



# APPENDIX A

## Technical Advisory Committee



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# APPENDIX B

## Survey Results



## GENERAL

**The Dutchess County Airport**, located approximately 4 miles southeast of the City of Poughkeepsie, N.Y., has had to transform its role within the Hudson Valley Region as a significant commercial service airport to a limited commuter service airport over the past decade since the development of the last airport master plan in 1984. Several variables have factored in to this transition; however, two have been most instrumental in effecting this change. A brief overview of these events are discussed in the next section followed by summarization of surveys conducted to assist in developing a framework to position the airport for the future.

### Context of the Past Decade

The historical context of the Dutchess County Airport up to the 1990's begins with the arrival of IBM in the Hudson Valley in 1941, which set up shop to make aircraft cannons during the war and, afterward, office equipment. By the mid-1960s, Poughkeepsie and Kingston, NY (across the Hudson River) were at the heart of a spectacularly successful mainframe-computer business. This technology waned when the personal computer revolution arrived in the early 1980's. The PC revolution evolved into the plague that nearly dismembered IBM by the early 1990's.

In 1993, the world's largest computer company announced the elimination of 2,700 jobs. IBM had lost \$8 billion over the preceding three years. A spill-over effect occurred as many businesses who thrived on IBM in the "one company town" began to fail. The region's labor force had shrunk by 6% in the prior two years, reflecting an exodus of thousands of skilled engineers and assembly workers. IBM already had depleted thousands of jobs from the region in the previous five years. By late 1993, unemployment in Dutchess County had reached 10.8%, up from 3% in 1990. When all was said and done, 20,000 jobs had left the valley.

As a result of this particular event in the recent history of Dutchess County, the course of the County's economic recovery has meant many changes for the Dutchess County Airport. With the restructuring of IBM that occurred during the downsizing, and after having been a tenant at the Dutchess County Airport for 35 years, IBM looked to reduce the costs of ferrying their "empty" aircraft from Dutchess to other areas of the region, namely Westchester County. As a result, IBM made the decision to relocate their corporate aircraft headquarters to Westchester County to reduce costs. This decision was combined with that of needing to construct hangar facilities at Westchester County that would meet the needs of their larger and future aircraft.

Though, IBM has left many abandoned structures in the Poughkeepsie-Kingston region, many of these buildings are in the process of being re-utilized for other businesses and entrepreneurs starting up in the region. Remaining buildings, equipment, and infrastructure are now seen as resources in the region to be exploited towards a more diversified and sustainable economy. In 1998, Associated Aircraft Group, Inc. established a successful charter helicopter business in the two former IBM hangars at Dutchess County Airport.

At about the same time the restructuring of IBM occurred, neighboring Stewart International Airport, a former Air Force Base deeded over to the New York State Department of Transportation in the 1970's, began commercial passenger service (1990).

Dutchess County Airport enplanements went from a peak of 33,000 in 1989 to a little over 6,600 in 1993 (an 80% reduction) as a result of IBM's downsizing and spill-over effects, combined with Stewart International Airport beginning passenger service. Dutchess County Airport, only



14 miles from Stewart International Airport, has served the past ten years as an *unofficial* reliever for Stewart (whose enplanement levels went from 2,672 in 1989 to well over 385,000 in 1999).

Within the historical context of the 1990's, an analysis of current users of the Dutchess County Airport assists in determining the future needs of the airport and its role within the surrounding regional community through to the end of the 2020 planning period. The following is a summary of surveys conducted in both the pilot and business communities on their current and anticipated utilization of the Dutchess County Airport.

## PILOTS SURVEY

Collection of data for the Master Plan included sending out ninety-seven surveys to certificated pilots in the City of Poughkeepsie, NY and Wappingers Falls, NY. Thirty-four (35%) responded out of the total ninety-seven surveys. The following is a summary of results from the Pilot Survey.

Of the 35% who responded, the largest proportion are privately licensed pilots (35%) with an instrument rating (21%). Of the respondents, 80% base their aircraft at Dutchess with the remainder being equally split between Stewart (3%) and Stormville (3%), or other (Orange County – 14%). Aircraft used by the respondent pilots are predominantly 4 passenger single engine planes (54%) and 1 to 3 passenger single engine planes (32%). Approximately 8% own and operate multi-engine planes.

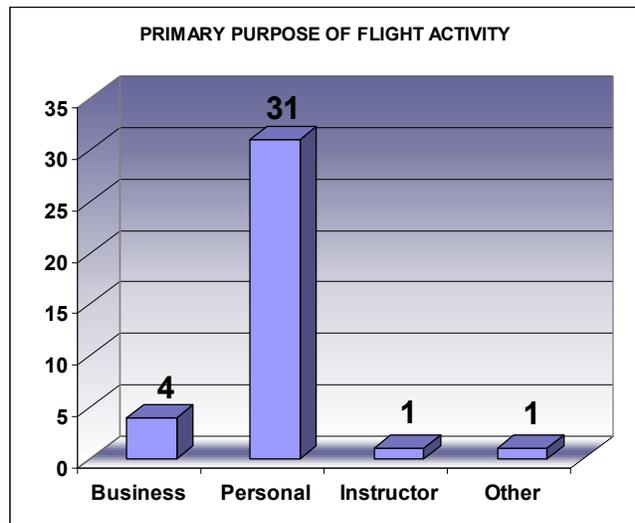


Chart 1  
Source: C & S Engineers, Inc.



Chart 2  
Source: C & S Engineers, Inc.

The primary purpose of flight activity according to respondents (Chart 1) is overwhelmingly *personal* at 83.7% (or 31 respondents) with *business* following at 10.8% (4 respondents). Over the past year (1999-2000), itinerant operations versus local operations among the respondents is roughly a 40% to 60% split, respectively. Of the respondents, 68% anticipate that their flying activity will increase over the next five years.

The primary reason that the respondents utilize the Dutchess County Airport is *convenience* (42%), followed by *location* (34%), *services* (12%) and *facilities* (9%). The facilities were rated as follows:

- Out of 16 that rated the *flight schools* at the airport, 11 rated them *high* with five rating



them *average*.

- Out of 22 that rated ***maintenance rates***, 17 rated them as *average* and 5 rated them *high*.
- Out of 31 that rated ***fuel costs***, 27 rated them *average*, 3 rated them *high* and 1 person rated them *low*.
- Out of 29 that rated ***aircraft storage and parking fees***, 22 rated them *average* and the remaining 7 rated them *high*.
- Out of 29 that rated ***FBO services***, nine rated them *excellent*, 19 rated them *good*, 1 rated them *fair*.
- Out of 29 that rated the airport's ***NAVAIDs***, 11 rated them *excellent*, 17 rated them *good*, and 1 rated them *fair*.
- Out of 26 that rated the airport's ***hangar facilities***, four rated them *excellent*, 9 rated them *good*, 10 rated them *fair* and 3 rated them *poor*.
- Out of 31 that rated the airport's ***pavement conditions***, 6 rated the pavement as *excellent*, 23 rated it *good*, 2 rated it *fair*.
- Out of 30 who rated the airport's ***snow removal***, 14 rated it as *excellent* and 16 rated it as *good*.
- Out of 30 that rated the ***geographic location*** of the airport, 16 rated it *excellent* and 14 rated it *good*.

To briefly summarize, pilots who responded to the survey rated the Dutchess County Airport facilities and its associated services, such as flight schools, fuel maintenance rates, aircraft and parking fees, FBO services, pavement conditions, and navigational aids as average to above average. The respondents rated the airport navigational aids, snow removal and geographic location favorably from good to excellent. There is evidence the hangar facilities need improvements since the survey implies that the facilities are deficient for the needs of the current users and pilots who base their aircraft at Dutchess. The primary reasons that the Pilot Survey respondents utilize the Dutchess County Airport is for *convenience*, *location*, its *services* and *facilities*, which indicates a favorable approval of the airport for General Aviation use.



## BUSINESS SURVEY

A Business Survey was conducted to analyze the current and potential users of the Dutchess County Airport within the surrounding business community. 211 surveys were sent to major employers in Dutchess County as well as business establishments approximately within a ten mile radius of where the airport is located in the Town of Wappingers. Of the 211 surveys sent out, 30 responded (14% rate of return). A non-respondent bias is assumed due to the low response rate where the average response rate for surveys of this type is 20% to 40%.

72% of the respondents are from service related industries. This reflects the present economic trend in Dutchess County where services has replaced manufacturing as the leading industry. The remaining respondents come from manufacturing at 8%, retail at 4% and other at 16%. The “other” category represents predominantly educational institutions, personal finance, and tourism. The overall average number of employees is approximately 78 employees per business establishment.

The following is a summary of indicators measuring importance of selected factors to the operation of their business. The survey employed a scale of one to five, one being “doesn’t matter” and five being “very important” to rate the factors as it applies to the following:

### Intermodalism and Access

In assessing transportation accessibility, approximately 30% **rated location within a multi-modal site** as being *important* to *very important* to business operations. 25% rated the same determinant as *doesn't matter*. Approximately 69% indicated that **proximity to highways** is *important* to *very important* to business operations. 15% rated **proximity to rail lines** as being *important* to their business and 50% indicated that location near rail lines *did not matter* in the operation of their businesses. Approximately 43% rated the **proximity to an airport** as being *important* to *very important* to their business operations, with 18% indicating that it *doesn't matter*. 74% of the respondents cited that **direct access to an airfield** *did not matter* in the operation of their business.

The automobile was the **most frequently used mode of transportation for business** (50%), followed by airlines (26%), train (16%), charter (3%), and “other” (5%) (bus, van or truck). While 71% indicated that the automobile was the **mode of travel most used by their employees**, the second most common mode of travel was by airlines (14%), followed by train (9%). “Other” category composed 6% (bus, van or truck).

### Customs, Trade and Raw Materials

Sixty-seven percent also revealed that the **presence of a federal inspection facility** was not *important* to the operation of their business with only 4% of the respondents rating it as *very important*. Another 74% indicated that **foreign trade designation** was not an *important* factor for their business with 7% indicating that it was a *very important* factor. Approximately 85% of the respondents indicated that the **proximity to raw materials** was not an *important* factor in the operation of their business.

### Labor and Market Accessibility

Twenty-nine percent of the respondents rated **proximity to skilled labor** as somewhat *important*, 35% rated it *important*, while 11% said that it was *very important*. A remaining 25% indicated that proximity to skilled labor did not matter in the operation of their business. 39%



indicated that **proximity to low cost labor** was *important* while 32% said that it *did not matter*. The majority of the respondents indicated that **proximity to market** was somewhat *important* (26%), *not very important* (4%) or *did not matter* (19%).

## Business Cost, Tax Incentives and Financing

Of the respondents, 35% indicated that a **location with low operation costs** was *somewhat important*, while 19% said that it was *important* and 15% said that it was *very important*. Additionally, with regard to a **location in an area with a low cost of living**, 26% said that it was *somewhat important*, 21% indicated that it was *important* and 14% said it was *very important* to their business operations. The importance in the **availability of tax incentives** was rated by the respondents to be *not a very important* matter to 35%, while 15% rating this factor as *very important*, 15% *important* and 31% said that it *somewhat important*. Also, the **availability of low cost financing** as it pertains to their business, 42% indicated that it *did not matter* with the remaining respondents ranging between *somewhat important* (27%) and *very important* (12%).

## Business Training Availability

With regard to the **availability of training** for their business operations, 22% indicated as *not mattering*, 22% rated it as *not very important*, and 26% indicated that it was *somewhat important*. A smaller percentage overall indicated that the availability of training was *very important* (11%) or *important* (19%).

## Importance of Air Service

The importance of air service to the businesses that responded to the consultant survey is assumed to under-represent the larger population of the business community because of the low survey response rate. On the other hand, some insight can be drawn regarding the current users of the Dutchess County Airport and its potential to fulfill future needs of the business community as illustrated from the results of the survey.

As shown in Chart 3 illustrating the **importance of passenger air service**, results show it to be fundamental to operation of business from those that responded to the survey with 27% acknowledging that passenger service is *important* and 33% indicating that it is *very important*. However, when asked whether or not the business used the Dutchess County Airport for business travel, 89% indicated that they did not.

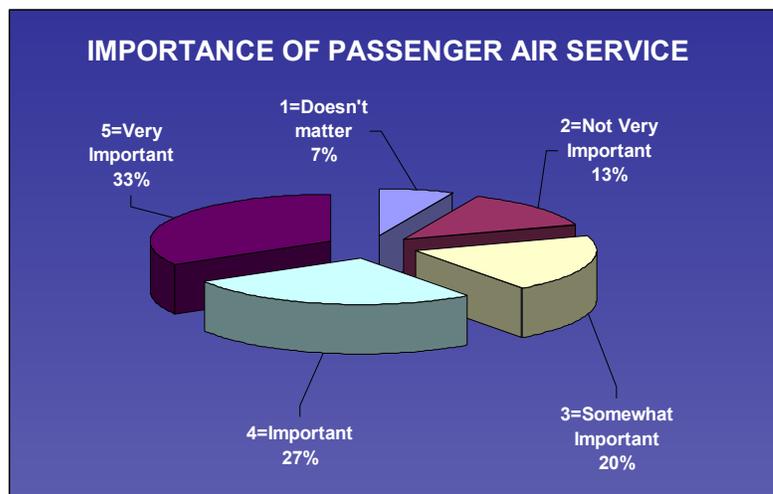


Chart 3  
Source: C & S Engineers, Inc.

The reasons chosen for not using the Dutchess County Airport were near equally split between **costs** (20%), **services** (26%) and/or **schedules** (28%). 17% responded to the “other” category with comments aimed at the limited services, lack of airline services, or destinations offered by Dutchess were



not congruent with those necessary for their businesses operations. Destinations listed for those that chose “other” category included West Coast, Florida, Atlanta, GA, Chicago, IL, Newark, NJ, and Boston, MA (nationally). Local destinations listed by those who chose “other” category included Rochester, NY, Albany, NY and the NYC metropolitan area.

Of the respondents, 75% indicated that the airport most **used by their employees** is Stewart International Airport, while only 6% use Dutchess County Airport. “Other” airports listed as being used by their employees (19%) included Westchester County, La Guardia, JFK International, Albany, and Harrisburg International.

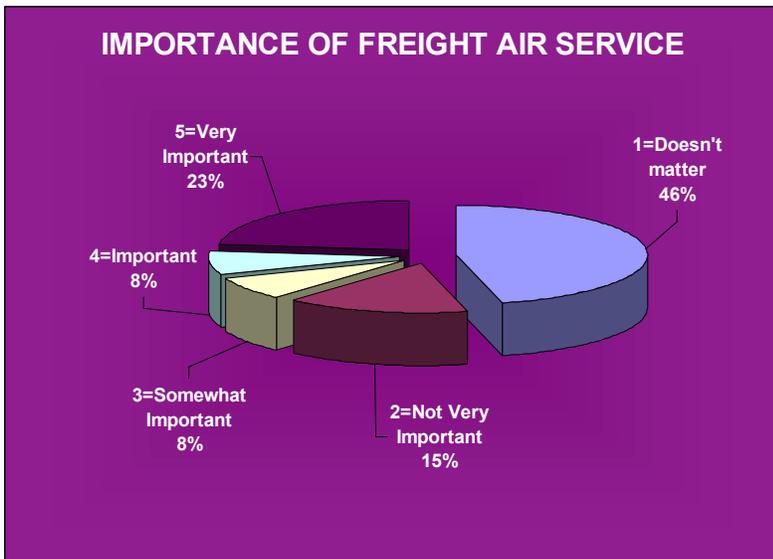


Chart 4  
Source: C & S Engineers, Inc.

When asked why their employees used airports other than Dutchess County Airport, answers indicated **airlines** (22%), **schedules** (21%), **services** (22%) and/or **costs** (19%) were factors at Dutchess. Facilities and location were not identified as significant indicators as to why Dutchess County Airport was not being used by businesses and/or their employees who responded to the survey. The number of air trips per month averaged for all businesses who responded is 14. 52% anticipate their air travel to increase, while 48% expect their rate of air travel to remain the same over the next five years.

In terms of business operations, the **importance of freight air service** is reported as a factor which *doesn't matter* to 46% of the survey respondents, while only 23% indicated that it is *important* (see Chart 4).

## Corporate Aircraft

Only one Business Survey respondent indicated that they owned and based their aircraft at Dutchess County Airport (out of 30 respondents). The reason listed as to why they base their aircraft at Dutchess is *promotional*. The business averages 300 corporate air trips per month. The company bases 7 helicopters at Dutchess County Airport and one helicopter at Stewart International Airport.

## Customer Travel

Of the respondents, 59% revealed that their business visitors arrived by air service with an average of 18.67 visitors per month. The majority of business visitors arrive from the mid-west, closely followed by the northeast and the southeast regions of the United States. 57% of the respondents expected the number of business visitors to increase over the next five years, while 43% expected no change in the number of business visitors.



## Business Contacts

Survey respondents cited that their primary suppliers are principally located locally with the majority being located in New York State and the eastern United States. These locations were followed by the Mid-West, West and South of the United States, respectively. Canada, Mexico and Europe were selected as locations for primary suppliers on a lesser scale compared to those from the continental U.S.

Primary customer locations followed this same format and logic with New York and the Eastern United States as principal locations for business customers. These locations were followed by the South, West, and Mid-West of the United States, respectively. Europe, Canada, and Mexico were cited as locations on a much lesser note, with minor mentions of Asia/Pacific, South America, and Africa.

Only 23% of the respondents indicated that the Canadian Market was *important* to their business, while 77% indicated that the Canadian Market *did not matter* in the operation of their businesses.

## SUMMARY OF KEY FINDINGS

The significant downsizing of IBM in the middle 1990's impacted the service at the airport along with IBM's decision to relocate its corporate aircraft headquarters to the Westchester County Airport. As a result, Associated Aircraft Group, Inc.'s takeover of the former IBM hangar facilities to establish a successful chartered helicopter business has become a key element in the continuing operation of the airport currently and for the future.

Stewart International Airport, which is within a 25 mile radius of Dutchess County Airport began commercial passenger service in 1990 inducing an 80% decrease in passenger enplanements at Dutchess County Airport for the next several years. Dutchess County Airport now serves as an *unofficial* reliever airport for Stewart International.

It appears from the superb response to the Pilot Survey and also from the favorable assessments of the General Aviation facilities that the Dutchess County Airport facilities are satisfactory. The FBO services, navigational aids, snow removal and ground maintenance, and geographic location were also rated favorably. There is evidence on the need to improve the hangar facilities since the survey suggests that the facilities are deficient in terms of the needs of the current users and pilots who base their aircraft at Dutchess.

Most of the respondents to the Business Survey are service related industries, which reflects the economy of Dutchess County overall. Service related industries replaced manufacturing as a leading employer in Dutchess County and the nation as a whole during the late 1980's and into the 1990's. The remaining respondents came from manufacturing, retail, educational institutions, personal finance, and tourism related industries. The overall average number of employees is approximately 78 employees per company.

Key insights that can be drawn from the survey are related to the opportunities and constraints of the airport to fulfill future expectations for business operational needs. Opportunities are related to the airport as a resource for the region as a whole. Other opportunities exist from the current reutilization of the former IBM hangar facilities by Associated Aircraft Group. Constraints are related to the current level of service being offered by Dutchess County Airport to the business



community in a climate that is recovering from a tremendous economic impact and downturn. The bigger picture is that of the economic climate that is transitioning from a narrowly focused loyalty to one successful business to a climate that is working to develop a more diversified and sustainable economy.

Air passenger service was revealed by the respondents to be a very important function of their businesses. After automobiles, airline service was cited as the most common mode of travel used for business travel, customer and employee travel. 52% reported that they expect their business air travel to increase over the next five years, while 48% expect their rate of air travel to remain the same. However, results of the survey also indicate that the current level of commercial service at the airport is not congruent with the current needs of the business community in terms of schedules, costs, airline services and destinations presently offered at Dutchess County Airport.

46% of the Business Survey respondents revealed that freight air service did not matter in their business operations, while only 23% indicated that it is important. Related to the issue of freight is cargo. The vast majority of respondents revealed that the presence of a federal inspection facility was not important to the operation of their business. The majority of respondents also indicated that foreign trade designation nor was proximity to raw materials an important factor in the operation of their business. Approximately three quarters of the respondents indicated that the Canadian Market did not matter in the operation of their businesses.

Survey respondents cited that their primary suppliers and primary customers are principally located locally with the majority being located in New York State and the eastern United States. These locations were followed by the Mid-West, West and South of the United States, respectively. Canada, Mexico and Europe were selected as locations for primary suppliers on a lesser scale compared to those from the continental U.S. Also, Europe, Canada, and Mexico were cited as locations for primary customers on a much lesser note than the U.S. on the whole, with minor mentions of Asia/Pacific, South America, and Africa.



# APPENDIX C

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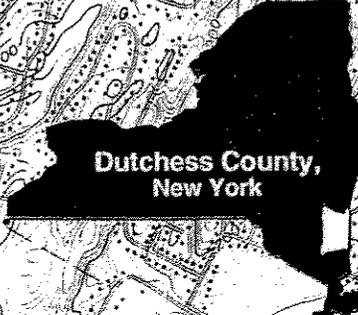
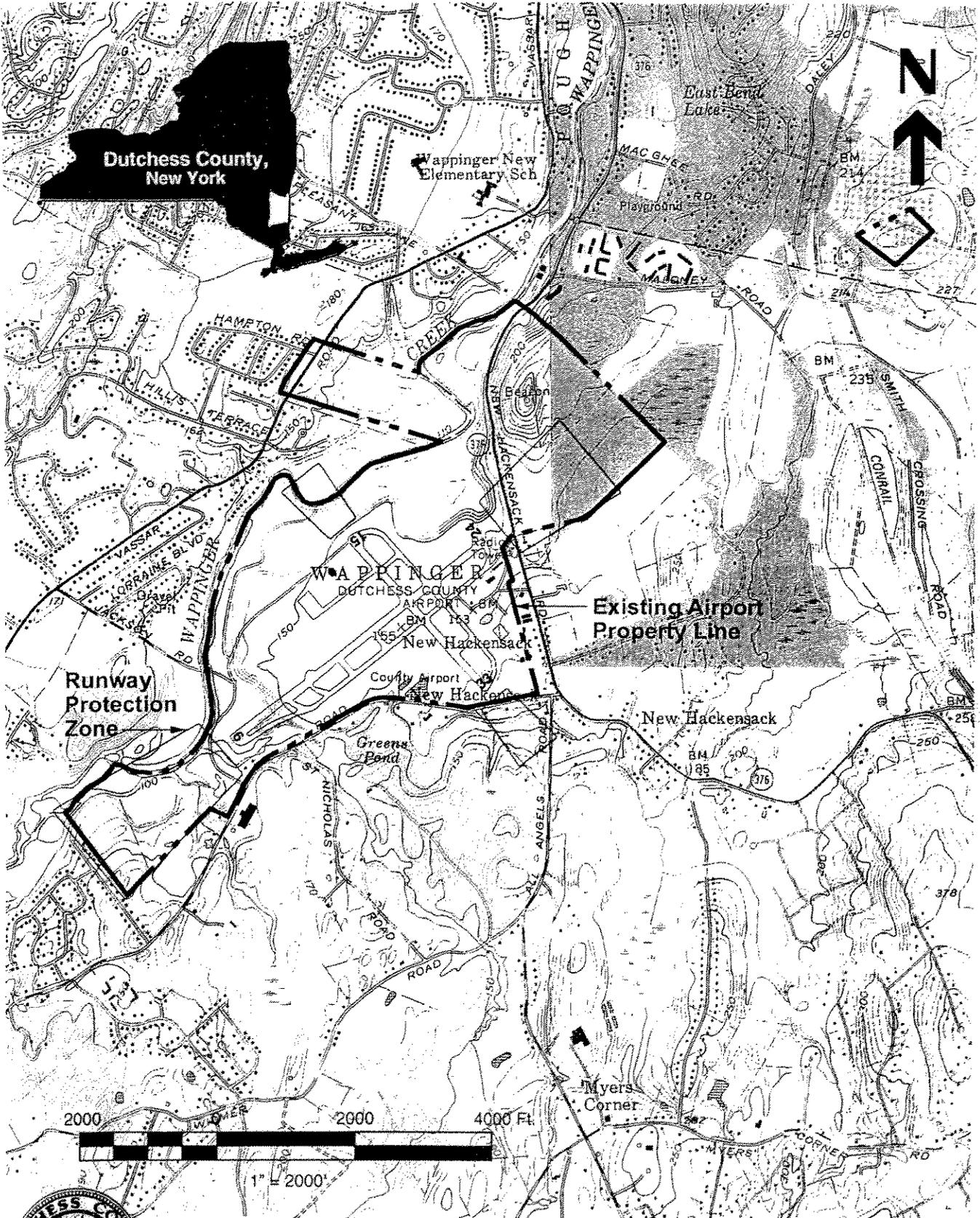
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ENGINEER  
 DESIGNER  
 PLANNING AND  
 CONSTRUCTION

**Dutchess County Airport  
 Vicinity Map  
 Figure 3-1**

May 12, 2000

Marie Jenet  
FAA Environmental Specialist  
Federal Aviation Administration  
New York District Office  
600 Old Country Road, Suite 446  
Garden City, NY 11530

Re: Poughkeepsie-Dutchess County Airport  
Master Plan  
File: 128.019.001.120

Dear Ms. Jenet:

On behalf of Dutchess County, C&S Engineers, Inc., is currently preparing a Master Plan for the Poughkeepsie-Dutchess County Airport in Wappingers Falls, New York. This letter is a request for your office's assistance in identifying any possible areas of environmental significance at the airport.

Attached please find a vicinity map of the airport. A significant task in the Airport Master Plan will be to evaluate the airport property in terms of existing environmental significance and possible future impacts. Obviously, before any major development would occur, specific Federal and/or State-level environmental reviews would be accomplished. What we are interested in from your office is any information regarding the following Environmental Impact Categories, taken from the Federal Aviation Administration Order 5050.4a *Airport Environmental Handbook*, as they may relate to the airport.

The categories are:

Noise	Endangered and Threatened Species of Flora and Fauna
Wetlands	Compatible Land Use
Flood Plains	Social Impacts
Coastal Zone Management	Induced Socio-economic Impacts
Coastal Barriers	Air Quality
Prime and Unique Farmland	Water Quality
Energy Supply and Natural Resources	Department of Transportation Act Section 4(f) Lands
Light Emissions	Historic-Architectural-Archeological and Cultural Resources
Solid Waste Impacts	Biotic Communities
Construction Impacts	
Wild and Scenic Rivers	

If you have any questions or concerns on this site, please provide it to us or call before June 16, 2000. Thank you again for your assistance.

Very truly yours,  
C&S ENGINEERS, INC.

Maureen A. Harding  
Planner

enc.



DEPARTMENT OF STATE

George E. Pataki  
Governor  
Alexander F. Treadwell  
Secretary of State

*Division of*  
**Coastal Resources**  
41 State Street  
Albany, NY 12231-0001

May 23, 2000

Ms. Maureen A. Harding  
C&S Engineers, Inc.  
Syracuse Hancock International Airport  
Syracuse, New York 13212

Re: Poughkeepsie-Dutchess County Airport Master Plan  
Town of Poughkeepsie, Dutchess County

Dear Ms. Harding:

The Department of State has reviewed the information you provided by letter, dated May 12, 2000, describing the above proposed project.

Based on the information provided we have determined that the proposed project is not subject to the consistency provisions of the New York State Coastal Management Program. The project, as proposed, is located outside the State's designated coastal area and is not likely to affect land and water uses and natural resources within the State's coastal area.

We appreciate your referring this information to the Department of State for review. Please call me at (518) 402-3399 if you have any questions.

Sincerely,

Vance A. Barr  
Coastal Resources Specialist

VAB/jma



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 2  
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NEW YORK, NY 10007-1866

**JUN 12 2000**

Maureen A. Harding, Planner  
C&S Engineers, Inc.  
Syracuse Hancock International Airport  
Syracuse, New York 13212

Dear Ms. Harding::

The Environmental Protection Agency (EPA) has reviewed the scoping notice for the preparation of a Master Plan for the Poughkeepsie-Dutchess County Airport, located in Wappingers Falls, New York.

Unfortunately, the lack of detailed information in the scoping fact sheet makes it difficult to provide specific comments on the scope of the proposed project. Nevertheless, we recommend that the project's environmental documentation include the following information:

- A discussion of the purpose and need for the proposed action;
- An evaluation of alternatives to the proposed action, including reasonable alternatives not within the jurisdiction of the lead agency;
- A comprehensive evaluation of cumulative, indirect, and secondary impacts. The cumulative impacts analysis should consider the environmental impacts of the project as a whole, and if any, as one of a number of other past, present, and reasonably foreseeable future projects and/or actions in the project area. With this in mind, the analysis should consider and evaluate impacts to air quality, surface and ground water quality, wetlands, historical/cultural resources, and endangered species. Please refer to the Council on Environmental Quality's January 1997 guidance, Considering Cumulative Effects Under the National Environmental Policy Act, which can be found at [www.whitehouse.gov/ceq/](http://www.whitehouse.gov/ceq/), if you require further guidance on the requirements of this analysis;
- An evaluation of the potential direct impacts associated with the implementation of the proposed action. This should include impacts to wetlands, ground water, air and water quality, endangered species and floodplains. The analysis should also assess potential impacts to the man-made environment, such as cultural/historic resources and the action's potential effect on noise levels in the project area;

- A description of the terrestrial and aquatic environments to be impacted by the proposed action and alternatives;
- An Environmental Justice analysis, as required by Executive Order 12898, to determine if the proposed action would result in disproportionate adverse impacts to low-income or minority communities. Please refer to the Council on Environmental Quality's Guidance for Considering Environmental Justice Under the National Environmental Policy Act, which can be found at [www.whitehouse.gov/ceq](http://www.whitehouse.gov/ceq), if you require further guidance on the requirements of this analysis.

Thank you for the opportunity to comment. Should you have any questions concerning this letter, please contact Mark Westrate of my staff at (212) 637-3789.

Sincerely yours,



Grace Musumeci, Chief  
Environmental Review Section  
Strategic Planning and Multi-Media Programs Branch

cc: D. Mather, FAA



# United States Department of the Interior

FISH AND WILDLIFE SERVICE

3817 LUKER ROAD

CORTLAND, NY 13045

June 12, 2000

Ms. Maureen A. Harding  
Planner  
C&S Engineers, Inc.  
Syracuse Hancock International Airport  
Syracuse, NY 13212

Dear Ms. Harding:

This responds to your letter of May 12, 2000, requesting information on the presence of endangered or threatened species in the vicinity of the Poughkeepsie-Dutchess County Airport in the Town of Wappinger, Dutchess County, New York. The information will be used in the preparation of an airport master plan.

Except for occasional transient individuals, no Federally listed or proposed endangered or threatened species under our jurisdiction are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the U.S. Fish and Wildlife Service (Service). Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

The above comments pertaining to endangered species under our jurisdiction are provided pursuant to the Endangered Species Act. This response does not preclude additional Service comments under the Fish and Wildlife Coordination Act or other legislation.

For additional information on fish and wildlife resources or State-listed species, we suggest you contact:

New York State Department  
of Environmental Conservation  
Region 3  
21 South Putt Corners Road  
New Paltz, NY 12561-1676  
(914) 256-3000

New York State Department  
of Environmental Conservation  
Wildlife Resources Center - Information Services  
New York Natural Heritage Program  
700 Troy-Schenectady Road  
Latham, NY 12110-2400  
(518) 783-3932

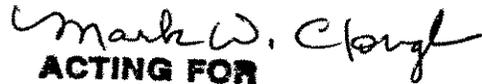
National Wetlands Inventory (NWI) maps may or may not be available for the project area. However, while the NWI maps are reasonably accurate, they should not be used in lieu of field surveys for determining the presence of wetlands or delineating wetland boundaries for Federal regulatory purposes. Copies of specific NWI maps can be obtained from:

Cornell Institute for Resource Information Systems  
302 Rice Hall  
Cornell University  
Ithaca, NY 14853  
(607) 255-4864

Work in certain waters and wetlands of the United States may require a permit from the U.S. Army Corps of Engineers (Corps). If a permit is required, in reviewing the application pursuant to the Fish and Wildlife Coordination Act, the Service may concur, with or without stipulations, or recommend denial of the permit depending upon the potential adverse impacts on fish and wildlife resources associated with project implementation. The need for a Corps permit may be determined by contacting Mr. Joseph Seebode, Chief, Regulatory Branch, U.S. Army Corps of Engineers, 26 Federal Plaza, New York, NY 10278 (telephone: [212] 264-3996).

If you require additional information please contact Michael Stoll at (607) 753-9334.

Sincerely,

  
**ACTING FOR**

David A. Stilwell  
Field Supervisor

cc: NYSDEC, New Paltz, NY (Environmental Permits)  
NYSDEC, Latham, NY  
COE, New York, NY



**FARM & HOME CENTER, 2715 Route 44, Suite 3  
MILLBROOK, NY 12545-0037, Tel. 914-677-3194**

**June 19, 2000**

**To: Maureen A. Harding, Planner, C&S Engineering, Inc.**

**Re: Poughkeepsie-Dutchess County Airport**

**First, you should of directed your inquiry to this office, as Dutchess County is not served from our Ghent, NY office. Make a note for your file.**

**Environmental Items that NRCS can add relevant information to would include, Soils interpretations for site suitability, erosion potential and control, as well as reestablishing vegetative cover. This same data base includes Prime and Unique Farmland soils. You will find this information in the Dutchess County's Soil Survey which can be obtained from the Dutchess' Soil and Water Conservation District. Erosion control standards are contained in New York State Guidelines for Erosion and Sediment Control. If you have trouble finding either of these documents let me know.**

A handwritten signature in black ink, appearing to read "William E. Duckery". The signature is written in a cursive style with a large, sweeping initial "W".

**William E. Duckery  
District Conservationist**



REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
NEW YORK DISTRICT, CORPS OF ENGINEERS  
JACOB K. JAVITS FEDERAL BUILDING  
NEW YORK, N.Y. 10278-0090

June 22, 2000

Planning Division

Maureen A. Harding  
Planner  
C&S Engineers, Inc.  
Syracuse Hancock International Airport  
Syracuse, NY 13212

RE: Poughkeepsie-Dutchess County Airport

Dear Ms. Harding:

Thank you for your letter dated May 12, 2000 and pertinent documents regarding the above referenced project. We have completed our review and enclose comments for your use (Enclosure 1).

Should you require any further assistance in this matter, please feel free to contact Mr. David Webb, NEPA Review Coordinator at (212) 264-2008.

Sincerely,

A handwritten signature in cursive script, appearing to read "Roselle Henn", is written over a horizontal line.

Roselle Henn  
Acting Chief, Environmental Analysis  
Branch

Attachments

**Enclosure 1**

**Comments for**  
**Poughkeepsie-Dutchess County**  
**Airport Master Plan**

1. **Cultural Resources:** It is not very clear where the impact will be. It is assumed that the impact will be on the Northwest in extension of the Runway Protection Zone. A cultural resource investigation should be carried out (i.e., background research and possibly limited shovel testing).
  
2. **Permits:** The Army Corps of Engineers regulates activities that include dredging or construction activities in or over any navigable waters of the United States, the placement of any dredged or fill material in any waters of the United States (including coastal or inland wetlands) or the accomplishment of any work affecting the course, location, condition or capacity of such areas. Such activities may require a Department of the Army permit, in accordance with 33 CFR 320-330.



Bernadette Castro  
Commissioner

**New York State Office of Parks, Recreation and Historic Preservation**  
Historic Preservation Field Services Bureau  
Peebles Island, PO Box 189, Waterford, New York 12188-0189

518-237-8643

June 23, 2000

Maureen A. Harding  
C & S Engineers  
Syracuse Hancock International Airport  
Syracuse, NY 13212

Re: FAA  
Poughkeepsie-Dutchess County Airport  
Master Plan,  
Towns of Wappingers & Poughkeepsie,  
Dutchess County  
00PR2164

Dear Ms. Harding:

Thank you for requesting the comments of the State Historic Preservation Office (SHPO). We have begun to review the project in accordance with Section 106 of the National Historic Preservation Act of 1966 and the relevant implementing regulations.

Regarding archeology, please see the attached "Archeology Comments," and contact the person named at the bottom of the form if you have any questions.

Regarding historic resources, there are no State or National Register listed properties within the boundaries of the airport or in the immediate vicinity of the airport; however, there may be properties on or in the vicinity of the airport property that are eligible for listing on the State and National Registers. The SHPO recommends that a survey of historic resources be undertaken of all properties over 50 years old on the airport property or in an area likely to be impacted by airport development. This should include a photograph, map location, and possible date of construction of each property. It appears that many of the subdivisions near the airport are of recent origin - this information should be included as part of the survey. Once we receive the survey, we will evaluate the properties and provide recommendations as to which ones are historic.

M. Harding page 2

Please call me at 518-237-8643, ext. 3264, if you have any questions. When corresponding with us on this project, please use the above project number.

Sincerely

A handwritten signature in black ink that reads "Peter Shaver". The signature is written in a cursive, flowing style.

Peter D. Shaver  
Historic Preservation  
Program Analyst

Enc

**ARCHEOLOGY COMMENTS**  
**00PR2164**

Based on reported resources, there are archeological sites in or adjacent to your project area. Therefore the State Historic Preservation Office (SHPO) recommends that a Phase 1 archeological survey is warranted unless substantial ground disturbance can be documented.

A Phase 1 survey is designed to determine the presence or absence of archeological sites or other cultural resources in the project's area of potential effect. The Phase 1 survey is divided into two progressive units of study including a Phase 1A sensitivity assessment and initial project area field inspection, and a Phase 1B subsurface testing program for the project area. The SHPO can provide standards for conducting cultural resource investigations upon request. Cultural resource surveys and survey reports that meet these standards will be accepted and approved by the SHPO.

Our office does not conduct cultural resource surveys. A 36 CFR 61 qualified archeologist should be retained to conduct the Phase 1 survey. Many archeological consulting firms advertise their availability in the yellow pages. The services of qualified archeologists can also be obtained by contacting local, regional, or statewide professional archeological organizations. Phase 1 surveys can be expected to vary in cost per mile of right-of-way or by the number of acres impacted. We encourage you to contact a number of consulting firms and compare examples of each firm's work to obtain the best and most cost-effective product.

Documentation of ground disturbance should include a description of the disturbance with confirming evidence. Confirmation can include current photographs and/or older photographs of the project area which illustrate the disturbance (approximately keyed to a project area map), past maps or site plans that accurately record previous disturbances, or current soil borings that verify past disruptions to the land. Agricultural activity is not considered to be substantial ground disturbance and many sites have been identified in previously cultivated land.

If you have any questions concerning archeology, please call Adrian Mandzy at (518) 237-8643 ext. 3281.

Syracuse Hancock International Airport  
Syracuse, New York 13212

# Memo

To: FILE

From: Bryan A. Bayer, Environmental Analyst

Date: November 6, 2000

Re: Dutchess County Airport  
Landfill and Balefill Sites

File: 128.019.001

---

C&S Engineers recently completed a review of the Dutchess County Airport Landfill and Balefill Sites status. This effort included telephone conversations with NYSDEC and a review of the *Registry of Inactive Hazardous Waste Disposal Sites in New York State - Volume 3* (Registry). C&S also reviewed the *Engineering Investigations at Inactive Hazardous Waste Sites in the State of New York Phase II* (Report). This memo in conjunction with general knowledge of 6 NYCRR 360, summarizes the information obtained during the review.

The Dutchess County Airport Balefill (New York Site Code 314023) is located on Citation Drive within the Town of Wappinger, Dutchess County. This site is a 2.25-acre landfill for baled refuse operated during 1976-1977. According to the Report, dated 1987, the balefill was capped and covered with thick vegetation (NYSDEC, 1987). Generally, the site is located northwest of Dutchess County Airport Runway 15. The Dutchess County Airport Landfill (New York Site Code 314023) is also located within the Town of Wappinger, Dutchess County. The landfill is a 60 acre site operated as a sanitary landfill from 1968 to 1972 (NYSDEC, 1987). The site is situated northwest of Runway 24. The two sites are located approximately 1,000 feet apart.

C&S consulted with Mr. David Pollock, of the NYSDEC Region 3 Solid and Hazardous Materials Unit, and the Registry to determine whether these two sites are designated hazardous waste sites. Mr. Pollock stated that the two sites are not considered hazardous waste sites at this time. The Registry did not list either site as an Inactive Hazardous Waste Site within Dutchess County.

Per telephone conversations with Mr. Andrew Lent, of the NYSDEC Region 3 Solid and Hazardous Materials Unit, both the Landfill and the Balefill were closed as solid waste facilities. NYSDEC does not have documentation or certification stating that the two sites were closed consistent with 6 NYCRR 360, and accordingly there are no state regulated post closure activities occurring with either site. Reputedly the County is

**Memo to File**  
**November 6, 2000**  
**Page 2 of 2**

undertaking continuous maintenance of the leachate collection system.

However, Mr. Lent stated that potential leachate outbreaks were recently noticed at the two sites, and that sampling efforts were conducted by the Dutchess County Department of Health to determine whether future post closure efforts will be required. Mr. Lent stated that he was not aware of the results of this sampling.

Development of the sites could involve any or a combination of the following issues:

- Poor structural conditions
- Uneven settlement
- Encountering waste and/or leachate during construction
- Managing landfill gas during and post construction

Any development that did take place on the site must be designed in such a manner as not to impede future remedial efforts or in any way compromise the function of the existing cap. Plans for such development should therefore be coordinated with NYSDEC.

Given the uncertain status of these sites with respect to future post closure maintenance or remediation requirements, it is not advisable, in our opinion, to commit to future development of these sites.

Cc: Bob Palladine, C&S  
Maureen Harding, C&S



ENGINEERS  
DESIGN BUILD  
TECHNICAL RESOURCES  
OPERATIONS

C&S Engineers, Inc.  
Syracuse Hancock International Airport  
Syracuse, NY 13212  
phone 315-455-2000  
fax 315-455-9667  
www.cscos.com

November 28, 2000

Nick Conrad, Information Manager  
New York State Department  
of Environmental Conservation Information Services  
NY Natural Heritage Program  
700 Troy-Schenectady Road  
Latham, New York 12110

**Re: Dutchess County Airport  
Airport Master Plan Update  
Wappingers Falls, Dutchess County, New York**

**File: 128.019.001**

Dear Mr. Conrad:

C&S Engineers, Inc. (C&S) on the behalf of Dutchess County Airport preparing an Airport Master Plan Update. C&S has been contracted by the Dutchess County Airport to prepare the update. A portion of this task includes identifying any environmental concerns existing within or nearby the project limits. Attached to this letter is a map (USGS Quadrangles: Wappingers Falls, Hopewell Junction, Poughkeepsie, Pleasant Valley Quadrangle) that illustrates the proposed project location.

I am requesting any information you may have regarding significant habitats, endangered, threatened, or rare species, or species of special concern on or in the immediate vicinity of the project.

Thank you for your assistance. If you have any questions or require any additional information, please contact me at this office.

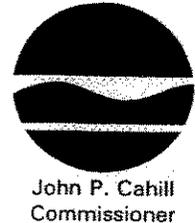
Very truly yours,  
C&S ENGINEERS, INC.

*Maureen A. Harding*

Maureen A. Harding  
Planner

MAH/mah  
Enc.

New York State Department of Environmental Conservation  
Division of Fish, Wildlife & Marine Resources  
Wildlife Resources Center - New York Natural Heritage Program  
700 Troy-Schenectady Road, Latham, New York 12110-2400  
Phone: (518) 783-3932 FAX: (518) 783-3916



December 29, 2000

Maureen A Harding  
C & S Engineers  
Syracuse Hancock Interntl Airport  
Syracuse, NY 13212

Dear Ms. Harding:

In response to your recent request, we have reviewed the New York Natural Heritage Program databases with respect to the proposed Dutchess County Airport Master Plan Update, area as indicated on the map you provided, located in the Town of Wappingers Falls.

We have no records of known occurrences of rare or state-listed animals or plants, significant natural communities, or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not mean, however, that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site, but rather that our files currently do not contain any information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. For these reasons, we cannot provide a definitive statement on the presence or absence of rare or state-listed species, or of significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities, and other significant habitats maintained in the Natural Heritage Databases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

Sincerely,

  
John Schmid, Information Services  
NY Natural Heritage Program

Encs.

cc: Reg. 3, Wildlife Mgr.



# APPENDIX D

## Noise Data

report

INM 6.0b ECHO REPORT 10-Apr-01 16:32

STUDY: M:\PLANNING\JOSHE\Dutchess Existing\

Created : 10-Apr-01 15:25  
Units : English  
Airport : POU  
Description :  
Dutchess Existing

CASE: existing 2000

Created : 10-Apr-01 15:47  
Description :

STUDY AIRPORT

Latitude : 41.626633 deg  
Longitude : -73.884068 deg  
Elevation : 166.0 ft  
Temperature : 58.4 F  
Pressure : 29.92 in-Hg  
AverageWind : 8.0 kt  
ChangeNPD : No

STUDY RUNWAYS

06

Latitude : 41.621919 deg  
Longitude : -73.892010 deg  
Xcoord : -0.3574 nmi  
Ycoord : -0.2827 nmi  
Elevation : 147.0 ft  
OtherEnd : 24  
Length : 5001 ft  
Gradient : 0.17 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 0 ft

07

Latitude : 41.625149 deg  
Longitude : -73.887830 deg  
Xcoord : -0.1693 nmi  
Ycoord : -0.0890 nmi

report

Elevation : 0.0 ft  
OtherEnd : 25  
Length : 1425 ft  
Gradient : 0.00 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 0 ft

15

Latitude : 41.630472 deg  
Longitude : -73.885437 deg  
Xcoord : -0.0616 nmi  
Ycoord : 0.2302 nmi  
Elevation : 155.8 ft  
OtherEnd : 33  
Length : 3003 ft  
Gradient : 0.34 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 0 ft

24

Latitude : 41.630596 deg  
Longitude : -73.877838 deg  
Xcoord : 0.2803 nmi  
Ycoord : 0.2377 nmi  
Elevation : 155.4 ft  
OtherEnd : 06  
Length : 5001 ft  
Gradient : -0.17 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 113 ft

25

Latitude : 41.627622 deg  
Longitude : -73.883792 deg  
Xcoord : 0.0124 nmi  
Ycoord : 0.0593 nmi  
Elevation : 0.0 ft  
OtherEnd : 07  
Length : 1425 ft  
Gradient : 0.00 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft

AppThresh : 0 ft  
 33  
 Latitude : 41.624280 deg  
 Longitude : -73.878188 deg  
 Xcoord : 0.2646 nmi  
 Ycoord : -0.1411 nmi  
 Elevation : 165.9 ft  
 OtherEnd : 15  
 Length : 3003 ft  
 Gradient : -0.34 %  
 RwyWind : 8.0 kt  
 TkoThresh : 0 ft  
 AppThresh : 142 ft

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
06-APP-1	0	100.00	Vectors	0.0
06-DEP-1	0	100.00	Vectors	0.0
15-APP-1	0	100.00	Vectors	0.0
15-DEP-1	0	100.00	Vectors	0.0
24-APP-1	0	100.00	Vectors	0.0
24-DEP-1	0	100.00	Vectors	0.0
33-APP-1	0	100.00	Vectors	0.0
33-DEP-1	0	100.00	Vectors	0.0

STUDY TRACK DETAIL

RwyId-OpType-TrkId-SubTrk	SegType	Dist/Angle	Radius(nmi)
06-APP-1-0	1 Straight	50.0000 nmi	
06-DEP-1-0	1 Straight	50.0000 nmi	
15-APP-1-0			

report

1	Straight	50.0000	nmi	
15-DEP-1-0				
1	Straight	50.0000	nmi	
24-APP-1-0				
1	Straight	50.0000	nmi	
24-DEP-1-0				
1	Straight	0.5000	nmi	
2	Right-Turn	8.0000	deg	0.5000
3	Straight	45.0000	nmi	
33-APP-1-0				
1	Straight	50.0000	nmi	
33-DEP-1-0				
1	Straight	50.0000	nmi	

STUDY AIRCRAFT

BEC58P Standard data  
 CNA172 Standard data  
 DHC6 Standard data  
 GIIB Standard data

STUDY SUBSTITUTION AIRCRAFT

Name	Description
Acft	Percent
BEC190	Beech 1900
DHC6	100.0 %
BEC58	Beechcraft Model 58 Barron
BEC58P	100.0 %
CNA152	Cessna 152
CNA172	100.0 %
GULF3	Gulfstream III
GIIB	100.0 %

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300
10000	16000	25000							

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)
------	------	--------	-----	-----	-------	----------

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)
----	---------	-----	------------

report

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(k
t)	Ang/Thr/Dis				

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode
---	----------	---------	---------	--------	--------

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B
------	------	----	---------	-----------	---------

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H
------	---------	---------	---------	----------	----------	---------

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power
------	---------	------------	-------

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb
		Coeff-H	Coeff-K1	Coeff-K2	

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Eveni
ng	Night								
BEC58P	APP	STANDARD	1	06	1	0	GA	3.4000	0.00
00	0.0000								
BEC58P	APP	STANDARD	1	15	1	0	GA	0.8500	0.00
00	0.0000								
BEC58P	APP	STANDARD	1	24	1	0	GA	10.2000	0.00
00	0.0000								
BEC58P	APP	STANDARD	1	33	1	0	GA	2.6000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	06	1	0	GA	3.4000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	15	1	0	GA	0.8500	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	24	1	0	GA	10.2000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	33	1	0	GA	2.6000	0.00
00	0.0000								
CNA172	APP	STANDARD	1	06	1	0	GA	37.7000	0.00
00	0.0000								

report

00	CNA172	APP	STANDARD	1	15	1	0	GA	9.4000	0.00
									0.0000	
00	CNA172	APP	STANDARD	1	24	1	0	GA	113.1000	0.00
									1.0000	
00	CNA172	APP	STANDARD	1	33	1	0	GA	28.3000	0.00
									0.0000	
00	CNA172	DEP	STANDARD	1	06	1	0	GA	37.7000	0.00
									0.0000	
00	CNA172	DEP	STANDARD	1	15	1	0	GA	9.4000	0.00
									0.0000	
00	CNA172	DEP	STANDARD	1	24	1	0	GA	113.1000	0.00
									1.0000	
00	CNA172	DEP	STANDARD	1	33	1	0	GA	28.3000	0.00
									0.0000	
00	DHC6	APP	STANDARD	1	06	1	0	COM	1.0000	0.00
									0.0000	
00	DHC6	APP	STANDARD	1	24	1	0	COM	3.0000	0.00
									0.0000	
00	DHC6	APP	STANDARD	1	33	1	0	COM	1.0000	0.00
									0.0000	
00	DHC6	DEP	STANDARD	1	06	1	0	COM	1.0000	0.00
									0.0000	
00	DHC6	DEP	STANDARD	1	24	1	0	COM	3.0000	0.00
									0.0000	
00	DHC6	DEP	STANDARD	1	33	1	0	COM	1.0000	0.00
									0.0000	
00	GIIB	APP	STANDARD	1	06	1	0	GA	0.8000	0.00
									0.0000	
00	GIIB	APP	STANDARD	1	15	1	0	GA	0.3000	0.00
									0.0000	
00	GIIB	APP	STANDARD	1	24	1	0	GA	2.4000	0.00
									0.0000	
00	GIIB	APP	STANDARD	1	33	1	0	GA	0.6000	0.00
									0.0000	
00	GIIB	DEP	STANDARD	1	06	1	0	GA	0.8000	0.00
									0.0000	
00	GIIB	DEP	STANDARD	1	15	1	0	GA	0.2000	0.00
									0.0000	
00	GIIB	DEP	STANDARD	1	24	1	0	GA	2.4000	0.00
									0.0000	
00	GIIB	DEP	STANDARD	1	33	1	0	GA	0.6000	0.00
									0.0000	

report

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)
Day	Evening	Night				

CASE GRID DEFINITIONS

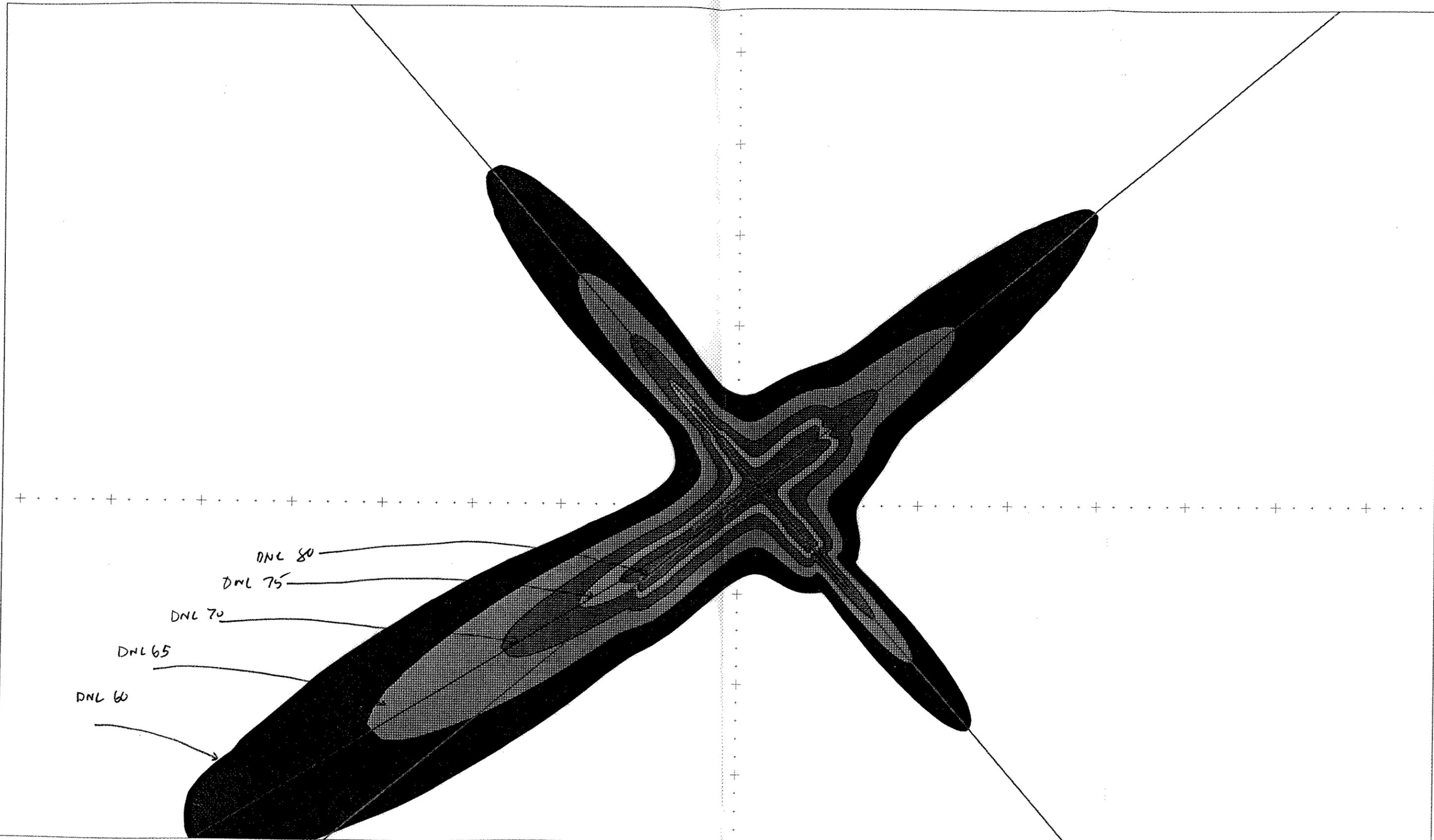
Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)
NI	NJ	Thrsh	dAmb	(hr)		
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0
000	2 2	85.0	0.0	0.00		

CASE RUN OPTIONS

Run Type : Single-Metric  
NoiseMetric : DNL  
Do Terrain : No  
Do Contour : Yes  
Refinement : 12  
Tolerance : 0.75  
Low Cutoff : 55.0  
High Cutoff : 85.0  
Ground Type : All-Soft-Ground  
Do Population : No  
Do Locations : No  
Do Standard : No  
Do Detailed : No

Compute System Metrics:

DNL : Yes  
CNEL : No  
LAEQ : No  
LAEQD : No  
LAEQN : No  
SEL : No  
LAMAX : No  
TALA : No  
NEF : No  
WECPNL : No  
EPNL : No  
PNLTM : No  
TAPNL : No  
CEXP : No  
LCMAX : No  
TALC : No



INM 6.0b 10-Apr-01 16:26

Dutchess Existing\Dutchess existing 2000

Scale 1 in = 2000 ft

DNL	60.0	65.0	70.0	75.0	80.0
Msq.ft	85.0	35.8	15.8	7.5	3.8
color					

INM 6.0b ECHO REPORT 10-Apr-01 17:15

STUDY: M:\PLANNING\JOSHE\DUTCHESS FUTURE\

Created : 10-Apr-01 16:34  
Units : English  
Airport : POU  
Description :  
Dutchess Future

CASE: Future 2020

Created : 10-Apr-01 16:35  
Description :

STUDY AIRPORT

Latitude : 41.626633 deg  
Longitude : -73.884068 deg  
Elevation : 166.0 ft  
Temperature : 58.4 F  
Pressure : 29.92 in-Hg  
AverageWind : 8.0 kt  
ChangeNPD : No

STUDY RUNWAYS

06

Latitude : 41.621919 deg  
Longitude : -73.892010 deg  
Xcoord : -0.3574 nmi  
Ycoord : -0.2827 nmi  
Elevation : 147.0 ft  
OtherEnd : 24  
Length : 5001 ft  
Gradient : 0.17 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 0 ft

07

Latitude : 41.625149 deg  
Longitude : -73.887830 deg  
Xcoord : -0.1693 nmi  
Ycoord : -0.0890 nmi

report

Elevation : 0.0 ft  
OtherEnd : 25  
Length : 1425 ft  
Gradient : 0.00 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 0 ft

15

Latitude : 41.630472 deg  
Longitude : -73.885437 deg  
Xcoord : -0.0616 nmi  
Ycoord : 0.2302 nmi  
Elevation : 155.8 ft  
OtherEnd : 33  
Length : 3003 ft  
Gradient : 0.34 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 0 ft

24

Latitude : 41.630596 deg  
Longitude : -73.877838 deg  
Xcoord : 0.2803 nmi  
Ycoord : 0.2377 nmi  
Elevation : 155.4 ft  
OtherEnd : 06  
Length : 5001 ft  
Gradient : -0.17 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft  
AppThresh : 113 ft

25

Latitude : 41.627622 deg  
Longitude : -73.883792 deg  
Xcoord : 0.0124 nmi  
Ycoord : 0.0593 nmi  
Elevation : 0.0 ft  
OtherEnd : 07  
Length : 1425 ft  
Gradient : 0.00 %  
RwyWind : 8.0 kt  
TkoThresh : 0 ft

AppThresh : 0 ft  
 33  
 Latitude : 41.624280 deg  
 Longitude : -73.878188 deg  
 Xcoord : 0.2646 nmi  
 Ycoord : -0.1411 nmi  
 Elevation : 165.9 ft  
 OtherEnd : 15  
 Length : 3003 ft  
 Gradient : -0.34 %  
 RwyWind : 8.0 kt  
 TkoThresh : 0 ft  
 AppThresh : 142 ft

STUDY TRACKS

RwyId-OpType-TrkId	Sub	PctSub	TrkType	Delta(ft)
06-APP-1	0	100.00	Vectors	0.0
06-DEP-1	0	100.00	Vectors	0.0
15-APP-1	0	100.00	Vectors	0.0
15-DEP-1	0	100.00	Vectors	0.0
24-APP-1	0	100.00	Vectors	0.0
24-DEP-1	0	100.00	Vectors	0.0
33-APP-1	0	100.00	Vectors	0.0
33-DEP-1	0	100.00	Vectors	0.0

STUDY TRACK DETAIL

RwyId-OpType-TrkId-SubTrk	SegType	Dist/Angle	Radius(nmi)
06-APP-1-0	1 Straight	50.0000 nmi	
06-DEP-1-0	1 Straight	50.0000 nmi	
15-APP-1-0			

report

1	Straight	50.0000	nmi	
15-DEP-1-0				
1	Straight	50.0000	nmi	
24-APP-1-0				
1	Straight	50.0000	nmi	
24-DEP-1-0				
1	Straight	0.5000	nmi	
2	Right-Turn	8.0000	deg	1.0000
3	Straight	45.0000	nmi	
33-APP-1-0				
1	Straight	50.0000	nmi	
33-DEP-1-0				
1	Straight	50.0000	nmi	

STUDY AIRCRAFT

BEC58P Standard data  
 CNA172 Standard data  
 DHC6 Standard data  
 GIIB Standard data

STUDY SUBSTITUTION AIRCRAFT

Name	Description
Acft	Percent
BEC190	Beech 1900
DHC6	100.0 %
BEC58	Beechcraft Model 58 Barron
BEC58P	100.0 %
CNA152	Cessna 152
CNA172	100.0 %
GULF3	Gulfstream III
GIIB	100.0 %

USER-DEFINED NOISE CURVES

Type	Thrust	Op	200	400	630	1000	2000	4000	6300
10000	16000	25000							

USER-DEFINED METRICS

Name	Type	Family	Day	Eve	Night	10Log(T)
------	------	--------	-----	-----	-------	----------

USER-DEFINED PROFILE IDENTIFIERS

Op	Profile	Stg	Weight(lb)
----	---------	-----	------------

report

USER-DEFINED PROCEDURAL PROFILES

#	StepType	Flap	ThrType	Alt/Clm	Speed(k
t)	Ang/Thr/Dis				

USER-DEFINED FIXED-POINT PROFILES

#	Dist(ft)	Alt(ft)	Spd(kt)	Thrust	OpMode
---	----------	---------	---------	--------	--------

USER-DEFINED FLAP COEFFICIENTS

Acft	Flap	Op	Coeff-R	Coeff-C/D	Coeff-B
------	------	----	---------	-----------	---------

USER-DEFINED JET THRUST COEFFICIENTS

Acft	ThrType	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb	Coeff-H
------	---------	---------	---------	----------	----------	---------

USER-DEFINED PROP THRUST COEFFICIENTS

Name	ThrType	Efficiency	Power
------	---------	------------	-------

USER-DEFINED GENERAL THRUST COEFFICIENTS

Acft	Type	Coeff-E	Coeff-F	Coeff-Ga	Coeff-Gb
		Coeff-H	Coeff-K1	Coeff-K2	

CASE FLIGHT OPERATIONS

Acft	Op	Profile	Stg	Rwy	Track	Sub	Group	Day	Eveni
ng	Night								
BEC58P	APP	STANDARD	1	06	1	0	GA	4.1000	0.00
00	0.0000								
BEC58P	APP	STANDARD	1	15	1	0	GA	1.0000	0.00
00	0.0000								
BEC58P	APP	STANDARD	1	24	1	0	GA	12.3000	0.00
00	0.0000								
BEC58P	APP	STANDARD	1	33	1	0	GA	3.0000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	06	1	0	GA	4.1000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	15	1	0	GA	1.0000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	24	1	0	GA	12.3000	0.00
00	0.0000								
BEC58P	DEP	STANDARD	1	33	1	0	GA	3.0000	0.00
00	0.0000								
CNA172	APP	STANDARD	1	06	1	0	GA	45.9000	0.00
00	0.0000								

report

	CNA172	APP	STANDARD	1	15	1	0	GA	11.5000	0.00
00									0.0000	
	CNA172	APP	STANDARD	1	24	1	0	GA	137.7000	0.00
00									1.0000	
	CNA172	APP	STANDARD	1	33	1	0	GA	34.4000	0.00
00									0.0000	
	CNA172	DEP	STANDARD	1	06	1	0	GA	45.9000	0.00
00									0.0000	
	CNA172	DEP	STANDARD	1	15	1	0	GA	11.5000	0.00
00									0.0000	
	CNA172	DEP	STANDARD	1	24	1	0	GA	137.7000	0.00
00									1.0000	
	CNA172	DEP	STANDARD	1	33	1	0	GA	34.4000	0.00
00									0.0000	
	DHC6	APP	STANDARD	1	06	1	0	COM	1.0000	0.00
00									0.0000	
	DHC6	APP	STANDARD	1	24	1	0	COM	3.0000	0.00
00									0.0000	
	DHC6	APP	STANDARD	1	33	1	0	COM	1.0000	0.00
00									0.0000	
	DHC6	DEP	STANDARD	1	06	1	0	COM	1.0000	0.00
00									0.0000	
	DHC6	DEP	STANDARD	1	24	1	0	COM	3.0000	0.00
00									0.0000	
	DHC6	DEP	STANDARD	1	33	1	0	COM	1.0000	0.00
00									0.0000	
	GIIB	APP	STANDARD	1	06	1	0	GA	1.0000	0.00
00									0.0000	
	GIIB	APP	STANDARD	1	15	1	0	GA	0.5000	0.00
00									0.0000	
	GIIB	APP	STANDARD	1	24	1	0	GA	3.0000	0.00
00									0.0000	
	GIIB	APP	STANDARD	1	33	1	0	GA	0.7500	0.00
00									0.0000	
	GIIB	DEP	STANDARD	1	06	1	0	GA	1.0000	0.00
00									0.0000	
	GIIB	DEP	STANDARD	1	15	1	0	GA	0.5000	0.00
00									0.0000	
	GIIB	DEP	STANDARD	1	24	1	0	GA	3.0000	0.00
00									0.0000	
	GIIB	DEP	STANDARD	1	33	1	0	GA	0.7500	0.00
00									0.0000	

report

CASE RUNUP OPERATIONS

Acft	RunupId	X(nmi)	Y(nmi)	Head	Thrust	Dur(sec)
Day	Evening	Night				

CASE GRID DEFINITIONS

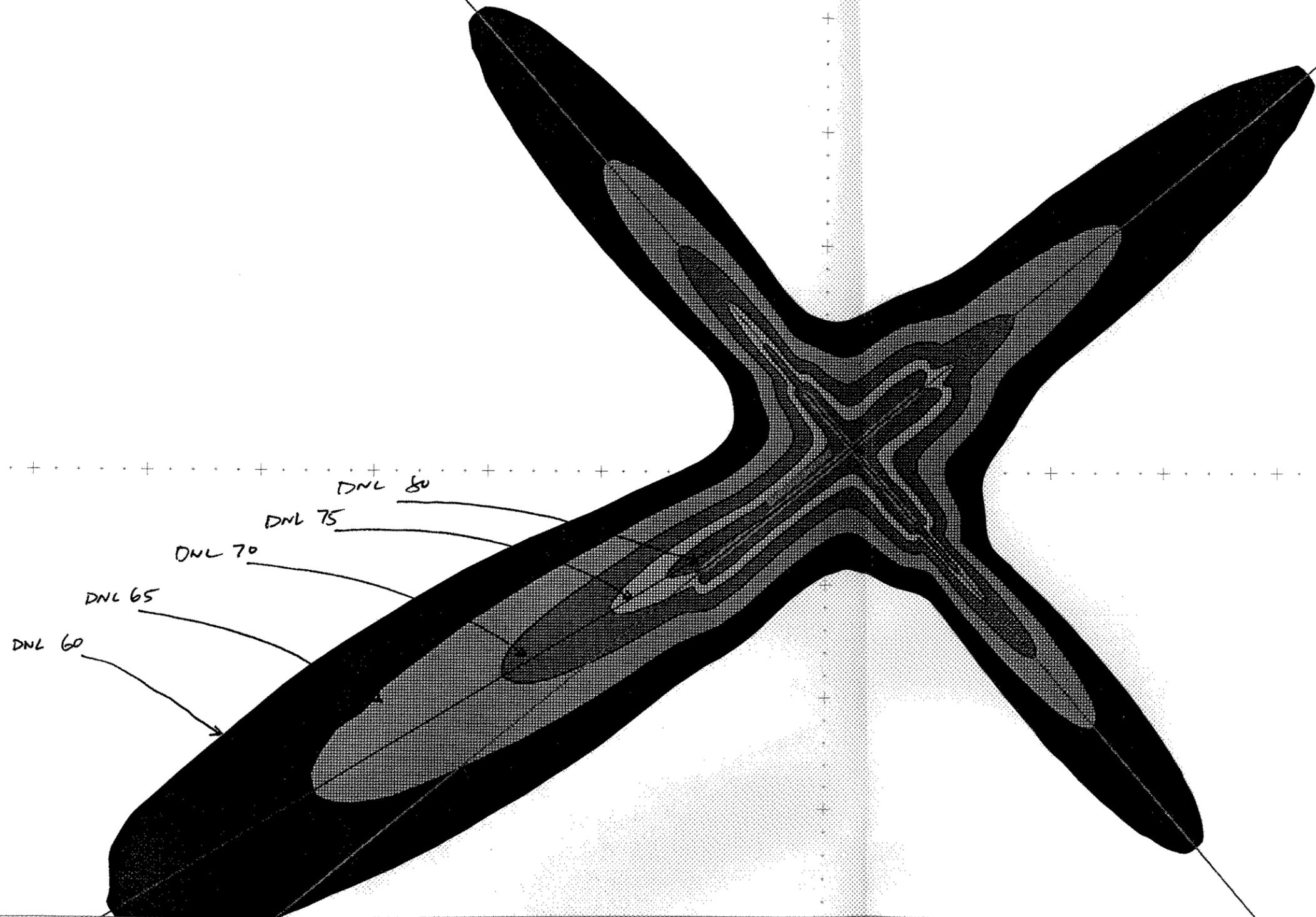
Name	Type	X(nmi)	Y(nmi)	Ang(deg)	DisI(nmi)	DisJ(nmi)
CONTOUR	Contour	-8.0000	-8.0000	0.0	16.0000	16.0
000	2 2	85.0	0.0	0.00		

CASE RUN OPTIONS

Run Type : Single-Metric  
NoiseMetric : DNL  
Do Terrain : No  
Do Contour : Yes  
Refinement : 12  
Tolerance : 1.00  
Low Cutoff : 55.0  
High Cutoff : 85.0  
Ground Type : All-Soft-Ground  
Do Population : No  
Do Locations : No  
Do Standard : No  
Do Detailed : No

Compute System Metrics:

DNL : Yes  
CNEL : No  
LAEQ : No  
LAEQD : No  
LAEQN : No  
SEL : No  
LAMAX : No  
TALA : No  
NEF : No  
WECPNL : No  
EPNL : No  
PNLTM : No  
TAPNL : No  
CEXP : No  
LCMAX : No  
TALC : No



INM 6.0b 10-Apr-01 17:15  
 PLANNING\JOSHE\DUTCHESS FUTURE\Fut. 2020  
 Scale 1 in = 2000 ft

DNL	60.0	65.0	70.0	75.0	80.0
Msq. ft	103.2	44.4	19.3	9.0	4.5
color					



# APPENDIX E

## Hangar Configuration



**HANGAR CONFIGURATION UNDER THE ALTERNATIVES**

**Existing Based Aircraft Hangars at Dutchess County Airport (2002)**

<b>Item</b>	<b>Qty.</b>
Whitefield (Conventional Hangar)	(1) (3,300 SF)
Reiss (Conventional Hangar)	(1) (3,300 SF)
T-Hangar	(1) 20-Bay Nested
T-Hangar	(1) 11-Bay Nested

**Alternative 2**

**(10) Corporate Hangars @ 7,225 SF each (85' X 85')**

- No. T-Hangars in Progress (A, B, and C)**  
**A** = 10-Bay (450' X 441') Ranch  
**B** = 20-Bay (441' X 54') Nested  
**C** = 20-Bay (441' X 54') Nested  
 = **Subtotal 50 Bays**

- T-hangar adjacent Precision Avionics**  
**D** = 10-Bay (235' X 54') Nested  
 = **Subtotal 60 Bays**

- New T-hangar adjacent existing T-hangar in Southeast**  
**E** = 20-Bay (441' X 54') Nested  
**Grand Total 80 Bays**

Total bays = 111 (Includes existing.)

**Alternative 3**

**(8) Corporate Hangars @ 7,225 SF each (85' X 85')**

- No. Alternative 3 – Option A**  
**A** = 10-Bay (450' X 441') Ranch  
**B** = 20-Bay (441' X 54') Nested  
**C** = 20-Bay (441' X 54') Nested  
**D** = 10-Bay (235' X 54') Nested  
**E** = 10-Bay (235' X 54') Nested  
**F** = 10-Bay (235' X 54') Nested  
**G** = 10-Bay (235' X 54') Nested  
**Total 90 Bays**

- No. Alternative 3 – Option B**  
**A** = 10-Bay (450' X 441') Ranch  
**B** = 20-Bay (441' X 54') Nested  
**C** = 20-Bay (441' X 54') Nested  
**D** = 10-Bay (235' X 54') Nested  
**E** = 10-Bay (235' X 54') Nested  
**F** = 20-Bay (441' X 54') Nested  
**G** = 20-Bay (441' X 54') Nested  
**Total 110 Bays**

Total bays under Option A = 110 (Includes existing. T-Hangar in Southeast corner would be eliminated)  
 Total bays under Option B = 130 (Includes existing. T-Hangar in Southeast corner would be eliminated)



# Dutchess County Airport

## Preferred Alternative

### (6) Corporate Conventional Hangars @ 7,225 SF each (85' X 85')

#### No. T-hangars in Progress (A, B, and C)

- A = 10-Bay (450' X 441') Ranch
- B = 20-Bay (441' X 54') Nested
- C = 20-Bay (441' X 54') Nested
- = ***Subtotal 50 Bays***

#### New T-hangar adjacent Precision Avionics \*

- D = 10-Bay (235' X 54') Nested
- = ***Subtotal 60 Bays***

#### New T-hangars adjacent existing T-hangars in Northeast \*

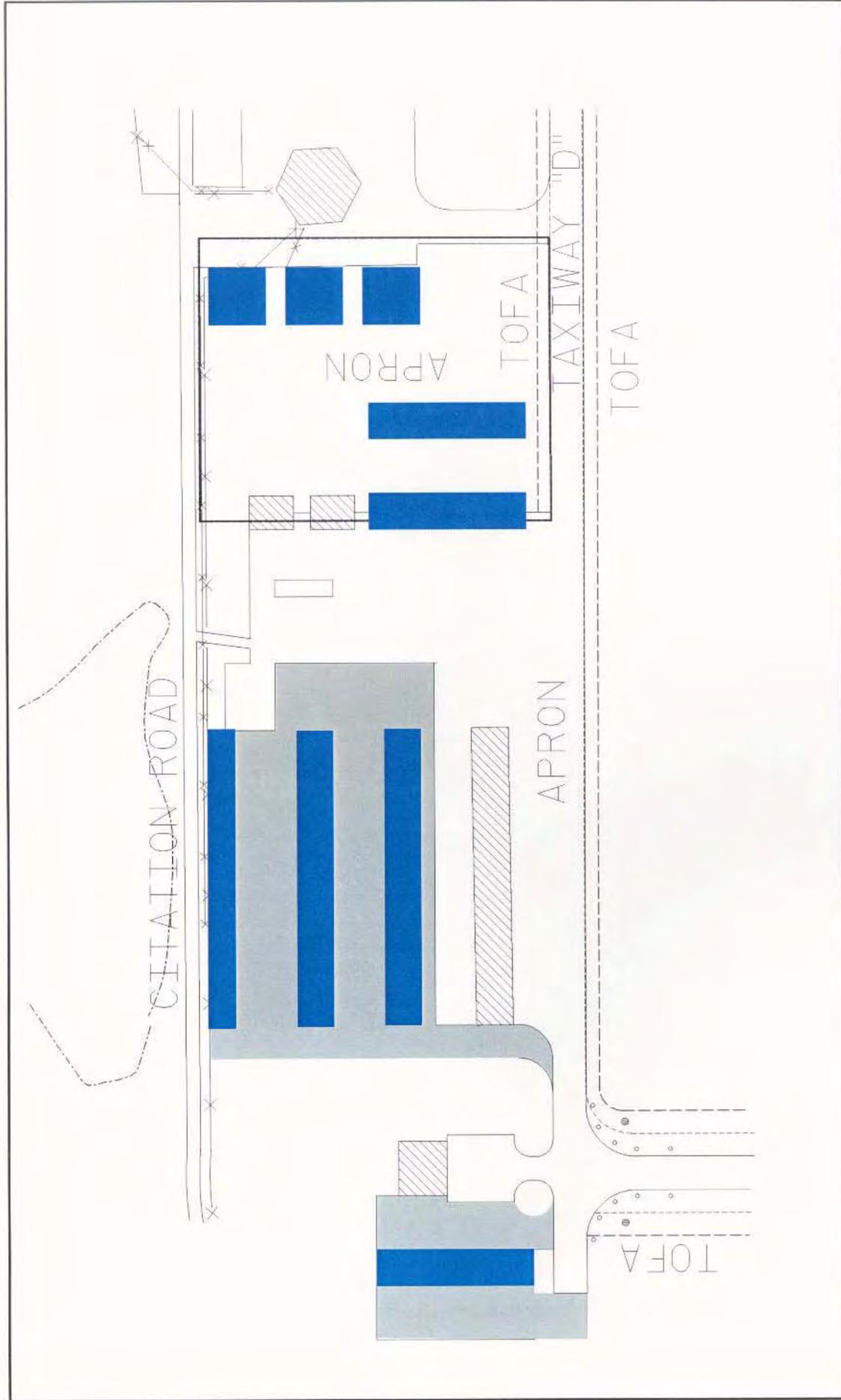
- E = 10-Bay (235' X 54') Nested
- F = 10-Bay (235' X 54') Nested
- = ***Subtotal 80 Bays***

#### New T-hangar adjacent existing T-hangar in Southeast

- G = 20-Bay (441' X 54') Nested
- Grand Total 100 Bays**

\* Configuration is Dependent upon demand for either T-hangar or Conventional Hangars

**Potential Grand Total (including existing T-hangars) = 131 bays**



DUTCHESS COUNTY AIRPORT



OPTION A



DUTCHESS COUNTY AIRPORT



**OPTION B**



# APPENDIX F

## Engineering Costs and Estimates



ENGINEERS  
 DESIGN BUILD  
 TECHNICAL RESOURCES  
 OPERATIONS

PROBABLE PROJECT COST

DUTCHESS COUNTY AIRPORT  
 POUGHKEEPSIE, NY  
 CONSTRUCT T/W (1,000' X 50')

128

02/23/02

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	P-152	UNCLASSIFIED EXCAVATION	10,000	CY	\$8.00	\$80,000.00
2	P-153	COLD MILLING EXISTING PAVEMENT	1,000	SY	\$4.00	\$4,000.00
3	P-156	SILT FENCE	2,000	LF	\$5.00	\$10,000.00
4	P-156	STORM DRAIN INLET PROTECTION IN TURF	6	EACH	\$500.00	\$3,000.00
5	P-156	CHECK DAMS	4	EACH	\$500.00	\$2,000.00
6	P-209	CRUSHED STONE BASE COURSE	5,000	CY	\$30.00	\$150,000.00
7	P-401	BITUMINOUS SURFACE COURSE, P-401B	2,000	TON	\$75.00	\$150,000.00
8	P-401	JOINT SEALING	500	LF	\$5.00	\$2,500.00
9	P-612	FIELD OFFICE	1	LS	\$10,000.00	\$10,000.00
10	P-620	RUNWAY & TAXIWAY PAINTING WITH GLASS BEADS	1,000	SF	\$1.50	\$1,500.00
11	D-701	24-INCH DIA. RCP, CLASS	400	LF	\$60.00	\$24,000.00
12	D-701	24-INCH DIA. RCP END SECTION	4	EACH	\$500.00	\$2,000.00
13	D-705	6-INCH UNDERDRAIN	3,000	LF	\$15.00	\$45,000.00
14	D-705	CLEANOUTS	16	EA	\$200.00	\$3,200.00
15	D-710	STABILIZATION FABRIC	70,000	SF	\$0.15	\$10,500.00
16	D-751	CATCH BASIN	4	EACH	\$4,000.00	\$16,000.00
17	T-906	HYDROSEEDING	2	ACRE	\$3,000.00	\$6,000.00
18	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$20,000.00	\$20,000.00
19	M-150	PROJECT SURVEY & STAKEOUT	1	LS	\$10,000.00	\$10,000.00
		MOBILIZATION (4% MAXIMUM)	1	LS	\$22,300.00	\$22,300.00
TOTAL CONSTRUCTION COST						\$572,000.00
ENGINEERING & ADMINISTRATION(20%+/-)						\$114,400.00
TOTAL PROJECT COST						\$686,000.00
COST PER SQUARE YARD						\$123.48



ENGINEERS  
 DESIGN BUILD  
 TECHNICAL RESOURCES  
 OPERATIONS

PROBABLE PROJECT COST

DUTCHESS COUNTY AIRPORT  
 POUGHKEEPSIE, NY

128

CONDUIT & CAN TAXIWAY LIGHTING & SIGNAGE  
 1,000 LF T/W W/ HOMERUNS

02/23/02

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	P-612	FIELD OFFICE	1	LS	\$4,000.00	\$4,000.00
2	L-108	NO. 8 AWG, 5KV, 1/C AIRPORT LIGHTING CABLE	4,000	LF	\$1.50	\$6,000.00
3	L-108	NO. 8 AWG COUNTERPOISE WIRE	3,000	LF	\$1.25	\$3,750.00
4	L-109	AIRPORT TRANSFORMER VAULT EQUIPMENT	1	LS	\$20,000.00	\$20,000.00
5	L-110	4-WAY DUCT BANK, TYPE I	210	LF	\$70.00	\$14,700.00
6	L-110	2-INCH DIA. PVC CONDUIT IN TURF	3,000	LF	\$15.00	\$45,000.00
7	L-125	MEDIUM INTENSITY T/W LIGHTS, BASE MOUNTED	20	EACH	\$900.00	\$18,000.00
8	L-125	TAXIWAY GUIDANCE SIGN, 3 CHARACTERS	6	EACH	\$3,000.00	\$18,000.00
9	L-125	I.D. TAGS FOR LIGHT UNITS	20	EACH	\$4.00	\$80.00
10	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$10,000.00	\$10,000.00
11	M-150	PROJECT SURVEY & STAKEOUT	1	LS	\$4,000.00	\$4,000.00
12	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$5,470.00	\$5,470.00
TOTAL CONSTRUCTION COST						\$149,000.00
ENGINEERING & ADMINISTRATION(20%+/-)						\$29,800.00
TOTAL PROJECT COST						\$179,000.00
COST PER LINEAR FOOT OF TAXIWAY						\$179.00

PROBABLE PROJECT COST

DUTCHESS COUNTY AIRPORT  
 POUGHKEEPSIE, NY  
 CONSTRUCT FENCE (1,000LF)

128

02/23/02

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	P-151	CLEARING & GRUBBING	1	ACRE	\$2,000.00	\$1,000.00
2	P-612	FIELD OFFICE	1	LS	\$2,000.00	\$2,000.00
3	T-906	HYDROSEEDING	1	ACRE	\$3,000.00	\$1,500.00
4	F-162	8-FOOT CHAIN LINK FENCE WITH BARBED WIRE	1,000	LF	\$22.00	\$22,000.00
5	F-162	20-FOOT DOUBLE SWING GATE	2	EACH	\$1,550.00	\$3,100.00
6	F-162	REMOVAL OF EXISTING FENCE	500	LF	\$8.00	\$4,000.00
7	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$2,000.00	\$2,000.00
8	M-150	PROJECT SURVEY & STAKEOUT	1	LS	\$1,000.00	\$1,000.00
9	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$1,400.00	\$1,400.00
TOTAL CONSTRUCTION COST						\$38,000.00
ENGINEERING & ADMINISTRATION(20%+/-)						\$7,600.00
TOTAL PROJECT COST						\$46,000.00
COST PER LINEAR FOOT						\$46.00



ENGINEERS  
DESIGN BUILD  
TECHNICAL RESOURCES  
OPERATIONS

PROBABLE PROJECT COST

DUTCHESS COUNTY AIRPORT  
POUGHKEEPSIE, NY  
RELOCATE FIRE POND

128

02/23/02

ITEM NO	FAA SPEC	DESCRIPTION	QUANTITY	UNITS	UNIT PRICE	TOTAL
1	P-152	UNCLASSIFIED EXCAVATION	15,000	CY	\$8.00	\$120,000.00
2	P-612	FIELD OFFICE	1	LS	\$2,000.00	\$2,000.00
3	D-701	36-INCH DIA. RCP, CLASS	300	LF	\$100.00	\$30,000.00
4	D-701	REMOVAL OF PIPE	300	LF	\$20.00	\$6,000.00
4	D-751	CATCH BASIN	4	EACH	\$5,000.00	\$20,000.00
5	T-902	TOPSOIL, SEED AND MULCH	2,000	SY	\$5.00	\$10,000.00
6	M-100	MAINTENANCE AND PROTECTION OF TRAFFIC	1	LS	\$3,000.00	\$3,000.00
7	M-150	PROJECT SURVEY & STAKEOUT	1	LS	\$3,000.00	\$3,000.00
8	M-200	MOBILIZATION (4% MAXIMUM)	1	LS	\$8,000.00	\$8,000.00
TOTAL CONSTRUCTION COST						\$202,000.00
ENGINEERING & ADMINISTRATION(20%+/-)						\$40,400.00
TOTAL PROJECT COST						\$242,000.00

FAR Part 77 Obstruction Study <sup>1</sup>	Lump Sum	\$125,000
Land Acquisition:		
Engineering Design Services	Lump Sum	\$35,000
Avigation Easement (Vacant Residential/Agricultural)		\$3,500 per Acre
Avigation Easement (Vacant Commercial)		\$17,500 per Acre
Fee Simple (Vacant Residential/Agricultural)		\$10,000 per Acre
Fee Simple (Vacant Commercial)		\$50,000 per Acre
Obstruction Removal:		
Individual Trees <sup>2</sup>		\$1000 per Tree
Tree Canopy <sup>2</sup>		\$10,000 per Acre

- 1 Includes Aerial Photography and horizontal and vertical ground control
- 2 Includes grubbing out the stump and grading, top soiling and re-seeding the surface

### **RPZ Avigation Easements**

Own all land within RPZ off Runway 24

Own off Runway 15 (3.85 Acres) out of a total of 13.770 Acres (Visual and Not lower than 1-mile) (Vacant Residential). The remainder is avigation easement of 9.92 acres.

Own off Runway 33 (0.850 Acres) out of a total 13.770 Acres (Visual and Not lower than 1-mile) (Partially Vacant Commercial)

Own off Runway 6 (70.125 Acres) out of a total of 78.914 Acres (Lower than ¼ Mile) (Vacant Residential)

### ***Avigation Easements Proposed for***

Runway 33 [12.93 Acres]

Total: 12.93 Acres



# APPENDIX G

## Landing Fee Schedules of Other Airports



## Airport Landing Fees

The current landing fees at Dutchess County Airport are based on the type of aircraft and Gross Landing Weight (GLW). The Dutchess County Legislature passed legislation in 1989 which exempts certain aircraft from paying landing fees at the airport. These include Based Aircraft at the Airport, Single Engine Planes, and anyone who does business with airport tenants. It has been recommended to reevaluate the current landing fee policy in order to bring the schedule up to date to conform with those of airports of similar size and industry trends.

### LANDING FEES AT NON-HUB AIRPORTS (AVERAGES FOR 2001-2002)

#### Landing Fees (per 1000 lbs. GLW)

1 Average Landing Fee for Signatory Scheduled Air Carriers	\$0.89
2 Average Landing Fee for Non-Signatory Scheduled Air Carriers	\$1.22
3 Average Landing Fee for Signatory Air Cargo	\$1.13
4 Average Landing Fee for Non-Signatory Air Cargo	\$1.08
5 Average Landing Fee for Commuters/Regional Airlines	\$0.80
6 Average Landing Fee for General Aviation Revenue Flights	\$1.07
7 Average Landing Fee for General Aviation Non-Revenue Flights	\$1.05
8 Average Landing Fee for Unscheduled and Non-Contract Air Carriers	\$1.19

### LANDING FEES AT GENERAL AVIATION AIRPORTS (AVERAGES FOR 2001-2002)

#### Landing Fees (per 1000 lbs. GLW)

1 Average Landing Fee for General Aviation Revenue Flights	\$1.04
2 Average Landing Fee for Non-Revenue Flights	\$0.67

SOURCE: Based on average annual increases in rates from AAAP Airport Rates & Charges Survey 1993-1998.

### LANDING FEES AT NEW YORK AIRPORTS

<u>Airport</u>	<u>Minimum Fee</u>	<u>Aircraft Type/Weight</u>
Niagara Falls International Airport	\$3.00	\$0.90 per 100 lbs. Take-off weight
Tompkins County Airport	\$3.00 to \$15.00	Single engine up to Beech 1900
Clinton County	\$3.00 to \$15.00	Single engine up to Beech 1900
Chautauqua County	\$0.00	Single engine
	\$4.50	Twin engines and above

SOURCE: C&S Engineers, Inc. (2002)



# APPENDIX H

## Glossary of Acronyms and Definitions

## **GLOSSARY OF ACRONYMS**

### **-A-**

A/C	- Aircraft
A/G	- Air to Ground
A/H	- Altitude/Height
AAI	- Arrival Aircraft Interval
AAP	- Advanced Automation Program
AAR	- Airport Acceptance Rate
ABDIS	- Automated Data Interchange System Service B
ACAIS	- Air Carrier Activity Information System
ACAS	- Aircraft Collision Avoidance System
ACC	- Area Control Center
ACCT	- Accounting Records
ACD	- Automatic Call Distributor
ACDM	- Airport Capacity and Delay Model
ACDO	- Air Carrier District Office
ACF	- Area Control Facility
ACFO	- Aircraft Certification Field Office
ACFT	- Aircraft
ACID	- Aircraft Identification
ACLS	- Automatic Carrier Landing System
ACLT	- Actual Landing Time Calculated
ACO	- Aircraft Certification Office
ADA	- Air Defense Area
ADAL	- Aviation Demand Activity Levels
ADAP	- Airport Development Aid Program
ADAS	- AWOS Data Acquisition System
ADCCP	- Advanced Data Communications Control Procedure
ADDA	- Administrative Data
ADF	- Automatic Direction Finding
ADI	- Automatic De Ice and Inhibitor
ADIN	- AUTODIN Service
ADIZ	- Air Defense Identification Zone
ADL	- Aeronautical Data Link
ADLY	- Arrival Delay
ADO	- Airline Dispatch Office
ADP	- Automated Data Processing
ADS	- Automatic Dependent Surveillance
ADSIM	- Airfield Delay Simulation Model
ADSY	- Administrative Equipment Systems
ADTN	- Administrative Data Transmission Network
ADTN2000	- Administrative Data Transmission Network 2000
ADVO	- Administrative Voice
AEG	- Aircraft Evaluation Group
AERA	- Automated En Route Air Traffic Control
AEX	- Automated Execution

AF	- Airway Facilities
AFB	- Air Force Base
AFIS	- Automated Flight Inspection System
AFP	- Area Flight Plan
AFRES	- Air Force Reserve Station
AFS	- Airways Facilities Sector
AFSFO	- AFS Field Office
AFSFU	- AFS Field Unit
AFSOU	- AFS Field Office Unit (Standard is AFSFOU)
AFSS	- Automated Flight Service Station
AFTN	- Automated Fixed Telecommunications Network
AGL	- Above Ground Level
AICUZ	- Air Installation Compatible Use Zone
AID	- Airport Information Desk
AIG	- Airbus Industries Group
AIM	- Airman's Information Manual
AIP	- Airport Improvement Plan
AIRMET	- Airmen's Meteorological Information
AIRNET	- Airport Network Simulation Model
AIS	- Aeronautical Information Service
AIT	- Automated Information Transfer
ALP	- Airport Layout Plan
ALS	- Approach Lighting System
ALSF1	- ALS with Sequenced Flashers I
ALSF2	- ALS with Sequenced Flashers II
ALSIP	- Approach Lighting System Improvement Plan
ALTRV	- Altitude Reservation
AMASS	- Airport Movement Area Safety System
AMCC	- ACF/ARTCC Maintenance Control Center
AMOS	- Automated Meteorological Observation Station
AMP	- ARINC Message Processor (OR) Airport Master Plan
AMVER	- Automated Mutual Assistance Vessel Rescue System
ANC	- Alternate Network Connectivity
ANG	- Air National Guard
ANGB	- Air National Guard Base
ANMS	- Automated Network Monitoring System
ANSI	- American National Standards Group
AP	- Acquisition Plan
APP	- Approach
APS	- Airport Planning Standard
AQAFO	- Aeronautical Quality Assurance Field Office
ARAC	- Army Radar Approach Control (AAF)
ARAC	- Aviation Rulemaking Advisory Committee
ARCTR	- FAA Aeronautical Center or Academy
ARF	- Airport Reservation Function
ARINC	- Aeronautical Radio, Inc.

ARLNO	- Airline Office
ARO	- Airport Reservation Office
ARP	- Airport Reference Point
ARSA	- Airport Service Radar Area
ARSR	- Air Route Surveillance Radar
ARTCC	- Air Route Traffic Control Center
ARTS	- Automated Radar Terminal System
ASAS	- Aviation Safety Analysis System
ASC	- AUTODIN Switching Center
ASCP	- Aviation System Capacity Plan
ASD	- Aircraft Situation Display
ASDA	- Accelerate Stop Distance Available
ASLAR	- Aircraft Surge Launch And Recovery
ASM	- Available Seat Mile
ASOS	- Automatic Surface Observation System
ASP	- Arrival Sequencing Program
ASQP	- Airline Service Quality Performance
ASR	- Airport Surveillance Radar
ASTA	- Airport Surface Traffic Automation
ASV	- Airline Schedule Vendor
ASV	- Annual Service Volume
ASV	- Airline Schedule Vendor
AT	- Air Traffic
AT&T	- American Telephone and Telegraph
AT&T	- ASDCAT&T Agency Service Delivery Center
AT&T	- CSAAT&T Customer Support Associate
ATA	- Air Transport Association of America
ATAS	- Airspace and Traffic Advisory Service
ATC	- Air Traffic Control
ATCAA	- Air Traffic Control Assigned Airspace
ATCBI	- Air Traffic Control Beacon Indicator
ATCCC	- Air Traffic Control Command Center
ATCO	- Air Taxi Commercial Operator
ATCRB	- Air Traffic Control Radar Beacon
ATCRBS	- Air Traffic Control Radar Beacon System
ATCSCC	- Air Traffic Control Systems Command Center
ATCT	- Airport Traffic Control Tower
ATIS	- Automated Terminal Information Service
ATISR	- ATIS Recorder
ATM	- Air Traffic Management
ATM	- Asynchronous Transfer Mode
ATMS	- Advanced Traffic Management System
ATN	- Aeronautical Telecommunications Network
ATODN	- AUTODIN Terminal (FUS)
ATOMS	- Air Traffic Operations Management System
ATOVN	- AUOTVON (Facility)

ATS - Air Traffic Service  
 ATSCCP - ATS Contingency Command Post  
 ATTIS - AT&T Information Systems  
 AVGAS - Aviation Gas  
 AVN - Aviation Standards National Field Office, Oklahoma City  
 AVON - AUTOVON Service  
 AWIS - Airport Weather Information  
 AWOS - Automated Weather Observation System  
 AWP - Aviation Weather Processor  
 AWPG - Aviation Weather Products Generator  
 AWS - Air Weather Station

**-B-**

BANS - BRITE Alphanumeric System  
 BART - Billing Analysis Reporting Tool (GSA software tool)  
 BASIC - Basic Contract Observing Station  
 BASOP - Military Base Operations  
 BCA - Benefit/Cost Analysis  
 BCR - Benefit/Cost Ratio  
 BDAT - Digitized Beacon Data  
 BMP - Best Management Practices  
 BOC - Bell Operating Company  
 bps - bits per second  
 BRI - Basic Rate Interface  
 BRITE - Bright Radar Indicator Terminal Equipment  
 BRL - Building Restriction Line  
 BUEC - Back up Emergency Communications  
 BUECE - Back up Emergency Communications Equipment

**-C-**

CAA - Civil Aviation Authority  
 CAB - Civil Aeronautics Board  
 CARF - Central Altitude Reservation Facility  
 CASFO - Civil Aviation Security Office  
 CAT - Category  
 CAT - Clear Air Turbulence  
 CAU - Crypto Ancillary Unit  
 CBI - Computer Based Instruction  
 CC&O - Customer Cost and Obligation  
 CCC - Communications Command Center  
 CCCC - Staff Communications  
 CCCH - Central Computer Complex Host  
 CCS7 NI - Communication Channel Signal 7 Network Interconnect  
 CCSD - Command Communications Service Designator  
 CCU - Central Control Unit  
 CD - Common Digitizer

CDR	- Cost Detail Report
CDT	- Controlled Departure Time
CDTI	- Cockpit Display of Traffic Information
CENTX	- Central Telephone Exchange
CEQ	- Council on Environmental Quality
CERAP	- Central Radar Approach
CFC	- Central Flow Control
CFCF	- Central Flow Control Facility
CFCS	- Central Flow Control Service
CFWP	- Central Flow Weather Processor
CFWU	- Central Flow Weather Unit
CGAS	- Coast Guard Air Station
CHP	- Central Heat Plant
CLC	- Course Line Computer
CLIN	- Contract Line Item
CLT	- Calculated Landing Time
CM	- Commercial Service Airport
CNMP	- Canadian Minimum Navigation Performance Specification Airspace
CNS	- Consolidated NOTAM System
CNSP	- Consolidated NOTAM System Processor
CO	- Central Office
COE	- U.S. Army Corps of Engineers
COMCO	- Command Communications Outlet
CONUS	- Continental United States
CORP	- Private Corporation other than ARINC or MITRE
CPE	- Customer Premise Equipment
CPMIS	- Consolidated Personnel Management Information System
CRA	- Conflict Resolution Advisory
CRDA	- Converging Runway Display Aid
CRT	- Cathode Ray Tube
CSA	- Communications Service Authorization
CSIS	- Centralized Storm Information System
CSO	- Customer Service Office
CSR	- Communications Service Request
CSS	- Central Site System
CTA	- Controlled Time of Arrival
CTA	- Control Area
CTA/FIR	- Control Area/Flight Information Region
CTAF	- Common Traffic Advisory Frequency
CTAS	- Center Tracon Automation System
CTMA	- Center Traffic Management Advisor
CUPS	- Consolidated Uniform Payroll System
CVFR	- Controlled Visual Flight Rules
CVTS	- Compressed Video Transmission Service
CW	- Continuous Wave
CWSU	- Central Weather Service Unit

CWY - Clearway

**-D-**

DA - Direct Access  
DA - Decision Altitude/Decision Height  
DA - Descent Advisor  
DABBS - DITCO Automated Bulletin Board System  
DAIR - Direct Altitude and Identity Readout  
DAR - Designated Agency Representative  
DARC - Direct Access Radar Channel  
dBA - Decibels A weighted  
DBCRC - Defense Base Closure and Realignment Commission  
DBMS - Data Base Management System  
DBRITE - Digital Bright Radar Indicator Tower Equipment  
DCA - Defense Communications Agency  
DCAA - Dual Call, Automatic Answer Device  
DCCU - Data Communications Control Unit  
DCE - Data Communications Equipment  
DDA - Dedicated Digital Access  
DDD - Direct Distance Dialing  
DDM - Difference in Depth of Modulation  
DDS - Digital Data Service  
DEA - Drug Enforcement Agency  
DEDS - Data Entry and Display System  
DEIS - Draft Environmental Impact Statement  
DEP - Departure  
DEWIZ - Distance Early Warning Identification Zone  
DF - Direction Finder  
DFAX - Digital Facsimile  
DFI - Direction Finding Indicator  
DGPS - Differential Global Positioning Satellite (System)  
DH - Decision Height  
DID - Direct Inward Dial  
DIP - Drop and Insert Point  
DIRF - Direction Finding  
DITCO - Defense Information Technology Contracting Office Agency  
DME - Distance Measuring Equipment  
DME/P - Precision Distance Measuring Equipment  
DMN - Data Multiplexing Network  
DNL - Day Night Equivalent Sound Level (Also called Ldn)  
DOD - Direct Outward Dial  
DoD - Department of Defense  
DOI - Department of Interior  
DOS - Department of State  
DOT - Department of Transportation  
DOTCC - Department of Transportation Computer Center

DOTS - Dynamic Ocean Tracking System  
DSCS - Digital Satellite Compression Service  
DSUA - Dynamic Special Use Airspace  
DTS - Dedicated Transmission Service  
DUAT - Direct User Access Terminal  
DVFR - Defense Visual Flight Rules  
DVFR - Day Visual Flight Rules  
DVOR - Doppler Very High Frequency Omni Directional Range  
DYSIM - Dynamic Simulator

**-E-**

E MSAW - En Route Automated Minimum Safe Altitude Warning  
EARTS - En Route Automated Radar Tracking System  
ECOM - En Route Communications  
ECVFP - Expanded Charted Visual Flight Procedures  
EDCT - Expedite Departure Path  
EFAS - En Route Flight Advisory Service  
EFC - Expect Further Clearance  
EFIS - Electronic Flight Information Systems  
EIAF - Expanded Inward Access Features  
EIS - Environmental Impact Statement  
ELT - Emergency Locator Transmitter  
ELWRT - Electrowriter  
EMAS - Engineering Arresting Materials System  
EMPS - En Route Maintenance Processor System  
ENAV - En Route Navigational Aids  
EOF - Emergency Operating Facility  
EPA - Environmental Protection Agency  
EPS - Engineered Performance Standards  
EPSS - Enhanced Packet Switched Service  
ERAD - En Route Broadband Radar  
ESEC - En Route Broadband Secondary Radar  
ESF - Extended Superframe Format  
ESP - En Route Spacing Program  
ESYS - En Route Equipment Systems  
ETA - Estimated Time of Arrival  
ETE - Estimated Time En Route  
ETG - Enhanced Target Generator  
ETMS - Enhanced Traffic Management System  
ETN - Electronic Telecommunications Network  
EVAS - Enhanced Vortex Advisory System  
EVCS - Emergency Voice Communications System

**-F-**

F&E - Facility and Equipment  
FAA - Federal Aviation Administration

FAA ADO - Federal Aviation Administration Airport District Office  
 FAA APO - Federal Aviation Administration Airport Planning Office  
 FAAAC - FAA Aeronautical Center  
 FAACIS - FAA Communications Information System  
 FAATC - FAA Technical Center  
 FAATSAT - FAA Telecommunications Satellite  
 FAC - Facility  
 FAF - Final Approach Fix  
 FAP - Final Approach Point  
 FAPM - FTS2000 Associate Program Manager  
 FAR - Federal Aviation Regulation  
 FAST - Final Approach Spacing Tool  
 FAX - Facsimile Equipment  
 FBO - Fixed Base Operator  
 FBS - Fall Back Switch  
 FCC - Federal Communications Commission  
 FCLT - Freeze Calculated Landing Time  
 FCOM - FSS Radio Voice Communications  
 FCPU - Facility Central Processing Unit  
 FDAT - Flight Data Entry and Printout (FDEP) and Flight  
 FDE - Flight Data Entry  
 FDEP - Flight Data Entry and Printout  
 FDIO - Flight Data Input/Output  
 FDIOC - Flight Data Input/Output Center  
 FDIOR - Flight Data Input/Output Remote  
 FDM - Frequency Division Multiplexing  
 FDP - Flight Data Processing  
 FED - Federal  
 FEIS - Final Environmental Impact Statement  
 FEP - Front End Processor  
 FFAC - From Facility  
 FIFO - Flight Inspection Field Office  
 FIG - Flight Inspection Group  
 FINO - Flight Inspection National Field Office  
 FIPS - Federal Information Publication Standard  
 FIR - Flight Information Region  
 FIRE - Fire Station  
 FIRMR - Federal Information Resource Management Regulation  
 FL - Flight Level  
 FLOWSIM - Traffic Flow Planning Simulation  
 FMA - Final Monitor Aid  
 FMF - Facility Master File  
 FMIS - FTS2000 Management Information System  
 FMS - Flight management System  
 FNMS - FTS2000 Network Management System  
 FOIA - Freedom Of Information Act

FP - Flight Plan  
 FRC - Request Full Route Clearance  
 FSAS - Flight Service Automation System  
 FSDO - Flight Standards District Office  
 FSDPS - Flight Service Data Processing System  
 FSEP - Facility/Service/Equipment Profile  
 FSP - Flight Strip Printer  
 FSPD - Freeze Speed Parameter  
 FSS - Flight Service Station  
 FSSA - Flight Service Station Automated Service  
 FSTS - Federal Secure Telephone Service  
 FSYS - Flight Service Station Equipment Systems  
 FTS - Federal Telecommunications System  
 FTS2000 - Federal Telecommunications System 2000  
 FUS - Functional Units or Systems  
 FWCS - Flight Watch Control Station

**-G-**

GA - General Aviation  
 GAA - General Aviation Activity  
 GAAA - General Aviation Activity and Avionics  
 GADO - General Aviation District Office  
 GCA - Ground Control Approach  
 GNAS - General National Airspace System  
 GNSS - Global Navigation Satellite System  
 GOES - Geostationary Operational Environmental Satellite  
 GOESF - GOES Feed Point  
 GOEST - GOES Terminal Equipment  
 GPS - Global Positioning Satellite  
 GPWS - Ground Proximity Warning System  
 GRADE - Graphical Airspace Design Environment  
 GS - Glide Slope Indicator  
 GSA - General Services Administration

**-H-**

H - Non Directional Radio Homing Beacon (NDB)  
 HAA - Height Above Airport  
 HAL - Height Above Landing  
 HARS - High Altitude Route System  
 HAT - Height Above Touchdown  
 HAZMAT - Hazardous Materials  
 HCAP - High Capacity Carriers  
 HDME - NDB with Distance Measuring Equipment  
 HDQ - FAA Headquarters  
 HELI - Heliport  
 HF - High Frequency

HH - NDB, 2kw or More  
 HI EFAS - High Altitude EFAS  
 HIRL - High Intensity Runway Lighting  
 HLDC - High Level Data Link Control  
 HOV - High Occupancy Vehicle  
 HSI - Horizontal Situation Indicators  
 HUD - Housing and Urban Development  
 HWAS - Hazardous In Flight Weather Advisory  
 Hz - HERTZ

**-I-**

I/AFSS - International AFSS  
 IA - Indirect Access  
 IAF - Initial Approach Fix  
 IAP - Instrument Approach Procedures  
 IAPA - Instrument Approach Procedures Automation  
 IBM - International Business Machines  
 IBP - International Boundary Point  
 IBR - Intermediate Bit Rate  
 ICAO - International Civil Aviation Organization  
 ICSS - International Communications Switching Systems  
 IDAT - Interfacility Data  
 IF - Intermediate Fix  
 IFCP - Interfacility Communications Processor  
 IFDS - Interfacility Data System  
 IFEA - In Flight Emergency Assistance  
 IFO - International Field Office  
 IFR - Instrument Flight Rules  
 IFSS - International Flight Service Station  
 ILS - Instrument Landing System  
 IM - Inner Marker  
 IMC - Instrument Meteorological Conditions  
 INM - Integrated Noise Model  
 INS - Inertial Navigation System  
 IRMP - Information Resources Management Plan  
 ISDN - Integrated Services Digital Network  
 ISMLS - Interim Standard Microwave Landing System  
 ITI - Interactive Terminal Interface  
 IVRS - Interim Voice Response System  
 IW - Inside Wiring

**-J-**

JFK - John Fitzgerald Kennedy Int'l Airport

**-K-**

Kbps - Kilobits Per Second  
Khz - Kilohertz  
KVDT - Keyboard Video Display Terminal

**-L-**

LAA - Local Airport Advisory  
LAAS - Low Altitude Alert System  
LABS - Leased A B Service  
LABSC - LABS GS 200 Computer  
LABSR - LABS Remote Equipment  
LABSW - LABS Switch System  
LAHSO - Land and Hold Short Operation  
LAN - Local Area Network  
LATA - Local Access and Transport Area  
LAWRS - Limited Aviation Weather Reporting System  
LCF - Local Control Facility  
LCN - Local Communications Network  
LDA - Landing Directional Aid  
LDIN - Lead in Lights  
LEC - Local Exchange Carrier  
LF - Low Frequency  
LGA - LaGuardia Int'l Airport  
LINCS - Leased Interfacility NAS Communications System  
LIS - Logistics and Inventory System  
LLWAS - Low Level Wind Shear Alert System  
LM/MS - Low/Medium Frequency  
LMM - Locator Middle Marker  
LMS - LORAN Monitor Site  
LOC - Localizer  
LOCID - Location Identifier  
LOI - Letter of Intent  
LOM - Compass Locator at Outer Marker  
LORAN - Long Range Aid to Navigation  
LRCO - Limited Remote Communications Outlet  
LRNAV - Long Range Navigation  
LRR - Long Range Radar

**-M-**

MAA - Maximum Authorized Altitude  
MALs - Medium Intensity Approach Lighting System  
MALSF - MALs with Sequenced Flashers  
MALSR - Medium Intensity Approach Lights w/Runway Indicators  
MAP - Modified Access Pricing  
MAP - Military Airport Program  
MAP - Missed Approach Point  
MAP - Maintenance Automation Program

Mbps	- Megabits Per Second
MCA	- Minimum Crossing Altitude
MCAS	- Marine Corps Air Station
MCC	- Maintenance Control Center
MCL	- Middle Compass Locator
MCS	- Maintenance and Control System
MDA	- Minimum Descent Altitude
MDT	- Maintenance Data Terminal
MEA	- Minimum En Route Altitude
METI	- Meteorological Information
MF	- Middle Frequency
MFJ	- Modified Final Judgement
MFT	- Meter Fix Crossing Time/Slot Time
MGD	- Millions of Gallons per Day
MHA	- Minimum Holding Altitude
Mhg	- MegHERTZ
MIA	- Minimum IFR Altitudes
MIDO	- Manufacturing Inspection District Office
MIS	- Meteorological Impact Statement
MISC	- Miscellaneous
MISO	- Manufacturing Inspection Satellite Office
MIT	- Miles In Trail
MITL	- Medium Intensity Taxiway Lights
MITRE	- Mitre Corporation
MLS	- Microwave Landing System
MM	- Middle Marker
MMC	- Maintenance Monitoring Console
MMS	- Maintenance Monitoring System
MNPS	- Minimum Navigation Performance Specification
MNPSA	- Minimum Navigation Performance Specifications Airspace
MOA	- Memorandum of Agreement
MOA	- Military Operations Area
MOCA	- Minimum Obstruction Clearance Altitude
MODE	- CAAltitude Encoded Beacon Reply
MODE	- CAAltitude Reporting Mode of Secondary Radar
MODE	- SMode Select Beacon System
MOU	- Memorandum of Understanding
MPO	- Metropolitan Planning Organization
MPS	- Maintenance Processor Subsystem (OR) Master Plan Supplement
MRA	- Minimum Reception Altitude
MRC	- Monthly Recurring Charge
MSA	- Minimum Safe Altitude
MSAW	- Minimum Safe Altitude Warning
MSL	- Mean Sea Level
MSN	- Message Switching Network
MTCS	- Modular Terminal Communications System

MTI - Moving Target Indicator  
 MUX - Multiplexor  
 MVA - Minimum Vectoring Altitude  
 MVFR - Marginal Visual Flight Rules

**-N-**

NAAQS - National Ambient Air Quality Standards  
 NADA - NADIN Concentrator  
 NADIN - National Airspace Data Interchange Network  
 NADSW - NADIN Switches  
 NAILS - National Airspace Integrated Logistics Support  
 NAMS - NADIN IA  
 NAPRS - National Airspace Performance Reporting System  
 NAS - National Airspace System or Naval Air Station  
 NASDC - National Aviation Safety Data  
 NASP - National Airspace System Plan  
 NASPAC - National Airspace System Performance Analysis Capability  
 NATCO - National Communications Switching Center  
 NAVAID - Navigation Aid  
 NAVMN - Navigation Monitor and Control  
 NAWAU - National Aviation Weather Advisory Unit  
 NAWPF - National Aviation Weather Processing Facility  
 NCAR - National Center for Atmospheric Research; Boulder, CO  
 NCF - National Control Facility  
 NCIU - NEXRAD Communications Interface Unit  
 NCS - National Communications System  
 NDB - Non Directional Radio Homing Beacon  
 NDNB - NADIN II  
 NEPA - National Environmental Policy Act  
 NEXRAD - Next Generation Weather Radar  
 NFAX - National Facsimile Service  
 NFDC - National Flight Data Center  
 NFIS - NAS Facilities Information System  
 NI - Network Interface  
 NICS - National Interfacility Communications System  
 NM - Nautical Mile  
 NMAC - Near Mid Air Collision  
 NMC - National Meteorological Center  
 NMCE - Network Monitoring and Control Equipment  
 NMCS - Network Monitoring and Control System  
 NOAA - National Oceanic and Atmospheric Administration  
 NOC - Notice Of Completion  
 NOTAM - Notice to Airmen  
 NPDES - National Pollutant Discharge Elimination System  
 NPIAS - National Plan of Integrated Airport Systems  
 NRC - Non Recurring Charge

- NRCS - National Radio Communications Systems
- NSAP - National Service Assurance Plan
- NSSFC - National Severe Storms Forecast Center
- NSSL - National Severe Storms Laboratory; Norman, OK
- NSWRH - NWS Regional Headquarters
- NTAP - Notices To Airmen Publication
- NTP - National Transportation Policy
- NTSB - National Transportation Safety Board
- NTZ - No Transgression Zone
- NWS - National Weather Service
- NWSR - NWS Weather Excluding NXRD
- NXRD - Advanced Weather Radar System
- NYSASP - New York State Aviation System Plan
- NYSDEC - New York State Department of Environmental Conservation
- NYSDOT - New York State Department of Transportation

**-O-**

- OAG - Official Airline Guide
- OALT - Operational Acceptable Level of Traffic
- OAW - Off airway Weather Station
- ODAL - Omnidirectional Approach Lighting System
- ODAPS - Oceanic Display and Processing Station
- OFA - Object Free Area
- OFDPS - Offshore Flight Data Processing System
- OFT - Outer Fix Time
- OFZ - Obstacle Free Zone
- OM - Outer Marker
- OMB - Office of Management and Budget
- ONER - Oceanic Navigational Error Report
- OPBA - Operations Pre Based Aircraft
- OPLT - Operational Acceptable Level of Traffic
- OPSW - Operational Switch
- OPX - Off Premises Exchange
- ORD - Operational Readiness Demonstration
- OTR - Oceanic Transition Route
- OTS - Organized Track System

**-P-**

- PABX - Private Automated Branch Exchange
- PAM - Peripheral Adapter Module
- PAPI - Precision Approach Path Indicator
- PAR - Precision Approach Radar
- PAR - Preferential Arrival Route
- PATWAS - Pilots Automatic Telephone Weather Answering Service
- PBCT - Proposed Boundary Crossing Time
- PBRF - Pilot Briefing

PBX - Private Branch Exchange  
 PCA - Positive Control Airspace  
 PCM - Pulse Code Modulation  
 PDAR - Preferential Arrival And Departure Route  
 PDC - Pre Departure Clearance  
 PDC - Program Designator Code  
 PDN - Public Data Network  
 PDR - Preferential Departure Route  
 PFC - Passenger Facility Charge  
 PHONE - Telephone  
 PIC - Principal Interexchange Carrier  
 PIDP - Programmable Indicator Data Processer  
 PIREP - Pilot Weather Report  
 PMS - Program Management System  
 POLIC - Police Station  
 POP - Point Of Presence  
 POT - Point Of Termination  
 PPIMS - Personal Property Information Management System  
 PR - Primary Commercial Service Airport  
 PRI - Primary Rate Interface  
 PRM - Precision Runway Monitor  
 PSC - Public Service Commission  
 PSDN - Public Switched Data Network  
 PSN - Packet Switched Network  
 PSS - Packet Switched Service  
 PSTN - Public Switched Telephone Network  
 PUB - Publication  
 PUP - Principal User Processor  
 PVC - Permanent Virtual Circuit  
 PVD - Plan View Display

**-R-**

RAIL - Runway Alignment Indicator Lights  
 RAPCO - Radar Approach Control (USAF)  
 RAPCON - Radar Approach Control (FAA)  
 RASP - Regional Aviation System Plan  
 RATCC - Radar Air Traffic Control Center  
 RATCF - Radar Air Traffic Control Facility (USN)  
 RBC - Rotating Beam Ceilometer  
 RBDPE - Radar Beacon Data Processing Equipment  
 RCAG - Remote Communications Air/Ground  
 RCC - Rescue Coordination Center  
 RCCC - Regional Communications Control Centers  
 RCF - Remote Communication Facility  
 RCIU - Remote Control Interface Unit  
 RCL - Radio Communications Link

RCLR	- RCL Repeater
RCLT	- RCL Terminal
RCO	- Remote Communications Outlet
RCU	- Remote Control Unit
RDAT	- Digitized Radar Data
RDP	- Radar Data Processing
RDSIM	- Runway Delay Simulation Model
REIL	- Runway End Identification Lights
RF	- Radio Frequency
RL	- General Aviation Reliever Airport
RMCC	- Remote Monitor Control Center
RMCF	- Remote Monitor Control Facility
RML	- Radio Microwave Link
RMLR	- RML Repeater
RMLT	- RML Terminal
RMM	- Remote Maintenance Monitoring
RMMS	- Remote Maintenance Monitoring System
RMS	- Remote Monitoring Subsystem
RMSC	- Remote Monitoring Subsystem Concentrator
RNAV	- Area Navigation
RNP	- Required Navigation Performance
ROD	- Record of Decision
ROFA	- Runway Object Free Area
ROI	- Region of Influence
ROSA	- Report of Service Activity
ROT	- Runway Occupancy Time
RP	- Restoration Priority
RPC	- Restoration Priority Code
RPG	- Radar Processing Group
RPZ	- Runway Protection Zone
RRH	- Remote Reading Hygrothermometer
RRHS	- Remote Reading Hydrometer
RRWDS	- Remote Radar Weather Display
RRWSS	- RWDS Sensor Site
RSA	- Runway Safety Area
RSS	- Remote Speaking System
RT	- Remote Transmitter
RT	- & BTL Radar Tracking And Beacon Tracking Level
RTAD	- Remote Tower Alphanumerics Display
RTCA	- Radio Technical Commission for Aeronautics
RTR	- Remote Transmitter/Receiver
RTRD	- Remote Tower Radar Display
RVR	- Runway Visual Range
RW	- Runway
RWDS	- Same as RRWDS
RWP	- Realtime Weather Processor

**-S-**

S/S	- Sector Suite
SAC	- Strategic Air Command
SAFI	- Semi Automatic Flight Inspection
SALS	- Short Approach Lighting System
SASP	- State Aviation System Plan
SATCOM	- Satellite Communications
SAWRS	- Supplementary Aviation Weather Reporting System
SCC	- System Command Center
SCVTS	- Switched Compressed Video Telecommunications Service
SDF	- Simplified Direction Finding
SDF	- Software Defined Network
SDIS	- Switched Digital Integrated Service
SDP	- Service Delivery Point
SDS	- Switched Data Service
SEL	- Single Event Level
SELF	- Simplified Short Approach Lighting System With Sequenced Flashing
SFAR 38	- Special Federal Aviation Regulation 38
SHPO	- State Historic Preservation Officer
SIC	- Service Initiation Charge
SID	- Station Identifier
SID	- Standard Instrument Departure
SIGMET	- Significant Meteorological Information
SIMMOD	- Airport and Airspace Simulation Model
SIP	- State Implementation Plan
SM	- Statute Miles
SMGC	- Surface Movement Guidance and Control
SMPS	- Sector Maintenance Processor Subsystem
SMS	- Simulation Modeling System
SNR	- Signal to Noise Ratio, also: S/N
SOC	- Service Oversight Center
SOIR	- Simultaneous Operations On Intersecting Runways
SOIWR	- Simultaneous Operations on Intersecting Wet Runways
SPDES	- State Pollutant Discharge Elimination System
SRAP	- Sensor Receiver and Processor
SSALF	- SSALS with Sequenced Flashers
SSALR	- Simplified Short Approach Lighting System
SSB	- Single Side Band
STAR	- Standard Terminal Arrival Route
STD	- Standard
STMUX	- Statistical Data Multiplexer
STOL	- Short Takeoff and Landing
SURPIC	- Surface Picture
SVFR	- Special Visual Flight Rules

**-T-**

T1MUX	- T1 Multiplexer
TAAS	- Terminal Advance Automation System
TACAN	- Tactical Aircraft Control and Navigation
TACR	- TACAN at VOR, TACAN only
TAF	- Terminal Area Forecast
TARS	- Terminal Automated Radar Service
TAS	- True Air Speed
TATCA	- Terminal Air Traffic Control Automation
TAVT	- Terminal Airspace Visualization Tool
TCA	- Traffic Control Airport or Tower Control Airport
TCA	- Terminal Control Area
TCACCIS	- Transportation Coordinator Automated Command and Control Information System
TCAS	- Traffic Alert And Collision Avoidance System
TCC	- DOT Transportation Computer Center
TCCC	- Tower Control Computer Complex
TCE	- Tone Control Equipment
TCLT	- Tentative Calculated Landing Time
TCO	- Telecommunications Certification Officer
TCOM	- Terminal Communications
TCS	- Tower Communications System
TDLS	- Tower Data Link Services
TDMUX	- Time Division Data Multiplexer
TDWR	- Terminal Doppler Weather Radar
TELCO	- Telephone Company
TELEMS	- Telecommunications Management System
TERPS	- Terminal Instrument Procedures
TFAC	- To Facility
TH	- Threshold
TIMS	- Telecommunications Information Management System
TIPS	- Terminal Information Processing System
TL	- Taxilane
TM&O	- Telecommunications Management and Operations
TMA	- Traffic Management Advisor
TMC	- Traffic Management Coordinator
TMC/MC	- Traffic Management Coordinator/Military Coordinator
TMCC	- Terminal Information Processing System
TMCC	- Traffic Management Computer Complex
TMF	- Traffic Management Facility
TML	- Television Microwave Link
TMLI	- Television Microwave Link Indicator
TMLR	- Television Microwave Link Repeater
TMLT	- Television Microwave Link Terminal
TMP	- Traffic Management Processor
TMS	- Traffic Management System

- TMSPS - Traffic Management Specialists
- TMU - Traffic Management Unit
- TNAV - Terminal Navigational Aids
- TODA - Takeoff Distance Available
- TOF - Time Of Flight
- TOFMS - Time of Flight Mass Spectrometer
- TOPS - Telecommunications Ordering and Pricing System (GSA software tool)
- TORA - Take off Run Available
- TR - Telecommunications Request
- TRACAB - Terminal Radar Approach Control in Tower Cab
- TRACON - Terminal Radar Approach Control Facility
- TRAD - Terminal Radar Service
- TRNG - Training
- TSA - Taxiway Safety Area
- TSEC - Terminal Secondary Radar Service
- TSP - Telecommunications Service Priority
- TSR - Telecommunications Service Request
- TSYS - Terminal Equipment Systems
- TTMA - TRACON Traffic Management Advisor
- TTY - Teletype
- TVOR - Terminal VHF Omnidirectional Range
- TW - Taxiway
- TWEB - Transcribed Weather Broadcast TWR Tower (non controlled)
- TY - Type (FAACIS)

**-U-**

- UHF - Ultra High Frequency
- UNICOM - Universal Communicator
- URA - Uniform Relocation Assistance and Real Property Acquisition Policies
- USAF - United States Air Force
- USOC - Uniform Service Order Code

**-V-**

- VASI - Visual Approach Slope Indicator
- VDME - VOR with Distance Measuring Equipment
- VF - Voice Frequency
- VFR - Visual Flight Rule
- VHF - Very High Frequency
- VLF - Very Low Frequency
- VMC - Visual Meteorological Conditions
- VNAV - Visual Navigational Aids
- VNTSC - Volpe National Transportation System Center
- VON - Virtual On net
- VOR - Very High Frequency Omni Directional Range
- VOR/DME - VHF Omnidirectional Range/Distance Measuring Equipment
- VORTAC - VOR collocated with TACAN

- VORTAC - A navigation aid providing VOR azimuth, TACAN azimuth, and TACAN distance measuring equipment (DME) at one site.
- VOT - VOR Test Facility
- VRS - Voice Recording System
- VSCS - Voice Switching and Control System
- VTA - Vertex Time of Arrival
- VTAC - VOR collocated with TACAN
- VTOL - Vertical Takeoff and Landing
- VTS - Voice Telecommunications System

**-W -**

- WAAS - Wide Area Augmentation System
- WAN - Wide Area Network
- WC - Work Center
- WCP - Weather Communications Processor
- WECO - Western Electric Company
- WESCOM - Western Electric Satellite Communications
- WMSC - Weather Message Switching Center
- WMSCR - Weather Message Switching Center Replacement
- WSCMO - Weather Service Contract Meteorological Observatory
- WSFO - Weather Service Forecast Office
- WSMO - Weather Service Meteorological Observatory
- WSO - Weather Service Office
- WTHR - Weather
- WX - Weather

**-X-**

**-Y-**

**-Z-**

## **DEFINITIONS**

*The following is by no means an exhaustive list, but it should serve to help in recognizing common Terms and Phrases used around airports and aircraft.*

### **A**

**ACCELERATE-STOP DISTANCE AVAILABLE (ASDA)** – The runway plus stopway length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff; and *Runway Object Free Zone*. The airspace above a surface centered on the runway centerline.

**AIRCRAFT** - Any contrivance, now known or hereafter invented, used or designed to be used for navigation and flight in air.

**Based Aircraft** - Any aircraft using the Airport whose operator has a lease agreement or other special agreement with the airport sponsor.

**Itinerant Aircraft** - Any aircraft using the Airport whose operator does not have a lease agreement or other special agreement with the airport sponsor.

**AIRCRAFT ACCIDENT** - An occurrence during the operation of an aircraft in which any person suffers death or serious injury or in which the aircraft receives damage.

**AIRCRAFT CLASSES** - Classification of aircraft by weight for various purposes

**Heavy (heavy)** - Aircraft capable of takeoff weight of 300,000 pounds (136078 kg) or more whether or not the aircraft is operating at this weight during a particular phase of flight.

**Large (Medium)** - Aircraft of more than 12,500 pounds (5670 kg) maximum certified takeoff weight, up to 300,000 pounds (136,078 kg).

**Small (Light)** - Aircraft of 12,500 pounds (5,670 kg) or less maximum certified takeoff weight.

**AIRCRAFT PARKING AND STORAGE AREA** - The open areas of the airport set aside for aircraft parking and storage space for the parking and storage of aircraft, or areas for the servicing of aircraft with fuel, lubricants or other supplies, or for making minor or emergency repairs to aircraft, or for any and all such purposes.

**AIRCRAFT RESCUE AND FIREFIGHTING (ARFF)** - The provision of aircraft rescue and firefighting service and equipment as defined and required by Federal Aviation Regulation (FAR) Part 139.

**AIR NAVIGATIONAL AIDS (NAVAIDS)** - Any visual, radio, or electronic devices furnished to provide guidance to aircraft pilots while flying their aircraft.

**AIRPORT/AIRFIELD** - Land used for aircraft takeoffs and landings. "Airport" means any landing area, runway or other facility designed, public or private, used or intended to be used either publicly or by any person or persons for the landing and taking off of fixed wing aircraft, including all necessary taxiways, aircraft storage and tie-down areas, hangars and other necessary buildings, including incidental commercial uses, and open spaces.

**AIRPORT CONTROL TOWER** - A unit established to provide traffic control service for the movement of aircraft and other vehicles in the airport operations area.

**AIRPORT ELEVATIONS** - The highest point of an airport's usable landing area measured in feet above mean sea level.

**AIRPORT FLIGHT INFORMATION SERVICE** - Air traffic services units that provide airport flight information service, search and rescue service, alerting service to aircraft at noncontrolled airports, and assistance to aircraft in emergency situations.

**AIRPORT GROUND CONTROL** - The control of aircraft and other vehicular traffic operating in the airport movement area by the airport control tower.

**AIRPORT OPERATION AREA (AOA)** - The area of an airport where aircraft are expected to operate such as taxiways, runways, and ramps.

**AIRPORT LAYOUT PLAN (ALP)** - A scaled drawing of the airport that shows the existing and planned airport property lines and facilities at the airport. Although ALPs are prepared by the airport sponsor and reflect the plans of the airport sponsor for short- and long-term development, they are submitted to the FAA for review and approval to ensure that FAA design and safety standards have been met.

**AIR TRAFFIC CONTROL** - The Federal Aviation Administration (FAA) division that operates control towers at major airports.

**ANTI-ICING** - A precautionary procedure that provides protection against the formation of frost or ice and the accumulation of snow on treated surfaces of an aircraft for a period of time.

**APPROACH LIGHTS** - A system of lights so arranged as to assist a pilot in aligning his or her aircraft with the runway for landing.

**APRON/RAMP** - An area on airports intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance.

**ARRESTING SYSTEM** - A device used to engage an aircraft and absorb forward momentum in case of an aborted takeoff and/or landing.

**ASSURANCE** - A provision contained in a federal grant agreement to which the recipient

of federal airport development assistance has voluntarily agreed in consideration for the assistance provided.

## **B**

**BELOW MINIMUM** - Weather conditions below the minimum prescribed by regulations for a particular operation such as takeoff or landing.

**BREAKAWAY/FRANGIBLE FENCES AND GATES** - Fences and gates designed and constructed to collapse when impacted by large vehicles to allow rapid access to accident sites.

**BUILDING RESTRICTION LINE (BRL)** - A line which identifies suitable building area locations on airports.

**BUSINESS/CORPORATE OPERATOR** - Any operator using the Airport and its facilities in the conduct of business without expectation of direct financial gain from the operation of the aircraft or vehicle.

## **C**

**CEILING** - The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken," "overcast," "obstruction," or "partial obstruction."

**CLEARWAY/OVERRUN** - An area beyond the end of the runway that has been cleared of nonfrangible obstacles and strengthened to allow overruns without serious damage to the aircraft.

**CONTROLLED AIRPORT** - An airport having a control tower in operation. Tower usually, but not always, staffed by FAA personal.

## **D**

**DE-ICING** - A procedure by which frost, ice, or snow is removed from the critical surfaces of an aircraft in order to render them free of contamination

**DECLARED DISTANCES** - The distances the airport owner declares available for the airplane's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements.

**DISPLACED RUNWAY THRESHOLD** - The temporary relocation of a runway threshold (beginning or end) due to maintenance or other activity on the runway.

## E

**FEDERAL AIRPORT OBLIGATIONS** - All references to federal grant programs, federal airport development assistance, or federal aid intended to address contractual commitments arising from the conveyance of land or from grant agreements.

**FEDERAL AVIATION REGULATIONS (FARS)** - Title 14 of the Code of Federal Regulations.

**FAR PART 139** - Certification and Operations: Land Airports Serving Certain Air Carriers” is a regulation established by the FAA that applies to airports that regularly accommodate passenger aircraft having a seating capacity of more than 30 passengers. The regulations provide guidelines for standards, facilities, and procedures required for the operation of such airports

**FINAL APPROACH** - That portion of the landing pattern in which the aircraft is lined up with the runway and is heading straight in to land.

**FIXED BASE OPERATOR (FBO)** - An entity that is authorized and required by agreement with the airport to provide, at a minimum, the following aeronautical activities at the airport:

- Sale of aviation fuel and oil
- Tie-down, hangaring, and parking
- Aircraft maintenance
- Aircraft washings
- Ancillary aircraft ground services
- Flight instruction

**FLAPS** - Adjustable airfoils attached to the leading or trailing edges of aircraft wings to improve aerodynamic performance during takeoff and landing. They are normally extended during takeoff, landing, and slow flight.

**FLIGHT SERVICE STATION** - A facility from which aeronautical information and related aviation support services are provided to aircraft. This also includes airport and vehicle advisory services for designated uncontrolled airports.

**FRANCHISE** - A right granted by a public entity to a person to do certain things that the person could not otherwise do. A franchise is distinguishable from a leasehold interest even when its exercise and value is inherently dependent upon the use and possession of publicly owned property.

## G

**GENERAL AVIATION** - All civil aviation operations other than scheduled air services and nonscheduled operations for remuneration or hire. The following aviation activities: Use of aircraft for private, business, recreational or agricultural purposes, but not including the

activities of aeronautical activity providers, air carriers, or military activity.

**GRANT AGREEMENT** - Any agreement made between and airport sponsor and the FAA, acting on behalf of the United States, for the grant of federal funding or a conveyance of land, either of which the airport sponsor agrees to use for airport purposes.

## H

**HANGAR** - Structure or building for purposes of storing aircraft.

**HAZARD TO AIR NAVIGATION** - An obstruction determined to have a substantial adverse effect on the safe and efficient utilization of the navigable airspace.

## I

**IMPROVEMENTS** - All buildings, structures, and facilities. Improvements may include pavement, fencing, signs, and landscaping that is constructed; installed; or placed on, under, or above any leased area.

**INSTRUMENT FLIGHT RULES (IFR)** - Regulations governing the operation of an aircraft in weather conditions with visibility below the minimum required for flight under visual flight rules.

**INSTRUMENT LANDING** - Landing an aircraft by relying only upon instrument data.

**INSTRUMENT LANDING SYSTEM (ILS)** - An electronic navigation system that allows aircraft to approach and land during inclement weather conditions.

## L

**LANDING DISTANCE AVAILABLE (LDA)** - The runway length declared available and suitable for a landing airplane. Applies to runways with an approach lighting system.

**LEASE** - A contract between the airport owner/operator and an entity granting a concession that transfers rights or interests in property, or otherwise authorizes the conduct of certain activities. The lease must be in writing, executed by both parties, and enforceable by law.

## M

**MINIMUM STANDARDS** -The criteria established by an airport owner as the minimum requirements that must be met by businesses in order to engage in providing on-airport aeronautical activities or services.

**MOVEMENT AREA** - The runways, taxiways, and other areas of an airport that are used for taxing or hover taxiing, air taxiing, and takeoff and landing of aircraft exclusive of loading ramps and aircraft parking areas.

**MUTUAL AID** - Reciprocal aid given one agency by another in times of emergency.

## Q

**OBJECT FREE AREA (OFA)** - An area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

**OBSTACLE FREE ZONE (OFZ)** - The OFZ is the airspace below 150 feet (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway, and for missed approaches.

**OBSTRUCTION** - Any structure, growth or other object, including a mobile object, which exceeds a limiting height set forth in Federal Aviation Regulations Part 77 (49 CFR Part 77 *Objects Affecting Navigable Airspace*).

**OPERATOR** - As used in these minimum standards, the term operator refers to both commercial operators and non-commercial operators.

## P

**PUBLIC AREA** - Any area, including the various concessions, restrooms, Airport Passenger Terminal lobby sections, ticketing sections, and concourse, used for public thoroughfares, gathering, waiting and viewing; streets and roads, sidewalks and all other areas normally used by the general public. All other areas are considered operational, restricted, or leased areas and access is permitted upon expressed consent of the airport sponsor or its lessees.

## R

**RAMP** - (1) An area on airports intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking or maintenance. (2) A movable stairway or enclosure for loading and unloading passengers.

**RESTRICTED AREA** - Any area designated by the airport sponsor in writing, by means of maps, barriers, or fencing to which the general public is denied access. Those areas established by the Airport Manager for safety and security reasons.

**RUNWAY** - A defined rectangular area on airports prepared for the takeoff or landing of aircraft along its length.

**RUNWAY THRESHOLD** - The beginning or end of a runway that is usable for landing or takeoff.

**RUNWAY SAFETY AREA (RSA)** - Area designated around runway to reduce the risk of damage to airplanes or facilities near the runway in the event of an aircraft undershooting, overshooting, or otherwise unexpectedly leaving the runway pavement.

## S

**SPONSOR** - A local municipal or state government body, or a private entity obligated to the federal government to comply with the assurances contained in grant agreements or property conveyance instruments. A sponsor may be an entity that exists only to operate the airport, such as an airport authority established by state or local law. For the purposes of this document, the terms *airport sponsor* and *airport owner* are used interchangeably.

**STAGING AREA** - A prearranged, strategically located area where personnel, apparatus, and other equipment can be held in readiness for use during an emergency.

**STOPWAY/OVERRUN AREA** - An area beyond the runway end capable of supporting aircraft that overshoot the runway on aborted takeoff or landing without causing structural damage to the airplane.

## T

**TAKEOFF RUN AVAILABLE (TORA)** - the runway length declared available and suitable for the ground run of an airplane taking off.

**TAKEOFF DISTANCE AVAILABLE (TODA)** – the TORA plus the length of any remaining runway or clearway (CWY) beyond the far end of the TORA.

*NOTE: The full length of TODA may not be usable for all takeoffs because of obstacles in the departure area. The usable TODA length is aircraft performance dependent and, as such, must be determined by the aircraft operator before each takeoff and requires knowledge of the location of each controlling obstacle in the departure area.*

**TAXIWAY** - A specially designated and prepared surface on an airport for aircraft to taxi to and from runways, hangars, etc.

**TENANT** - A person having a written hangar lease, hangar rental agreement or other aircraft storage agreement with the airport sponsor, which grants that entity certain rights and privileges on the Airport property.

**TIE DOWN AREA** - An area used for securing aircraft to the ground.

**TRAFFIC PATTERN** - The traffic flow that is prescribed for aircraft landing or taking off from an airport.

**TURBOJET** - A jet engine employing a turbine-driven compressor to compress the intake

air, or an aircraft with this type of engine. Also known as a gas turbine.

**TURBOPROP** – 1) A turbojet engine with a turbine-driven propeller that provides a large part of the thrust, adding this to the thrust of the jet exhaust; turboprop engine. 2) An aircraft that has one or more of these engines.

### U

**UNCONTROLLED AIRPORT** - One having no control tower in operation.

### V

**VISUAL APPROACH** - An approach to landing made by visual reference to the surface.

**VISUAL FLIGHT RULES (VFR)** - Rules that govern the operation of an aircraft during visual flight.

### W

**WAKE TURBULENCE** - Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash or downdraft.

**WINDSOCK** - Cone-shaped cloth sock located on airports to indicate wind direction and to some extent wind velocity.