



Introduction

CHAPTER 0 -

AIRPORT MASTER PLAN INTRODUCTION

STUDY INTRODUCTION

The Tucson Airport Authority (TAA) initiated an update to the Airport Master Plan (Master Plan or Plan) to assess the facilities and service needs of Ryan Airfield (RYN or Airport) throughout the next 20 years (planning period). The Plan serves as a roadmap for bringing future projects, people, and funding together in a coordinated manner and provides strategic direction for future airport development in the form of a 20-year capital development plan that considers investment of resources.

The Plan is conducted in accordance with Federal Aviation Administration (FAA) guidance, as prescribed by grant assurances and mandated by regulatory standards. Conformance with FAA standards enables the TAA to apply for federal and state funding for the support of maintenance, expansion, and upgrade of airport facilities as demand warrants and when funding is available.

AIRPORT BACKGROUND

RYN was initially developed for the Army Air Corps as a pilot training base during World War II in 1942. Two years after its development and at the end of the war in 1944, the pilot school was closed, and the Federal Government transferred ownership to the State of Arizona in 1948. In 1951 the State executed a lease agreement with the Tucson Airport Authority (TAA) to manage the airfield but retained ownership of the land. The State transferred both ownership of the land and the airfield lease with TAA to the City of Tucson in 1960.

The Airport is located 14 miles southwest of Tucson at the intersection of State Route 86 and West Valencia Road. RYN comprises a total of 1,804 acres at 2,417 feet above mean sea level (MSL). RYN has an Air Traffic Control Tower and supports businesses and the residents of these areas:

- ▶ City of Tucson
- ▶ Green Valley
- ▶ Town of Sahuarita
- ▶ Tohono O'odham Native American Reservation
- ▶ Pascua Yaqui Native American Reservation
- ▶ Pima County

RYN serves as a GA reliever to Tucson International Airport (TUS) and is one of five GA airports in Pima County.

WHAT IS AN AIRPORT MASTER PLAN?

An airport master plan is a comprehensive study of an airport that focuses on short-, medium-, and long-term development plans to meet future aviation demand. The vitality of air transportation as a community industry makes it important that requirements for new, improved, or expanded airport facilities be anticipated in planning. The scope of an airport master plan focuses on identifying the development and facilities needed to support an FAA-approved forecast.

Many elements of airport operations and management are outside of the scope of this Plan, such as staff organization, marketing, and general repair and maintenance. This Plan focuses on facilities that serve passengers, aircraft owners, pilots, and airport tenants, and provides guidance on how the facilities need to be updated and changed to maintain a high level of service to the flying public into the future.

What the Plan “is”

- ▶ A flexible long-term development plan for the Airport over the next 20 years
- ▶ A detailed and comprehensive record of the data analysis of existing conditions and future trends
- ▶ A Plan with a focus on long-term facility development and land use
- ▶ A document assembled through extensive community outreach

What the Plan “is not”

- ▶ An engineering level document
- ▶ A rigid “blueprint” for future development
- ▶ A program to move the Airport to another location
- ▶ A business, strategic, or marketing plan
- ▶ An environmental permitting document

The Plan is one of several documents that the TAA produces to guide airport operations. The Plan development considers the other documents already in place and refers to these documents as appropriate.

MASTER PLAN ELEMENTS

The Plan is organized into six core elements that translate into comprehensive chapters as the plan is developed. Each element is a building block that will result in the final Plan document and compliance with FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*. The purpose behind each element is described below.

- ▶ **Inventory:** This element answers the question “What do we have?” This element describes facilities and levels of activity currently existing at the Airport, and how they have changed over time. The inventory is the foundation of subsequent Plan elements.



- ▶ **Aviation Forecasts:** This element answers the question “How much demand do we expect?” Understanding future demand is a critical part in the decision-making process that occurs during Plan development and during the execution of the ensuing capital improvement plan. The forecasts look at the volume of passengers and cargo, the number of based aircraft, and the movements of aircraft to describe how the use of the Airport will change over time. Aviation forecasts are pivotal in justifying future improvements and helping the FAA determine funding priority. For these reasons, the FAA must approve the aviation forecasts. This is one of only two Plan elements that the FAA formally approves.
- ▶ **Facility Requirements and Demand / Capacity Analysis:** This element answers the question “Are our existing facilities sufficient to meet future demand?” This element can be thought of as a gap analysis between the facilities that the Airport has (inventory) and the facilities it will need (based on the forecasts). This element will yield recommendations about which facilities need improvement, expansion, replacement, and removal and will provide an idea of the scale of facility changes needed to meet future demand. This element will also cover the potential for Airport modernization to address evolving technologies and preferences.
- ▶ **Airport Alternatives and Environmental Considerations:** This element answers the question “How will we meet future demand?” This element builds on the recommendations in the Facility Requirements and Demand / Capacity Analysis element and assesses a variety of alternatives to meet future needs. Alternatives are evaluated based on cost, environmental impact, construction feasibility, and operational integration with the existing airfield and facilities. A preferred alternative for each facility type is recommended based on the analysis and is carried forward in the Plan.
- ▶ **Financial Feasibility Analysis and Facilities Implementation Plan:** This element answers the following questions: (1) When do we need financially to fulfill alternatives; (2) How will we pay for the improvements selected in the alternatives; and (3) What is the affordability and the impact of potential rates and charges for users of the Airport? The preferred alternatives are plotted on a timeline of when they are expected to be needed, based on the forecasts. A financial plan is prepared that addresses up-front capital costs and ongoing operations. Maintenance costs are identified, and the financial impact and feasibility are evaluated. The outcome of this element is a phased capital improvement plan that will guide TAA through the facility development process and aid the Airport during the Airport Improvement Program process with FAA and Arizona Department of Transportation - Aeronautics Division (ADOT).
- ▶ **Airport Layout Plan Set:** This element is the graphical depiction of the existing airfield and preferred improvements identified in the Plan. This document shows how the airfield will look once the improvements have occurred and illustrates the conceptual ultimate plan. This is the second part of the Plan that must be formally approved by the FAA. Only improvement projects depicted on an approved Airport Layout Plan are eligible for FAA funding

PLAN PARTICIPATION

As a strategic visioning process, the Plan is structured to be responsive to airport needs while being inclusive of broader community considerations. This approach builds stakeholder support for Plan recommendations and facilitates acceptance. The Plan’s public involvement program is targeted to engage key personnel that are representative of the Airport and community (elected officials, community leaders, on- and off-airport stakeholders), address comments, and actively encourage public participation.

AGENCY COORDINATION

The FAA Phoenix Airports District Office (ADO) is the primary external reviewing agency for this Plan. A representative from the Phoenix ADO received Plan deliverables and attended Stakeholder Working Group (SWG), Technical Advisory Committee (TAC), and public meetings.

ADOT is also a key stakeholder in the Plan. The Consultant and the Airport kept ADOT updated on Plan progress through routine communication, including scheduled teleconferences, and transmittal of Plan chapters.

STAKEHOLDER WORKING GROUP (SWG)

The SWG consists of aeronautical and non-aeronautical constituents selected to provide their individual perspectives at key project milestones in the Plan. The SWG served in an advisory capacity to collectively review Plan recommendations and provide feedback to the Airport and Consultant. SWG input guided Plan developments. The SWG consisted of invited members representing the following interests:

- ▶ City of Tucson
- ▶ Federal Aviation Administration (FAA)
- ▶ Marana Regional Airport
- ▶ Pascua Yaqui Native American Reservation
- ▶ Pima Association of Governments
- ▶ Pima Community College
- ▶ Pima County
- ▶ Sun Corridor Inc.
- ▶ Tohono O'odham Native American Reservation
- ▶ Tucson Airport Authority (TAA)
- ▶ Tucson Metro Chamber
- ▶ University of Arizona

TECHNICAL ADVISORY COMMITTEE (TAC)

A TAC consisting of airport stakeholders provides a technical perspective on key Plan elements. Similar to the SWG, the TAC provided their individual perspectives at key milestones. The TAC provided more detailed feedback on operational Plan elements due to the members' familiarity with the Airport. The TAC consisted of invited members representing the following interests:

- ▶ Arizona Department of Transportation – Aeronautics Division (ADOT)
- ▶ Aircraft Owners and Pilots Association (AOPA)
- ▶ BBS Investments
- ▶ Federal Aviation Administration (FAA)



- ▶ SERCO Air Traffic
- ▶ Tucson Airport Authority (TAA)
- ▶ Velocity Air

PUBLIC OUTREACH

A public involvement process informs, educates, and solicits feedback from the public regarding the Plan process, major findings, and conclusions. Conducting public outreach meetings in an open house format provided the public the opportunity to interact with the Airport and Consultant, ask questions, communicate concerns, and provide feedback.

Public open house meetings occurred at these Plan milestones:

- ▶ Aviation Demand Forecasts, Facility Requirements, and Airport Development Alternatives

As part of the public outreach methods, online surveys were conducted to provide the Airport and Consultant with additional feedback to support the cultivation of the Plan and encourage community participation/input.

MASTER PLAN GOALS & OBJECTIVES

The mission of this Master Plan Update was to expand upon the past successes of the Airport and to make positive plans for the future resulting in a 20-year Capital Improvement Program. On October 30 and 31, 2018, the Master Plan consulting team conducted workshops to gather a comprehensive understanding of development issues the Airport has been experiencing. This understanding led to the development of a list of improvement goals that were used in the development and analysis of the Master Plan's improvement alternatives. The developed goals of the Master Plan include recommendations that:

- ▶ Maximize the safety and efficiency of aircraft operational areas and achieve compliance with FAA guidance.
- ▶ Recognize airfield deficiencies and needed improvements to address the FAA Hotspot, direct runway access from aircraft apron areas, and high energy intersections.
- ▶ Consider the significant amounts of airport property that can be developed for aeronautical and non-aeronautical uses, maximizing revenue generation.
- ▶ Consider the layout of the airfield based upon the demands related to existing and all potential future aircraft types that could regularly operate at the Airport. This includes consideration of all safety and object clearing standards, and current FAA configuration guidance.
- ▶ Consider comprehensive improvements for airside and landside facilities (e.g. ATCT, ARFF, fuel storage and delivery, FBO, instrument approaches, aircraft parking, storage hangars, maintenance hangars, etc.).
- ▶ Continue the work with the surrounding communities to promote land use compatibility initiatives that minimize the potential for negative impacts, while not being restrictive of potential airport improvements and increased activity.

- ▶ Promote a Capital Improvement Plan that provides financial sustainability, anticipates reasonable levels of expense and income, and balances facility improvements and infrastructure recommendations with revenues and funding sources.
- ▶ Recognize environmental development constraints and appropriately consider the constraints in improvement recommendations.
- ▶ Identify on airport utilities infrastructure and drainage improvements.

