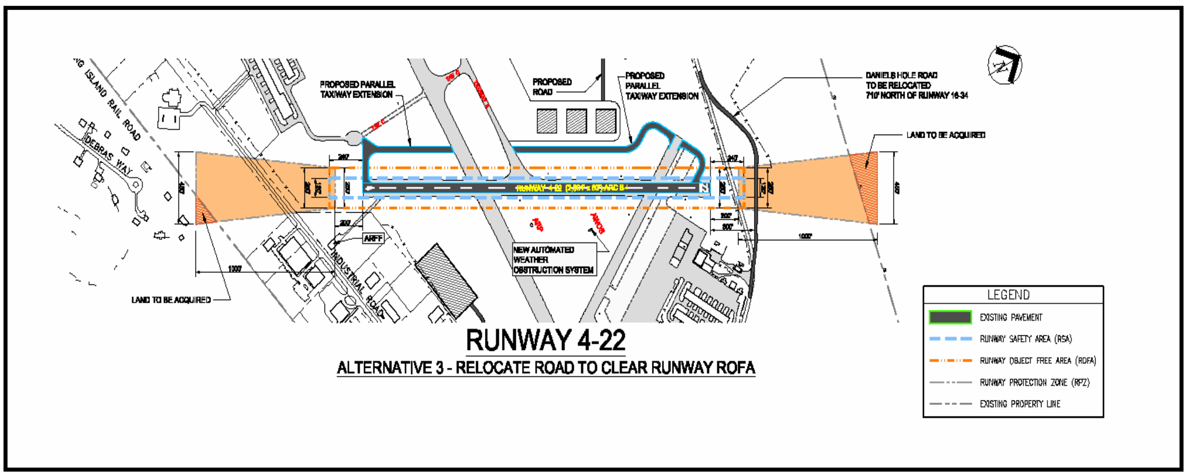
Source: DY Consultants

<u>Runway 4-22 Alternative #3</u>:

Under this alternative Runway 4-22 would be rehabilitated, trees on the approach to Runway 22 would be removed and Daniels Hole Road would be relocated (approximately 200 feet) so that the displaced threshold on Runway 22 could be removed. Runway length would remain at 2501 ft. and the runway width would remain at 100 ft. The runway would meet the dimensional requirements the RSA and the ROFA and there would be no obstructions.

Overall, this alternative would maintain the present use of the runway and would not add to the traffic of the airport. It would therefore have a minimal if any impact. The only impact associated with this alternative would be that concerned with moving Daniel's Hole Road.

FIGURE III-48
ALTERNATIVE 3



Source: DY Consultants

ii. Runway 16-34

The following is an analysis of four (4) potential alternatives for Runway 16-34. Each alternative will be analyzed based on a selected usage of the runway.

Runway 16-34 No Action

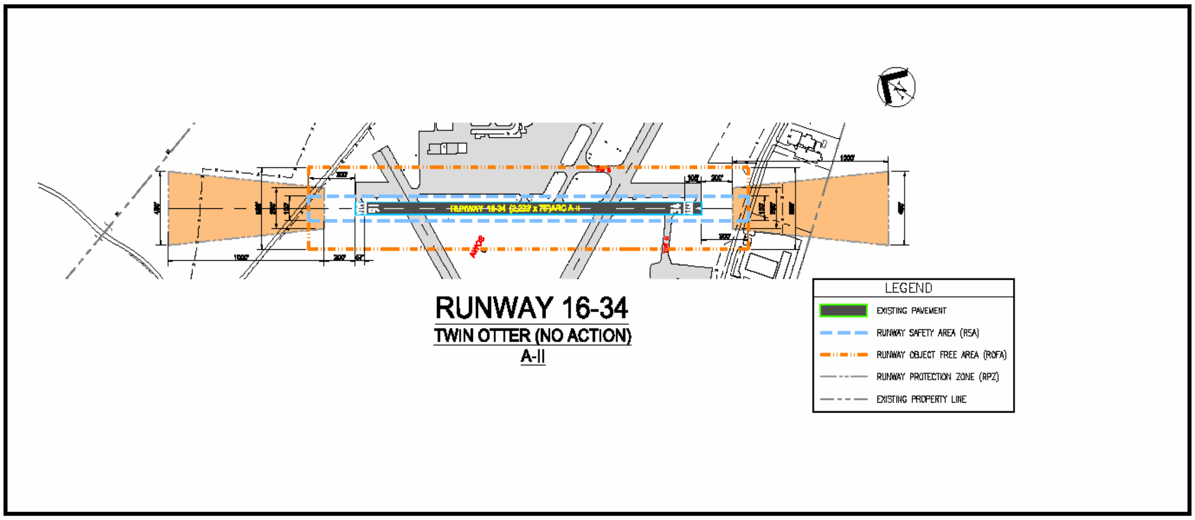
This alternative analyzes Runway 16-34 as it exists with no changes using the ARC of A-II from the last valid Master Plan conducted in 1989.

The current runway length of 2,223 ft is sufficient to serve small general aviation aircraft. These are typically aircraft weighing less than 12,500 lbs. The current runway width of 75 ft is larger than what would be required (60 ft) for the type of aircraft that used this runway. The threshold for Runway 16 is displaced 57 ft due to vehicles on Daniels Hole Road. Runway 34 is displaced 106 ft due to trees in the approach.

The northern end of the runway (Runway 16 approach end) as well as the southern end of the runway (Runway 34 approach end) do not meet the Runway Safety Area (RSA) dimensions of 150 ft width and 300 ft length nor the Runway Object Free Area (ROFA) dimensions of 500 ft width and 300 ft length.

The RPZ in the approach to Runway 16 is owned by the airport. Approximately 50% of the RPZ in the approach to Runway 34 is owned by the airport. Both RPZs meet FAA requirements.

FIGURE III-49
NO ACTION ALTERNATIVE



Source: DY Consultants

Runway 16-34 Alternative #1:

Under this alternative Runway 16-34 would be shortened approximately 5 feet on the north end, to bring the RSA and ROFA inside Daniels Hole Road and the threshold for Runway 16 would be displaced 60 from the end to accommodate a 15 ft vehicle on Daniels Hole Road. Obstructing trees in the approach to Runway 34 would be removed and the threshold for Runway 34 would be displaced 60 ft to accommodate a 15 ft vehicle on Industrial Road. The runway would be rehabilitated. The runway length would be 2,218 ft and the width would be reduced to 60 ft. With these dimensions, the runway would be able to accommodate single engine and small twin engine aircraft as it currently does now.

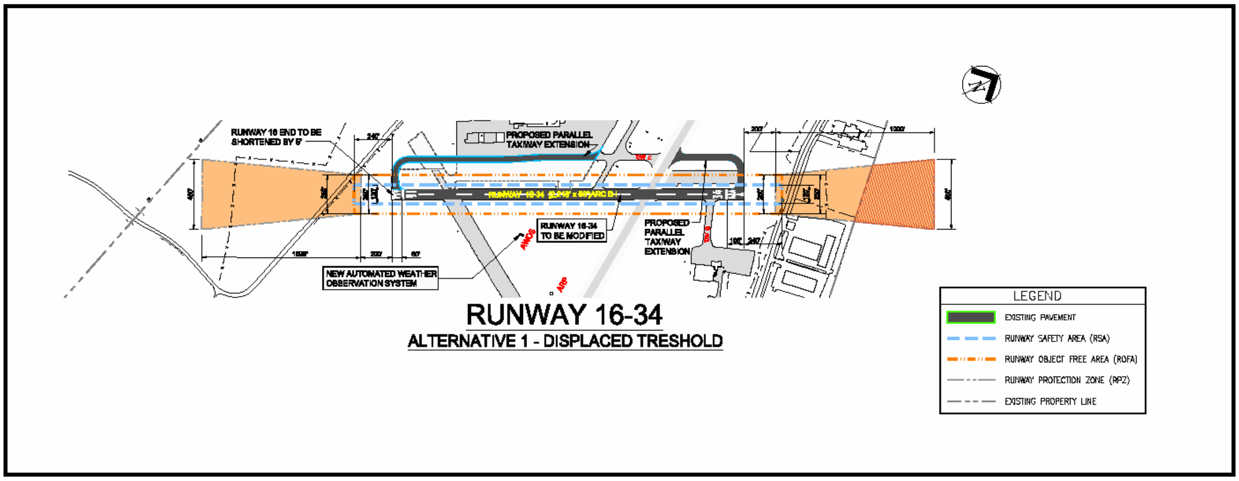
The FAA standards would be addressed as follows;

> **Approach Surface**: The inner edge of the FAR Part 77 approach surface (which starts 200 ft from the runway end) would be 250 ft in width, and would expand uniformly to a width of 700 ft, and would extend for a horizontal distance of 1,000 feet at a slope of 20:1. A 15 ft vehicle on Daniels Hole Road is a penetration to the Part 77 approach surface for Runway 16. A displaced threshold would need to located 60 ft from the newly relocated (by 5 ft) Runway 16 threshold. This is determined using AC 150/5300-13 Table A2-1 Approach/Departure Requirements Table. Also a 15 ft vehicle on Industrial Road is a penetration to the Part 77 approach surface for Runway 34. A displaced threshold would need to be located 60 ft from the Runway 34 threshold.
>
> **RSAs –** The Runway 16 approach end would be shortened by 5 ft to bring the RSA inside of Daniels Hole Road, thereby meeting the RSA required dimensions of 120 ft width and 240 ft length. The Runway 34 approach end meets the RSA required dimensions.
>
> **ROFAs –** The Runway 16 approach end would be shortened by 5 ft to bring the ROFA inside of Daniels Hole Road; thereby meeting the ROFA required dimensions of 120 ft width and 240 ft length. The Runway 34 approach end meets the ROFA required dimensions.

Alternative 1 would have minimal impact on this runway since most single engine and small twin engine aircraft would still be able to utilize this runway.

Any operation of Runway 16-34 would have a severe impact on the use of the Terminal Apron, due to runway/taxiway separation standards. If Runway 16-34 is open, many of the aircraft parking locations along the western edge of the apron would not be able to be used. This would result in inadequate aircraft parking during the busy summer season.

FIGURE III-50
ALTERNATIVE 1



Source: DY Consultants

Runway 16-34 Alternative #2:

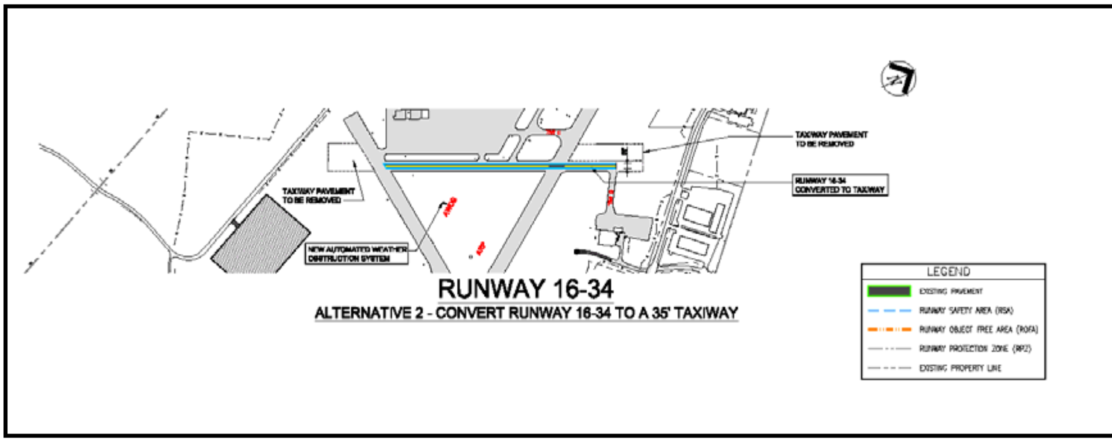
This alternative would convert Runway 16-34 into a taxiway with a width of 35 ft, which would be sufficient for use by single engine and small twin engine general aviation aircraft. This would require the rehabilitation of the center 35 ft of the existing pavement and the removal of the remainder outside 35 ft. Taxiway edge lights would need to be installed along with appropriate taxiway markings. Additional discussion of the physical requirements needed to convert this runway to a taxiway is included in the taxiway section of this chapter.

This would be an improvement over the current use of this pavement which is in poor condition and provide for the permanent closure of Runway 16-34 which is not needed to provide adequate wind coverage at the airport. The closure of this runway would eliminate air traffic to both of these approaches to Runway 16-34. This would limit the areas affected by noise impacts.

The impact, upon the airport as a whole, would be negligible since there would be no net increase/decrease in traffic as a result of closing Runway 16-34. Traffic would shift to the other two runways, causing a slight increase in traffic to the other two runways. This alternative would have a positive impact on safety, since back taxiing on Runway 16-34 would be eliminated.

This alternative to Runway 16-34 may also be considered in Alternative #1 for the airport, since it has been determined that all three (3) runways may not be required to satisfy crosswind conditions at the airport.

FIGURE III-51
ALTERNATIVE 2



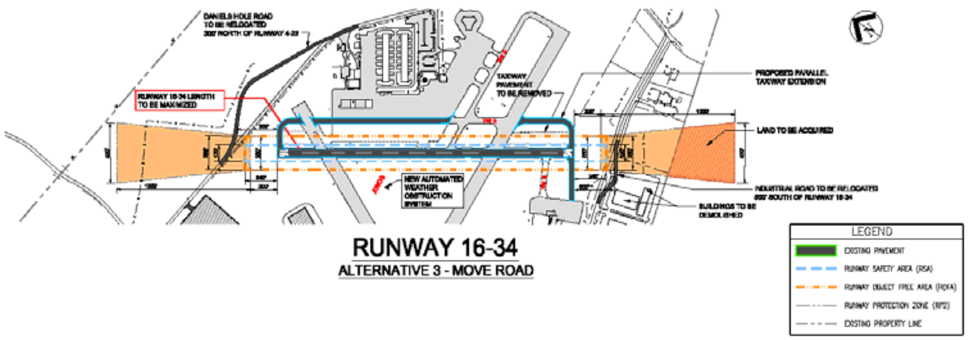
Source: DY Consultants

<u>Runway 16-34 Alternative #3</u>:

Under this alternative, Runway 16-34 would be rehabilitated, trees on the approach to Runway 34 would be removed, Daniels Hole Road would be relocated approximately 60 feet and Industrial Road would be relocated approximately 75 ft. This would allow single engine and small twin engine aircraft to operate on the current length of 2,223 ft without displaced thresholds. RSA and ROFA dimensional requirements would also be met. The RPZ located in the approach to Runway 16 is located on airport property. Approximately 50% of the RPZ located in the approach to Runway 34 is located on airport property. They are both in compliance with FAA standards

Overall, this alternative would have a minimal if any air traffic impact. There would be major impacts associated with the relocation of Daniels Hole Road and Industrial Road.

FIGURE III-52
ALTERNATIVE 3



Source: DY Consultants

TABLE III-28
DESIGN AIRCRAFT REQUIREMENTS

Runway Dimensions	A-II Twin Otter		B-I Beech Baron		B-II Cessna 560		C-II Challenger 604	
	No Action	Existing	Alt #1	Existing	Alt #2	Existing	Alt #3	Existing
Runway 10-28 Dimensions:								
Length (feet):	4,255	4,255	2,450	4,255	4,255	4,255	6,700	4,255
Width (feet):	100	100	60	100	100	100	100	100
Runway 28 ROFA								
Length (feet):	300	300	240	240	300	300	1,000	300
Width (feet):	500	500	120	120	150	150	500	500
Runway 10 ROFA								
Length (feet):	300	300	240	240	300	300	1,000	1,000
Width (feet):	500	500	120	120	150	150	500	500
Runway 16-34 Dimensions:			B-I Beech Baron				B-I Beech Baron	
Length (feet):	2,223	2,223	2,218	2,223	*For Alternative 2 Runway 16-34 is Converted into a Taxiway*		2,223	2,223
Width (feet):	75	75	60	75			60	75
Runway 34 ROFA								
Length (feet):	300	204	240	240			240	240
Width (feet):	500	500	250	250			250	250
Runway 16 ROFA								
Length (feet):	300	127	240	240			240	240
Width (feet):	500	500	250	250			250	250
Runway 4-22 Dimensions:					B-I Beech Baron		B-I Beech Baron	
Length (feet):	2,,501	2,501	*For Alternative 1 Runway 4-22 is Converted into a Taxiway*		2,375	2,501	2,501	2,501
Width (feet):	100	100			60	100	60	100
Runway 22 ROFA								
Length (feet):	300	72			240	114	240	200
Width (feet):	500	500			250	250	250	250
Runway 4 ROFA								
Length (feet):	300	300			240	240	240	240
Width (feet):	500	500			250	250	250	250

1989 Critical Design Aircraft
Existing condition is less than standard

Source: DY Consultants

2. Taxiway and Other Improvements

Taxiways

Taxiways exist at airports to promote safe, efficient, and expeditious aircraft movement primarily to and from runways and parking aprons, while minimizing runway crossings and back taxiing.

Taxiway Improvements will be discussed in the context of the following alternatives;

5. No Action Alternative
6. Alternative #1
7. Alternative #2
8. Alternative #3

<u>No Action Alternative-Twin Otter ARC-II:</u>

Under this alternative no improvements would be made. The taxiways system would continue to force aircraft to back taxi on runways and have multiple runway crossings.

East Hampton has an under developed system of taxiways. Currently, only one partial parallel taxiway exists along Runway 10-28 and Runway 16-34. This creates the undesirable condition known as “back taxiing”. Back taxiing is a term used by pilots and air traffic controllers which means that an aircraft is taxiing on the runway, opposite to the landing direction, to the beginning of the runway for the purpose of departure. This has a direct and negative effect on safety. Aircraft departing on Runways 4, 16, 34, and 22 need to back taxi on the runway to reach the approach end of the runway for departure. Runway 4-22 is currently closed due to its poor pavement condition; however it is used as a taxiway.

Currently the existing taxiway widths are in compliance with the FAA requirements for Group II aircraft. Taxiway A, B, E and G are 40 feet wide with Taxiway D being 35 feet wide. The Runway-Taxiway separation distance for Taxiway A and Taxiway D, which are parallel to Runway 10-28, is 300 feet, which is in compliance with the FAA Runway-

Taxiway separation criteria. Runway 4-22 does not have a parallel taxiway. Taxiway E is a short partial parallel taxiway to Runway 16-34. It is located 240 feet from Runway 16-34 which is in compliance with the FAA requirements. However, the distance between the Runway 16-34 centerline to the taxilane centerline adjacent to the aircraft parking apron is only 105 feet and not in compliance with the FAA separation criteria which states that the separation distance should be 240 ft for Group II aircraft.

<u>Alternative #1-Beech Baron ARC B-I:</u>

A taxiway improvement, which would greatly increase safety and the expeditious flow of aircraft, would be to remove the existing closed pavement on the northeast side of Runway 16-34 from the threshold of Runway 16 to the intersection with Runway 4-22 and provide a new 35 foot wide parallel taxiway with a runway-taxiway separation criterion of 225 feet (AC 150-5300-13 Table 2-1 for Group B-I) or if Runway 16-34 is restricted to small aircraft only (weighing 12,500lbs or less), this distance could be reduced to 150 ft. Similarly at the Runway 34 end, removal of the existing closed pavement and construction of a 35 feet wide parallel taxiway would be undertaken to provide a partial parallel taxiway to Runway 16-34.

The existing main apron taxilane centerline to runway centerline separation distance is only 105 feet which is not in compliance with the FAA runway/taxiway separation criterion for ARC A-II. In order to be in compliance with the separation criteria for Group I aircraft, the taxilane centerline should be remarked at a distance of 225 feet from the runway centerline (or 150 ft if Runway 16-34 is restricted to small aircraft only) and the portion of the pavement to the west of the taxilane be indicated as unusable pavement.

This would have a minimal environmental impact, since existing closed pavement would be removed and replaced with pavement which is narrower than the existing taxiway. Providing a parallel taxiway to Runway 16-34 would prevent back taxiing for departures on Runway 16 and Runway 34 and thereby improve safety. The biggest impact would be the loss of tie-downs on the terminal apron. With this alternative there would not be any increase in traffic.

Alternative #2-Cessna Citation B-II

This alternative will consider utilizing the existing airside and landside facilities as much as possible while increasing safety and controlling the impact upon the surrounding community, using the current mix of aircraft that operate at East Hampton Airport. In order to facilitate movement of aircraft using Runway 10-28, a complete full length parallel taxiway to Runway 10-28 would be very beneficial (approximately 75% of a full parallel taxiway already exists). Currently aircraft from the main apron have two routes to the threshold for Runway 10. One is to travel north on the apron, then onto Runway 4-22 (currently closed and in poor condition), then onto Taxiway A to the threshold. Another route is south on Taxiway E and then back taxi on Runway 10-28. The addition of a taxiway which would connect Taxiways D and A would provide a much more direct and safer route.

This proposed parallel taxiway would provide access to airplanes within the Airport Reference Code (ARC) of a B-II such as a Citation V. The existing Taxiway A and D centerline and Runway 10-28 separation distance is 300 feet. In order to maintain consistency with the existing Taxiways A and D, the proposed parallel taxiway would be designed and constructed such that the width of the taxiway is 35 feet and the separation between the Runway 10-28 centerline and the taxiway centerline would be 300 feet. The proposed taxiway would be marked and fillets to Runway 4-22 constructed so as to meet the Group II aircraft criteria.

Runway 16-34 would be closed and permanently converted to a taxiway. The usable pavement width would be reduced to 35 feet, the edge lighting system would be modified, pavement markings would be changed to taxiway markings, a new sign system would be installed and circuitry would be adjusted to isolate the taxiway system from the runway circuitry.

This alternative would allow full use of the terminal apron, which currently does not meet runway-taxiway separation standards.

These improvements would be considered a maximum use of the field while accompanying a design aircraft that is presently active at the airport.

Alternative #3-Challenger C-II:

Under this alternative, the following would be added to all of the previously mentioned taxiway improvements. A parallel taxiway south of Runway 10-28 from the Runway 10 threshold to the proposed taxiway parallel to Runway 16-34 would facilitate movement of aircraft located in the T –hangars in the southwest corner of the airport, and aircraft operating from the apron in the southeast corner of the airport as well as future development on the south side of Runway 10-28. Taxiway G would be relocated south to the threshold for Runway 34 and a new taxiway would be constructed from the ramp to the southern parallel taxiway to Runway 10-28.

Under this alternative, the Challenger 604 can be considered to be the design aircraft for Runway 10-28. The Challenger belongs to a C-II ARC and the FAA runway-taxiway centerline separation for this group of aircraft is 300 feet. The required parallel taxiway width for a Group II aircraft is 35 feet. Taxiways A and D both satisfy the required runway-taxiway centerline separation criteria as well as the taxiway width criteria for this group of aircraft.

If Runway 4-22 were to be rehabilitated as a runway, a parallel taxiway, on the west side of this runway, from the Runway 4 threshold to Runway 16-34, would provide an efficient and safer route for aircraft traveling between the threshold for Runway 10, the main apron and for aircraft in the T-hangars in the southwest corner of the airport. If Runway 4-22 is converted to a taxiway, constructing a taxiway, between the approach end of Runway 10 to the T-hangars located in the south west portion of the airport will increase tenants' accessibility of the runway and reduce taxi time.

Current users of the Airport have asked for the addition of a holding apron adjacent to Taxiway D at the approach end of Runway 28. This would allow an aircraft to pass another one that is being held because of a delay. A bypass taxiway has been incorporated at the approach end of Runway 28 to accommodate this.

As mentioned earlier, providing a parallel taxiway to Runway 10-28 to connect the existing Taxiways A and D would also prove to be beneficial to the taxiing aircraft. This would however require the relocating of the segmented circle located in the triangular infield area such that it clears the taxiway object free area.

Providing a network of parallel taxiways, will definitely improve the accessibility to the runway ends and other parts of the airport and at the same time improve safety by reducing the need for aircraft to travel on runways.

3. Runway Closure Alternatives

Based on the following information, it would be possible to close a runway at East Hampton Airport. The Airport Improvement Program does not financially support a third runway when two runways will provide 95% wind coverage, as is the case at East Hampton Airport. Currently, any combination of two of the three runways will provide adequate wind coverage based on historical wind data.

If the existing configuration and conditions remain, Runway 10-28 would continue to exist as the main runway, Runway 4-22 would remain closed and used as a taxiway, and Runway 16-34 would remain the crosswind runway used by smaller, piston aircraft. The advantages and disadvantages associated with the permanent closure of Runway 4-22 (as described below) currently apply. However, the pavement condition of Runway 4-22 is not stable enough to continue to serve the Airport as a taxiway and would require improvement. A considerable cost would be incurred and construction at the Airport would occur to rehabilitate Runway 4-22's pavement, even for taxing operations.

The following is an examination of the advantages and disadvantages of associated with closing each of the runways:

Closing Runway 4-22…

If Runway 4-22 were permanently closed, Runways 16-34 would remain for use by small, piston aircraft and Runway 10-28 would remain to accommodate both smaller, piston aircraft as well as larger, jet aircraft.

The advantages associated with closing Runway 4-22 include:

- Average noise contours would change as result of the traffic redistribution over the two remaining runways. Residents underneath the flight path of the landing and departure ends of Runway 4-22 would be relieved.
- Once rehabilitated as a 35 ft taxiway, maintenance costs would be much less than for a runway, since there would be approximately 50% less pavement to maintain.

The disadvantages associated with closing Runway 4-22 include:

- Runway 4-22, which offers the most wind coverage during the summer months, would no longer serve the users of the airport
- Taxiing time and effort for tenants who house their aircraft in the t-hangars at the each approach end of Runway 4-22 would increase, since one of the two remaining runways would have to be used.
- The largest disadvantage would be the loss of aircraft parking on the terminal apron due to the ramp being too close to Runway 16-34

Two options can be pursued for use of the pavement from the abandoned Runway 4-22. The first option would entail rehabilitating the pavement to continue serving the airport as a taxiway. This means the runway would officially be converted into a taxiway. The second option entails completely closing the pavement due to its poor condition, meaning that the pavement would be officially closed and unavailable.

Advantages associated with the taxiway conversion option include:

- Airport accessibility would be preserved.
- An area to be developed for aviation, if desired, would be made available.

Disadvantages associated with the taxiway conversion option include:

- Local or federal funding for the pavement rehabilitation would be required
- There would be a considerable amount of construction at the Airport during the rehabilitation process.

Advantages associated with the taxiway closure option include:

- No funds would be necessary for maintenance or rehabilitation of the pavement

Disadvantages associated with the taxiway closure option include:

- An impediment to the accessibility of the airport would be created.
- Users would have to circumnavigate the closed pavement, possibly congesting the remaining taxiways and crossing runways in several places. Current practices recommend that a system of taxiways is provided to allow an aircraft to maintain an average taxiing speed of 20 M.P.H. and to minimize runway crossing. See AC 150/5300-13.
- Increased taxiing time would inconvenience aircraft and passengers.
- Airport capacity and efficiency may be compromised during peak season causing delays and bottlenecks at entrances and exits to remaining runways.

Closing Runway 16-34…

If Runway 16-34 were closed, Runway 4-22 would remain available to serve smaller, piston aircraft and Runway 10-28 would remain to serve both smaller, piston aircraft as well as larger, jet aircraft.

The advantages associated with closing Runway 16-34 include:

- Average noise contours would change as a result of the traffic redistribution over the two remaining runways. Residents underneath the flight path of the landing and departure ends of Runway 16-34 would be relieved.
- The separation distance between Runway 16-34 and the terminal parking area is non-standard. The edge of the apron which serves as a taxilane was constructed approximately 100 ft from the centerline of Runway 16-34. The minimum required distance for a taxiway/taxilane from a runway (which is restricted to only small aircraft – under 12, 500 lbs MTOW) is 150 ft. Additionally, no aircraft can park within 125 ft of the runway centerline. If Runway 16-34 remained open (exclusively for small aircraft use only), the taxilane and a portion of the terminal apron would violate runway/taxilane separation standards. The FAA would require that a portion of the terminal ramp be kept empty to satisfy the separation requirements. If Runway 16-34 is closed or converted into a taxiway, the apron can be fully utilized and would comply with separation standards.

The disadvantages associated with closing Runway 16-34 include:

- Reduced wind coverage during the winter months, mainly December through January.

Runway 10-28 is the main runway at East Hampton Airport because it is the longest and the only runway to offer a straight in instrument approach. Runway 10-28 should be excluded from the closure analysis because the following might occur if it were closed:

- The airport would be unavailable to larger aircraft, which are the primary users of the airport. Only small, piston aircraft would be able to use the remaining two runways due to their shorter length.
- High end charter and passenger transport, which mainly operate luxury jets, could no longer exist at the airport.
- Residents of East Hampton or adjacent communities who own and operate their own private or timeshared jets aircraft would be required to operate into and out of Westhampton Airport.
- Alternate transportation would be necessary and could create an increase in helicopter traffic in the vicinity of East Hampton Airport or an increase in the already present vehicular traffic congestion on the ground.
- Current grants assurances require the Airport to maintain its availability to its users.

The answer to the question of which runway should remain open and which should be closed resides with the Town of East Hampton based on the best interests of the community. Any combination of runways will provide the adequate wind coverage. Federal funded airports are required to maintain their availability to the users of the airport through grant assurances. Closing Runway 10-28 would in effect restrict use of East Hampton Airport to smaller, piston aircraft. Therefore, a combination Runway 10-28 (the main runway) and one other runway (either Runway 16-34 or Runway 4-22) is ideal.

C. Landside Considerations

1. Aprons and Facilities

Aprons

The aircraft aprons providing tiedowns to based aircraft are leased to and managed by Sound Aircraft Service and Myer's Aero Services. It is the prerogative of the Airport to determine the type and amount of additional facilities they might choose to offer. As such, tie down modifications will be discussed in the context of the following alternatives;

1. No Action Alternative
2. Alternative #1
3. Alternative #2
4. Alternative #3

No Action Alternative:

Under this alternative no improvements or additions would be made. The tie-down facilities are currently at capacity, however; they appear to be sufficient to satisfy the current demand at the airport. According to Airport Management, there currently is no demand for additional aircraft parking at East Hampton Airport. Maintaining the current apron capacity would prohibit additional tie-downs in the future.

Under the current Grant Assurances, East Hampton Airport is required to maintain the Airport accessible to current traffic demands. This does not mean that new facilities must be constructed to accommodate new growth. Therefore, the Airport would be in full compliance with federal requirements under this Alternative.

There are no current community or user related impacts under this Alternative, as it is merely maintaining the Airport in its current condition. The type and frequency of air traffic would also remain unchanged.

Alternative #1:

The Minimum Environmental Impact Alternative may also consist of maintaining existing facilities. Again, there is no immediate demand for additional tie down space at the Airport. Therefore, supplying additional tie down space may be considered in excess of what is currently required at the Airport.

There are no current community or user related impacts under this Alternative, as it is merely maintaining the Airport in its current condition. The type and frequency of air traffic would also remain unchanged.

Alternative #2:

This alternative will examine how the Airport could efficiently accommodate the conservative forecast for based aircraft at East Hampton Airport. Planning analysis may be used to determine future adequacy of tie down space provided for based aircraft. Based Aircraft forecasts from Chapter 1 show a small amount of potential demand in the near future. To examine long term needs, typical planning practices look 20 years ahead to anticipate activity and determine what is necessary to accommodate it. According to the forecast (Table I-12) there will be 120 based aircraft in the year 2025. That is an increase of 19 based aircraft over a 20 year period. These aircraft would likely be single engine or small twin engine propeller aircraft based on historical usage of the Airport.

It is the norm to assume that 60% of based aircraft at an airport like East Hampton would prefer to store their aircraft in a hangar. Therefore, it could be assumed that over the next two decades, 8 of the projected 19 additional tenants (them remaining 40 %) will require tie downs at the Airport.

Tie-down space for single engine and light twin engine airplanes, which is the type that would be expected, require a minimum of 900 square feet per aircraft. Therefore, approximately 9,900 square feet of additional apron would be needed at the Airport.

Tie downs would likely be; near the current tie-down spots, outside of all FAA Safety Surfaces, and in compliance with all FAA design criteria.

There may be slight impacts to the community in terms of noise due to a small increase in frequency of operations due to the additional traffic at the Airport. Again, the type of new aircraft will likely be small and propeller driven. The associated noise impacts would be slight.

Alternative 3:

Under the Unrestricted Growth Alternative we will examine how the Airport could construct facilities to accommodate an increase in both small propeller and larger jet aircraft. Under this alternative, a 9,900 ft apron to provide tie downs for the additional 11 forecasted aircraft as well as additional transient aircraft parking would be added to the Airport:

The ideal location for transient aircraft parking would probably be at the south end of the airport off the Approach end of Runway 34. The amount of transient aircraft parking would be contingent up the activity levels, normally based on fuel sales volumes. Fuels sales for the FBOs for 2006 are still being calculated and a more precise estimation of required apron space will be provided once complete. However, for planning purposes, we will use an apron similar in size to the East Hampton Airlines apron.

There would be several impacts under this alternative. If new tenants were acquired for tie downs or transient operations were increased, noise related impacts to the community would also increase due to additional traffic at the Airport. The Airport on the other hand may benefit financially from the additional sources of revenue provided by these aircraft.

It is also important to consider other factors when determining the amount of apron an Airport would prefer to construct. Variables that might increase or decrease the desired apron size might include current tenant preferences (tie-down vs. hangar), anticipated changes in services at the airport and surrounding areas that might attract a new customer base or changes in regional or industry trends that might affect activity levels.

Attendants Office Relocation

Aircraft parked on the transient parking apron obscure the view of the Airport Attendant's office in the terminal building to the runway/taxiway pavements. Relocating this office will improve safety and security by allowing a clear line of sight between the office and the aircraft operations area.

Currently the terminal building itself is in good condition. The second floor was originally intended to be used as the Airport Attendants Office. The idea was later discarded before construction of the building began. Today the second floor would require renovation to accommodate the office. This option may be slightly costly (see cost estimate later in the report) however, it is a better solution than relocating the office to a new location. Selecting a different location would require the construction of a new, separate facility providing a line of sight to the Airport.

Impacts on the Airport include increased safety and security. It is unlikely that any impacts to the community would exist, as the renovation to the terminal would not be major. This project is consistent with the goals of Alternative #2.

Construction of an Airport Maintenance Facility

A new maintenance building would provide shelter for the airport equipment and materials required to adequately maintain the facility. Sheltering equipment from weather and the elements will prolong its useful life and help maintain proper functioning. Locating the maintenance building adjacent to the fuel farm is ideal. This location is easily accessible to Airport personnel and would not impede aircraft operations.

A maintenance building would benefit personnel and equipment and has been requested by the Airport. No negative impacts would exist to the community. This project is consistent with the intent of Alternatives #1, #2 and #3. As a result, the Maintenance facility will be considered as a component of each of the alternatives presented later in the report.

2. Fuel Farm

The fuel farm in its current state is inadequate during peak season. Daily fuel deliveries of 9,000 gallons of Jet A fuel occur each day during the summer months and are very costly. These deliveries originate from providers located in Philadelphia, New Jersey and Queens and must be transported out to the Airport further adding to vehicular traffic congestion. Moreover, general industry practice would expect an ideal fuel farm to supply a three day reserve however; the seasonality of East Hampton Airport skews this general concept. Making improvements and increasing the capacity of the fueling system will have no impact upon aviation traffic at the East Hampton Airport.

Currently there is a 12,000 Gallon Jet-A tank at the fuel farm. Adding an additional 12,000 gallon Jet A fuel tank would cut the deliveries to every other day during peak season. This would provide one day of storage during the peak summer months. Additionally, the existing Jet A fueling facility should be replaced as it is in poor condition. The fuel farm would be modified by installing an additional above ground tank for Jet A fuel adjacent to the location of the existing tank. This effort would require the construction of existing concrete foundations, modifications to the utilities, and adjustment to the dispensing system and providing necessary site work.

The AVGAS fueling facility was replaced in 2000 and is in good condition. The capacity of this tank is expected to remain adequate to meet the anticipated demand for this type of fuel.

The primary compliance issues in upgrading the fuel farm facility would be to meet environmental standards for this type of system. The major issues would involve proper detection systems and the necessary secondary containment in the case of spills. From an aeronautical standpoint, the system would adhere to airfield clearance requirements and needs to be secure under the guidelines established by the Transportation Security Administration (TSA).

Actions that would benefit the Airport include increasing the current Jet A fuel storage capacity, replacing the existing Jet A storage tank, enlarging the area for easy ingress and egress of the fuel delivery trucks, adding security cameras, installing fencing and providing lighting.

Upgrading the fuel farm would not increase air traffic or impact the type of traffic at East Hampton, but would serve the existing users of the Airport and help facilitate the Airport's effort to provide fuel. Additionally, the community would not be adversely impacted by upgrading the fuel farm.

This project is consistent with Alternative #1, Alternative #2, as well as Alternative #3. As a result, the facility will be considered as a component of each of the alternatives presented in Chapter 5 of this report, with the exception to the No Action Alternative.

3. Hangar Development

Typical aviation planning practices assume that 60% of based aircraft would prefer to store their aircraft in a hangar. It is also presumed that 70% of those owners would prefer T-hangars rather than conventional hangars. Applying this methodology to the 101 currently based aircraft, it can be presumed that an additional 43 T-hangars and 18 conventional hangars should be desired and considered at some point in the future. However, since there currently is not a waiting list for hangar space, it can be presumed that future demand of hangar space will be less than this value.

Hangars

T-hangars and conventional hangars currently exist at East Hampton Airport to provide aircraft shelter and housing. These hangars are leased to and managed by Sound Aviation, Myers Aero Service, and East Hampton Airlines. The actual number of hangars an airport should provide is open to interpretation based on demand, space available for aeronautical use, and character of the airport and its clientele. As such, hangar additions will be discussed in the context of the following alternatives;

1. No Action Alternative
2. Alternative #1
3. Alternative #2
4. Alternative #3

No Action Alternative

Under this alternative no hangar improvements or additions would be made.
The existing hangars at East Hampton Airport are at capacity. Currently there are 5 conventional hangars and 59 T-hangars at the Airport. East Hampton does not have a waiting list for additional hangars at this time and the forecasted level of based aircraft at the airport is relatively stagnant. According to Airport Management, there currently is no outside interest in providing new hangars at East Hampton Airport.

Under the current Grant Assurances, East Hampton Airport is required to maintain the Airport accessible to current traffic demands. Not expanding current apron facilities would prohibit acquiring additional tenants in the future. Construction of new facilities to accommodate new growth is not required. Therefore, the Airport would be in full compliance with federal requirements under this Alternative.

There are no current community or user related impacts under this Alternative, as it will merely maintain the Airport in its current condition.

Alternative #1:

Alternative #1 may also consist of maintaining existing facilities. Again, there is no immediate demand for additional hangar space at the Airport. Therefore, supplying additional facilities may be considered in excess of what is currently required.

There is no current community or user related impacts under this Alternative, as it will merely maintain the Airport in its current condition.

Alternative #2:

Since there is no immediate demand for hangars, we will not consider adding them under this alternate.

Alternative 3:

Under Alternative 3 we will examine how the Airport could construct facilities to accommodate an increase in both small propeller and larger jet aircraft. Though there currently is not a hangar waiting list, it could be a reasonable assumption that more hangars will desired in the future. Planning analysis may be used to determine future adequacy of the hangar space provided. Based Aircraft forecasts from Chapter 1 show a small amount of potential demand in the near future. Using the same 20 year projection of 120 based aircraft in the year 2025; an increase of 19 based aircraft is expected during this time frame.

Again, it is the norm to assume that 40% of based aircraft at an airport like East Hampton would prefer to store their aircraft in a hangar. Therefore, it could be assumed that over the next two decades, 8 of the projected 19 additional tenants (40 %) will require hangars at the Airport.

Under this alternative, the following would be added to the Airport:

1. One row of T-hangars for small propeller driven aircraft.
2. 2 Conventional hangars to accommodate jet aircraft newly based at the Airport.

An additional row of T-hangars could be located by the existing hangar community located off the approach of Runway 4. This location would likely have the least impact since there are already hangars in this area and a taxiway for access the runways. The hangars would be placed outside of all Airport Design Safety Surfaces.

2 Conventional Hangars could be placed between the approach end of Runways 16 and 10, adjacent to and west of Runway 4-22. Apron space would be designed and provided according to the size of the hangar structure and the location of the facility. Construction has not previously taken place in this location. The hangars would be constructed so as not to conflict with Airport Design Safety requirements. An environmental assessment would be required.

There would be several impacts under this alternative. If new tenants were acquired for hangars, noise related impacts to the community would increase due to additional traffic at the Airport. The Airport on the other hand may benefit financially from the additional sources of revenue provided by these aircraft. Moreover, already based aircraft that park in the tie-down areas of the Airport would be provided with another storage option.

It is also important to consider other factors when determining the amount of hangars an Airport would prefer to construct. Variables that might increase or decrease the required hangar space determination might include current tenant housing preferences, anticipated changes in services at the airport and surrounding areas that might attract a new customer base or changes in regional or industry trends that might affect activity levels. Other airports within the area including Brookhaven, Gabreski and Long Island MacArthur Airports; are currently constructing or have waiting lists for new hangar space. It appears that industry is moving toward constructing new hangars to store aircraft that are presently renting tie-down space. The Transportation Security Administration has also issued an industry recommendation to hangar aircraft at general aviation airports.

4. Auto Parking, Circulation and Access Improvements

Based upon interviews with Airport Management, the current parking is inadequate during peak season. Parking facilities are being used to park vehicles of individuals that are not users of the Airport. The main lot has become a "park and ride" for local residents and vacationers looking for alternate locations for vehicles due to parking rules or space limitations at their homes and rentals. Auto parking and circulation may not be a problem if only airport users parked in the facility. The Airport should consider options for implementing constraints that would discourage the public from using the lot for non-airport related activities. These may include:

1. Charging a fee for regular or long term parking lot usage.
2. Modifying and enforcing existing parking lot rules and regulations.
3. Construction of physical controls such as lot attendants, automated ticketing equipment, and scan card activated arms, or a combination thereof.

Popular methods for general aviation airports such as East Hampton Airport include the scan key method supplemented by a long-term parking fee enforcement program. Combining these two controls will allow based tenants to park and access their aircraft without incurring additional charges while ensuring that the lot is limited to customers of the terminal and FBOs.

This improvement would have no effect on the air traffic at East Hampton Airport. In order to achieve control of the parking lot, the parking area would be segregated to provide airport users with a reserved area. This would be achieved by providing fencing and a security system that may consist of a card reader or other methods of preventing non-airports users from using this designated area.

Should it be determined that the remainder of the lot be accessible at a fee, there would be a need to provide other controls. This could be achieved by physically providing an attendant which would require the construction of a collection booth with utilities. Another alternative would be to install a metering system which can be unmanned.

The implementation of this parking system will require local planning and building code approvals.

The Airport is obligated under the assurances that are associated with the acceptance of FAA grants. These assurances require that all revenues generated at the airport must remain on the airport. If a parking fee is instituted, the revenues from this operation must be used for airport expenditures, such as maintenance and capital improvements.

Setting procedures for parking lot controls should be considered since the lot currently continues to be overcrowded and is insufficiently available to the based and transient users of the Airport. Instituting parking controls will likely benefit the Airport and its users. A user fee-based system would provide another source of revenue for the Airport and/or the Town of East Hampton. However, construction and maintenance of the system will be another expense for the Airport. Convenience of a free parking lot for the community will no longer exist.

The installation of parking controls would be considered in Alternatives 1, 2 and 3. As a result, the preferred control method will be considered as a component of each of the alternatives presented later in the report.

Figure 53
Proposed Airport Facilities Plan

5. Roadway Relocation

Depending upon the Alternative chosen for the Airport, roadway relocation may be required to satisfy airport design requirements and/or standards. The specific action required is described in the individual Alternative Analysis sections. Road relocation could be pursued to rectify the following non-compliant conditions:

1. Inadequate Runway Length
2. Inadequate Runway Safety Areas and Runway Object Free Areas
3. Penetrations to the Approach Surface

Road relocation pertains to Daniels Hole Road and Industrial Road. Daniels Hole Road is located within close proximity of the thresholds for Runway 28, Runway 22 and Runway 16. Industrial Road is located close to the threshold for Runway 34.

Road relocation would be consistent only with the intent of Alternative #3. The relocation of Daniels Hole Road will not be considered in the No Action Alternative as well as Alternatives 1, and 2. If road relocation is necessary, further analysis would be required. Compliance with zoning and environmental requirements will have to be studied. Delays caused by construction will impact the Airport and the Community of East Hampton. Road relocation is costly. The nature of this project would make it eligible for Federal Funding, through the FAA AIP program. However, a benefit to such a complex project would be the creation jobs for the community.

More detailed discussions of this issue are included within the runway sections of this report.

D. Non-Aviation Use

1. Conservation/Recreation

Through the Town of East Hampton Comprehensive Plan, it is apparent that conservation and recreation areas have been very important to maintain and create for use as parks and playing fields.

There are two (2) areas being considered for these purposes. One area is directly north and east of the terminal building. Approximately 107 acres of the lot located on the north side of Daniels Hole Road will be considered. See Figure 53. The other area is the Maidstone property on the northwest corner of the airport. It is approximately 96 acres.

The areas would be considered in all potential alternatives (Alternatives #1, #2 and #3), with exception to the No Action Alternative, to preserve and maintain the land for the purposes intended.

2. Industrial Use

The airport currently consists of approximately 610 acres based on tax map information. The map of East Hampton Town Industrial Park was filed on April 17, 1998. The industrial park, currently zoned as industrial, consists of 56.166 acres on the south side of the airport property. Lot number 5 (1.8939 acres) was released from airport property and is no longer part of the airport property.

Building’s 13-23, 25-29, 32-33, 35-38, and 40-41 are located within the industrial park. Currently, 8 out of the 24 buildings are used for aviation purposes or reserved for the potential aviation in the near future. The other buildings are currently being used for non-aviation purposes. Descriptions of these buildings were provided in Table I-3 in Chapter I, Section A.

There is currently no aircraft access to the buildings within the industrial park. These areas are currently vacant and have the potential for future aviation use. An additional area for revenue generation purposes would by designated as industrial use. This area will be considered in all potential alternatives (Alternatives #1, #2 and #3), with exception to the No Action Alternative.

E. Environmental Management

1. Preservation of Endangered Species and Habitat Maintenance

Cleared areas at the East Hampton Airport are composed of disturbed land as a result of earlier clearing and development. The parent soil in the area is the Plymouth loamy sand, a common outwash soil found throughout Suffolk County. This is a deep, overly well drained soil with low fertility. Observations around the main runway complex indicate the upper stratum of soil was removed or disturbed during land clearing operations exposing the light colored coarse sand and pebble mixture characteristic of the subsoil of this series.

Due to both the parent soil characteristics and the absence of the upper soil strata, the airport area cannot support a complete ground cover year round. At the time of inspection, vegetation covered only about 50 percent of the surface. Plant cover grows slowly under these conditions and open areas are mowed only once annually.

Plant and animal species were inventoried as part of the 1989 Final Environmental Impact Statement, a 1999 survey by the Town of East Hampton, and extensively examined in the draft Environmental Assessment for the East Hampton Airport published in November, 2002. These exercises included comprehensive field surveys of plants and to a lesser extent animal species. A total of 134 plant species were found including 35 woody plants and 99 herbaceous plants. The surveys noted the relatively poor growing conditions and an absence of turf. Given these marginal growing conditions, minimal further site disruption is recommended.

In terms of project development proposals, only one plant species of concern was noted, *Minuartia caroliniana*, the Pine Barrens Sandwort. This species is found close to the triangle formed by the three runways. To a lesser extent, it is found in other areas on the western portions of the airport tract. At one time this plant species was considered an S2 organism with only 6 to 20 known occurrences in the State. It has since dropped to Category S3 or 21 to 100 known occurrences. This species also occurs in sandy areas throughout the Atlantic coastline states. Portions of the habitat for this plant may be utilized for taxiway construction. However, this will not result in the elimination of this plant type since it occurs elsewhere on the site. It is also amenable to relocation as a mitigating measure.
A second species, *Viola pedata,* the Bird's Foot Violet, is found in the vicinity of the main runway ends and will be disturbed by a runway extension. A third plant species a *Spirathes* orchid is known to occur northwest of Runway 4-212, but appears unlikely to be disturbed.

Two bird species of concern, the Grasshopper Sparrow (*Ammodramus savannarum*) and the Eastern Bluebird (*Sialia sialis*) have also been reported on site, but do not nest in areas that are likely to be affected by proposed improvements.

Other plant and animal species of concern were not noted in areas where candidate development proposals are likely. Thus, refraining from excessive land clearing, weed removal, frequent mowing, etc. should be sufficient to insure that on site biota are maintained to the extent that natural conditions permit.

As noted in the 2002 EA, "no rare, threatened or endangered species were identified within the project area and no adverse impacts to the same would be expected." By preserving the existing habitat, it enhances the environment without any negative impacts upon the community or the airport.

The activity described within this section would be implemented under all options (Alternatives #1, #2 and #3), with exception to the No Action Alternative. In that case, nothing would be done.

2. Emergency Preparation and Plans

Efficient response to foreseeable emergencies is a core management responsibility. These events may occur on or off airport. Community wide responsibilities may include access by military or rescue aircraft. Designated staging areas for reception of large fixed wing or helicopters is advisable. The southern portion of the airport north of the industrially developed area would accommodate such activity and facilitate the off loading of supplies or vehicle, the stockpiling of emergency supplies or the congregation of individuals for evacuation.

On airport, the chief concern is adequate maintenance and capacity of fire fighting capacity. As the East Hampton Airport is served by a volunteer fire fighting force, training, inspections and maintenance of equipment and readiness levels is recommended.

As a small general aviation airport, official standards for fire fighting material inventories are expressed under FAA Advisory Circular 150 5210-6D Aircraft Fire Extinguishing Agents. The airport is not required to prepare an official Emergency Preparedness Plan, but

FAA Advisory Circular 150/5200-31A Airport Emergency Plans, which applies to larger airports, should be consulted for general guidance. Additional guidance can be obtained in FAA Advisory Circular 150 5200-18C Airport Safety Self Inspection which specifies the conduct and concerns in safety inspections.

3. Ground Water Protection Considerations

The airport lies above a primary sole source aquifer representing a significant environmental and monetary asset. See Figure III-54. Long Island is dependent on aquifers as its primary source of potable water and that resource is under increasing threat from over consumption and contamination from surface pollution. Protection of this resource is essential as it represents a substantial asset, irreplaceable except through costly remediation. Airport operations and policy should reflect the importance of preservation of water quality through prevention of contamination, defined procedures in the event of environmental contamination, and assured availability of essential equipment and material.

Prevention is a primary strategy. Industrial activities with substantial pollution potential on town/airport lands should be avoided. Similarly such activities as waste disposal, stockpiling of hazardous materials and leakage of toxic or waste chemicals should be carefully monitored and controlled.

Spillage of fuels, oils, or lubricants should be subject to immediate cleanup through deployment of absorbent chemicals. Fuel storage tanks should be designed for easy inspection, maintained to prevent corrosion, designed to isolate petrochemicals in the event of catastrophic failure. Monitoring systems should be used to detect leakage. Contaminated or hazardous materials should be immediately removed by licensed handlers. If immediate removal is not possible, contaminated material should be isolated in a designated holding area that is lined to prevent seepage and covered to prevent dispersion via stormwater runoff. Oil/water separators should be used in any expansion that involves underground storm water drainage. Regular cleaning and disposal of contaminants is recommended. Waste containers and emptied drums should be removed on a routine basis.

Deicing of aircraft during winter months should be done in a designated area. Commercially available mats can be used beneath aircraft to collect spent deicing fluids and the material recycled and eventual impounded for removal or recycling. These portable systems are adequate for routine use by smaller aircraft. There are much more elaborate systems that use glycol or even heat for large scale deicing should demand levels necessitate such arrangements. Often glycol based systems have geosynthetic liners underlying deicing areas to prevent ground water contamination, and holding tanks for high concentration or low concentration glycol runoff for eventual recycling. Occasionally, heated fuel or heating blankets have been used to prevent wing ice. Depending on wing design, turbine powered business jet aircraft can be extremely vulnerable thin layer accumulations of ice that are essentially invisible. Thus, deicing will continue to be an essential provision for airport operations. Adequate hangar space is also helpful by insuring protection of based aircraft from snow and ice accumulation.

Another source of ground water contaminants includes sewage disposal. All septic systems are considered temporary or limited life structures. Regular inspections and sludge disposal are recommended. Chemical materials, industrial waste or any non biodegradable materials should be disposed of separately and not introduced into underground leaching fields.

Appropriate administrative procedures include preparation of operations manuals or specifications for materials handling should be published. Adequate stockpiles of absorbent materials, cleaning equipment and preparation of temporary holding areas for contaminated waste should be considered in advance of any incidents. Long term ground water monitoring and inspections should be conducted. Any accidents, incidents, fires or other potential sources of ground water contaminants should be promptly addressed. Residual materials or contaminated soil should be isolated and carted off site for disposal and records maintained regarding the extent of any surface contamination on location.

Insert Figure 54-Ground Water Protection Zone

4. Deer Control, Fence Line Openings

Deer fencing was installed on airport property to prevent deer and other wildlife from entering the airfield. Wildlife strikes are a major safety concern among airports, aircraft operators, and the FAA.

The deer fencing is shown on Figure I-1, Existing Airport Facility Plan. Openings in the deer fencing included two (2) on Daniels Hole Road, one on the entrance to the tennis court complex and two (2) on Industrial Road. There is a "Cattle Crossing" on the road to the fire rescue building to deter deer from entering through the gate onto the airfield. Where driveways are within the fence line, gates have been installed.

Installation of the deer fencing has substantially cut down the number of deer on the airport according to airport management. However, existence of wildlife still exists as a hazard to aircraft. Recent wildlife struck by aircraft on the Airport includes both deer and fox.

The existing openings in the deer fencing should be repaired with similar fencing. The fencing would be consistent to FAA standards for this purpose. It would also be beneficial to examine other wildlife mitigation efforts at the Airport. Common types found at airport similar in size and nature to East Hampton include noise makers, compressed air cannons, installing wildlife traps, procedures for maintaining vegetation, and procedures for reducing wildlife attractants such as food, shelter, and water sources.

The installation of deer fencing will enhance safety on the airport. It will not have any significant impacts upon the local community and should benefit all concerned.

This project is essential for the safety of the airport and would be considered in all potential alternatives, with exception to the No Action Alternative.

Figure III-55

Industrial Park

F. Financial Considerations

TABLE III-29
COSTS OF PROPOSED IMPROVEMENTS

No.	Project	Cost	Possible FAA Funding
1	Rehabilitation Airport Beacon	$225,000.00	YES
2	AWOS Installation	$185,000.00	NO
3	Fuel Farm Canopy Improvements	$50,000.00	NO
4	Security Camera Installation	$100,000.00	NO
5	Maintenance Building	$350,000.00	YES
6	Fuel Farm Expansion	$250,000.00	YES
7	Complete Runway 10-28 Parallel Taxiway	$800,000.00	YES
8	Taxiway A Extension	$540,000.00	NO
9	Convert Runway 4-22 (north side) to Taxiway	$1,200,000.00	YES
10	Convert Runway 4-22 (south side) to Vehicle Road	$240,000.00	YES
11	Runway 4-22 Rehabilitation	$3,000,000.00	YES
12	Runway 16-34 Rehabilitation	$700,000.00	YES
13	Runway 10-28 Rehabilitation	$400,000.00	YES
14	Taxiway A Rehabilitation	$560,000.00	YES
15	Taxiway B Rehabilitation	$125,000.00	YES
16	Taxiway C Rehabilitation	$125,000.00	YES
17	Taxiway C Rehabilitation (south side)	$50,000.00	YES
18	Taxiway D Rehabilitation	$400,000.00	YES
19	Taxiway E Rehabilitation	$125,000.00	YES
20	Remove and Replace Airfield Lighting and Signage	$1,725,000.00	YES
21	Remove and Replace Runway 28 Runway End Identifier Lights (REILs)	$45,000.00	YES
22	Remove and Replace Precision Approach Path Indicators PAPIs	$310,000.00	YES
23	Remove and Replace Lighted Wind Cone and Segmented Circle	$44,000.00	YES
24	Construct New Taxiway D-1	$300,000.00	YES
25	Entrance Road Improvements	$100,000.00	YES
26	Seasonal Control Tower	$200,000.00	NO
27	Terminal Building Second Floor Addition	$280,000.00	YES

TABLE III-30
SUMMARY

EAST HAMPTON SUMMARY	NO BUILD	MINIMAL ENVIRONMENTAL	MAXIMUM USAGE	UNRESTRICTED GROWTH
AWOS	NO	YES	YES	YES
CONTROL TOWER	NO	YES	YES	YES
FLY TRACKS	NO	YES	YES	YES
GPS	NO	YES	YES	YES
RUNWAY4-22	NO	CLOSE RUNWAY	MODIFY RUNWAY (Shortened)	MAXIMIZE PAVEMENT (Move Road)
RUNWAY 16-34	NO	MODIFY RUNWAY (Shortened)	CLOSE RUNWAY	MAXIMIZE PAVEMENT (Move Road)
RUNWAY10-28	NO	SHORTEN RUNWAY (Small airplanes only)	MAINTAIN RUNWAY LENGTH (Citation V)	EXTEND RUNWAY (Challenger)
BUILDINGS/FBO'S	NO	NO	NO	YES
FUEL FARM	NO	YES	YES	YES
HANGAR DEVELOPMENT	NO	NO	NO	YES
AUTO PARK	NO	YES	YES	YES
ROAD RELOCATIONS	NO	NO	NO	YES
CONSERVATION/ RECREATION	NO	YES	YES	YES
INDUSTRIAL USE	NO	NO	YES	YES
PRESERVATION OF ENDANGERED SPECIES	NO	YES	YES	YES
EMERGENCY PREPARATION AND PLANS	NO	YES	YES	YES
GROUNDWATER	NO	YES	YES	YES
DEER CONTROL FENCING	NO	YES	YES	YES

Source: DY Consultants

G. Summary

This Chapter has taken a comprehensive look at the facilities East Hampton Airport considering four (4) alternatives: No Action, Alternative #1, Alternative #2, and Alternative #3. The preceding chart summarizes how individual projects would be affected by each of the four alternatives:

Chapter IV – Airport Noise and Access Management

A. Introduction

The Towns of East Hampton and Southampton have an unusual confluence of circumstances that necessitates an in depth review of aircraft related noise impact and potential proprietary controls.

Both communities are exceptionally quiet areas primarily composed of small villages and population centers. The majority of homes outside the village centers are on relatively large lots. There are limited noise sources, few trains, primarily low speed roads, and limited trucking. Essentially, both communities are on a dead end peninsula, a seasonal destination and not on the way to any other population centers. Local neighborhood noises are assiduously controlled via local ordinances. Noise monitoring studies included as Appendix C confirm the prevailing low background noise levels on residential sites in both Towns.

During the summer months, the area is predominantly a recreational community. While there is a stable year round population, total population triples during the summer season when vacationers from throughout the country visit, many by air. Thus, peak population and peak airport noise impact coincide by season. Further since the Hamptons are a weekend destination for many, airport noise impacts peak on weekend summer days. Air traffic levels on a given weekend summer day may be four times greater than occur during a two week period during the cooler months. Approximately half of total annual traffic occurs during the three summer months.

For these reasons, adverse reactions to aircraft noise tend to be widespread throughout the airport vicinity since virtually every summer weekend day is accompanied by frequent aircraft related noise events.

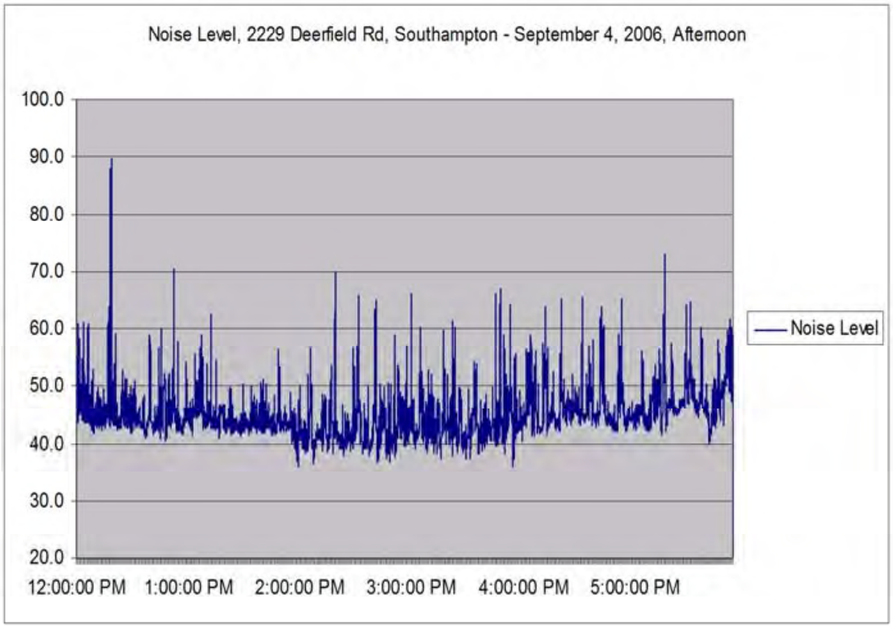
Under these circumstances, the annual average day, the normal basis for aircraft noise impact determinations, is an inadequate stand alone descriptor. A supplementary analysis is included for a specific peak summer weekend day in order to better understand the nature of the human reactions during the summer season. It is this specific set of conditions that, in the main, have resulted in continuing community concerns over aircraft traffic and the means available to the Town, acting in the role of airport proprietor, to reduce adverse effects.

B. Noise Measurement

1. Single Event Noise

Community noise levels were extensively monitored in 2003 and in 2006. The results obtained are discussed in detail in II.A.3 presented earlier in this report. Generally, all these exercises showed relatively low background noise levels throughout the airport vicinity. Figure IV-56 illustrates the circumstances as they were recorded on Labor Day, Monday, September 4, 2006. The background noise level during this monitoring period as measured by the L90 statistic was found to be 40.8 dB. This measure indicates that 90 percent of the sample measurements obtained were at or above this level. Even for a rural residential site, this is a quiet environment. During this period approximately 16 noise events occurred, one above 90 dB and the remainder in the 60 to 70 dB range or about 20 to 30 dB above the background noise level. During outdoor activities these events are noticeable and intrusive. It is for this reason that aircraft noise is considered disruptive. Similar results were found at virtually all monitoring sites.

FIGURE 4-56



Source: Young Environmental Sciences

2. Single Event Noise Contours

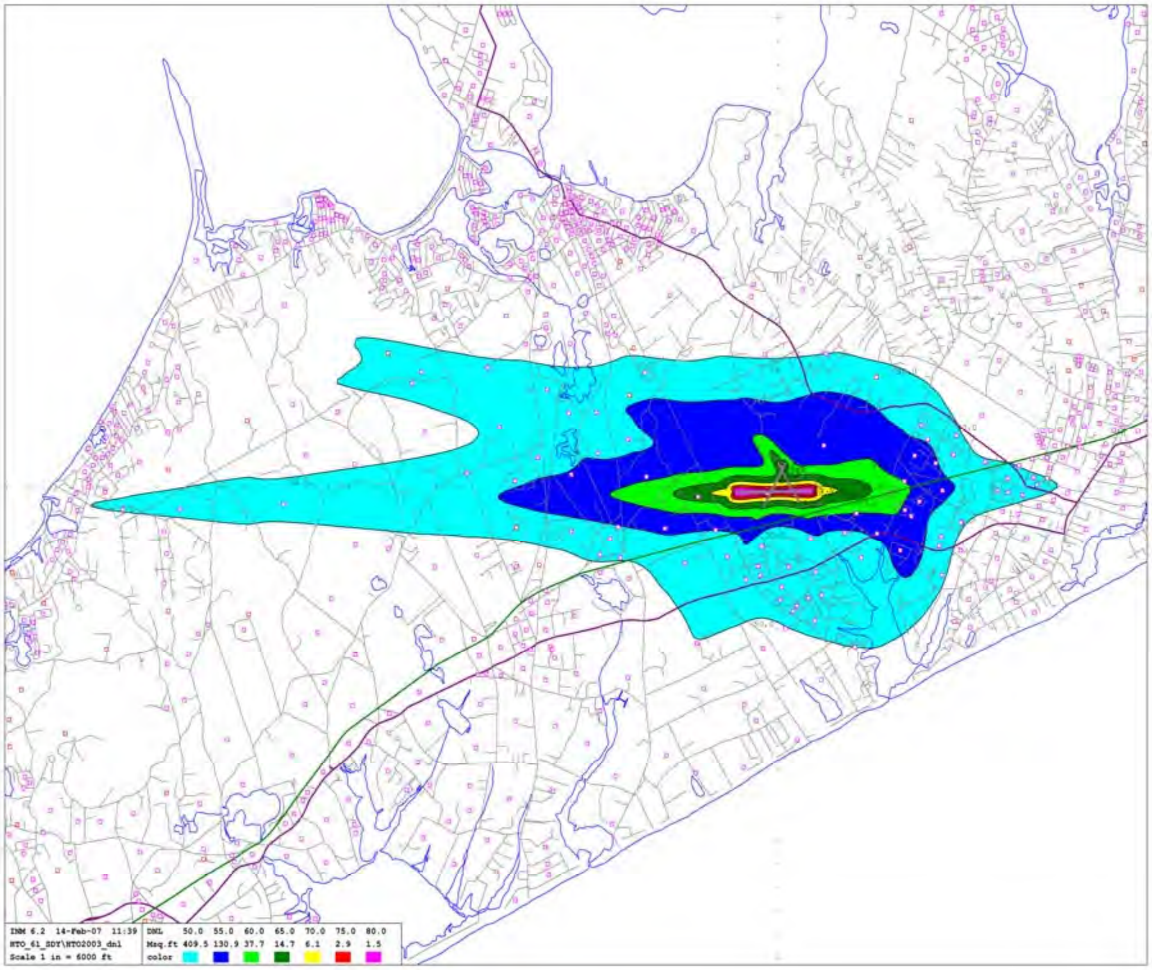
Appendix D presents single event noise contours, i.e., a landing and a takeoff from east to west on a hot day, for 35 general aviation aircraft contained in the database of the Integrated Noise Model (INM) or generated manually for helicopters. These plots are not actual depictions of the expected pattern of operation at the airport, but provide an index of the relative noisiness of the aircraft that may regularly use East Hampton Airport. The contours show peak audible noise levels from 65 dB to 85 dB in 5 dB increments. As can be seen from inspection, most aircraft will produce off airport noise levels in excess of 65 dB, the current noise limit in both East Hampton and Southampton established by local ordinance. Some aircraft, particularly older jet powered aircraft such as the Lear 25 series, and helicopters, due to relatively low cruising altitudes, produce widespread areas exposed to noise levels that exceed local limits.

It is the combination of low background noise levels, the relatively high amplitude of most aircraft noise events and the expectations of local and seasonal residents that produces adverse responses to aircraft noise.

3. Cumulative Annual Average Noise Contours

Annual average day noise contours, usually determined using the FAA's Integrated Noise Model (INM), are the starting point for determining cumulative noise impacts at airports. Procedures for doing so are codified in Federal Aviation Regulations Part 150, Appendix A. The results of computer noise modeling are a series of nested contours at progressively higher cumulative levels around the runway complex using the Day/Night Average Sound Level (DNL or Ldn) methodology, the single system defined for use at both civilian and military airports throughout the United States. The details provided below define the information utilized by the INM for Calendar Year 2006. This exercise is based on the determination provided by HMMH for Calendar Year 2003 (shown below as Figure IV-57). That exercise included aircraft noise definitions for helicopters developed for the East Hampton case, and detailed approach and departure tracks based on long term observations. Several changes have occurred since that exercise including the temporary closure of Runway 4/22, the definition of specific approach and departure tracks for helicopters, reductions in night period activity, and significant changes to the fleet mix of aircraft serving the airport.

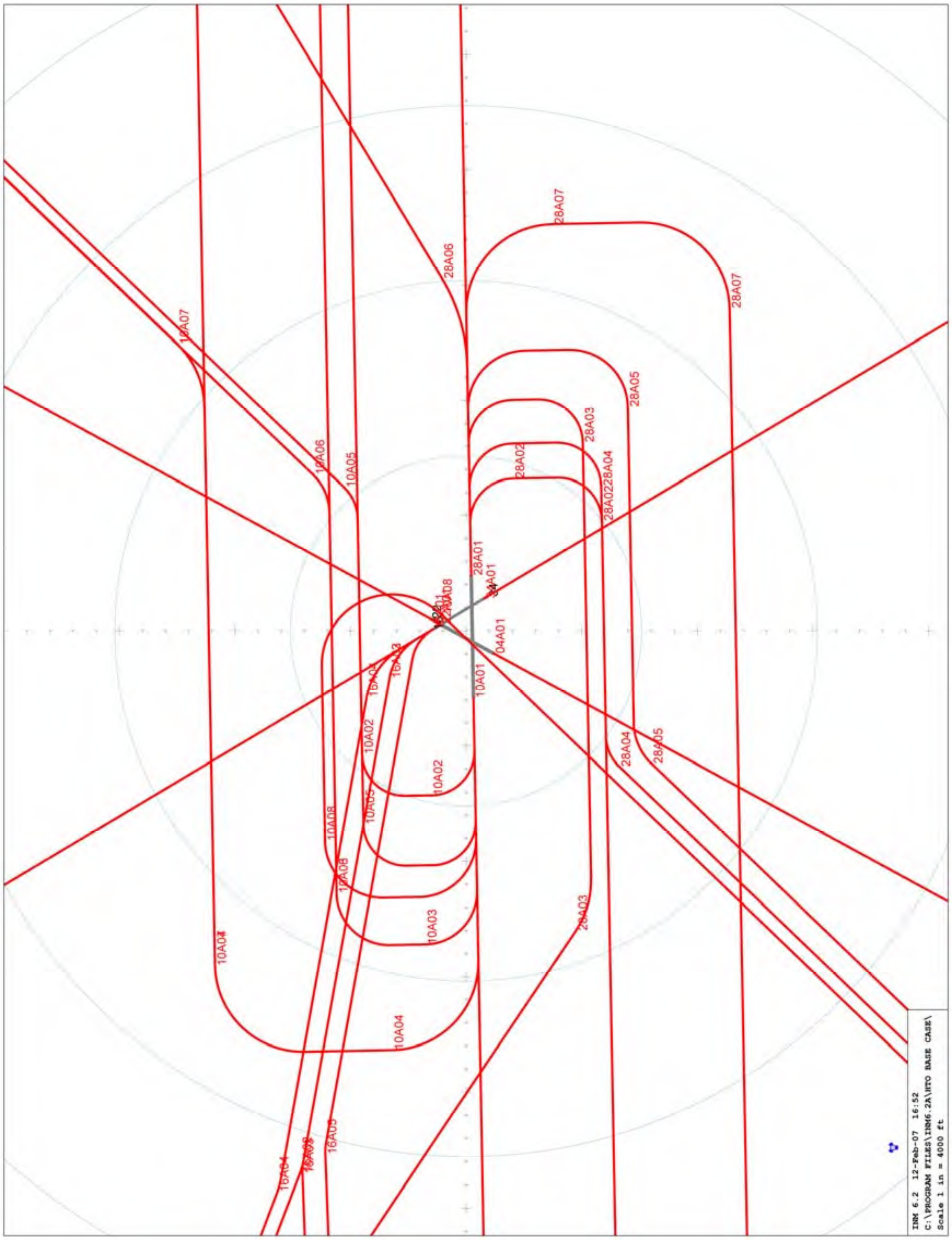
FIGURE IV-57
ANNUAL AVERAGE NOISE CONTOURS 2003



Source: HMMH

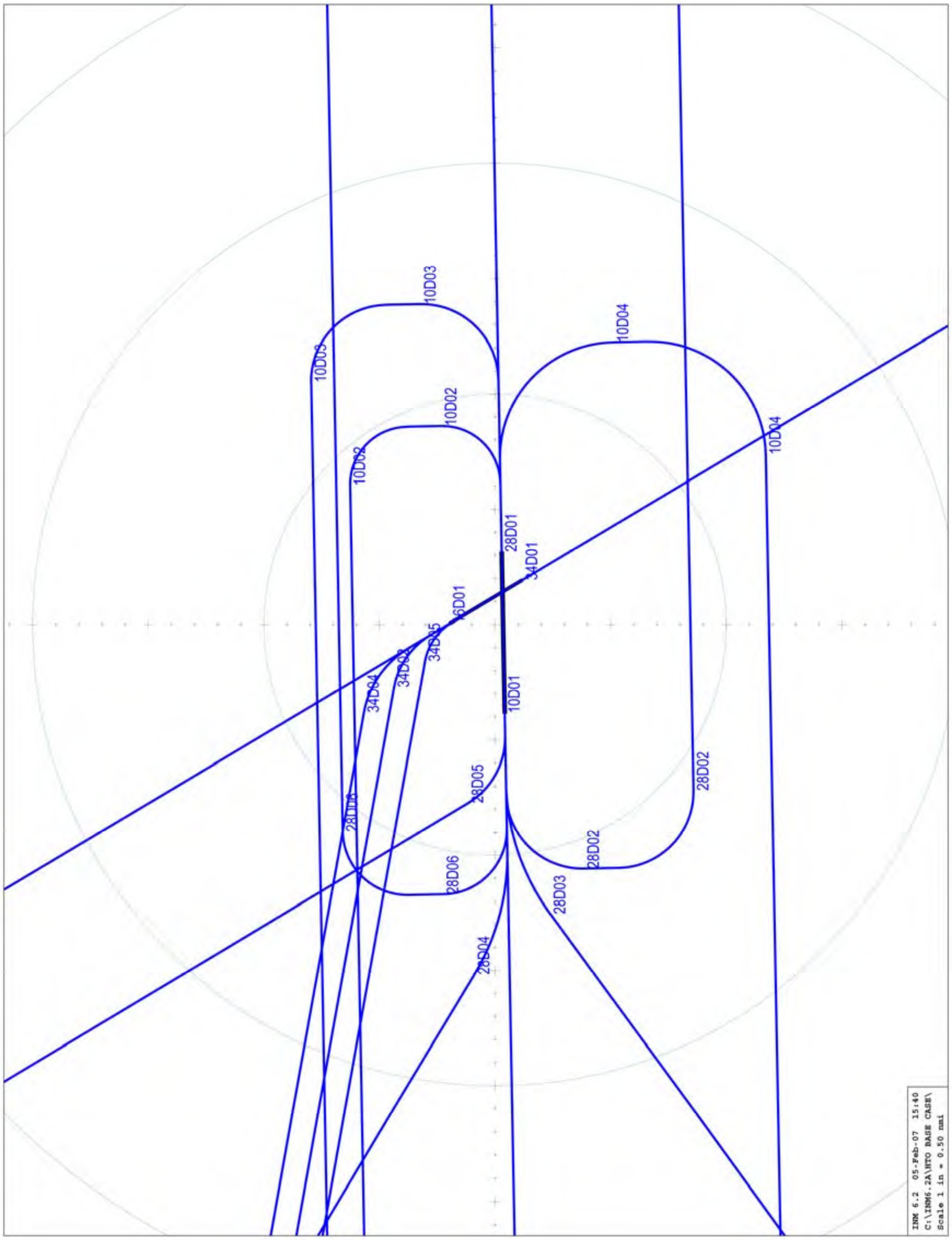
As input to the INM, the following data is required. First, the airport runways are defined. Approach, departure and touch and go flight tracks are determined based on the pattern of approaches and departures from each runway end. The approach and departure flight tracks are shown as Figures IV-58 and IV-59.

FIGURE IV-58
ARRIVAL TRACKS



Source: Young Environmental Sciences

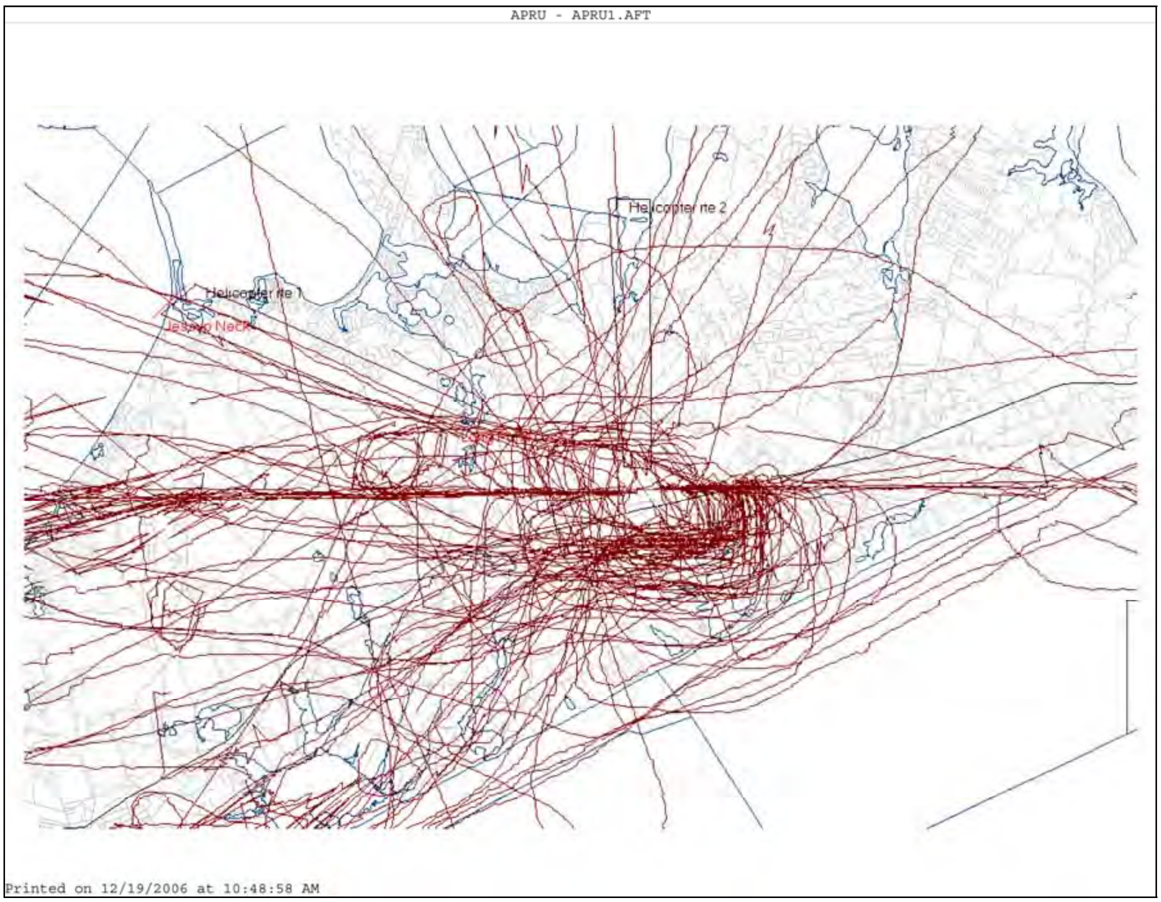
FIGURE IV-59
DEPARTURE TRACKS



Source: Young Environmental Sciences

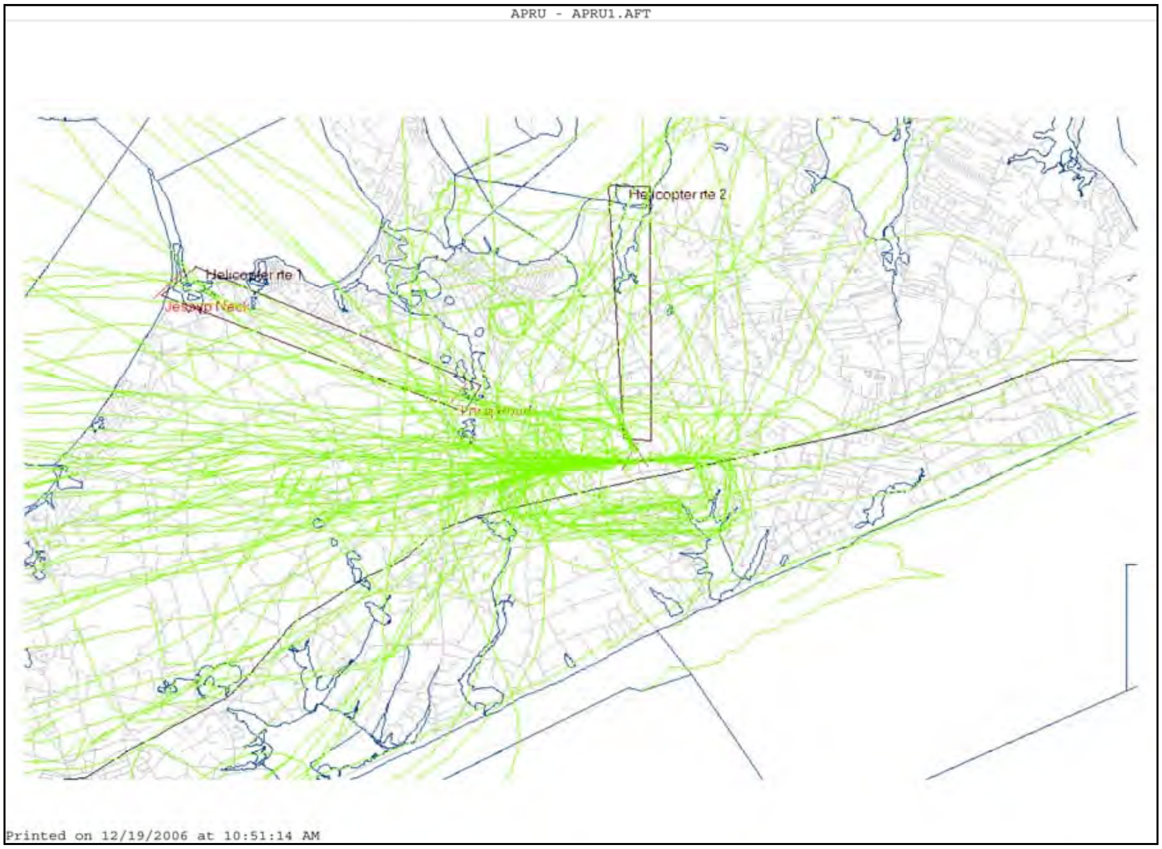
These tracks were verified through the use of the AirScene aircraft monitoring system installed in 2005. Plots of activity recorded by the AirScene system were retrieved for approaches and departures as they occurred during four separate periods in 2006, one week during February, May, August and November. Figures IV-60, IV-61, IV-62, IV-63, IV-64, and IV-65 show the results of two periods. Figures IV-60 and IV-61 are approaches and departures for the week of February 4 through 11.

FIGURE IV-60
FLIGHT TRACKS-ARRIVALS FEBRUARY 4-11TH 2006



Source: Young Environmental Sciences

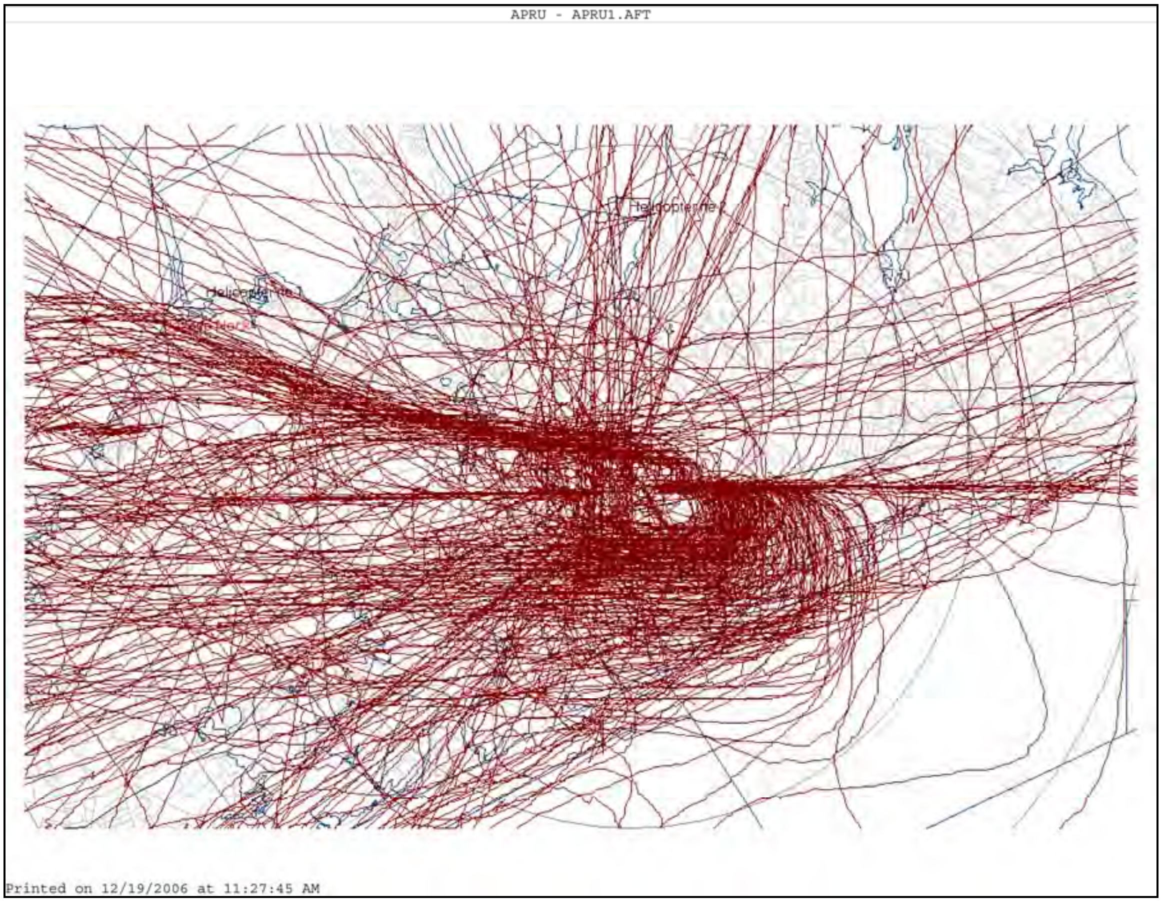
FIGURE IV-61
FLIGHT TRACKS-DEPARTURES FEBRUARY 4-11TH 2006



Source: Young Environmental Sciences

Figures IV-62 and IV-63 show activity for the weekend of August 11, 12 and 13. Inspection of the flight track diagrams reveals the general pattern of movements in the airport vicinity. During the February sample, relatively little traffic occurred. Flight movement data was found to be generally consistent with the previously determined INM tracks.

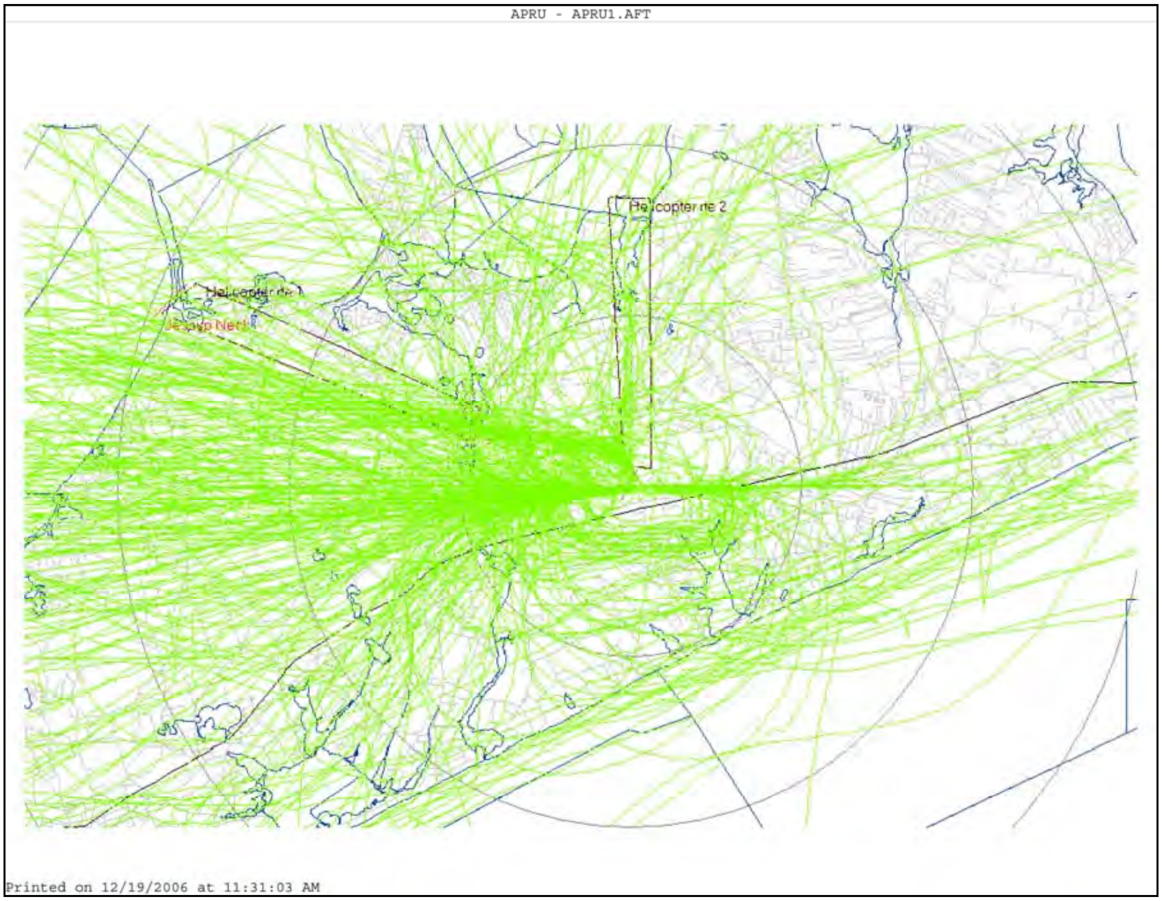
FIGURE IV-62
FLIGHT TRACKS-ARRIVALS AUGUST 11-13TH 2006



Source: Young Environmental Sciences

FIGURE IV-63

FLIGHT TRACKS-DEPARTURES AUGUST 11-13TH 2006

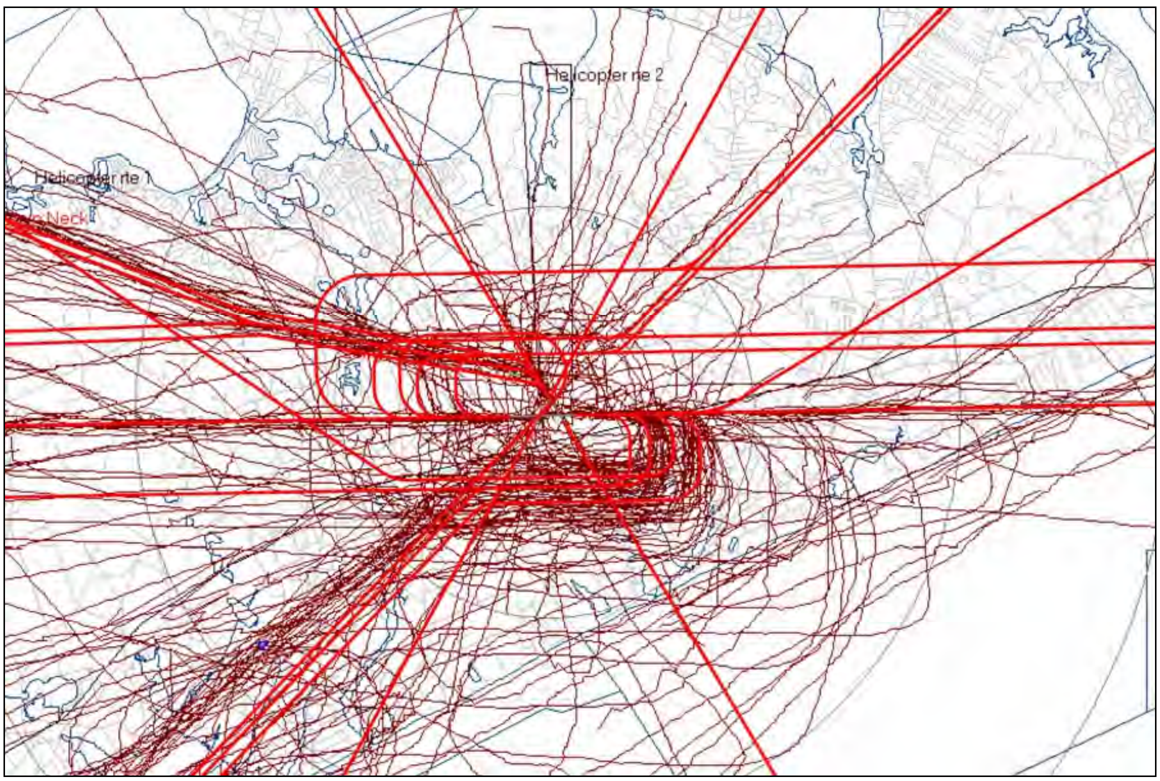


Source: Young Environmental Sciences

Figures IV-64 and IV-65 show the INM flight tracks overlaid on the AirScene flight tracks displays for November 5-11, 2006. However, there is some divergence from the nominal flight tracks. The August weekend sample shows much high traffic levels for both approaches and departures consistent with the substantially high demand levels that occur during the summer months. Divergence from the nominal flight tracks reveals the fact that most of the area around the airport is over flown on a busy day.

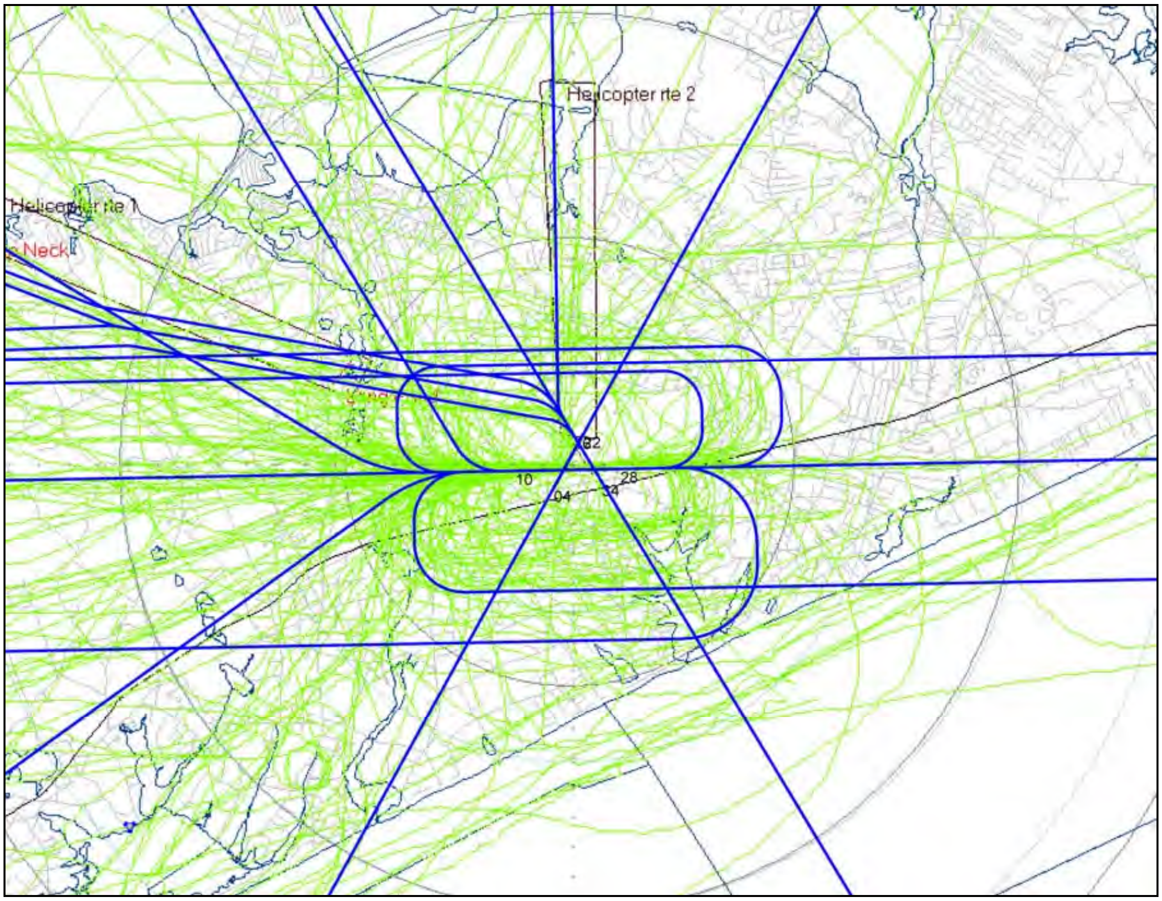
FIGURE IV-64

FLIGHT TRACKS-ARRIVALS NOVEMBER 5-11TH 2006



Source: Young Environmental Sciences

FIGURE IV-65
FLIGHT TRACKS-DEPARTURES NOVEMBER 5-11TH 2006



Source: Young Environmental Sciences

The INM requires a definition of the fleet mix of aircraft using the airport. The annual volume of overall aircraft operations is provided in Table IV-31. A total of 31,562 total aircraft operations were recorded in 2006. These annual numbers were adjusted to account for unknown aircraft recorded by the AirScene system and divided by 365 to obtain the daily average volumes by overall category. Each category of aircraft was further defined by INM equivalent type.

Jet powered aircraft were divided into 11 separate types corresponding to the range of aircraft known to use the airport in 2006. This included two older Stage 2 aircraft, the Gulfstream II and the Lear 25. These are both older noisier types as can be seen by reviewing the Single Event Noise Contours in Appendix D. The remaining nine jet powered aircraft are all modern Stage III, turbofan powered aircraft. These aircraft included the Gulfstream V, a large intercontinental range business jet aircraft; the Falcon 20 and 90, both medium sized aircraft; the Lear 35, a small common business jet; the Beechjet, a small common business jet; three representative Cessna Citation series aircraft, small, medium and large; and the Challenger, a medium sized business jet.

TABLE IV-31

ANNUAL TRAFFIC

OPERATIONS	
Jets	3,537
Turbo	1,186
Twin	2,371
Single	17,986
Helicopters	6,482
TOTAL	31,562

Source: Young Environmental Sciences

Propeller driven twin engine aircraft were divided between turboprops and piston powered twins. Turboprops included the Cessna 441, equivalent to the Piper Cheyenne, and the DHC6, the Twin Otter, which is the equivalent to the Beech King Air, a popular twin turboprop powered business aircraft. Twin engine, piston powered aircraft are represented by the Beech Baron and the Piper Aztec, both popular piston twins.

Single engine aircraft are represented by the GASPF, or the generic fixed pitch general aviation single engine aircraft and the GASPV, or the generic variable pitch single engine aircraft.

Helicopters were represented by the Sikorsky S-76, a popular twin engine helicopter, and the Eurocopter Twinstar, a smaller lighter twin engine turbine powered helicopter.

All these aircraft are included in the single event contours appendix where comparisons of the individual noise impacts can be clearly seen.

The complete list of aircraft with their corresponding daily average volumes is shown in Table IV-32. The table includes only arrivals, takeoffs are exactly the same. Table IV-33 shows the assignments to track.

TABLE IV-32
ANNUAL TRAFFIC

TRACK SPLITS ARRIVALS:

RUNWAY 10	10A01	10A02	10A03	10A04	10A05	10A06	10A07	10A08
JETS	52%	3%	9%	9%	3%	9%	9%	6%
ALL OTHER AIRCRAFT	41%	9%	15%	3%	9%	16%	3%	5%

RUNWAY 28	28A01	28A02	28A03	28A04	28A05	28A06
JETS	50%	4%	13%	4%	16%	13%
ALL OTHER AIRCRAFT	27%	13%	19%	15%	16%	11%

RUNWAY 16	16A01	16A02	16A03	16A04	16A05
HELICOPTERS		41%	41%	11%	7%
ALL OTHER AIRCRAFT	**100%**				

**NO JETS ARRIVING ON RNWY 16*

RUNWAY 34	34A01
HELICOPTERS	100%
ALL OTHER AIRCRAFT	100%

**NO JETS ARRIVING ON RNWY 34*

TRACK SPLITS DEPARTURES:

RUNWAY 10	10D01	10D02	10D03	10D04
JETS	**14%**	**14%**	**14%**	**57%**
ALL OTHER AIRCRAFT	**24%**	**29%**	**35%**	**12%**

RUNWAY 28	28D01	28D02	28D03	28D04	28D05	28D06
JETS	**86%**	**7%**	**7%**			
ALL OTHER AIRCRAFT	**52%**	**8%**	**7%**	**9%**	**15%**	**9%**

RUNWAY 16	16D01
*ALL AIRCRAFT	**100%**
**NO JETS DEPARTING ON RNWY 16*	

RUNWAY 34	34D01	34D02	34D03	34D04	34D05
*ALL AIRCRAFT	**7%**	**36%**	**36%**	**14%**	**7%**
**NO JETS DEPARTING ON RNWY 34*					

Source: Young Environmental Sciences

TABLE IV-33
2006 AVERAGE DAY ARRIVING TRAFFIC

JETS

INM TYPE	AIRCRAFT	DAY	NIGHT
GV	Gulfstream V	0.1993	0.0041
GIIB	Gulfstream IIB	0.0498	0.0010
FAL90	Falcon 90	0.6583	0.0134
FAL20	Falcon 20	0.6583	0.0134
LEAR35	Lear 35	0.5331	0.0109
MU3001	Beech 400	1.1104	0.0227
CNA500	Cessna Citation 2	0.6737	0.0137
CNA55B	Cessna 550	0.6737	0.0137
CNA750	Cessna 750	0.6737	0.0137
LEAR25	Lear 25	0.0589	0.0012
CL601	Challenger	0.1715	0.0035

TURBO

INM TYPE	AIRCRAFT	DAY	NIGHT
CNA441	Cessna 441	0.9153	0.0187
DHC6	King Air	0.9153	0.0187

TWIN

INM TYPE	AIRCRAFT	DAY	NIGHT
BE58P	Beech Baron	1.8306	0.0374
PA31	Piper Aztec	1.8306	0.0374

SINGLE

INM TYPE	AIRCRAFT	DAY	NIGHT
GASPV	GASPV	8.0206	0.1637
GASPF	GASPF	16.0412	0.3274

HELICOPTER

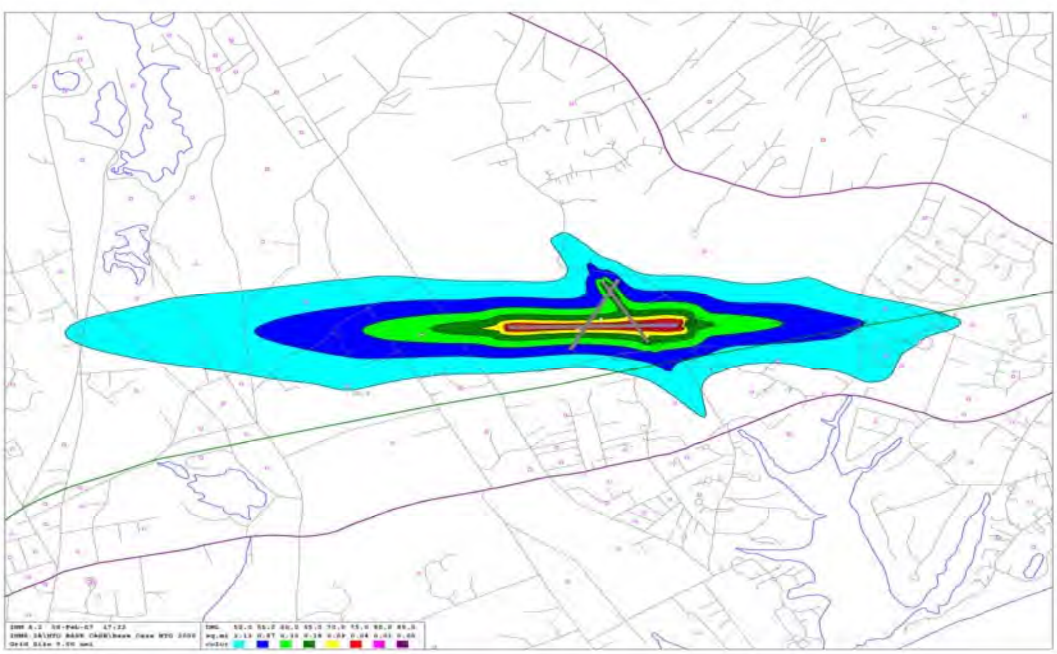
INM TYPE	AIRCRAFT	DAY	NIGHT
S76	Sikorsky 76	6.6643	0.1360
SA355F	Eurocopter AS355 Twinstar	3.3321	0.0680

Source: Young Environmental Sciences

Inspection of Table IV-32 shows that each aircraft type volume was split into two groups, day and night. In the DNL system, night period operations are weighted by a factor of ten (10) and therefore contribute disproportionately to the contour areas. In this case, the night period split is two (2) percent of total operations. These figures are verified by the AirScene system. In the 2003 determination, the night period split was six (6) percent, about three times greater.

Runway and flight track use are the remaining specifications. The AirScene system allows summary statistics. This provided the overall split on runway use. The most frequently used runway is Runway 28 with sixty (60) percent of overall traffic. Runway 10 showed twenty four (24) percent of overall traffic. Runway 16 had ten (10) percent of total traffic while the remaining six (6) percent was on Runway 34. Jet powered aircraft used Runways 10 and 28 exclusively. Runway 4/22 had no traffic due its temporary closure. This input data was run on the highest refinement settings available in the INM. The resulting plot of the annual average noise contours in DNL is shown as Figure IV-64. This plot shows a series of nested contours beginning at 50 DNL and increasing in 5 dB increments to DNL 85.

FIGURE IV-64
BASE 2006 CONTOURS



Source: Young Environmental Sciences

The land use compatibly determinations associated with the DNL system assert that all land use exposed to 65 DNL or lower levels are considered nominally compatible. In this case, the DNL 65 contour is essentially confined to airport owned land with the exception of a small projection westward along the extended centerline of Runway 28 and caused by the preference for this runway by departing jet aircraft.

At general aviation airports, land use incompatibilities in the sense of adverse reaction can be anticipated to occur throughout the airport vicinity due to divergence from the nominal flight tracks. The areas and population exposed at the eight differing levels of impact are shown in Table IV-34.

TABLE IV-34
AREA /POPULATION TOTALS & ANNUAL AVERAGE NOISE CONTOURS 2006

DNL Level	Total Area Square Miles	Total Area Acres	Cumulative Population Exposure
85	0.005	8	0
80	0.032	20	0
75	0.109	70	73
70	0.231	148	73
65	0.473	303	73
60	1.011	647	74
55	2.264	1,149	74
50	5.504	3,523	180

Source: Young Environmental Sciences

4. Busy Day Cumulative Noise Contours

A second exercise was performed based on the level of traffic occurring on Sunday, August 13, 2006. In this determination, flight tracks and assignments to track utilize the same percentages as in the Annual Average Case above. However, runway use, aircraft volumes and the day night split were developed directly from the AirScene data and Landing Fee Logs for that specific day. Total operational volumes are presented in Table IV-35. Note that these are actual daily volumes and not averages. Since this was a

Sunday, departures greatly outnumber arrivals. Assignments of traffic to runway follow precisely the data in the AirScene system. Assignments to track follow the percentage splits used in the annual average determination. Helicopters were assigned to the appropriate arrival tracks on the designated route; helicopter departures were assigned half to the current designated north bound departure route and half to the northwest approach/departure corridor.

TABLE IV-35
BUSY DAY OPERATIONS-AUGUST 13, 2006

Arrivals			
Aircraft Name	**INM Equiv. or Type**	**Day**	**Night**
Jets			
Gulfstream V	GV	0.76	0.08
Gulfstream IIB	GIIB	0.19	0.02
Lear 35	LEAR35	4.55	0.5
Falcon 20	FAL20	2.51	0.27
Beechjet 400	MU3001	4.24	0.46
Cessna Citation	CNA500	2.57	0.28
Cessna Citation	CNA55B	2.57	0.28
Cessna Citation	CNA750	2.57	0.28
Lear 25	LEAR25	0.22	0.02
Canadaire Challenger	CL601	0.65	0.07
Turbo Props			
Cessna 441	CNA441	13.15	1.43
Beech King Air	DHC6	13.15	1.43
Piston Twins			
Beech Baron	BE58P	5.44	0.59
Piper Aztec	PA31	5.44	0.59
Single Engine			
Single Engine Variable Prop	GASPV	22.14	2.42
Single Engine Fixed Prop	GASPF	23.68	4.87
Helicopters			
Sikorsky S-76	S76	26.57	2.9
Eurocopter Twinstar	SA355F	13.28	1.45
	Total Arrivals	**143.69**	**17.97**

Source: Young Environmental Sciences

TABLE IV-35 CONT.
BUSY DAY OPERATIONS-AUGUST 13, 2006

Departures			
Aircraft Name	**INM Equiv. or Type**	**Day**	**Night**
Jets			
Gulfstream V	GV	0.97	0.1
Gulfstream IIB	GIIB	0.24	0.03
Lear 35	LEAR35	5.82	0.6
Falcon 20	FAL20	3.22	0.33
Beechjet 400	CNA500	3.29	0.34
Cessna Citation	CNA55B	3.29	0.34
Cessna Citation	CNA750	3.29	0.34
Cessna Citation	LEAR25	0.29	0.03
Lear 25	MU3001	5.43	0.56
Canadaire Challenger	CL601	0.84	0.09
Turboprops			
Cessna 441	CNA441	18.56	1.91
Beech King Air	DHC6	18.56	1.91
Piston Twins			
Beech Baron	BE58P	7.68	0.79
Piper Aztec	PA31	7.68	0.79
Single Engine			
Single Engine Variable Prop	GASPV	31.26	3.22
Single Engine Fixed Prop	GASPF	42.09	6.5
Helicopters			
Sikorsky S-76	S76	37.52	3.86
Eurocopter Twinstar	SA355F	18.76	1.93
	Total Departures	**208.82**	**23.67**
Touch and Goes			
Single Engine Fixed	GASPF	21	0

Source: Young Environmental Sciences

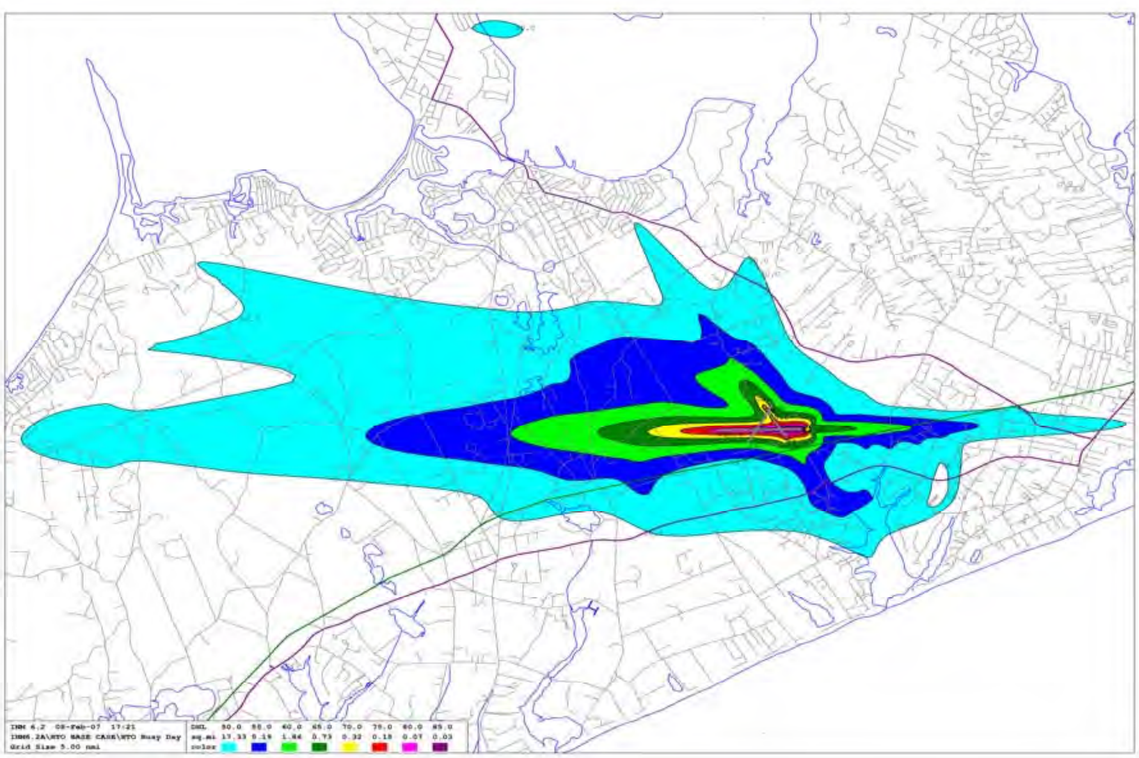
The resulting noise contour determination is shown as Figure IV-65. Area and population figures are shown in Table IV-36. As can be seen from inspection, noise area impact expands on the order of three to eight times the annual average day conditions.

TABLE IV-36
AREA AND POPULATION TOTALS
& BUSY DAY NOISE CONTOURS 2006

DNL Level	Total Area Square Miles	Total Area Acres	Cumulative Population Exposure	Percentage Increase Over Annual Average
85	0.028	18	0	560%
80	0.072	46	73	600%
75	0.154	99	73	367%
70	0.322	206	74	362%
65	0.731	468	74	399%
60	1.859	1,190	157	477%
55	5.192	3,323	721	594%
50	17.33	11,091	2,907	816%

Source: Young Environmental Sciences

FIGURE IV-65
BUSY DAY CONTOURS 2006



Source: Young Environmental Sciences

C. Noise Abatement Measures Fixed Wing Aircraft

1. Limitations by Noise Level-Part 161

Federal Aviation Regulations Part 161 is the administrative law that determines procedures for regulating jet powered aircraft including helicopters. Jet powered fixed wing aircraft are grouped by the FAA into four differing stage classes, Stages 1, 2, 3, and 4. The oldest and noisiest aircraft are classed as Stage 1. These aircraft are no longer present in the general aviation fleet in large numbers. Powered by turbojet engines, these were the earliest manufactured and, in addition to being exceptionally noisy, are relatively fuel inefficient and have substantial air pollutant emissions. Stage 2 turbine powered aircraft are also older fuel inefficient types that have largely been withdrawn from service or upgraded via hush kits or re-engining to Stage 3. Stage 3 aircraft are relatively modern, powered by turbofan engines and constitute the majority of the civil general aviation fleet. Stage 4 was recently instituted, primarily to enable distinction between aircraft converted to Stage 3 from those that were originally manufactured to Stage 3 standards. Most aircraft in production today meet Stage 4 standards.

Part 161 is most often considered in the context of eliminating Stage 2 aircraft from accessing airports or regulation by time of day or other means to reduce overall noise impact. Compliance with this regulation requires the performance of a cost/benefit analysis and notifications to potential airport users. While the proportion of Stage 2 fixed wing aircraft at East Hampton has diminished to the point where such a compliance effort might no longer be justifiable, helicopters are also classed as Stage 2 aircraft. Helicopters are a major source of adverse reactions due to their relatively low cruising altitudes, distinguishable noise signature and frequent summer use. Limitations on helicopters such as by time of day restriction may justify the use of the procedures available under Part 161.

2. Limitations by Single Event Noise

The single most effective means to curtail airport noise impact is by instituting single event noise levels, usually measured at the approach and departure measurement points specified in Federal Aviation Regulations Part 36. Virtually every aircraft in service has an identifiable noise level on approach and departure via measurements made during certification, the introduction of the aircraft into production. Only aircraft made prior to the institution of FAR Part 36 are exceptions.

Through the use of portable noise monitors, approach and departure noise levels can be systematically measured. Through examination of the specific aircraft types that use the airport, review of their certified noise levels and identifying in-service noise levels that can be measured through noise monitoring, reasonable specifications for permissible noise levels can be made. Over time and with appropriate notification, the performance standards could be employed to reduce overall noise impact.

Single event noise level limits, especially when these can be enforced through noise monitoring are the fairest and most reliable way to impose limitations on cumulative aircraft noise impact.

3. Limitations by Weight

Runway weight limits are common at airports nationwide. Weight limits are used to protect the service life of runway, taxiway and apron pavement.

Generally, within specific comparable aircraft types using similar propulsion technology, greater weight usually means higher noise levels. Thus, instituting a maximum limit on aircraft weight may have a collateral consequence of limiting noise both peak and cumulative noise levels.

Historically, the weight limit at East Hampton Airport has been 12,500 pounds. This is a sensible specification at general aviation airports generally because this level is a "bright line" in the aircraft regulatory environment. Aircraft with a maximum weight above 12,500 pounds are developed to more stringent standards defined by the FAA. Most, although not all, jet powered aircraft weigh more than 12,500 pounds. East Hampton Airport had a 12,500 pound weight limit until runway reconstruction increased that figure substantially in the 1990's, accounting, in part, for the continuing controversy concerning airport affairs.

While it is generally inappropriate to use runway weight limits to control access and cumulative noise levels and establishing a weight limit does not mean that it is impermissible to operate a heavier aircraft on such pavement, it tends to curtail use by larger aircraft. Further, the establishment of a specific weight limit has a variety of consequences including reduced landing fees since these are usually based on vehicle weight, lower volumes of fuel sold, increased pavement life and therefore reduced maintenance costs, and potentially reduced need for fire fighting equipment. Most importantly, the establishment of a weight limit specification, whether a return to 12,500 pounds or a differing figure, signals to the user community the type of facility the proprietor intends to provide.

4. Seasonal Rules

Since the annual average noise impact at the East Hampton Airport is relatively modest in comparison to the peak summer period, many of the available noise abatement measures are most desirable during this period. Further, the busy summer season may necessitate air traffic control which in turn makes structuring and directing aircraft traffic more feasible. Seasonal controls present a lesser degree of conflict with federal priorities, may have lesser overall financial consequences, and maybe easier to implement and administer. Thus, it may be helpful to consider such restrictions as limitation by time of day, noise level limits, alternative routing procedures, differential landing fees, flipping the touch and go pattern or limitations on flight training only during the more sensitive summer season.

5. Touch and Go Training Operations

For residents situated under the standard traffic pattern for each runway, touch and go training operations can be especially annoying despite the fact that most training is accomplished with relatively small aircraft with limited noise emissions. In this case, the repetitive flyovers and not the cumulative noise impact is driving the annoyance level. There are three ways to reduce these impacts. Flipping the touch and go pattern to keep aircraft over the airport will reduce annoyance levels in areas around the airport. However, since this results in a non standard traffic pattern, its practicality is contingent on having a control tower. Second, training operations could be prohibited seasonally and presumably conducted at other available airports. This increases training costs and creates additional impact elsewhere. Finally, voluntary or mandatory limitations on the frequency of training flights or the times of day or days of the week might be partial solutions. For example, prohibiting training operations on summer weekends would provide a respite for airport neighbors during summer weekends.

6. Landing Fee Adjustments

Landing fees are set by the airport proprietor in order to recover costs of staffing and maintaining the airport. While significant regulatory concerns may result from the establishment of punitively large landing fees, the proprietor may have some discretion in establishing a reasonable fee structure to discourage unwanted activity. Higher landing fees during the night period, higher landing fees based on aircraft noise level, or other differentials may be considered. The disadvantage of this administrative approach is that landing fees are typically a small component of total aircraft operating costs. Raising landing fees may increase revenue, but unless raised drastically are unlikely to cause substantial shifts in total activity levels or totally eliminate, for example, night period usage.

7. Noise Abatement Measures Rotary Winged Aircraft

Rotary winged aircraft, helicopters, are a disproportionate source of annoyance in airport adjacent neighborhoods and under the approach and departure flight tracks or designated routes. Raising the minimum cruise level for helicopters to 2,000 feet has already been implemented. Designated approach and departure corridors have been established.

Since East Hampton Airport is surrounded by sensitive land uses, there are limited possibilities to reduce impact by rerouting approach/departure paths. In Chapter 3, several differing approach paths were studied. With one exception, none were found to have significantly lower population exposure.

One approach and departure corridor was found to be substantially better than the existing routes. This approach/departure path would branch off from the offshore helicopter route. On approach, helicopters would over-fly Georgica Pond and thence over the currently undeveloped land adjacent to the Runway 34 threshold and then land in the terminal area. This is the minimum sound track, avoids overflight of areas in Southampton, and adds little if any flying distance and flight time. It would, however, expose residents in this area of high value real estate to much greater noise levels than currently exist.

Another occasionally used noise abatement technique for helicopters is the spiral decent. In essence this procedure calls for an arriving helicopter to remain at cruise altitude until over the airport and then initiate a circling descent to land. Extensive modeling of this procedure applied to the East Hampton Airport failed to reveal any advantage. The circling procedure exposes areas adjacent to the airport to higher levels of noise than would otherwise occur with a straight in approach. A larger total number of individuals would be adversely affected. Therefore, this noise abatement strategy is not recommended.

Finally, since helicopters do not require a large landing site, one partial strategy for reducing noise impact would be the establishment of one or more shoreline heliports. While an extensive survey of available candidate sites is beyond the scope of this investigation, there may be one or more sites with over the water approaches that could be established as alternative landing sites. While this strategy has clear potential for reducing overflights of areas around the airport, it would almost certainly be unwanted and probably opposed by adjacent shoreline residents.

8. Voluntary Measures

For noise abatement measures that involve avoidance of specific areas, specific times of the day, or specific aircraft, an alternative administrative approach involves voluntary limitations by operators.

Generally, such voluntary measures are more effective with based aircraft operators than with transients. Thus, voluntary measures are, at best, a partial solution. The most commonly used voluntary measure, restraints on night period flying would logically not create much change in East Hampton since night period activity on average is very low, about two percent. However, the night period fraction is greater during the summer season and, as can be seen in the busy day noise contours, can be much greater on a summer weekend. Thus, voluntary restraint by airport users might substantially reduce annoyance levels during busy periods even if only partially effective overall.

The aircraft using the airport may be candidates for voluntary measures as well. As mentioned above, hushkits or re-engining can reduce the noise emission levels of older noisier aircraft. Propeller driven aircraft can be fitted with multi-blade propellers designed to reduce noise emissions. These measures impose costs which may not appear worthwhile to aircraft owners and operators in the absence of encouragement and the knowledge that they could ultimately become mandatory requirements.

Quiet flying procedures for both jet powered aircraft and piston powered aircraft have been defined by the National Business Aircraft Association and the Aircraft Owners and Pilots Association. These are all voluntary procedures that have been found helpful in reducing noise impact.

Generally, voluntary measures are an initial means of achieving improved noise reduction performance and do not involve regulatory conflicts as do mandatory measures. Thus, they recommend themselves as the starting point in noise abatement.

9. Alternative Demand Accommodation

Restrictions of any type on airport access do nothing to reduce demand levels for transportation services. For example, shifting fixed wing passenger traffic to helicopters is likely to worsen rather than improve overall noise impact. However, a new series of Very Light Jets, small (four to six passenger) single or twin engine aircraft will soon be available in significant numbers. All anticipated models are less than 12,500 pounds. These provide a realistic alternative for accommodating passenger demand. These aircraft will begin entering service over the next several years. Initial information indicates these may be among the quietest aircraft available, will easily operate on short runways and are relatively inexpensive to acquire and operate. To the extent practicable, adapting and, if necessary, expanding facilities to efficiently handle this new class of aircraft may be the easiest way of reducing noise impact while continuing to satisfy transportation demand.

10. Management Improvements, Staffing and Record Keeping

Generally, annoyance levels from aircraft diminish when there is a shared realization that all reasonable means to reduce noise impact have been adopted. Such activities as noise monitoring, reporting, responding to complaints and other sensible administrative responses to adverse reactions can be expected, over time, to reduce the annoyance levels. The perception of accountability is the essential step.

For this reason, regular reporting of activity levels, periodic reporting of cumulative noise levels, regular deployment of noise monitors, and continuation of data acquisition through the AirScene system are recommended. This has the further benefit of tracking improvement or deterioration in the overall situation, and highlighting problem areas for increased attention. These are essential activities despite the fact that they impose additional costs. Larger general aviation airports use elaborate and expensive fixed point monitoring systems which, in the case of East Hampton, are not warranted at this time. However, those airports that do utilize these systems have found them to be helpful in improving community relations.

Thus, regular surveillance combined with reporting of results and, ultimately, accountability in the sense of curtailment of specific problems can be expected to achieve favorable results. As a generalization, when the local noise exposed population becomes convinced that their concerns have been adequately adjudicated and the residual impacts minimized, the noise sensitivity of local residents may diminish by as much as 10 decibels on the DNL scale even if actual cumulative noise levels remain the same. Thus, more time, attention and resources devoted to noise abatement generally yield measurable benefits in terms of reduced annoyance levels.

Chapter V- Alternative Analysis

Chapters 1 through 4 of this report provide a basis for evaluating airside and landside suggestions that consider the interests of the residents of the Town of East Hampton, while safely and economically servicing aircraft traffic. Chapter 1 gave an in depth description of the existing facilities and the conditions that are currently present at the Airport. Chapter 2 went on to describe the complex background of the Airport and the need to properly define its role within the community. Chapter 3 developed specific objectives for the Airport that were then tied to several different alternatives based on the varied perspectives of airport stakeholders. Finally, Chapter 4 provided analysis of airport noise and environmental concerns.

This chapter attempts to find a proper balance between community impact and aeronautical needs. Previous chapters addressed important issues and concerns facing the Airport and the community. Chapter 3 is the primary source of information and provides an explanation of the development of the chosen concepts or options. Chapter 3 studied individual and specific components that make up the airport. Each component was analyzed, evaluated and suggestions were made to satisfy the intent of each alternative. A tabulation of this analysis was provided in Chapter 3. Chapter 5 is a compilation of that analysis and provides a comprehensive plan of the entire airport for each of the alternatives.

a. No Action- preserves the Airport in its existing condition. No projects or changes would occur.

b. Alternative 1- modifies the Airport such that airport facilities are decreased in scale and environmental effects are reduced without regard to operational impact.

c. Alternative 2- modifies the Airport by maximizing use of the existing facilities, satisfying safety standards, fulfilling operational demands, and addressing community impacts.

d. Alternative 3- modifies the airport so the facilities are expanded to meet unrestricted operational forecasted demand.

A description of the *intent, major work items, design standards, and effect upon current traffic* associated with each alternative is provided on the following pages. The second portion of this chapter outlines the methodology used to evaluate the alternatives. Upon completing the evaluations, a preferred alternative will either be selected or a separate alternative may be developed as a result of a combination of alternatives, should it prove to be the most beneficial option

Principles used to evaluate each alternative included the following;

1. <u>Safety</u>: Alternatives were evaluated on the extent to which they meet safety standards.
2. <u>Environmental</u>: Alternatives were evaluated in terms of their potential impacts upon the environment.
3. <u>Satisfaction of Demand</u>: Alternatives were evaluated against how well they would serve the operational demand of the Airport.
4. <u>Revenue</u>: Alternatives were evaluated based on Airport revenue loss/gain potential.
5. <u>Effect upon community</u>: Alternatives were evaluated based on their potential effect on the residents of East Hampton and adjacent communities.

PART ONE

A. No Action Alternative

Intent

The intent of the No Action Alternative is to maintain the Airport in its current state without any modifications.

Description of Major Work Items

There are no projects proposed under this Alternative. The airport facilities would remain in its present configuration and only maintenance activities would occur, preserving the condition of the airport.

Design Standards

The Twin Otter (ARC A-II) from the previously adopted 1989 Master Plan would remain as the Design Aircraft. Design standards associated with an ARC of A-II will be used for all three runways. Under the present condition, the airport would continue to remain non-compliant with a number of FAA standards. The following is a listing of standards associated with runway clearance requirements at East Hampton and current compliance issues:

Runway 28:

- <u>Approach Surface</u>- Runway 28 approach surface now exists in a non-standard condition. A vehicle on Daniel's Hole Road is considered an obstruction to the approach surface to Runway 28 as per FAR Part 77 "Objects Affecting Navigable Airspace". This is based upon the runway's use as a non-precision instrument runway with minimums greater than three-fourths of a statute mile.

Runway 4:

- Runway Protection Zone: The RPZ currently meets land use requirements; however a small portion, approximately 0.3 acres, of the RPZ exists outside of the airport property boundary. It is recommended that the airport control the entire RPZ in order to ensure land use requirements continue to be met.

Runway 22:

- Runway Safety Area: The current RSA is non-standard due to the location of Daniels Hole Road. The standard RSA dimension for this alternative is 150 ft wide and extends 300 ft beyond the end of the runway. Daniel's Hole Road is located within the RSA.

- Runway Object Free Area: The current ROFA is non-standard due to the location of Daniels Hole Road. The standard ROFA dimension for this alternative is 500 ft wide and extends 300 ft beyond the end of the runway. Daniel's Hole Road is located within the ROFA.

- Runway Protection Zone: The RPZ currently meets land use requirements; however a small portion, approximately 1.32 acres, is located outside of the current airport property line. It is recommended that the airport control the entire RPZ or that it exists within the airport boundary in order to ensure land use requirements continue to be met.

Runway 16:

- Runway Safety Area: The current RSA is non-standard due to the location of Daniels Hole Road. The standard RSA dimension for this alternative is 150 ft wide and extends 300 ft beyond the end of the runway. Daniel's Hole Road is located within the RSA.

- Runway Object Free Area: The current ROFA is non-standard due to the location of Daniels Hole Road. The standard ROFA dimension for this alternative is 500 ft wide and extends 300 ft beyond the end of the runway. Daniel's Hole Road is located within the ROFA.

Runway 34:

- Runway Safety Area: The current RSA is non-standard due to the location of Industrial Road. The standard RSA dimension for this alternative is 150 ft wide and extends 300 ft beyond the end of the runway. Industrial Road is located within the RSA.

- Runway Object Free Area: The current ROFA is non-standard due to the location of Industrial Road. The standard ROFA dimension for this alternative is 500 ft wide and extends 300 ft beyond the end of the runway. Industrial Road is located within the ROFA.

- Runway Protection Zone: The RPZ currently meets land use requirements; however a large portion, approximately 4.14 acres, of the RPZ exists outside of the airport property boundary. It is recommended that the airport control the entire RPZ in order to ensure land use requirements continue to be met.

It is important to note that the above design standards apply to the theoretical design aircraft from 1989 (Twin Otter). Obviously, this design aircraft is less demanding than the actual type of aircraft presently using East Hampton Airport. The design standards that apply to this outdated design aircraft are less stringent than the requirements of the current fleet mix presently using the airport. As a result, the continued use of the airfield with design standards based on the Twin Otter, while servicing more demanding aircraft, would be considered inappropriate and should be addressed.

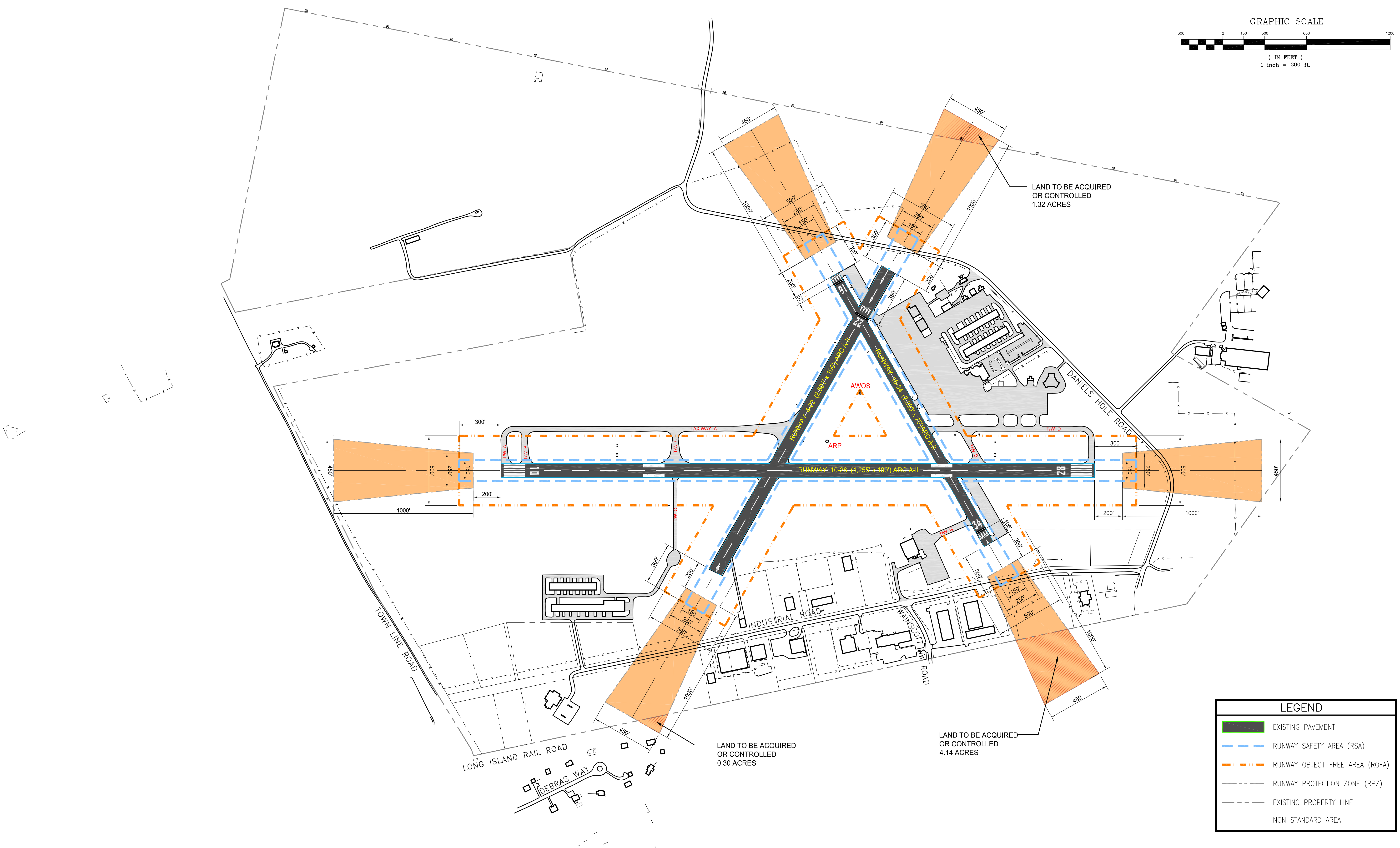
Effect upon Current Traffic

The No Action Alternative does not have a specific operational impact upon the current traffic, the users of the Airport, passengers, and the revenue generated by the Airport. Conditions merely continue to remain the same.

Existing airplanes will continue to use the airport while applying inappropriate safety standards. High performance aircraft will continue to make operational adjustments, such as applying aircraft weight limitations to use the facilities at East Hampton. This operational scenario is not desirable from an aviation standpoint, while having a potential adverse impact upon the community.

The drawing on the following page depicts the No Action Alternative at East Hampton Airport:

NO ACTION



GRAPHIC SCALE
300 0 150 300 600 1200
(IN FEET)
1 inch = 300 ft.
RUNWAY 10-28 (4,255' x 100') ARC A-II
RUNWAY 4-22 (2,501' x 100') ARC A-II
RUNWAY 16-34 (2,223' x 75') ARC A-II
AWOS
ARP
TAXIWAY A
T/W A
T/W B
T/W C
T/W D
T/W E
T/W F
T/W G
DANIELS HOLE ROAD
INDUSTRIAL ROAD
WAINSCOTT NW ROAD
TOWN LINE ROAD
LONG ISLAND RAIL ROAD
DEBRAS WAY
LAND TO BE ACQUIRED OR CONTROLLED 1.32 ACRES
LAND TO BE ACQUIRED OR CONTROLLED 0.30 ACRES
LAND TO BE ACQUIRED OR CONTROLLED 4.14 ACRES
LEGEND
EXISTING PAVEMENT
RUNWAY SAFETY AREA (RSA)
RUNWAY OBJECT FREE AREA (ROFA)
RUNWAY PROTECTION ZONE (RPZ)
EXISTING PROPERTY LINE
NON STANDARD AREA

B. Alternative 1

Intent

The intent of Alternative 1 is to provide facilities at the Airport that would have the least impact on the environment. The current physical layout of the Airport would be down scaled, such that environmental effects are reduced without regard to operational impact. No regard was made to operational adequacy in terms of the airports availability to the current mix of traffic. The designation of the Design Aircraft was minimized to the greatest extent possible. As such, the Beech Baron with an ARC of B-I was chosen as the Design Aircraft. The standards associated with this aircraft are less than those required of the Twin Otter, the current design aircraft. The airfield configuration and landside layout for this alternative was developed with the understanding of reducing impacts and using standards that would be applicable to an aircraft category that included only small aircraft.

Description of Major Work Items

Major work items included in this Alternative include:

1. **Design Aircraft**- the Beech Baron (ARC B-I) was selected as the critical aircraft.

2. **Runways**
   a. Runway 10-28 would be reduced by 1,805 ft. to a total length of 2,450 ft. to satisfy the runway length requirements of the Beech Baron. Two Hundred (200) feet of the Runway 28 approach end would be removed. A pavement reduction of 1,605 ft would take place on the Runway 10 approach end. The majority of the runway removed is the portion that is located southwest from the terminal area. This would provide greater accessibility to airport facilities and services. The width of the runway would be decreased from 100 ft. to 60 ft.

   b. Runway 4-22 would be closed and converted into a 35 ft wide taxiway.

c. Runway 16-34 would be reduced to a length of 2,218 ft. Runway 16 approach end would be shortened by 5 ft. This would bring the RSA and ROFA in compliance. The Runway 16 threshold would be displaced 60 ft from the runway end to mitigate a penetration to FAR Part 77 Imaginary Approach Surface. FAR Part 77 assumes an imaginary approach surface at the ends of runways that should be protected. No objects should be of a greater height than this imaginary surface. Vehicles on Daniel's Hole Road penetrate the current approach surface and would be considered an obstruction to the runway. The displacement of the runway, for landing purposes would mitigate this obstruction, without relocating the road.

The 106 ft displacement of the Runway 34 threshold would remain, since tree removal is not considered in Alternative 1.

The width would be reduced from 75 ft to 60 ft.

3. **Taxiways -** A partial parallel taxiway (parallel to Runway 16-34) would be constructed at the ends of this runway. This taxiway would be connected to the existing Taxiway E and would continue across the Terminal Apron, thereby providing a full length parallel taxiway to Runway 16-34. A taxiway from the T-Hangars located in the Southwest corner of the airport would be constructed to the taxiway created from Runway 4-22.

4. **Tree Removal -** Under this alternative, trees on airport property that are FAR Part 77 obstructions would not be removed.

5. **Installation of an AWOS -** Installation of an AWOS would enhance pilot safety by providing accurate weather conditions at East Hampton Airport. This would allow pilots to make a determination if they can land, further away from the airport. This will reduce missed approaches during low visibility conditions and improve safety.

6. **Construction of an Air Traffic Control Tower** - The Air Traffic Control would be located upon an elevated section of the Terminal Building. This location would provide an air traffic controller a clear line of sight to the entire airfield.

7. **Improvements to the Fuel Farm -** Improvements to the fuel farm would be adjacent to the existing fueling facilities. It would provide additional storage capacity with an upgrade in automation

8. **Modifications to Airport Parking Lot -** The modifications to the vehicle lot includes fencing and a system to isolate non-airport users from airport users.

9. **Industrial Area-** Not Applicable.

10. **Actions to Promote Conservation and Recreation –** Approximately 203 acres of area bordering the north and east side of the airport would be designated for Conservation and Recreation as determined by the Town of East Hampton.

11. **Actions to Preserve Endangered Species -** Provisions will be made to locate and preserve suitable habitat for threatened and endangered species listed on federal environmental listings.

12. **Development of Emergency Preparation and Plans -** The airport management will coordinate with the local police and fire department, special provisions and procedures to respond to airport emergencies. Specific issues to be addressed will include communication procedures and emergency access routes for expedited response times.

13. **Consideration of Groundwater Sources -** All stormwater management facilities will be reviewed to control the discharge of any hazardous fluids into existing water bodies or into the groundwater. Operational guidelines will be developed and circulated to all tenants. These provisions would be included within the airports Minimum Standards and Operational Manual.

14. **Augmentation of Deer Control Fencing -** All portions of the airport perimeter, which are not currently and appropriately fenced, would be fenced. This important project will protect the flying public from the potential for wildlife strikes on the airport.

Design Standards

Under this alternative, all runways would meet design and safety standards (RSA, ROFA, RPZ, approach surfaces).

Terminal Apron A taxiway, parallel to Runway 16-34 would be constructed. It would need to be at least 150 ft from Runway 16-34. This is the minimum separation distance for the runway centerline to taxiway centerline for a runway designed in the B-I category for small aircraft (under 12,500lbs). Otherwise, it would need to be located 225 ft from Runway 16-34. If the parallel taxiway is placed in line with existing Taxiway E, it would be 240 ft from Runway 16-34. This is how it is depicted in the drawing for Alternative 1. With Runway 16-34 open, the Terminal Apron would be need to be reconfigured to ensure an adequate Runway Object Free Area (ROFA), runway/taxiway(taxilane) separation distance and a clear taxiway/taxilane OFA. The current taxilane located on the terminal ramp is 100 ft from Runway 16-34 (centerline to centerline) and is not in compliance.

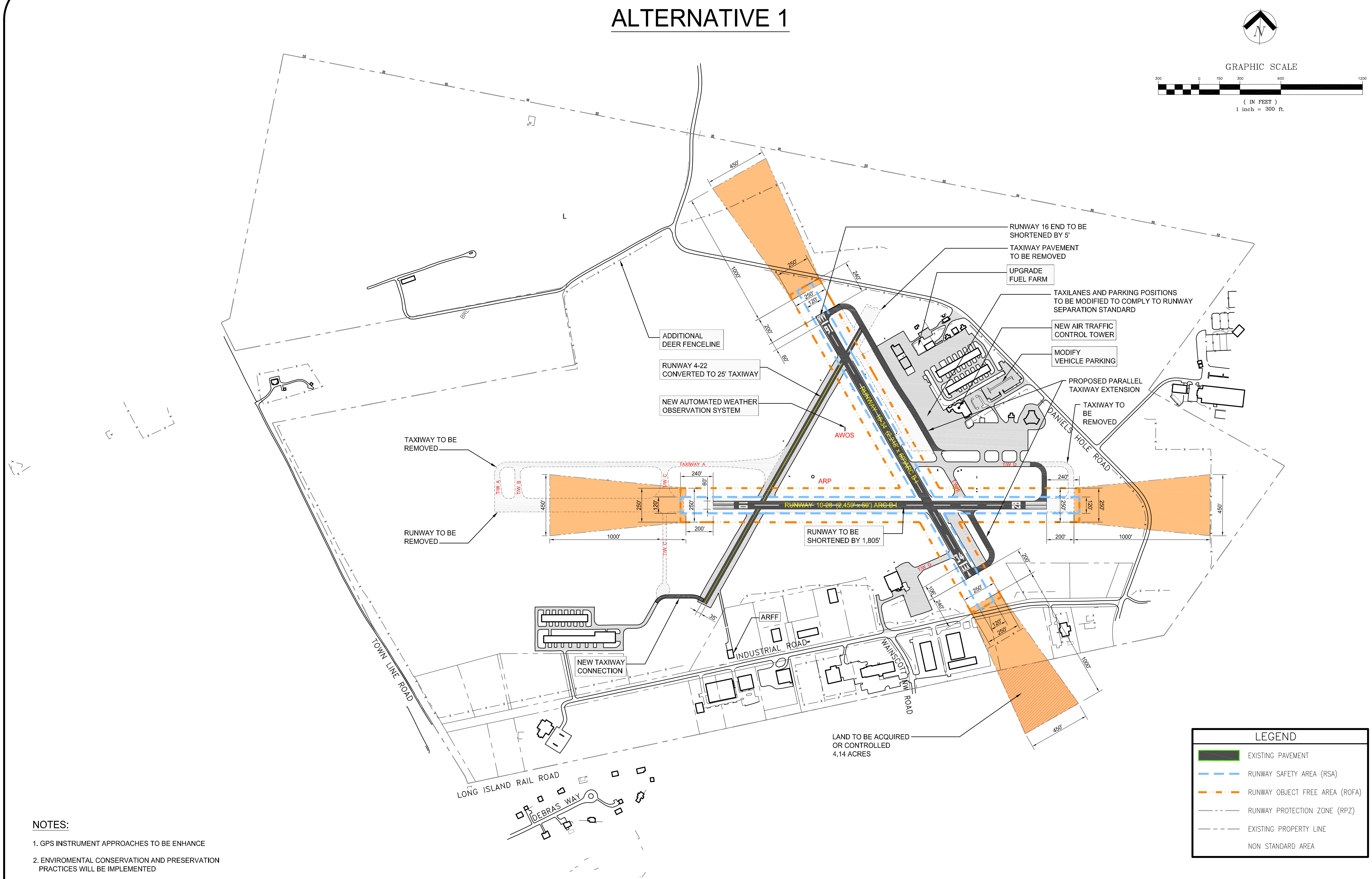
Runway 34 RPZ The Runway 34 RPZ currently meets land use requirements. However, a large portion, approximately 4.14 areas, of the RPZ exists outside of the airport property boundary. It is recommended that the airport control the entire RPZ in order to ensure land use requirements continue to be met.

Effect upon Current Traffic

Implementation of Alternative 1 will effectively reduce the Airport to a point where certain types of aircraft that currently utilize the Airport could no longer land or takeoff on Runway 10-28. The Airport use would be limited to only small aircraft like the Beech Baron. Furthermore, the main clientele who require use of business jet transportation would be severely affected and would be forced to find alternative means of transportation. This could lead to a potential increase in helicopter traffic at the Airport (helicopters currently account for the majority of the noise complaints) as well as an increase in vehicular traffic on the already congested roads in the area.

With Runway 16-34 open, parking on the Terminal Apron will be restricted, resulting in less available aircraft parking. The drawing on the following page depicts Alternative 1 at East Hampton Airport:

ALTERNATIVE 1



LEGEND

- EXISTING PAVEMENT
- RUNWAY SAFETY AREA (RSA)
- RUNWAY OBJECT FREE AREA (ROFA)
- RUNWAY PROTECTION ZONE (RPZ)
- EXISTING PROPERTY LINE
- NON STANDARD AREA

NOTES:

1. GPS INSTRUMENT APPROACHES TO BE ENHANCE
2. ENVIROMENTAL CONSERVATION AND PRESERVATION PRACTICES WILL BE IMPLEMENTED

C. Alternative 2

Intent

The intent of Alternative 2 is to maintain facilities at the Airport to the greatest extent possible while increasing safety, controlling the impact upon the surrounding community, and maintaining availability to airport users. This alternative would maximize use of the Airport's current attributes, meet current design and safety standards, without creating additional adverse impacts to the environment or the surrounding community. Alterations to the existing airfield will be kept to a minimum, while operational adequacy in terms of the Airport's availability to the flying public will be maintained.

Description of Major Work Items

Major work items included in this Alternative include:

1. **Design Aircraft-** The Cessna Citation V (ARC B-II) was selected as the critical aircraft for Runway 10-28 and the airfield, with the exception to Runway 4-22. The Citation is the most demanding aircraft currently using the airport that meets the definition of a Design Aircraft (at least 500 operations per year). Higher performing aircraft than the Citation will occasionally use East Hampton Airport, but not at the operational level that would justify identifying them as the design aircraft currently. The Beech Baron (ARC-BI) was selected as the design aircraft for Runway 4-22. The Beech Baron is within a smaller airplane category than the Twin otter, the existing design aircraft.

2. **Runways**
   a. <u>Runway 10-28</u> would be maintained at 4,255 ft. A displaced threshold of 150 ft. would be required on the Runway 28 approach end. An assumed vehicle (with a height of 15 ft) on Daniel's Hole Road would be considered an obstruction to FAR Part 77's approach surface to Runway 28. The approach slope for Runway 28 is 34:1 for a non-precision instrument runway. The displacement of the threshold for aircraft landing

on Runway 28 would mitigate the obstruction without relocating Daniel's Hole Road.

b. Runway 4-22 would be rehabilitated to 2,375 ft. in length by 60 ft. in width. This would be 126 feet shorter than its original length to bring the RSA and ROFA within compliance, such that Daniel's Hole Road is not within these areas. The Runway 22 threshold would be displaced 60 ft. An assumed vehicle (with a height of 15 ft) on Daniel's Hole Road would be considered an obstruction to FAR Part 77's approach surface to Runway 22. The approach slope is 20:1 for visual runways. The displacement of the threshold for aircraft landing on Runway 22 would mitigate the obstruction without relocating Daniel's Hole Road.

c. Runway 16-34 would be closed and converted into a 35 ft. taxiway, maximizing the usage of aircraft parking on the terminal apron while honoring the required clearances for parked aircraft.

3. **Taxiways-** Taxiway A would be extended to meet with Taxiway D, to provide a full length parallel taxiway to Runway 10-28. This adjustment provides a safe and efficient taxiway system to allow aircraft access to any part of the field. The addition of this missing portion of the taxiway eliminates the need for an airplane to "back taxi" on active runways, which would be considered unsafe.

4. **Tree Removal-** Under this alternative, trees on airport property that are FAR Part 77 obstructions would be removed.

5. **Installation of an AWOS-** Installation of an AWOS would enhance pilot safety by providing accurate weather conditions at East Hampton Airport. This would allow pilots to make a determination if they can land, further away from the airport. This will reduce missed approaches during low visibility conditions and improve safety.

6. **Construction of an Air Traffic Control Tower-** The Air Traffic Control Tower would be located along the south portion of the airfield. The location would take into account the necessary clearance requirements, and would provide an air traffic controller a clear line of sight to the entire airfield.

Additional site work will be provided as part of this project, including an access road, parking, utilities and site grading.

7. **Improvements to the Fuel Farm-** Improvements to the fuel farm would be adjacent to the existing fueling facilities. It would provide additional storage capacity with an upgrade in automation

8. **Modifications to Airport Parking Lot-** The modifications to the vehicle lot includes fencing and a system to isolate non-airport users from airport users.

9. **Industrial Area-** An area on the north side of the airport was designated for future industrial use to provide an additional source of revenue to the Airport without further increasing air traffic. This area would not be used for aviation related business.

10. **Actions to Promote Conservation and Recreation-** Approximately 203 acres of area bordering the north and east side of the airport would be designated for Conservation and Recreation as determined by the Town of East Hampton.

11. **Actions to Preserve Endangered Species-** Provisions will be made to locate and preserve suitable habitat for threatened and endangered species listed on federal environmental listings.

12. **Development of Emergency Preparation and Plans-** The airport management will coordinate with the local police and fire department, special provisions and procedures to respond to airport emergencies. Specific issues to be addressed will include communication procedures and emergency access routes for expedited response times.

13. **Consideration of Groundwater Sources-** All stormwater management facilities will be reviewed to control the discharge of any hazardous fluids into existing water bodies or into the groundwater. Operational guidelines will also be developed and circulated to all tenants. These would be included within the airports Minimum Standards and Operational Manual.

14. **Augmentation of Deer Control Fencing-** All portions of the airport perimeter, which are not currently and appropriately fenced, would be fenced. This important project will protect the flying public from the potential for wildlife strikes on the airport.

15. **Landside Development-** This alternative assumes no growth in air traffic but does consider providing an industrial site to enhance revenue generation on the airport. The lands, located within the northwest portion of the field, are vacant, with available road side frontage along Daniel's Hole Road.

Design Standards

All runways would meet design and safety standards (RSA, ROFA, and approach surfaces). There are small amounts of the RPZ for both ends of Runway 10-28 and Runway 4-22 that exist outside of the airport property line. There as follows:

Runway 10- approximately 0.03 acres
Runway 28- approximately 0.17
Runway 4- approximately 0.3 acres
Runway 22- approximately 0.21 acres

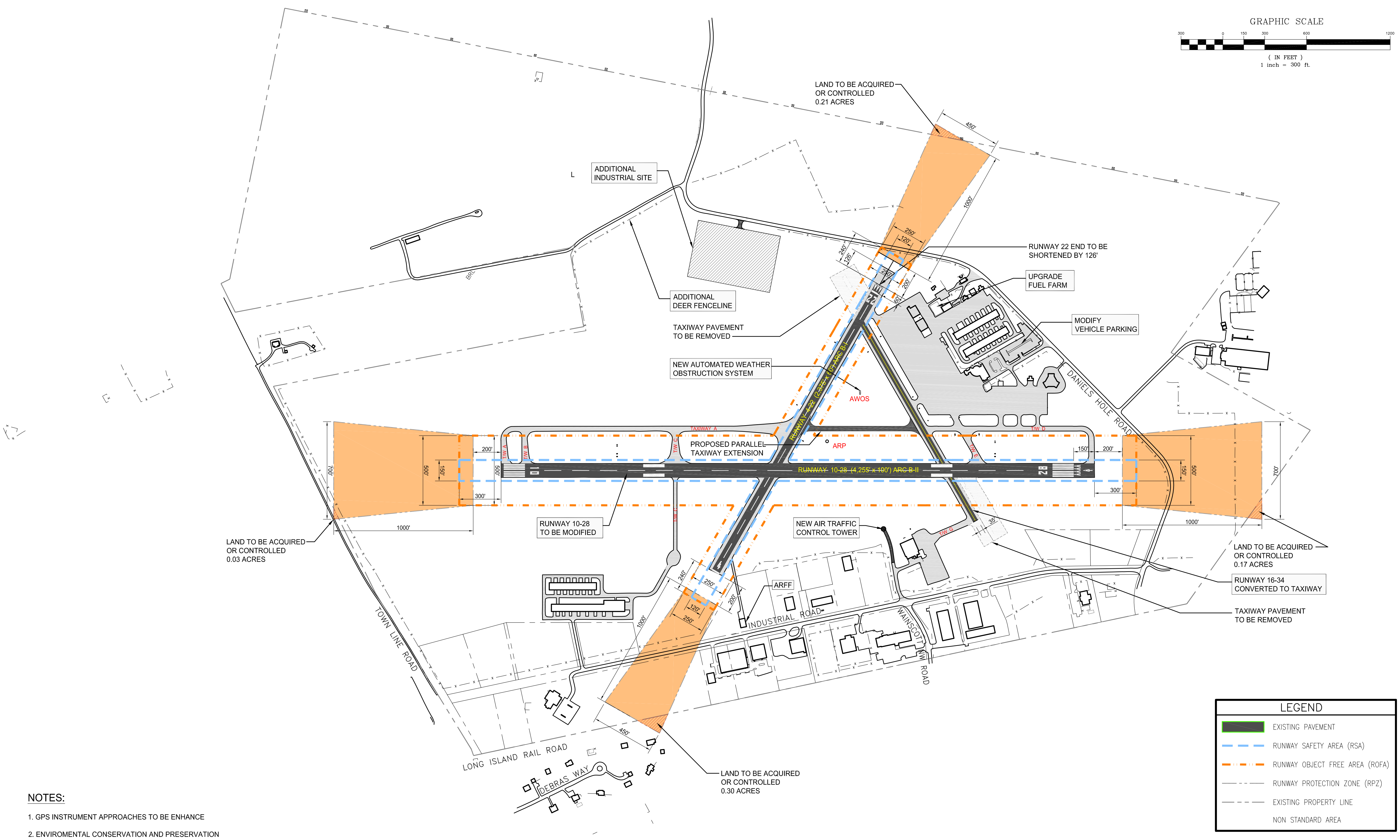
With Runway 16-34 closed, aircraft parking on the Terminal Apron would not be affected. There would be no reduction in available aircraft parking.

Effect upon Current Traffic

Implementation of Alternative 2 will maintain the ability of East Hampton Airport to accommodate existing traffic while meeting all required design and safety standards. The proper safety standards associated with actual traffic at East Hampton would be applied. It will not encourage future growth in operations nor promote use by more demanding aircraft. The Airport will continue to serve the primary users and their clientele. Essentially, there will be no effect on traffic.

The drawing on the following page depicts the Alternative 2 at East Hampton Airport:

ALTERNATIVE 2



NOTES:

1. GPS INSTRUMENT APPROACHES TO BE ENHANCE
2. ENVIROMENTAL CONSERVATION AND PRESERVATION PRACTICES WILL BE IMPLEMENTED

D. Alternative 3

Intent

The intent of Alternative 3 is to increase facilities at the Airport to the extent necessary to accommodate the most physically demanding aircraft that use the Airport, regardless of its frequency of operation. Essentially, this alternative would attempt to add to the Airports current facilities without regard to potential impacts to the environment or the surrounding community.

Description of Major Work Items

Major work items included in this Alternative include:

1. **Design Aircraft-**The Bombardier Challenger 604 (ARC C-II) was selected as the critical aircraft. The Challenger is one of the largest aircraft to operate at East Hampton Airport. Its presence is infrequent and it does not meet the operational requirements that traditionally define the Design Aircraft (500 annual operations). The standards associated with this aircraft are significantly more demanding than those required of the Twin Otter, the current design aircraft.

   Planes similar to this aircraft have been forecasted for future use at East Hampton Airport. Studies supporting this forecast have been presented to the Township, but never properly accepted.

   The Beech Baron with an ARC of B-I and its associated design standards were chosen for Runway 16-34 and 4-22.

2. **Runways**
   a. <u>Runway 10-28</u> would require an extension of 2,445 ft. resulting in a total length of 6,700 ft. This would be the length required of a Challenger to properly operate at East Hampton. The width would remain at 100 ft. The extension would take place on the Runway 28 (east) end. The extension to the East was chosen due to the limited amount of land owned by East Hampton to the west. Daniel's Hole

Road would require significant relocation to ensure that it remains outside of all required setbacks and obstruction surfaces. Additionally, the extensive land acquisition program would be necessary for the purposes of construction and control of the RPZ.

b. <u>Runway 4-22</u> would realize the full length of the existing pavement, without any displacements. Daniel's Hole Road would be relocated to ensure that it provides the necessary setbacks, as outlined in FAA standards.

c. <u>Runway 16-34</u> would also make full use of the pavement without any threshold displacements. Industrial Road to the south and Daniels Hole Road to the north would be relocated to ensure that they provide the necessary setbacks, as outlined in FAA standards.

3. **Taxiways-** This alternative proposes to provide full parallel taxiways to all three runway ends. This could include extending the parallel taxiway to Runway 10-28, to service the Runway 28 extension. A portion of the parallel taxiway system to Runway 10-28 can be salvaged. The remainder of the parallel taxiway system would be new. The taxiway system is a necessary component to insure safe circulation for ground traffic on the airfield.

4. **Tree Removal**- Under this alternative, trees on airport property that are obstructions would be removed.

5. **Installation of an AWOS-** Installation of an AWOS would enhance pilot safety by providing accurate weather conditions at East Hampton Airport. This would allow pilots to make a determination if they can land, further away from the airport. This will reduce missed approaches during low visibility conditions and improve safety.

6. **Construction of an Air Traffic Control Tower-** The Air Traffic Control would be located upon an elevated section of the Terminal Building. This location would provide an air traffic controller a clear line of sight to the entire airfield.

7. **Improvements to the Fuel Farm-** Improvements to the fuel farm would be adjacent to the existing fueling facilities. It would provide additional storage capacity with an upgrade in automation

8. **Modifications to Airport Parking Lot-** The modifications to the vehicle lot include fencing and a system to isolate non-airport users from airport users.

9. **Industrial Area-** An area on the north side of the airport was designated for future industrial use to promote the further financial and operational development of the Airport. This proposal is unconstrained and would provide facilities for both air and landside use in anticipation of aviation related growth.

10. **Actions to Promote Conservation and Recreation-** Approximately 203 acres of area bordering the north and east side of the airport would be designated for Conservation and Recreation as determined by the Town of East Hampton.

11. **Actions to Preserve Endangered Species-** Provisions will be made to locate and preserve suitable habitat for threatened and endangered species listed on federal environmental listings.

12. **Development of Emergency Preparation and Plans-** The airport management will coordinate with the local police and fire department, special provisions and procedures to respond to airport emergencies. Specific issues to be addressed will include communication procedures and emergency access routes for expedited response times.

13. **Consideration of Groundwater Sources-** All stormwater management facilities will be reviewed to control the discharge of any hazardous fluids into existing water bodies or into the groundwater. Operational guidelines will also be developed and circulated to all tenants. These would be included within the airports Minimum Standards and Operational Manual.

14. **Augmentation of Deer Control Fencing-** All portions of the airport perimeter, which are not currently and appropriately fenced, would be fenced.

This important project will protect the flying public from the potential for wildlife strikes on the airport.

15. **Landside Aviation Related facilities-** Alternative 3 anticipates growth and provides landside development to service traffic, as well as commercial/industrial needs. The location of this development is proposed within the northwest portion of the airport.

Design Standards

Under this alternative, all runways would meet design and safety standards (RSA, ROFA, and approach surfaces). There are small amounts of the RPZ for both ends of Runway 10-28 and Runway 4-22 that exist outside of the airport property line. Approximately 0.3 acres for Runway 4, 1.32 acres for Runway 22, and 12.63 acres for Runway 10. The total amount of land that must be acquired for Runway 10-28 is 65.77 acres outside of the current airport property line.

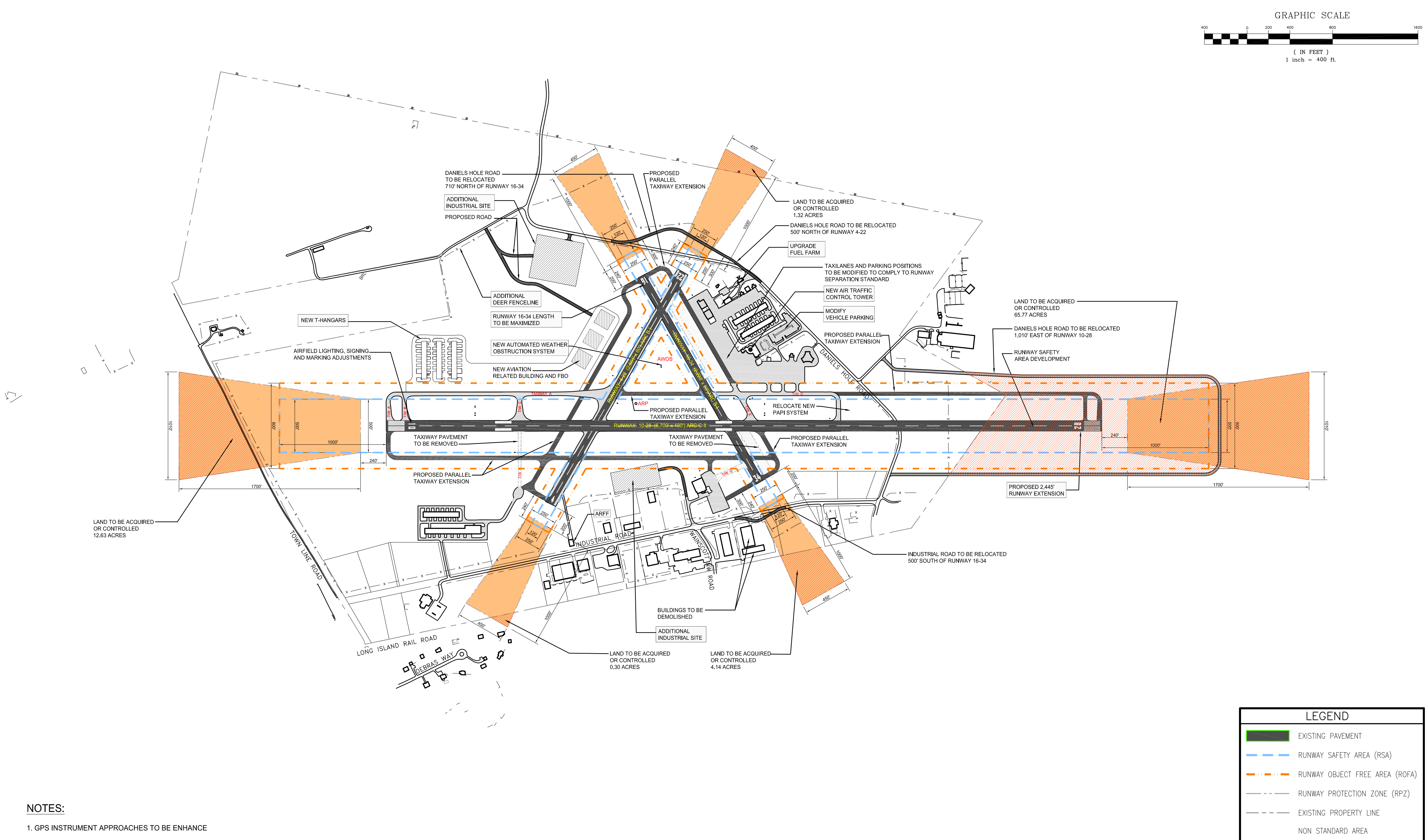
Effect upon Current Traffic

Implementation of Alternative 3 will increase the length of Runway 10-28 by more than 50%. This would enable this runway to accommodate larger and more demanding aircraft. There is a potential that traffic may significantly increase as a result.

The addition of parallel taxiways will allow for more efficient and safe traversing of the airport. It will greatly reduce back taxiing and thereby increase safety.

The drawing on the following page depicts the Alternative 3 at East Hampton Airport:

ALTERNATIVE 3



NOTES:

1. GPS INSTRUMENT APPROACHES TO BE ENHANCE
2. ENVIROMENTAL CONSERVATION AND PRESERVATION PRACTICES WILL BE IMPLEMENTED

PART TWO

E. Comparison, Contrast & Evaluation of Alternatives

This section consists of a review and an analysis of the four alternatives from a variety of perspectives. Each alternative has a very different and very specific intent that is related to the airport role concept. The principles used to evaluate the success of each Alternative include:

- Safety: Each alternative was evaluated from a safety perspective.
  a. Compliance with FAA Design and Safety Standards
  b. Airfield Circulation

- Environmental: Each alternative was evaluated in terms of their impacts upon the environment.
  a. Noise
  b. Air Pollutants
  c. Preservation
  d. Threatened and Endangered Species
  e. Wetlands
  f. Other Significant Categories

- Satisfaction of Demand: Each alternative was analyzed on its capability to meet the operational demand of the Airport.
  a. Ability to accommodate some or most of existing traffic
  b. Ability to accommodate all of existing traffic
  c. Ability to accommodate future traffic

- Revenue: Each alternative was evaluated to consider a potential loss or gain of revenue that might be experienced by the Airport. Factors that affected this analysis included capital improvement costs for projects, maintenance costs, operational costs and current revenue. It should be noted that the cash flow associated with each of the alternatives would be greatly affected by a decision to accept/reject future FAA funding for capital improvements.

- Effect upon community: Alternatives were based on the assumed Airport roles. The potential effects on the residents of East Hampton and adjacent communities were identified. Community concerns are well documented at East Hampton Airport. This portion of the report addresses how these alternatives may have an effect upon past community concerns.

Safety

An evaluation of the level of safety of each particular alternative was conducted. Major issues of consideration were passenger transport, aircraft operation, and preservation of persons and property on the ground. The concepts presented in Alternatives 1, 2 and 3 provide all the necessary setbacks and meet all FAA standards related to safety. The No Action Alternative does not maintain the Airport in a standard condition.

The following explanation describes the thought process used in making these assumptions. Major components were analyzed such as design aircraft and runway configuration are presented.

No Action: This alternative allows for existing conditions, which fall short of several FAA safety and design standards, to remain in effect. It can be presumed that maintaining the obsolete Twin Otter as the design aircraft would be a potential safety concern as it does not present an accurate representation of the types of aircraft currently using the Airport. Standards required by an appropriate Design Aircraft, meeting the prescribed 500 operations criteria, should be used.

Alternative 1: Although all design standards would be met for ARC B-I aircraft, the use of the airport by aircraft in this category is not realistic. Inappropriate standards would be applied to East Hampton Airport, similar to the current situation. There may be potential for some aircraft to attempt to land on a runway shorter than what is required for a particular aircraft.

Additionally, an increase in helicopter traffic may become a byproduct of this alternative. Increased rotorcraft traffic may result in additional helicopters traversing the preferred entry and exit routes. This type of traffic is a safety issue that is not easily maintained at uncontrolled airports

Alternative 2: This alternative meets all safety objectives and design standards for ARC B-II. The current activity level of the Citation V at the East Hampton Airport meets the criteria for a Design Aircraft. The airport safety and design standards for the most prominent user of the Airport would be provided. The Airport would continue to successfully function as it does today while making modifications to meet the required standards. The existing runway length, which would be maintained under this alternative, satisfies the Cessna Citation runway take-off and landing length requirements for Runway 10-28.

Under this alternative, Runway 16-34 would be converted to a taxiway. This would improve safety by allowing all parked aircraft on the Terminal Apron to not violate Runway/Taxilane separation standards as they currently do. Also it would improve circulation and increase safety by reducing the level of back taxiing that currently takes place at East Hampton Airport.

Alternative 3: This alternative meets all safety objectives and design standards for the Challenger. Runway lengths proposed under this alternative would be more than sufficient for the largest aircraft currently operating at the airport.

Conclusion - Safety

Alternatives 1, 2 and 3 were developed to meet safety objectives for their respective design aircraft. The "No Action" Alternative is not in compliance with several safety requirements. Although Alternative 1 meets the FAA requirements related to safety, the Beech Baron design aircraft standards would not be applicable to current users of the airport. Alternatives 2 and 3 satisfy all safety requirements for their respective design aircraft.

Environmental

The purpose of this section is to describe the affected environment and discuss the potential effects of the proposed concepts on specific resources.

The following categories were considered for each alternative as they would have the greatest impact to the community: Noise, Air Pollutants, Preservation, Threatened and Endangered Species, Wetlands, and possible other significant categories such as Water Quality.

The following analysis will be completed for development projects as proposed in the alternatives as previously discussed.

No Action: This alternative will not alter the current configuration of the airport and will remain as is; therefore, the above categories will have no significant impact to the environment.

Alternative 1: This alternative proposes the development as depicted in Figure V-66. This alternative is designed to result in minimal environmental impact and would reduce fixed wing aircraft noise impact in the following ways. Runway 10-28 would be reduced in length. A number of larger business jet types could no longer regularly utilize the airport. Thus, fixed wing aircraft traffic by aircraft over 12,500 pounds would decline. Very Light Jets, however, could be an offsetting factor in activity levels, but would cause limited cumulative noise impact. Helicopter traffic will increase since runway length has no effect on rotary winged aircraft. The reduction in runway length will likely increase helicopter traffic at a greater rate than the present growth. Peak noise impacts would also be reduced especially to the west since the landing threshold for Runway 10 would move eastward and a quieter overall fleet would use the main runway.

The following projects are proposed and will have no impact to the environment as they involve either having minor repairs or modifications, or are being developed in existing buildings or areas that have been previously disturbed:

- Air Traffic Control Tower
- Installation of an AWOS
- Installation of additional deer fence
- Modify existing vehicle parking
- Land acquisition for RPZ

The existing fuel farm currently has tanks that are below the ground. A more detailed study will have to be completed to see the impact to groundwater when removing the tanks. The new fuel system will include above-ground tanks with secondary containment, integral pump and filter system. This new system will help to preserve the groundwater by diminishing the consequences of potential leaks from the tanks.

This alternative minimizes the impacts to noise, air pollutant emissions, and protecting the surrounding environment. There are no wetlands located on the airport, resulting in no impact to this category.

Alternative 2: This alternative is to maintain the airfield for the current conditions. Alternative 2 would reduce noise impact on the Runway 16-34 orientation by eliminating that runway. Runway length on all other runways would remain essentially the same, i.e. no growth induced by facility improvements, but some natural growth would occur. The noise impacts would remain the same as current conditions for Runways 10-28 and 4-22. Fixed wing turbine powered aircraft would increase slightly due to user demand. Helicopter traffic would likely continue to increase moderately.

The projects that are proposed for this alternative, and their locations, are the same as listed in Alternative 1, except for the air traffic control tower, which will be a stand alone building located directly south of Runway 10-28. Also, a full parallel Taxiway A is proposed to allow for full use of the taxiway.

An additional industrial site is proposed and will be located directly west of Runway 22. The development will be restricted to commercial or light industrial type businesses only. This site will not have a significant impact to the community and its environs. The impacts to the environment will be very minimal as described in Alternative 1.

Alternative 3: This alternative would increase off airport noise impact in two ways. First, extending the main runway would bring the eastern threshold of Runway 28 closer to residential and urban areas to the east. The airport could accommodate larger aircraft and heavier weights expanding the range of heavier aircraft that could conveniently use the airport. Therefore, additional impact would likely occur in areas to the west since Runway 28 is the most frequently used departure runway. Light aircraft traffic would be distributed to all runways. Helicopter traffic would likely continue to increase. This alternative clearly has the greatest potential for increased impact both on the annual average as well as during peak period conditions.

This alternative proposes some major development. In addition to the projects listed in Alternatives 1 and 2, there will be an additional industrial site, T-hangar and aviation/FBO building areas, road relocations, buildings to be demolished and the construction of parallel taxiways for Runway 4-22 and 10-28.

The extension of Runway 10-28 will require land acquisition. Once acquired, an environmental assessment will be required to determine the impacts for the construction of this extension. The most important categories that will have to be focused on will be wetlands, threatened and endangered species, biotic communities, noise, air quality, and water quality, as there may be a significant impact to one or more of these categories.

The impacts to the environment will be quite significant due to the proposed development. There is no possibility of preserving the land, and as a result of the expansion of the airport, more traffic will be generated affecting noise and air quality.

Conclusion - Environmental

Alternative 2 would have a very minimal impact to the environment and would meet the demands of the airport. Alternative 1 would have the least impact to the environment, and Alternative 3 would have the most impact, which would not meet the goals of the community to preserve and maintain the areas surrounding the airport.

Satisfaction of Demand

<u>No Action</u>: No effect can be expected on traffic at the airport should no action be taken. Larger and higher performing aircraft will continue to use the airport, designed for a less demanding aircraft (the Twin Otter)

The No Action Alternative designates the Twin Otter as the Design Aircraft. This aircraft no longer operates at the Airport. Larger and faster jet aircraft are an important component of the airport's customer base. The designation of Design Aircraft should reflect the most demanding aircraft the airport currently serves regularly. As such, maintaining standards based on the Twin Otter would fall short of those that are currently required by today's aircraft.

<u>Alternative 1</u>: If the runways were reduced significantly, as suggested in this alternative, it could be expected that a considerable portion of the existing traffic would choose to not use East Hampton Airport. The traffic at the airport would be reduced to small single and twin engine aircraft. Past history indicates that airplanes that are not designed for the runway lengths will still attempt to use the runway by applying weight adjustments.

It can be anticipated that a drastic increase in helicopter traffic would occur, should the runways be shortened. Traffic patterns would be affected and may create an impact upon the surrounding communities.

This alternative would only satisfy a portion of the current demand of aircraft at East Hampton. Because the facilities would no longer be available, users of the airport would be forced to find alternate means of accessing the East Hampton vicinity.

<u>Alternative 2</u>: Alternative 2 would have limited effect upon the existing traffic. It can be anticipated that no additional, or more demanding traffic would use the airport as a result of this configuration. The design standards applied would be appropriate for current aircraft and would not promote any additional traffic.

Alternative 2 would accommodate all of the existing traffic in a safe environment.

Alternative 3: Alternative 3 has the potential of increasing traffic at the airport. The lengthening of Runway 10-28 provides adequate facilities for airplanes in a higher category than the design standards applied presently at East Hampton Airport. Socio-economic and demographic factors can support an argument that higher performing aircraft could use East Hampton Airport in the future. This alternative would potentially promote usage by an entire "family" of more demanding aircraft.

This alternative would satisfy the demand of all existing traffic as well as additionally forecasted traffic.

Satisfaction of Demand - Conclusion-

The No Action Alternative as well as Alternative 2 would have minimal effect on current demand. Alternative 1 would not meet the demands placed upon the airport. Alternative 3 would satisfy current demand and allow for future growth.

Revenue

In order to provide an accurate financial projection and analysis, it would require an extensive study of expenditures and revenues that would be assumed by each of the alternatives. This section provides a broad description of financial impacts for each of the alternatives.

An important input into this analysis is the use of FAA grants to absorb 90-95% of the cost of capital improvements at the airport. A detailed financial analysis would involve a financial pro forma schedule. The need to fund these projects without federal participation would have an overwhelming effect on the cash flow at East Hampton. Without detailed analysis of the revenues generated at the airport, it could be assumed that the airport would not be financially self sustaining without FAA funding. An exception to this assumption may be the no action alternative, being that capital cost may be reduced.

<u>No Action</u>: Since there is no change associated with the No Action Alternative, we can assume that the revenue potential of the Airport will remain as it is today.

<u>Alternative 1</u>: This alternative severely reduced the facilties provided by the Airport. This would result in a drastic reduction in the size of aircraft that could operate in and out of the Airport. Essentially, the majority of the higher end traffic would no longer be present and the Airport would suffer a loss in revenue from a variety of sources, namely fuel, landing fees, parking fees, rent, etc.

There is the potential for added helicopter traffic and may result in added Jet-fuel revenue. The nature and characteristics of a helicopter would not be great enough to offset the revenues lost to jet traffic at East Hampton Airport.

The Capital Improvement Plan for Alternative 1 would involve a substantial amount of construction costs to adjust, modify and reduce the facilities to accommodate less demanding aircraft. These costs would have a significant impact on the airport's cash flow annually.

It should be noted, the possibility of the FAA approving a plan that does not address current or projected traffic, such as Alternative 1 is unlikely. It could be assumed that FAA funding would not be available for this concept.

Revenues from small GA traffic would remain constant, but is considered minor in comparison to revenues generated from the higher end traffic.

It should be anticipated that the airport would experience a negative financial impact under Alternative 1.

<u>Alternative 2</u>: This Alternative maintains the existing positive revenue stream. This alternative focuses on maintaining the current operating levels while implementing certain improvements. Selecting the Citation as the design aircraft enables the Airport to plan and provide the necessary facilities for this type of aircraft.

The intent of maximizing the use of existing facilities results in lower construction costs than alternatives 1 and 3. FAA funding would likely be available for this program, therefore minimizing the financial burden upon the airport, as a result of construction costs.

This alternative also suggests the construction of facilities that may result in additional revenue generation. Alternative 2 includes the construction of a commercial industrial site. Projects of this nature have a history of providing profits to the airport.

Based upon minimal construction plans, increased revenues and the availability of FAA funding, Alternative 2 would have a positive financial impact.

Alternative 3: Increasing the facilities to serve larger aircraft, such as the Challenger, would likely enable the airport to serve a broader spectrum of aircraft. More traffic equates to more revenue. However, it must be noted that this alternative also requires major and very costly modifications to the airfield. Major capital projects would include the extension of Runway 10-28, land acquisition, extensive taxiway additions and modifications. The cost for these capital projects would be considerable; however FAA funding would likely be available via a long term plan.

Similar to Alternative 2, Alternative 3 also proposes to construct revenue generating facilities. This alternative recognizes growth in aviation activity and includes projects such as business hangars, storage hangars and fuel facilities.

The costs to construct this alternative are substantial and would shadow the added revenue generated at the airport. Alternative 3 would have an overall negative financial impact

Conclusion - Revenue

The No Action Alternative would result in no change to the current financial situation. Alternative 1 would result in a loss of revenue. Although Alternative 3 is a potential revenue generator, its associated cost of implementation could make this a less acceptable option. Overall, Alternative 2 is the best-case scenario based on financial feasibility.

Potential for Community Related Impacts

No Action: Since there is no change associated with the No Action Alternative, we can assume that community related impacts will remain as they are today. Community concerns regarding safety areas and noise impacts would remain unanswered.

Alternative 1: This alternative minimizes the physical impact of the airport by shortening the runways and reducing the traffic load. However, there are potentially negative by-products of this approach. By eliminating jets from the mix, the customer/client base will be forced to find alternate means of traveling to and from the Town of East Hampton. This could potentially increase the amount of vehicular and/or helicopter traffic and inconvenience the community, as well as the users of the airport that were previously accustomed to the accessibility of the area.

Alternative 2: This alternative limits community impacts. It maintains current operating levels, honors safety standards for an accurate representation of the Airport's design aircraft, minimizes financial burden upon the community and does not promote or attract more demanding aircraft. Noise levels are below acceptable levels for the land uses that surround the airport

Alternative 3: This alternative provides for significant change and expansion to the airport. Impacts to the community would be excessive. An increase in the size of aircraft, that would use the airport, would have an effect upon the community. The combination of the change in aircraft type as well as the extension of Runway 28 toward residential land uses would result in a significant increase in noise levels.

In addition, the extensive capital program to develop this concept will have the greatest environmental and financial impact upon the community.

Conclusion - Community Related Impacts

Alternative 2 best answers community concerns on various issues. All other options reviewed negatively affect the community or would remain a negative impact upon the community, as in the case of the "No Action" Alternative.

(Alternative Selection to be written upon comments and meeting with Town)

Appendix A

ASSURANCES
Airport Sponsors

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of the grant offer by the sponsor, these assurances are incorporated in and become part of the grant agreement.

B. Duration and Applicability.

1. **Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.** The terms, conditions and assurances of the grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.** The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. **Airport Planning Undertaken by a Sponsor.** Unless otherwise specified in the grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 30, 32, 33, and 34 in section C apply to planning projects. The terms, conditions, and assurances of the grant agreement shall remain in full force and effect during the life of the project.

C. Sponsor Certification. The sponsor hereby assures and certifies, with respect to this grant that:

1. **General Federal Requirements.** It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

Federal Legislation

a. Title 49, U.S.C., subtitle VII, as amended.
b. Davis-Bacon Act - 40 U.S.C. 276(a), <u>et seq</u>.[1]
c. Federal Fair Labor Standards Act - 29 U.S.C. 201, <u>et seq.</u>
d. Hatch Act - 5 U.S.C. 1501, <u>et seq.</u>[2]

e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.[1] [2]
f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).[1]
g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.[1]
h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
i. Clean Air Act, P.L. 90-148, as amended.
j. Coastal Zone Management Act, P.L. 93-205, as amended.
k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.[1]
l. Title 49 ,U.S.C., Section 303, (formerly known as Section 4(f))
m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
n. Civil Rights Act of 1964 - Title VI - 42 U.S.C. 2000d through d-4.
o. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
p. American Indian Religious Freedom Act, P.L. 95-341, as amended.
q Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.[1]
r. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.[1]
s. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.[1]
t. Copeland Anti kickback Act - 18 U.S.C. 874.[1]
u. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.[1]
v. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
w. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.[2]
x. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

Executive Orders

Executive Order 11246 - Equal Employment Opportunity[1]
Executive Order 11990 - Protection of Wetlands
Executive Order 11988 – Flood Plain Management
Executive Order 12372 - Intergovernmental Review of Federal Programs.
Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction[1]
Executive Order 12898 - Environmental Justice

Federal Regulations

a. 14 CFR Part 13 - Investigative and Enforcement Procedures.
b. 14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
c. 14 CFR Part 150 - Airport noise compatibility planning.
d. 29 CFR Part 1 - Procedures for predetermination of wage rates.[1]
e. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.[1]
f. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).[1]
g. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).[1]

h. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.[3]
i. 49 CFR Part 20 - New restrictions on lobbying.
j. 49 CFR Part 21 - Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.
k. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.
l. 49 CFR Part 24 - Uniform relocation assistance and real property acquisition for Federal and federally assisted programs.[1 2]
m. 49 CFR Part 26 – Participation By Disadvantaged Business Enterprises in Department of Transportation Programs.
n. 49 CFR Part 27 - Nondiscrimination on the basis of handicap in programs and activities receiving or benefiting from Federal financial assistance.[1]
o. 49 CFR Part 29 – Government wide debarment and suspension (non-procurement) and government wide requirements for drug-free workplace (grants).
p. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.
q. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.[1]

Office of Management and Budget Circulars

a. A-87 - Cost Principles Applicable to Grants and Contracts with State and Local Governments.
b A-133 - Audits of States, Local Governments, and Non-Profit Organizations

[1] These laws do not apply to airport planning sponsors.
[2] These laws do not apply to private sponsors.
[3] 49 CFR Part 18 and OMB Circular A-87 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in the grant agreement.

2. Responsibility and Authority of the Sponsor.

a. **Public Agency Sponsor:** It has legal authority to apply for the grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. **Private Sponsor:** It has legal authority to apply for the grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. **Sponsor Fund Availability.** It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under the grant agreement which it will own or control.

4. **Good Title.**

a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. **Preserving Rights and Powers.**

a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in the grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in the grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of the grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in the grant agreement and shall insure that such arrangement also requires compliance therewith.

6. **Consistency with Local Plans.** The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.** It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.** In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.** In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Air and Water Quality Standards.** In projects involving airport location, a major runway extension, or runway location it will provide for the Governor of the state in which the project is located to certify in writing to the Secretary that the project will be located, designed, constructed, and operated so as to comply with applicable air and water quality standards. In any case where such standards have not been approved and where applicable air and water quality standards have been promulgated by the Administrator of the Environmental Protection Agency, certification shall be obtained from such Administrator. Notice of certification or refusal to certify shall be provided within sixty days after the project application has been received by the Secretary.

11. **Pavement Preventive Maintenance**. With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. **Terminal Development Prerequisites.** For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. **Accounting System, Audit, and Record Keeping Requirements.**

    a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the project in connection with which the grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

    b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to the grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which the grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. **Minimum Wage Rates.** It shall include, in all contracts in excess of $2,000 for work on any projects funded under the grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. **Veteran's Preference.** It shall include in all contracts for work on any project funded under the grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Veterans of the Vietnam era and disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. **Conformity to Plans and Specifications.** It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved

plans, specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into the grant agreement.

17. **Construction Inspection and Approval.** It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. **Planning Projects.** In carrying out planning projects:

   a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

   b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

   c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

   d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

   e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

   f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

   g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

   h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. **Operation and Maintenance**.

   a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal, state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably

operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary.
In furtherance of this assurance, the sponsor will have in effect arrangements for-

(1) Operating the airport's aeronautical facilities whenever required;

(2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and

(3) Promptly notifying airmen of any condition affecting aeronautical use of the airport.

Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. Hazard Removal and Mitigation. It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. Compatible Land Use. It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. Economic Nondiscrimination.

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

(1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

(2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

e. Each air carrier using such airport (whether as a tenant, non tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non tenants and signatory carriers and non signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. **Exclusive Rights.** It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and

b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport.

It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. Fee and Rental Structure. It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. Airport Revenues.

a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. Provided, however, that if covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. Reports and Inspections. It will:

a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of the grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:
   (i) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and
   (ii) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. **Use by Government Aircraft.** It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that-

a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. **Land for Federal Facilities.** It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. **Airport Layout Plan.**

a. It will keep up to date at all times an airport layout plan of the airport showing (1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto; (2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities; and (3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

b. If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities.

30. **Civil Rights.** It will comply with such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from funds received from this grant. This assurance obligates the sponsor for the period during which Federal financial assistance is extended to the program, except where Federal financial assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon in which case the assurance obligates the sponsor or any transferee for the longer of the following periods: (a) the period during which the property is used for a purpose for which Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits, or (b) the period during which the sponsor retains ownership or possession of the property.

31. **Disposal of Land.**

a. For land purchased under a grant for airport noise compatibility purposes, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will, at the discretion of the Secretary, (1) be paid to the Secretary for deposit in the Trust Fund, or (2) be reinvested in an approved noise compatibility project as prescribed by the Secretary, including the purchase of nonresidential buildings or property in the vicinity of residential buildings or property previously purchased by the airport as part of a noise compatibility program.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested in another eligible airport improvement project or projects approved by the Secretary at that airport or within the national airport system, or (2) be paid to the Secretary for deposit in the Trust Fund if no eligible project exists.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. Engineering and Design Services. It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement **prescribed** for or by the sponsor of the airport.

33. Foreign Market Restrictions. It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. Policies, Standards, and Specifications. It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated _____ and included in this grant, and in accordance with applicable state policies, standards, and specifications approved by the Secretary.

35. **Relocation and Real Property Acquisition.** (1) It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B. (2) It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24. (3) It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. **Access By Intercity Buses**. The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport, however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. **Disadvantaged Business Enterprises.** The recipient shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract or in the administration of its DBE program or the requirements of 49 CFR Part 26. The Recipient shall take all necessary and reasonable steps under 49 CFR Part 26 to ensure non discrimination in the award and administration of DOT-assisted contracts. The recipient's DBE program, as required by 49 CFR Part 26, and as approved by DOT, is incorporated by reference in this agreement. Implementation of this program is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the recipient of its failure to carry out its approved program, the Department may impose sanctions as provided for under Part 26 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1986 (31 U.S.C. 3801).

38. Hangar Construction. If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. Competitive Access.

a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-

1. Describes the requests;
2. Provides an explanation as to why the requests could not be accommodated; and
3. Provides a time frame within which, if any, the airport will be able to accommodate the requests.

b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date

Appendix B

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK

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COMMITTEE TO STOP AIRPORT EXPANSION, et al.,

Plaintiffs,

v.

DEPARTMENT OF TRANSPORTATION, et al.,

Defendants.

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SETTLEMENT AGREEMENT

Civil Action No. CV-03-2634

(Seybert, J.)
(M. Orenstein, M.J.)

SETTLEMENT AGREEMENT

WHEREAS, on January 10, 1989, the East Hampton Town Board passed Resolution No. 145, wherein it adopted the Master Plan Update for East Hampton Airport ("the 1989 Master Plan") with certain amendments that are set forth in the Resolution No. 145 (a copy of the Master Plan Update as adopted and Resolution No. 145 are attached hereto as Exhibit A); and

WHEREAS, on December 15, 1989, the East Hampton Town Board passed Resolution No. 2020 wherein it approved an Airport Layout Plan (the "1989 ALP") for the East Hampton Airport and authorized Pat Trunzo, III, the then Deputy Supervisor, to sign the 1989 ALP; and

WHEREAS, on December 19, 1989, Pat J. Trunzo, III signed the 1989 ALP on behalf of the East Hampton Town Board (a copy of the Airport Layout Plan, as adopted and signed, is attached hereto as Exhibit B); and

WHEREAS, by letter dated September 5, 1990 from Mr. Phillip Brito to Mr.

Tony Bullock, the Federal Aviation Administration ("FAA") conditionally approved the 1989 ALP (a copy of which letter is attached hereto as Exhibit C); and

WHEREAS, in 2001 the FAA did not have in its possession a signed copy of the 1989 ALP and the FAA asked the Town to furnish a signed copy thereof; and

WHEREAS, the East Hampton Town Board, on August 3, 2001, adopted Resolution No. 1023, wherein it authorized the re-signing of the ALP adopted in 1989 and the submission of the re-signed ALP (the "2001 ALP") to the FAA; and

WHEREAS, in August 2001, the Town of East Hampton submitted the 2001 ALP to the FAA (a copy of which is attached hereto as Exhibit D) and represented that the 2001 ALP was a true copy of the 1989 ALP; and

WHEREAS, according to published reports, in December of 2002 or January of 2003 in response to a federal subpoena, the Town of East Hampton produced a copy of the 1989 ALP that included the signature of Pat J. Trunzo, III; and

WHEREAS, Plaintiffs allege that a comparison of the airport layout plan produced by the Town in response to the subpoena and the 2001 ALP demonstrates that the 2001 ALP is not in fact a true copy of the 1989 ALP; and

WHEREAS, to the best of the knowledge, information, and belief of the FAA, the approval of an ALP by the East Hampton Town Board may only be affected by resolution of the Town Board; and

WHEREAS, to the best of the knowledge, information and belief of the FAA, since December 15, 1989 there has been no resolution of the East Hampton Town Board approving an ALP for the East Hampton Airport other than the 1989 ALP; and

WHEREAS, in this action Plaintiffs seek review of the determination by the FAA in 2001 to approve the 2001 ALP; and

WHEREAS, the Plaintiffs submitted several Freedom of Information Act requests to the FAA concerning the East Hampton Airport prior to the initiation of the above-captioned action; and

WHEREAS, the parties desire to resolve this action and the issues between them without further litigation;

IT IS HEREBY STIPULATED AND AGREED, by and between Plaintiffs and Defendants ("the parties"), that the above-captioned action shall be settled and compromised on the following terms and conditions:

1. Plaintiffs will file a Rule 41(a) stipulation of dismissal whereby the above-captioned action would be dismissed with prejudice, and without costs and fees to any party, provided that Plaintiffs' obligation to file such a stipulation shall not arise until the Defendants or their counsel sign this Agreement. Plaintiffs agree to file such stipulation within ten business days of receipt of Defendants' executed signature page.

2. Plaintiffs will submit to the United States District Court for the District of Columbia a Rule 41(a) stipulation of dismissal, with prejudice and without costs and fees to any party, of the action entitled *Committee to Stop Airport Expansion, et al. v. United States Department of Transportation, et al.*, Civil Action No. 02-0619 (JR) following receipt of the Court's order dismissing Civil Action No. CV-03-2634 (Seybert, J.) and execution by the parties of a stipulation of dismissal of Civil Action No. 02-0619 (JR).

3. Plaintiffs will submit a request seeking dismissal, with prejudice and without costs and fees to any party, of the proceeding entitled *Committee to Stop Airport Expansion v. Town of East Hampton*, FAA Docket No. 16-02-04 to Defendant FAA within ten

days of receipt by Plaintiffs' counsel of an order dismissing Civil Action No. 03-2634. Defendant FAA agrees that upon receipt of such request, it will withdraw the order of dismissal dated June 24, 2002 in FAA Docket No. 16-02-04.

4. Defendant FAA agrees that it will not assert, agree or conclude in any subsequent proceeding, including during its consideration of a request for federal financial assistance, that any master plan concerning the East Hampton Airport other than the 1989 Master Plan as modified by the Town Board in Town Resolution No. 145, which plan and resolution are attached as Exhibit A, is a master plan approved by the Town of East Hampton unless Defendant FAA obtains or is presented with a certified copy of the resolution of the Town Board adopted subsequent to the effective date of this Agreement approving such master plan. Defendant FAA also agrees that it will not assert, agree or conclude in any subsequent proceeding, including during its consideration of a request for federal financial assistance, that any airport layout plan concerning the East Hampton Airport, other than the 1989 ALP which is attached as Exhibit B, is an airport layout plan approved by the Town of East Hampton unless Defendant FAA obtains or is presented with a certified copy of the resolution of the Town Board adopted subsequent to the effective date of this Agreement approving such airport layout plan. Defendant FAA agrees that the 1989 ALP does not, as of the date hereof, constitute a "current" airport layout plan within the meaning of applicable federal law and; therefore, is not a legally acceptable basis for any federal financial assistance, including airport improvement grants, issued subsequent to the effective date of this Agreement.

5. Defendant FAA will not award federal financial assistance, including grants, to the Town of East Hampton for the East Hampton Airport unless the application for federal financial assistance is based upon an airport layout plan for the East Hampton Airport

that was adopted by resolution of the East Hampton Town Board and in a manner consistent with applicable law.

6. Through and including December 31, 2009, Defendant FAA will require that applications for federal financial assistance, including grants, from the Town of East Hampton for the East Hampton Airport include a copy of the Town Board Resolution approving the airport layout plan that is submitted to the FAA and a certified copy of the Town Board Resolution approving the submission of the application itself, except that the requirement to submit a copy of the Town Board resolution approving the extant airport layout plan shall not apply to a request for funding to develop a new or revised airport layout plan.

7. Defendant FAA agrees, with respect to East Hampton Airport grants issued prior to the effective date of this Agreement, that the following grant assurances will not be enforced beyond December 31, 2014:

- It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport (grant assurance 22.a.).
- The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport (grant assurance 22.h).
- It will keep up to date at all times an airport layout plan of the airport showing; (1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto; (2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and roads), including all proposed extensions and reductions of existing airport facilities; and (3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the

opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport (grant assurance 29.a.).

- If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary; (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities (grant assurance 29.b.).

Notwithstanding the foregoing, Defendant FAA reserves its right to take action as provided in grant assurance 29 if the Town of East Hampton takes an action or proposes to take an action that will adversely affect the safety of the East Hampton Airport. All other grant assurances with respect to any grant awarded to the East Hampton Airport, and all grant assurances with respect to any grant awarded after the effective date of this Agreement, including grant assurances 22.a and 22.h and grant assurance 29, shall be enforced in full.

8. a) Plaintiffs will file a request pursuant to the Freedom of Information Act, 5 U.S.C. § 552, 49 C.F.R. Part 7, in the form attached as Exhibit E (the "FOIA request"), within ten (10) business days of the execution of this Settlement Agreement.

(b) Defendant FAA will respond to the FOIA request within seventy-five (75) days of receipt by the FAA of the FOIA request and will send the response to the undersigned counsel for Plaintiffs. Defendant FAA agrees that any record within the scope of the FOIA request that is withheld by Defendant FAA on the grounds that it is exempt from disclosure will be identified on a list or log and that list or log will be provided to Plaintiffs' counsel within 105 days of receipt of the FOIA request. Defendant FAA also agrees that the FAA Regional Counsel's Office ("FAA counsel") will review any record so withheld and listed and will provide Plaintiffs' counsel with a written statement informing Plaintiffs as to whether

FAA counsel agrees that such record is properly withheld. The parties agree that the records on the list or log shall be identified by providing the name of the author(s), the name of the intended and actual recipients, the date of the record, the type of record and the reason why the record was withheld.

(c) The parties agree that Plaintiffs may appeal the determination of Defendant FAA by: (1) submitting a written appeal to the Assistant Administrator for Regions and Center Operations, FAA Headquarters, 800 Independence Avenue, S.W., Washington, D.C., 20591; (2) submitting the appeal within thirty (30) days of receipt by Plaintiffs' counsel of the response of Defendant FAA to the FOIA request or the FAA counsel's written statement, whichever occurs last in time, (3) referencing the FOIA Control Number, and including all information and arguments relied upon in support of the appeal in the submission to the Assistant Administrator for Regions and Center Operations; (4) indicating that it is an appeal from a denial of a request under the Freedom of Information Act; and (5) prominently marking the envelope in which the appeal is sent as "FOIA Appeal." Defendant FAA agrees that any determination of the Assistant Administrator concerning such appeal will be sent to the undersigned counsel for Plaintiffs.

(d) The parties agree that within forty-five (45) days of receipt by Plaintiffs' counsel of a determination by the Assistant Administrator, Plaintiffs may request that this Court determine whether there has been a failure by Defendant FAA to comply with the Freedom of Information Act with respect to the FOIA request. The parties agree that the Court shall retain jurisdiction to determine any issues raised by the FAA response to the FOIA request, if such request is filed with the Court within forty-five (45) days of receipt of the Assistant Administrator's determination by Plaintiffs' counsel. The parties also agree that the Court's review of the Assistant Administrator's determination and the nature of the relief available shall be governed by the Freedom of Information Act.

(e) The parties agree that this Paragraph 8 shall not be construed to afford Plaintiffs any rights beyond those provided in the Freedom of Information Act.

9. Nothing herein, or in the settlement hereof, shall in any way be deemed an admission or evidence of wrongdoing or liability on the part of the Defendants, including agents, officers, assigns, employees and representatives, past and present.

10. Plaintiffs and Defendants understand and agree that this Agreement contains the entire agreement between the parties, and no statements, representations, promises, agreements or negotiations, oral or otherwise, between the parties or their counsel which are not included herein shall be of any force or effect.

11. The effective date of this Agreement shall be the date that the document is signed by the party who signs it last in time.

COMMITTEE TO STOP AIRPORT EXPANSION

By: Edward Gorman
Edward Gorman

Dated: January 27, 2005

EDWARD GORMAN

By: Edward Gorman
Edward Gorman
68 Huckleberry Lane
East Hampton, NY 11937

Dated: January 27, 2005

PAT TRUNZO, JR.

By: Pat Trunzo Jr.
Pat Trunzo, Jr.
148 Buckskill Road
East Hampton, NY 11937

Dated: January 27th, 2005

PAT J. TRUNZO, III

By: Pat J Trunzo III
Pat J. Trunzo, III
10 Cedar Trail
East Hampton, NY 11937

Dated: January 27th, 2005

COUNSEL FOR PLAINTIFFS

Sheila Jones
Sheila D. Jones, Esquire
(Admitted Pro Hac Vice)
Akin Gump Strauss Hauer & Feld LLP
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036-1564

Dated: ~~January ____, 2005~~ April 29, 2005

UNITED STATES OF AMERICA

Roslynn R. Mauskopf
United States Attorney
Eastern District of New York
Attorney for Defendants
610 Federal Plaza
Central Islip, New York 11722-4454

Dated: January ____, 2005

By: ______________________
Kevin P. Mulry (KM 3752)
Assistant U.S. Attorney

PAT TRUNZO, JR.

By:______________________________

Pat Trunzo, Jr.
148 Buckskill Road
East Hampton, NY 11937

Dated: January _____, 2005

PAT J. TRUNZO, III

By:______________________________

Pat J. Trunzo, III
10 Cedar Trail
East Hampton, NY 11937

Dated: January _____, 2005

COUNSEL FOR PLAINTIFFS

____

Sheila D. Jones, Esquire
(Admitted Pro Hac Vice)
Akin Gump Strauss Hauer & Feld LLP
1333 New Hampshire Avenue, N.W.
Washington, D.C. 20036-1564

Dated: January _____, 2005

UNITED STATES OF AMERICA

Roslynn R. Mauskopf
United States Attorney
Eastern District of New York
Attorney for Defendants
610 Federal Plaza
Central Islip, New York 11722-4454

Dated: ~~January~~ APRIL 11, 2005

By: Kevin P. Mulry

Kevin P. Mulry (KM 3752)
Assistant U.S. Attorney

Exhibit E

Federal Aviation Administration

National Freedom of Information Act Staff, ARC-40

800 Independence Ave., SW

Washington, DC 20591

Dear [Insert name]:

This firm represents the Committee to Stop Airport Expansion with respect to certain matters relating to the East Hampton Airport located in the Town of East Hampton, New York (airport identifier: HTO). Pursuant to the Freedom of Information Act , 5 U.S.C.§ 552, and the settlement agreement executed by the parties in *Committee to Stop Airport Expansion, et al. v. U.S. Department of Transportation, et al., Civil Action,* No. CV-03-2634 (E.D.N.Y.), we request the following documents and records:

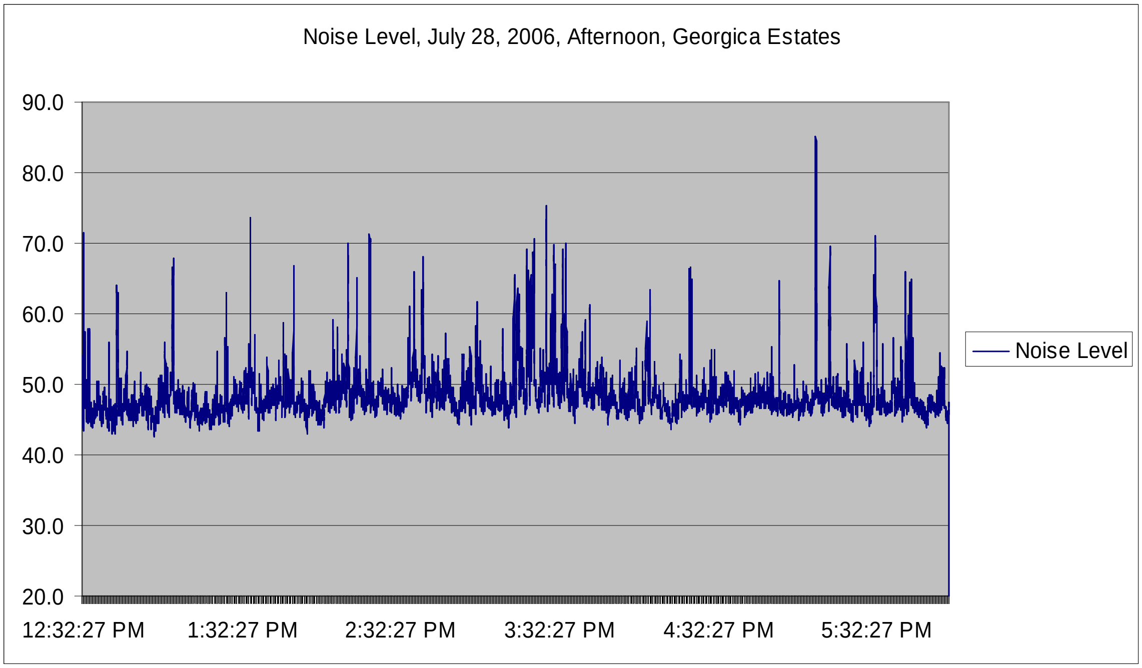
> all records and documents referring or relating to the East Hampton Airport from January 1, 1988 to December 31, 2003, that were received by, issued by or created by the following organizational units of the Federal Aviation Administration's Eastern Region (and all organizational units reporting to such organizational units); Airports Division(AEA-600), including without limitation the New York Airports District Office; the Airway Facilities Division (AEA-400); the New York NAS Implementation Center (ANI-200); the NY Flight Procedures Office (NYFPO); the Flight Standards Division (AEA-200); the Air Traffic Division (AEA-500); the Office of the Runway Safety Program Manager, and the Office of the Regional Administrator (AEA-1). In addition, the requester seeks documents and records referring or relating to the East Hampton Airport that were received, issued by or created by the Office of the Associate Administrator for Airports (ARP-1), Office of Airport Safety and Standards (AAS), and the Office of Airport Planning and Programming (APP), each of which are located at FAA National Headquarters, Washington, D.C.

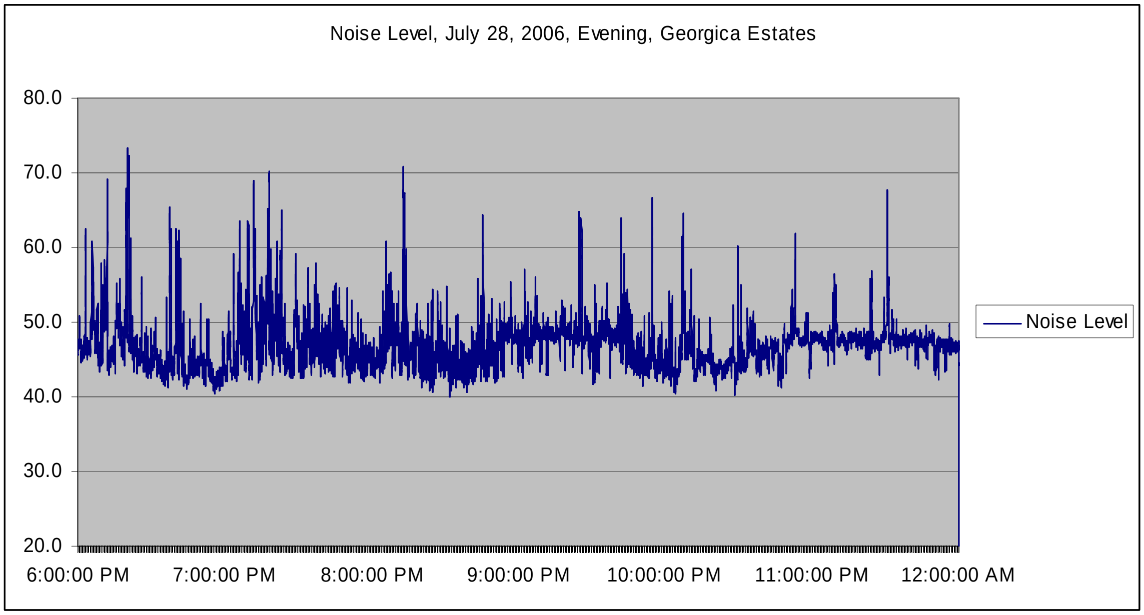
For the purposes of this request, as defined in the U.S. Department of Transportation's regulation implementing FOIA, 49 C.F.R. Part 7, the term "record" includes "any writing, drawing, map, recording, tape, film, photograph, or other documentary material by which information is preserved. The term also includes any such documentary material stored by computer." 49 CFR §7.2. Also for the purposes of this request, "record" and "document" mean draft versions, final versions and all attachments or exhibits to such "records" and "documents."

Appendix C

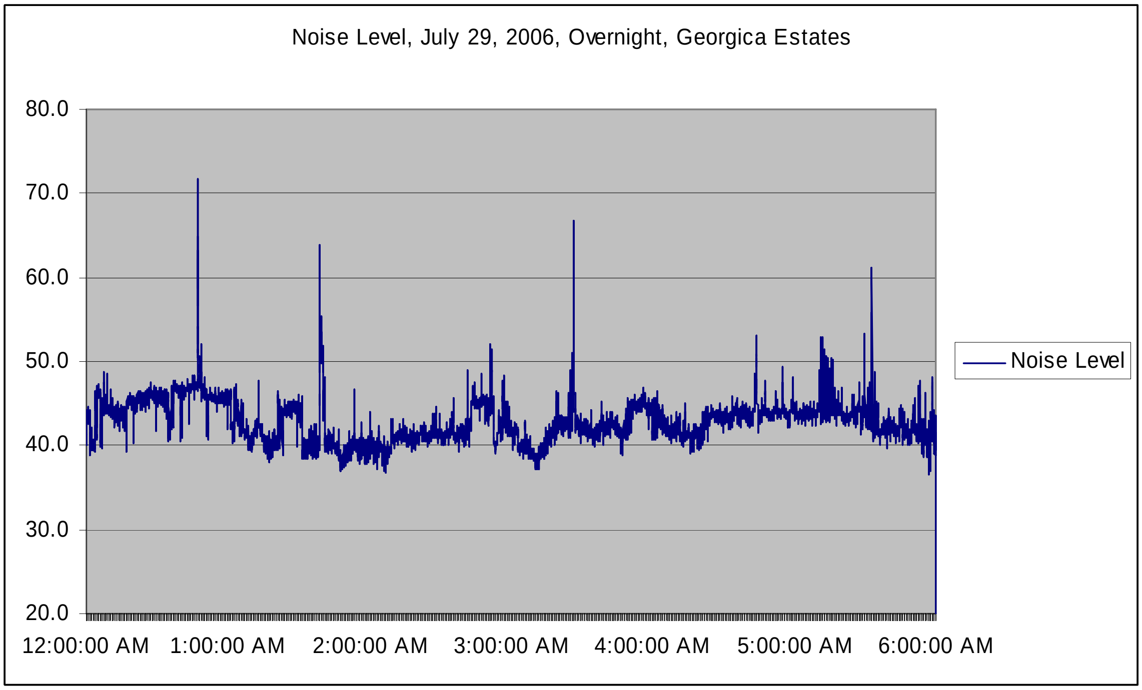
Ed Gorman

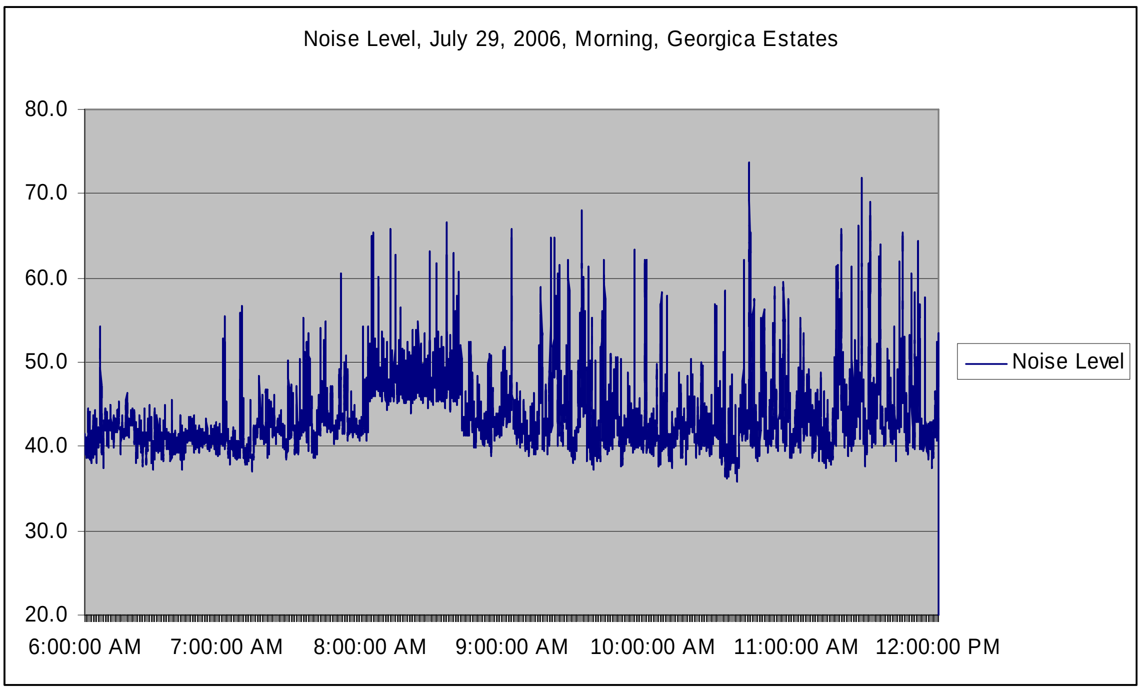
NOISE MONITORING, GEORGICA ESTATES





NOISE MONITORING, GEORGICA ESTATES





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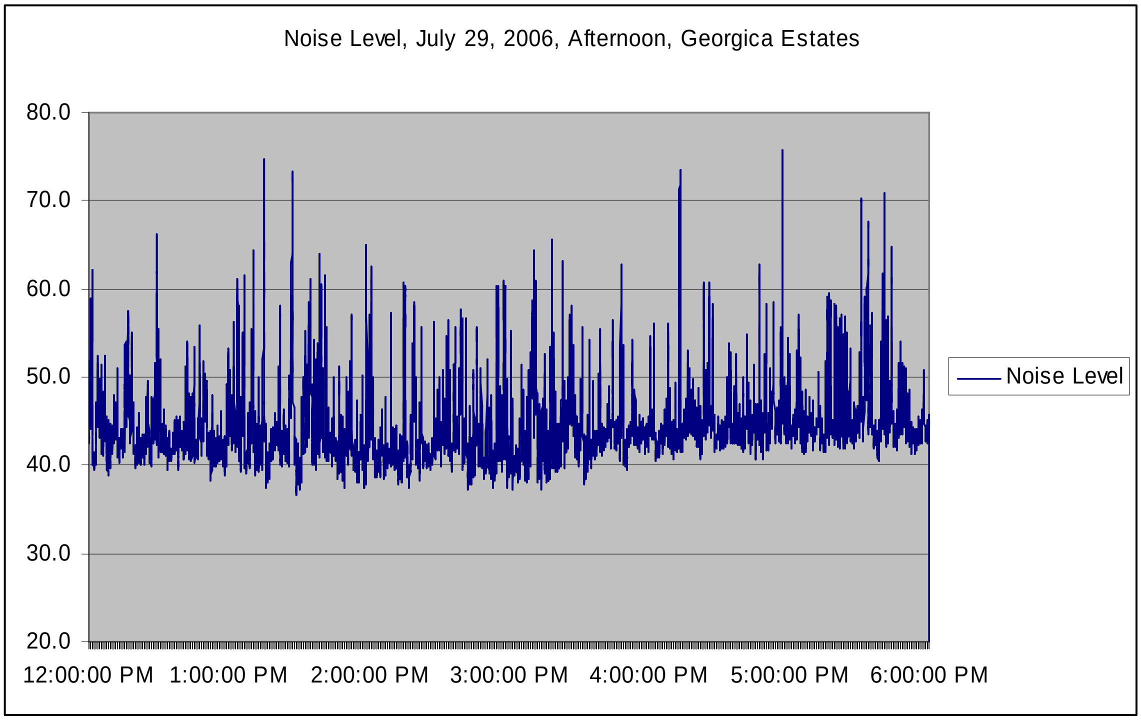

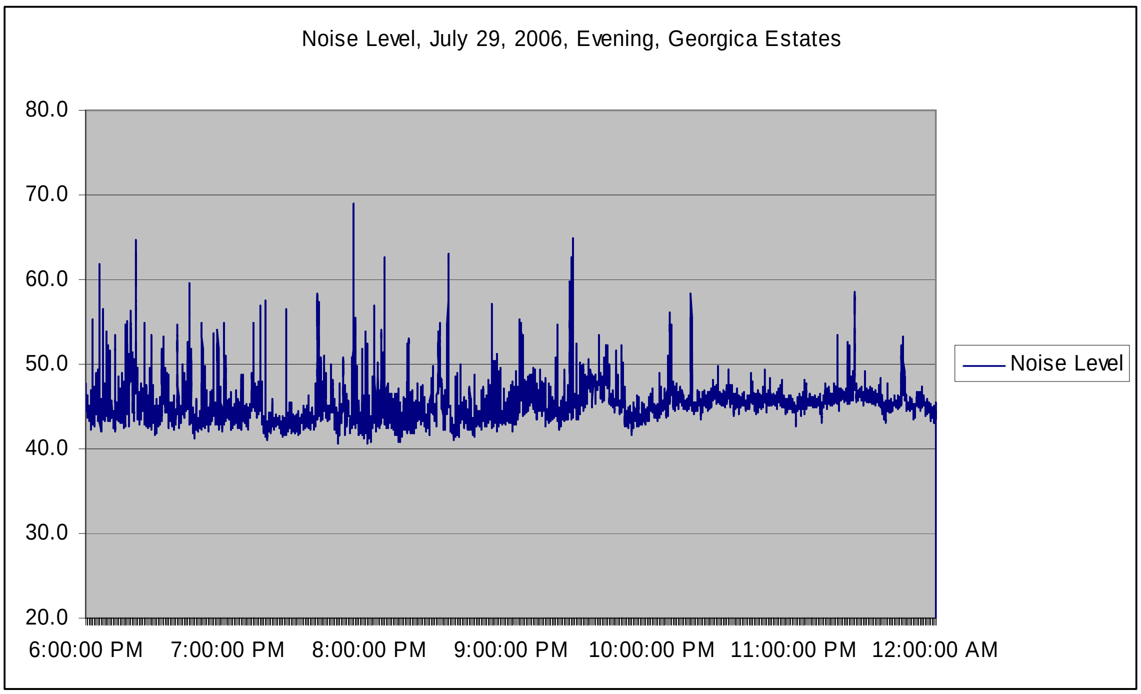

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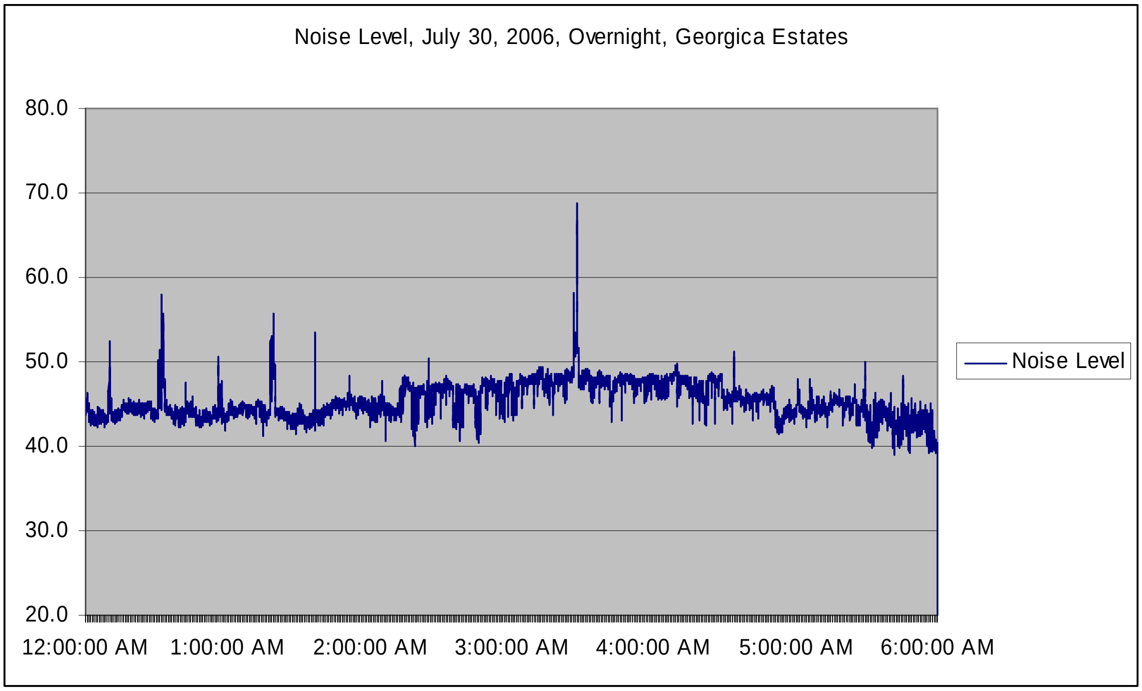

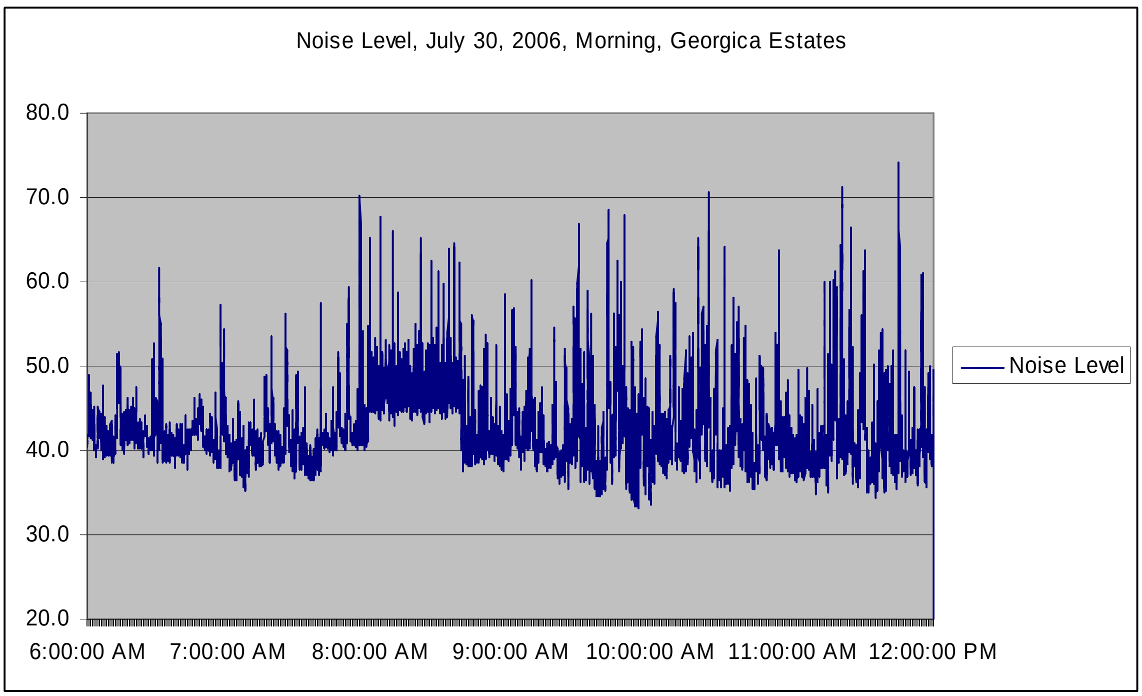

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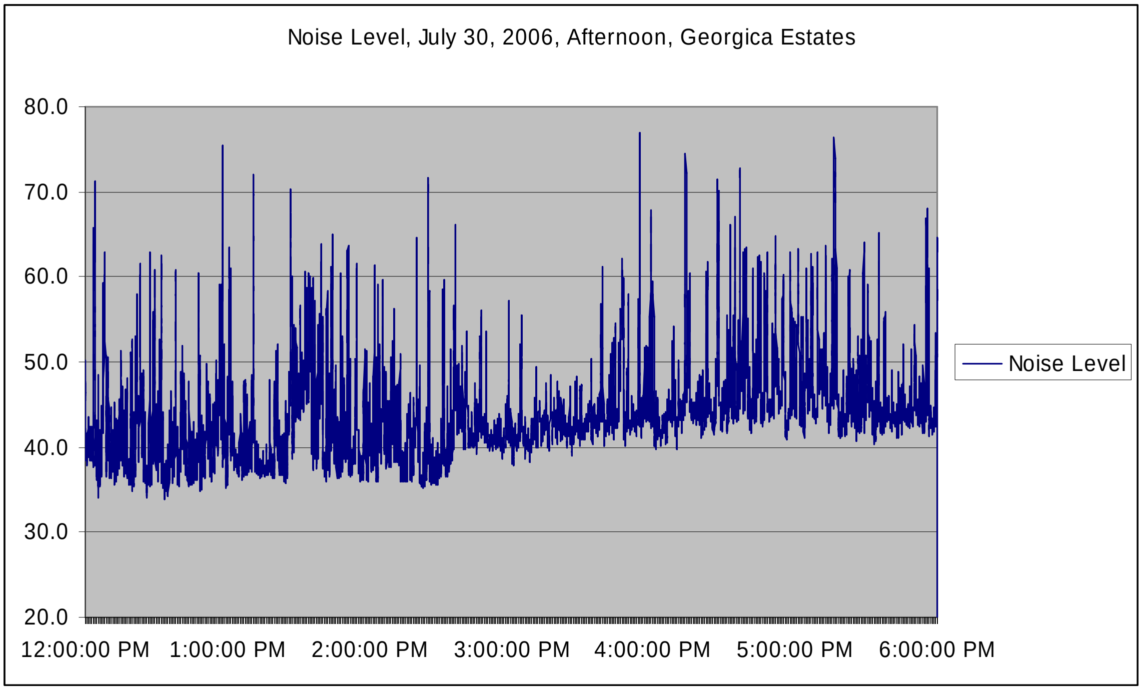

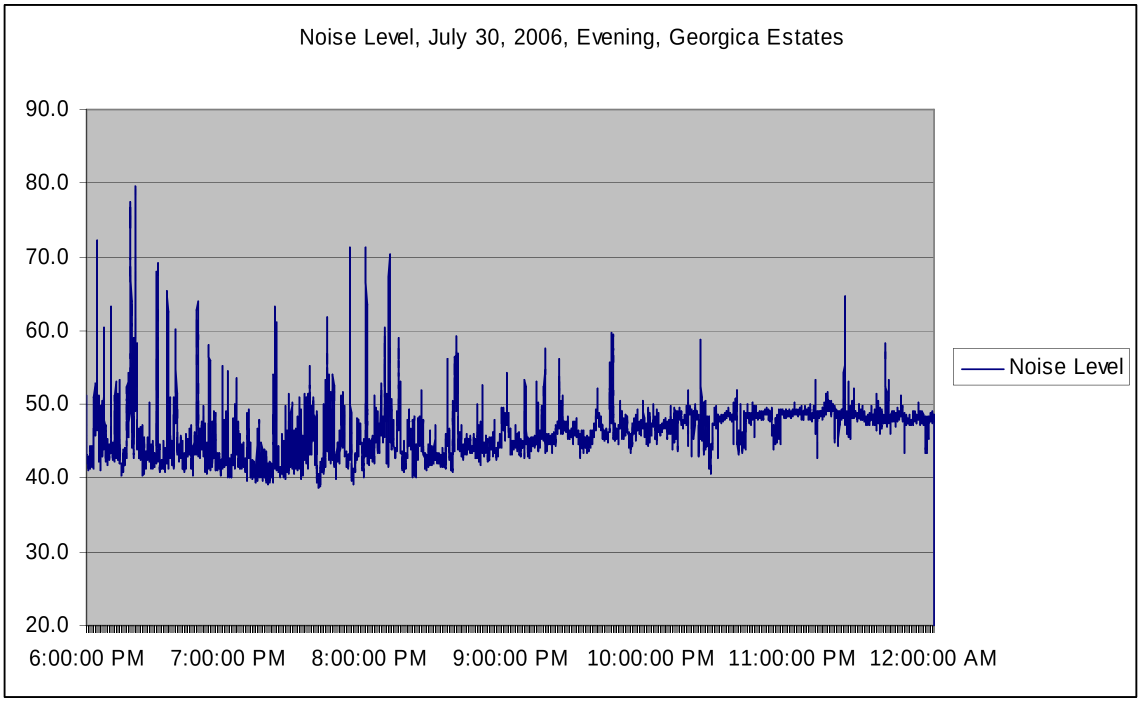

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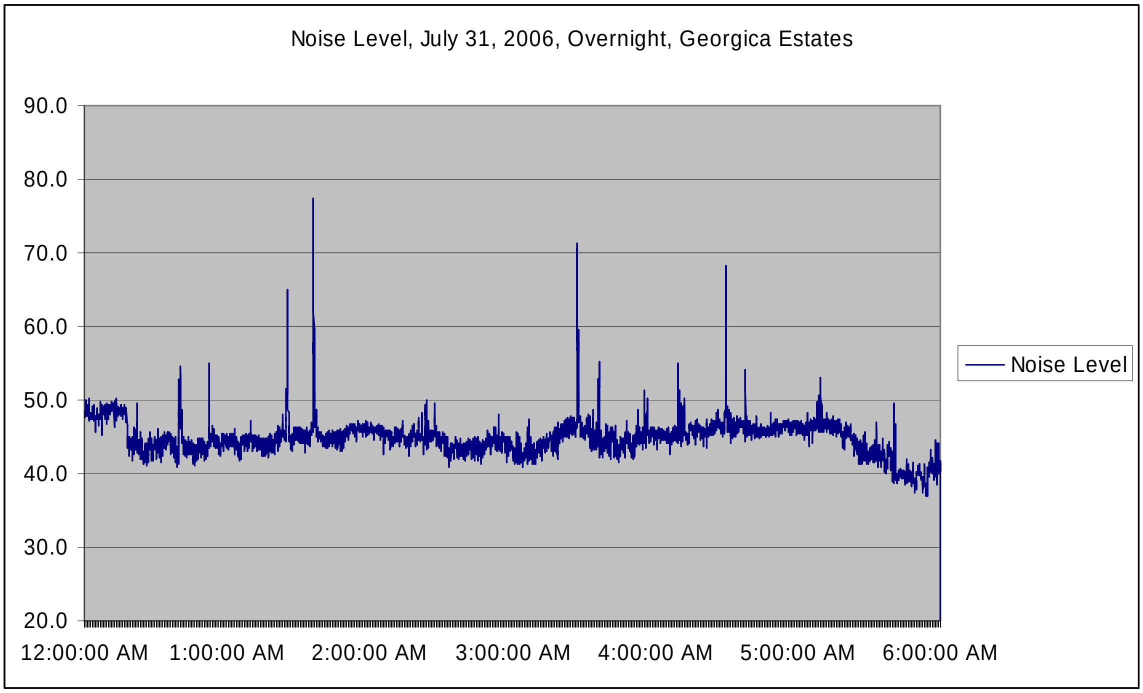

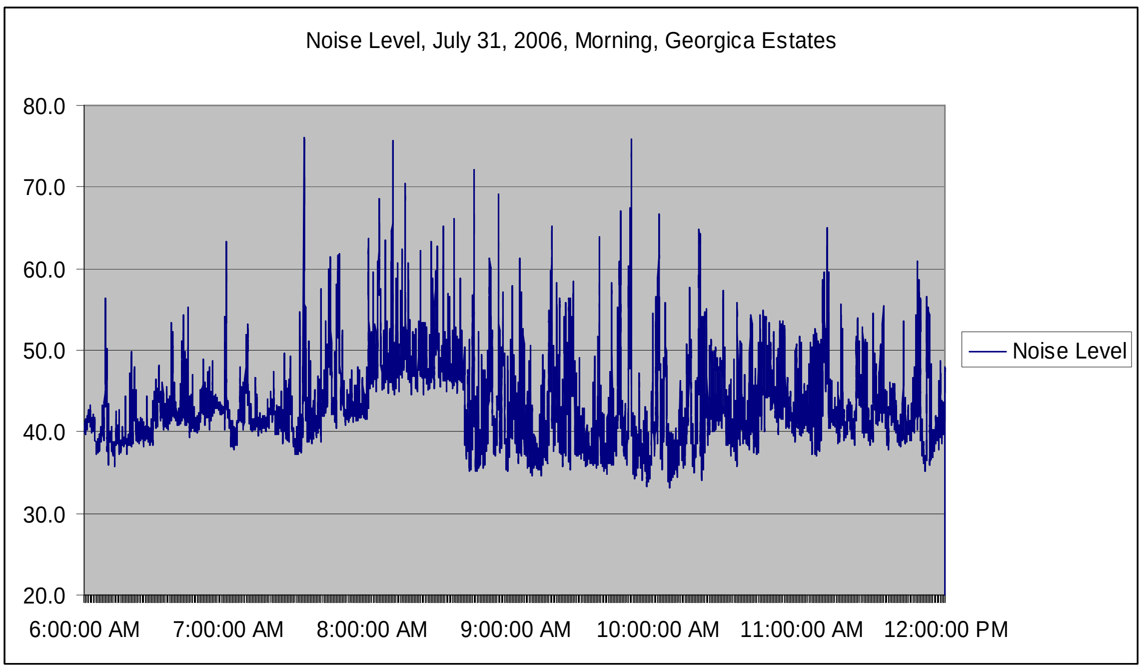

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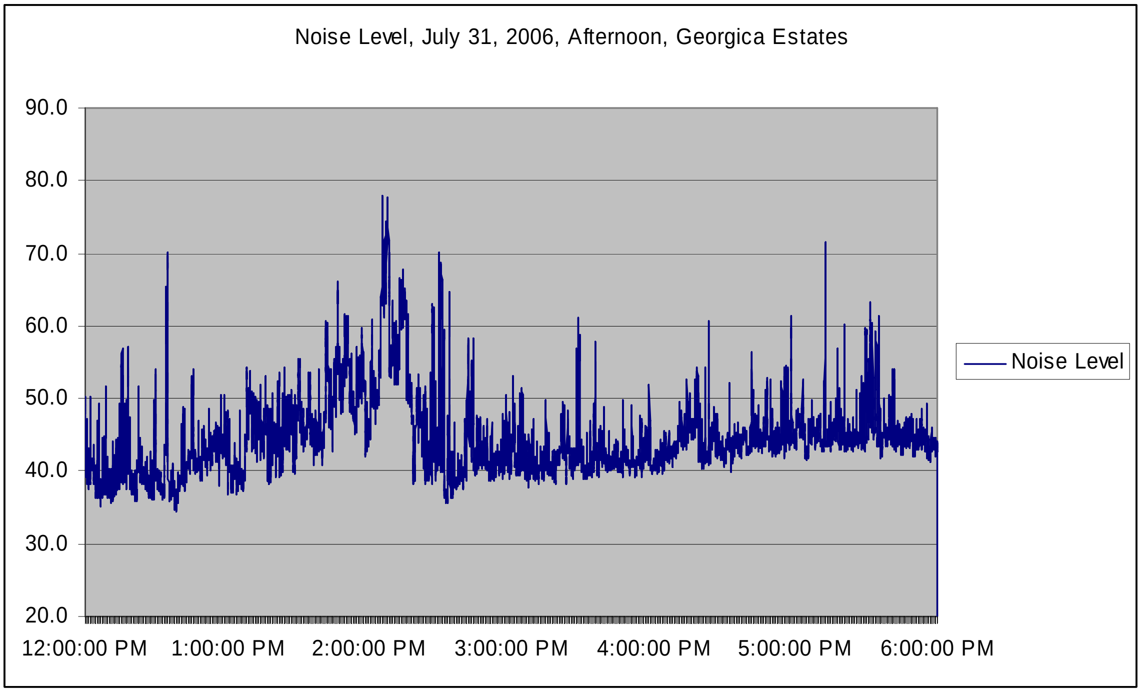

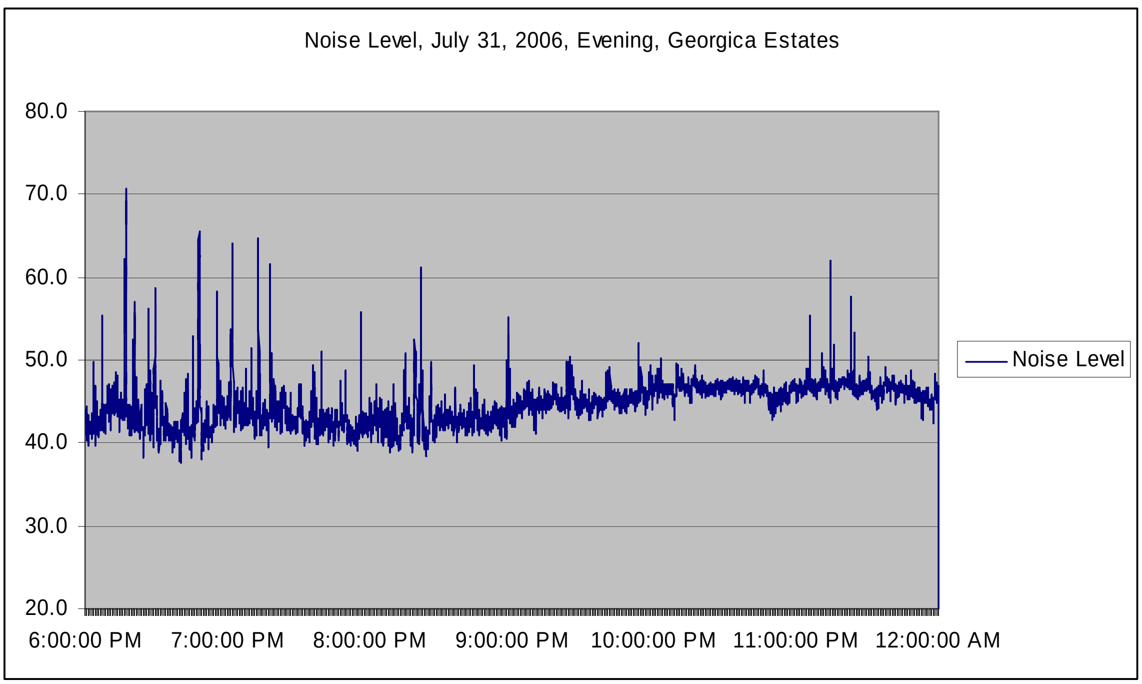

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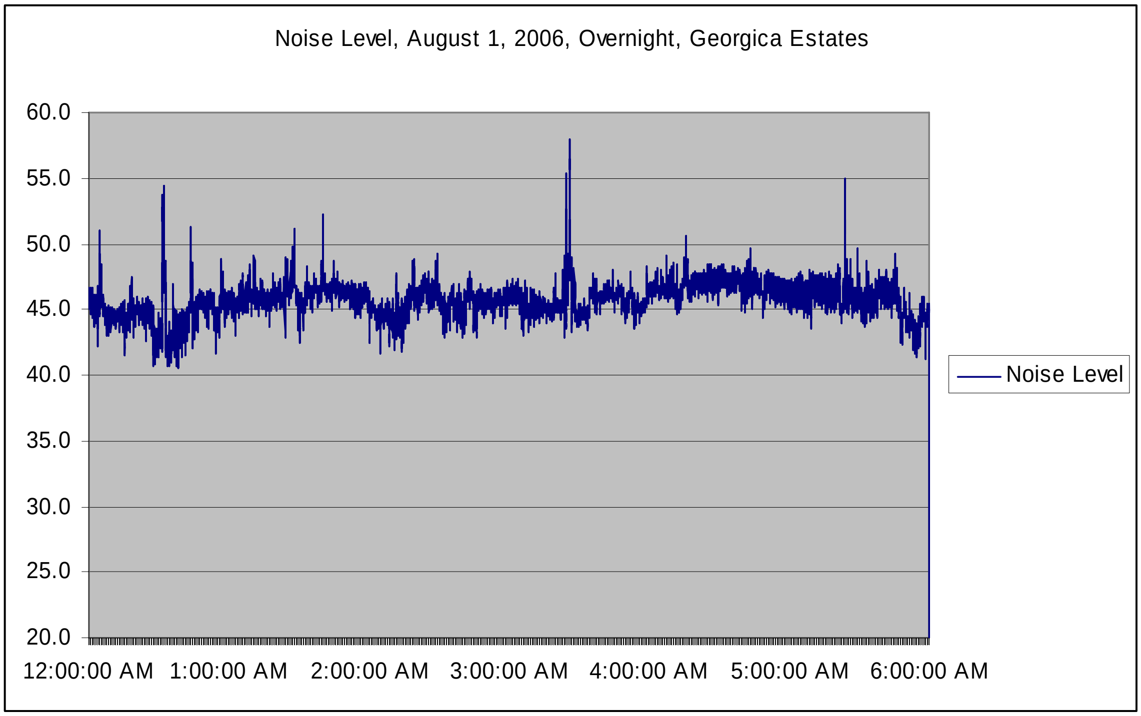

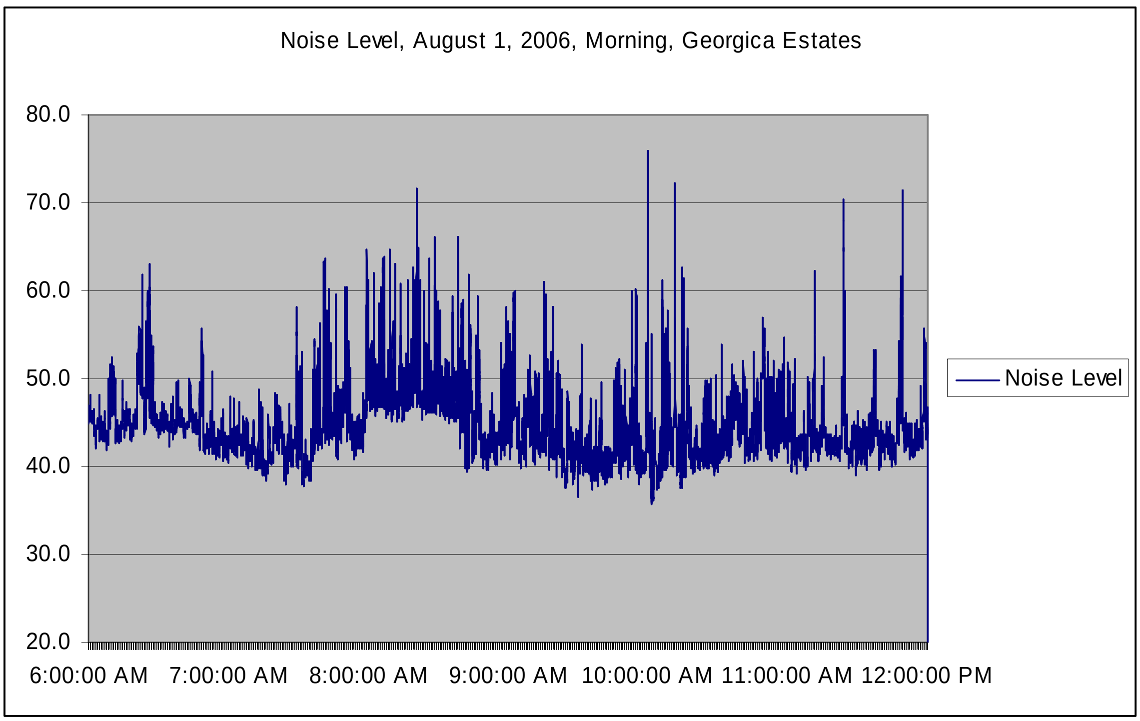

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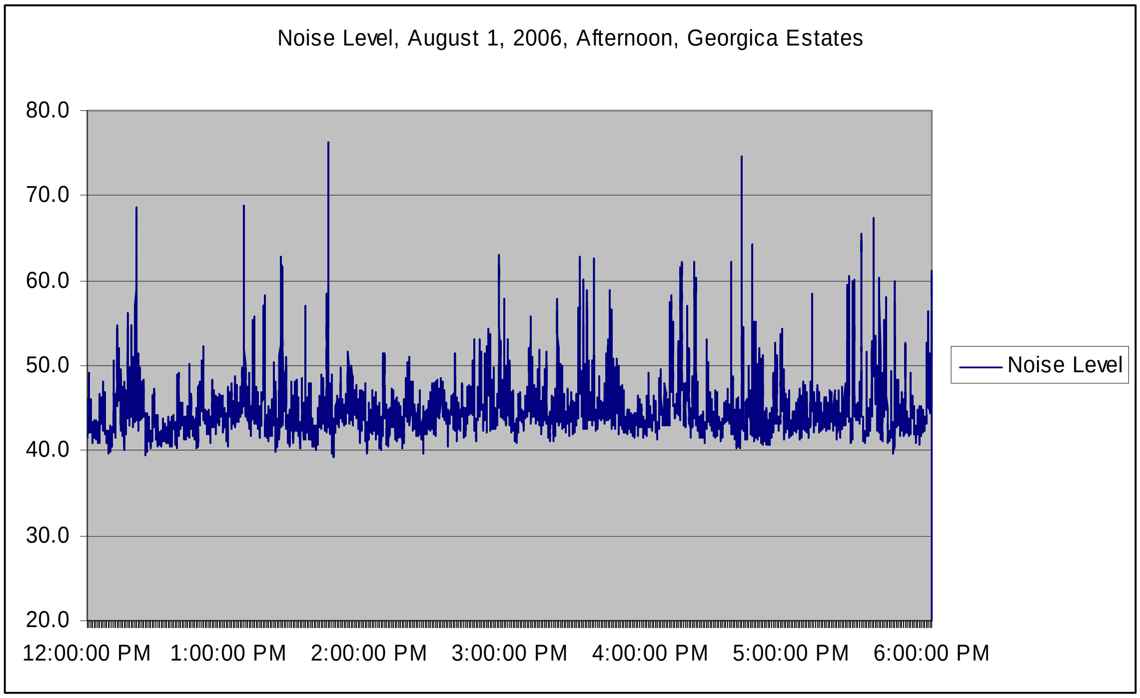

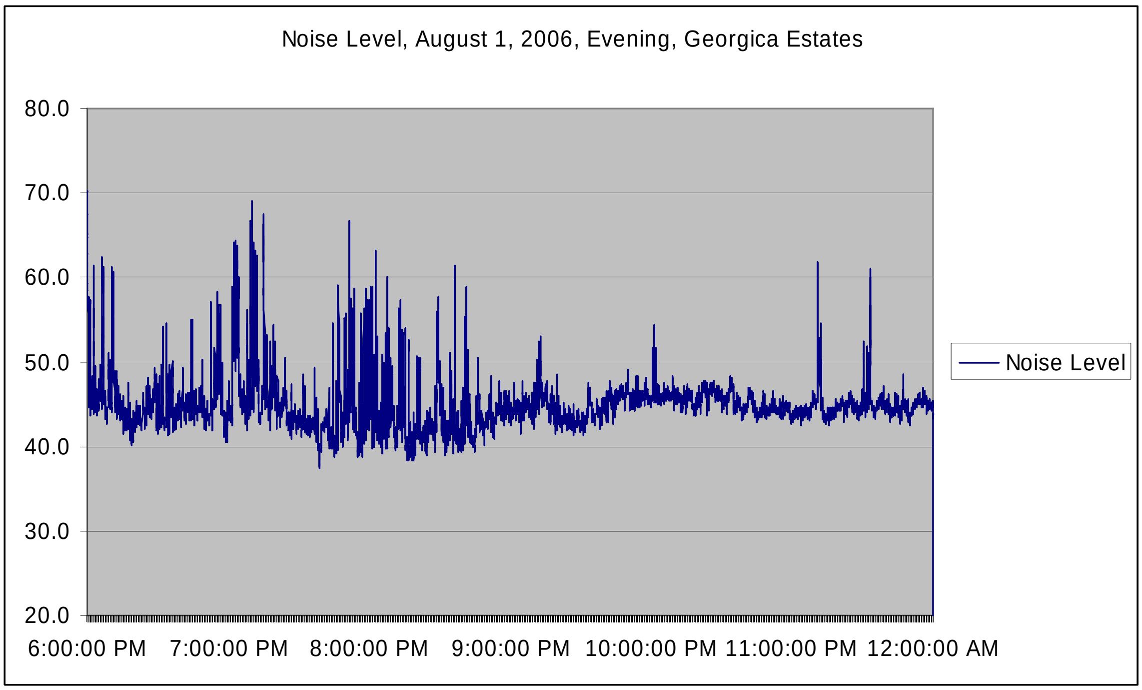

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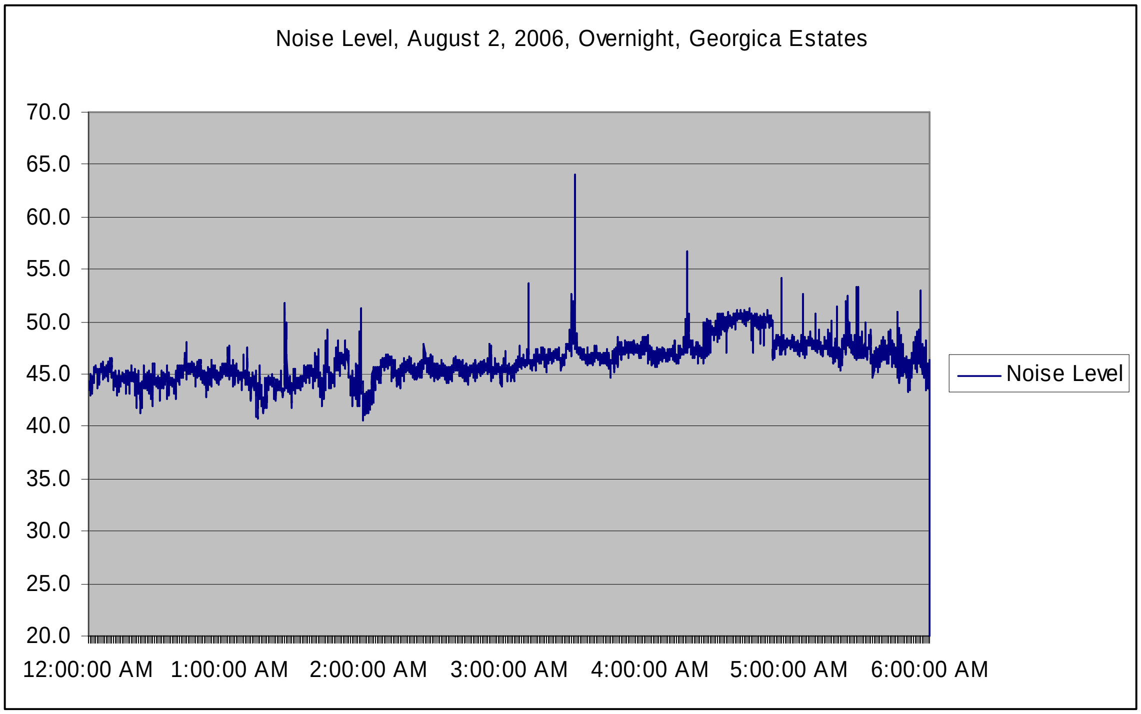

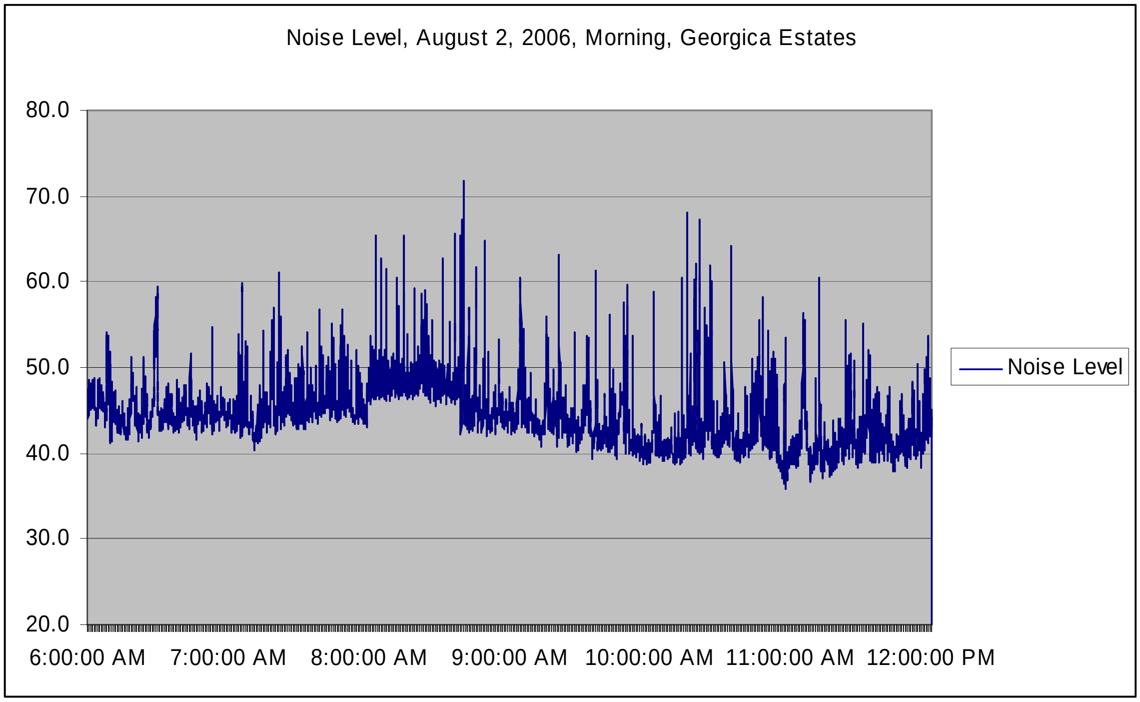

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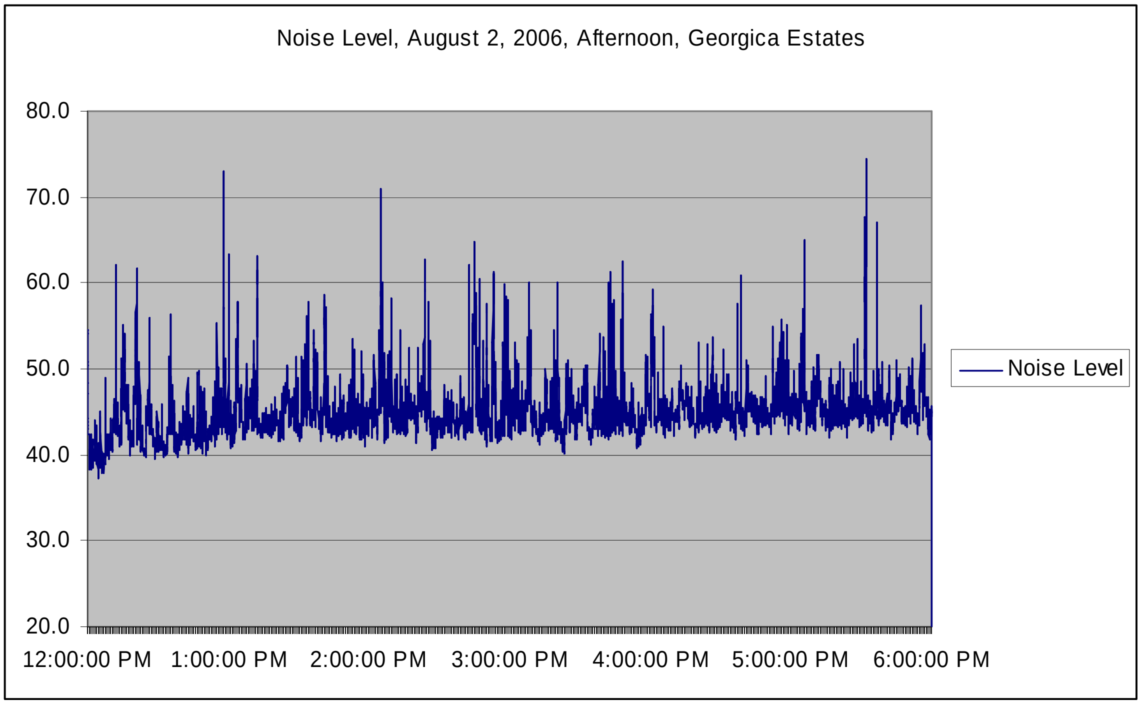

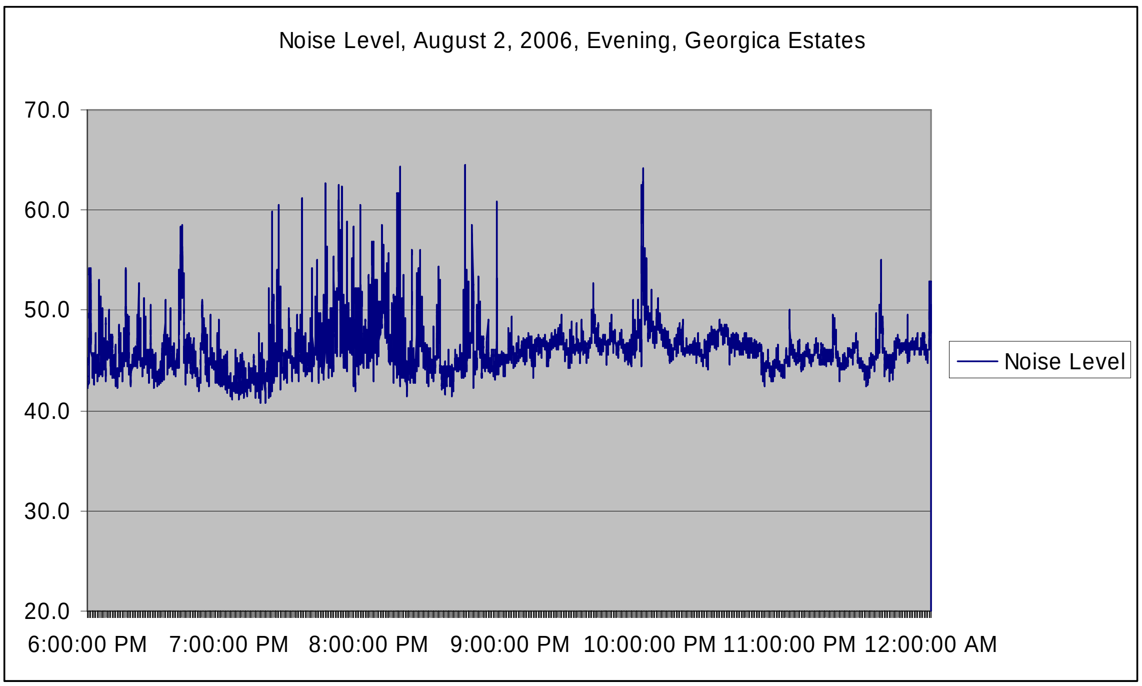

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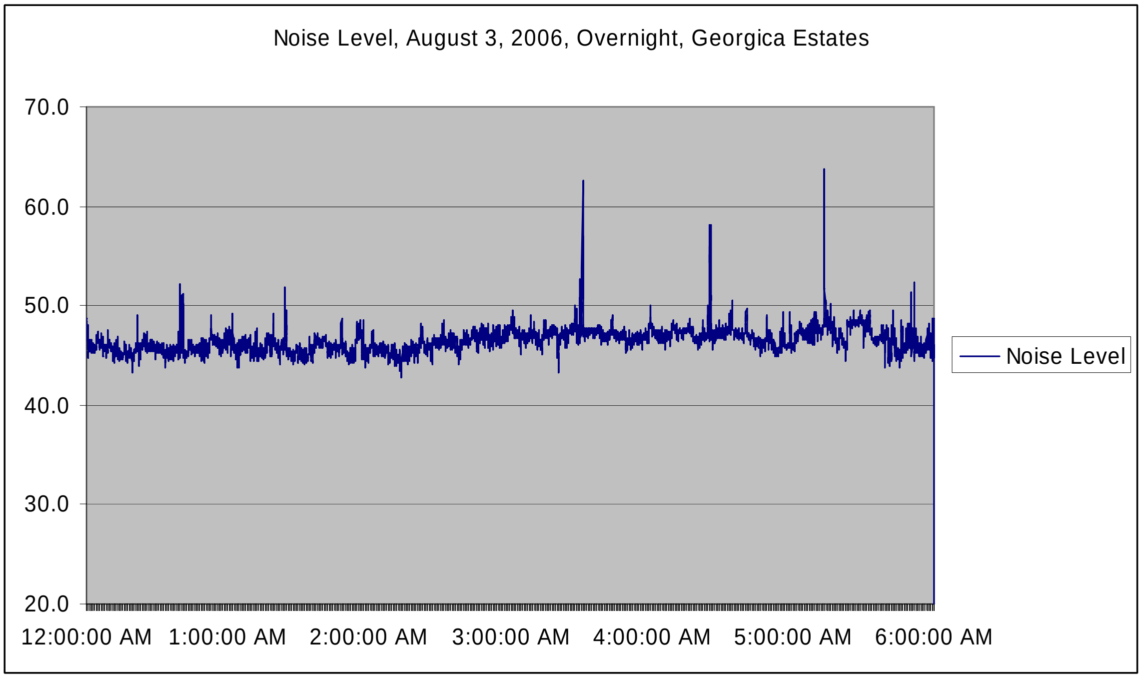

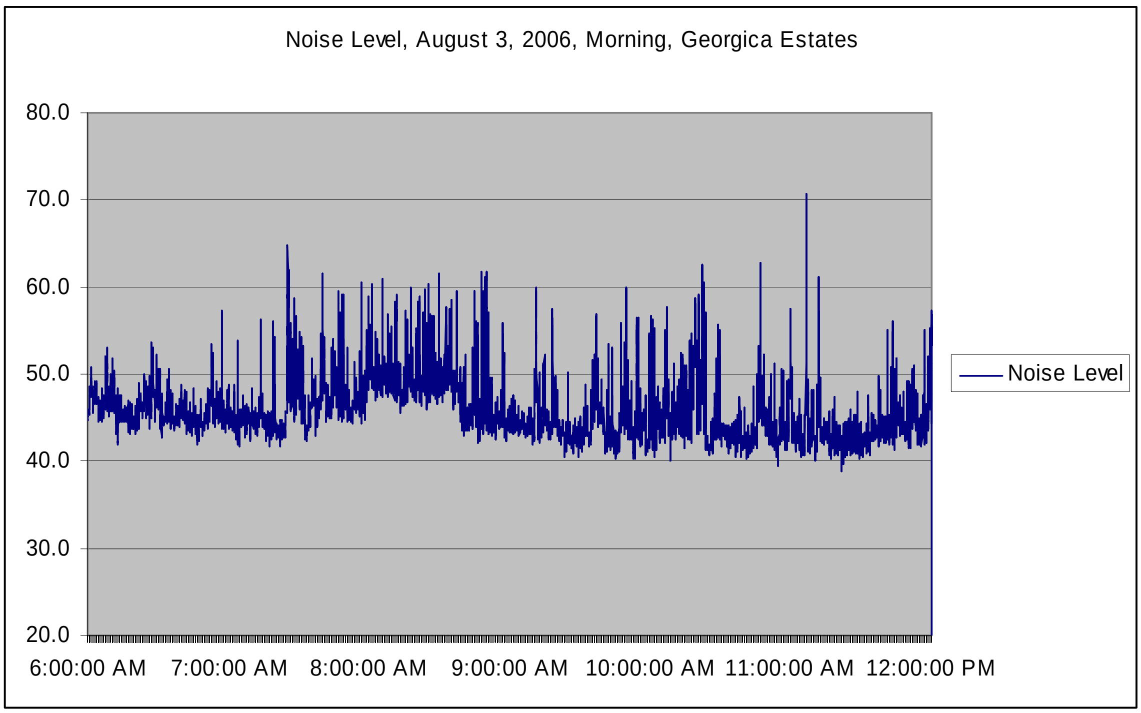

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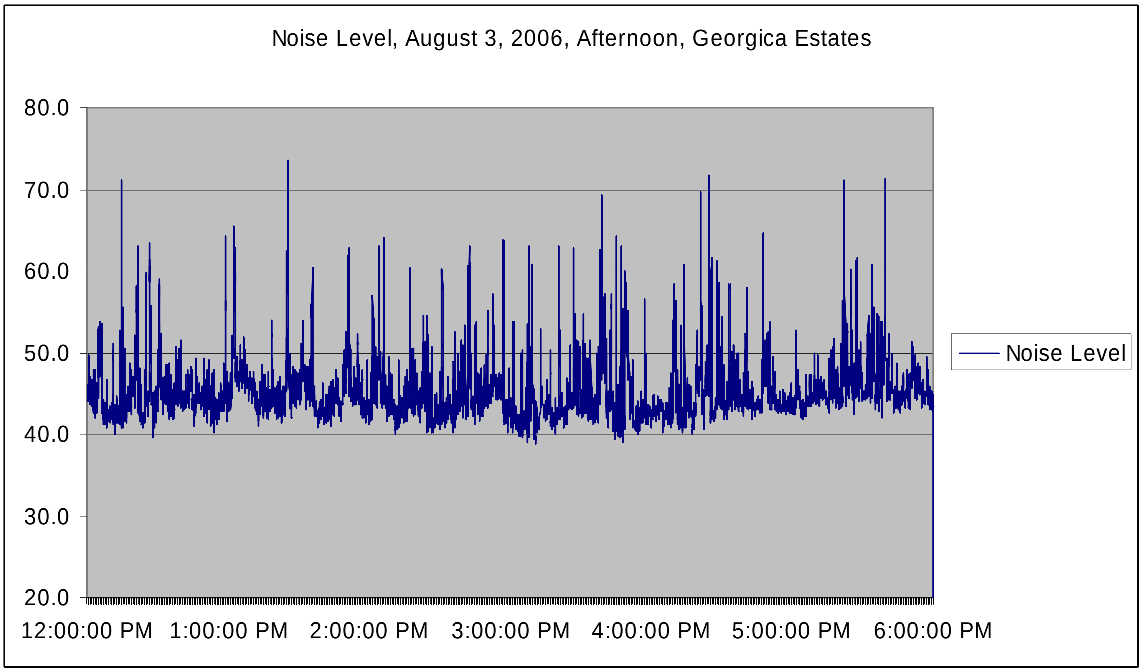

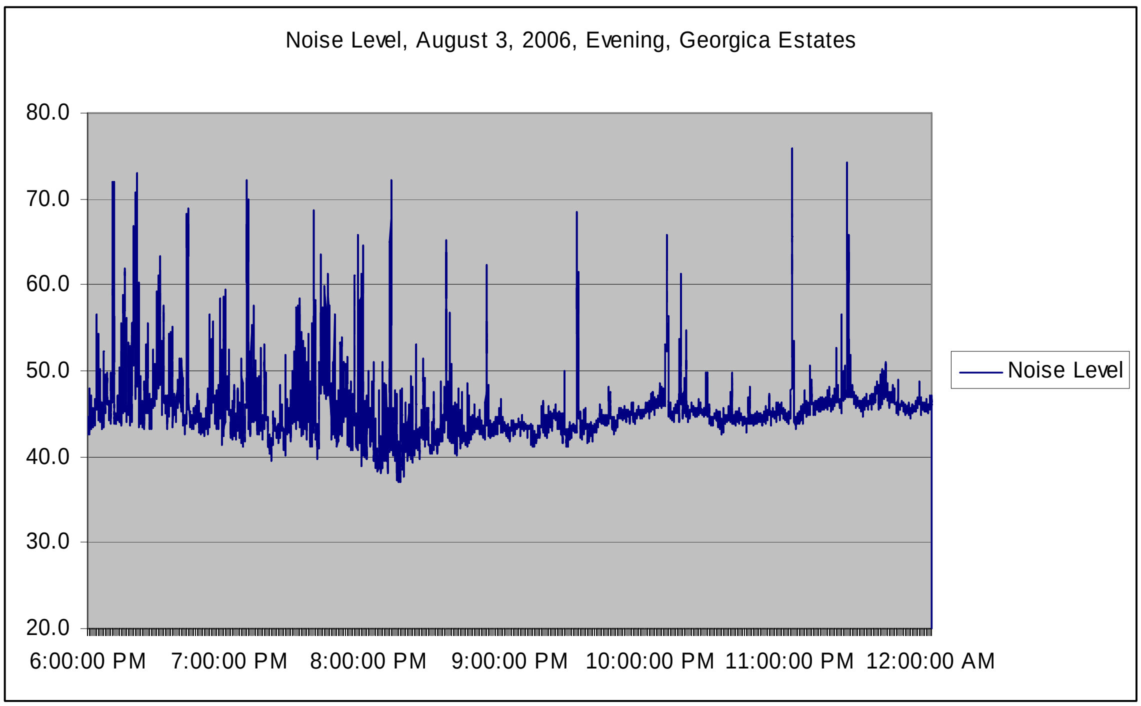

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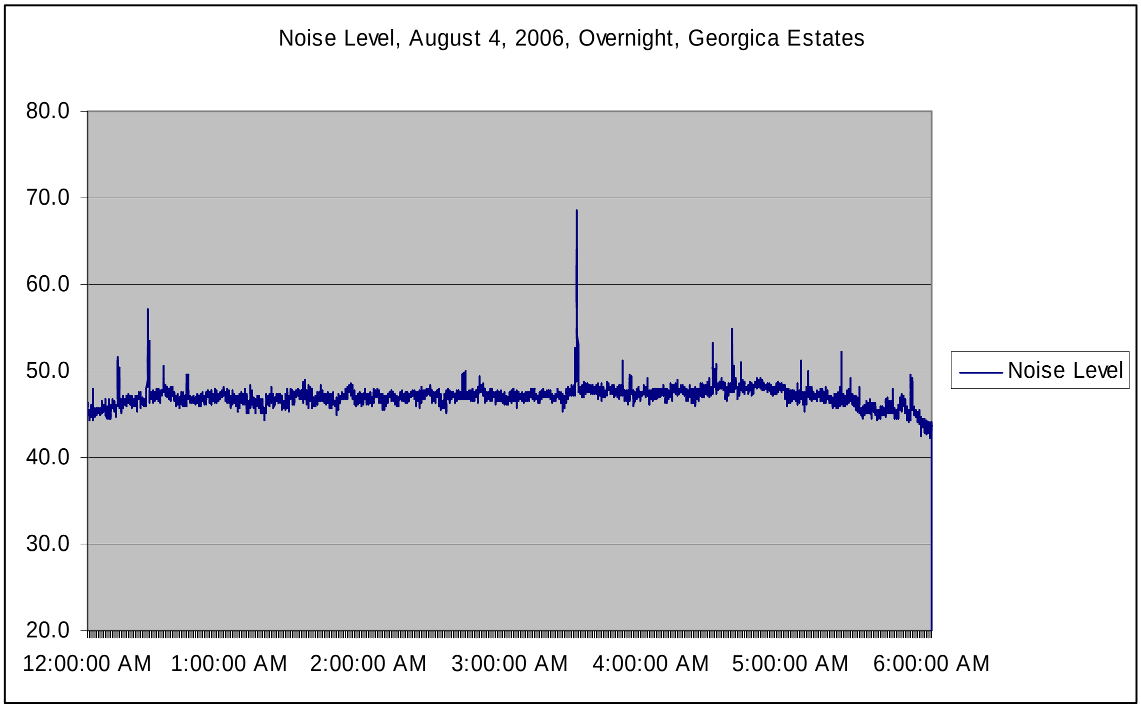

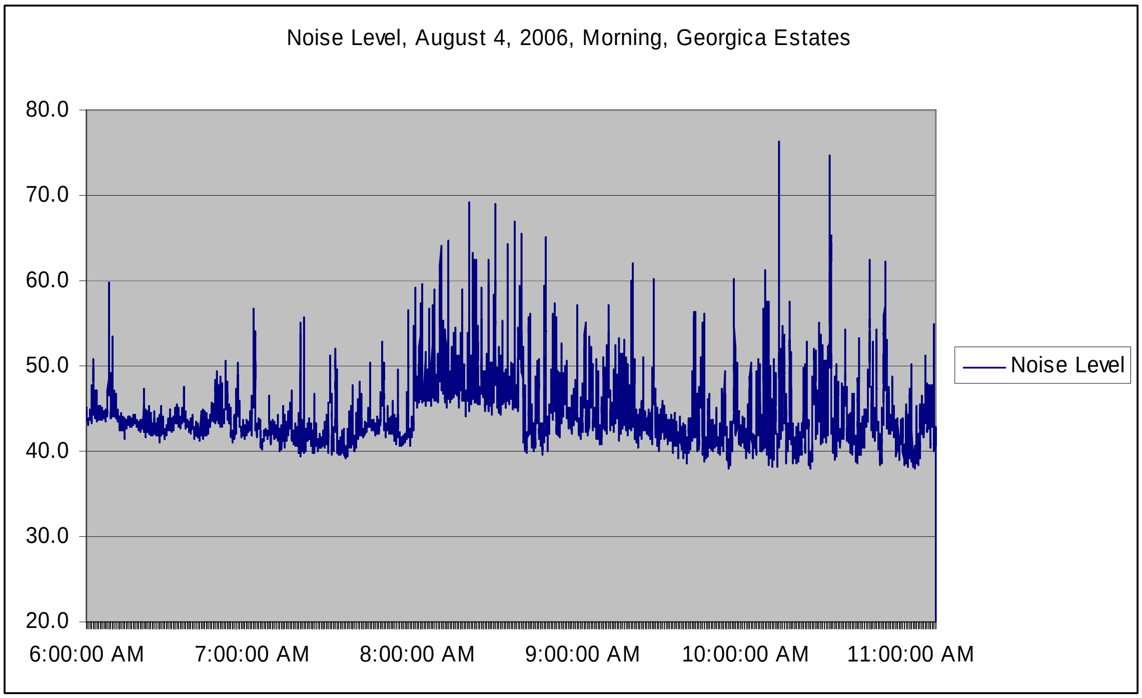

Leq = 48.82
Ldn = 53.7

L90s:

12:50:14 PM	**45.8**
8:34:20 PM	**43.2**

NOISE MONITORING, GEORGICA ESTATES

12:02:33 AM	**39.9**
11:07:51 AM	**39.7**
3:29:39 PM	**40.2**
8:47:27 PM	**42.9**
12:11:50 AM	**43.1**
7:30:42 AM	**37.8**
2:01:20 PM	**37.3**
6:42:11 PM	**42.0**
12:31:50 AM	**42.5**
6:35:59 AM	**41.7**
1:18:22 PM	**39.2**
7:28:44 PM	**41.4**
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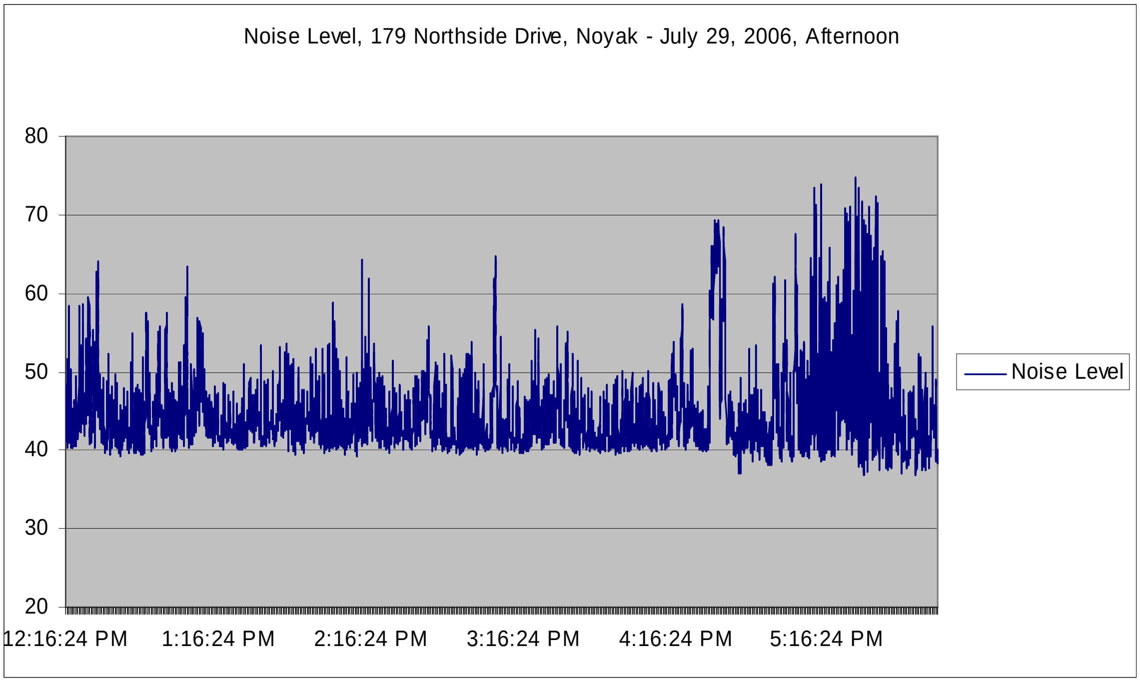
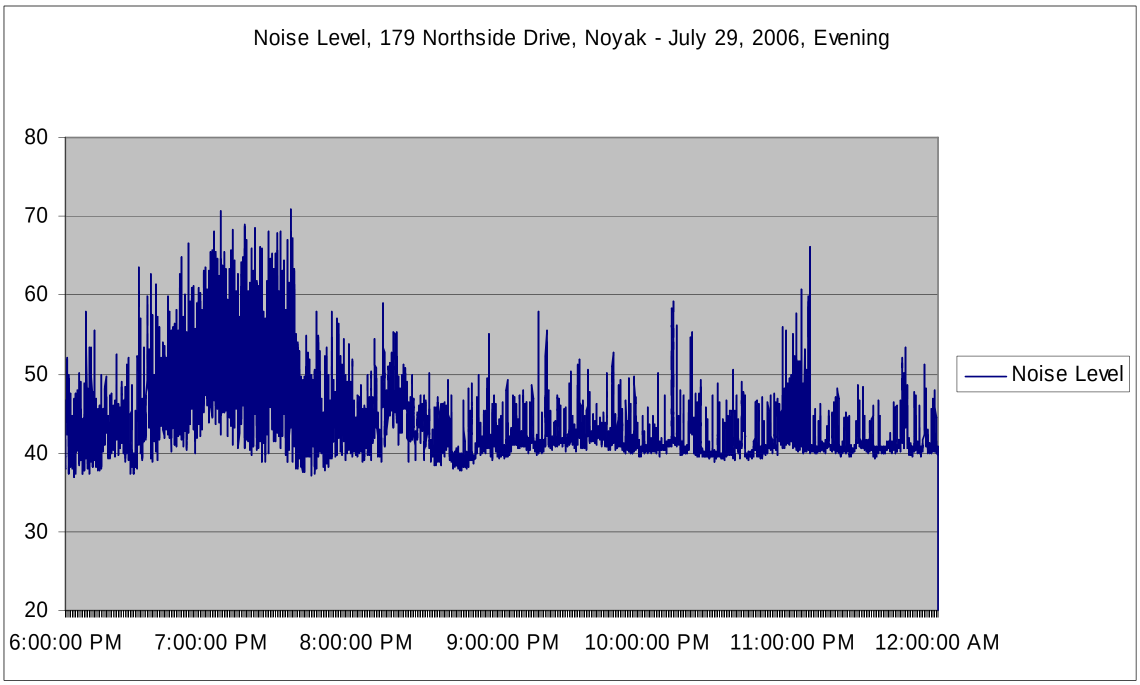
11:07:35 AM	**40.6**
12:08:30 PM	**42.0**
7:33:11 PM	**42.0**
12:17:11 AM	**44.2**
11:39:29 AM	**40.2**
2:01:07 PM	**42.1**
6:37:38 PM	**43.7**
12:35:59 AM	**45.3**
11:31:08 AM	**42.2**
4:00:06 PM	**41.9**
8:30:42 PM	**42.4**
1:15:47 AM	**45.8**
9:34:09 AM	**41.0**
10:55:44 AM	**40.8**

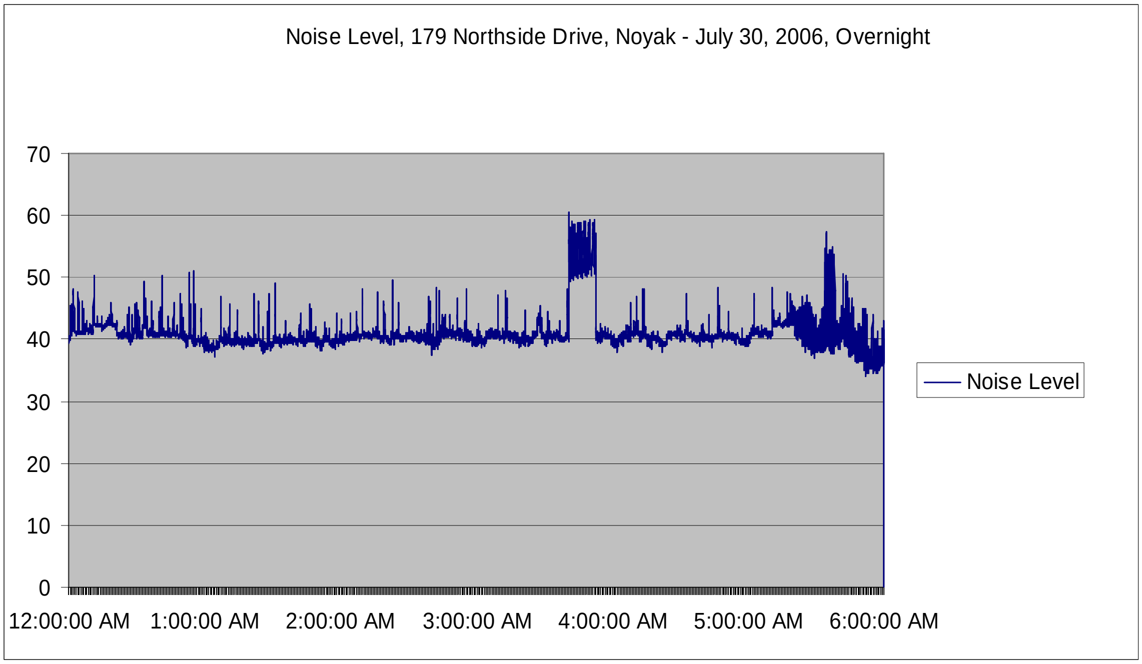
Haynal 2

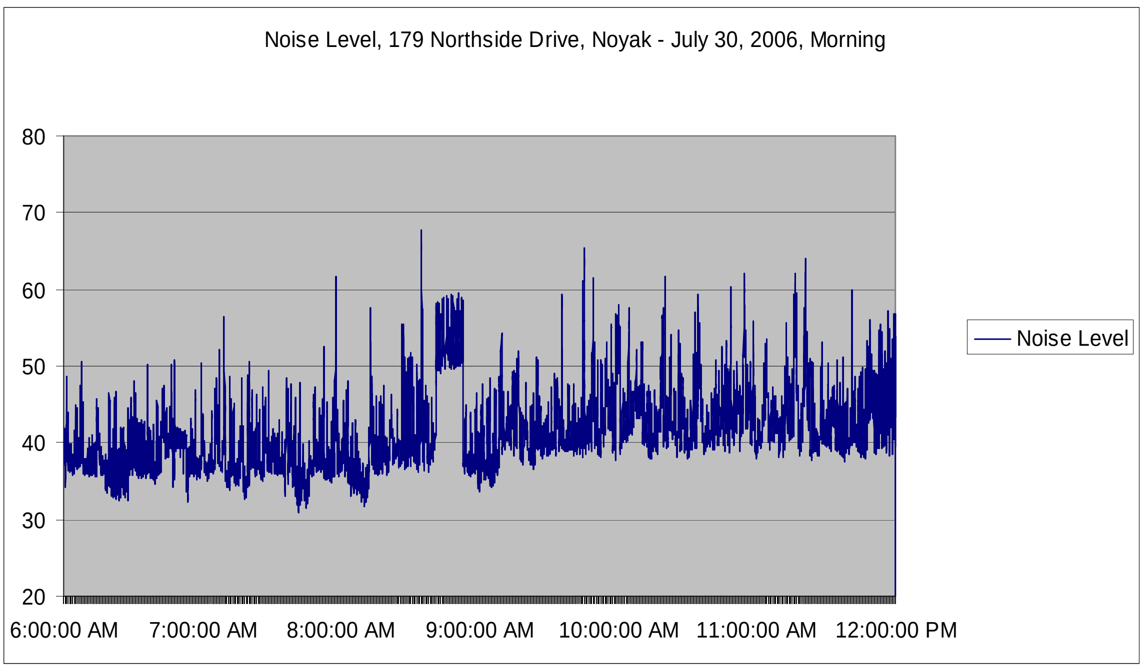
NOISE MONITORING, 179 NORTHSIDE DRIVE, NOYAK

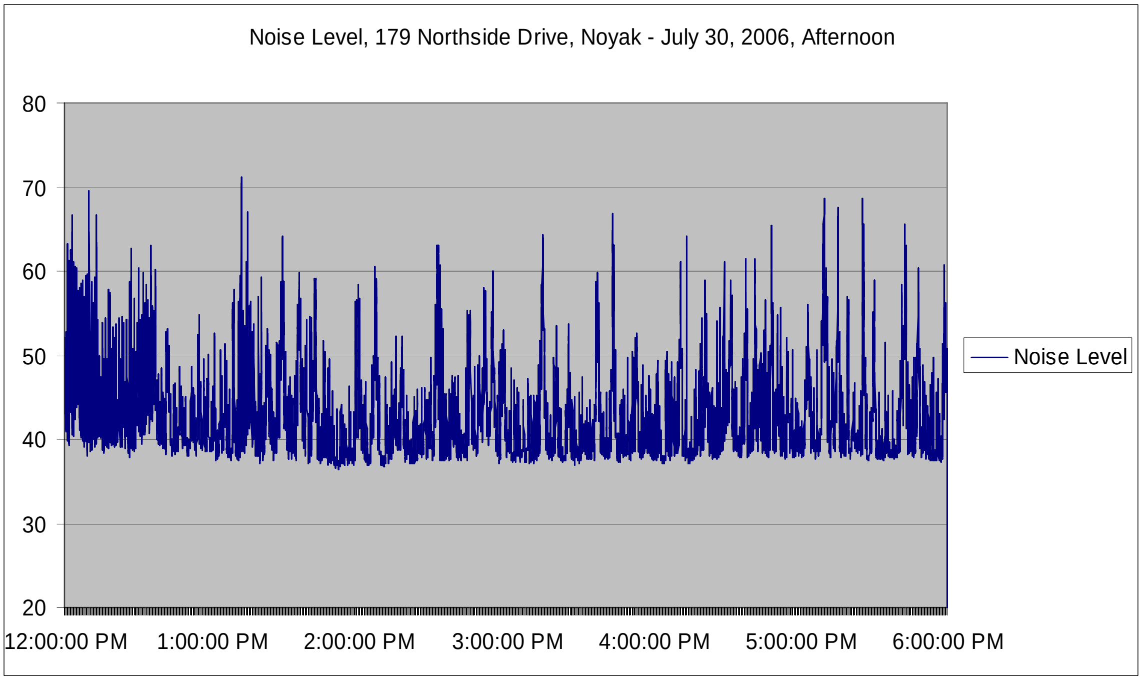


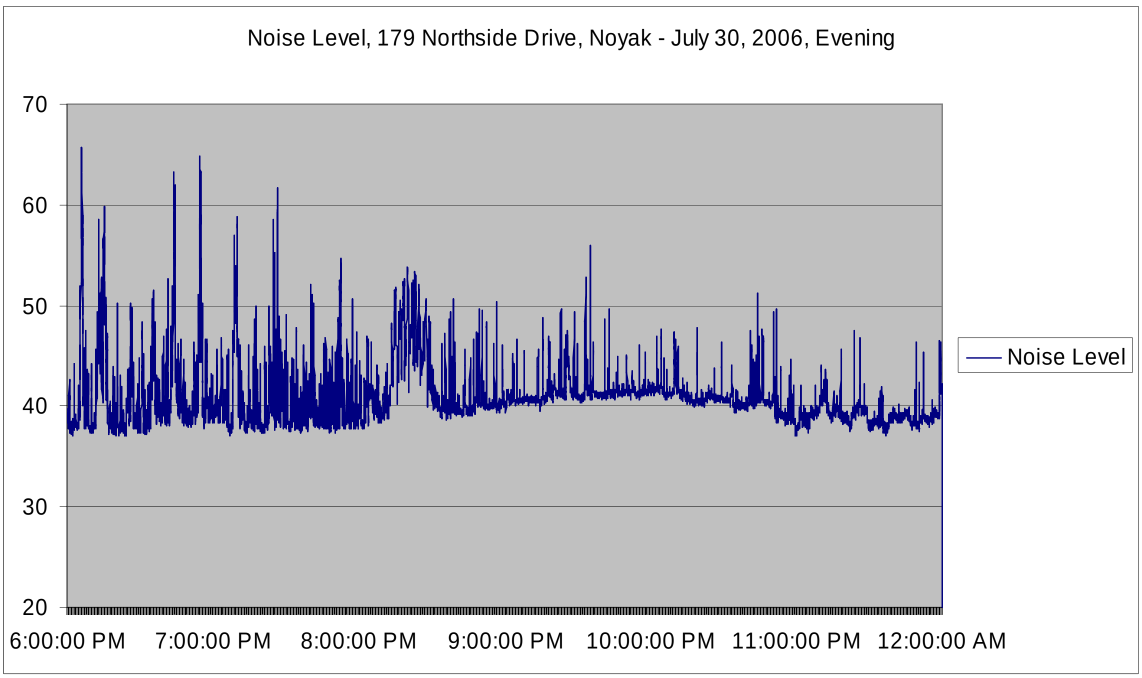


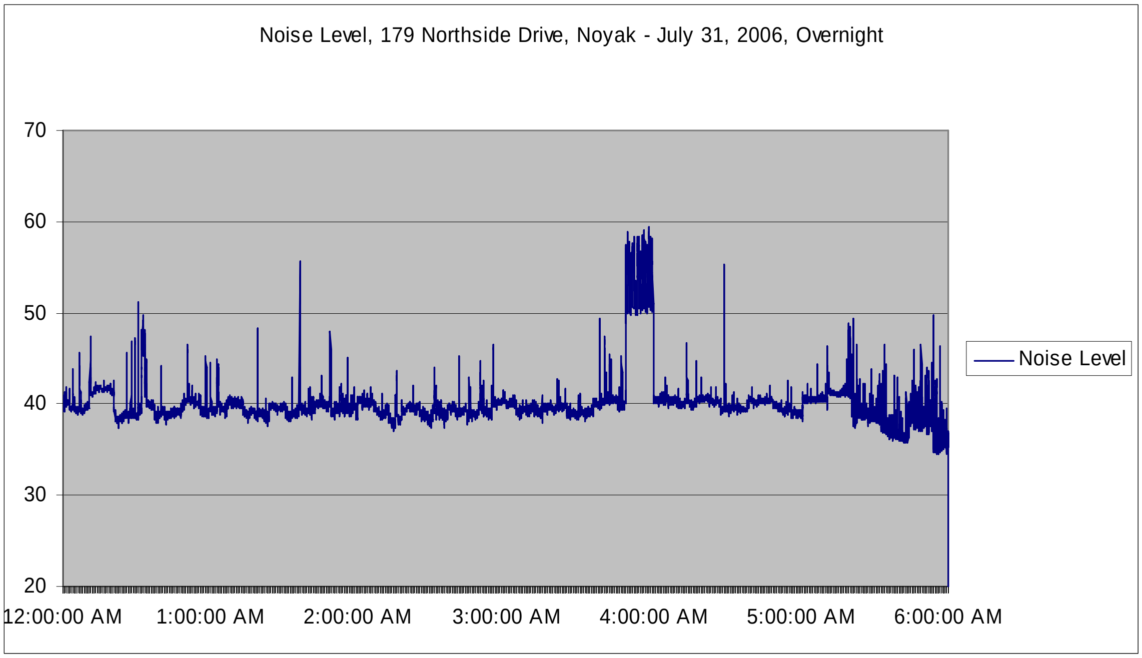
NOISE MONITORING, 179 NORTHSIDE DRIVE, NOYAK

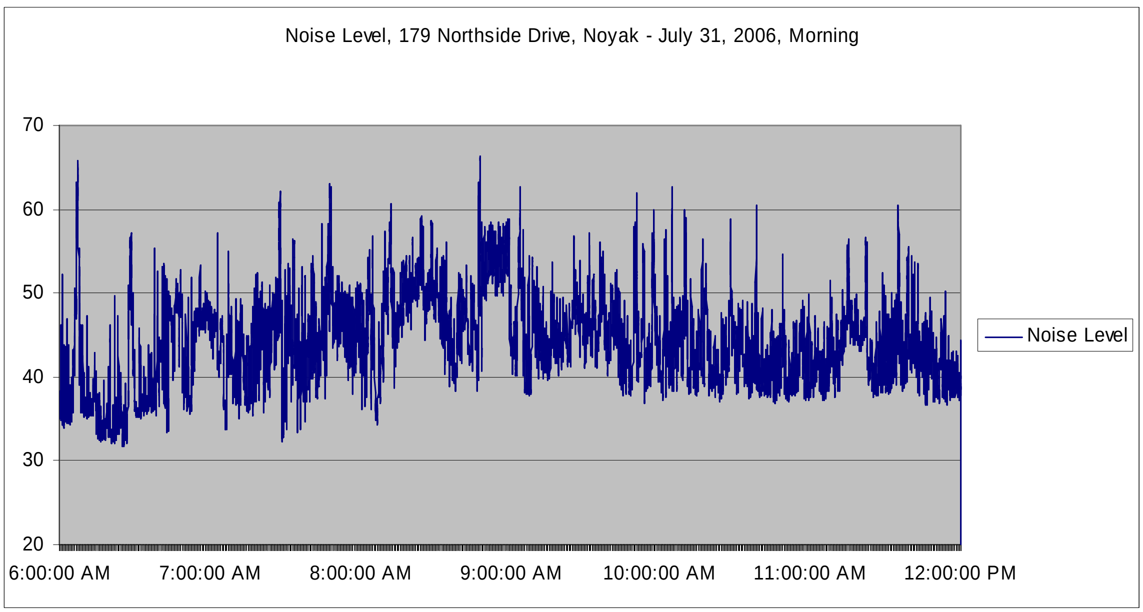





Noise Level, 179 Northside Drive, Noyak - July 30, 2006, Afternoon
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level


Noise Level, 179 Northside Drive, Noyak - July 30, 2006, Evening
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level


Noise Level, 179 Northside Drive, Noyak - July 31, 2006, Overnight
70
60
50
40
30
20
12:00:00 AM
1:00:00 AM
2:00:00 AM
3:00:00 AM
4:00:00 AM
5:00:00 AM
6:00:00 AM
Noise Level


Noise Level, 179 Northside Drive, Noyak - July 31, 2006, Morning
70
60
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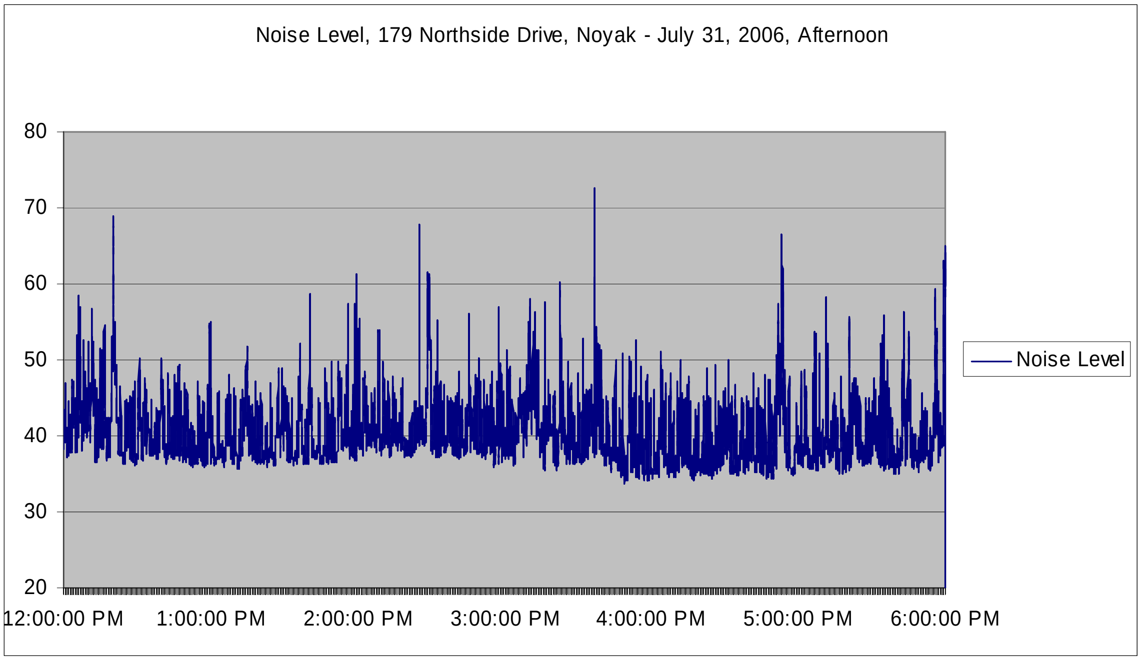
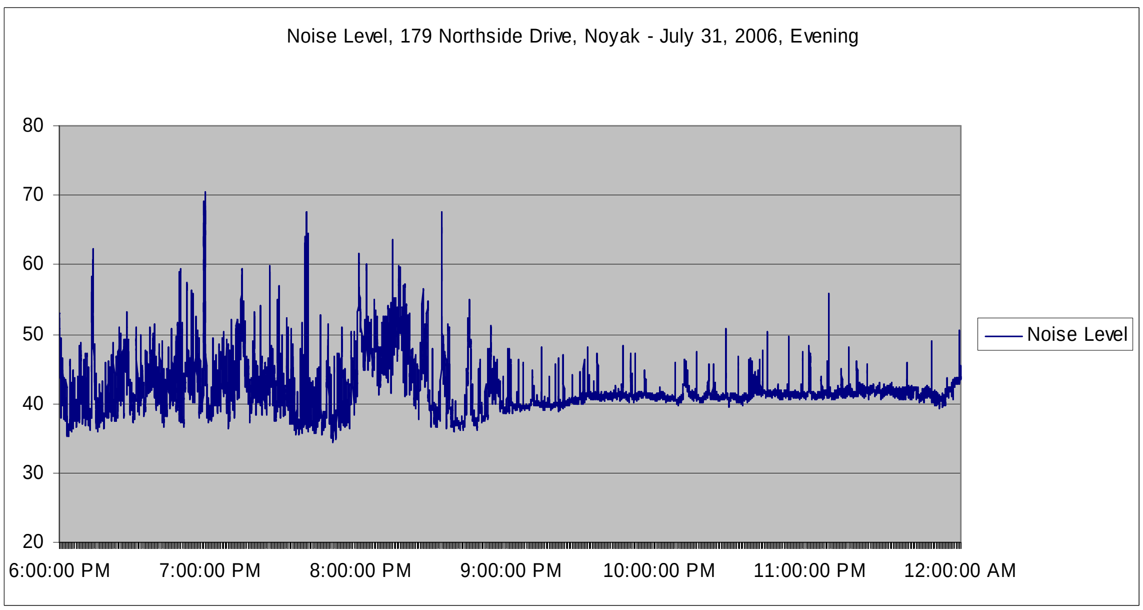
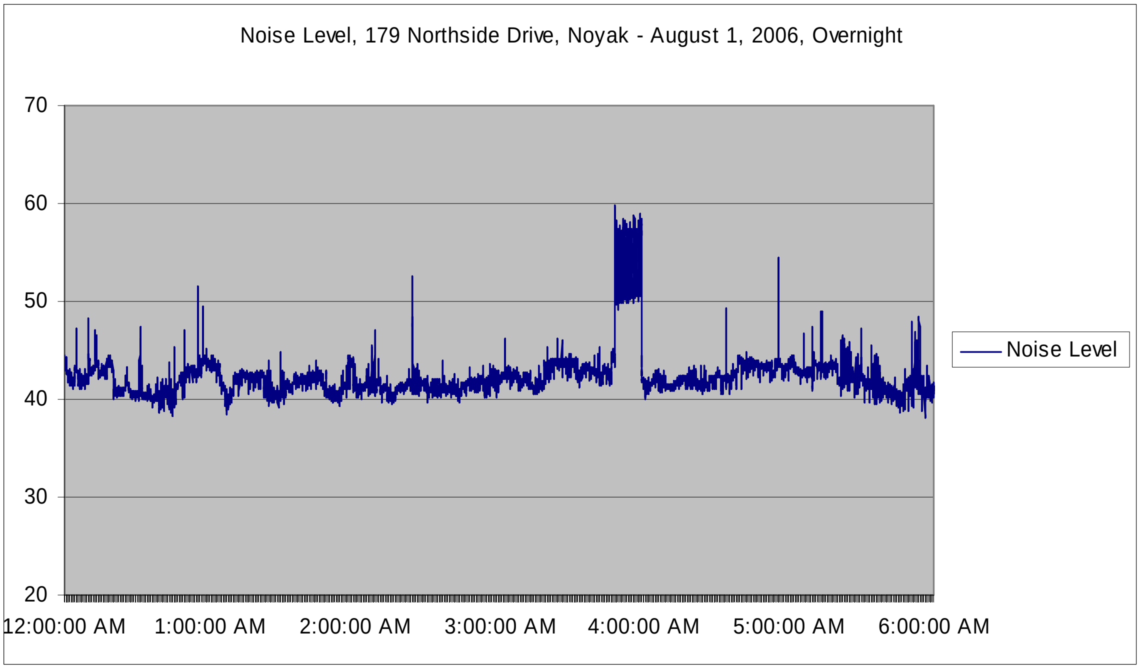
30
20
6:00:00 AM
7:00:00 AM
8:00:00 AM
9:00:00 AM
10:00:00 AM
11:00:00 AM
12:00:00 PM
Noise Level

NOISE MONITORING, 179 NORTHSIDE DRIVE, NOYAK







Noise Level, 179 Northside Drive, Noyak - August 1, 2006, Overnight
70
60
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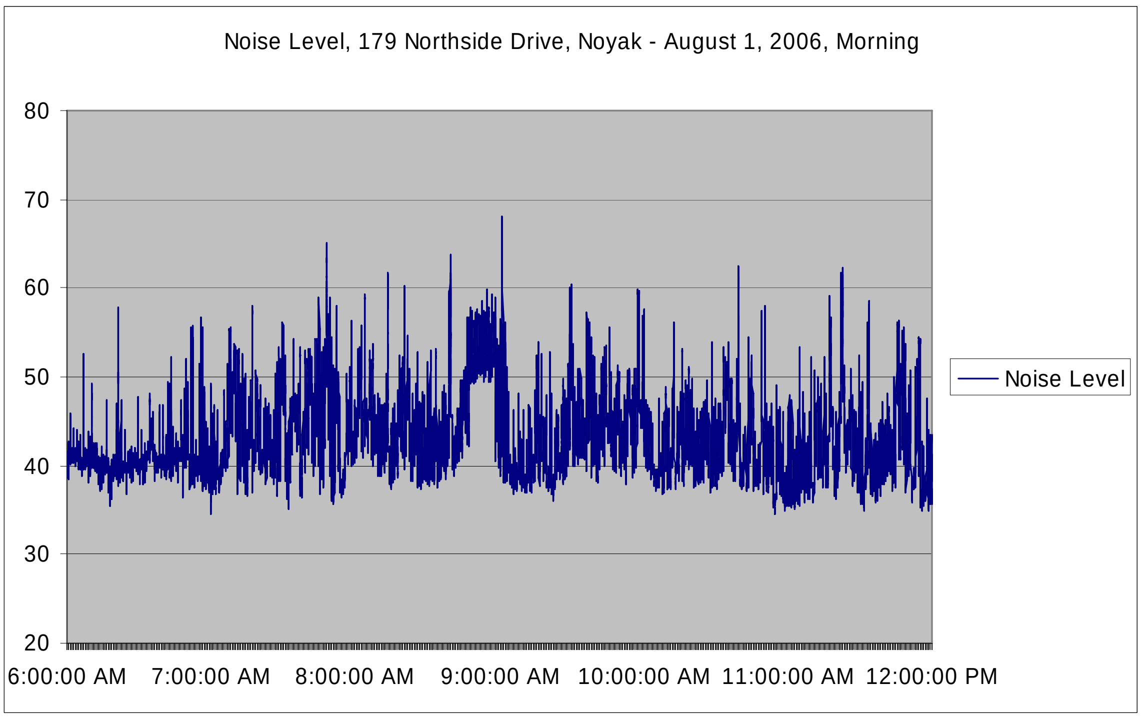
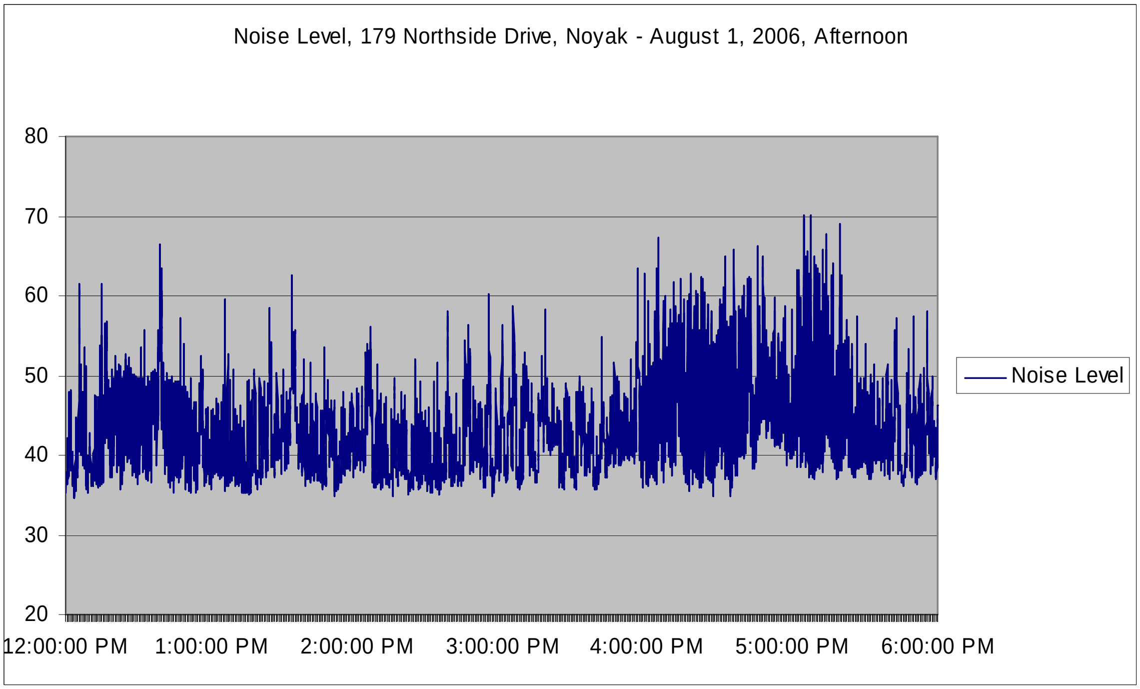
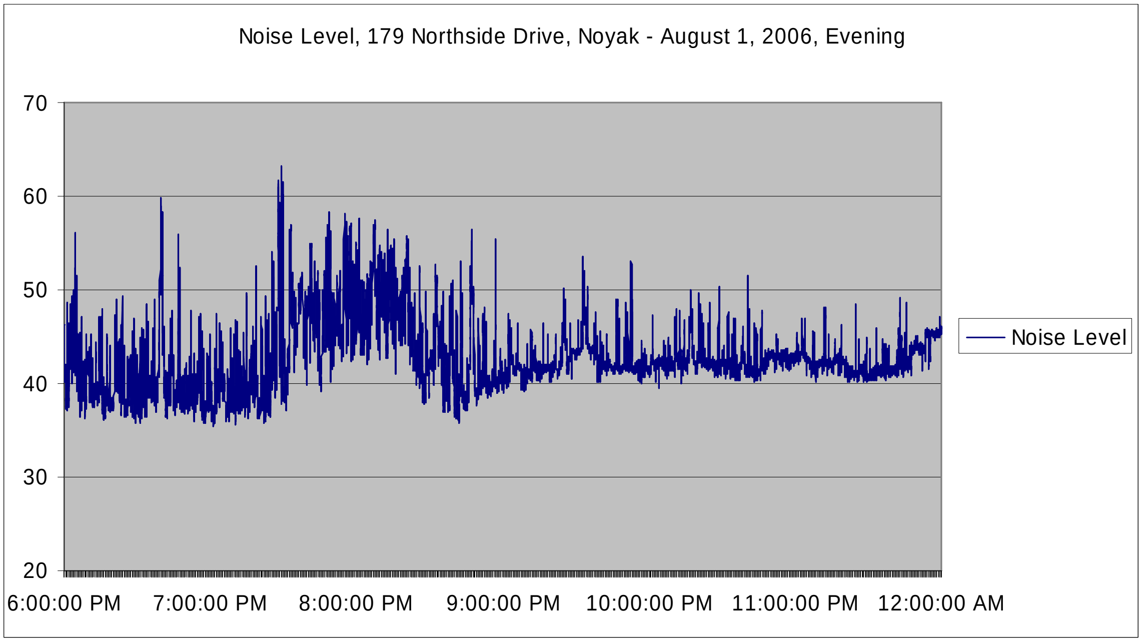
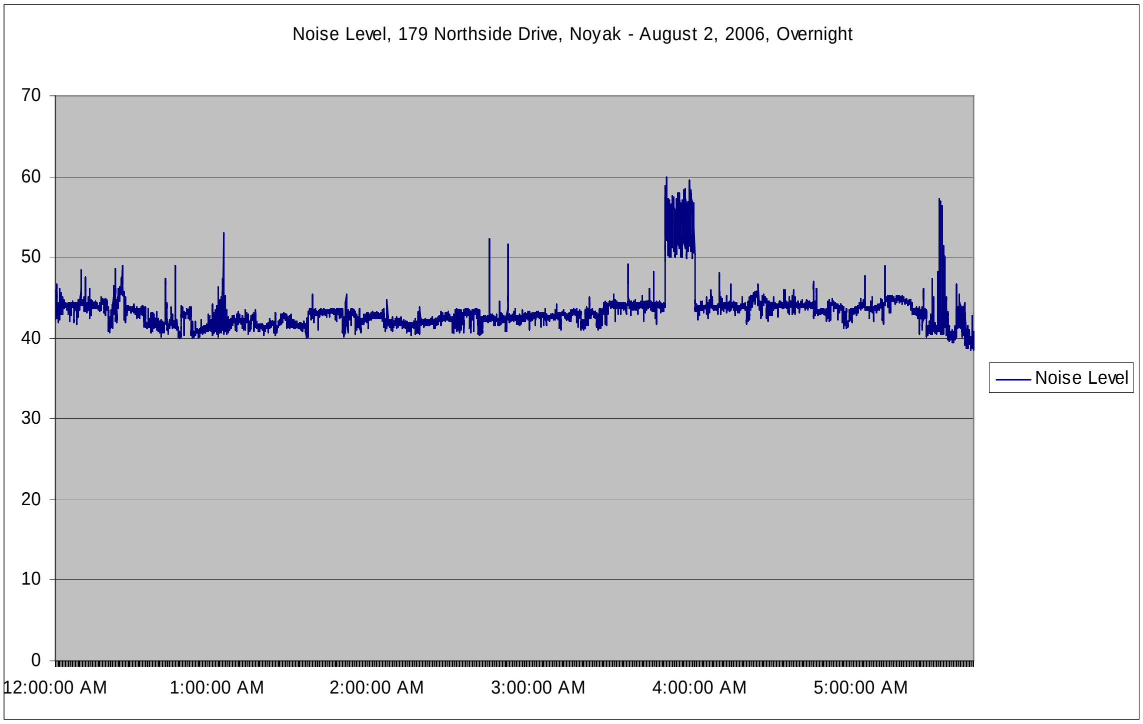
40
30
20
12:00:00 AM
1:00:00 AM
2:00:00 AM
3:00:00 AM
4:00:00 AM
5:00:00 AM
6:00:00 AM
Noise Level



Noise Level, 179 Northside Drive, Noyak - August 1, 2006, Morning
80
70
60
50
40
30
20
6:00:00 AM
7:00:00 AM
8:00:00 AM
9:00:00 AM
10:00:00 AM
11:00:00 AM
12:00:00 PM
Noise Level


Noise Level, 179 Northside Drive, Noyak - August 1, 2006, Afternoon
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level


Noise Level, 179 Northside Drive, Noyak - August 1, 2006, Evening
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level



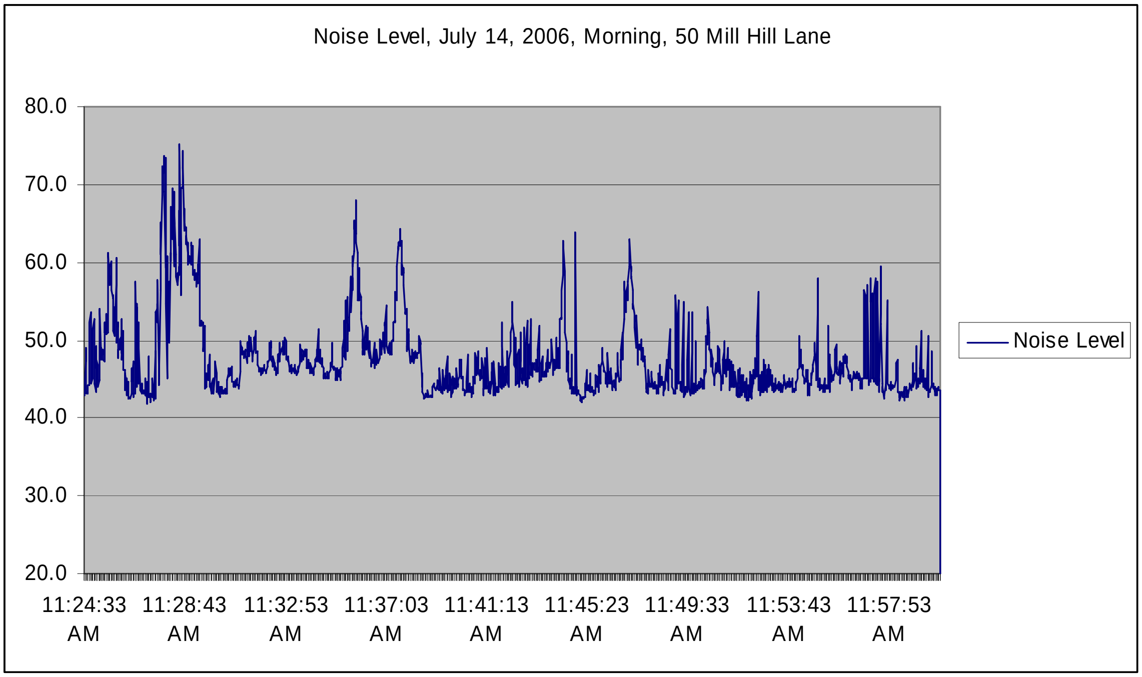
Leq = 47.2
Ldn = 51.55

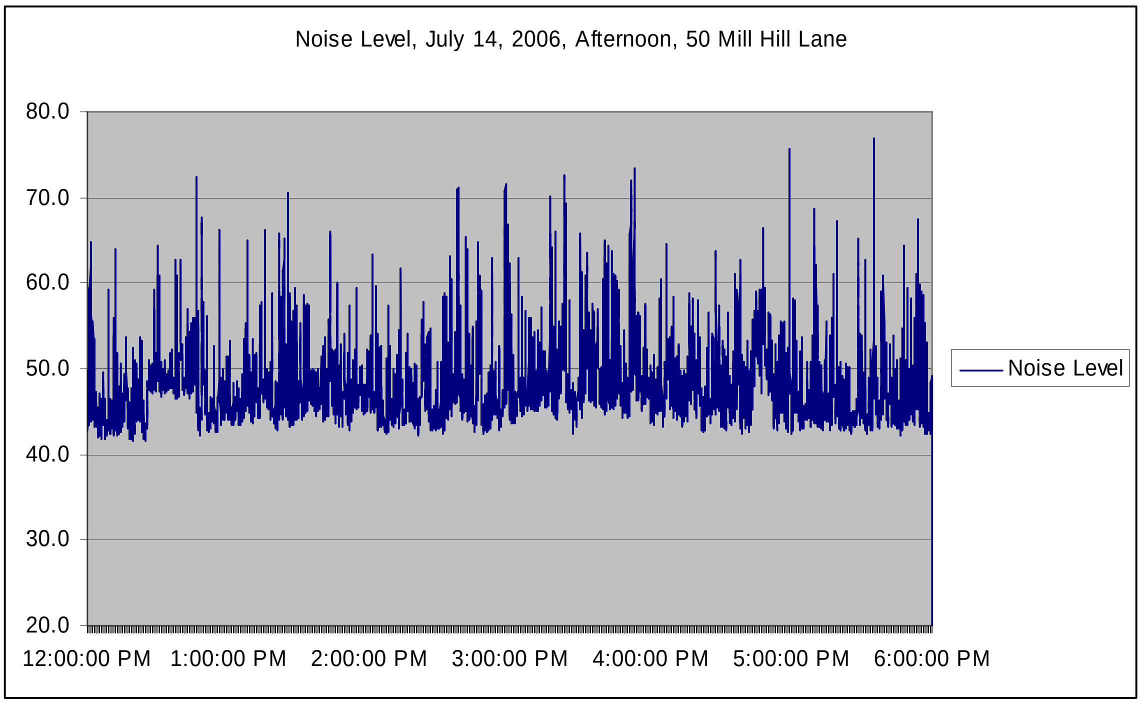
L90s:

10:31:02PM	**39.5**
5:33:50 PM	**37.8**
2:42:14 PM	**38.7**
7:14:09 PM	**38.1**
2:19:50 PM	**37.5**
9:22:18 AM	**38**
4:54:56 AM	**41.5**

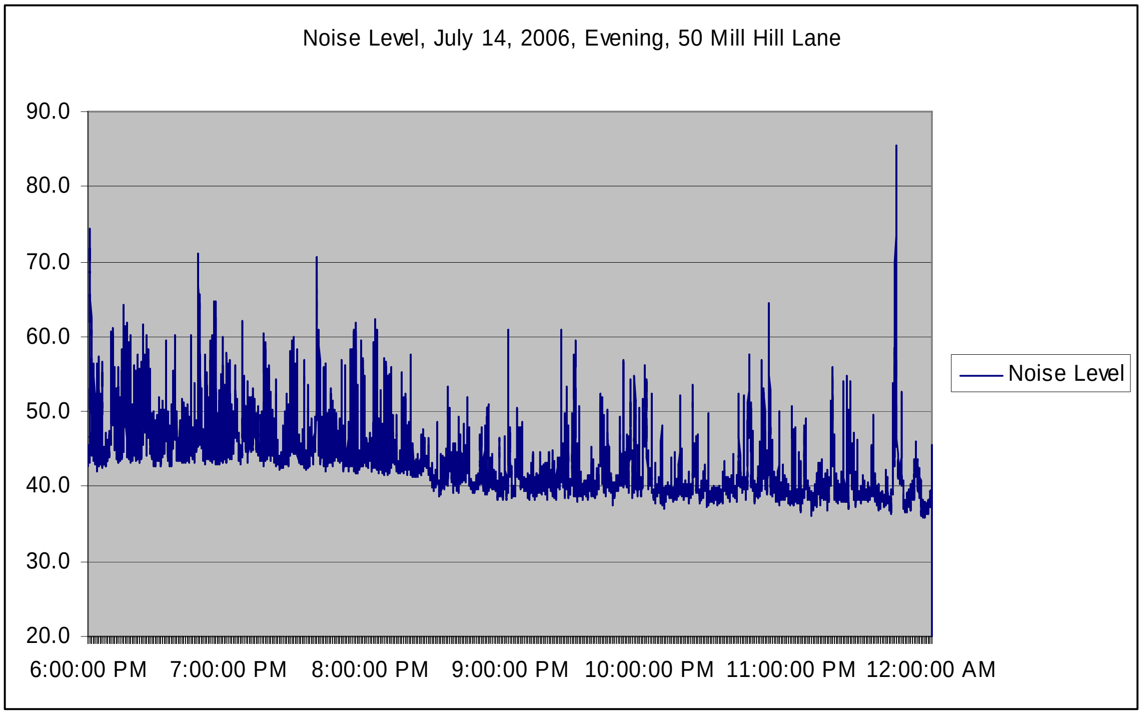
Mary Bush

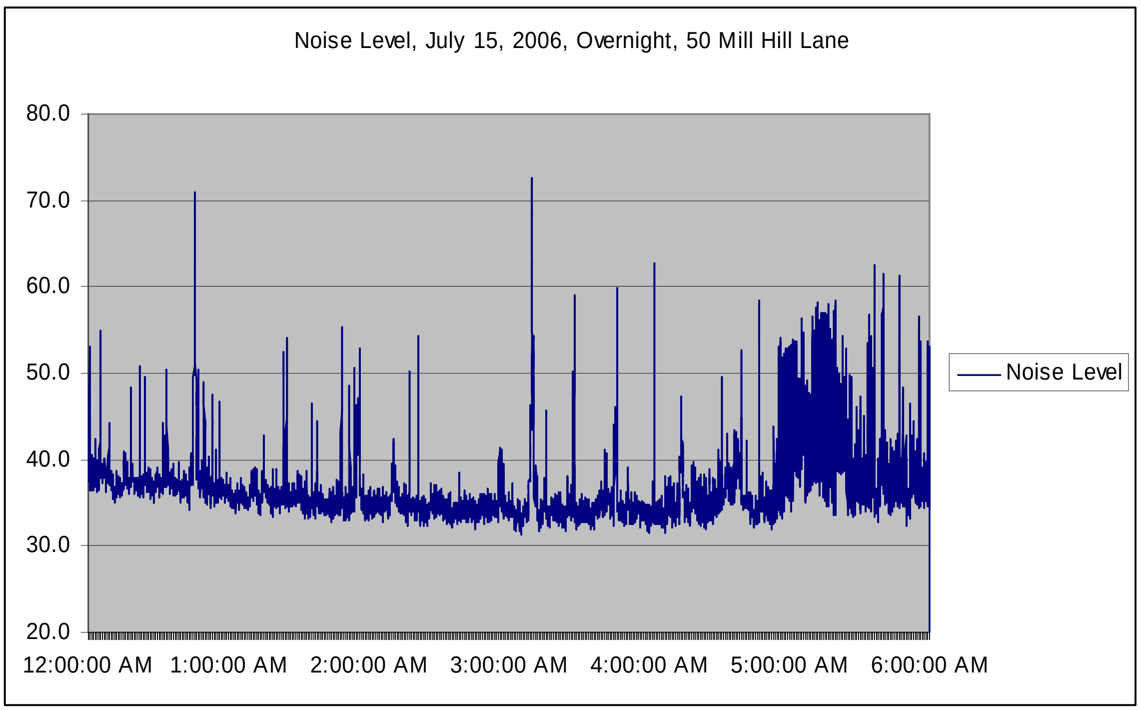
NOISE MONITORING, 50 MILL HILL LANE



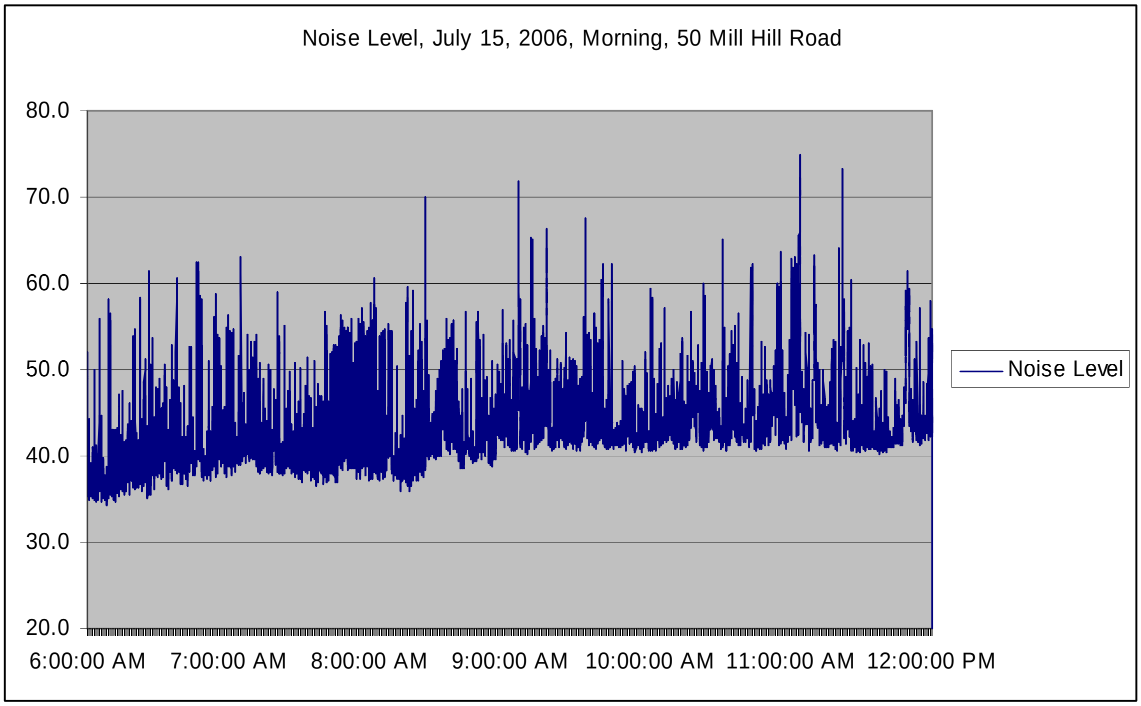


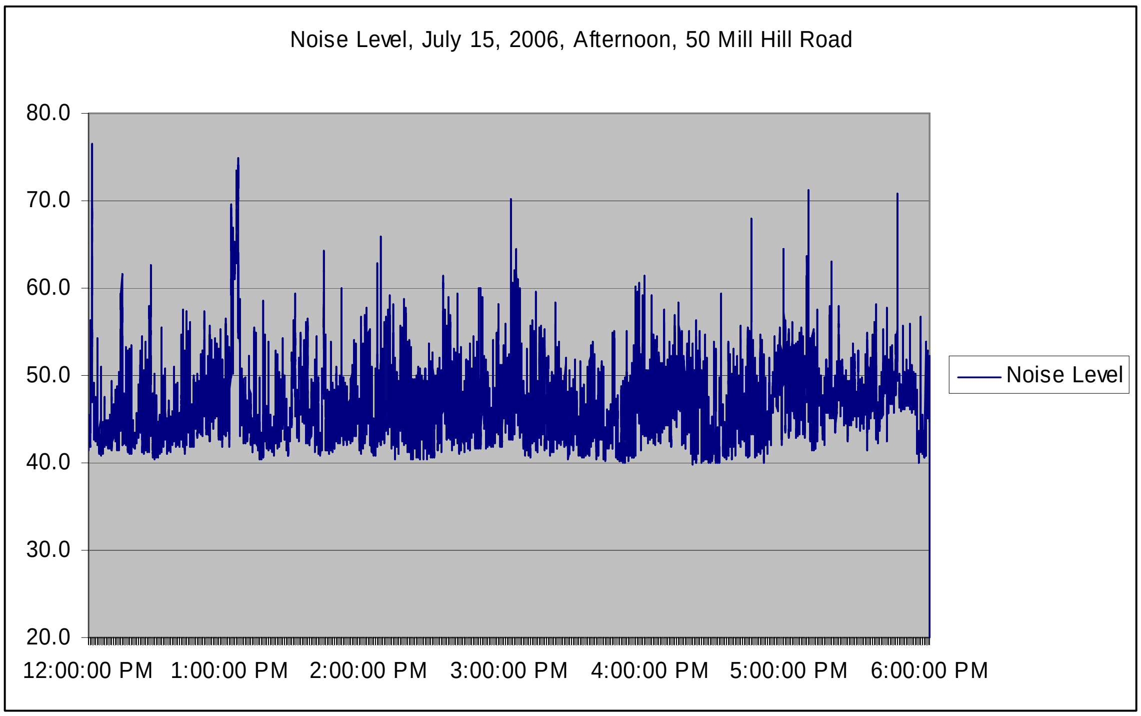
NOISE MONITORING, 50 MILL HILL LANE



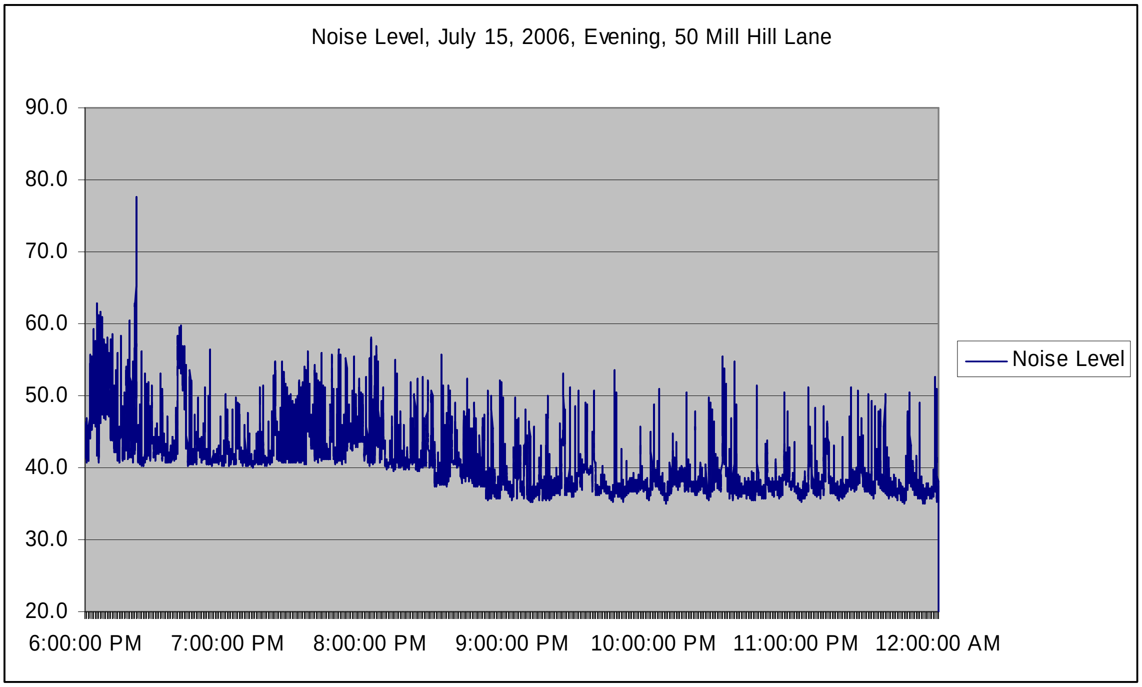


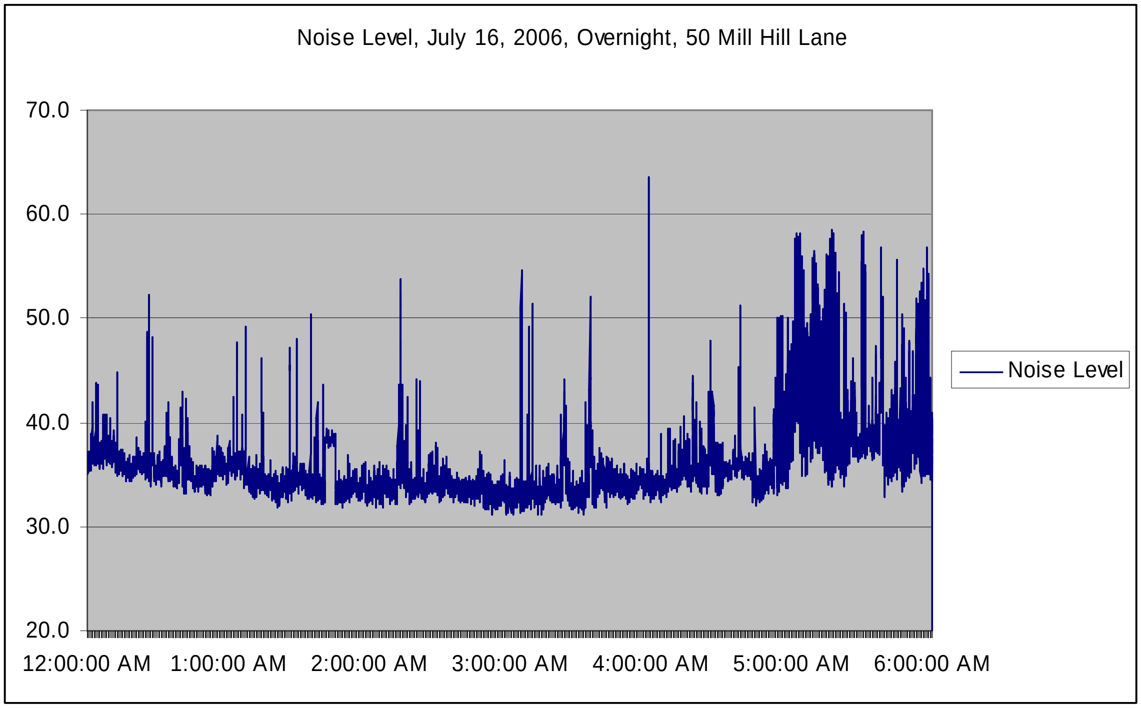
NOISE MONITORING, 50 MILL HILL LANE



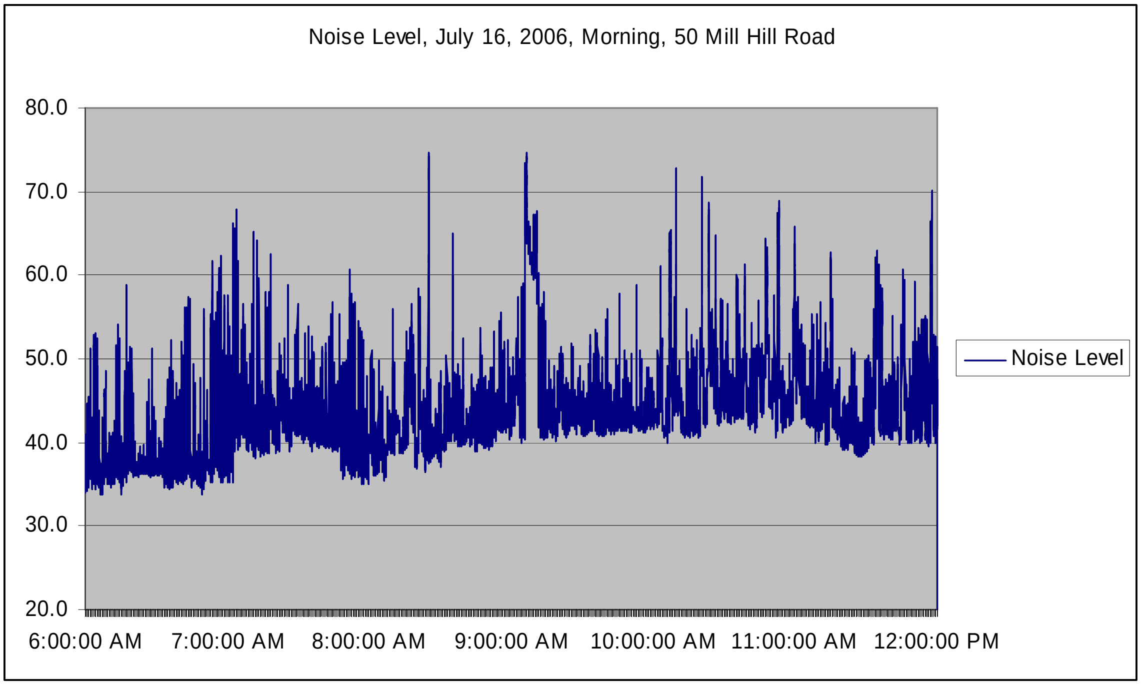


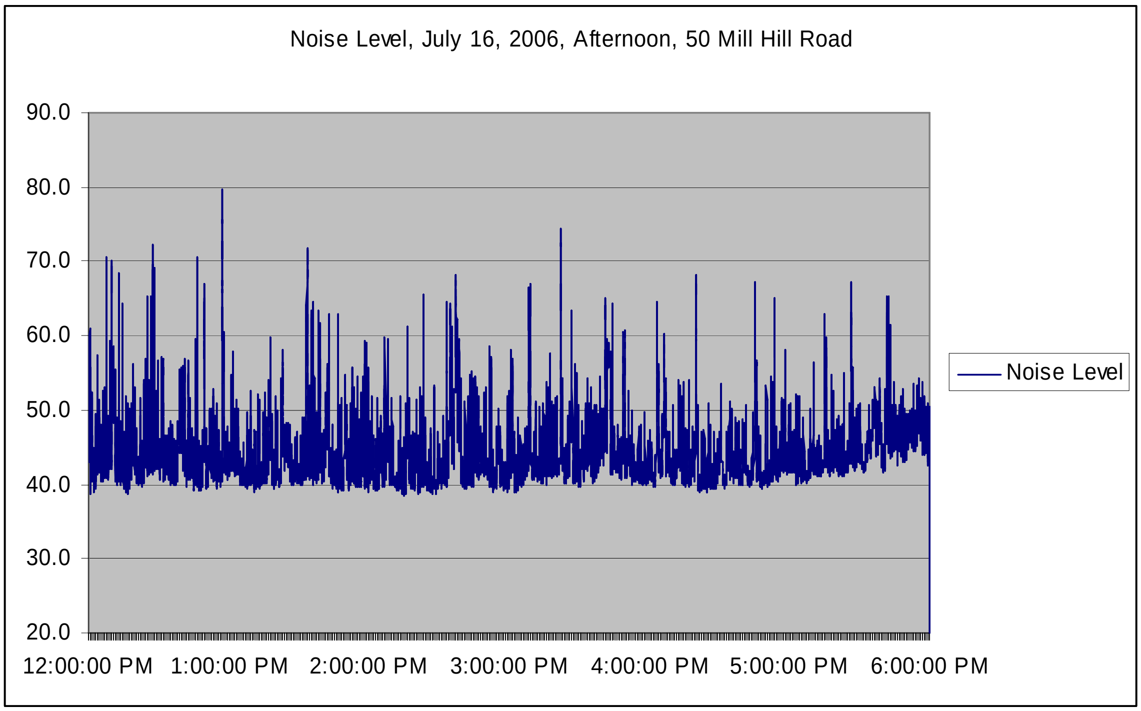
NOISE MONITORING, 50 MILL HILL LANE



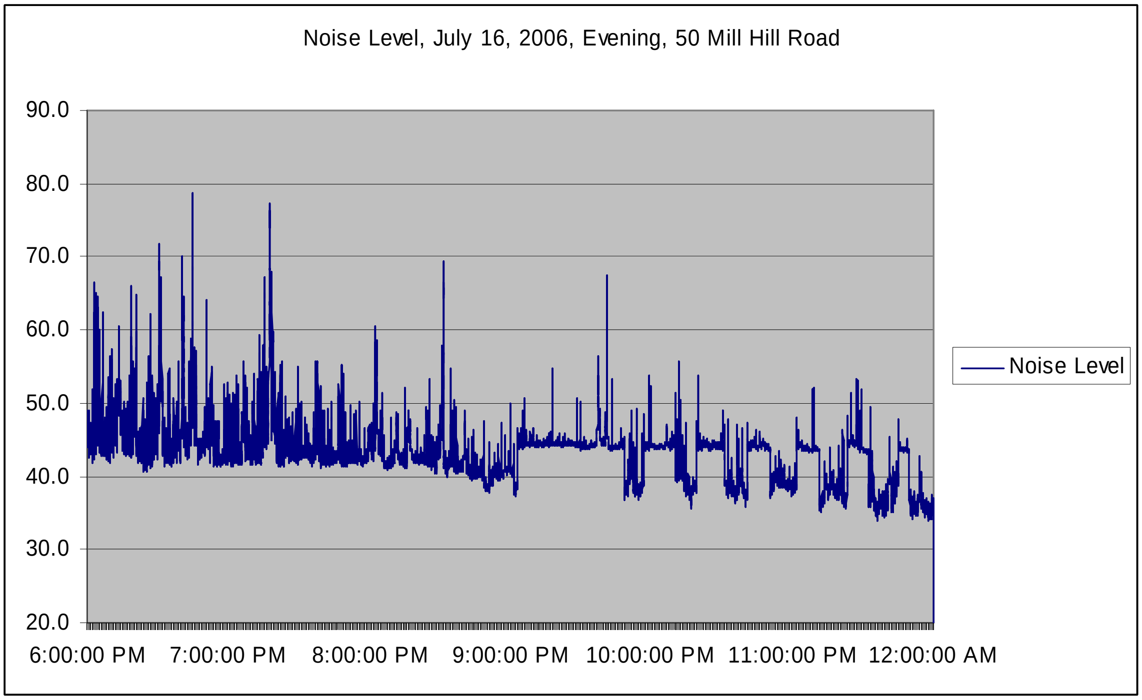


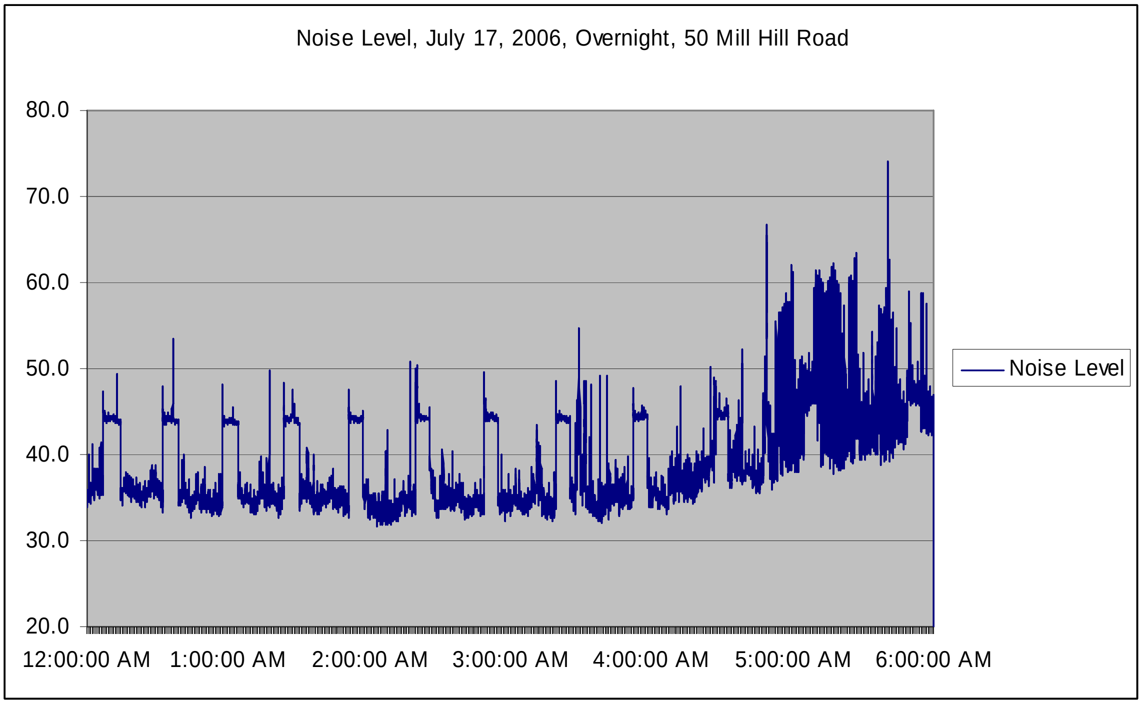
NOISE MONITORING, 50 MILL HILL LANE



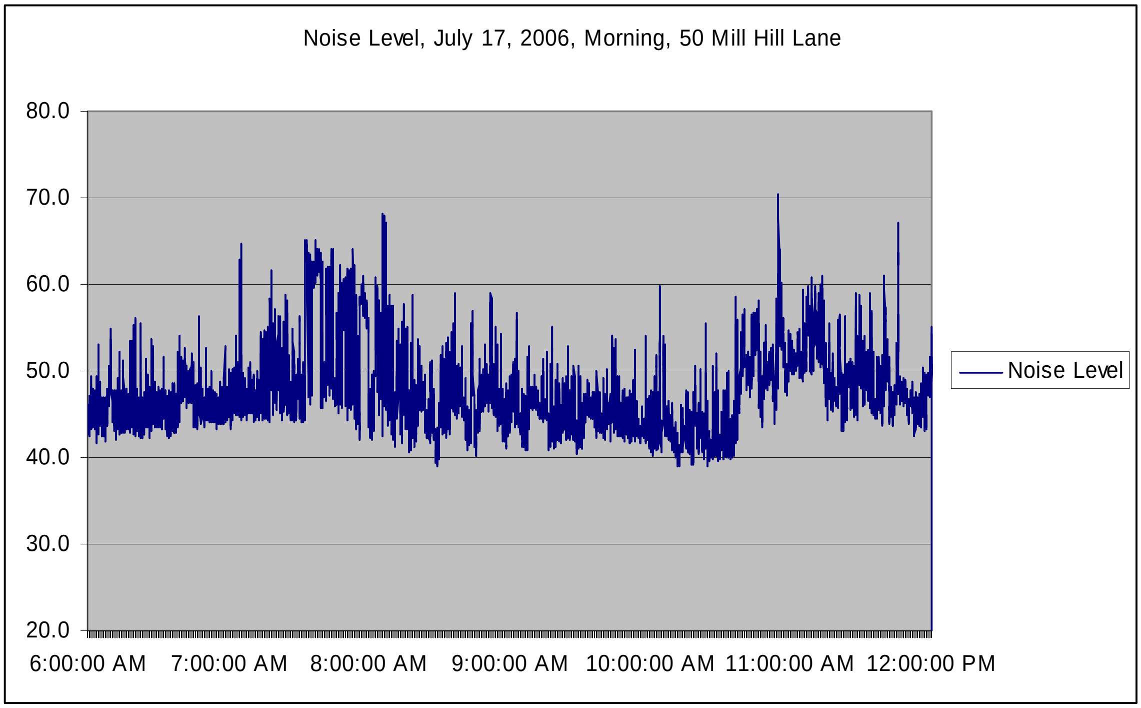


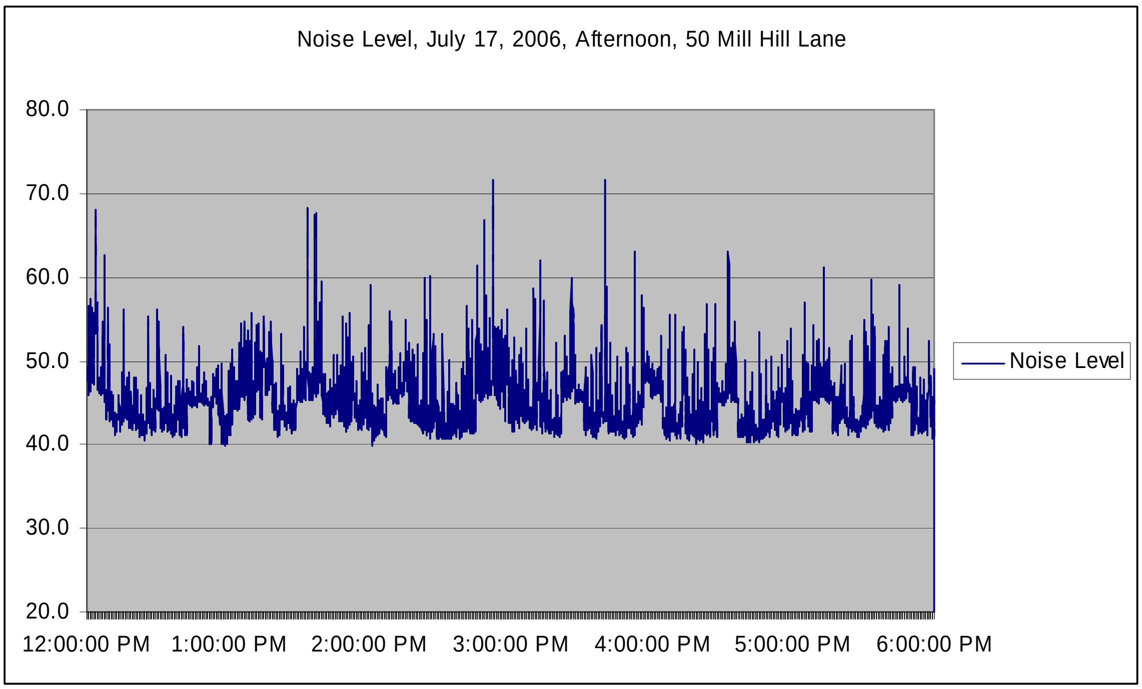
NOISE MONITORING, 50 MILL HILL LANE



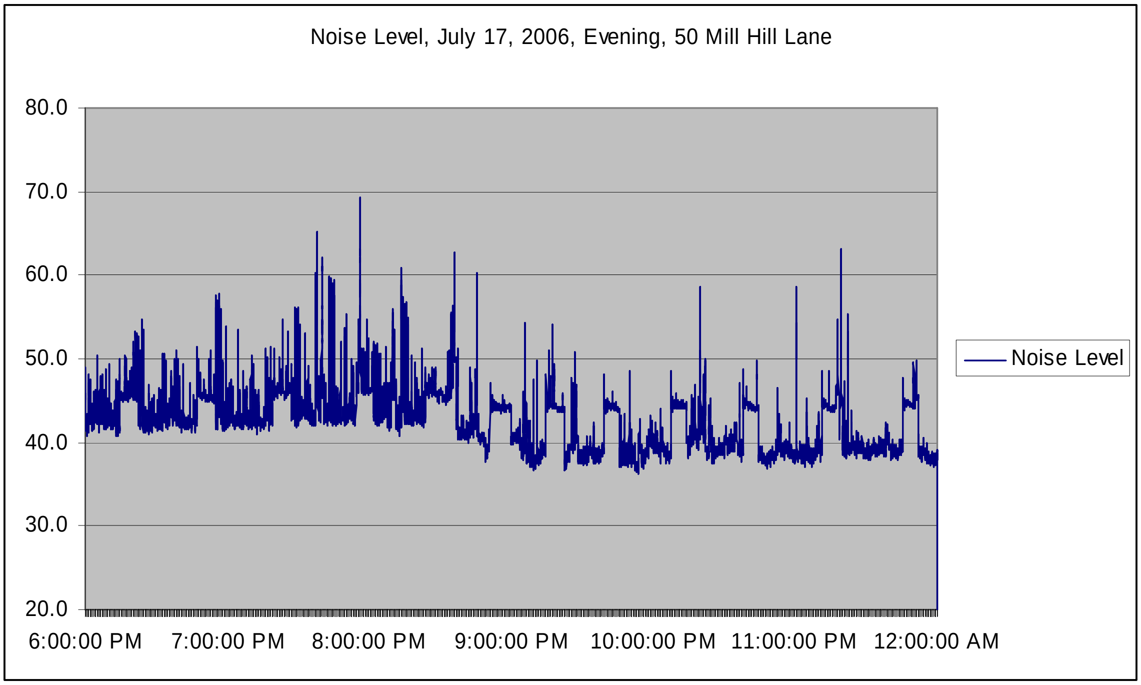


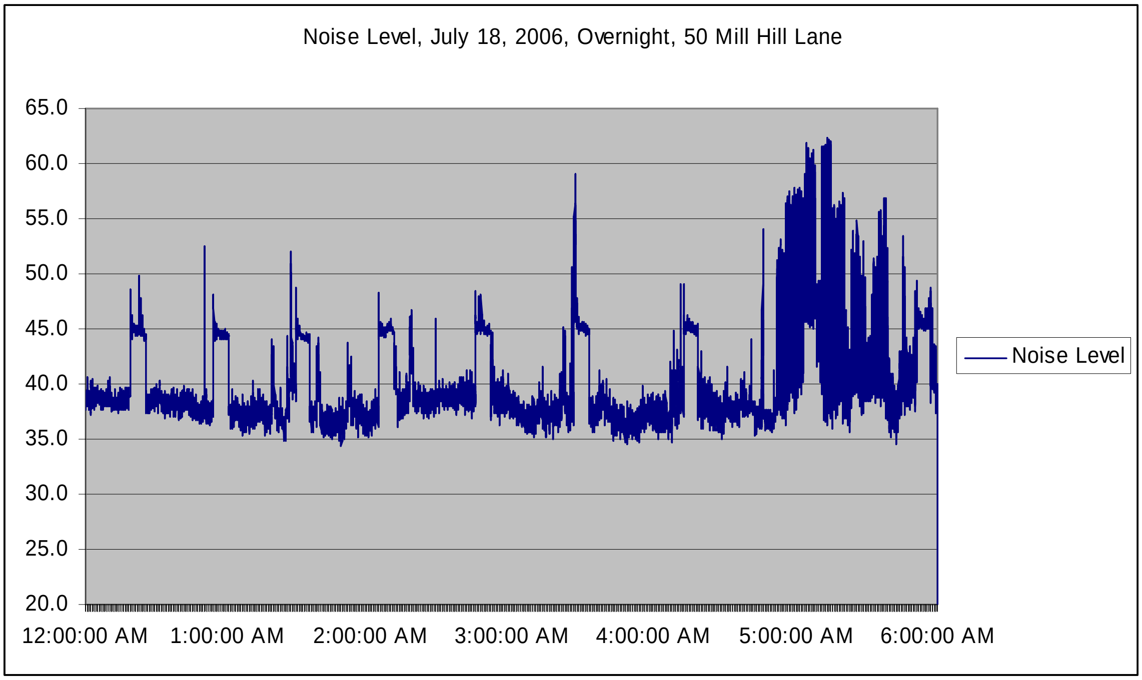
NOISE MONITORING, 50 MILL HILL LANE



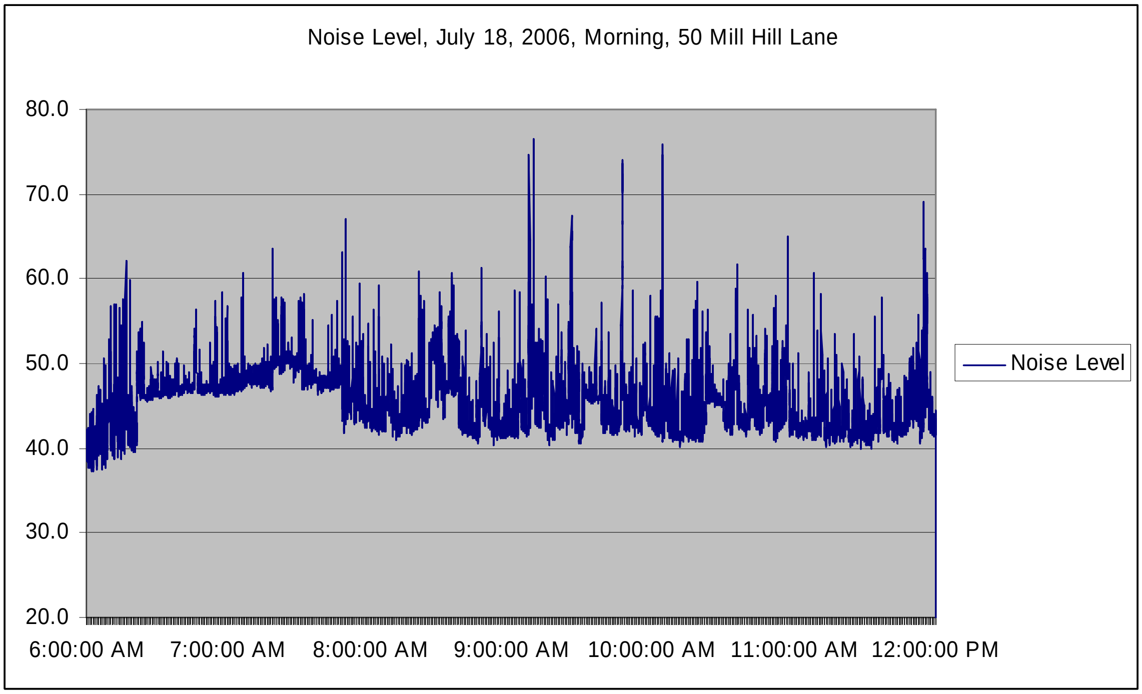


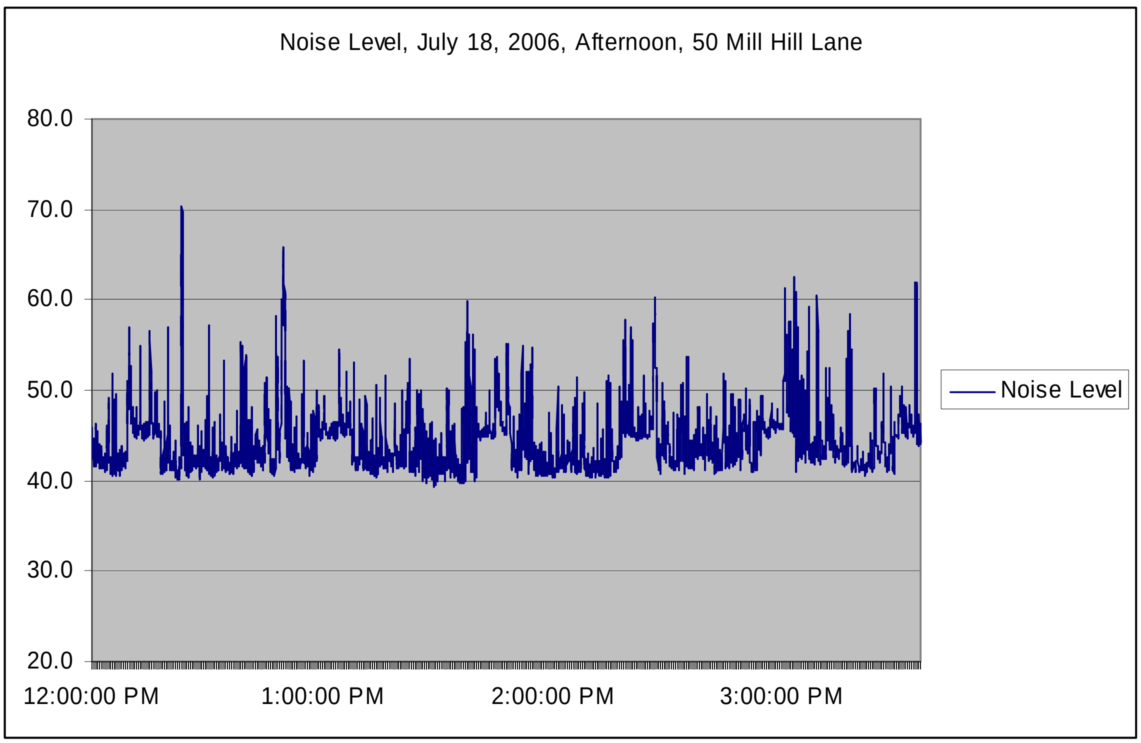
NOISE MONITORING, 50 MILL HILL LANE





NOISE MONITORING, 50 MILL HILL LANE





Leq = 49.04
Ldn = 59.96

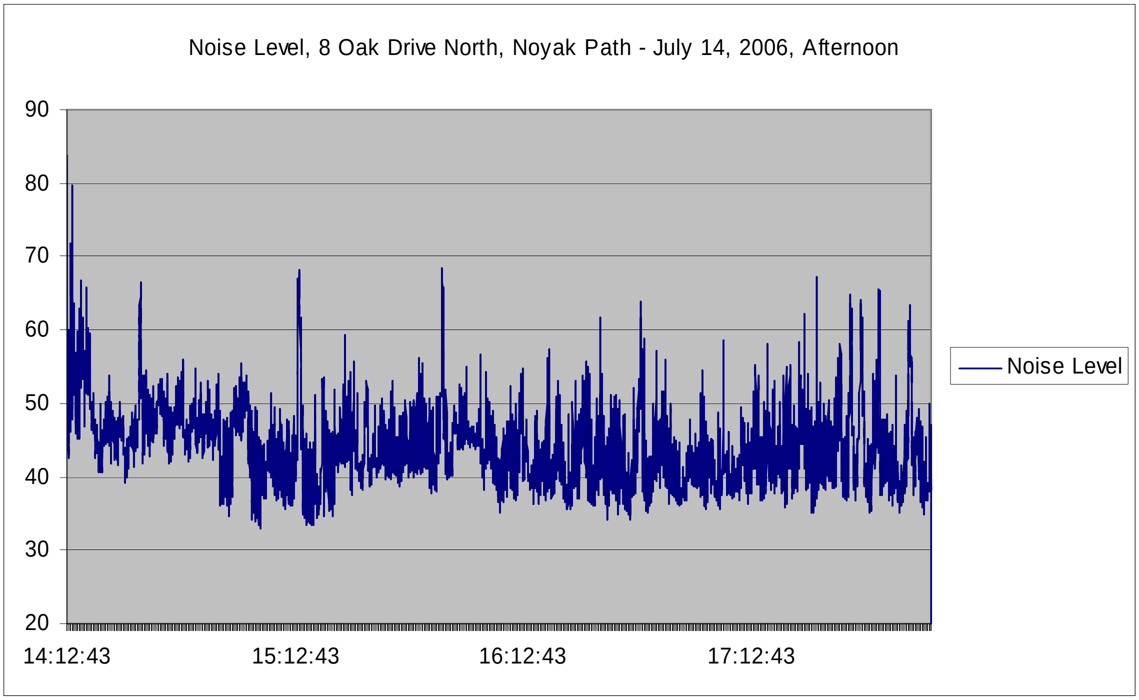
L90s:
11:39:35AM 43.4

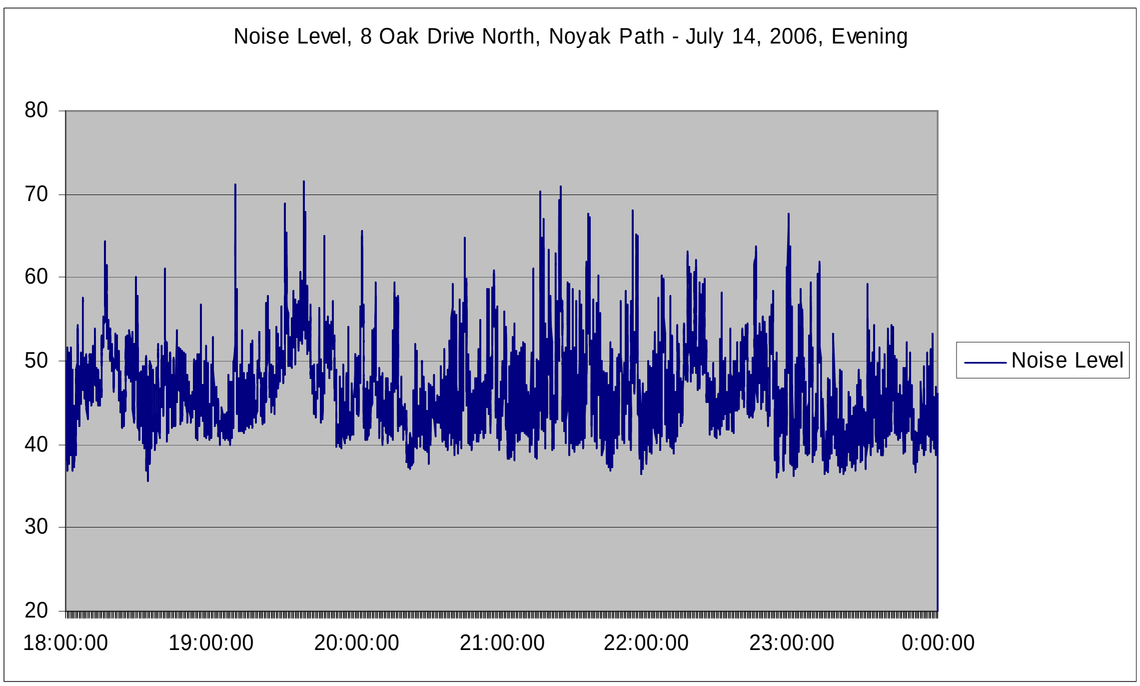
NOISE MONITORING, 50 MILL HILL LANE

4:05:05 PM	**43.7**
10:17:14PM	**38.7**
2:44:00 AM	**33.6**
8:11:31 AM	**38.6**
4:32:06 PM	**41.9**
11:51:55PM	**36.6**
1:16:23 AM	**33.1**
6:15:24 AM	**37.3**
3:16:03 PM	**40.2**
8:50:47 PM	**38.2**
2:06:03 AM	**34.0**
10:22:54AM	**42.6**
3:48:09 PM	**41.7**
9:24:11 PM	**38.4**
3:17:57 AM	**36.6**
6:19:55 AM	**41.7**
1:19:49 PM	**41.5**

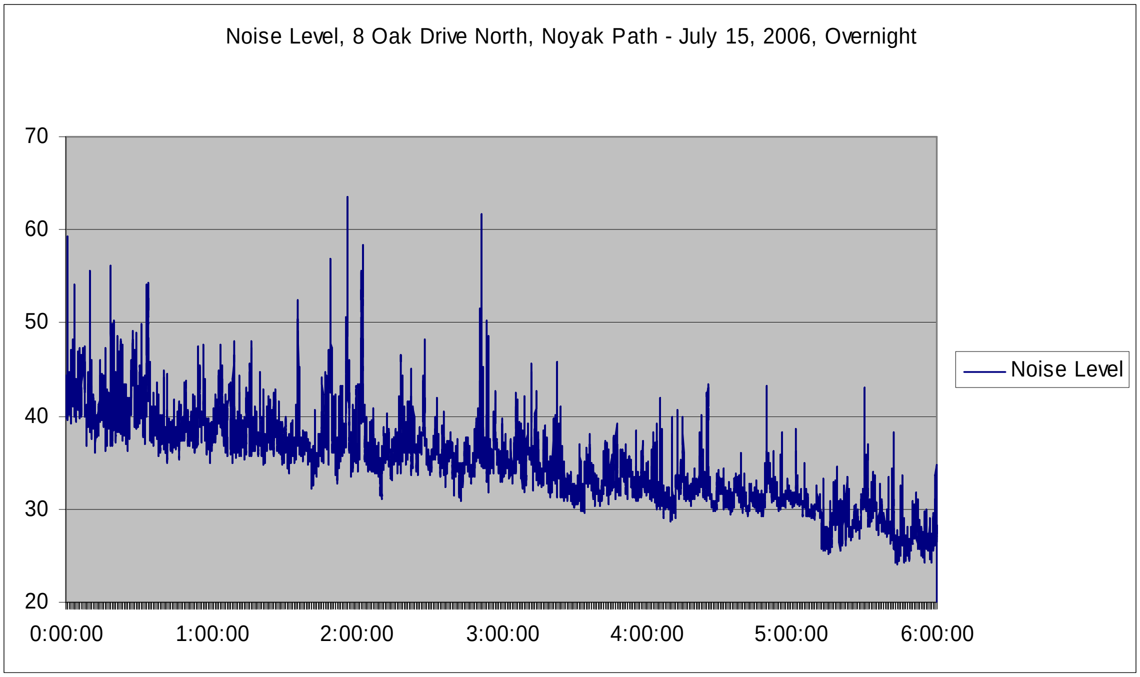
Riley

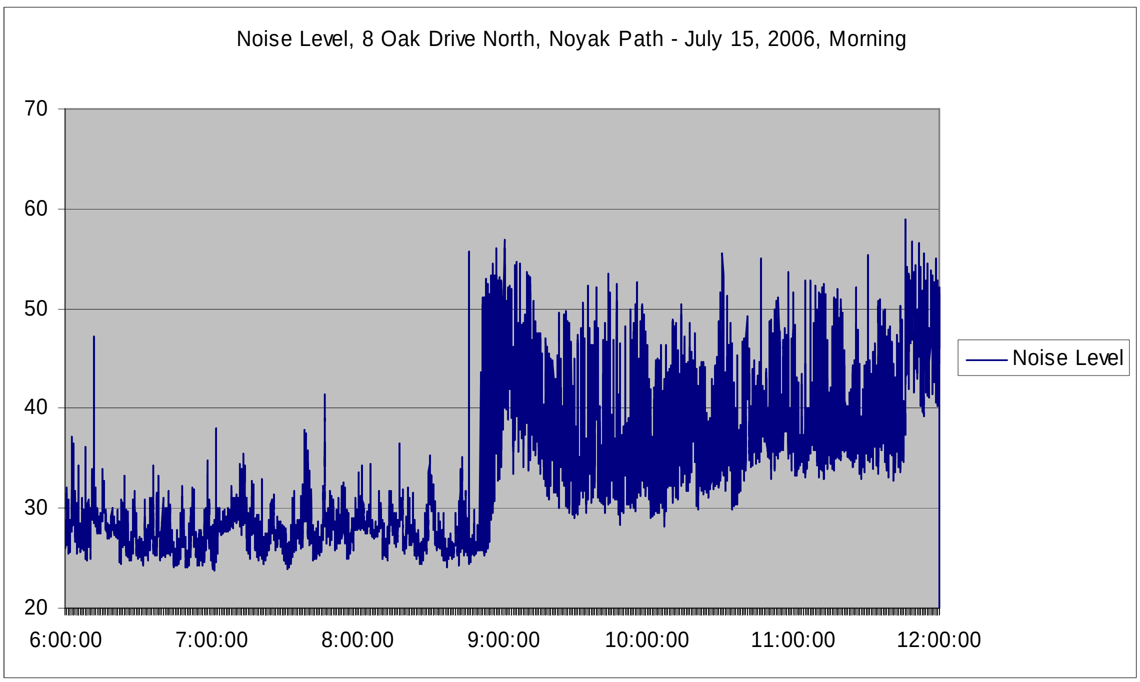
NOISE MONITORING, 8 OAK DRIVE NORTH, NOYAK PATH



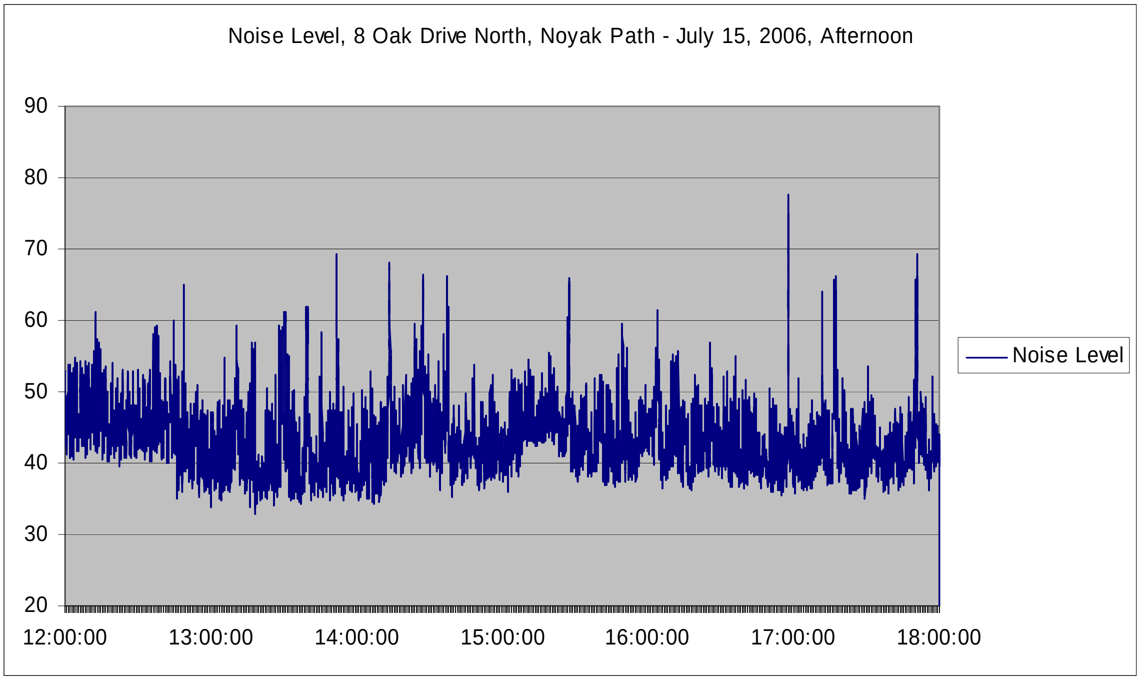


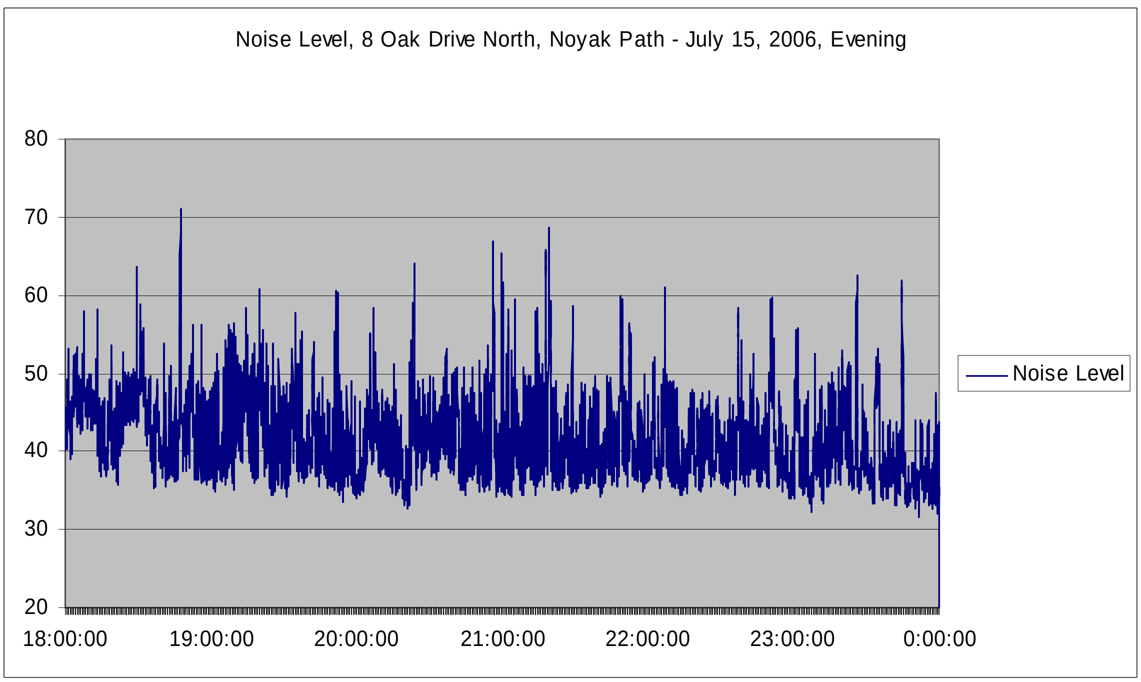
NOISE MONITORING, 8 OAK DRIVE NORTH, NOYAK PATH



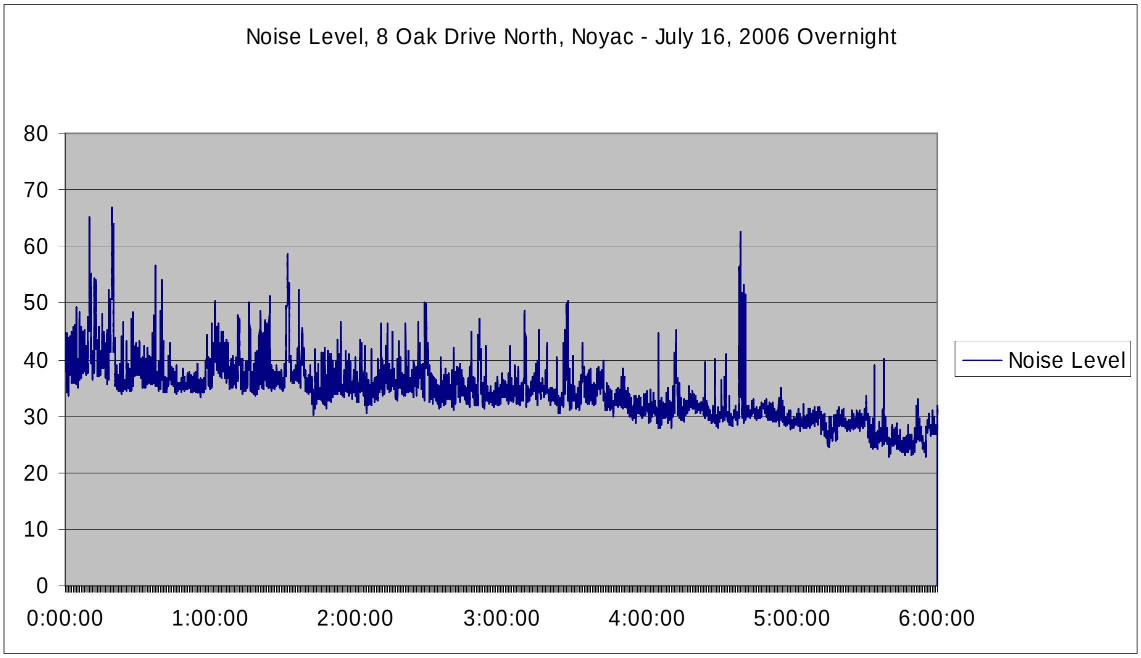


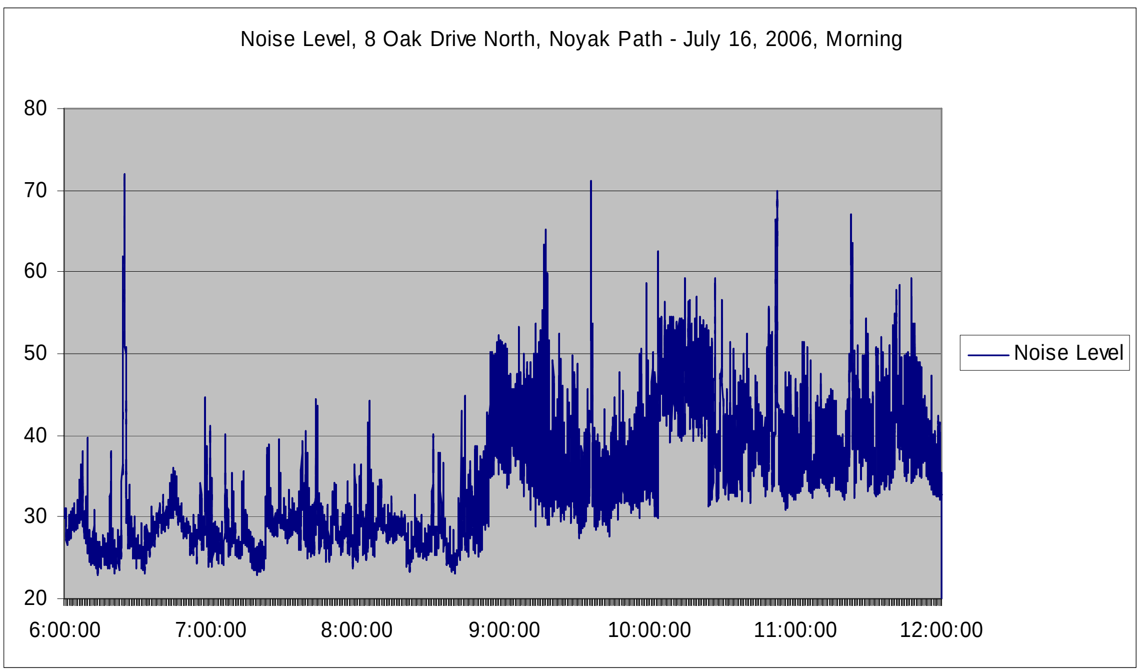
NOISE MONITORING, 8 OAK DRIVE NORTH, NOYAK PATH



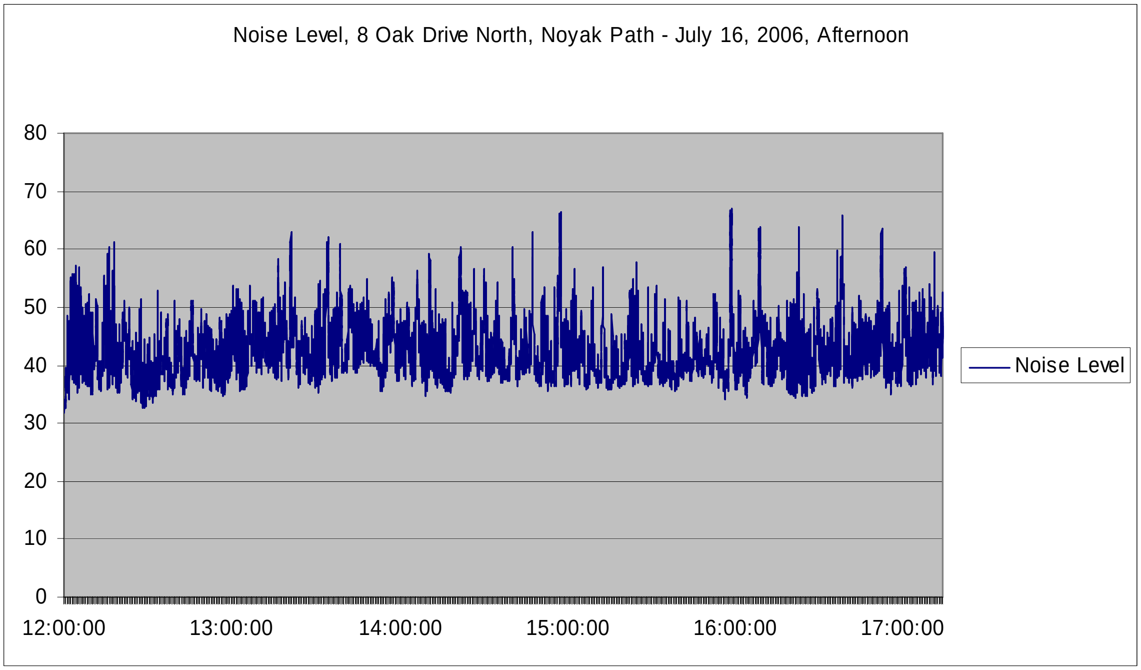


NOISE MONITORING, 8 OAK DRIVE NORTH, NOYAK PATH





NOISE MONITORING, 8 OAK DRIVE NORTH, NOYAK PATH



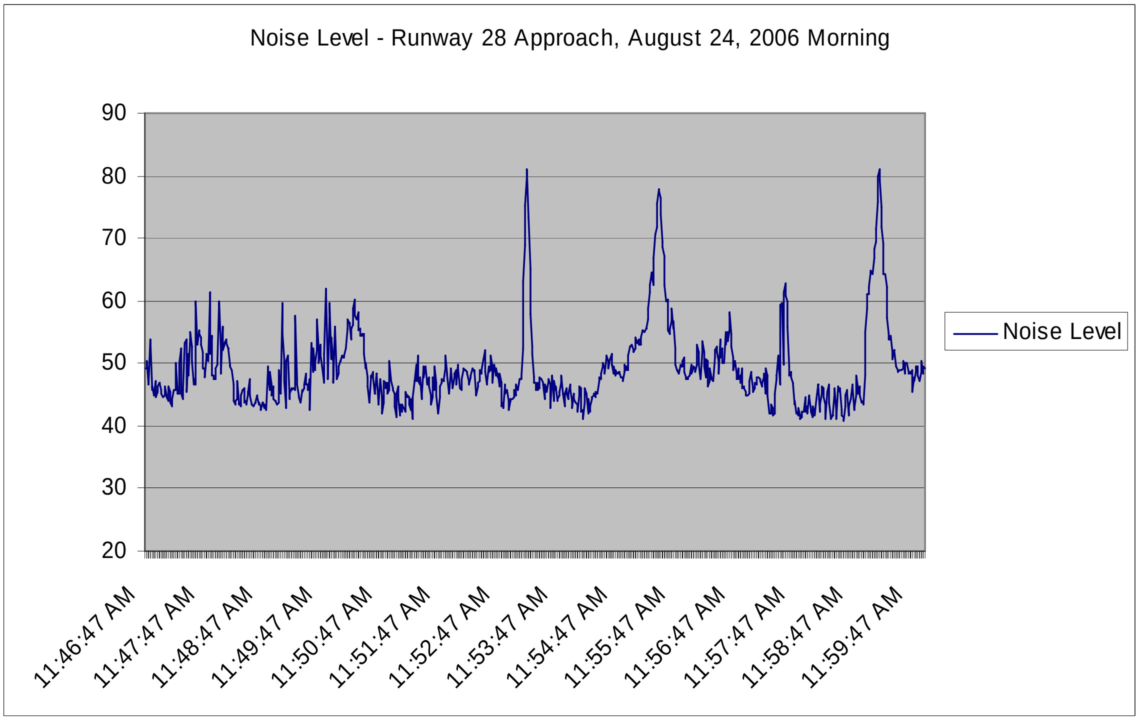
Leq = 46.85
Ldn = 50.48

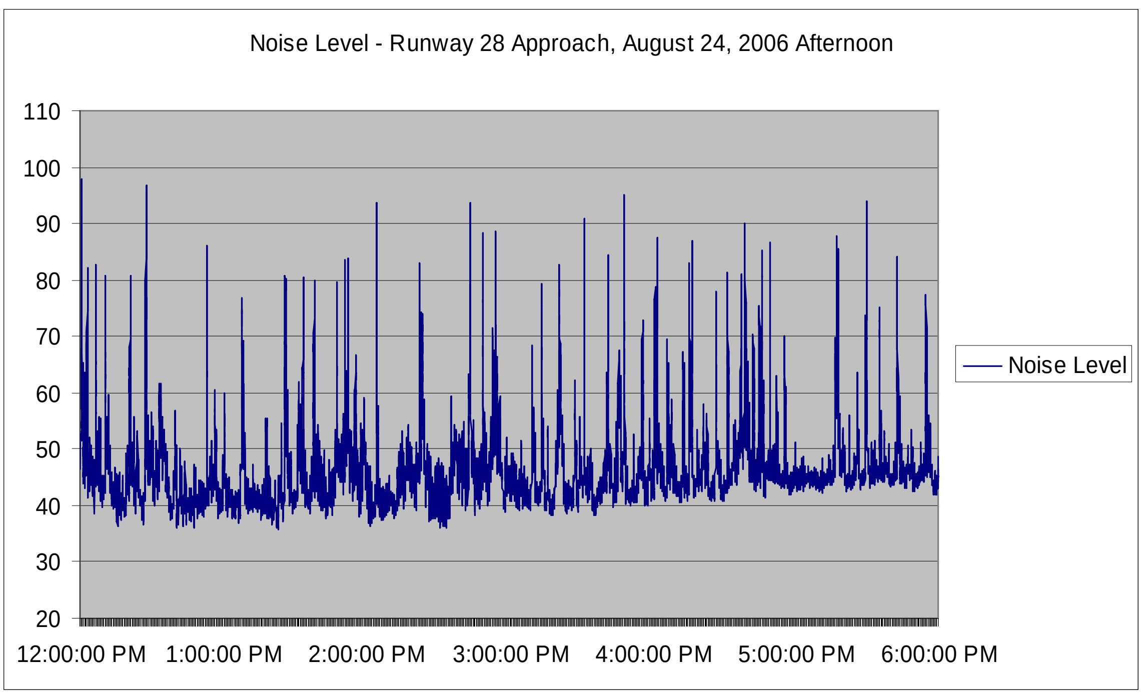
L90s:

16:30:24	**37.9**
17:27:10	**38.6**
19:53:52	**40.6**
5:08:56	**29.2**
7:33:35	**26**
13:57:21	**37.8**
20:00:11	**35.8**
5:29:31	**28.4**
6:16:20	**26.1**
12:17:24	**37.1**

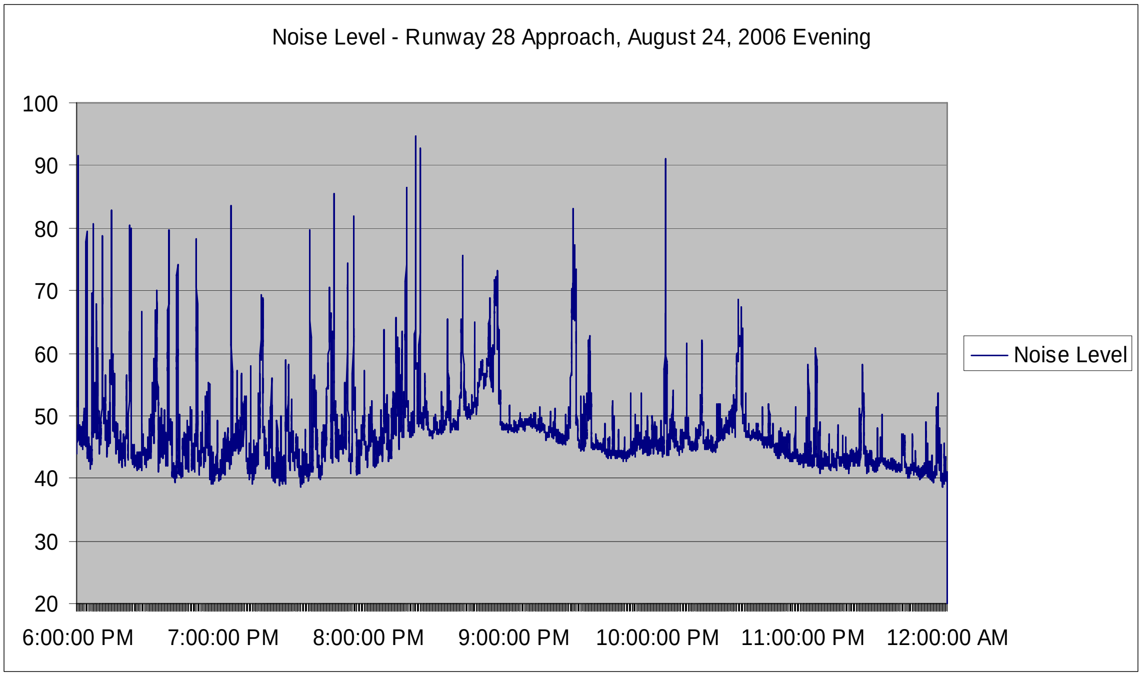
Runway 28 Approach

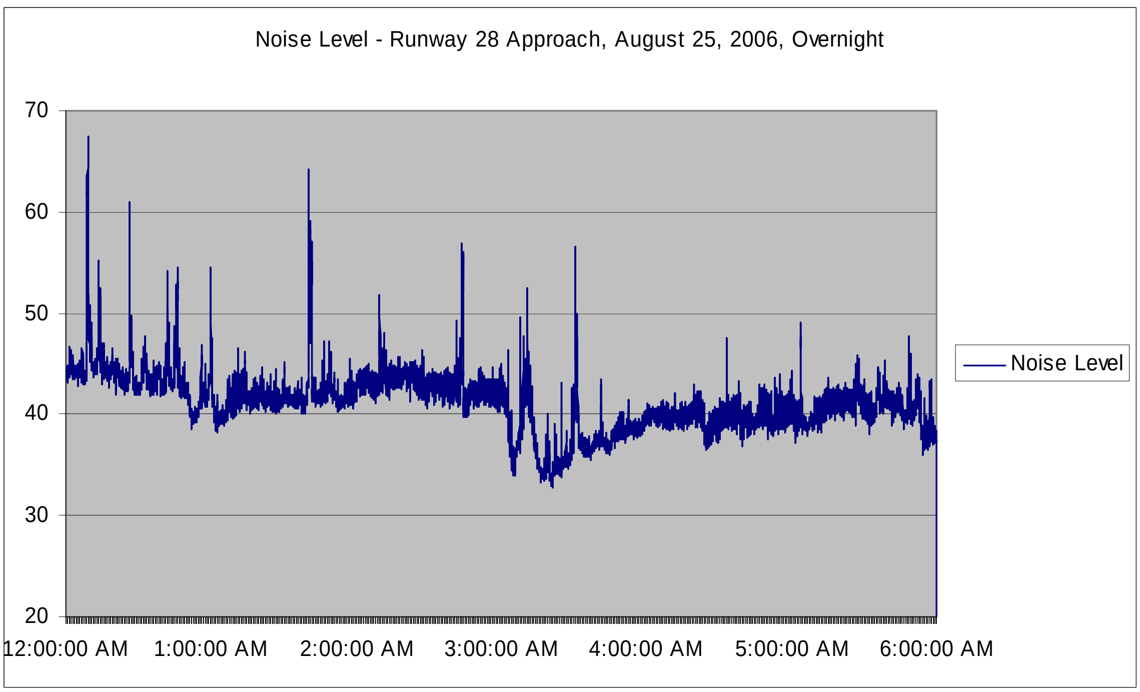
NOISE MONITORING, RUNWAY 28 APPROACH



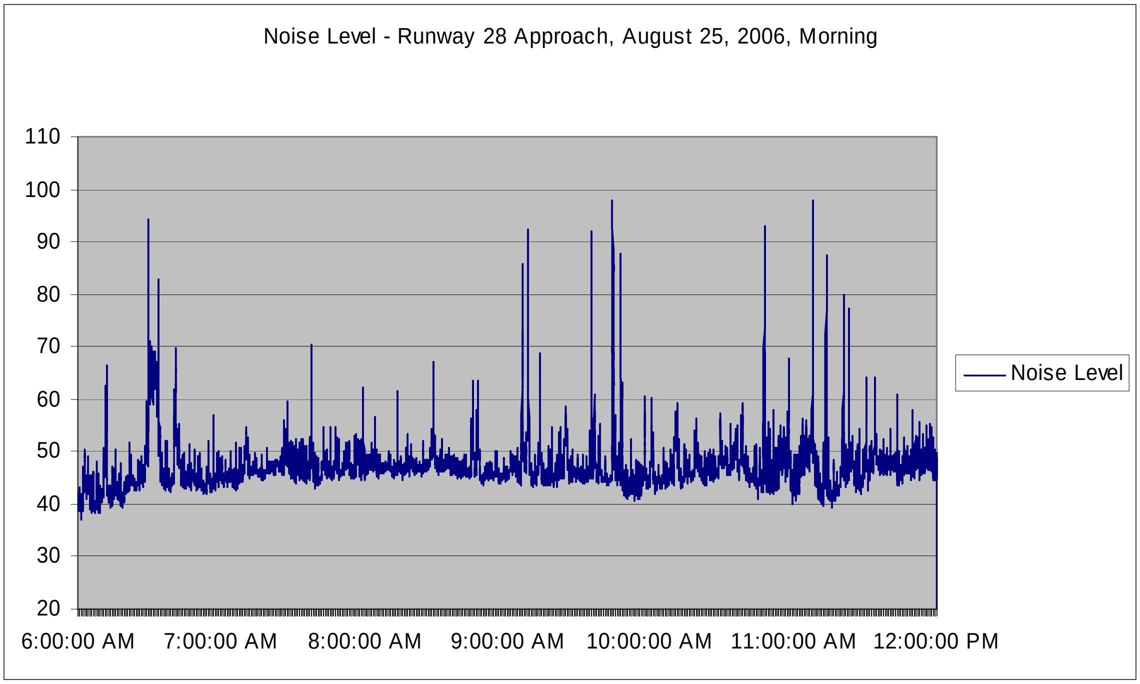


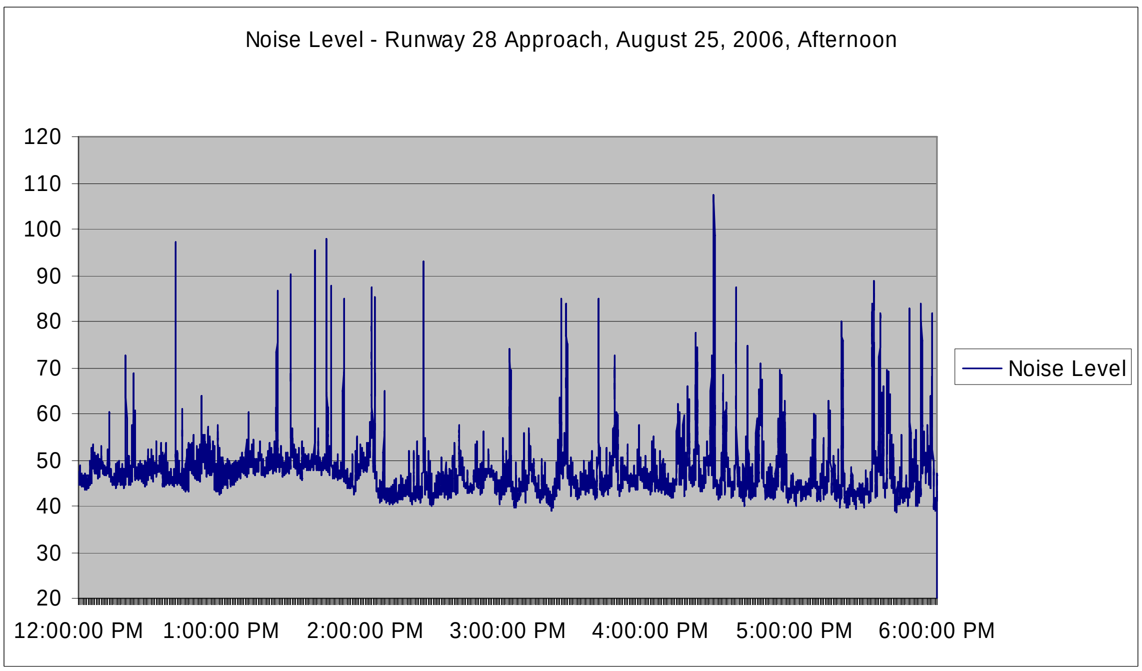
NOISE MONITORING, RUNWAY 28 APPROACH



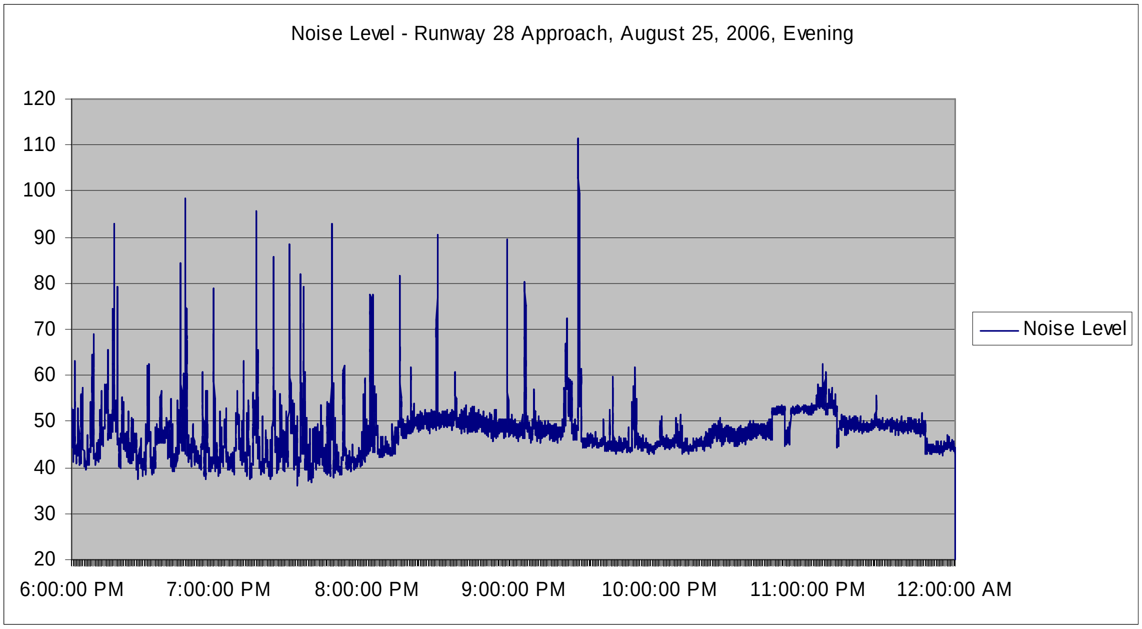


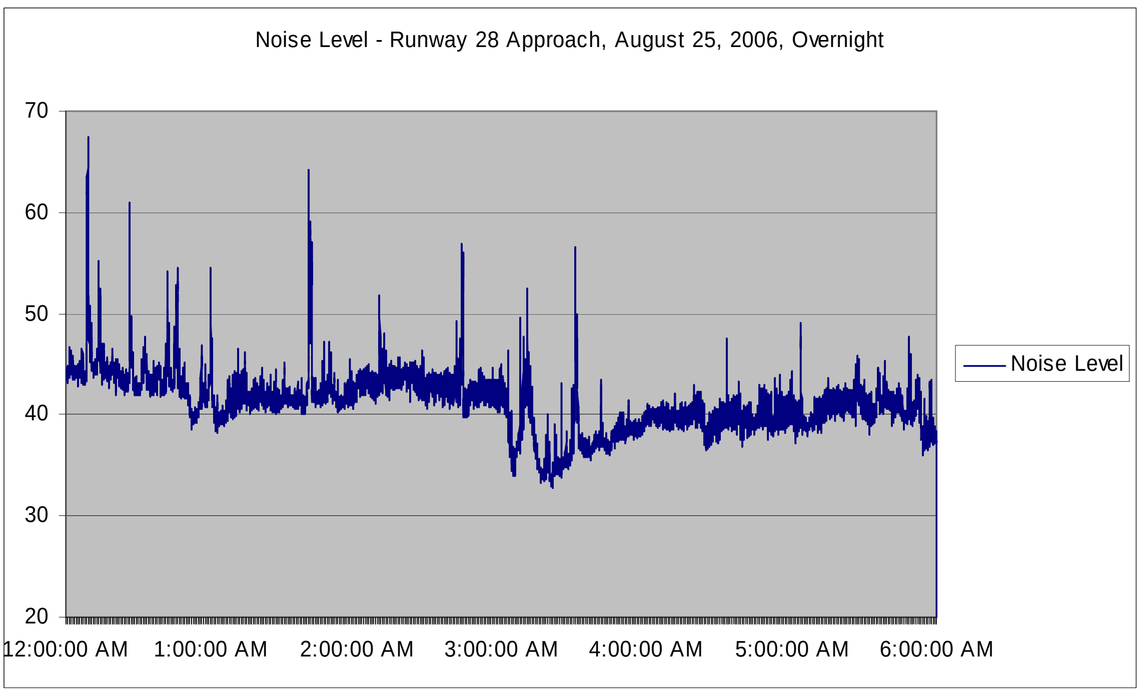
NOISE MONITORING, RUNWAY 28 APPROACH



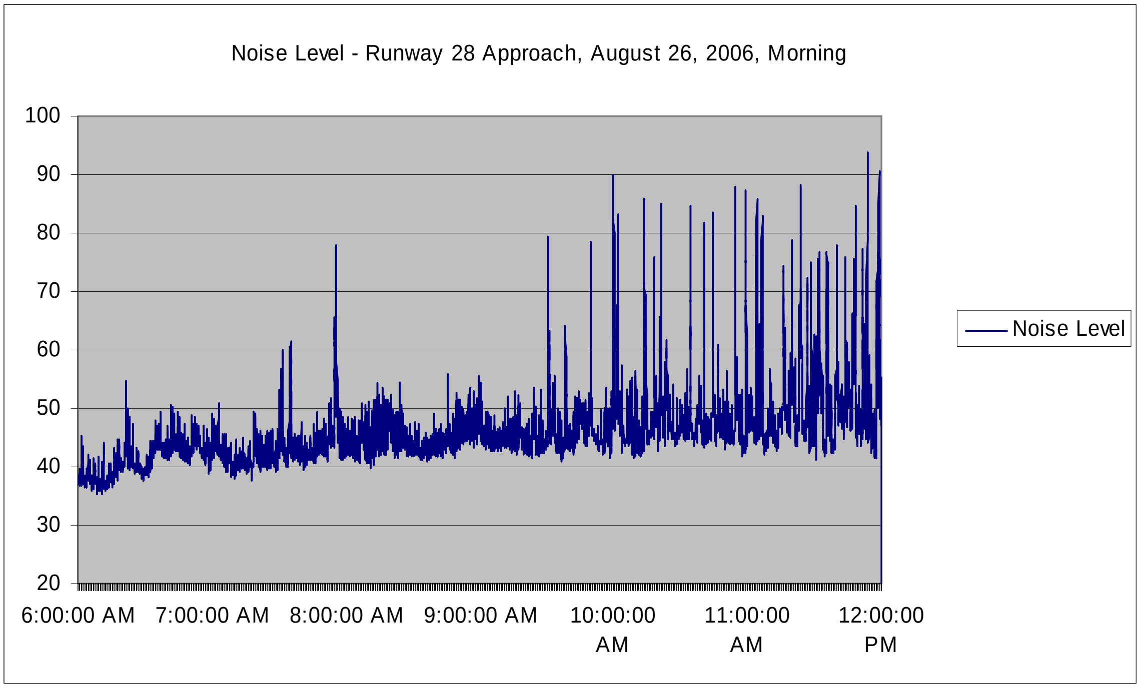


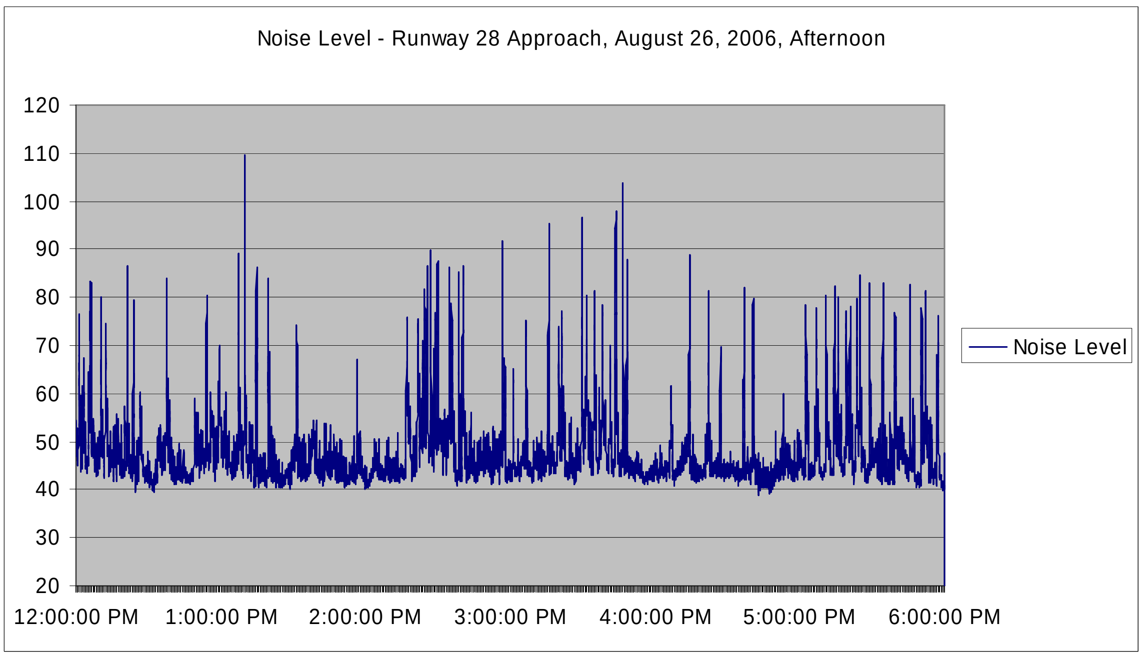
NOISE MONITORING, RUNWAY 28 APPROACH



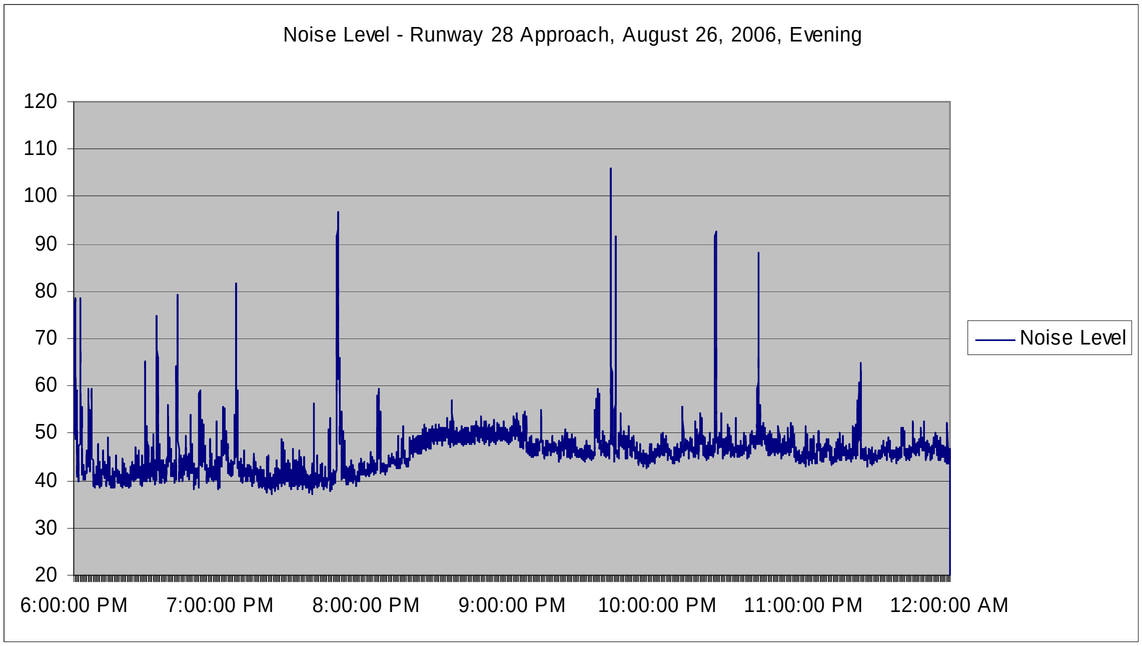


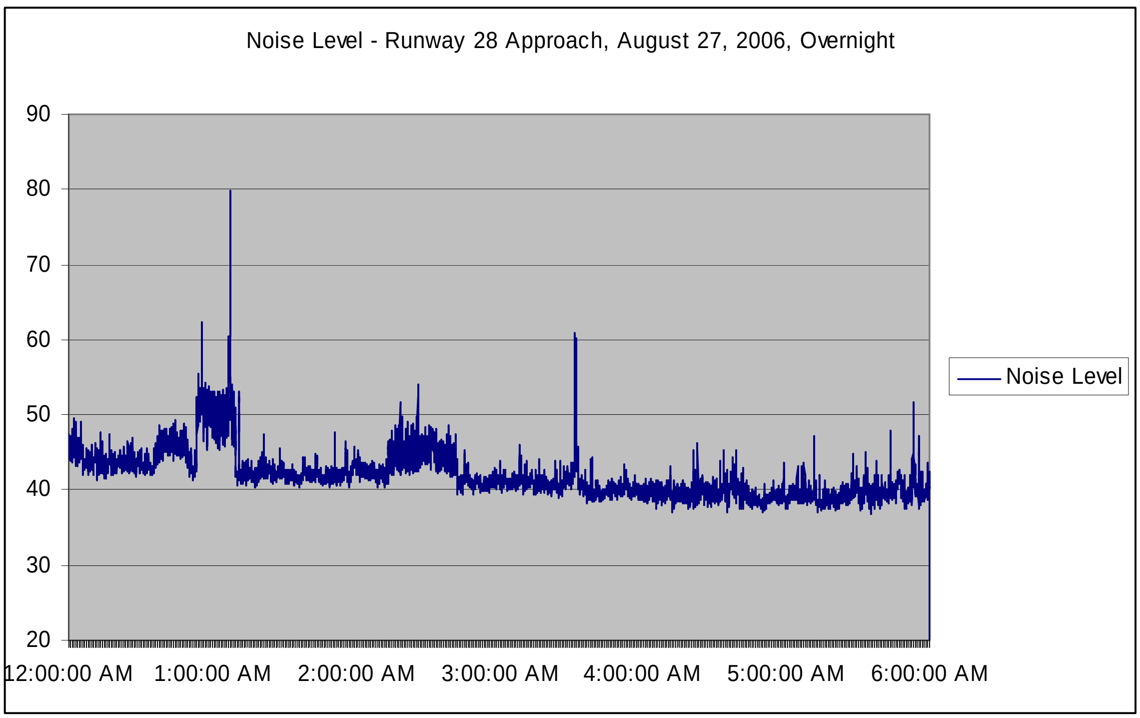
NOISE MONITORING, RUNWAY 28 APPROACH



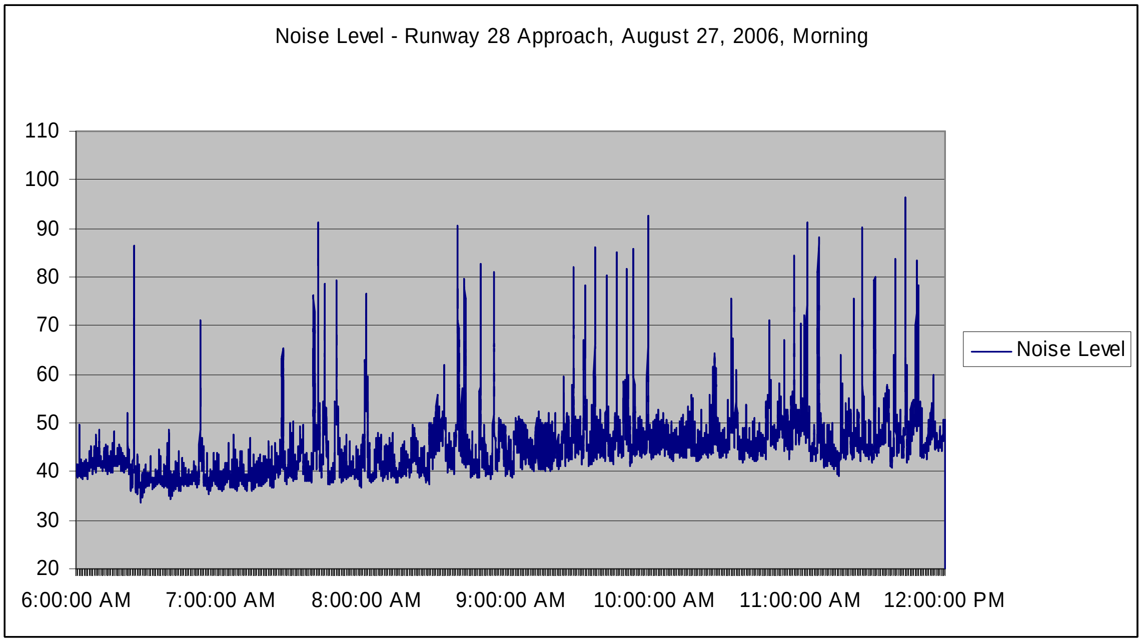


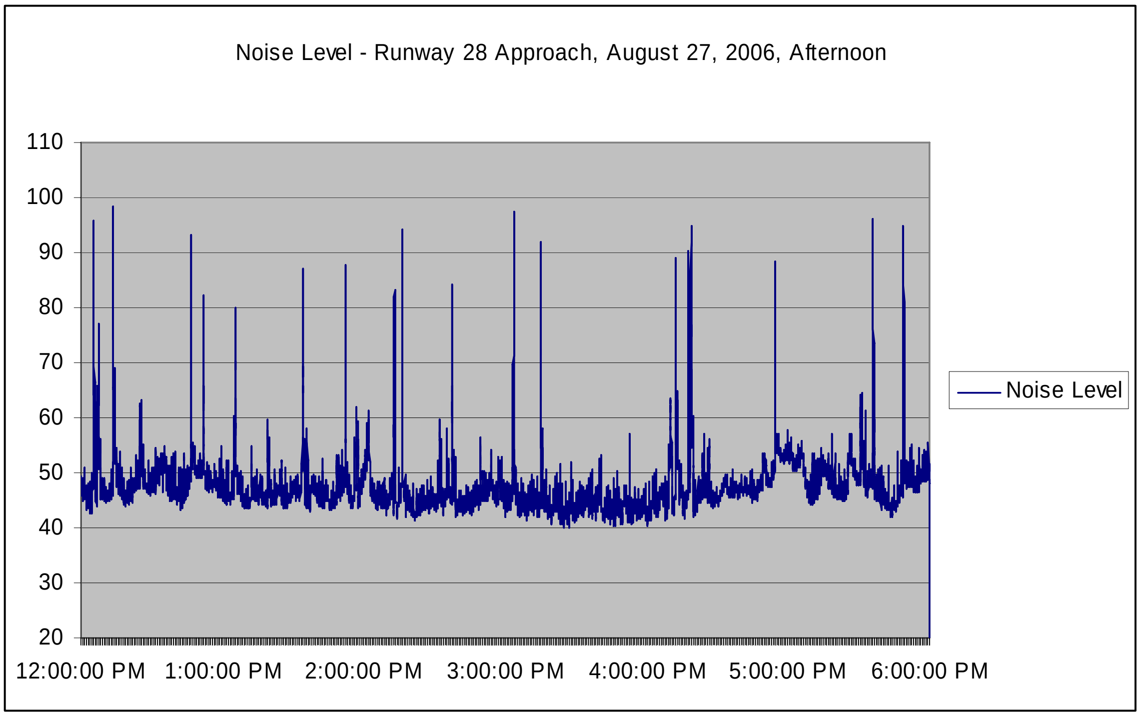
NOISE MONITORING, RUNWAY 28 APPROACH



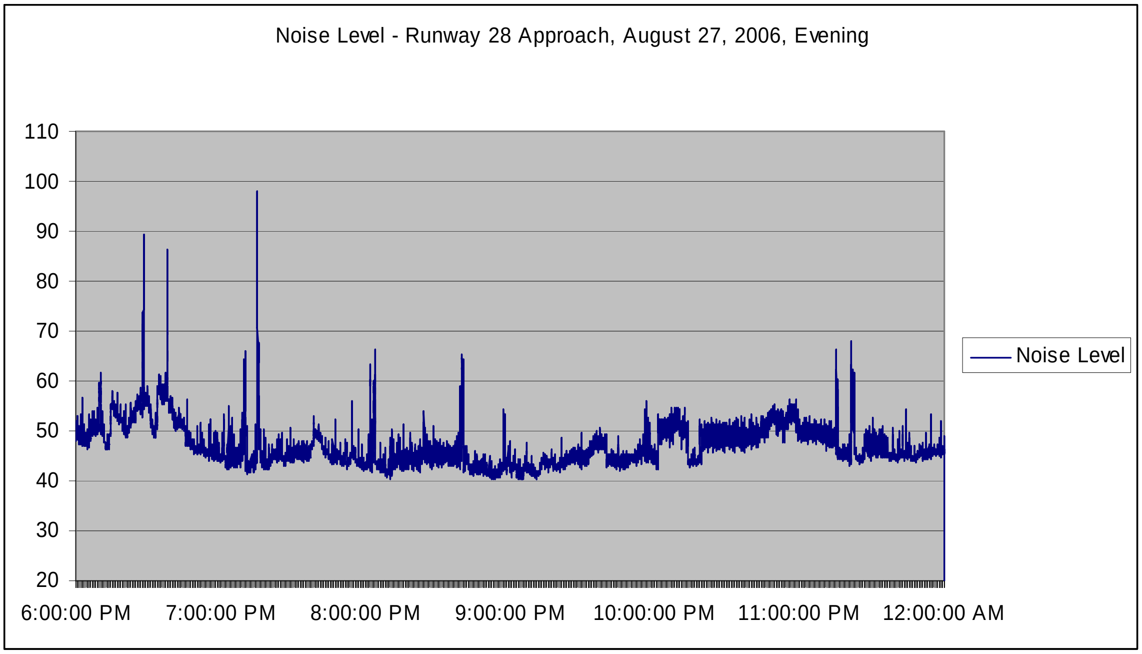


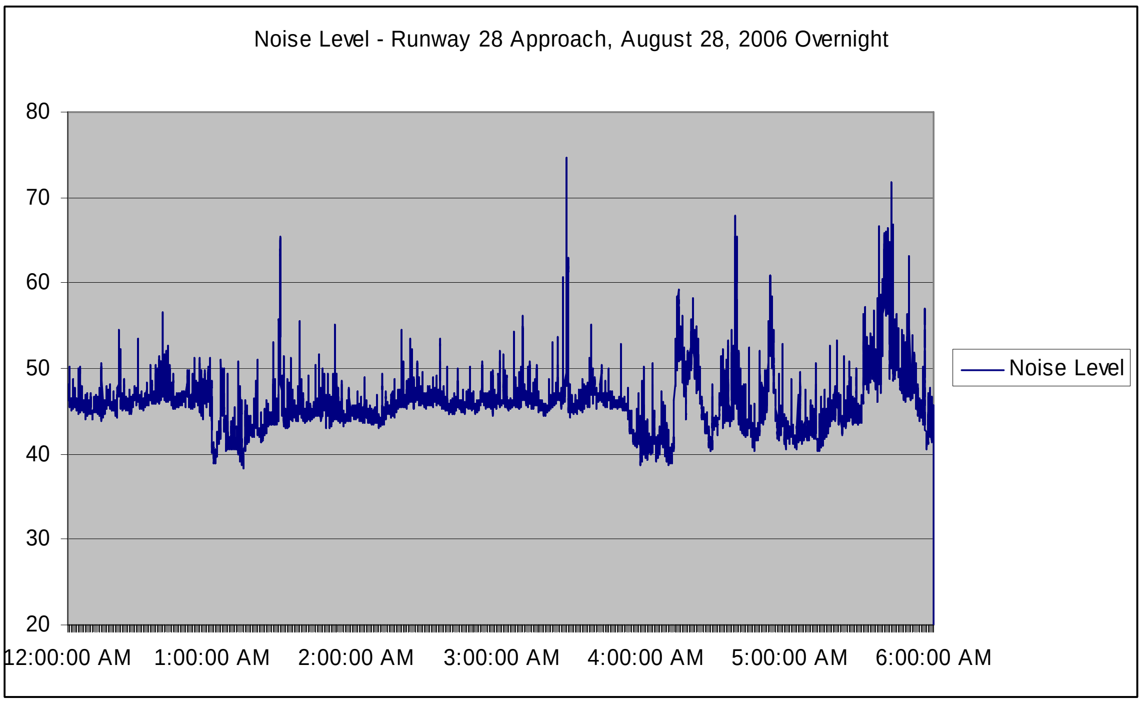
NOISE MONITORING, RUNWAY 28 APPROACH



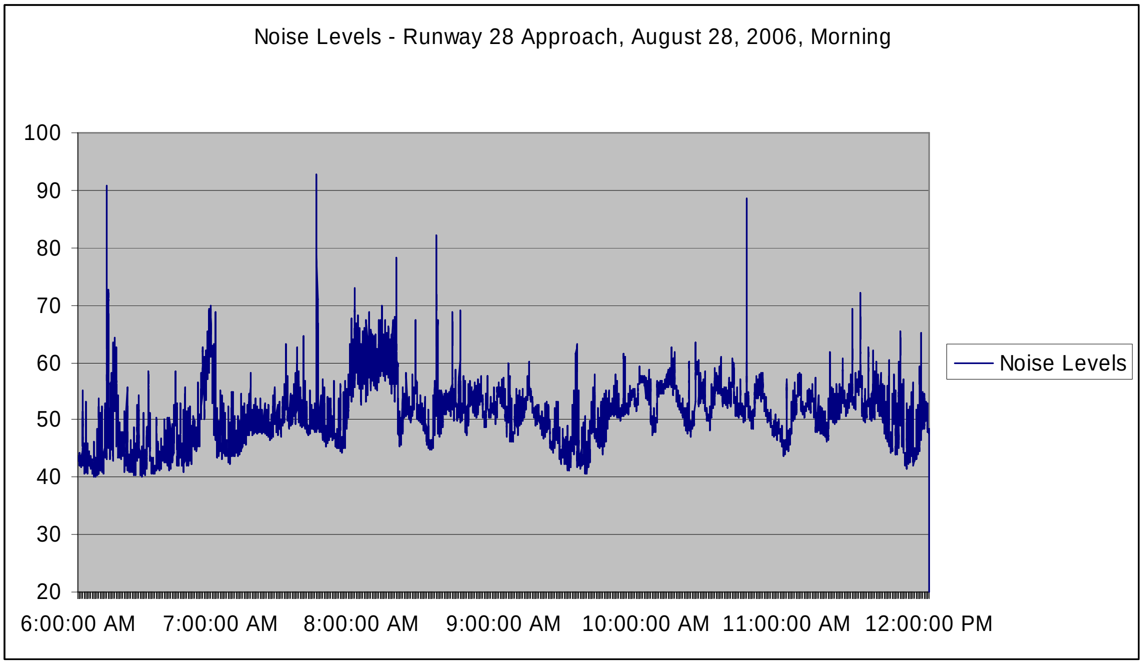


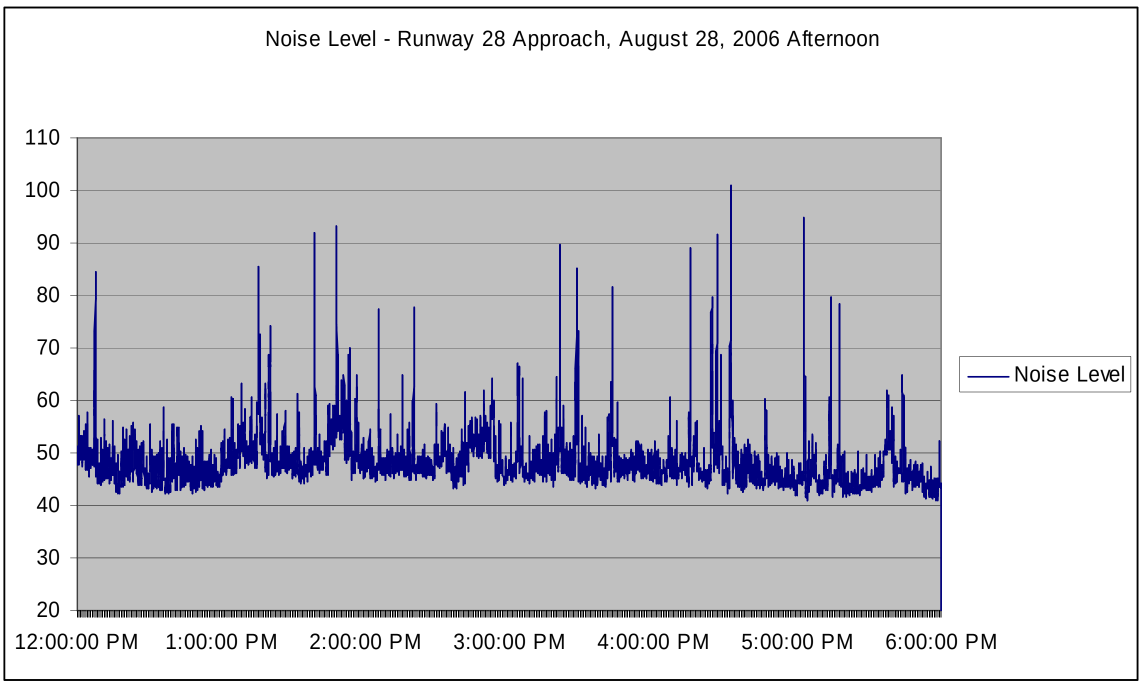
NOISE MONITORING, RUNWAY 28 APPROACH



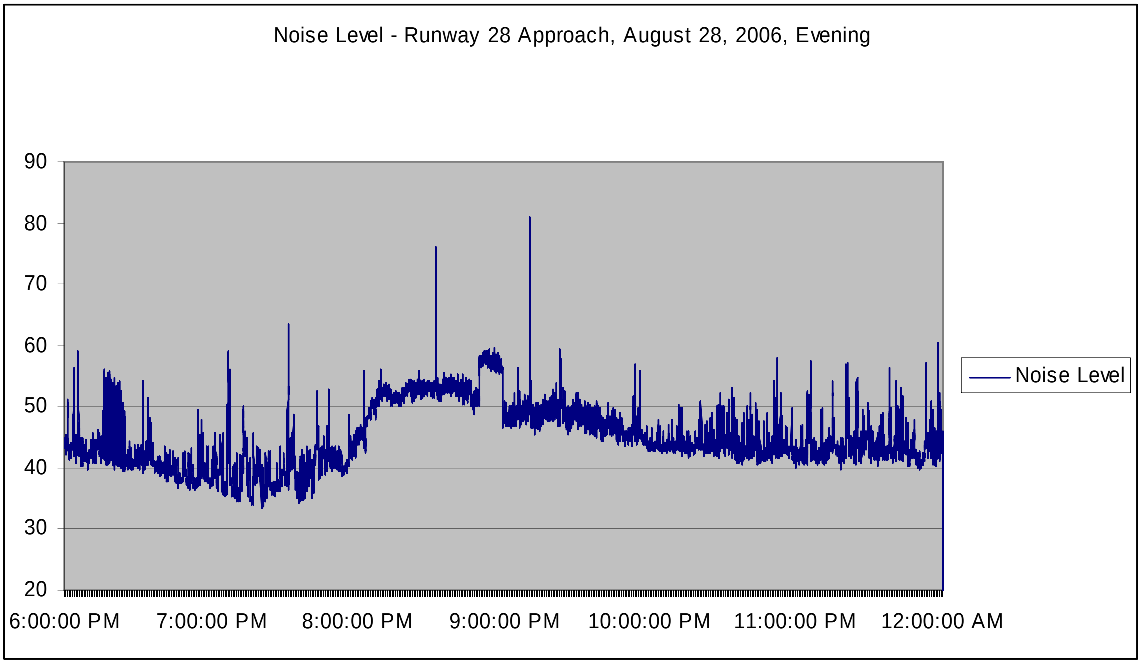


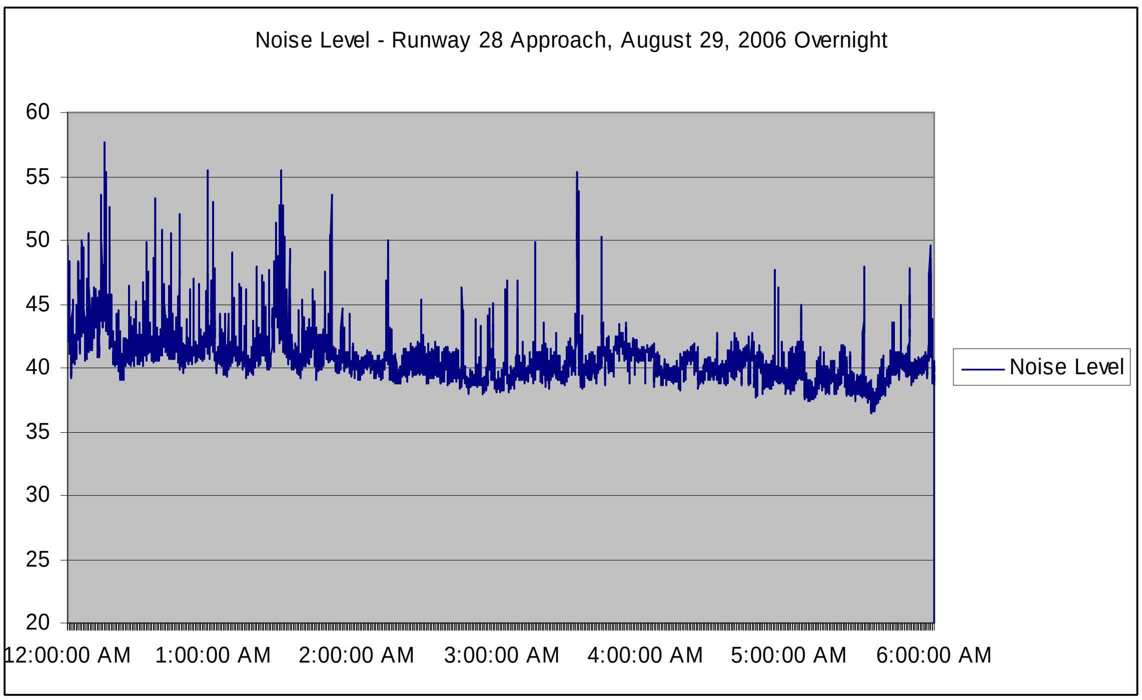
NOISE MONITORING, RUNWAY 28 APPROACH





NOISE MONITORING, RUNWAY 28 APPROACH





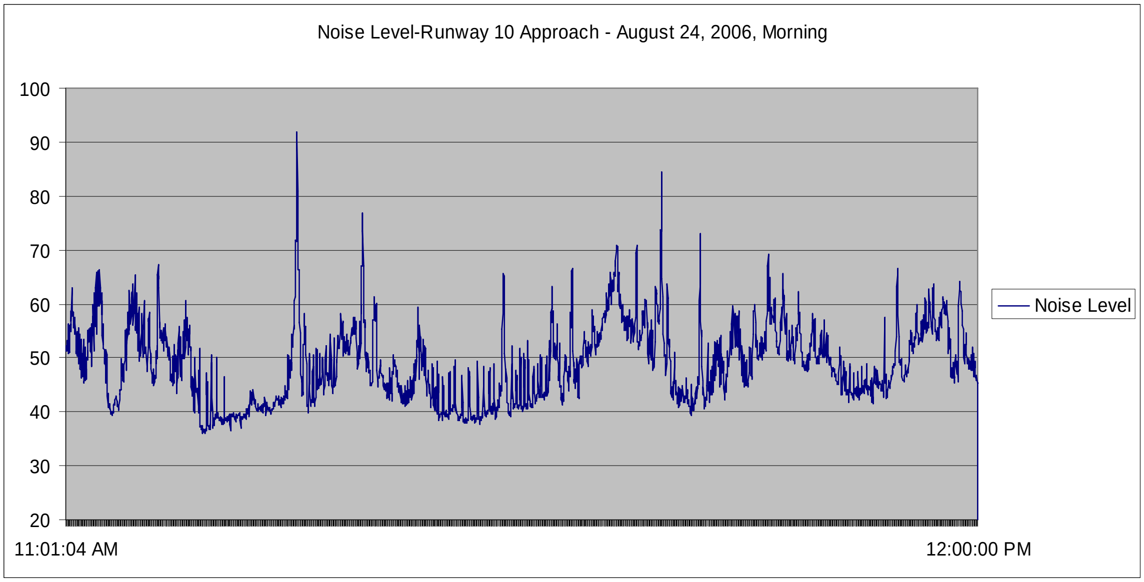
Leq = 64.79
Ldn = 65.57

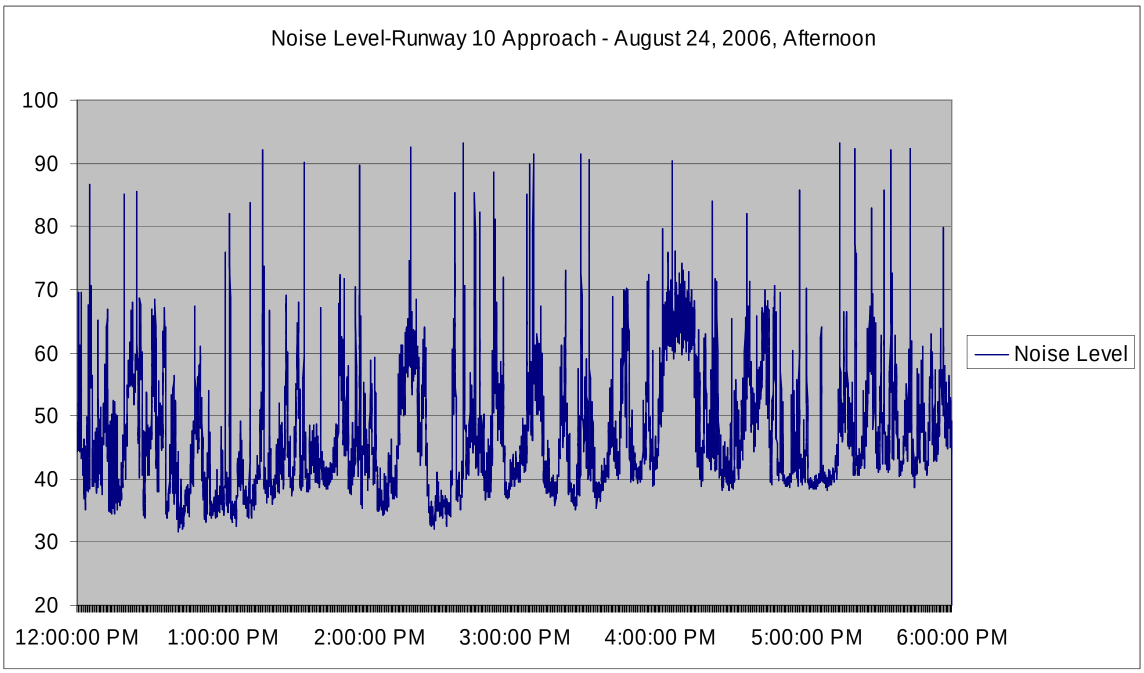
L90s:

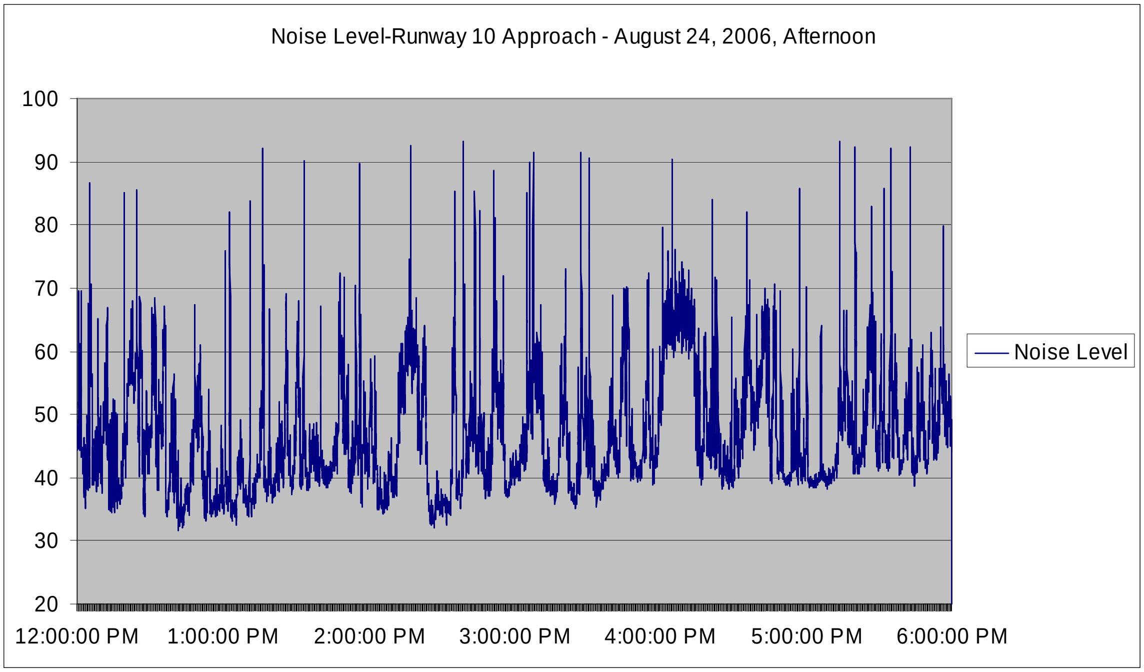
2:12:49 PM	40.1
11:50:17PM	41.8
3:55:58 AM	35.5
9:54:21 AM	43.4
2:14:36 PM	42.5
7:55:35 PM	41.5
3:03:23 AM	37.6
7:25:52 AM	40.5
1:55:25 PM	42.3
6:43:33 PM	40.5
4:45:09 AM	39
6:37:59 AM	38.6
2:41:21 PM	43.4
7:59:53 PM	42.9
4:45:46 AM	42
7:01:58 AM	43.9
12:28:45 PM	44.1
7:22:40 PM	39.3
2:56:35 AM	39

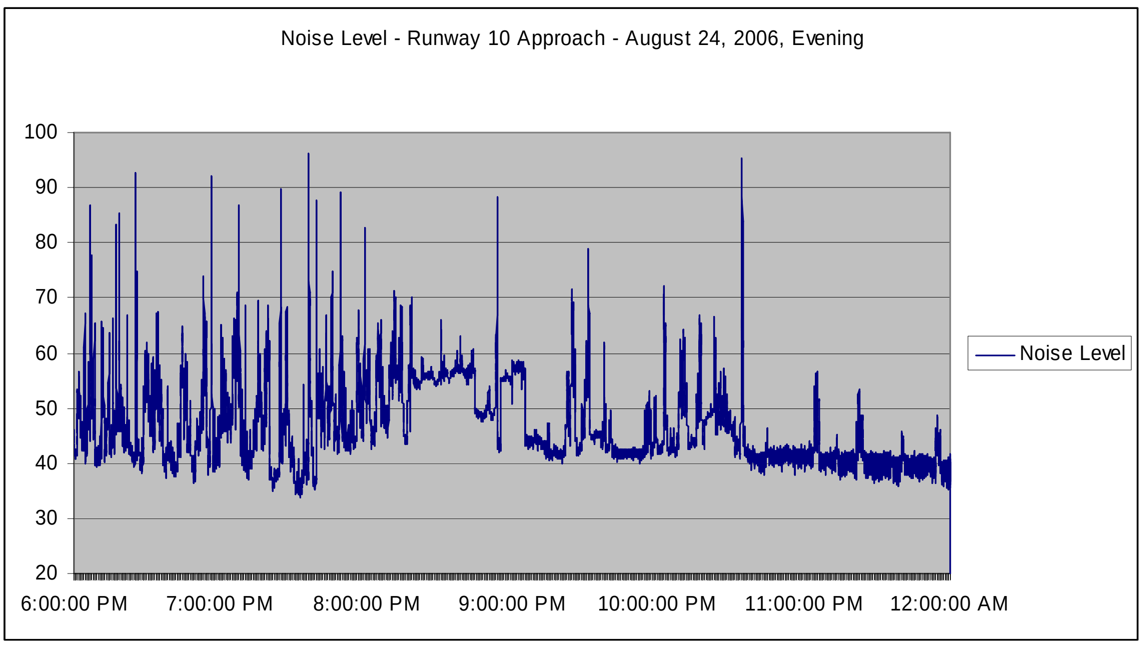
Runway 10 Approach

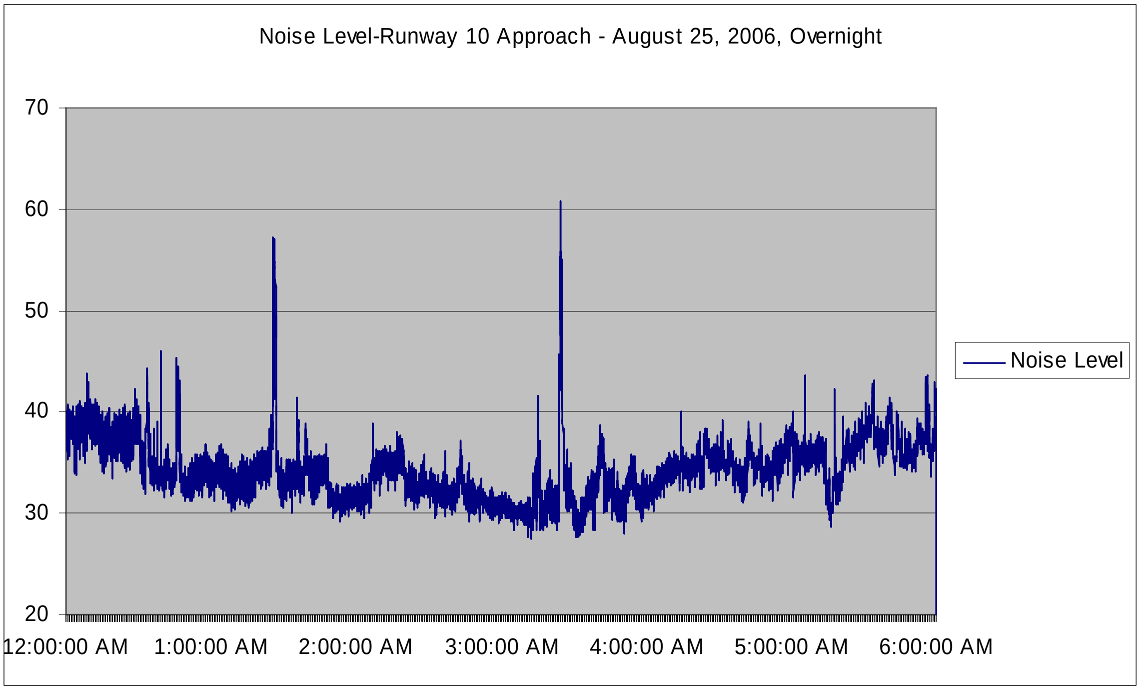
NOISE MONITORING, RUNWAY 10 APPROACH

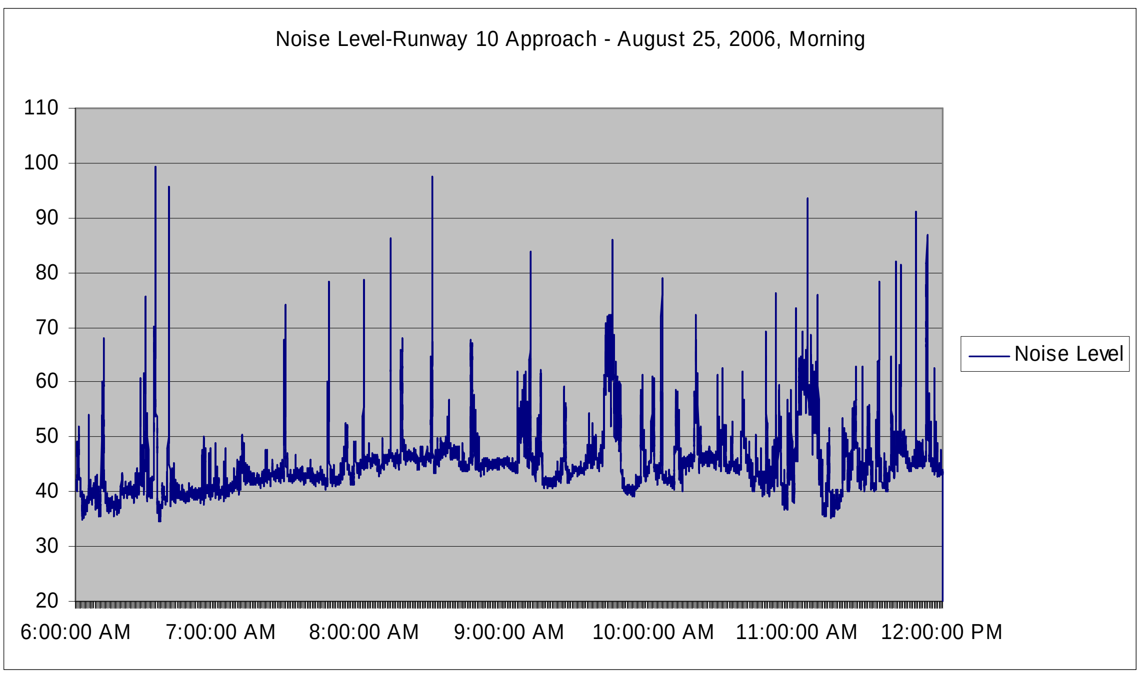


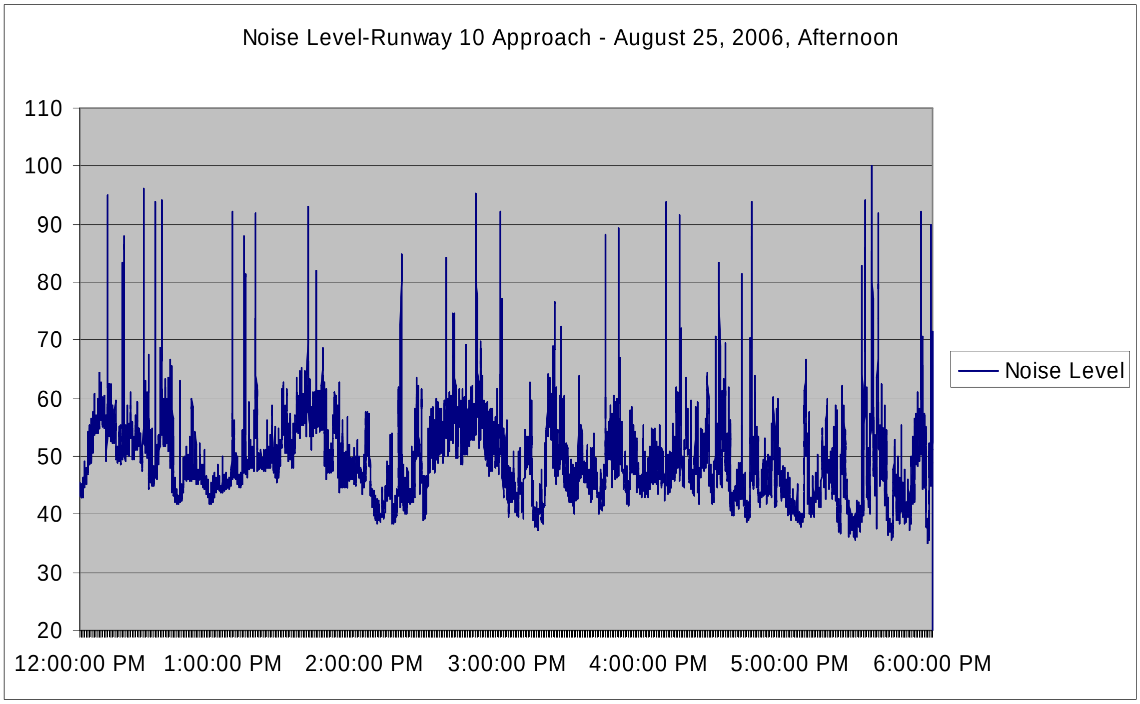



Noise Level-Runway 10 Approach - August 24, 2006, Afternoon
100
90
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level

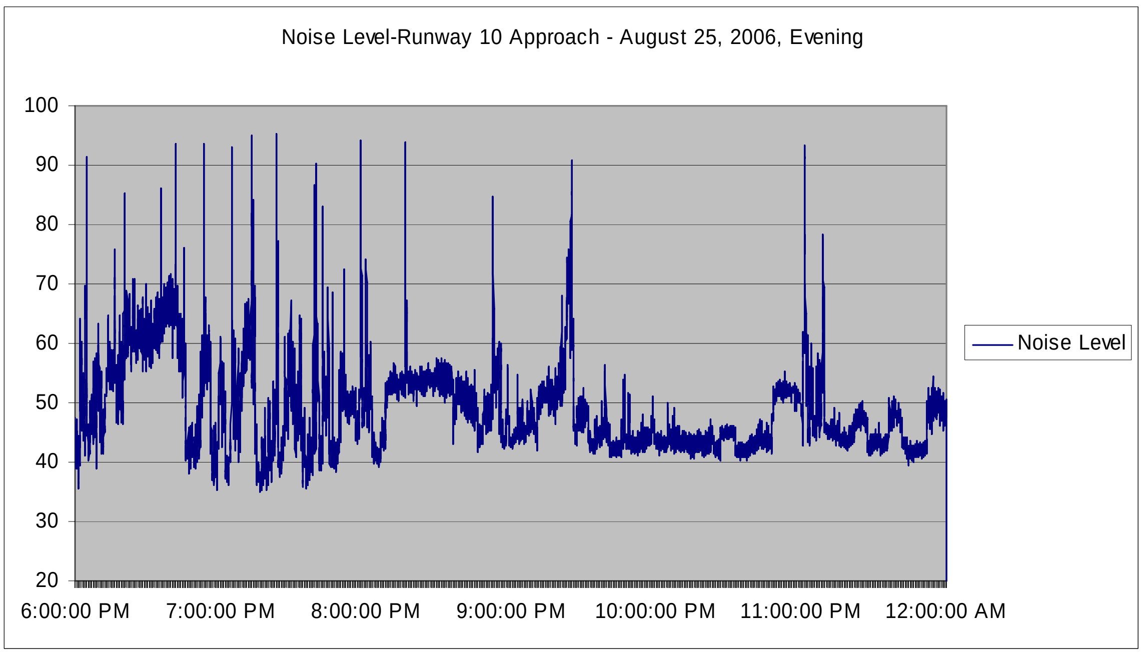

Noise Level - Runway 10 Approach - August 24, 2006, Evening
100
90
80
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level


Noise Level-Runway 10 Approach - August 25, 2006, Overnight
70
60
50
40
30
20
12:00:00 AM
1:00:00 AM
2:00:00 AM
3:00:00 AM
4:00:00 AM
5:00:00 AM
6:00:00 AM
Noise Level

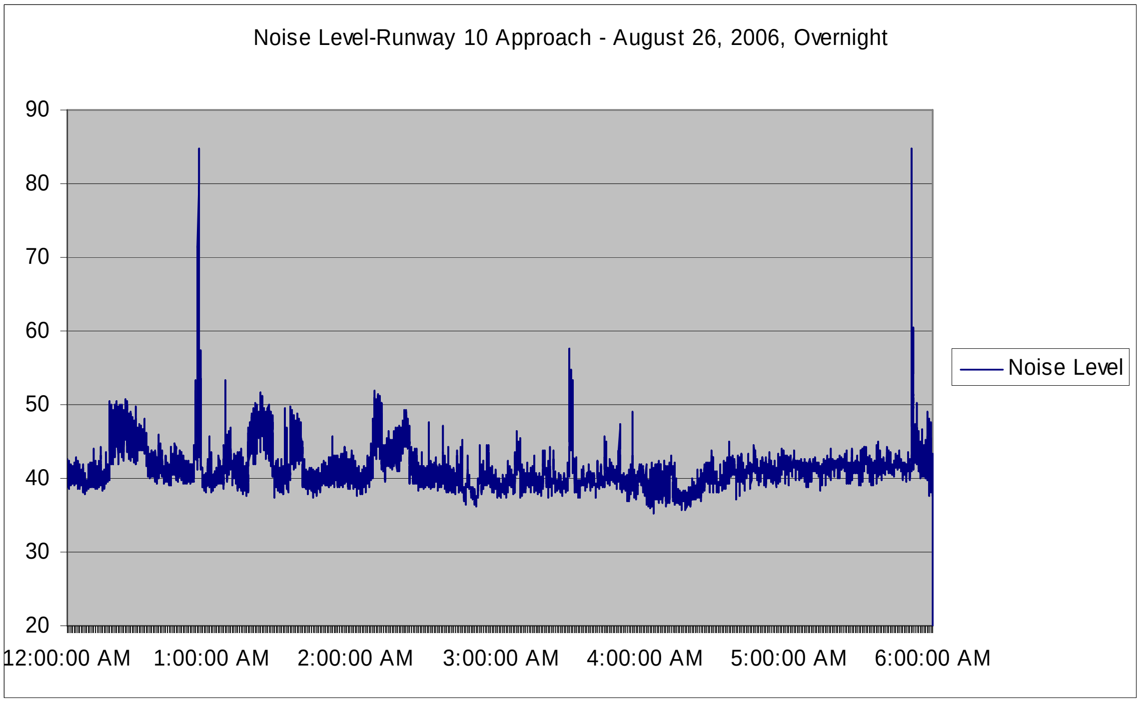

Noise Level-Runway 10 Approach - August 25, 2006, Morning
110
100
90
80
70
60
50
40
30
20
6:00:00 AM
7:00:00 AM
8:00:00 AM
9:00:00 AM
10:00:00 AM
11:00:00 AM
12:00:00 PM
Noise Level

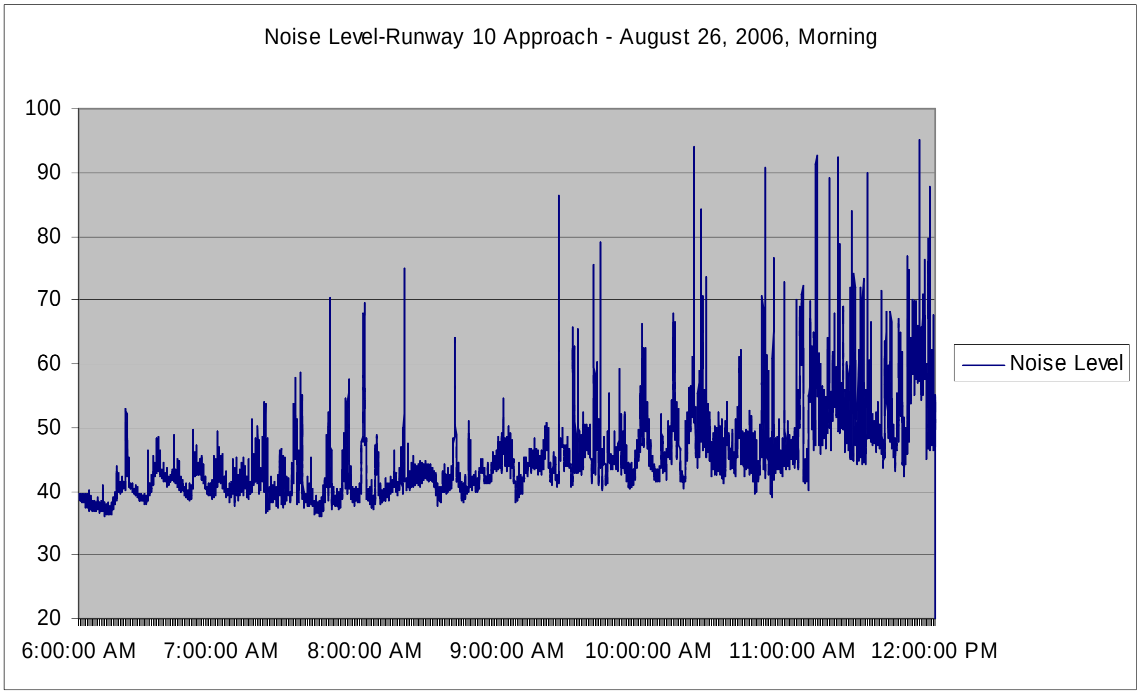


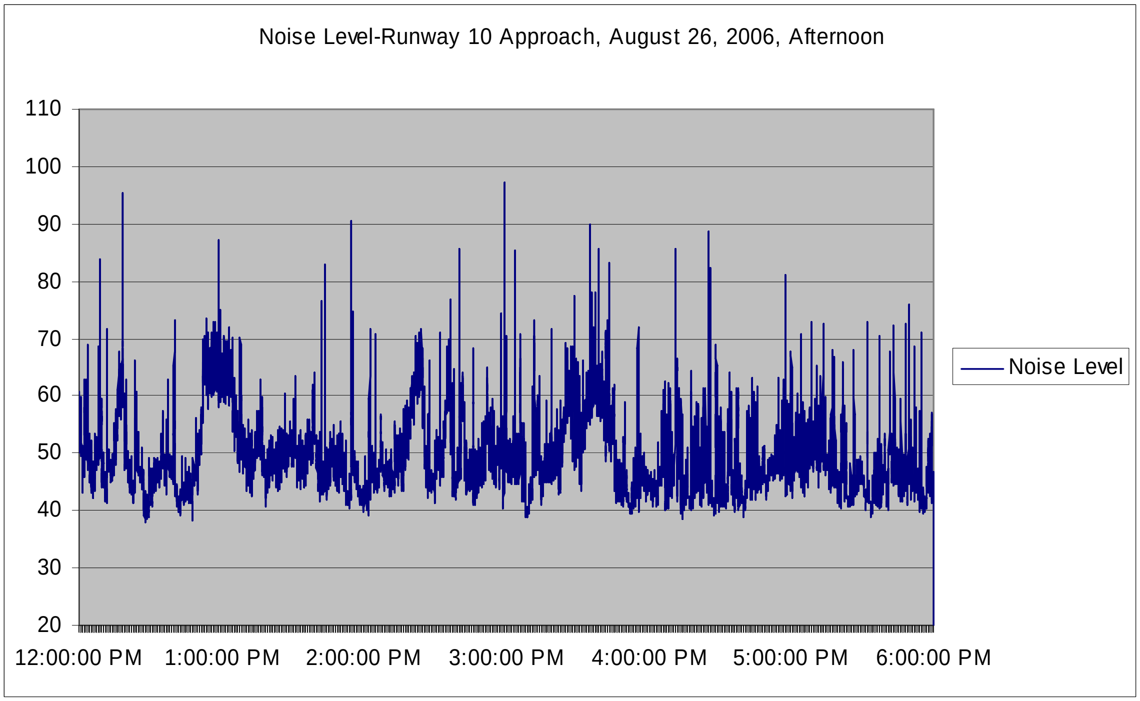
Noise Level-Runway 10 Approach - August 25, 2006, Afternoon
110
100
90
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level

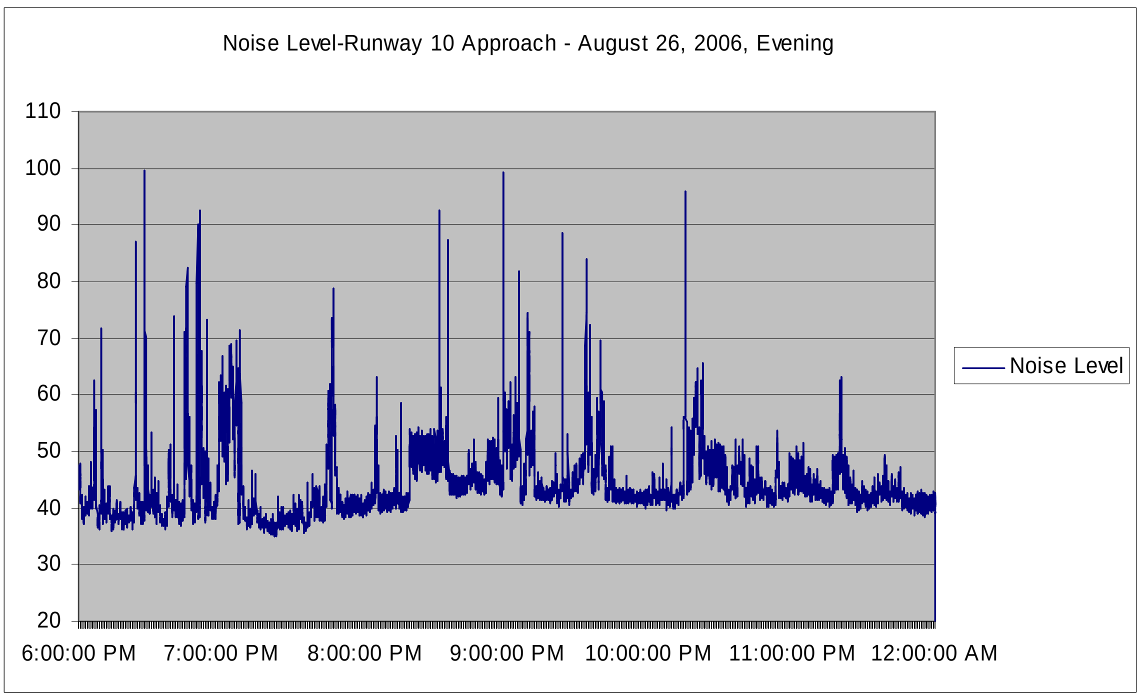


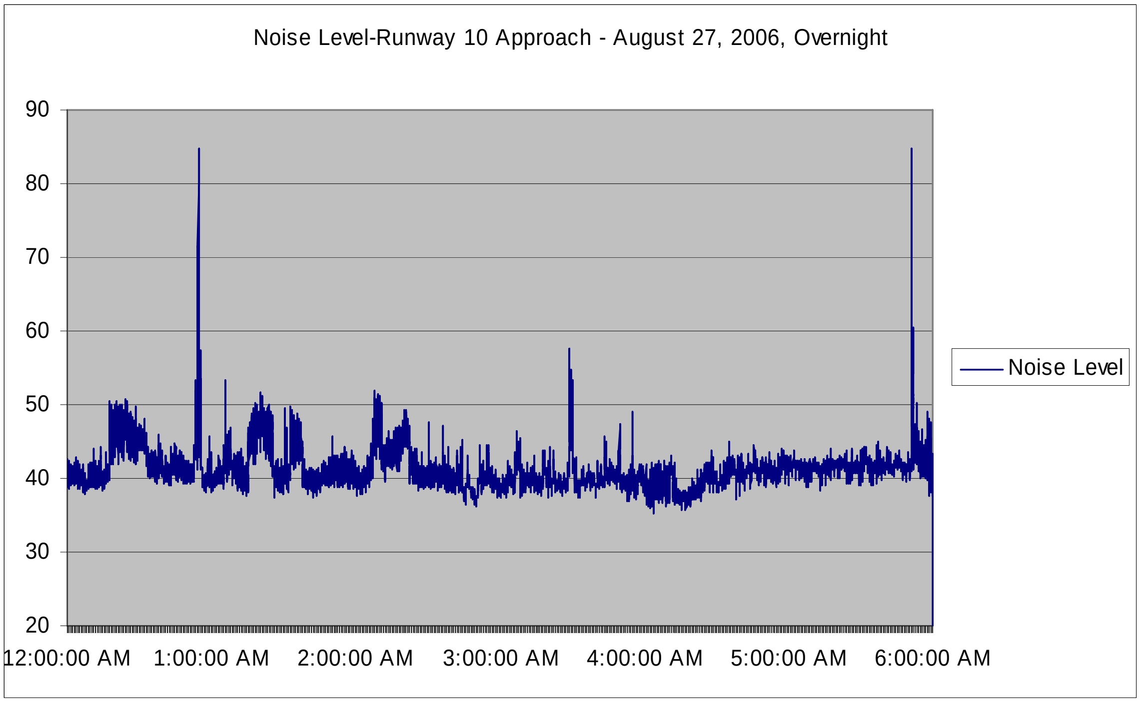
Noise Level-Runway 10 Approach - August 25, 2006, Evening
100
90
80
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level

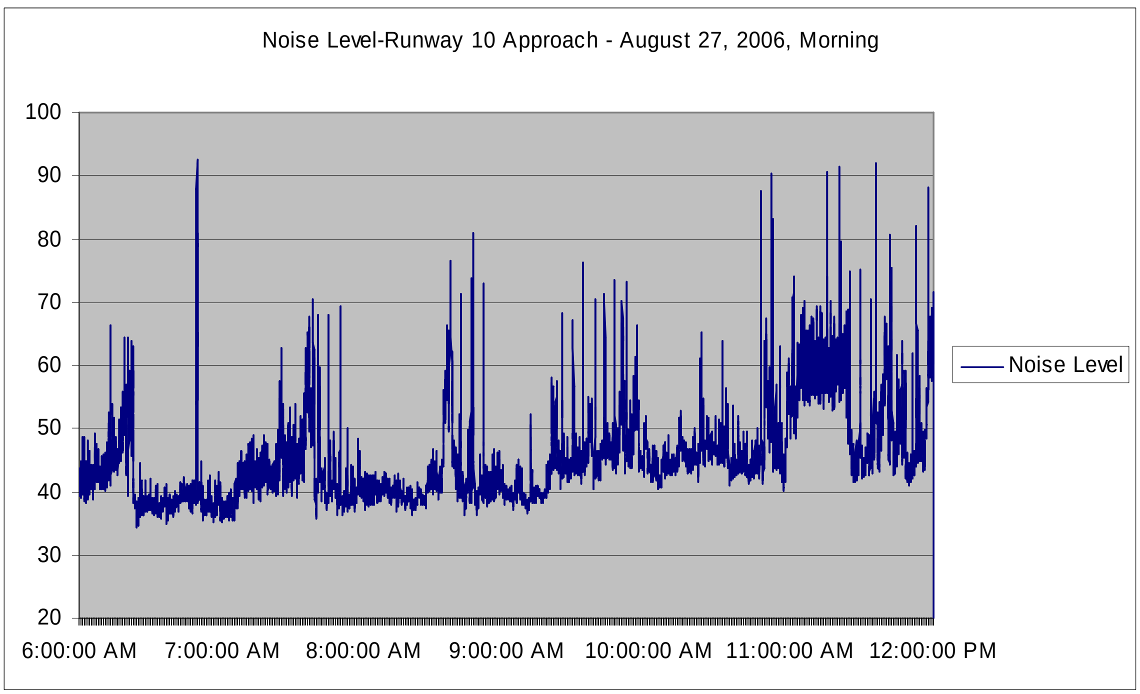

Noise Level-Runway 10 Approach - August 26, 2006, Overnight
90
80
70
60
50
40
30
20
12:00:00 AM
1:00:00 AM
2:00:00 AM
3:00:00 AM
4:00:00 AM
5:00:00 AM
6:00:00 AM
Noise Level

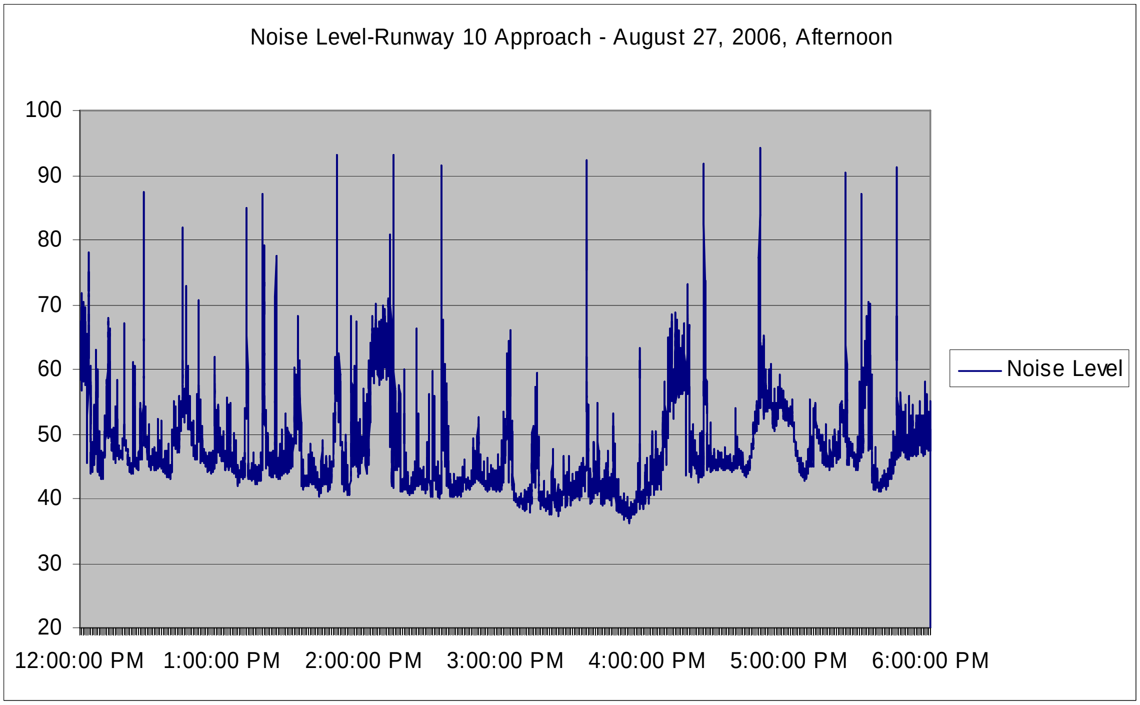

Noise Level-Runway 10 Approach - August 26, 2006, Morning
100
90
80
70
60
50
40
30
20
6:00:00 AM
7:00:00 AM
8:00:00 AM
9:00:00 AM
10:00:00 AM
11:00:00 AM
12:00:00 PM
Noise Level

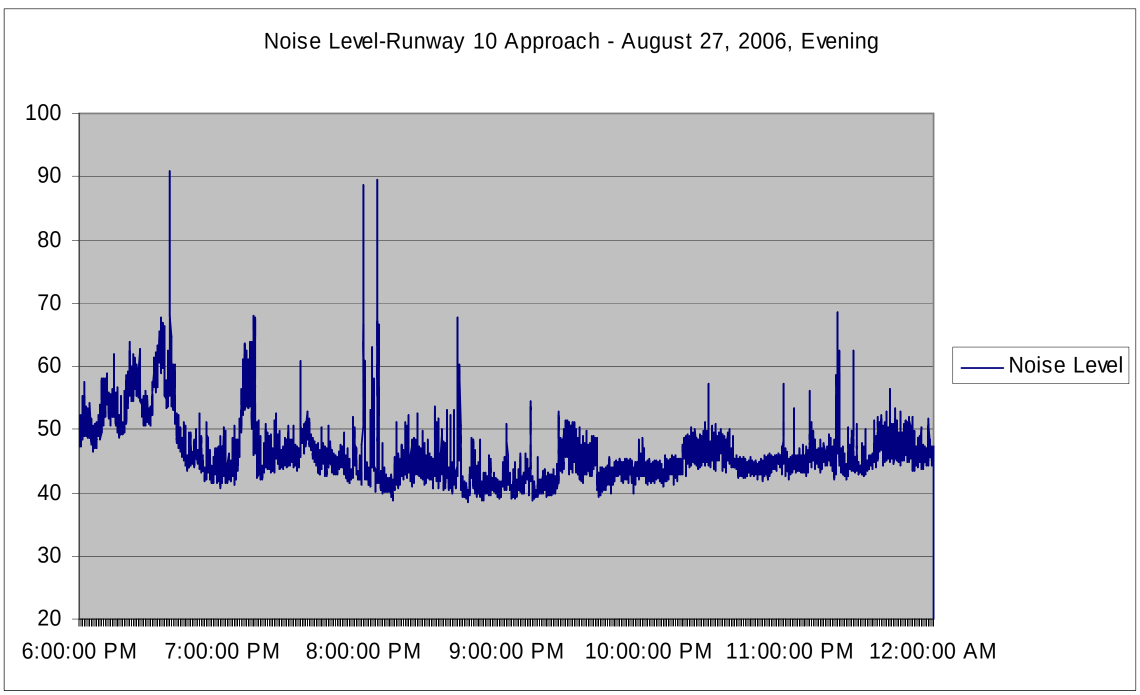

Noise Level-Runway 10 Approach, August 26, 2006, Afternoon
110
100
90
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level

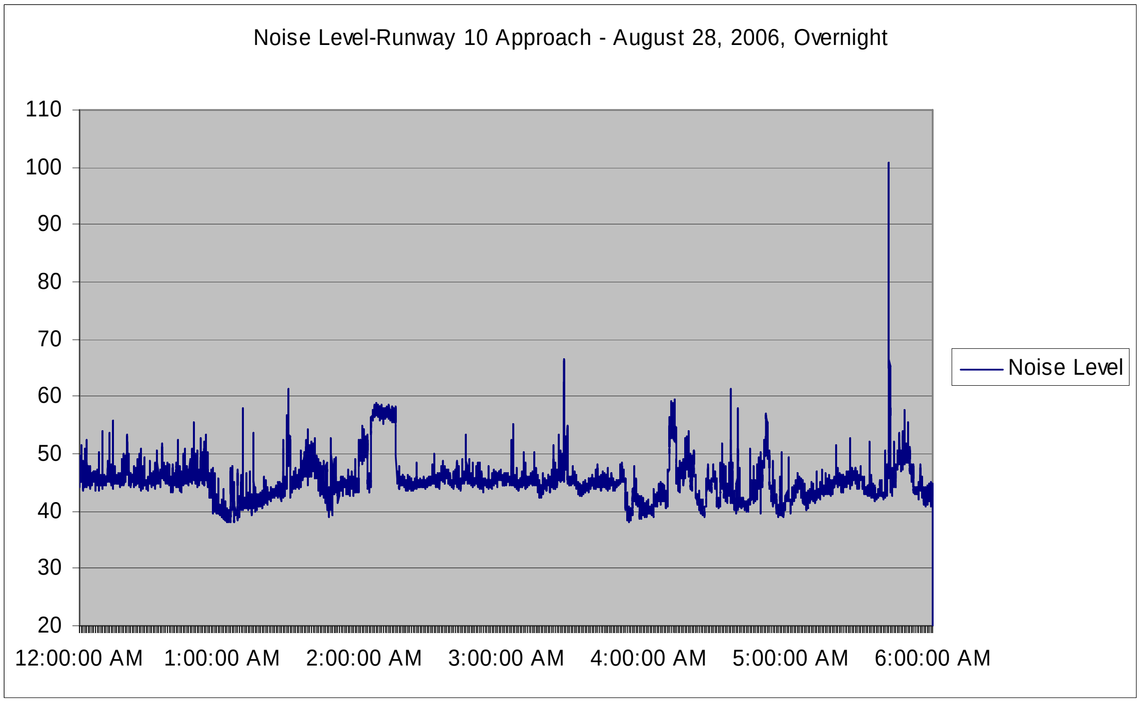

Noise Level-Runway 10 Approach - August 26, 2006, Evening
110
100
90
80
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level


Noise Level-Runway 10 Approach - August 27, 2006, Overnight
90
80
70
60
50
40
30
20
12:00:00 AM
1:00:00 AM
2:00:00 AM
3:00:00 AM
4:00:00 AM
5:00:00 AM
6:00:00 AM
Noise Level

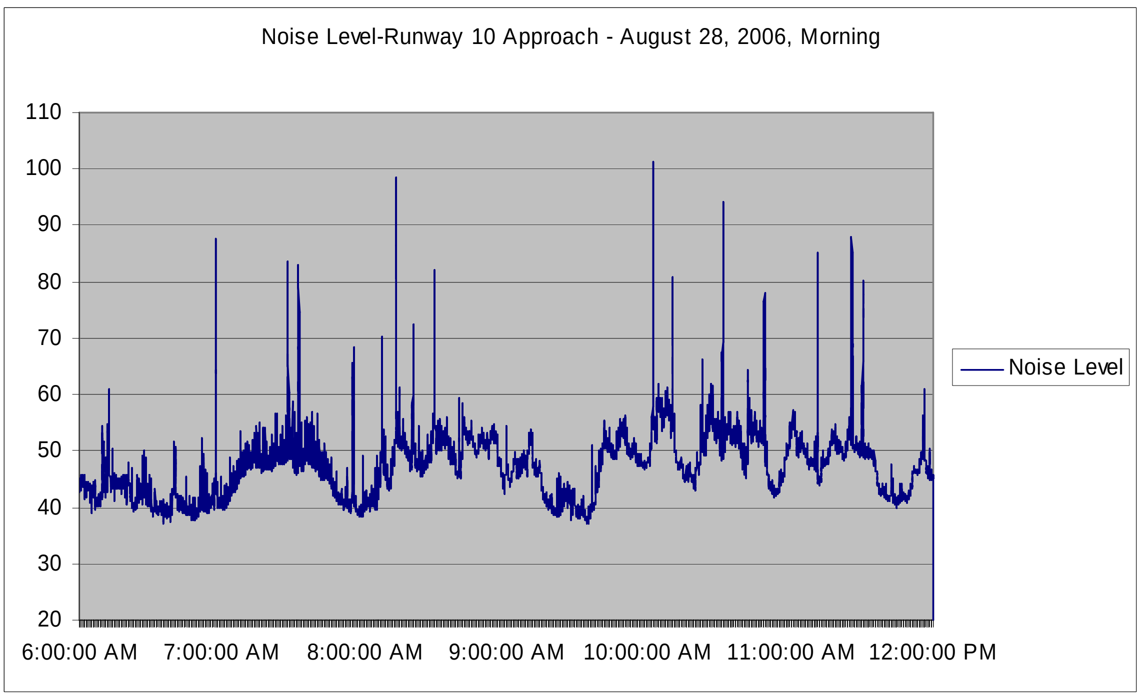

Noise Level-Runway 10 Approach - August 27, 2006, Morning
100
90
80
70
60
50
40
30
20
6:00:00 AM
7:00:00 AM
8:00:00 AM
9:00:00 AM
10:00:00 AM
11:00:00 AM
12:00:00 PM
Noise Level


Noise Level-Runway 10 Approach - August 27, 2006, Afternoon
100
90
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level

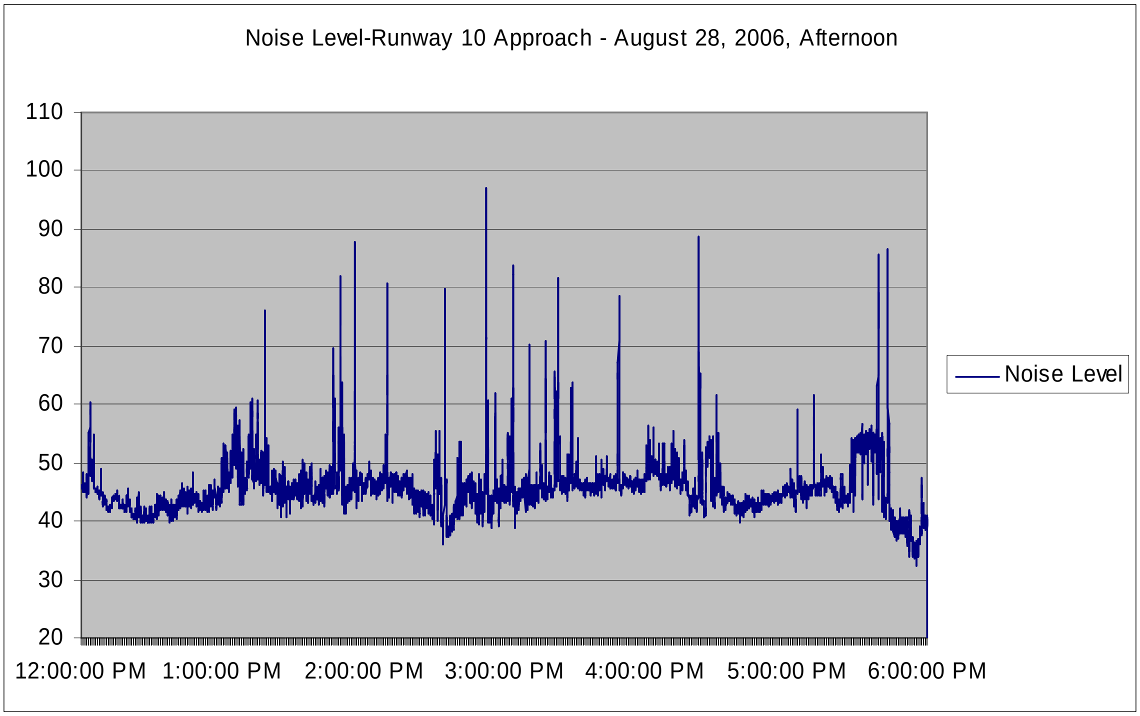

Noise Level-Runway 10 Approach - August 27, 2006, Evening
100
90
80
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level



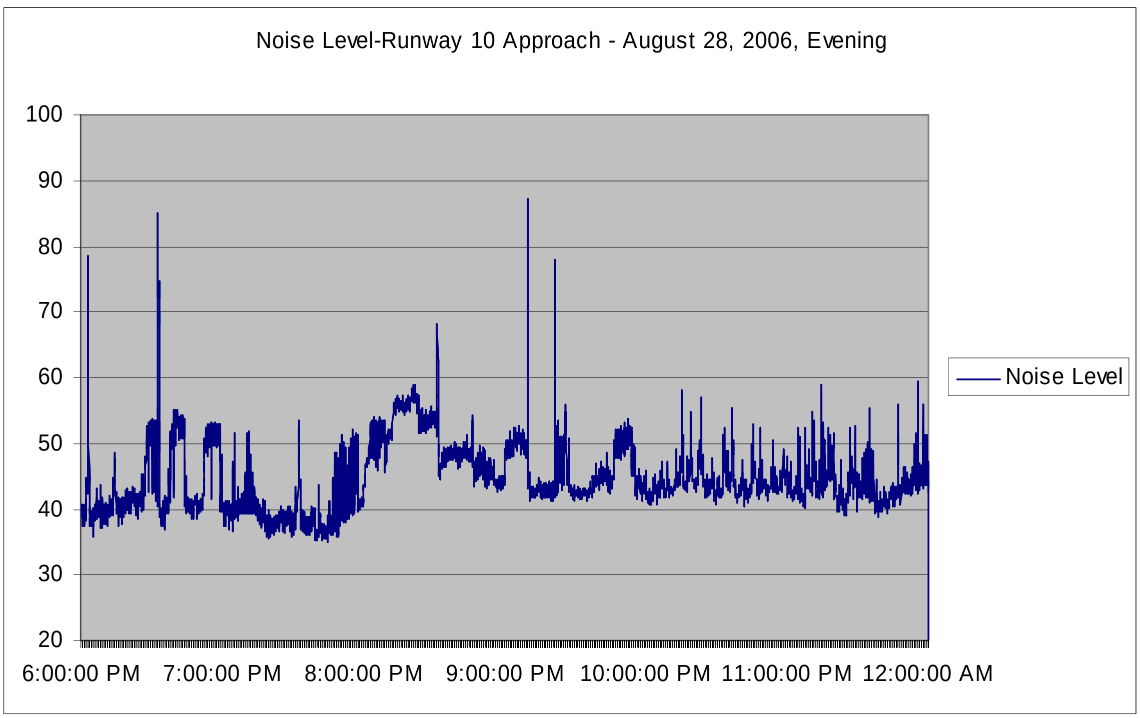
Noise Level-Runway 10 Approach - August 28, 2006, Overnight
110
100
90
80
70
60
50
40
30
20
12:00:00 AM
1:00:00 AM
2:00:00 AM
3:00:00 AM
4:00:00 AM
5:00:00 AM
6:00:00 AM
Noise Level



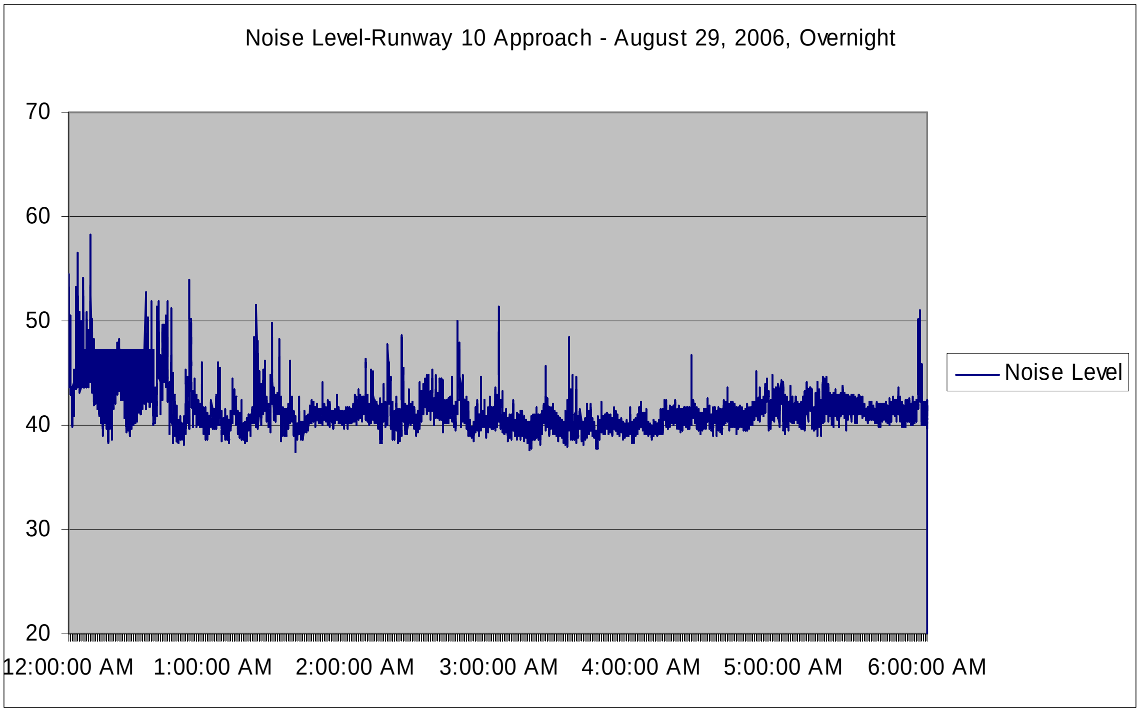
Noise Level-Runway 10 Approach - August 28, 2006, Morning
110
100
90
80
70
60
50
40
30
20
6:00:00 AM
7:00:00 AM
8:00:00 AM
9:00:00 AM
10:00:00 AM
11:00:00 AM
12:00:00 PM
Noise Level

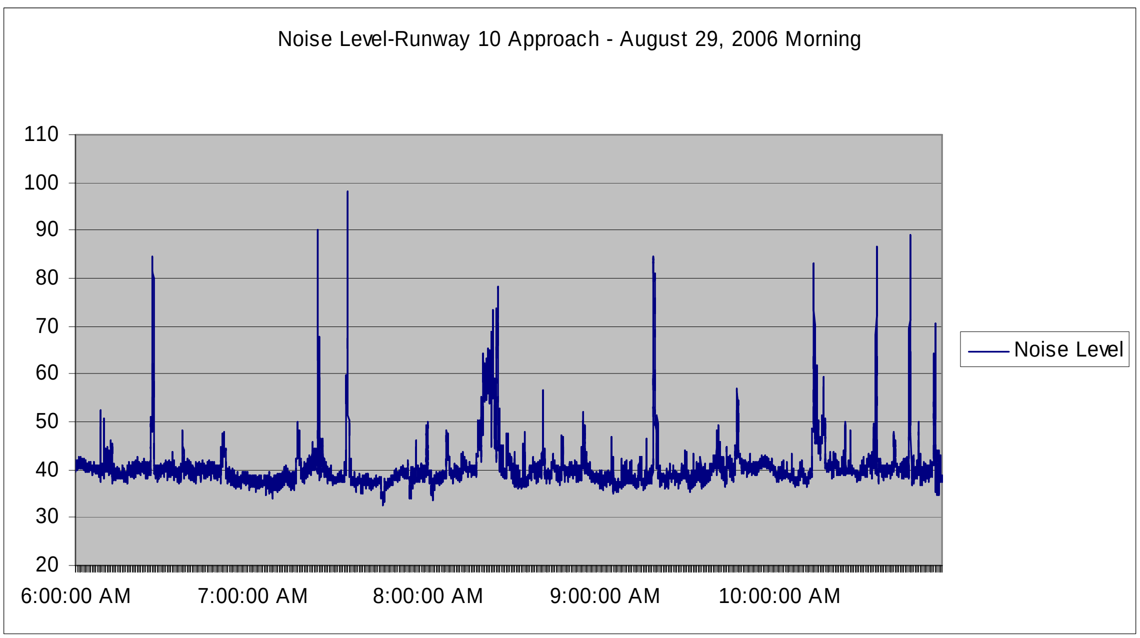


Noise Level-Runway 10 Approach - August 28, 2006, Afternoon
110
100
90
80
70
60
50
40
30
20
12:00:00 PM
1:00:00 PM
2:00:00 PM
3:00:00 PM
4:00:00 PM
5:00:00 PM
6:00:00 PM
Noise Level



Noise Level-Runway 10 Approach - August 28, 2006, Evening
100
90
80
70
60
50
40
30
20
6:00:00 PM
7:00:00 PM
8:00:00 PM
9:00:00 PM
10:00:00 PM
11:00:00 PM
12:00:00 AM
Noise Level





Leq = 61.72
Ldn = 65.33

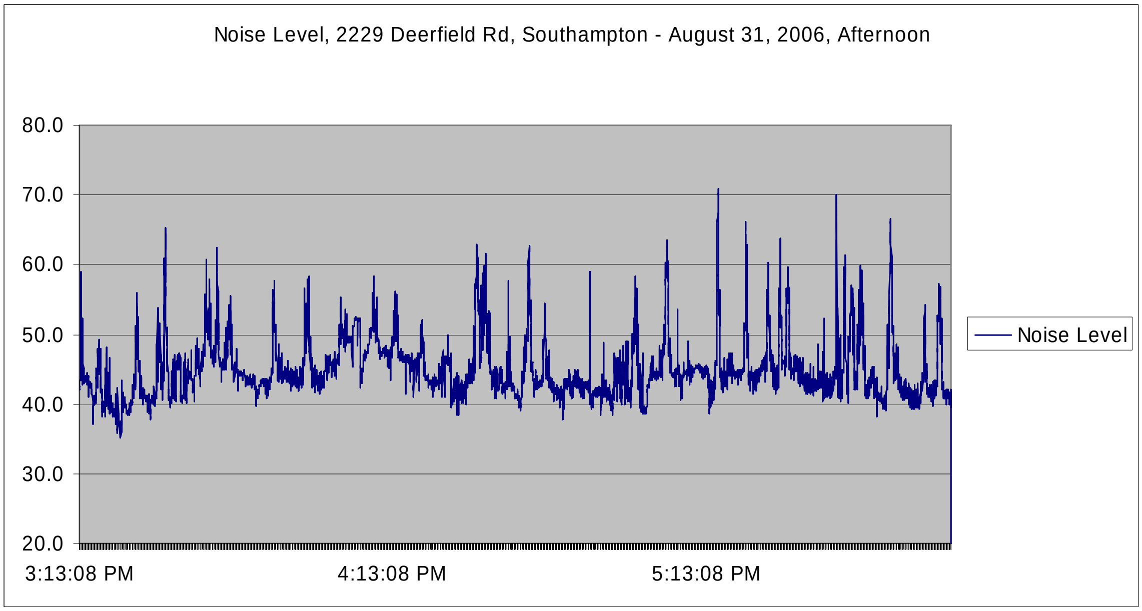
L90s:

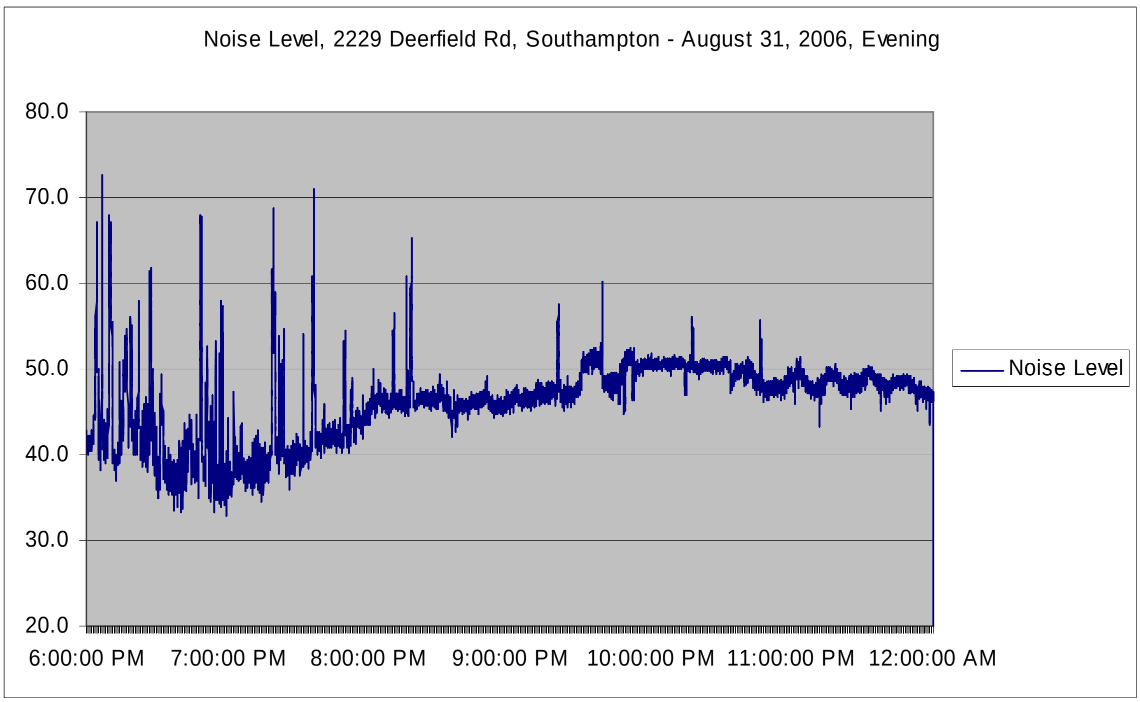
12:39:14 PM	**40.4**
9:46:45 PM	**41.6**
3:59:18 AM	**32.5**

11:28:12 AM	**42**
5:36:14 PM	**44.7**
8:57:34 PM	**43.7**
2:46:25 AM	**39.5**
9:40:03 AM	**41**
2:27:40 PM	**44.8**
11:54:08 PM	**41**
1:39:59 AM	**40**
7:39:59 AM	**35.6**
1:39:59 PM	**43.3**
7:39:59 AM	**35.6**

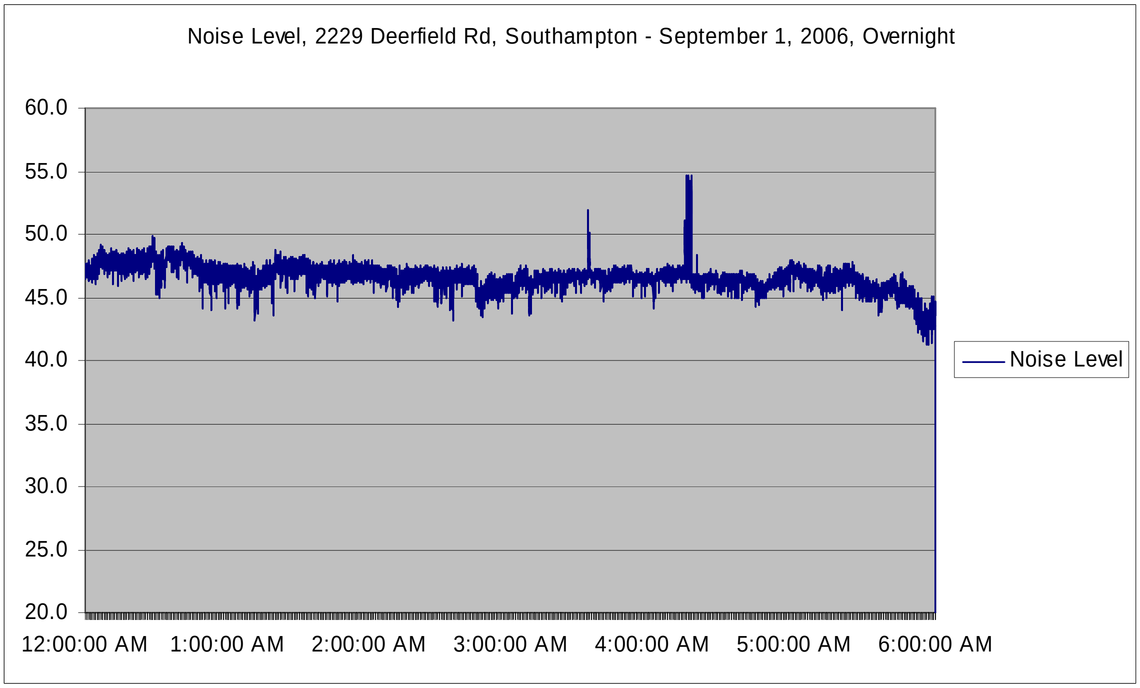
Waksman

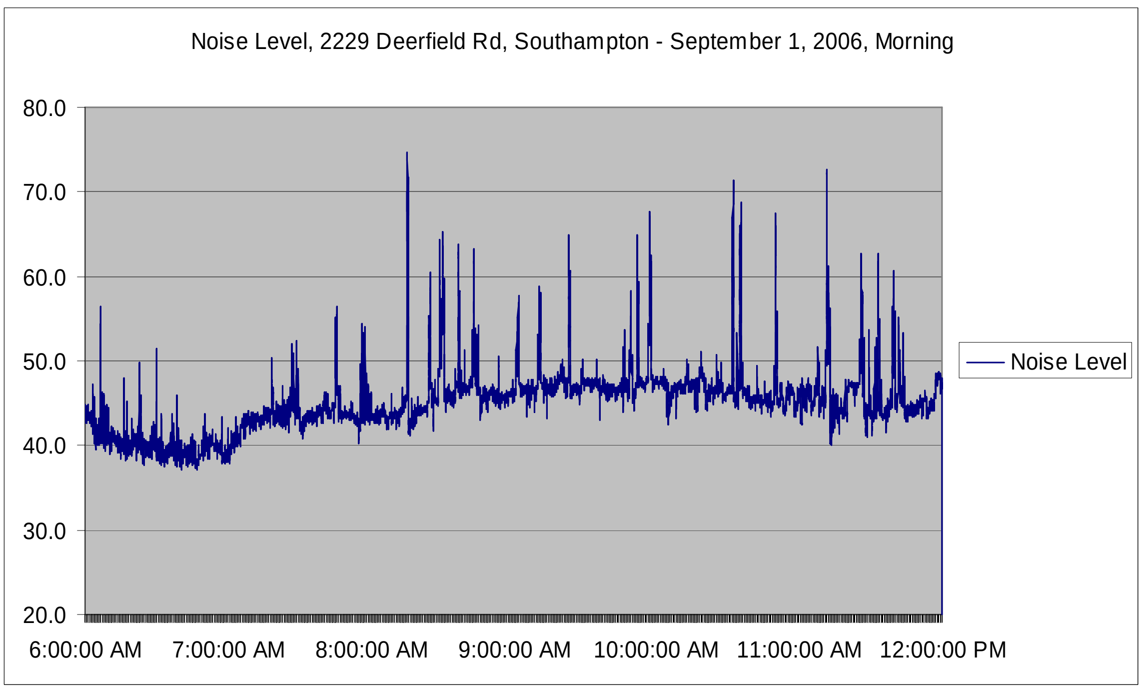
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



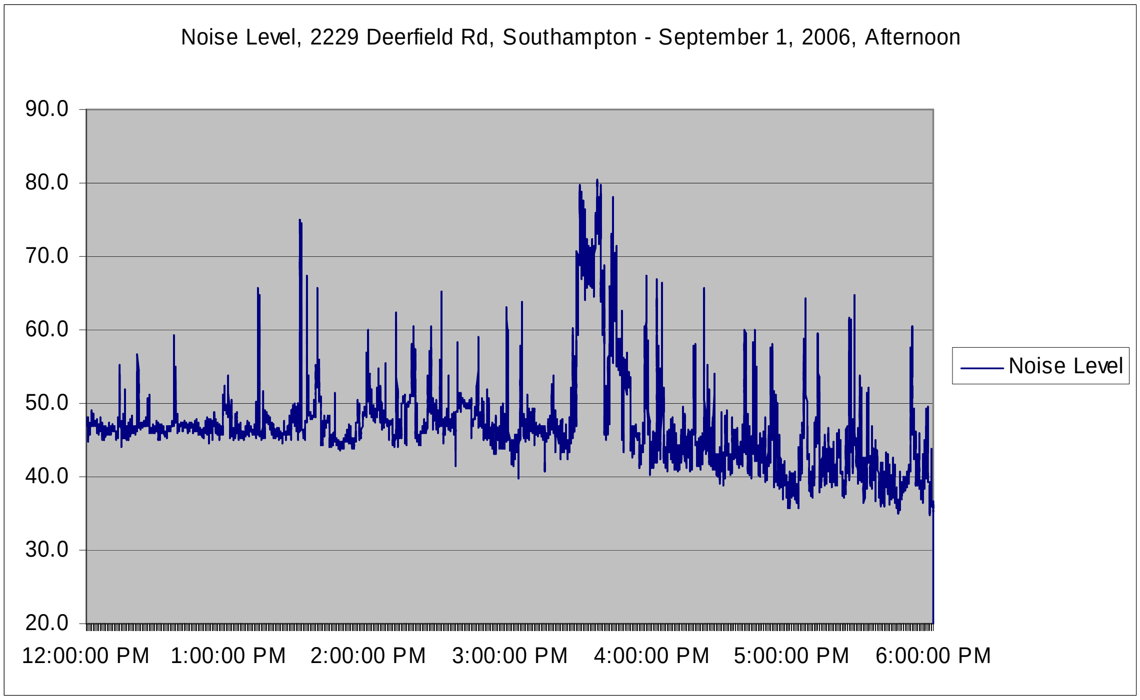


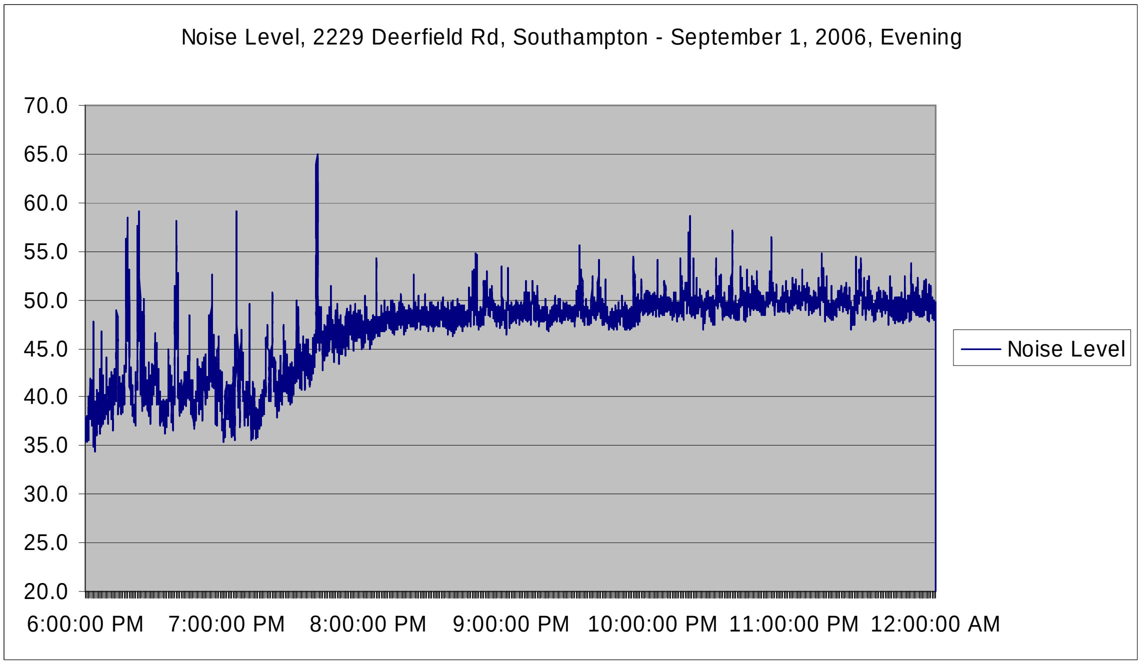
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



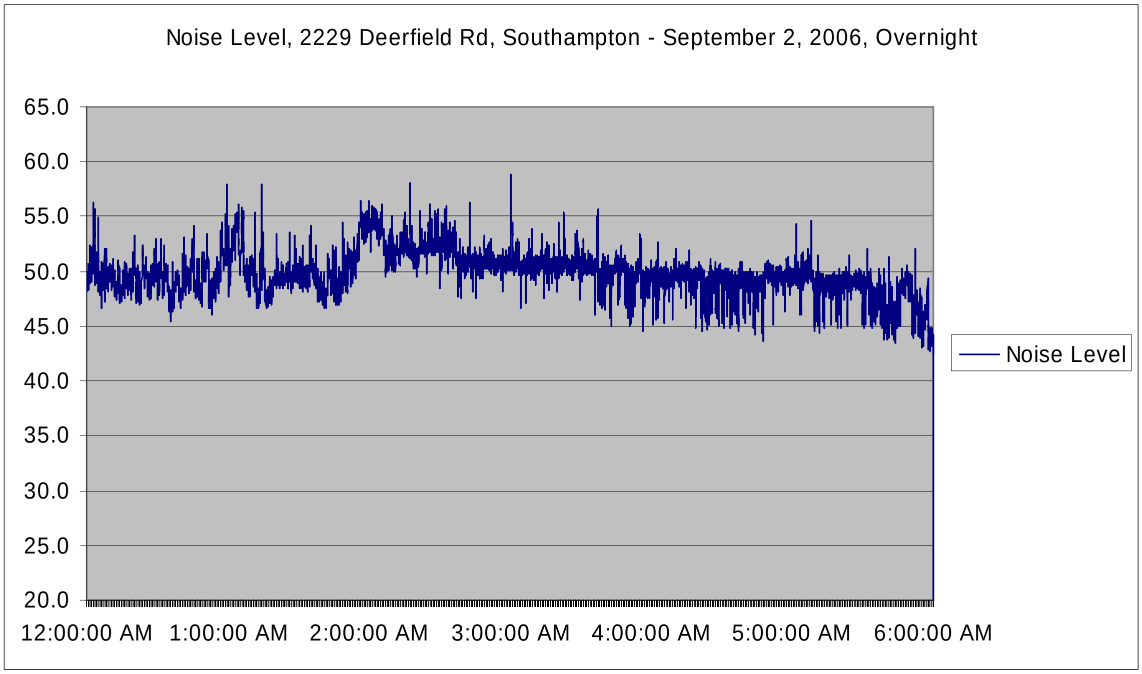


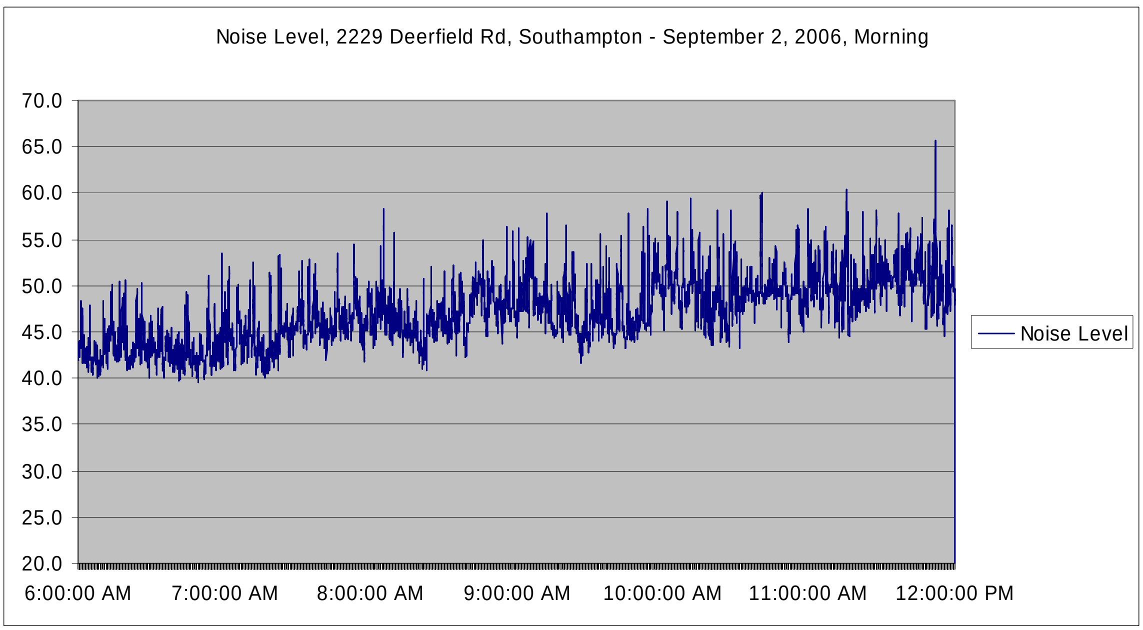
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



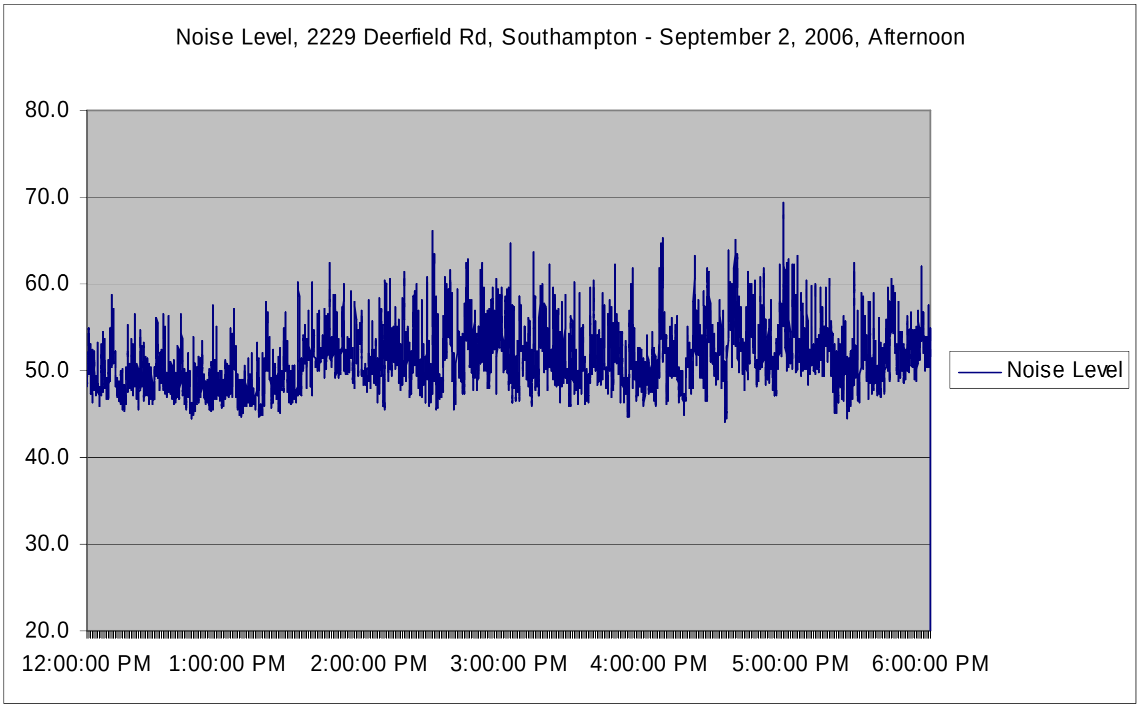


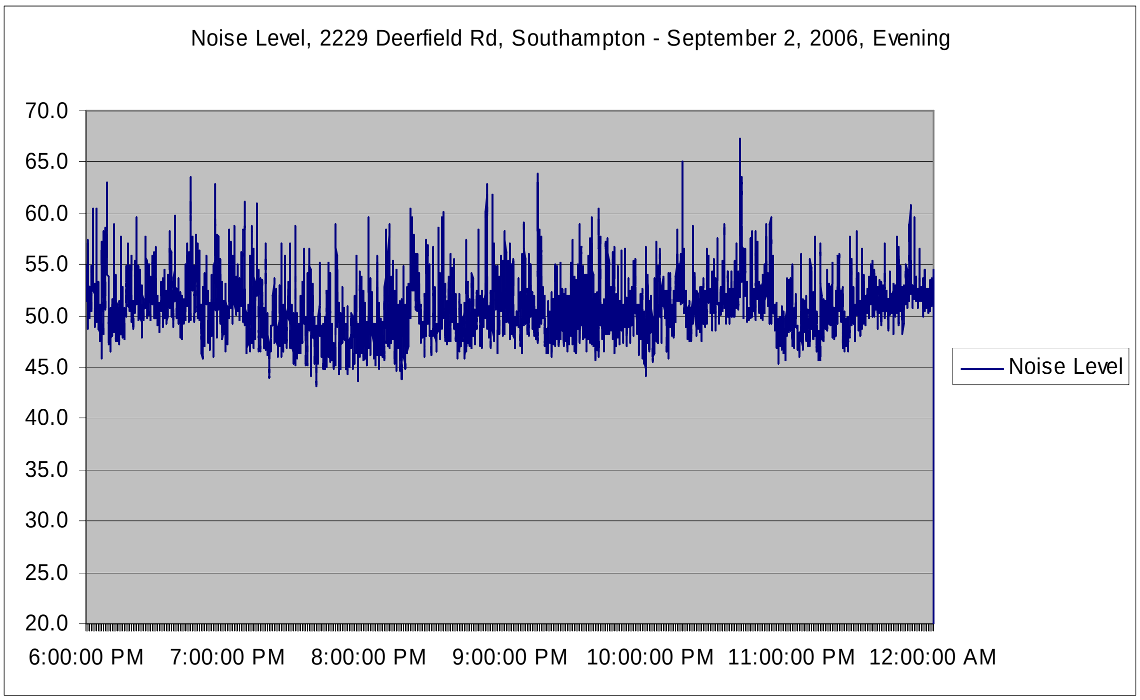
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



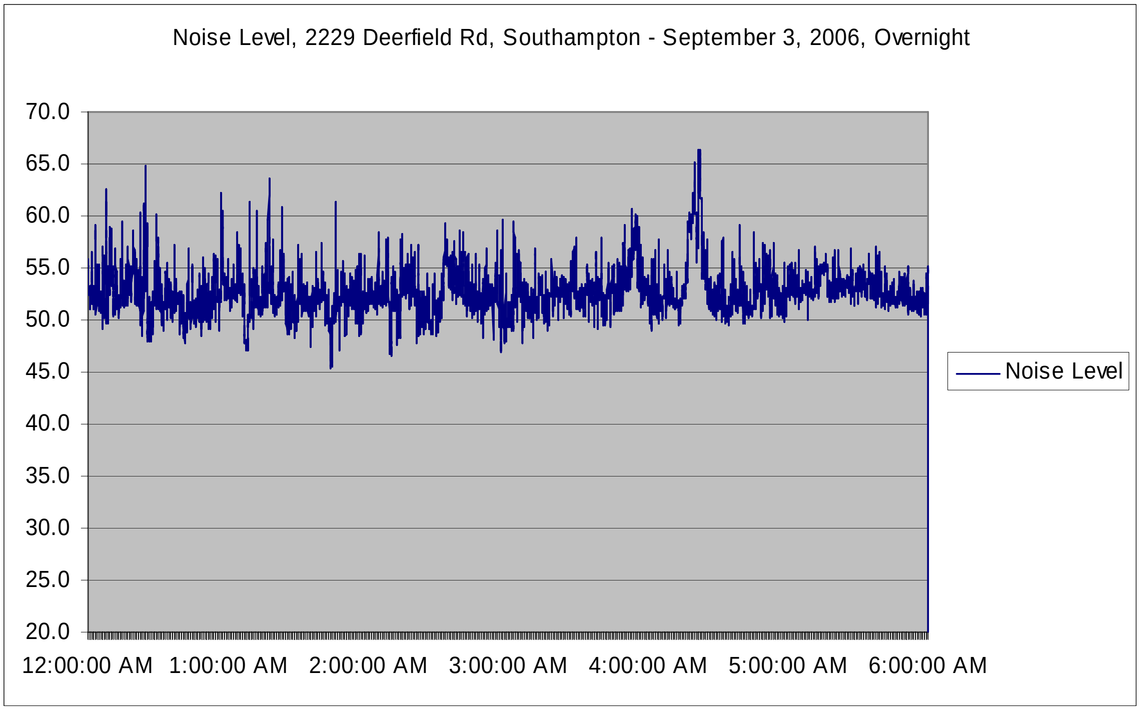


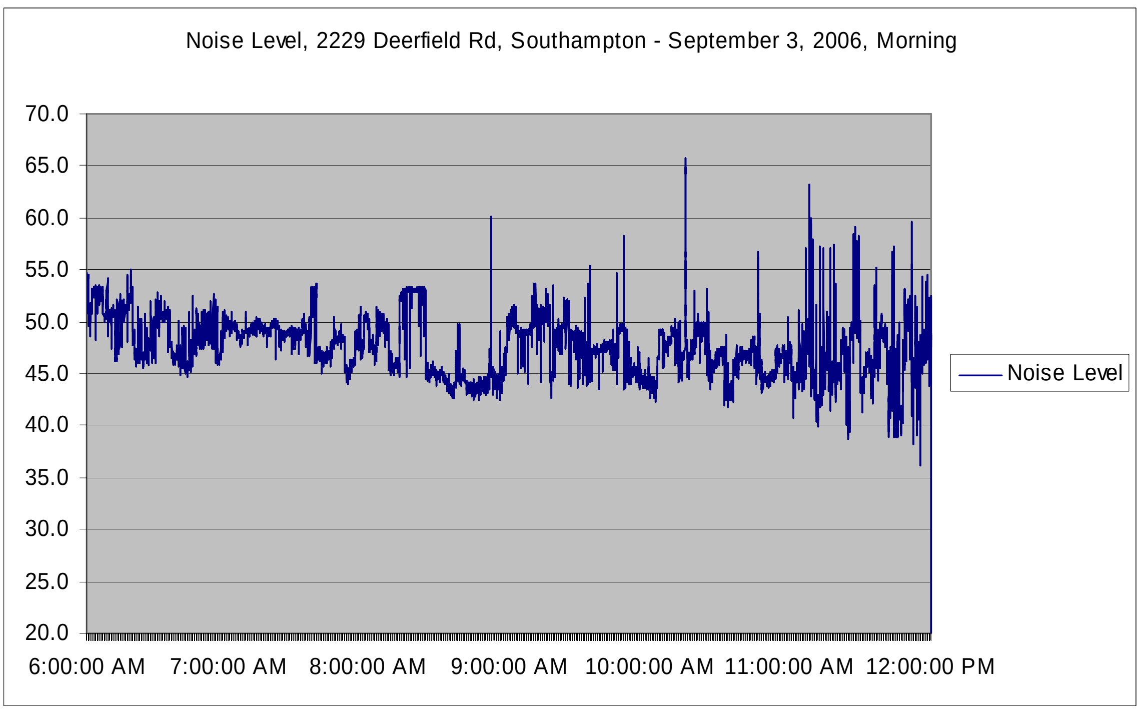
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



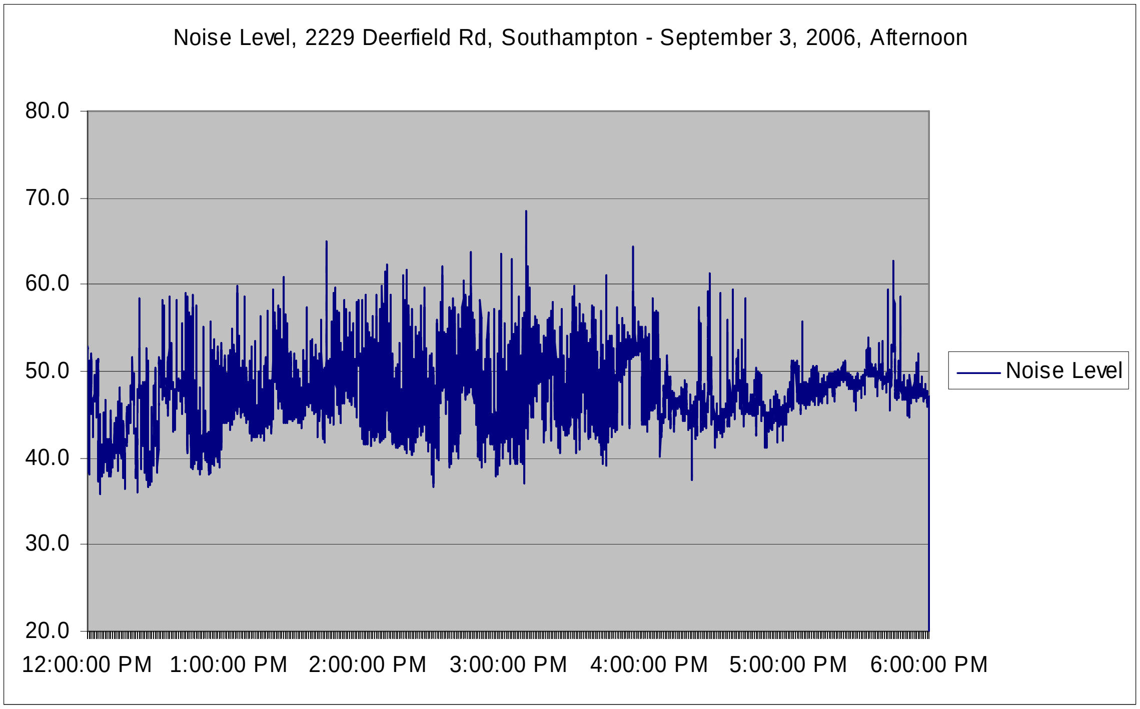


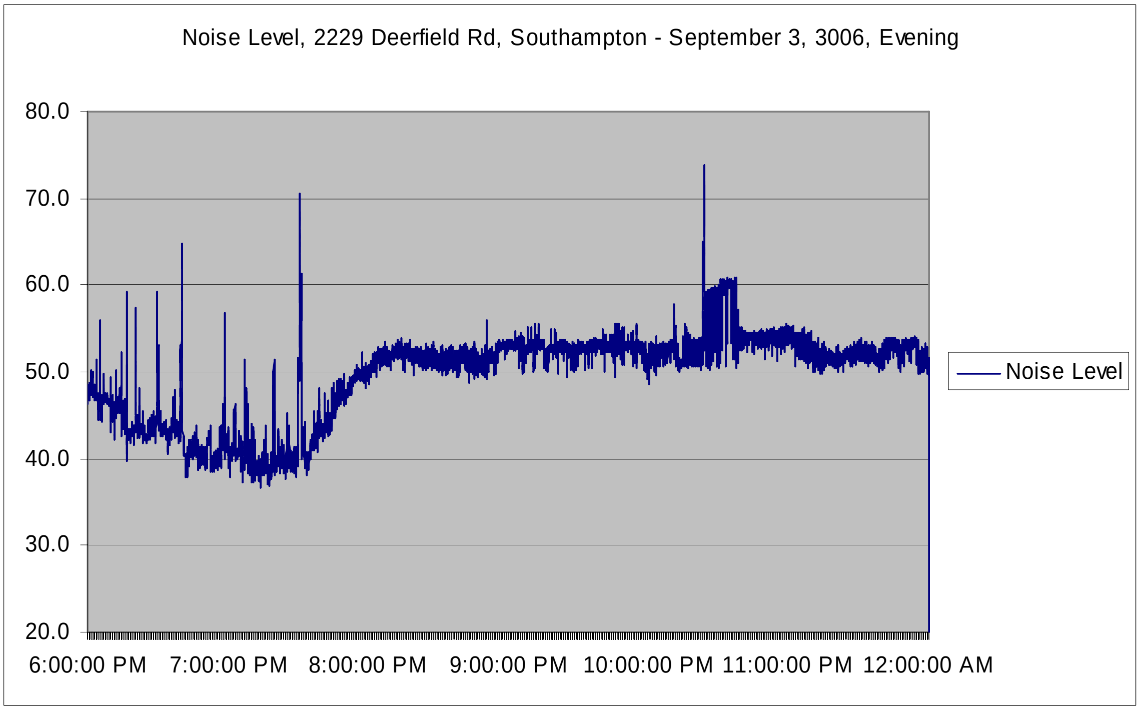
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



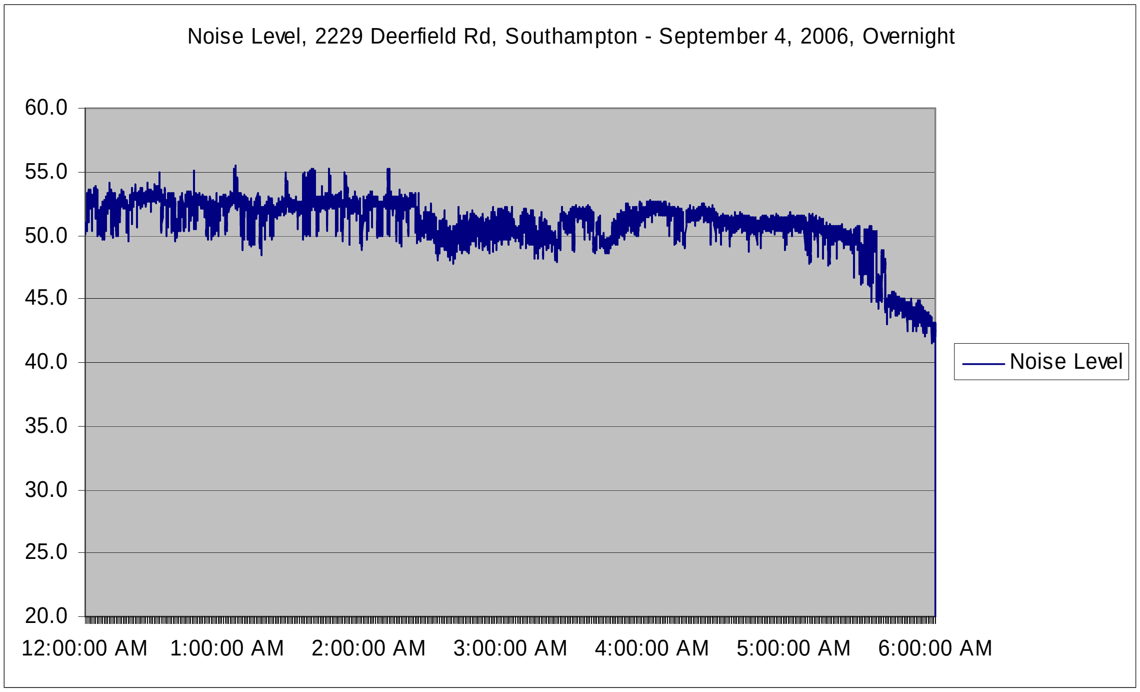


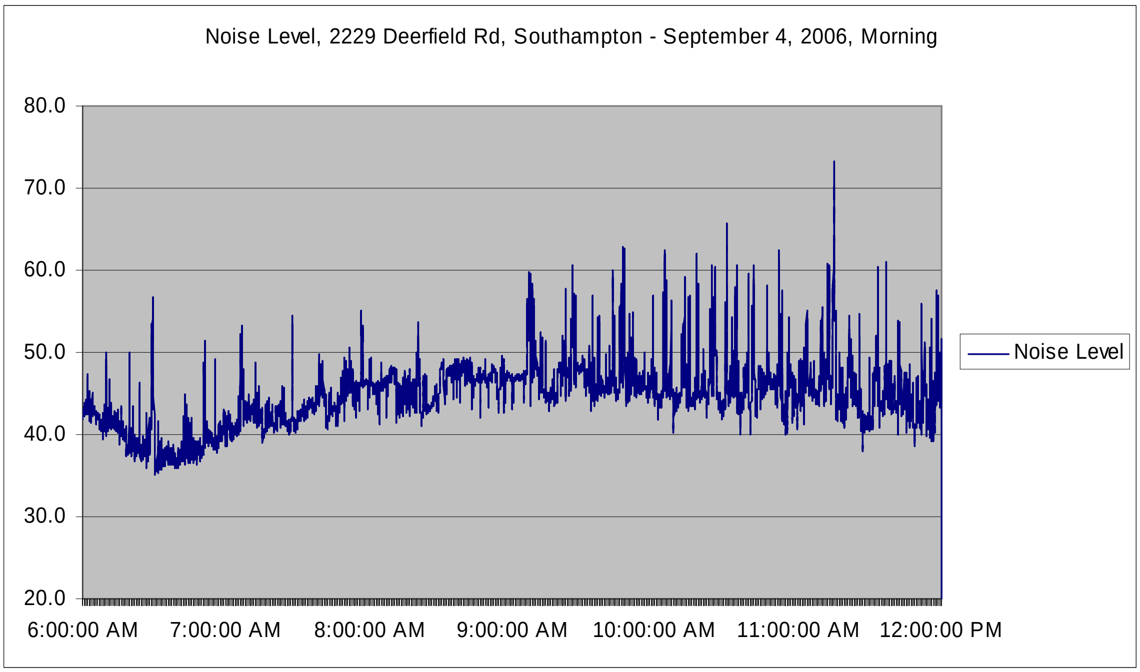
NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



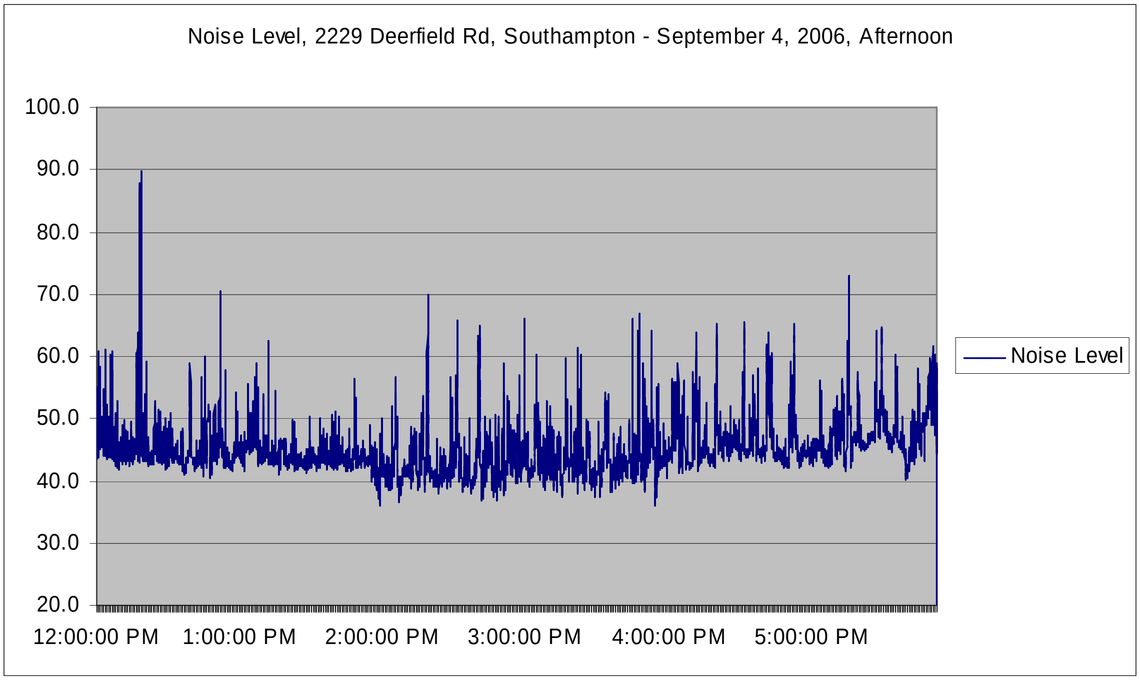


NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON





NOISE MONITORING, 2229 DEERFIELD RD, SOUTHAMPTON



Leq = 52.28
Ldn = 57.43

L90s:

5:52:09 PM	**40.9**
3:23:19 PM	**42.1**
7:18:07 PM	**39.3**
5:30:46AM	**45.5**
7:02:04AM	**40.2**
5:17:01 PM	**40.5**
6:46:16 PM	**39.7**
1:47:49AM	**47.5**
6:27:33AM	**42.6**
2:17:53 PM	**47.3**
8:07:45 PM	**47.5**
1:46:32AM	**50.7**
9:57:47AM	**44.2**
4:29:24 PM	**42.4**
6:44:30 PM	**41.0**
3:44:37 PM	**40.8**