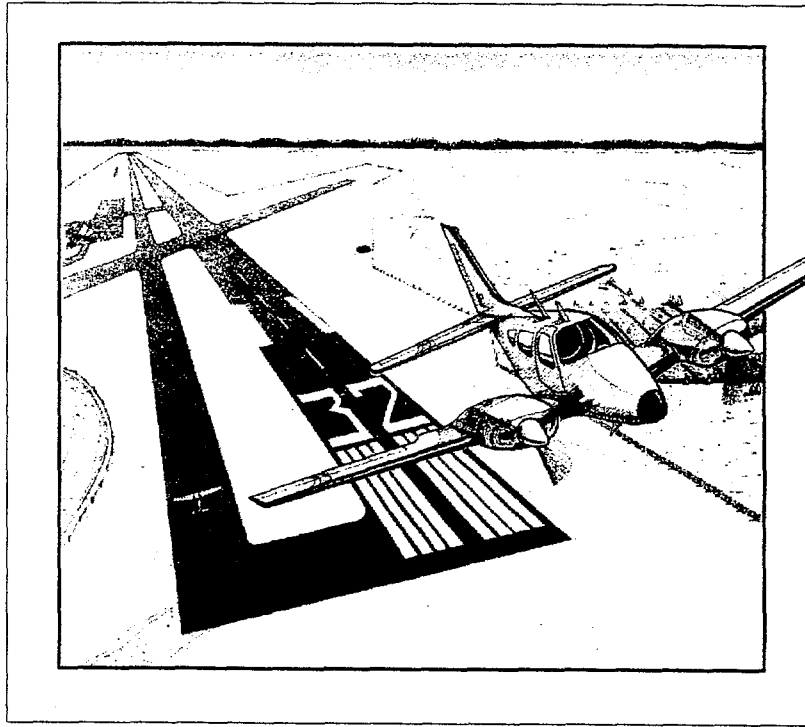


**Chapter One**  
**INTRODUCTION**

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## Chapter One

# INTRODUCTION

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The growth and economic development of the United States has been directly related to the advancement and expansion of the transportation industry. This has included shipping, the railroads, the automobile, and most recently, aviation. Since December 17, 1903, aeronautics has evolved from the primitive Wright Brothers' flying machine to jet aircraft weighing three-quarters of a million pounds. To accommodate the rapid increase in the quantity, size and capabilities of aircraft, airport facility design and operation must keep pace with the fixed and operational needs of today's aircraft.

The planning, operation and development of public airports have become highly technical and very complex subjects. Consequently, a continuous planning effort must be made to anticipate the increasing demands being placed on the air transportation system. Development programs must be considered

in relation to the total social, economic, and political environments in which airports exist. Focusing solely on the aviation issues will result in a plan that is narrow in scope, rigid in design and difficult to implement, and may tend to isolate the airport from the community it is intended to serve.

Other industry specific factors must be considered as well. The rapidly changing technology, and the current and future direction of aviation taxes, and airport improvement programs are only a few of the factors that will have short- and long-term effects on all airports. It was the principle purpose of this study to bring all of these elements together and analyze their immediate impacts and long-term implications on St. Johns Industrial Air Park. The proper analysis of these factors resulted in a Master Plan document that will

serve as a valuable tool throughout the planning period.

The St. Johns Industrial Air Park Master Plan was undertaken by the City of St. Johns for the purpose of determining the existing and future role of the airport, and to provide the city with direction in the future development of an important community asset. This study was financed, in part, by the Federal Aviation Administration (FAA), the Arizona Department of Transportation (ADOT) - Aeronautics Division, and the City of St. Johns.

This Master Plan is evidence that the City of St. Johns recognizes the importance of aviation in community planning and the associated challenges inherent in providing for future aviation needs. The cost of maintaining an airport is an investment that can yield impressive benefits for the community. With a sound and realistic Master Plan, St. Johns Industrial Air Park will increase its potential as both an economic asset and a source of pride to the residents of the community.

### AVIATION CLASSIFICATIONS

The FAA currently defines three broad categories of aviation activity: Air Carrier, General Aviation, and Military.

**Air Carriers** are those airlines that provide scheduled carriage of passengers or freight under certificates issued by the Department of Transportation. Air carriers may be divided into two major groupings:

*Certificated Route Air Carrier:* An air carrier holding a certificate of public convenience and necessity issued by the federal government to conduct scheduled

services over specified routes. Certain non-scheduled or charter operations may also be conducted by these carriers, all passenger carriers, and combination carriers operating under Federal Aviation Regulation (FAR) Part 121 Certificates.

*Commuter Operators:* Operations of multi-engine airplanes with a maximum seating (excluding pilot) of 19 passengers and having a maximum payload capacity of 6,000 pounds. These carriers operate under FAR Part 135 Certificates.

Air Carrier/Commuter activity is typically the most visible form of flight because it is most common to the experience of the average citizen. Federal deregulation of the airline industry in 1978 has resulted in an intense diversification in the carriers serving the marketplace, as well as the stratification of carriers into global, national and regional service levels.

**General Aviation** includes every type of civil flying other than the air carriers. Consequently, this segment is characterized by a relatively low profile. General Aviation falls into four major categories:

*Business:* The use of an aircraft for executive or business transportation. This category consists of aircraft used by an organization and operated by professional pilots to transport its employees and property (not for compensation of hire); and aircraft used by an individual for transportation required for business.

*Commercial:* The use of an aircraft for commercial purposes (other than the commuter and air carrier), including: air taxi, aerial application, special industrial

usage, aerial surveys, advertising, aerial photography, and emergency medical transportation.

*Instructional:* The use of an aircraft for flight training under the supervision of an instructor.

*Personal:* The use of an aircraft for a variety of personal reasons.

General Aviation is the largest and the most significant element of the national air transportation system. General Aviation aircraft account for 98 percent of all aircraft in use today. Certificated airlines serve fewer than 700 airports in the country, while there are over 16,000 general aviation airports in the country.

It is by no coincidence that general aviation has contributed greatly to the socioeconomic phenomenon that has seen American industry move from the larger metropolitan areas to smaller communities. Smaller communities can offer industry lower taxes and labor costs, closer access to raw materials and natural resources, and a superior working environment. General Aviation provides the time saving link for corporate travel that has made the shift to communities such as St. Johns extremely attractive.

**Military Aviation** includes all flying in support of the national defense and conducted by military aircraft. Military activity usually plays a small role in the operation of civilian airports, but often has a disproportionately high impact on airspace utilization.

## OBJECTIVES

The Master Plan Study has produced a flexible plan for future airport development that will meet the aviation demands of the St. Johns area. The primary objective was to produce a long-term development program that will yield a safe, efficient, economical, and environmentally acceptable air transportation facility.

The plan is based upon projected aviation demands, which established a schedule of construction priorities for the 20-year planning period. It details the analyses and rationale upon which the Master Plan elements were based. Financial analyses detail the feasibility of the recommended plan.

The Master Plan examines the air transportation needs of the community, and the area that St. Johns Industrial Air Park can be expected to serve. The completed Master Plan provides a step-by-step, outline of the required developments, and identifies for officials the milestones for airport needs to aid in its future budgeting and scheduling.

## PROCESS

Because the airport belongs to the public and is intended to serve the entire community, a comprehensive analysis of the airport and the area was made. Evaluation of both existing and forecast conditions served as the basis from which the recommended airport development, financial and land use compatibility plans were developed. As part of the objectives of this study, the Master Plan evaluated the following elements.

*Inventory of Existing Conditions* -  
Assemble and organize information and

data relevant to St. Johns Industrial Air Park and its surrounding area.

*Forecasts* - Develop estimates of future air traffic activity, by quantity and type.

*Facility Requirements* - Determine and prepare a list of facility requirements needed to meet projected demands for the airport for existing, short, intermediate, and long term time frames.

*Airport Alternatives* - Develop and evaluate various airport development alternatives.

*Airport Layout Plan* - Refine the recommended airport development concept into a plan for the ultimate development of the airport.

*Financial Plan* - Prepare and analyze a capital improvement program to carry out the recommended development plans. Establish development priorities, schedule proposed development, and estimate development costs. Examine means of financing future development.

impact on the surrounding community? Will future development be compatible with long range land use plans? All indications are that St. Johns will be affected by the growing demand for aviation facilities being experienced by cities and metropolitan areas throughout Arizona.

One of the most important elements of the planning process, is the direct involvement of all parties who may be affected by any recommendations that result from the study effort. This involvement was channeled through a Planning Advisory Committee to review the work of the study team, and through a series of public information meetings at strategic points during the course of the study. With the assistance of the Planning Advisory Committee, the Master Plan for St. Johns Industrial Air Park reflects the necessary future development to meet the growing aviation and industrial demands in the community.

## REQUIREMENTS

Creating a healthy airport environment is a challenge that the airport, its users, the community, and all citizens must undertake jointly. The planning process represents an important step in the direction of accepting that challenge.

Several questions face St. Johns Industrial Air Park in the next twenty years. What impact will aviation growth in Arizona have on St. Johns? Will development of new facilities and improvements to existing facilities be accomplished with minimum