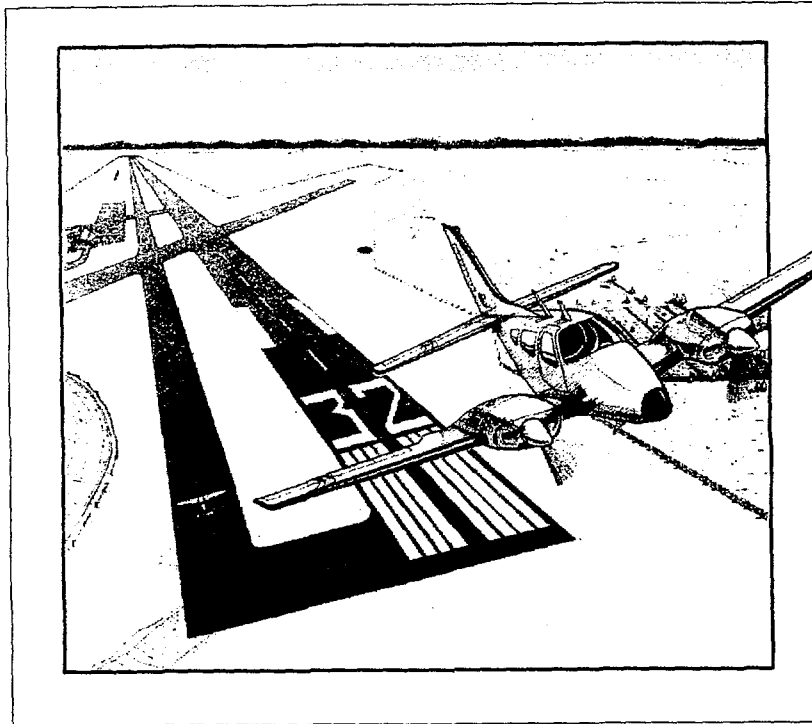


Chapter Eight
FINANCIAL MANAGEMENT AND
DEVELOPMENT PROGRAM



Chapter Eight

FINANCIAL MANAGEMENT AND DEVELOPMENT PROGRAM

The analyses conducted in previous chapters have evaluated airport development needs based on forecast activity changes, environmental factors, and operational efficiency. However, one of the most important elements of the master planning process is the application of basic economic, financial, and management rationale so that the feasibility of implementation can be assured. In short, this chapter will concentrate on those factors which will help make the St. Johns Industrial Air Park Master Plan achievable and successful.

This section of the master plan will become the primary reference for decision makers responsible for carrying out the master plan recommendations. Consequently, this chapter must provide complete justification

for each recommendation. Proper understanding of the potential ramifications of a decision either for or against a recommendation will be essential. This understanding will be critical in maintaining a realistic and cost effective program that provides maximum benefit to the City of St. Johns.

The program outlined on the following pages has been evaluated from a variety of perspectives. The plan is not financially dependent exclusively upon the City of St. Johns for financing the recommended facility improvements. With timely decision making, it may be possible for the City of St. Johns to provide \$4.59 million in improvements for approximately 03 cents on the dollar. This leverage can be accomplished by obtaining airport

development grants from government agencies and through private development. Several sources for development funding exist which will provide decision makers the means necessary for implementing the program. In fact, the development program is dependent upon other sources of capital to finance the majority of the proposed development. Nevertheless, the City of St. Johns will have to provide a significant share of the development costs. This financial commitment on the part of the city will result in substantial economic benefit to the St. Johns area and will be repaid many times over through a system of airport leases, fees and charges, and through increased business activity and taxes throughout the region.

The primary source of funds for airport development are the taxes paid by the aviation consumer throughout the country. The process of collecting and distributing aviation user taxes is quite complex but generally follows one basic premise. Aviation goods and services are provided for a fee and are taxed at various rates. These aviation excise taxes are deposited in the Aviation Trust Fund which is used to fund airport planning and development projects.

Distribution of the taxes deposited in the Aviation Trust Fund is controlled by the Congress and administered by the FAA. The Congress establishes the funding authorization levels and the FAA establishes priorities for distributing the funds appropriated through the budget process.

The Airport Improvement Program (AIP) was established by Congress in 1982, to provide in part, for the development of a

system of airports throughout the nation. Monies appropriated from the Aviation Trust Fund can provide over 90 percent of the financing necessary for eligible airport development projects. These monies are distributed to eligible airport sponsors throughout the country through grants administered by the FAA.

Federal airport development programs similar to AIP date back to 1946 with the passage of the Federal Airport Act. The Airport Improvement Program is currently scheduled to continue through September 1998. One basic underlying assumption in this chapter is that AIP or other similar program will continue to support airport development requirements throughout the planning period.

The primary feature of AIP funding which must be recognized and properly considered is that these funds are distributed on a priority basis. These priorities are established by each FAA Regional Office based upon the number and dollar amount of applications received, and the amounts made available each year. Therefore, the City of St. Johns will be competing with other airport sponsors in the Western-Pacific Region for a limited number of development grants.

Since the Airport Improvement Program uses a 91.06 percent federal to 8.94 percent local matching formula for airports like St. Johns Industrial Air Park, federal grants are essential to airport development programs such as is proposed in this Master Plan. Consequently, the approved development program for St. Johns Industrial Air Park must be continuously coordinated with the FAA. Airport development grants obtained by the city must always be matched by local

funds. Therefore, it is important to act expeditiously in securing the nine percent local share for these grants or to have the local share already budgeted for the year in which the grant is desired or expected.

In support of the State Airports System Plan, the State of Arizona also participates in the development of general aviation airports through its Department of Transportation, Aeronautics Division (ADOT). The state may grant up to 50 percent of the local share of FAA eligible projects and 90 percent on some projects not eligible for federal funding. Currently, the state has set a maximum grant amount of \$980,000 to any eligible airport in fiscal year 1998. Other funding sources are also presented in the various schedules for the individual development projects detailed later in this chapter. As with the federal participation, a similar level of coordination of program needs should be maintained with ADOT Aeronautics.

In addition to the local share on federally or state funded improvements, the City of St. Johns will be faced with financing necessary facilities that are not eligible for AIP or ADOT grants. The direct financing necessary for these projects will be high, and the natural tendency will be to reduce or eliminate basic facilities such as utilities and auto parking from the plans. Aviation users are expected to contribute at the local level to support these facilities through airport leases, aircraft parking fees, and fuel flowage fees.

The final source for development funding is the private sector. Private development is frequently ignored and often does not receive adequate credit for its investment in the airport. This master plan has identified

many areas where private development sources can be encouraged to contribute needed improvements. These improvements will not only benefit the private concerns but will also benefit the airport and the community.

The community's interest in a public airport is to serve the aviation demands of the region and promote the economic well being of the community. As such, the principal benefactors are local residents, businesses and industry. Because of the importance of many of the improvements to local business, and subsequently the community as a whole, the public and private sector must work together to ensure that adequate resources are provided and long-term financing is available.

AIRPORT DEVELOPMENT SCHEDULE AND COST SUMMARIES

The initial step in establishing an airport development schedule is to determine the cost of each proposed improvement. Cost data used in this study were collected from a variety of sources, including published engineering indices, government agencies and similar airport construction projects. The estimates for each planning period are based on current dollars. A 25 percent contingency for overhead, engineering, administration and unforeseen circumstances has been applied to the cost estimates of various development projects.

In future years, as the master plan is implemented, the current cost estimates can continue to serve as management aids by adjusting the 1998-based figures for

subsequent inflation. This may be accomplished by converting the interim change in the National Consumer Price Index (CPI) into a multiplier ratio through the following formula:

$$\frac{X}{\text{CPI}} = Y$$

Where: X = CPI in any given future year

CPI = National CPI in 1998
(1982 - 84 = 100)

Y = Change ratio (multiplier)

Multiplying the change ratio (Y) times any 1998 based cost estimate presented in this study will yield the adjusted dollar amounts appropriate in any future year reevaluation. This procedure will be needed in the Continuous Planning Process section at the end of this chapter. National CPI data should be used, as local or regional measures may vary too widely or may not be available. The CPI information is available from the economic research departments of most banks or the Arizona Department of Commerce.

An airport development schedule takes into consideration not only the demand for facilities, but also the financial capability of the airport sponsor and the need to resolve current deficiencies. Development project scheduling has been divided into three major stages covering the entire planning period. The three planning stages are intended to reflect the relative importance of the development projects to aviation safety and airport efficiency.

The first five-year stage includes those items of critical importance to the overall safe operation of the airport and its benefit to the community as a whole. The second five-year stage includes those items necessary to tie related development items together and maintain or improve the capacity of the facility. The third long-term phase covering the remaining ten years should include those items necessary to improve efficiency and the overall operational effectiveness of the airport.

Of course, each phase should also include basic maintenance and revenue generating components. As shown in *Table 8.1* below, the total cost for completing all three stages of development at St. Johns Industrial Air Park will be approximately \$4.59 million by the year 2017.

Table 8.1
Summary of Total Development Costs
St. Johns Industrial Air Park

Stage I (1998-2002)	\$2,944,000
Stage II (2003-2007)	581,000
Stage III (2008-2017)	<u>1,065,000</u>
Total Development Costs	\$4,590,000

Prior to scheduling individual projects, two key points should be emphasized. First, with few exceptions, the staging of development projects has been based upon the projected activity at the airport. However, actual activity may vary from forecast levels. With the exception of those items directly related to safety and resolving current deficiencies, the development staging in this section should

also be viewed as a projection. In the event airport activity does not follow projected levels, implementation of projects should be altered to coincide with demand rather than according to an estimated schedule. Therefore, the Continuous Planning Process at the end of this chapter has been developed to allow the City of St. Johns to adjust the development program based on the various indicators of demand. Second, due to the conceptual nature of a master plan, implementation of recommended capital projects should occur only after further refinement of their design considerations and cost estimates through detailed engineering analyses at the project level.

Stage I (1998-2002)

Stage I development will cover the five-year period from 1998 through 2002. At the end of Stage I, St. Johns Industrial Air Park is expected to have approximately 14 based aircraft and an annual traffic volume of 21,000 aircraft operations. During this stage it is important to eliminate existing constraints to future development and alleviate deficiencies or shortages in existing facilities. Stage I will focus on providing those facilities that are necessary for safety and required for a minimum level of aviation service.

Stage I development will concentrate on the proposed development of Runway 3-21. The development will include extending the runway 640 feet and widening it from 60 feet to 75 feet in width. Medium Intensity Runway Lights (MIRL) will also be installed.

Other landside facility improvements will include reconstruction of the airport parking apron, construction of the

FBO/maintenance hangar with associated parking, and the relocation/extension of perimeter fencing. Installation of additional runway and taxiway edge lighting will serve to enhance nighttime operations. This development will form the foundation for future development and alleviate airport constraints and safety deficiencies.

Stage II (2003-2007)

Stage II development includes the five-year period from 2003 through 2007. During Stage II the number of aircraft based at St. Johns Industrial Air Park is expected to grow to 16 aircraft and the annual traffic volume will increase to 27,000 operations.

Development in this stage will focus primarily on hangar development and installation of MITL on Taxiway B.

Stage III (2008-2017)

Stage III includes the ten-year period from 2008 through 2017. These projects will include T-hangar construction, installation of PAPI-2 on Runway 3-21, and relocation of the city maintenance yard. In addition, aviation easements for Runway 14-32 ends and Runway 3 end should be acquired. By the end of Stage III, activity at St. Johns Industrial Air Park is expected to increase to 25 based aircraft and 37,500 annual operations. At the completion of Stage III, St. Johns Industrial Air Park will be capable of accommodating the aviation activity anticipated during the planning period.

There is a considerable amount of flexibility built-in to the development staging, thereby providing that, if the local share of the development costs on a given project becomes prohibitive during either of the first two stages, shifting the financial

burden to the subsequent stage could be considered. *Table 8.2* shows the proposed airport development schedule and project cost summary for all of the recommended

development at St. Johns Industrial Air Park.

Table 8.2
Estimated Development Schedule and Costs Summary
St. Johns Industrial Air Park

<i>Sequence</i>	<i>Project Description</i>	<i>Quantity</i>	<i>Units</i>	<i>Unit Price</i>	<i>Total</i>
	<i>Stage I</i>				
1	Reconstruct Aircraft Parking Apron	18,000	SY	\$50.00	\$900,000.00
2	Widen Runway 3-21	6,000	SY	40.00	240,000.00
2	Extend Runway 3-21 (640')	5,400	SY	75.00	405,000.00
2	Relocate/Extend Perimeter Fence	1,500	LF	12.00	18,000.00
3	Install MIRL Runway 3-21	4,200	LF	30.00	126,000.00
4	Seal Coat Runway 14-32	45,000	SY	5.00	225,000.00
5	Construct FBO/Maintenance Hangar	10,000	SF	100.00	1,000,000.00
5	Construct Automobile Parking	1,200	SY	25.00	30,000.00
	STAGE I TOTAL				\$2,944,000.00
	<i>Stage II</i>				
1	Install MITL Taxiway B	5,200	LF	30.00	156,000.00
2	Construct 10-Unit T-Hangar	10	EA	40,000.00	400,000.00
3	Remove Existing Hangars	1	JOB	25,000.00	25,000.00
	STAGE II TOTAL				\$581,000.00
	<i>Stage III</i>				
1	Construct 10-Unit T-Hangar	10	EA	40,000.00	400,000.00
2	Install PAPI-2 Runway 3-21	2	EA	20,000.00	40,000.00
3	Relocate City Maintenance Yard	1	JOB	250,000.00	250,000.00
4	Obtain Avigation Easements	75	AC	5,000.00	375,000.00
	STAGE III TOTAL				\$1,065,000.00
	TOTAL DEVELOPMENT COSTS				\$4,590,000.00

AC = Acres
 LF = Linear Feet
 SY = Square Yards
 EA = Each
 LS = Lump Sum
 SF = Square Feet

While the costs of developing the proposed new facilities at St. Johns Industrial Air Park will be \$4.59 million, it should be remembered that a large portion of these improvements can be provided at minimal direct cost to the city. Tenants cognizant of the opportunities to conduct business profitably at the airport may provide much of the investment for FBO and hangar facilities.

Optimum funding sources for all the proposed development items will be shown in detail later in the chapter. The development program relies heavily on FAA funding for all eligible projects, however, it must be realized that federal funds will be limited. If federal funds are not available, state grants may be used to fund 90 percent of the development costs. A summary of historical project grant awards are listed in the following table.

Table 8.3
History of Project Grants
St. Johns Industrial Air Park

FAA Grants	Project	Date	Amount	
<i>ADAP -01</i>	Pave & Mark RWY 2/20 Ph I	1980	\$	452,530.00
<i>ADAP -02</i>	Pave & Mark RWY 2/20 Ph II	1981	\$	249,542.00
<i>AIP -01</i>	Reconstruct RWY 13/31	1984	\$	366,528.00
<i>AIP -02</i>	Install MIRL RWY 13/31	1985	\$	370,246.00
<i>AIP -03</i>	Construct TXY, Fencing	1987	\$	235,000.00
<i>AIP -04</i>	Parallel Taxiway	1990	\$	256,139.00
<i>AIP -05</i>	Master Plan	1991	\$	45,792.00
<i>AIP -06</i>	Taxiway Extension	1992	\$	423,428.00
Total FAA Amounts				\$2,399,205.00
ADOT Grants	Project	Date	Amount	
<i>State Matches</i>	4.47 Percent of FAA	Various	\$	107,244.46
<i>N922</i>	Surface RWY 13/31	1989	\$	127,523.00
<i>N036</i>	NDB, AWOS, Fence & Lighting	1990	\$	53,535.00
<i>N239</i>	Surface RWY, TXY, Apron, Rd.	1992	\$	324,800.00
<i>N539</i>	Surface RWY, Fencing	1995	\$	225,000.00
<i>N639</i>	Apron Repair	1996	\$	500,000.00
<i>ADOT Loan</i>	Fuel Farm	1996	\$	300,000.00
Total State Amounts				\$1,638,102.46

FINANCING THE LOCAL SHARE OF AIRPORT CAPITAL IMPROVEMENTS

In addition to the revenues derived from airport operations, the City of St. Johns has several methods available for financing the local share of airport development costs. The most common methods involve debt financing which amortize the debt over the useful life of the project or a specified period. Methods of debt financing commonly available to the city are discussed below.

GENERAL OBLIGATION BONDS

General Obligation Bonds are a common form of municipal bonds whose payment is secured by the full faith, credit, and taxing authority of the city. General Obligation Bonds are instruments of credit and, because of the community guarantee, reduce the available debt level of the sponsoring community. This type of bond uses tax revenues to retire debt and the key element becomes the approval of the elaborate to a tax levy to support airport development. If approved, General Obligation Bonds are typically issued at a lower interest rate than other types of bonds.

SELF-LIQUIDATING GENERAL OBLIGATION BONDS

As with all General Obligation Bonds, Self-liquidating Bonds are secured by the issuing governmental agency. They are retired, however, by the adequate cash flow from the operation of the facility for which the bonds were issued. However, the state

court must determine that the project is self-sustaining and that the debt may legally be excluded from the debt limits of the community.

Since the credit of the local government bears the ultimate risk of default, the bond issue is still considered, for the purpose of financial analysis, as part of the debt limit of the community. Therefore, this method of financing may mean a higher rate of interest on all bonds sold by the community. The amount of increase in the interest rate depends, in part, upon the degree of exposure risk of the bond. Exposure risk occurs when there is insufficient net airport operating income to cover the level of debt service plus coverage requirements, thus forcing the community to absorb the residual.

REVENUE BONDS

Revenue Bonds are payable solely from the revenue of a particular project or from operating income of the borrowing agency, such as an Airport Authority which lacks taxing powers. Generally, they fall outside of constitutional and statutory limitations and, in many cases, do not require electorate approval. Because of the limitations on other public bonds, airport sponsors are increasingly turning to revenue bonds whenever possible.

However, Revenue Bonds normally carry higher rate of interest because they lack the guarantees of General Obligation Bonds. It should also be noted that the general public would usually be aware of the risk involved with a revenue bond issue for a general aviation airport. Therefore, the sale of

such bonds could be more difficult than others.

BANK FINANCING

Some airport sponsors have used bank financing as a means of providing airport development capital. Generally, two conditions are required; the airport must demonstrate the ability to repay the loan plus interest, and the capital improvement must be less than the value of the present facility. These are standard conditions which are applied to almost all bank loan transactions. This method of financing could be particularly useful for smaller development items that will produce revenues and a positive cash flow.

THIRD-PARTY SUPPORT

Several types of funding fall into this category. For example, individuals or interested organizations may contribute portions of the required development funds. Although not a common means of airport financing, the role of private financial contributions not only increases the financial support of the project, but also stimulates moral support to airport development.

Because of the high potential for industrial park development, park developers could be interested in investing in certain development projects such as providing the local share for a runway extension or a lump sum contribution towards general airport improvements.

Another method of third-party support involves permitting the fixed base operator (FBO) to construct his own hangar and maintenance facilities on property leased

from the airport. The advantage to this arrangement is that it lowers the local share of development costs, a large portion of which is building construction. However, the disadvantage is that the airport sponsor will receive a smaller percentage of the revenue generated at the airport. For this reason, it is important to consider all eventualities before entering into a specific lease agreement.

COMMUNITY SUPPORT

While it would certainly be advantageous for an airport to support itself, the indirect and tangible benefits of the airport to the economy of the region and its growth must be considered. Approximately ten people are directly employed on the airport by the city, the FBO's or other tenants. As airport activity increases, it is likely employment on the airport will also grow throughout the planning period. The local construction industry will also benefit throughout the planning period.

The local construction industry will benefit directly from implementation of the development program. The cost of the Master Plan improvements coming from fund sources outside the community will total approximately \$2.64 million. In addition to the above Master Plan improvement costs, buildings developed by private investors in new airport lease areas could total another \$1.8 million in new construction.

Other community benefits involve business growth and development that is enhanced by the availability of an airport. While it is unlikely that industry has or has not chosen to locate in the St. Johns area solely because of the airport, the fact remains that

the major employers in the community benefit extensively from the present of St. Johns. Some of these same firms own and operate aircraft that use the airport. Clients and suppliers of businesses in the White Mountain Region will also benefit by the future facilities. This type of extensive use by corporate aircraft is a definite trend across the United States. The trend has been generated in part by the movement of American Industry from the larger metropolitan areas to smaller communities that offer lower taxes and labor costs and a better working environment.

Time is money to corporate executives and corporate aircraft are answering the need for quick access to and from these new locations. The ability of St. Johns to provide convenient access to corporate aircraft will be reflected not only in benefits to existing business and industry, but could be a strong positive factor in attracting new industry to the White Mountain Region.

SUMMARY OF DEVELOPMENT FUNDING

Funding for the development of St. Johns Industrial Air Park over the next twenty

plus years will be obtained from several sources. As indicated in Table 8.3, federal and state aid will be critical to the funding of proposed developments at St. Johns Industrial Air Park. It should be remembered however, that both the FAA and ADOT Aeronautics Division strive not to participate in the funding of projects that duplicate facilities within close proximity to one another.

St. Johns Industrial Air Park has the capability to serve the majority of the aviation demands of the area. Consequently, St. Johns Industrial Air Park will more likely be developed to a greater degree than the other airports in the area. These other airports will need to be developed to provide aviation services to their local communities. The development of all the airports throughout the area should be coordinated to avoid duplication and maximize service.

The City of St. Johns will need to keep fully abreast of all the potential funding sources and research each source on a continuing basis.

**Table 8.4
Development Funding Sources
St. Johns Industrial Air Park**

<u>Stage</u>	<u>Federal</u>	<u>State</u>	<u>City/Private</u>	<u>Total</u>
Stage I	\$1,538,004	\$304,998	\$1,100,998	\$2,944,000
Stage II	142,054	29,473	409,473	581,000
Stage III	377,900	243,550	443,550	1,065,000
TOTAL	\$2,057,958	\$578,021	\$1,954,021	\$4,590,000

The final portions of this chapter deal with this through a process called Continuous Planning. By closely monitoring the aviation activity and availability of funds with the worksheets provided on the following pages, airport management will be able to carry out its function of implementing the master plan.

CONTINUOUS PLANNING PROCESS

The successful implementation of the St. Johns Industrial Air Park Master Plan will require sound judgment on the part of airport management. Among the more important factors influencing management's decisions to carry out a recommendation are scheduling or sequencing, and airport activity. Both of these factors can be used as references in implementation of the plan.

While it was necessary for scheduling and budgeting purposes to focus on the timing of airport development, the actual need for facilities is in fact established by levels of activity. Proper master plan implementation suggests the use of airport activity rather than time as the primary criterion in airport development. However, the development must also follow a logical progression so that the development does not create intermediate conflicts in the process.

Experience has demonstrated that significant problems can arise from strict adherence to schedules rather than demands. These problems center around the inherent inflexibility and inability of this policy to deal with new issues that

develop from unforeseen events that may occur after the plan is completed. The format used in the development of this master plan has attempted to deal with this issue by emphasizing that planning is a continuous process that does not end with the completion of the master plan, and recognizing this factor without invalidating the planning priorities or the sequence of development within the Master Plan.

The primary issues and concepts upon which the St. Johns Industrial Air Park Master Plan is based should remain current for many years to come. The real value of a usable master plan, however, is that it serves to keep the issues and objectives of airport development in the mind of the user. Consequently, the user is better able to recognize changes and their potential effects on the airport.

Guidelines and worksheets are included in the following section for each future year during the initial stage of development from 1998 through 2002. Summary worksheets are also included for Stage II and Stage III. All estimated development costs are based upon 1998 dollars.

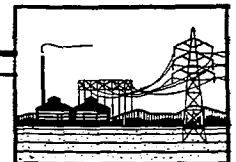
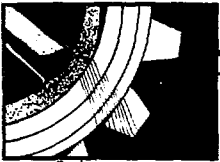
CONTINUOUS PLANNING AIDS

The continuous planning process requires the City of St. Johns to consistently monitor the progress of the airport in terms of growth in based aircraft, annual operations and fuel sales. Accurate tracking of this data is important because this growth is critical to the exact timing and need for a significant portion of the proposed airport facilities. The information obtained from this monitoring process will provide the data necessary to determine if development

should be accelerated, decelerated, or maintained as scheduled.

On an annual basis, airport management should compile this information and determine the actual number of based aircraft, total amount of fuel sales, and total annual aircraft operations. Use of the Continuous Planning Chart (*Exhibit 7A*) and the Continuous Planning Graph (*Exhibit 7B*) will enable the city to visualize airport activity growth and compare it to the forecast levels.

The actual future airport operating statistics data should be entered in the space provided on the continuous planning charts and graphs. With this information, adjustments in the development schedule can easily be made to effectively deal with deviations from forecasts or respond to any unique demands that may arise. By closely monitoring the activity and availability of funds, the city will be better able to carry out its function of implementing the St. Johns Industrial Air Park Master Plan.



St. Johns Industrial Airpark
Continuous Planning Chart

YEAR	BASED AIRCRAFT		ANNUAL OPERATIONS	
	Forecast	Actual	Forecast	Actual
1995		10		15,000
1996	11		16,200	
1997	12		17,400	
1998	12		18,600	
1999	13		19,800	
2000	14		21,000	
2001	15		22,200	
2002	16		23,400	
2003	16		24,600	
2004	17		25,800	
2005	18		27,000	
2006	19		28,200	
2007	20		29,400	
2008	20		30,600	
2009	21		31,800	
2010	22		33,000	
2011	22		33,900	
2012	23		34,800	
2013	24		35,700	
2014	24		36,600	
2015	25		37,500	
2016	25		38,400	
2017	26		39,300	
	26		40,200	

EXHIBIT 8A
CONTINUOUS PLANNING CHART

St. Johns Industrial Air Park Airport Master Plan



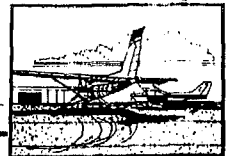
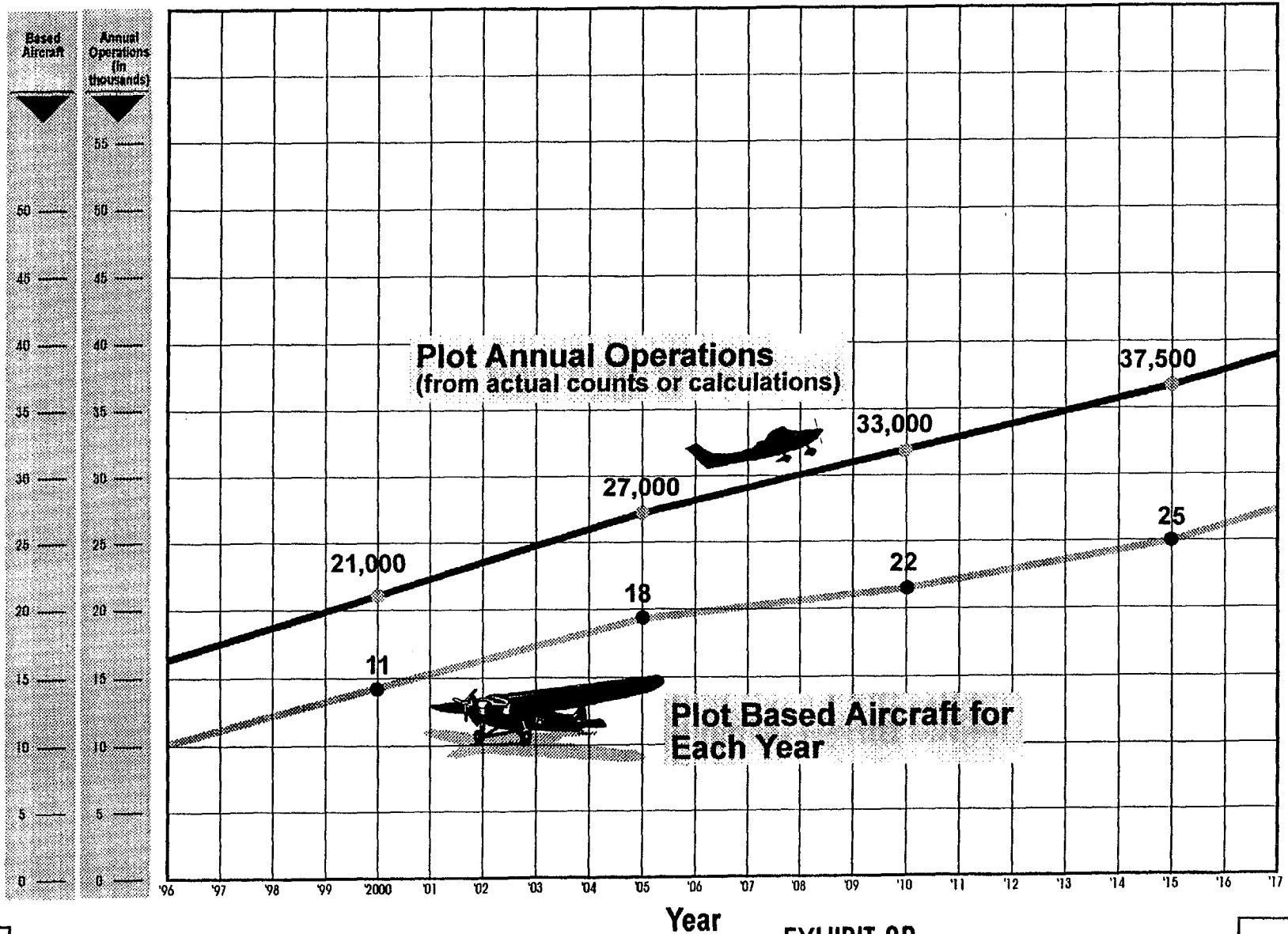
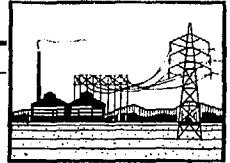
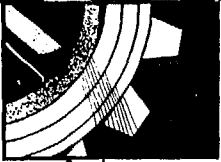


EXHIBIT 8B
CONTINUOUS PLANNING GRAPH

St. Johns Industrial Air Park Airport Master Plan