

CHAPTER 1

Background and Airport Setting

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In 2017, the Naples Airport Authority (NAA) began the process to develop a new master plan for the Naples Airport (APF). The overall goal was to prepare a comprehensive planning document meeting the needs of airport management as well as the requirements of the Federal Aviation Administration (FAA) and Florida Department of Transportation (FDOT). As such this study was conducted in accordance with FAA Advisory Circular (AC) 150/5070-6B *Airport Master Plans* and FDOT's 2019 *Guidebook for Airport Master Planning*. It is also consistent with Chapter 14-60 of the Florida Administrative Code and other applicable FAA or FDOT guidance, including FAA AC 150/5300-13A, Change 1, *Airport Design*.

1.1 Need for a New Master Plan

The last airport master plan for the APF was completed in November 1997. At that time, the airport was in a first generation growth cycle and land was readily available at the airport to support the development of aviation related facilities. The existing facilities at the airport were largely concentrated on the east side of the airfield with a number of hangar buildings, aircraft parking aprons, and the General Aviation Terminal (as shown in the 1995 aerial image), and the south side with the Commercial Airline Terminal facilities. Since completion of the last master plan (as reflected on the 2016 aerial image), significant development has occurred in both the north and south portions of the airport and the east side of the airfield is nearly built out, leaving only the west side available for future development. To date, utilization of the west side has been limited due to the setbacks required to protect the electronic signal transmissions of the FAA's Terminal VHF omnidirectional range (TVOR) located on this side of the airfield. With significant areas of the airfield developed, the airport is now in a second generational growth phase, where developable land is at a premium and each decision requires careful consideration for the highest and best use, as well as the potential for redevelopment.

Since the last master plan, overall aircraft activity at the airport has fluctuated. Over the past two decades, annual aircraft operations have had three significant peaks, with the highest level recorded in 2005. The lowest level of aircraft activity was in 2010, which highlighted the general aviation industry declines that resulted from the Great Recession of 2008. Since that time, the aircraft operations have increased annually for all but one year and corporate jet activity levels are among the highest in the nation. While the 1997 Airport Master Plan Update was being developed, passenger enplanements were just under 70,000 in 1994. Afterwards, the enplanement levels varied up and down until all regularly scheduled service ended in 2008. With the exception of about 1,500 passenger enplanements between 2016 and 2017, the airport does not currently support any regularly scheduled commercial passenger service.



1995 Aerial Image



2016 Aerial Image

Transition from 1st to 2nd Generational Growth

These fluctuations demonstrate the continuously dynamic landscape of the aviation industry. Such changes and trends need to be understood to enable the airport to support its tenants and customers and to provide an even greater role in the economic and business growth of the surrounding community. A new airport master plan will also enable the airport to ensure it remains proactive in its efforts to address newer airport design standards and airport land use guidance that have also occurred since 1997.

1.2 Study Goals and Objectives

Airports face many challenges in their day to day operation. At a minimum they must maintain a safe facility, comply with a myriad of regulations, manage numerous leaseholds, preserve compatibility with the community, be good stewards of the environment, encourage economic growth, and compete for limited funds, all while providing essential community services with a positive public image. The master plan process serves as a tool for an airport to address these issues in an organized approach. The overall objective of a new master plan is to accurately assess existing airport conditions, project aviation activity, define future needs, develop cost effective options, and provide a realistic development program. In doing so, the 20-year plan also needs to be flexible by including appropriate activity triggers or benchmarks, as well as potential scenarios to respond to the ever changing aviation industry. Such flexibility provides options for airport management to react to fluctuating market conditions, shifts in development priorities, and/or take advantage of unforeseen opportunities.

In short, the master plan will serve as a guide to achieve realistic airport development in line with both airport and community objectives. Since the previous 1997 study is out of date and no longer reflects the current conditions at the airport or of the community, this master plan will be a “from scratch” effort as defined by FDOT in their guidance. The primary goal will be to create a 20-year development program to maintain a safe, efficient, economical, and environmentally acceptable airport facility for the City of Naples and surrounding Collier County communities. By achieving

this goal, the document will provide the guidance to satisfy the aviation demand in a financially feasible and responsible manner, while at the same time addressing the aviation, environmental, and socioeconomic issues of the community. In support of this goal, the following objectives were achieved:

- Ensure orderly development: consider short-term needs and long-term plans;
- Ensure compliance with latest FAA/FDOT design criteria, grant assurances, and policies;
- Maximize level of service to airport customers and operators while maintaining low operating costs;
- Provide flexibility to allow the airport to respond to changes in the aviation industry;
- Meet FAA Airport Geographic Information System (AGIS) mandate;
- Create a new Airport Layout Plan (ALP) drawing set;
- Incorporate environmental elements such as noise and stormwater into the analyses;
- Integrate sustainability (including solar feasibility) and resiliency concepts to ensure long term viability;
- Refine land and commercial real estate development strategies;
- Diversify airport revenue streams and increase regional economic impact;
- Align with the airport’s strategic plan; and
- Serve the air transportation needs of the community through the operation, development, and maintenance of an airport with a commitment to the same community’s quality of life.

While some of these objectives fulfill the broader goals of a comprehensive planning document, others are much more unique to the airfield’s setting and surrounding environment. For example, it was critical to include a resiliency planning component as a subset of the sustainability elements given the relatively low elevation of airfield facilities coupled with airport’s proximity to both the Gordon River and Rock Creek. In fact, this became a significant concern in 2017 when 10 to 15 foot storm surge was expected for Naples during Hurricane Irma. While the airport did not experience any significant flooding as a result of Hurricane Irma, the effects of this storm on the local area, as well as the entire Florida peninsula, also highlighted the need to incorporate resiliency elements into future plans. For development, the 2012 revisions to Federal Emergency Management Agency (FEMA) floodplain elevations create substantial impacts to any new project at the airport.

1.3 Planning Process

This master plan provides a systematic outline of the development actions required to maintain and further develop airfield and landside facilities. This process provides those officials responsible for the scheduling, budgeting, and ultimate funding of airport improvement projects with an advance notice of the airport’s needs. By phasing airport improvements, this development can be conducted in an orderly and timely fashion.

Throughout this process, reviews were conducted to insure input was received from key stakeholders, including the NAA, Noise Compatibility Committee, City of Naples staff, Collier County staff, airport traffic control management, FAA, FDOT, airport tenants, airport customers, and the public. The individual steps in the master plan process are built upon information and decisions made during previous steps. Taken as a whole they address the objectives identified above.



Airport Master Planning Process

1.4 Airport Setting

The Airport is located in Collier County on Florida’s Gulf Coast. Approximately 45 miles south of Fort Myers and just 2 miles from the Gulf of Mexico, APF is accessible from the north and east via Interstate 75 and from the south by US-41 (Tamiami Trail).

1.4.1 History

Aviation existed in and around Naples before a true airport had been constructed. In the early days, local golf courses and the beach were used as landing strips. In 1942, the Naples Army Airfield was established by the U.S. Army Air Force as a base for training bomber crews and fighter pilots.



Collier County, Florida (highlighted)



Naples Airport – 1952

The army de-activated the Naples Army Airfield in 1945; turning the facilities over to the War Assets Administration. The airport was returned to the City of Naples and Collier County in 1947 who operated it jointly as a public facility until the county sold its interests in 1958. In 1969 the NAA was formed and since the 1950s, the airport has served the City of Naples and surrounding communities as a center for both aviation and non-aviation businesses. In 1999, the airport became the first in the nation to successfully ban Stage 1 aircraft. The NAA wrote aviation history again in 2001 when they became the first airport in the country to complete a *FAA Part 161 - Notice and Approval of Airport Noise and Access Restrictions* study, banning Stage 2 aircraft.

More recently, the airport has continued to progress with the community and provides a vital role in the area's evolution as a high end destination of the Paradise Coast. The NAA continues to work on balancing the air transportation needs with the quality of life for the community, which was the foundation of the recently developed 2017-2021 Strategic Plan for the airport.

1.4.2 System Planning Roles

Airport planning occurs at local, statewide, and national levels, each with its own particular emphasis. Airport master plans provide planning at the local level, while statewide matters are addressed by FDOT and national issues by the FAA.

Florida Aviation System Plan

The Florida Aviation System Plan (FASP) facilitates FDOT's strategic planning for the state's aviation system. This plan is updated on a regular basis through the Continuing Florida Aviation Systems Planning Process (CFASPP) and divides the state's public-use airports into nine regions. APF is one of 14 public airports in the Southwest Florida Region. This CFASPP region is home to some of the state's most popular destinations in the winter with white, sugar sand beaches; numerous golf courses, four major league baseball spring training facilities, museums, and major tourist destinations. There are also a number of universities, research centers, and medical facilities, not to mention every facet of business. The state system plan designates facilities as either commercial or general aviation airports and then subcategorizes them based on the role they serve. The FASP identifies APF as one of Florida's general aviation airports.

National Plan of Integrated Airport Systems

A National Plan of Integrated Airport Systems (NPIAS) is presented every two years to Congress by the Secretary of Transportation for the development of public-use airports which are significant to the national air transportation system. Specifically, this plan documents the federal aid required

for infrastructure development at the nation's commercial service, reliever (high capacity general aviation airports), and other select general aviation airports. The categorization of these needs guides FAA management in their administration of the Airport Improvement Program.

The most recent NPIAS (2019-2023) groups airports into two major categories: primary (commercial service) and non-primary (primarily general aviation). General aviation airports under the non-primary category are then subdivided into either national, regional, local, basic, or unclassified facilities depending on activity measures (number/type of based aircraft and operations). These categories do not change any eligibility for federal funding; rather they are designed to further assist the FAA in determining the appropriate types of development. In the 2019-2023 NPIAS, APF is designated as a national general aviation facility with \$8.8 million in eligible improvement requested for federal funding over the system's five-year planning period.

1.4.3 Climate and Weather Data

Collier County is located along the Gulf Coast of Southwest Florida. As with much of southern Florida, the surrounding land is relatively flat and the airfield is located just under two miles inland from the Gulf of Mexico. These characteristics, coupled with prevailing sea breezes and maritime location do significantly influence climate and prevailing winds in the region. Although the airport is located in the warmer southeastern portion of the nation, annual temperatures are considered moderate due to the influence of the sea breeze.

Temperatures during the summer months rarely reach 100 degrees Fahrenheit; with an average maximum temperature of 91 degrees Fahrenheit in August. The average minimum winter temperature is 56 degrees Fahrenheit in January. Rainfall in this area occurs during all seasons; however, it is more abundant during the summer when daily showers are common. Collier County has averaged approximately 44 inches of rainfall on an annual basis over the last 10 years

Historic wind and weather conditions are key considerations for an airport's runway system since aircraft takeoff and land into the wind. As recommended by FAA AC 150/5300-13A, Change 1, ten consecutive years of wind data was collected for APF. This information will be analyzed and used to develop a number of airfield facility requirements in this study.

1.5 Local Economic Impact

In March 2019, FDOT completed an update of the Florida Statewide Aviation Economic Impact Study. The report provides the estimated annual impact created by the 116 public-use airports that participated in the study. The study documents the economic benefits generated by the various on-airport and off-airport aviation related activities. For each airport included in the study, the economic benefits are expressed as direct (on-airport), indirect (off-airport), and induced (multiplier) impacts. These measures are then expressed in terms of total annual employment, payroll (labor income), and activity (business sales). The 2019 study diagram below documents the annual contribution that APF creates for the City Naples and surrounding Collier County economy.



APF's Impact on City of Naples and surrounding Collier County Economy

SOURCE: Florida Statewide Aviation Economic Impact Study, FDOT 2019.

It is important to note that the airport does not receive any local tax subsidies for operations or capital improvements. All of the funds utilized for the operation, maintenance, and improvement of the facility are generated by the airport's activities, which includes leveraging both state and federal grants for various improvement projects. There are also a number of community services supported by the airport that cannot be easily quantified. Examples include providing a location for the Collier County Sheriff's Aviation Unit, Collier Mosquito Control District (aviation and ground based equipment), Collier County Emergency Medical Services MedFlight (helicopter medevac), City of Naples Fire-Rescue Department Station #3, Civil Air Patrol, Experimental Aircraft Association, Naples Pilots Association, Naples Flying Club, and rental car services. There is also the Naples Museum of Military History located in the commercial service terminal building that is free to the public, the public Naples Airport Observation Deck, and part of the Gordon River Greenway on airport property. And finally, the City of Naples Recycle Transfer Facility, Naples Recycling Drop-Off Center (Collier County), and the Humane Society Naples are also located on airport property.