

EXECUTIVE SUMMARY

INTRODUCTION



The purpose of an airport Master Plan is to provide a blueprint for long-term airport development. Consequently, it is important to have a consistent and well thought out long-term vision for airport growth that adequately addresses the most important current and expected future issues.

The Master Plan process consisted of six steps, including:

- Establishing optimal outcomes
- Conducting an inventory of existing facilities
- Forecasting aviation activity
- Determining the facility requirements needed to meet future forecast demand
- Developing airport development concepts
- Preparing an implementation plan

This executive summary provides an overview of the Master Plan process and presents the recommended 20-year development plan for the airport.

OPTIMAL OUTCOMES



To guide the master plan process, a list of optimal outcomes was selected with the assistance of the Fayetteville Airport Commission and the Fayetteville Airport Director. These criteria provided the basis for evaluation to assess the various alternatives and were used as general guidelines for development of the FAY Master Plan. In order of importance, the selected criteria include:

- Financial performance
- Airport development
- Level of activity



INVENTORY



An airport inventory was undertaken to determine the type, number, and condition of existing facilities and to document changes that had occurred since the previous Master Plan.

During the inventory process, each major functional element of the airport was visited, plan documents were obtained, pertinent socioeconomic data was gathered, and interviews were conducted with airport staff and tenants. Previous studies were also reviewed.

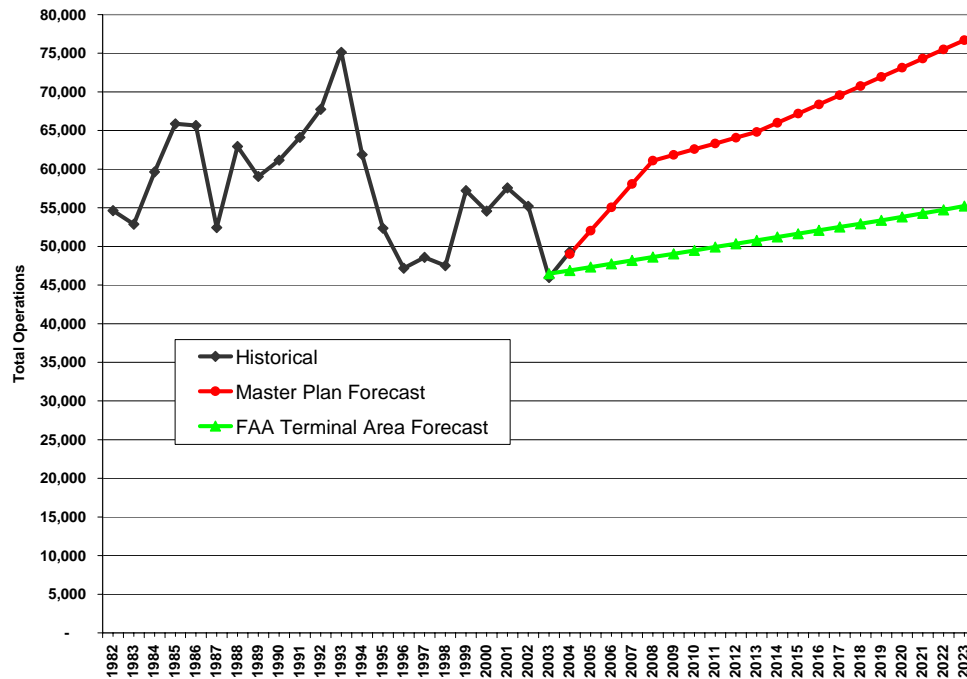
AVIATION FORECASTS

AIRCRAFT OPERATIONS

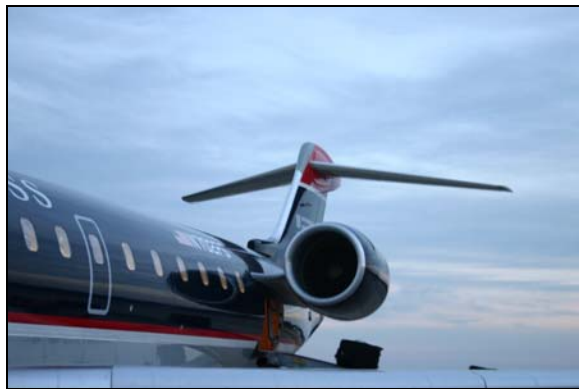


Total aircraft operations at FAY are expected to increase at about 2.6 percent per year over the forecast period, see **Figure 1**. Passenger carrier operations are expected to grow slowly over the forecast period but are expected to carry an increasing number of passengers in and out of FAY due to anticipated increases in load factor and average aircraft size. General aviation operations are expected to account for the majority of the operations growth and will continue to account for more than a third of all aircraft operations at FAY.

Figure 1: Total Operations



FLEET MIX FORECAST



Currently, all air service at FAY is provided by regional carriers, and this is projected to remain the case throughout the forecast period.¹ The average aircraft size, however, is expected to increase slightly over the next 20 years, from about 47 seats per aircraft in 2003 to about 58 seats per aircraft in 2023. This increase is expected to come primarily

¹ This does not include the occasional charter flight at FAY which may use larger aircraft, such as B737s.

from the gradual introduction of larger aircraft to FAY coupled with the anticipated phasing out of smaller turboprop aircraft.

PASSENGER ENPLANEMENTS



A fare comparison was made between FAY and RDU. Once adjusted for inflation, fares at FAY have remained fairly constant over the last 20 years, while dropping slightly in recent years. Therefore, it was assumed that

fares at FAY would remain at or near their 2003 levels over the forecast period. Fares at RDU have experienced more fluctuation and have dropped off considerably in recent years and it was, therefore, assumed that fares at RDU would decrease slightly over the forecast period consistent with the FAA’s most recent fare projections.

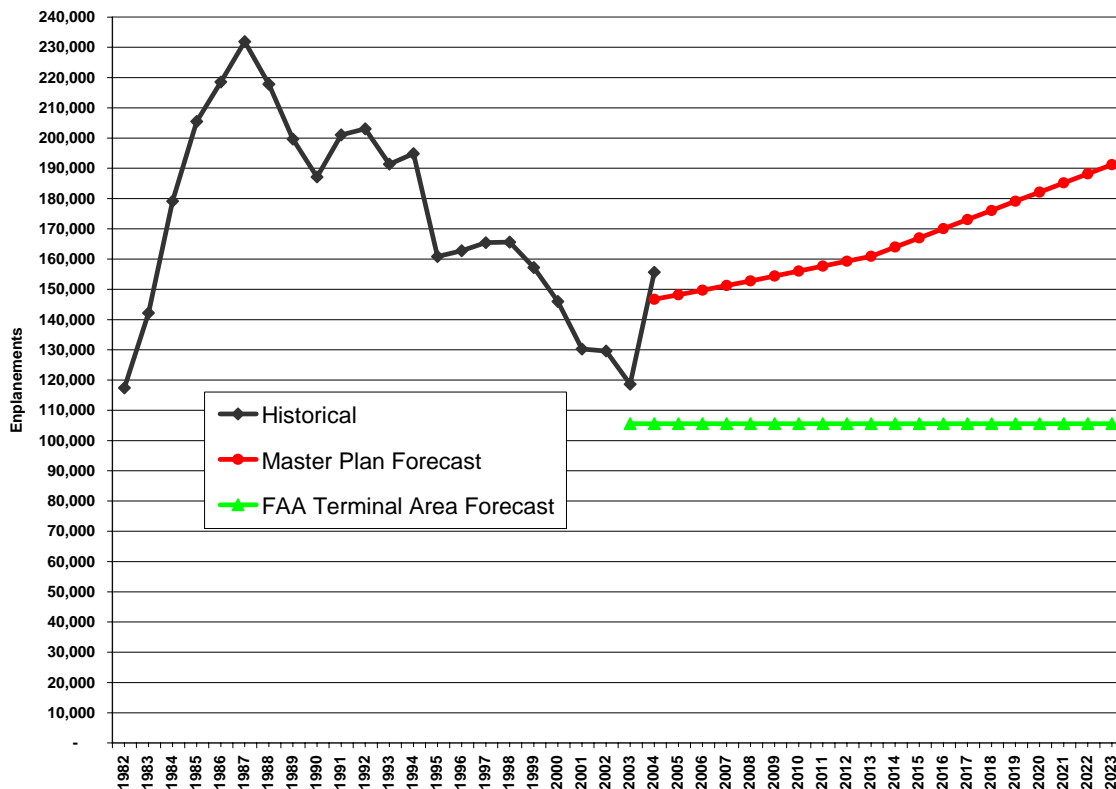
Finally, FAY served two nonstop markets in 2003, and is projected to increase to three by 2023. This increase in nonstop markets is expected to take place in response to conditions at ATL. If congestion at ATL worsens as projected, the forecast assumes that it will trigger Delta to operate more feeder flights through other hub airports.



Over the forecast period, the number of daily flights operated by US Airways is expected to remain the same, and the number of daily flights operated by Delta is expected to increase by two flights per day.

A summary of enplanements is provided in **Figure 2**.

Figure 2: Enplanements



FACILITY REQUIREMENTS

Airfield and NAVAID

Runway Approaches



It is recommended that Runway 22 be upgraded to a precision approach when differential GPS technology becomes available.

Rotating Beacon



Currently, pilot's have difficulty acquiring the airport visually since the 36-inch rotating beacon is surrounded by tall trees. Due to

the number of trees that would need to be removed, which the airport is opposed to, a new, taller beacon is recommended to improve pilot visibility.

VOR/DME



The VOR/DME is impacting development at this time. Consequently, it is recommended that the possibility of decommissioning or moving the existing VOR/DME be explored. The purpose of this move would be to reclaim the restricted and very substantial 1,000-foot radius surrounding the VOR/DME for current and future airport development.

Terminal Building



The terminal building houses a wide range of functions and spaces. These functions and spaces are divided into five main categories: airline functions, concessions space, non-secure public area, non-public

area, and secure public area. FAY is forecast to have sufficient terminal space through the planning period. In addition, the airport is currently renovating the terminal building. However, some reallocation of space will be necessary to provide the minimum space required for a future third airline serving FAY.

Auto Parking



Based on the current and future expected level of activity, long and short term public parking has excess capacity throughout the forecast period. However, rental car parking will need to be expanded. An additional 40 spaces are projected to be needed as early as 2008 and 48 more spaces will be needed by 2023. Further, GA parking at the FBO is currently deficient and will require 20 additional spaces by the end of the planning period.

Air Cargo



An analysis of future cargo requirements determined that no significant air cargo activity is foreseen at FAY due to small cargo carrying capacity of regional jets (RJs) and the current practice of trucking all cargo to Raleigh. Both UPS and FedEx operate sorting facilities near the airport (not on-airport) but rely on trucks to move their cargo in and out of the Fayetteville area. Given the current and future level of cargo activity, it was recommended that an alternate use be found for the existing cargo facility.

General Aviation

GA Terminal



The size of the current GA terminal was calculated by assuming 49.0 square feet of

building space per peak hour passengers. Based on this planning factor, the FBO's terminal will require a modest 375-foot expansion by the end of the planning period in 2023.

T-Hangars



T-hangar requirements are projected to reach 36 units by 2013, and remain at that level through 2023, thus requiring an additional 12-unit T-hangar. A 14-unit T-hangar is recommended, matching the existing building on the south GA ramp, to provide some extra rental space.

Conventional Hangars



By the end of the forecast horizon, an additional 15,000 square feet of

conventional hangars space will be required for community aircraft storage. This does not include the needs of private corporate aircraft owners, such as Centurion.

Support Facilities

ARFF Facility



Substantial renovation and expansion of the Airport Rescue and Fire Fighting (ARFF) building has been identified. A minimum of three bays is required to house its three vehicles.

Initial cost estimates indicate that relocating the ARFF function to a portion of the unused cargo building may be significantly more cost effective than expanding and renovating the facility at its current location.

In addition, the benefits of a joint use facility with the City fire department for off-

airport structural fire support should be analyzed as this type of agreement may save the airport significant money in operating expenses as well as provide increased fire protection for the Airport and the community.

Fire Training Facility



The current Fire Training Facility is in need of a major renovation in order to maintain its functionality. It is recommended that the airport obtain discretionary funding from the FAA.

RECOMMENDED AIRPORT IMPLEMENTATION PLAN

RECOMMENDED AIRFIELD PLAN

The existing airfield has sufficient capacity to accommodate future demand through the 20-year planning horizon. The recommended airfield plan removes the previously proposed

parallel runway but recommends extending the crosswind runway (Runway 10-28) to at least 6,000 feet, but at a reduced width of 100 feet. This would allow RJ passenger jets to operate at FAY if the main runway is closed due to such events as aircraft incidents, snow removal, and pavement projects. A future study will be needed to determine the specific length that will be needed for the airlines and aircraft that would use the runway at that time.

Both US Airways and Delta Air Lines will be operating only regional jets in early 2005 and the airlines require a minimum of 6,000 feet for takeoff runway length. Without this extension, they would cancel service to FAY when the main runway was closed, which would likely hurt future passenger use at FAY. Additional airfield recommendations include:

- Upgrading the approach to Runway 22 to a precision (Category I) approach with associated approach lighting/NAVAIDS.
- Providing full shoulders for Runway 4-22 and enlarging the blast pad for Runway 22 to FAA standards.
- Taxiway improvements, including widening Taxiway A to 75 feet to accommodate C-130 aircraft, and extending it by approximately 500 feet to the approach end of Runway 4.
- Extending Taxiway G across Runway 10-28 to the South GA ramp and widening it from 35 feet to 50 feet.



RECOMMENDED TERMINAL PLAN



Recognizing that the existing terminal has sufficient capacity to meet forecast requirements, the primary objective will be to update the interior and improve customer service. Although the identification of specific interior projects are beyond the scope of this Master Plan Update, some projects could include improving lighting, upgrading signage, replacing carpeting, raising ceiling heights, updating airline and rental car counters, and updating finishes.

It is also recommended that the remaining three loading bridges be upgraded to accommodate RJs.



RECOMMENDED LANDSIDE DEVELOPMENT PLAN



Most landside facilities, including the terminal curb, public parking, and employee parking, are sufficiently sized to accommodate future demand. Rental car ready-return space requirements are expected to increase to 238 by the end of the forecast period. To meet this requirement, it is recommended that 88 existing spaces be reallocated by relocating employee parking to the long-term lot.

RECOMMENDED GA DEVELOPMENT PLAN



The following General Aviation projects are recommended:

- 15,000-square foot corporate hangar

- GA ramp strengthening
- 14-unit T-hangar
- 22 parking spaces to accommodate FBO demand
- Wash rack and an oil/water separator.

RECOMMENDED SUPPORT FACILITIES DEVELOPMENT PLAN



The Master Plan Update recommends relocating the existing ARFF facilities to the Cargo Building on the west side of the airfield. This relocation will provide room for three ARFF vehicles and building space for staff.

FINANCIAL CAPACITY

Table 1 shows the proposed Capital Improvement Program (CIP) for FAY. Prior to being adjusted for inflation, the total cost for the CIP is projected to be approximately \$28.3 million. Once adjusted for inflation, these costs are expected to total \$32.7 million.²

The first column in the table indicates the projected funding source for each project. Funding for the CIP projects is expected to come primarily from three sources: 1) the Airport Improvement Program (AIP), 2)

² Assumes an inflation rate of 2.3%.

Passenger Facility Charges (PFCs), and 3) the State of North Carolina.

AIP funds are divided into two categories: discretionary funds and entitlement funds. Discretionary funds are awarded at the discretion of the FAA based on certain eligibility criteria, while entitlement funds are distributed to airports based on enplanements with the base (minimum) entitlement of \$1 million per year for primary (commercial service airports with >10,000 enplanements per year) airports. In recent years, FAY has received more than \$1 million in entitlements each year. For example, last year the airport received almost \$1.6 million in entitlements. However, for planning purposes it is assumed that the airport will receive only \$1 million in entitlement funds each year. In cases where Airport Improvement Program (AIP) funds are used to fund a project, the federal share of the cost is 95 percent and the airport must raise the remaining five percent of needed funds from other sources, such as Passenger Facility Charge (PFCs).

FAY currently collects \$3.00 per enplanement in the form of PFCs and, for purposes of this analysis, PFCs are expected to remain at \$3.00 for the duration of the forecast period. Based on the enplanement forecast, FAY is expected to collect more than \$8.4 million in PFCs through 2023. Each year the airport receives approximately \$300,000 in state funds and this amount also is expected to remain constant over the forecast period. Generally, the State funds 90 percent of a project and the airport provides the remaining share (10%); however in some cases the state/local share is 50/50 rather than 90/10.

The airport has the financial capacity to fund each of the projects listed in the CIP as detailed in **Table 1**.

DEVELOPMENT PLAN

Figure 3 shows the complete recommended development plan, including landside, airside, general aviation, and support facilities.

Table 1
FAYETTEVILLE REGIONAL AIRPORT
Capital Improvement Program (CIP)

Funding Source	Expected Year	PROJECT DESCRIPTION	TOTAL COST (c) (2004\$)
Entitlement	2005	Terminal Loop Roadways	\$ 350,000
Entitlement	2005	Terminal Rehab. Phase 3-Design	\$ 200,000
Entitlement	2005	Design-Jet Bridge Modification	\$ 27,000
PFC	2005	Pavement PCI Study	\$ 100,000
Entitlement	2005	New Airport Beacon	\$ 250,000
Entitlement	2005	Design-ARFF Expansion	\$ 275,000
State/Local (a)	2005	Stormwater Improvement Projects	\$ 330,000
PFC	2005	Airport Operations Vehicle (ARFF)	\$ 30,000
Discretionary	2006	ARFF Facility Expansion/Cargo Fac Conversion	\$ 1,500,000
Entitlement	2006	Terminal Rehab. Phase 3-Const.	\$ 1,545,000
Entitlement	2006	Two Jetway Modifications for RJs	\$ 153,000
PFC	2006	Design -R/W 4-22 Rehab	\$ 100,000
Entitlement	2007	Terminal Rehab. Phase 3-Const. Complete	\$ 555,000
Entitlement	2007	Const-R/W 4-22 Rehab	\$ 495,000
Entitlement	2007	Design-Generator/Vault Upgrade	\$ 50,000
Entitlement	2007	Design-Taxiway A, Widen 75' & 25' Shoulders	\$ 400,000
State/Local (a)	2007	Reconstruct Runway 10-28 75' wide	\$ 784,000
PFC	2007	Land Purchase-RW 4 Transitional Surface 17 AC	\$ 122,300
Entitlement	2008	Const-Generator/Vault Upgrade	\$ 500,000
Discretionary	2008	Const-Taxiway A, Widen 75' & 25' Shoulders	\$ 2,800,000
Entitlement	2008	Design-Taxiway A Extension	\$ 100,000
Entitlement	2008	Design-Overlay South GA Ramp extend TW N	\$ 50,000
State/Local (a)	2008	Design& Const-Overlay South GA Ramp extend TW N	\$ 431,000
Entitlement	2009	Const-Taxiway A Extension	\$ 600,000
Entitlement	2009	Const-Overlay South GA Ramp extend TW N	\$ 350,000
State/Local (b)	2009	North GA Lower Ramp Overlay	\$ 431,000
State/Local (b)	2009	North GA Auto Parking	\$ 150,000
Entitlement	2010	Replace ARFF vehicle(s)	\$ 700,000
Entitlement	2010	Runway 4 RPZ Land Purchase	\$ 1,000,000
State/Local (b)	2010	Design T-Hangars	\$ 70,000
Discretionary	2010	Fire Training Facility Upgrade	\$ 500,000
State/Local (b)	2011	14 Unit T-Hangar	\$ 630,000
Entitlement	2011	Pave ARFF & Surveillance Road	\$ 750,000
Other	2013	Rental Car Parking Expansion 57 spaces	\$ 150,000
Entitlement	2013	RW 4-22 Hold pads	\$ 350,000
Entitlement	2014	One Jetway Replacement	\$ 475,000
Other	2015	15,000 SF Corporate Hangar	\$ 850,000
Entitlement	2020	Runway 22 RVR	\$ 335,000
Entitlement	2020	Runway 22 DGPS	\$ 50,000
Entitlement	2020	Runway 22 MALSR	\$ 750,000
Discretionary	2020	Extend Runway 10-28 to 6000'	\$ 9,000,000
GRAND TOTAL			\$ 28,288,300

(a) State Local Split assumed to be 90/10

(b) State Local Split assumed to be 50/50

(c) Costs include contingency factor and engineering/design fees. Cost are not adjusted for inflation.