APALACHICOLA REGIONAL AIRPORT MASTER PLAN UPDATE

Draft Final Narrative Report
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TABLE OF CONTENTS

1	INT	roe	DUCTION	1-1
2	IN۱	/ENT	TORY OF EXISTING CONDITIONS	2-1
	2.1	INT	TRODUCTION	2-1
	2.2	Airp	port Setting	2-1
	2.2	<u>.</u> .1	Location	2-2
	2.2	2	Administration	2-3
	2.2	2.3	Airport History	2-4
	2.2	.4	National Air Transportation System Role	2-4
	2.2	2.5	Florida Aviation System Plan	2-5
	2.3	Met	eteorological Conditions	2-6
	2.4	Clin	mate	2-6
	2.4	.1	Wind Coverage	2-6
	2.5	Hist	storical Data	2-11
	2.5	5.1	Based Aircraft	2-11
	2.5	.2	Aircraft Operations	2-14
	2.6	Airs	side Facilities	2-15
	2.6	5.1	Aircraft Movement Areas	2-15
	2.6	.2	Runway 14/32	2-17
	2.6	3.3	Runway 6/24	2-18
	2.6	.4	Airfield Lighting	2-22
	2.6	.5	Pavement Markings	2-24
	2.6	6.6	Take-off and Landing Aids	2-24
	2.7	Airs	space and Air Traffic Control	2-25
	2.7	'.1	Approach Procedures	2-27
	2.7	'.2	Vicinity Airports	2-30
	2.8	Airp	port Facilities	2-33
	2.8	3.1	Airport Terminal and FBO	2-33
	2.8	3.2	Hangars and Other Buildings	2-34
	2.8	3.3	Aircraft Parking Aprons	2-38
	2.8	3.4	Aviation Fuel Storage	2-39

i

	2.	.8.5	Automated Surface Observing System	2-40
	2.	.8.6	Airfield Electrical Vault	2-41
	2.	.8.7	Airfield Security Fencing	2-41
	2.9	Are	a Demographics	2-41
	2.	.9.1	Population	2-41
	2.	.9.2	Employment	2-42
	2.	.9.3	Personal Income Per Capita	2-44
	2.10) Lan	d Uses/Community Characteristics	2-45
	2.	.10.1	Florida Statutes Chapter 333	2-45
	2.	.10.2	Local Government Comprehensive Plans	2-49
	2.11	l Inve	entory of Existing Conditions Summary	2-49
3	Α	VIATIO	ON ACTIVITY FORECASTS	3-1
	3.1	Ove	erview	3-1
	3.2	Hist	orical Activity	3-1
	3.3	For	ecast of Based Aircraft	3-5
	3.	.3.1	Previous Based Aircraft Forecasts	3-5
	3.	.3.2	Based Aircraft Forecasts	3-11
	3.	.3.3	Preferred Based Aircraft Forecast	3-19
	3.	.3.4	Based Aircraft Fleet Mix Forecast	3-21
	3.4	Ann	ual Operations Forecast	3-23
	3.	.4.1	Forecast of Annual Operations	3-23
	3.	.4.2	Local Versus Itinerant Operations Distribution Forecast	3-38
	3.	4.3	Commercial Operations	3-39
	3.	.4.4	Military Operations	3-39
	3.	4.5	Airport Operational Fleet Mix	3-40
	3.5	Pea	king Activity	3-41
	3.6	Crit	ical Aircraft	3-42
	3.7	Cor	nparison of Preferred Forecasts to FAA Terminal Area Forecasts	3-47
	3.8	Sur	nmary of Aviation Activity Forecasts	3-48
4	Е	NVIRC	NMENTAL CONSIDERATIONS	4-1
	4.1	Intro	oduction	4-1
	4.2	Ass	umptions	4-3

4	.3	Lim	itations and Exceptions	4-3
4	.4	Site	Description	4-4
	4.4.	1	Location and Legal Description	4-4
	4.4.	2	Airport Property and Vicinity General Characteristics	4-4
	4.4.	3	Current Use of the Property	4-5
	4.4.	4	Descriptions of Property Improvements	4-5
4	.5	Airp	oort Provided Information	4-5
	4.5.	1	Land Title Records	4-6
	4.5.	2	Environmental Liens or Activity and Use Limitations	4-6
	4.5.	3	Specialized Knowledge	4-6
	4.5.	4	Actual Knowledge	4-6
	4.5.	5	Valuation Reduction for Environmental Issues	4-6
	4.5.	6	Commonly Known or Reasonably Ascertainable Information	4-6
	4.5.	7	Obvious Indicators	4-6
4	.6	Inte	rviews	4-6
	4.6.	1	Interview with Owner	4-6
	4.6.	2	Interviews with Site Manager	4-6
	4.6.	3	Interviews with Occupants	4-7
	4.6.	4	Interviews with Local Government Officials	4-7
4	.7	Rec	cords Review	4-7
	4.7.	1	Physical Setting Sources	4-7
4	.8	Env	rironmental Record Sources	4-9
	4.8.	1	Airport Property	4-11
	4.8.	2	Adjoining Sites	4-15
4	.9	Hist	torical Use Information	4-15
	4.9.	1	Topographical Maps	4-16
	4.9.	2	Sanborn® Maps	4-16
	4.9.	3	Historical Aerial Photographs	4-17
	4.9.	4	Historical City Directories	4-18
	4.9.	5	Previous Environmental Reports on Airport Property	4-18
	4.9.	6	Previous Environmental Reports on Surrounding Sites	4-18
4	10	Airr	port Reconnaissance	4-18

	4.10).1	Methodology and Limiting Conditions	4-18
	4.10).2	General Property Setting	4-19
	4.10	0.3	Observations	4-19
	4.11	Nor	n-ASTM Considerations/Observations	4-20
	4.11	1.1	Asbestos-Containing Materials	4-20
	4.11	1.2	Lead-Based Paint	4-20
	4.11	1.3	Lead in Drinking Water	4-21
	4.11	1.4	Mold	4-21
	4.11	1.5	Radon	4-21
	4.12	Find	lings, Opinions and Conclusions	4-21
	4.12	2.1	Recognized Environmental Conditions	4-22
	4.12	2.2	Controlled Recognized Environmental Conditions	4-23
	4.12	2.3	Historical Recognized Environmental Conditions	4-23
	4.12	2.4	Business Environmental Risks	4-23
	4.12	2.5	Vapor Migration	4-23
	4.12	2.6	De Minimis Conditions	4-23
	4.12	2.7	Recommendations	4-23
	4.13	Dev	riations	4-23
	4.14	Thre	eatened and Endangered Species	4-25
	4.15	FAA	A Wildlife Strike Database	4-27
	4.16	Env	ironmental Considerations Summary	4-28
	4.16	6.1	Recognized Environmental Conditions	4-28
	4.16	6.2	Business Environmental Risks	4-28
	4.16	6.3	Vapor Migration	4-28
	4.16	6.4	Recommendations	4-29
5	Fac	ility F	Requirements	5-1
	5.1	Intro	oduction	5-1
	5.2	Airs	pace	5-1
	5.2.	1	Approaches	5-1
	5.2.	2	Part 77 Surfaces	5-2
	5.3	Airfi	eld	5-4
	5.3	1	Airfield Configuration	5-4

	5.3.2	Airfield Demand Capacity	5-4
	5.3.3	Runway Design Code	5-5
	5.3.4	Airport Reference Code	5-7
	5.3.5	Runway Length Analysis	5-8
	5.3.6	Declared Distances	5-10
	5.3.7	Runway Width Analysis	5-11
	5.3.8	Runway Design Standards	5-11
	5.3.9	Runway Designations	5-13
	5.3.10	Runway Pavement Condition and Strength	5-16
	5.3.11	Runway Markings and Lighting	5-17
	5.3.12	Taxiway and Taxilane Standards	5-17
	5.3.13	Taxiway Design	5-19
	5.3.14	Taxiway Conditions Assessment	5-20
	5.3.15	Taxiway Markings and Lighting	5-23
	5.3.16	Additional Taxiways	5-23
	5.3.17	Apron Pavement	5-23
	5.3.18	Navigational Aids	5-23
	5.3.19	Weather Equipment	5-24
	5.4 La	ndside	5-24
	5.4.1	Based Aircraft Storage	5-24
	5.4.2	Itinerant Aircraft Storage	5-27
	5.4.3	Apron Capacity	5-30
	5.4.4	Support Facilities	5-32
	5.5 Fa	cility Requirements Summary	5-35
6	DEVEL	OPMENT AND EVALUATION OF ALTERNATIVES	6-1
	6.1 Int	roduction	6-1
	6.2 Ele	ements Affecting Development of Alternatives	6-1
	6.2.1	Wetlands	6-1
	6.2.2	The Gulf to Gadsden Freight Logistics Zone	6-7
	6.3 De	velopment of Alternatives	6-9
	6.3.1	Airfield Development	6-10
	6.3.2	Roads and Runway Protection Zones	6-18

	6.4	Dev	/elopment Area Alternatives	6-20
	6.4	.1	Potential Development Areas	6-20
	6.4	.2	South Development Area	6-23
	6.4	.3	Southwest Development Area	6-23
	6.4	.4	Southeast Development Area	6-26
	6.4	.5	North Development Area	6-26
	6.4	.6	Northeast Development Area	6-26
	6.4	.7	West Development Area	6-26
	6.5	Airp	oort Development Composite Alternatives	6-27
	6.5	.1	Airport Development Composite One	6-27
	6.5	.2	Airport Development Composite Two	6-27
	6.6	Eva	luation of Alternatives	6-27
	6.7	Dev	velopment and Evaluation of Alternatives Summary	6-30
7	AIR	POF	RT LAYOUT PLAN SET	7-1
	7.1	Intro	oduction	7-1
	7.2	Airp	oort Layout Plan Set	7-2
	7.1	.1	Cover Sheet	7-2
	7.1	.2	Data Sheets	7-2
	7.1	.3	Existing Airport Layout Plan Drawing	7-2
	7.1	.4	Future Airport Layout Plan Drawing	7-2
	7.1	.5	Terminal Area Plan	7-3
	7.1	.6	FAR Part 77 Airport Airspace Drawing	7-3
	7.1	.7	Inner Portion of the Approach Surfaces for Runway 14/32	7-3
	7.1	.8	Inner Portion of the Approach Surfaces for Runway 6/24	7-3
	7.1	.9	Inner Portion of the Approach Surfaces for Runway 18/36	7-3
	7.1	.10	Obstacle Action and Disposition Plans	7-3
	7.1	.11	Departures Surfaces Plan	7-4
	7.1	.12	Land Use Plan	7-4
	7.1	.13	Airport Exhibit 'A' Property Inventory Map	7-4
	7.3	ALF	P Highlights and Modifications	7-4
	7.4	Sun	mmary	7-4
8	CA	PITA	L IMPROVEMENT PROGRAM	8-1

8.1 Inti	roduction	8-1
8.2 Sh	ort-Term Projects (2019-2023)	8-2
8.3 Mid	d-Term Projects (2024-2028)	8-6
8.4 Loi	ng-Term Projects (2029-2038)	8-10
8.5 Po	tential Funding Sources	8-14
7.1.14	Federal Funding	8-14
7.1.15	State Funding	8-15
7.1.16	Local Funding	8-17
8.6 Po	tential Allocation of Funding	8-17
7.1.17	Capital Improvement Program Funding Availability	8-18
8.7 Su	mmary	8-22
	APPENDICES	
Appendix A	: Wind Analysis for Apalachicola Regional Airport 2009-2018	
Appendix B	: Approach Plates	
Appendix C	: Florida Statutes Chapter 333	
Appendix D	: Traffic Flow Management System Counts	
Appendix E	Environmental Considerations Appendices	
Appendix F:	FAA Interim Guidance on Land Uses Within a Runway Protection Zone	
Appendix G	: Sustainability Plan	
Appendix H	: Recycle, Reuse, and Waste Reduction Plan	
Appendix I:	Public Presentations	
Appendix J:	Public Comment	
	TABLE OF FIGURES	
Figure 1-1 A	Apalachicola Regional Airport Master Planning Process	1-2
Figure 2-1 \	/icinity Map	2-2
Figure 2-2 A	Airport Location Map	2-3
Figure 2-3 N	Northwest Florida Region CFASPP	2-5
Figure 2.4 F	Historical Rased Aircraft	2-12

APALACHICOLA REGIONAL AIRPORT Apalachicola, Florida Airport Master Plan Update

Figure 2-5 Historical Annual Aircraft Operations	2-14
Figure 2-6 Apalachicola Airport Aerial Photo	2-16
Figure 2-7 Airport Rotating Beacon	2-23
Figure 2-8 Airspace Classifications	2-26
Figure 2-9 Apalachicola Regional Airport Airspace	2-29
Figure 2-10 Apalachicola Regional Airport Terminal and FBO	2-33
Figure 2-11 FBO Storage Hangar	2-34
Figure 2-12 T-Hangars	2-35
Figure 2-13 Conventional Hangar	2-35
Figure 2-14 Conventional Hangar	2-36
Figure 2-15 Conventional Hangar	2-36
Figure 2-16 Conventional Hangar	2-37
Figure 2-17 Transient Aircraft Parking Apron Along Taxiway A	2-38
Figure 2-18 Aircraft Parking Apron Along Taxiway B	2-39
Figure 2-19 Fuel Facility	2-39
Figure 2-20 Automated Surface Observing System	2-40
Figure 2-21 Historical and Projected Compounded Annual Growth Rate for Population	2-42
Figure 2-22 Historical and Projected Compounded Annual Growth Rate for Employment	2-43
Figure 2-23 Historical and Projected Compounded Annual Growth Rate for Personal Income	;
Per Capita	
Figure 2-24 Landfill Restricted Areas	2-47
Figure 2-25 Educational And Residential Restricted Areas	
Figure 3-1 Historical Based Aircraft	. 3-3
Figure 3-2 Historical Annual Operations	. 3-5
Figure 3-3 2019 FAA TAF Forecast	. 3-6
Figure 3-4 2006 Airport Layout Plan Based Aircraft Forecast	. 3-8
Figure 3-5 2015 FAD Based Aircraft Forecast	. 3-9
Figure 3-6 Comparison of Previous Based Aircraft Forecasts	3-11
Figure 3-7 Market Share of Florida Based Aircraft	3-13
Figure 3-8 Projections Using FAA Aerospace Forecasts	3-14
Figure 3-9 Historical Trend Forecasts	3-16
Figure 3-10 Comparison of Based Aircraft Forecasts	3-19
Figure 3-11 Preferred Based Aircraft Forecast	3-21

Figure 3-12 Future Based Aircraft Fleet Mix	. 3-22
Figure 3-13 2019 FAA TAF Annual Operations Forecast	. 3-24
Figure 3-14 2006 Airport Layout Plan Annual Operations Forecast	. 3-26
Figure 3-15 2015 FAD Annual Operations Forecast	. 3-27
Figure 3-16 Comparison of Previously Developed Forecasts Of Annual Operations	. 3-29
Figure 3-17 Market Share of Florida Annual Operations	. 3-31
Figure 3-18 FAA Aerospace Based Forecast Of Annual Operations	. 3-32
Figure 3-19 Historical Trend Forecast of Annual Operations	. 3-34
Figure 3-20 Comparison of Current Forecasts of Annual Operations	. 3-36
Figure 3-21 Preferred Annual Operations Forecast	. 3-37
Figure 3-22 Local Versus Itinerant Operations Distribution	. 3-39
Figure 3-23 Operational Fleet Mix	. 3-41
Figure 5-1 Existing Part 77 Surfaces	5-3
Figure 5-2 Airfield Pavement Conditions Map	. 5-22
Figure 6-1 On-Airport Wetlands	6-3
Figure 6-2 Gulf to Gadsden Freight Logistics Zone	6-8
Figure 6-3 Apalachicola Northern Railroad Location	6-9
Figure 6-4 Runway Configuration One: Runway 18/36 Closed	. 6-12
Figure 6-5 Runway Configuration Two: Runway 18/36 Remains Open	. 6-13
Figure 6-6 Separation of Runway Safety Areas	. 6-14
Figure 6-7 Taxiway Configuration One: Remove Taxiways From Existing Aprons	. 6-16
Figure 6-8 Taxiway Configuration Two: Add New Parallel Taxiway Between Runway and A	-
Figure 6-9 Airport's Current and Future Runway Protection Zones	. 6-19
Figure 6-10 Potential Airport Development Areas for Alternatives that Retain Runway 18/36	36-21
Figure 6-11 Potential Airport Development Areas for Alternatives that Close Runway 18/36	6-22
Figure 6-12 South Development Area	. 6-24
Figure 6-13 Southwest Development Area	. 6-25
Figure 6-14 Airport Development Composite One	. 6-28
Figure 6-15 Airport Development Composite Two	. 6-29
Figure 6-16 Preferred Alternative	. 6-31
Figure 7-1 Cover Sheet	7-6
Figure 7-2 Airport Data Sheet (1 of 3)	7-7

Figure 7-3 Airport Data Sheet (2 of 3)	7-8
Figure 7-4 Airport Data Sheet (3 of 3)	7-9
Figure 7-5 Existing Airport Layout Plan	7-10
Figure 7-6 Future Airport Layout Plan	7-11
Figure 7-7 Terminal Area Plan	7-12
Figure 7-8 Airport Airspace Analysis	7-13
Figure 7-9 Inner Portion of the Approach Surface for Runway 14	7-14
Figure 7-10 Inner Portion of the Approach Surface of Runway 32	7-15
Figure 7-11 Inner Portion of the Approach Surface for Runway 06	7-16
Figure 7-12 Inner Portion of the Approach Surface for Runway 24	7-17
Figure 7-13 Inner Portion of the Approach Surface for Runway 18	7-18
Figure 7-14 Inner Portion of the Approach Surface for Runway 36	7-19
Figure 7-15 Obstacle Action and Disposition Plans (1 of 6)	7-20
Figure 7-16 Obstacle Action and Disposition Plans (2 of 6)	7-21
Figure 7-17 Obstacle Action and Disposition Plans (3 of 6)	7-22
Figure 7-18 Obstacle Action and Disposition Plans (4 of 6)	7-23
Figure 7-19 Obstacle Action and Disposition Plans (5 of 6)	7-24
Figure 7-20 Obstacle Action and Disposition Plans (6 of 6)	7-25
Figure 7-21 Obstructions Filed with OE/AAA	7-26
Figure 7-22 Departure Surfaces	7-27
Figure 7-23 Land Use Plan	7-28
Figure 7-24 Exhibit "A" Airport Property Inventory Map (1 of 2)	7-29
Figure 7-25 Exhibit "A" Airport Property Inventory Map (2 of 2)	7-30
Figure 7-26 Exhibit "A" Boundary Survey and Parcel Description (1 of 6)	7-31
Figure 7-27 Exhibit "A" Boundary Survey and Parcel Description (2 of 6)	7-32
Figure 7-28 Exhibit "A" Boundary Survey and Parcel Description (3 of 6)	7-33
Figure 7-29 Exhibit "A" Boundary Survey and Parcel Description (4 of 6)	7-34
Figure 7-30 Exhibit "A" Boundary Survey and Parcel Description (5 of 6)	7-35
Figure 7-31 Exhibit "A" Boundary Survey and Parcel Description (6 of 6)	7-36
Figure 8-1 Short-Term Projects	8-5
Figure 8-2 Mid-Term Projects	8-9
Figure 8-3 Long-Term Projects	8-13

TABLE OF TABLES

Table 2-1 Wind Data For Runway 14/32	2-7
Table 2-2 Wind Data For Runway 6/24	2-8
Table 2-3 Wind Data For Runway 18/36	2-8
Table 2-4 Wind Data For Combined Runways 14/32 And 6/24	2-9
Table 2-5 Wind Data For Combined Runways 14/32 And 18/36	2-10
Table 2-6 Wind Data For Combined Runways 6/24 And 18/36	2-10
Table 2-7 Wind Data For Combined Runways 6/24, 14/32, And 18/36	2-11
Table 2-8 Historical Based Aircraft	2-13
Table 2-9 Historical Annual Aircraft Operations	2-15
Table 2-10 Aircraft Approach Categories	2-17
Table 2-11 Airplane Design Groups	2-17
Table 2-12 Apalachicola Regional Airport Runway Data	2-19
Table 2-13 Runway Safety Area Criteria	2-20
Table 2-14 Design Standards For ADG II Taxiways And Taxiways A, B, And C	2-22
Table 2-15 Design Standards For TDG 2 Taxiways	2-22
Table 2-16 Airspace Classifications	2-26
Table 2-17 Apalachicola Regional Airport Instrument Approach Procedures	2-28
Table 2-18 Vicinity Commercial Airports	2-31
Table 2-19 Public-Use General Aviation Airports Within 60 Nautical Miles	2-32
Table 2-20 Historical And Projected Compounded Annual Growth Rate For Population	2-42
Table 2-21 Historical And Projected Compounded Annual Growth Rate For Employment	nt 2-44
Table 2-22 Historical And Projected Compounded Annual Growth Rate For Personal Ir Per Capita	
Table 3-1 Historical Based Aircraft	3-2
Table 3-2 Historical Annual Operations	3-4
Table 3-3 2019 FAA TAF Based Aircraft Forecast	3-6
Table 3-4 2006 Airport Layout Plan Plan Based Aircraft Forecast	3-7
Table 3-5 2015 FAD Based Aircraft Forecast	3-9
Table 3-6 Comparison Of Previous Based Aircraft Forecasts	3-10
Table 3-7 Market Share Of Florida Based Aircraft	3-12
Table 3-8 Projections Using FAA Aerospace Forecasts	3-14

	Airport Master Plan Update
Table 3-9 Historical Trend Forecasts	3-15
Fable 3-10 Comparison Of Based Aircraft Forecasts	3-18
Fable 3-11 Preferred Based Aircraft Forecast	3-20

Table 3-12 Future Based Aircraft Fleet Mix3-21Table 3-13 2019 FAA TAF Annual Operations Forecast3-24Table 3-14 2006 Airport Layout Plan Annual Operations Forecast3-25Table 3-15 2015 FAD Annual Operations Forecast3-27Table 3-16 Comparison Of Previously Developed Forecasts Of Annual Operations3-28Table 3-17 Market Share Of Florida Operations3-30Table 3-18 FAA Aerospace Based Forecast Of Annual Operations3-32Table 3-19 Historical Trend Forecast Of Annual Operations3-33Table 3-20 Comparison Of Annual Operations Forecasts3-35Table 3-21 Preferred Annual Operations Forecast3-37Table 3-22 Local Versus Itinerant Operations Distribution3-38

APALACHICOLA REGIONAL AIRPORT Apalachicola, Florida Airport Master Plan Update

Table 5-8 Runway Length Analysis	5-10
Table 5-9 Existing Declared Distances	5-11
Table 5-10 Runway Design Standards	5-12
Table 5-11 Runway Protection Zone Dimensions	5-13
Table 5-12 Runway Separations Distances in Feet	5-13
Table 5-13 Runway Designations	5-15
Table 5-14 Taxiway Design Standards Based on Airplane Design Group	5-18
Table 5-15 Taxiway Design Standards Based on Taxiway Design Groups	5-19
Table 5-16 Airfield Pavement Condition Inventory	5-21
Table 5-17 Based Aircraft Storage	5-25
Table 5-18 Based Aircraft Hangar Spaces Available Versus Required	5-25
Table 5-19 Based Aircraft Hangar Area Available Versus Required	5-26
Table 5-20 Itinerant Aircraft Stored on Apron	5-28
Table 5-21 Square Yard Area of Itinerant Apron Required	5-29
Table 5-22 Itinerant Aircraft Stored in Hangars	5-30
Table 5-23 Aircraft Apron Parking Area Requirements	5-31
Table 5-24 Conventional Hangar Apron Area	5-32
Table 5-25 FBO Terminal Requirements	5-33
Table 5-26 Facility Requirements Summary	5-36
Table 6-1 Reduction of Runway Length to Separate Runway Safety Areas	6-11
Table 8-1 Short-Term Capital Improvement Program Projects	8-4
Table 8-2 Mid-Term Capital Improvement Program Projects	8-8
Table 8-3 Long-Term Capital Improvement Program Projects	8-12
Table 8-4 Potential Allocation of Short-Term (2019-2023) CIP Project Funding	8-19
Table 8-5 Potential Allocation of Mid-Term (2024-2028) CIP Project Funding	8-20
Table 8-6 Potential Funding of Long-Term (2029-2038) CIP Project Funding	8-21
Table 8-7 Short-Term Projects and Costs	8-22
Table 8-8 Potential Funding Sources of Short-Term Projects	8-22
Table 8-9 Mid-Term Projects and Costs	8-23
Table 8-10 Potential Funding Sources of Mid-Term Projects	8-23
Table 8-11 Long-Term Projects and Costs	8-24
Table 8-12 Potential Funding of Long-Term Projects	8-24

APALACHICOLA REGIONAL AIRPORT Apalachicola, Florida Airport Master Plan Update

1 INTRODUCTION

This Airport Master Plan Update has been prepared for Franklin County, Florida to provide long-range airport improvement strategies that respond to the projected future demand for aviation and aviation related services at the Apalachicola Regional Airport at Cleve Randolph Field (Airport). Funding for this project has been received from the Federal Aviation Administration's (FAA) Airport Improvement Program (AIP), and the Florida Department of Transportation (FDOT) Aviation and Spaceports Office.

The FAA requires airports receiving AIP funding to conduct periodic updates of their planning documents. The last Airport Layout Plan (ALP) Update and Narrative Report was completed in November of 2006 and since then several changes have taken place at the Airport.

This study considers future Airport improvements for the 20-year period of 2018 to 2038. This period will be broken into three phases over which Airport improvement projects will be undertaken: Short-Term (2018-2023), Mid-Term (2024-2028), and Long-Term (2029-2038). The previous ALP Narrative Report provided a basis for some information in this study. Use of the current versions of FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, AC 150/5300-13A, *Airport Design*, FAA Standard Operating Procedure (SOP) No. 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans (ALP)*, SOP No. 3.00, *Standard Operating Procedure for FAA Review of Exhibit "A" Airport Property Inventory Maps*, SOP No. 8.00, *Standard Operating Procedure for Runway Safety Area Determination*, FDOT regulations, and local laws provided guidance in decision making during this study. Local, state, and federal agencies have been coordinated with throughout this Master Plan process.

The Master Plan process identifies the existing facilities and their condition. Current and future aviation activity demands are also identified. Facility requirements are developed to meet the aviation activity demands. This Master Plan Update provides guidance for future development over the planning period that will satisfy the demand in an efficient, safe, and financially feasible manner, as well as serving as a guide for the County, the Technical Advisory Committee, the County Commission, and the funding agencies. This Master Plan addresses the following:

- Updates the 2006 ALP Narrative Report
- Identifies the location and types of facility improvements needed
- Provides a capital improvement plan that addresses project phasing and financial needs
- Updates the ALP that graphically depicts existing and future developments

The steps in the typical Airport Master Planning process as proscribed by the FAA and the FDOT are shown in Figure 1-1 and are briefly described below:

Inventory of Existing Conditions: The existing Airport facilities are catalogued, and an
evaluation is made as to their condition. State of Florida Statutes and the County
Comprehensive Plan are searched for Airport-related information. Additionally,
information related to the area demographics is collected.

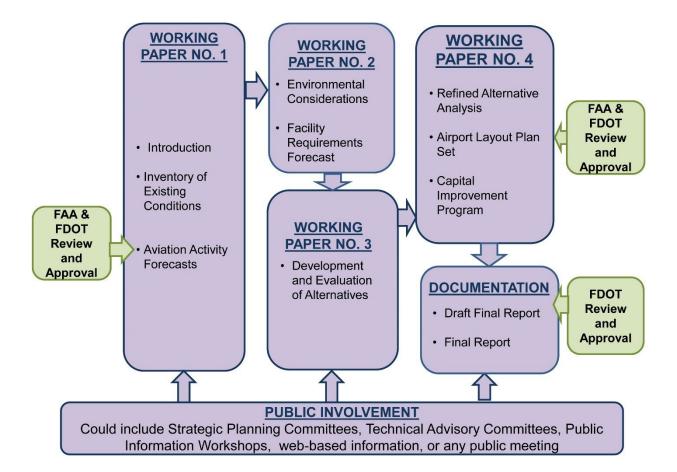


Figure 1-1
APALACHICOLA REGIONAL AIRPORT MASTER PLANNING PROCESS

- Aviation Activity Forecasts: Current and future levels of based aircraft, aircraft annual operations, and the existing and future critical aircraft are determined in this study phase. These forecasts are further broken out into various categories, such as aircraft type and local versus itinerant operations. Forecasts are generally developed for the Short-Term, Mid-Term, and Long-Term periods as described above for the planning period. The aviation activity forecasts are the basis and the justification for the Airport Master Plan Update. As such, both the FAA and FDOT require that the aviation activity forecasts be reviewed and approved by them before developing the remainder of the Master Plan Update. If the forecasts are not approved by the FAA and FDOT, projects identified thus are not eligible for funding by these agencies.
- Environmental Considerations: Environmental factors are assessed to provide
 enough information to evaluate Airport development alternatives and to provide
 information that will assist in the expediting of any subsequent environmental process.
 Typically, this results in an overview of the Airport's environmental setting and the
 identification of environmentally related permits that may be required for the
 recommended development projects.

1-2 Introduction

- Facility Requirements Forecast: An assessment of the airfield operational capacity is
 conducted to determine if unacceptable operational delays would be expected over the
 planning period. Various analyses are conducted to project future demand for facilities
 based on the aviation activity forecasts, including airfield infrastructure, hangars, aprons,
 and vehicle parking spaces. These future facility demands are then compared to the
 existing facilities to identify any shortfalls. Additionally, a review is conducted to identify
 any existing facilities that do not meet federal, state, or local regulations, codes, or
 standards.
- Development and Evaluation of Alternatives: Alternatives are developed to meet the
 shortfalls in facilities identified in the previous task. These alternatives are then
 evaluated using several criteria including the ability to meet the demand, cost,
 environmental impacts, and other relevant criteria. These alternatives could consider
 airside and landside facilities and any needed access improvements. From the
 evaluation, a preferred development plan will result.
- Refined Alternative Analysis: As the alternatives are being evaluated during the
 previous phase, the pros and cons of the various alternatives are evaluated. It is rare
 that the preferred alternative would be considered perfect. This phase attempts to
 correct or mitigate some of the perceived flaws in the preferred alternative. In addition,
 more detail or refinement is put into the plan. This refinement will allow a better
 preliminary cost estimate to be accomplished in a later phase of the project.
- Airport Layout Plan Set Production: A set of engineering-type drawings, referred to
 as the Airport Layout Plan (ALP) set, is created showing existing facilities and the
 selected preferred alternative. The ALP set also includes airspace and runway
 approach drawings, a terminal area map, a land use map, and a property map showing
 the existing and proposed boundaries. These maps and drawings will assist the County
 in the planning and maintenance of Airport boundaries and airspace.
- Capital Improvement Program: A list of individual projects, cost estimates, and a development timeline are determined for the preferred alternative. This information makes up the Capital Improvement Program (CIP), which is utilized by the FAA, FDOT, and the County in determining funding and development priorities.
- Documentation: All the analyses will be documented and consolidated into working papers as shown in Figure 1-1. Each working paper will be submitted to the County as it is completed. At the completion of the four working papers, they will be consolidated into one draft document and submitted to the County, FAA, and FDOT for review. The aviation activity forecasts, and the Airport Layout Plan set are the only portions of the Master Plan Update that the FAA approves, although they review the entire document. Comments from the County, FDOT, and the FAA will be addressed, and the final document will be submitted to the County, FAA, and FDOT.

These steps build one upon another to identify a clear action plan that can be used by the County to guide financial and development decisions. This process leads to the production of two key documents – the ALP set and the Master Plan Update report. The development of an approved ALP is a requirement for public use airports that receive federal AIP funding

and FDOT aviation development funds. The Master Plan Update report describes and justifies the proposed improvement concepts included in the ALP set.

1-4 Introduction

2 INVENTORY OF EXISTING CONDITIONS

2.1 INTRODUCTION

This chapter presents a description of the existing conditions and facilities at the Apalachicola Regional Airport (Airport). The description of these facilities will help assess the overall condition of the Airport, including the non-conformance of any infrastructure to FAA standards. This information will be the basis of comparison for the facility requirements forecast to be developed later in this Master Plan Update. The assessment of the existing facilities includes the description of the existing airside facilities including the runways, taxiways, apron, and navigational aids. Landside facilities, including T-hangars, a fueling facility, the Airport terminal, and the vehicular facilities are also discussed. A field visit was conducted on 25 April 2019, which included a visual assessment of each facility's condition.

The Franklin County Commission set the following Goals and Objectives for this Master Plan Update:

Goal 1:Grow the Airport to provide more jobs to the County.

Objective 1.1: Provide additional T-hangars

Objective 1.2: Provide additional conventional hangars to invite industry and larger aircraft to the Airport.

Objective 1.3: Provide as many options as possible for the landing and take-off of aircraft at the Airport.

Objective 1.4: Extend Runway 14 to the northwest when the Gulf to Gadsden Rail Line is being constructed to provide opportunities for freight to be transported into and out of the Airport via the rail line

Goal 2: Comply with Safety Practices of the FAA and the FDOT.

Objective 2.1: Keep all roads and other development out of the Runway Protection Zones.

Objective 2.2: Remove all known obstructions to the arrival, departure, threshold siting, and transitional surface.

Objective 2.3: Remove all avenues for aircraft to travel directly from an apron to a runway without making at least one ninety-degree turn.

2.2 AIRPORT SETTING

Apalachicola Regional Airport is in Apalachicola, Florida, which is in Franklin County, Florida, which is in the southeastern portion of the Florida panhandle. Wakulla County borders Franklin

County to the east, Gulf County to the west, and Liberty County to the north. Franklin County is bordered to the south by the Gulf of Mexico. Franklin County is shown in Figure 2-1.

2.2.1 Location

Apalachicola Regional Airport is located two miles west of Apalachicola, Florida, which is the County seat of Franklin County. The location of the Airport to the City is shown in Figure 2-2. The Airport is located north of U.S. 8 and public access to the Airport is achieved via Apalachee Street and Airport Road. The Airport covers approximately 1,100 acres and the airfield has an elevation of approximately 19.7 feet above mean sea level. Major cities near the Airport include Panama City, FL (48 miles), Tallahassee, FL (66 miles), and Gainesville, FL (162 miles).

Dothan Moultrie Waycross Brunswick Thomasville Valdosta Fernandina Crestview Mobile Beach Pensacola Tallahassee Jacksonville cagoula Ponte Vedra Lake City Panama City Beach St Augustine Gainesville Palm Coast Franklin County 95 Big Bend Seagrasses Daytona Beach Ocala Aquatic Preserve Del and New Smyrna Beach Orlando Kissimmee Palm Bay Tampa **OLakeland** Clearwatero LORIDA Vero Beach St Petersburg Sebring Bradenton Port St Lucie Sarasota Port Charlotte West Palm Beach Cape Coral Fre Wellington **Bonita Springs** Naples Lauderdale Miami Kendall Homestead Google Everglades National Park (*)

Figure 2-1
VICINITY MAP

Source: Google Maps



Figure 2-2
AIRPORT LOCATION MAP

2.2.2 Administration

The Airport is owned and operated by Franklin County, Florida. The Airport Manager and the manager of the Fixed Base Operator (FBO), Centric Aviation, take care of the day-to day

operations of the Airport and advise Franklin County Commissioners on matters pertaining to the development, use, and general operation of the Airport.

2.2.3 Airport History

In 1933, Franklin County acquired 160 acres for the development of the Airport. In 1942, the County acquired an additional approximately 852 acres. The entire Airport was then leased to the U.S. Army for the development and operation of the Apalachicola Army Airfield. The U.S. Army constructed much of the existing airfield pavement and infrastructure. After the World War II, the Airport was returned to Franklin County in 1947 in accordance with the Surplus Property Act of 1944, as amended. The Airport was again leased to the U.S. Army between May 22, 1951, and January 5, 1954. Since 1954, the Airport has been owned and operated by Franklin County. Today, the Airport consists of approximately 786 acres and has three operational runways.

2.2.4 National Air Transportation System Role

Every two years, the U.S. Secretary of Transportation is required to publish a national plan to Congress that presents data, forecasts, and development plans of all public-use airports in the United States. This plan is referred to as the National Plan of Integrated Airport Systems (NPIAS). One of the main products of the NPIAS is a listing of infrastructure that will be eligible for federal grants. A general aviation (GA) airport is characterized in the NPIAS as an airport not receiving scheduled commercial passenger or cargo service. To be included in the NPIAS, airports should have at least 10 based aircraft and be located a minimum of 20 miles from other NPIAS airports. Airports located closer than 20 miles from another NPIAS airport can also be included based on several exception criteria. Meeting these requirements, the Apalachicola Regional Airport is included in the NPIAS and is classified as a GA airport. As such, Apalachicola Regional Airport serves an important role in the national and state aviation systems.

The FAA 2021-2025 NPIAS indicated that future development of general aviation facilities must be based on "eligible and justified needs and priorities." These are in part based on the new categories of general aviation airports. Apalachicola Regional Airport is classified as a Basic Category airport. Basic Category airports "provide a means for general aviation flying and link the community to the national airport system. These airports support general aviation activities, such as emergency response, air ambulance service, flight training, and personal flying. Most of the flying at basic airports is self-piloted for business and personal reasons using propeller driven aircraft. They often fulfill their role with a single runway or helipad and minimal infrastructure."

Within the United States, the FAA assigns location identifiers to airports. These are then adopted by the International Air Transport Association (IATA), which has airport or location identifiers for each airport around the World. The airport code is a three – character alphanumeric code. The International Civil Aviation Organization (ICAO) also uses and published a similar system. The assigned codes for each organization often bear little resemblance to one another. The ICAO designations are published in the ICAO Document

7910: Location Indicators. In general, IATA codes are usually derived from the name of the airport or the city it serves, while ICAO codes are distributed by region and country. Apalachicola Regional Airport has the IATA designation of AAF and the ICAO designation of KAAF.

2.2.5 Florida Aviation System Plan

The Florida Aviation System Plan (FASP) is administered by the FDOT Aviation and Spaceports Office through its Continuing Florida Aviation System Planning Process (CFASPP). The CFASPP was established by the FAA and FDOT to maintain and enhance the Florida aviation system and to help keep the FASP in step with constant changes by updating the FASP periodically.

Within the CFASPP, there are nine regions within the State of Florida. Apalachicola Regional Airport is in the Northwest Region of the CFASPP. This region encompasses Escambia, Santa Rosa, Okaloosa, Walton, Holmes, Washington, Bay, Calhoun, Golf, Liberty, Jackson, Gadsden, Franklin, Wakulla, Len, and Jefferson counties. There are twenty-one public-use airports in the Northwestern Region. Of these, seventeen, including Apalachicola Regional Airport, are designated as general aviation airports. There are no designated reliever airports. There are four commercial service airports in the Region, as shown in Figure 2-3. The four commercial service airports are Pensacola International, Destin-Fort Walden Beach, Northwest Florida Beaches International, and Tallahassee International Airports.

Commercial Service
General Aviation Reliever
General Aviation
Heliport
Seaplane Base
Ultralights

Figure 2-3
NORTHWEST FLORIDA REGION CFASPP

Source: CFASPP

2.3 METEOROLOGICAL CONDITIONS

Weather plays an important role in the operation of aircraft. It must be considered in several different airfield design parameters. Information regarding the Apalachicola area's climate and wind characteristics is presented in this section.

2.4 CLIMATE

Franklin County and the surrounding region are typically warm throughout the year. The average temperature varies between 39.5° Fahrenheit (F) in January to 90.8° F in July. In summer, the temperature generally drops approximately 20° F at night. The area experiences a distinct change of seasons accompanied by short cold periods in the winter. The average annual rainfall is 59.4 inches and there are typically 102 days per year with precipitation.

2.4.1 Wind Coverage

Runway wind coverage at an airport refers to the percentage of time that crosswinds are below an acceptable velocity. Per the FAA Advisory Circular (AC) 150/5300-13A, *Airport Design*, the minimum wind coverage permitted for a runway, considering all observations, is 95 percent. This means that for 95 percent of the time, the crosswind component must be less than the maximum crosswind component of the aircraft landing at that specific airport. The crosswind component is calculated based on a crosswind not exceeding the following:

- 10.5 knots (12 miles per hour (mph)) for aircraft with an Airport Reference Code (ARC) of A-1 and B-1 (example aircraft include the Beech Bonanza, the Cessna Citation I, and the Beech King Air)
- 13 knots (15 mph) for ARC A-II and B-II (example aircraft include the Beech King Air 200, the DHC 6 Twin Otter, and the Cessna 441)
- 16 knots (18 mph) for ARC A-III, B-III, and C-I through D-III (example aircraft include the Dash 8, the DHC 5D Buffalo, and the Gates Learjet 24/25/28/29/54/55/56)
- 20 knots (23 mph) for ARC A-IV through D-IV (example aircraft include the Boeing YC-14, the Boeing 757, and the MD-11.)

If this coverage cannot be accomplished for the maximum crosswind component of the critical aircraft for a specific runway, then constructing a crosswind runway should be considered.

The Apalachicola Regional Airport has an Automated Surface Observing System (ASOS), which is operated by the National Weather Service. The FAA AC 150/5300-13A states that a period of at least 10 consecutive years of wind data should be examined when analyzing airfield wind coverage. This data is available through the FAA Airports GIS website and was downloaded for the years 2009 through 2018; a period of ten years. The Airport's wind data combined with the Runway 14/32 configuration yielded the results contained in Table 2-1.

Table 2-1
WIND DATA FOR RUNWAY 14/32

Runway 14/32	Apalachicola Regional
All Weather	
10.5 knots (12 mph)	93.44%
13 knots (15 mph)	96.66%
16 knots (18 mph)	99.23%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	93.49%
13 knots (15 mph)	96.84%
16 knots (18 mph)	99.53%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	93.68%
13 knots (15 mph)	96.57%
16 knots (18 mph)	98.82%

Source: FAA AGIS Years 2011 through 2020

The information is given for three different conditions. The first is called All Weather and covers all weather conditions. The second is called Visual Flight Rules (VFR) and covers those rules in effect when visual flight meteorological conditions occur, which is when the cloud ceiling is greater than 1,000 feet and the visibility is greater than three miles. The third condition is called Instrument Flight Rules or IFR. This occurs when the meteorological conditions are less than 1,000 feet and the visibility is at or lower than three miles. Only the crosswind components 10.5, 13, and 16 knots were calculated, as aircraft in the higher wind groups are not expected to operate in significant numbers at the Airport.

As seen in Table 2-1, the wind coverage for Runway 14/32, the designated primary runway, exceeds 95 percent under all but three conditions: the All Weather, VFR, and IFR under 10.5 knots wind conditions. These conditions indicate that a crosswind runway should be considered.

The same analysis was completed for Runway 6/24, one of the Airport's two crosswind runways, as shown in Table 2-2. The results indicate that a crosswind runway should also be considered if this runway were operating by itself, or as the primary runway. Again, the All Weather, VFR, and IFR under 10.5 knots wind conditions were each under 95 percent wind coverage.

Table 2-2 WIND DATA FOR RUNWAY 6/24

Runway 6/24	Apalachicola Regional
All Weather	
10.5 knots (12 mph)	92.44%
13 knots (15 mph)	96.01%
16 knots (18 mph)	99.05%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	92.67%
13 knots (15 mph)	96.29%
16 knots (18 mph)	99.35%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	91.93%
13 knots (15 mph)	95.40%
16 knots (18 mph)	98.56%

Source: FAA AGIS Years 2011 through 2020

The last runway analyzed was Runway 18/36 and the results are shown in Table 2-3. The results again show that the none of the All Weather, VFR, and IFR under 10.5 knots wind conditions achieved 95 percent or over wind coverage. This means that, ideally, none of the runways could ideally operate on their own or as the primary runway.

Table 2-3
WIND DATA FOR RUNWAY 18/36

	Apalachicola
Runway 18/36	Regional
All Weather	
10.5 knots (12 mph)	93.56%
13 knots (15 mph)	96.64%
16 knots (18 mph)	99.31%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	93.28%
13 knots (15 mph)	96.56%
16 knots (18 mph)	99.41%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	94.86%
13 knots (15 mph)	96.97%
16 knots (18 mph)	98.84%

Source: FAA AGIS Years 2011 through 2020

Finally, the wind data was analyzed against the configuration using two of the Airport's runways together. The results for the combined configuration of Runways 14/32 and 6/24 were first analyzed and are shown in Table 2-4. These results show that under all wind conditions shown, the combination had a 95 percent wind coverage. This means that combined, these two runways have sufficient coverage to operate under all conditions.

Table 2-4
WIND DATA FOR COMBINED RUNWAYS 14/32 AND 6/24

Runways 14/32 and 6/24	Apalachicola Regional
All Weather	
10.5 knots (12 mph)	98.84%
13 knots (15 mph)	99.63%
16 knots (18 mph)	99.79%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	99.11%
13 knots (15 mph)	99.85%
16 knots (18 mph)	99.98%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	98.54%
13 knots (15 mph)	99.59%
16 knots (18 mph)	99.89%

Source: FAA AGIS Years 2011 through 2020

While the above combination of runways achieved the desired result, wind data was also analyzed for other combinations of the three runways at the Airport, to have the assurance that this combination was not the only one that fulfilled the requirements. The wind data for the combination of Runway 14/32 and for Runway 18/36 can be found in Table 2-5. The wind data for the combination of data for Runway 6/24 and Runway 18/36 can be found in Table 2-6.

Table 2-5
WIND DATA FOR COMBINED RUNWAYS 14/32 AND 18/36

Runways 14/32 and 18/36	Apalachicola Regional
All Weather	
10.5 knots (12 mph)	96.78%
13 knots (15 mph)	98.73%
16 knots (18 mph)	99.76%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	96.69%
13 knots (15 mph)	98.75%
16 knots (18 mph)	99.84%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	97.30%
13 knots (15 mph)	98.65%
16 knots (18 mph)	99.42%

Source: FAA AGIS Years 2011 through 2020

Table 2-6
WIND DATA FOR COMBINED RUNWAYS 6/24 AND 18/36

Runways 6/24 and 18/36	Apalachicola Regional
All Weather	
10.5 knots (12 mph)	98.02%
13 knots (15 mph)	99.46%
16 knots (18 mph)	99.87%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	98.04%
13 knots (15 mph)	99.54%
16 knots (18 mph)	99.91%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	98.21%
13 knots (15 mph)	99.24%
16 knots (18 mph)	99.72%

Source: FAA AGIS Years 2011 through 2020

Each of the results of combining two runways resulted in a wind coverage of 95 percent in all categories and wind conditions studied. This shows that while no single runway at the Airport can assure complete wind coverage, any combination of two of the runways would more than meet the requirements. If only two runways were to remain operational, the best wind combination resulting from two runways would be the combination of Runways 14/32 and 6/24. This combination yields a 99.06 percent coverage in the All-Weather category for even the 10.5

knot wind-speed. An analysis was also done using all three runways and the results are shown in Table 2-7.

Table 2-7
WIND DATA FOR COMBINED RUNWAYS 6/24, 14/32, AND 18/36

Runways 14/32, 6/24, and 18/36	Apalachicola Regional
All Weather	
10.5 knots (12 mph)	99.81%
13 knots (15 mph)	99.94%
16 knots (18 mph)	99.98%
Visual Flight Rules (VFR)	
10.5 knots (12 mph)	99.89%
13 knots (15 mph)	99.98%
16 knots (18 mph)	100.00%
Instrument Flight Rules (IFR)	
10.5 knots (12 mph)	99.80%
13 knots (15 mph)	99.94%
16 knots (18 mph)	99.99%

Source: FAA AGIS Years 2011 through 2020

The results of the wind analysis for all three runways shows 95 percent coverage or higher under all conditions.

The information from the wind data indicates that while no single runway can fulfill the wind requirements alone, any combination of two or more of the runways does meet the necessary requirements. Specific wind rose information for each of the runways can be found in Appendix A.

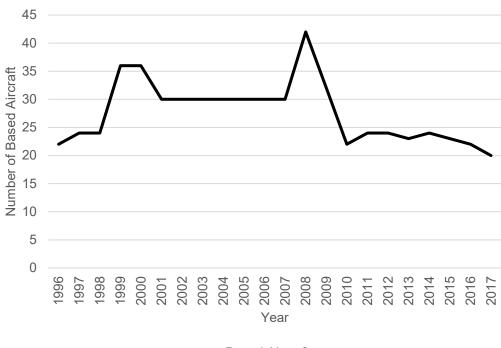
2.5 HISTORICAL DATA

The historical aviation activity data for the Apalachicola Regional Airport was taken from the 2019 FAA Terminal Area Forecast (TAF) for the Airport. This historical data is typically reported to the FAA by each respective airport on the FAA Airport Master Record (Form 5010).

2.5.1 Based Aircraft

The historical data for based aircraft for the Airport, as shown in the January 2019 FAA TAF for the Airport begins in 1996 and goes through 2017. The data is shown in Figure 2-4 and Table 2-4.

Figure 2-4
HISTORICAL BASED AIRCRAFT



----Based Aircraft

Table 2-8
HISTORICAL BASED AIRCRAFT

Year	Historical Based Aircraft
1996	22
1997	24
1998	24
1999	36
2000	36
2001	30
2002	30
2003	30
2004	30
2005	30
2006	30
2007	30
2008	42
2009	32
2010	22
2011	24
2012	24
2013	23
2014	24
2015	23
2016	22
2017	20

From 1996 through 1999, the number of aircraft based at the Airport rose from 22 aircraft to 36 aircraft. The number remained constant through the year 2000 and fell to 30 aircraft after the events of September 11, 2001. The number remained constant at 30 aircraft through 2007. In 2008, the number spiked to 42 for a single year before falling to 22 based aircraft in 2010, probably because of the recession. The number of based aircraft has remained in the doldrums since with small increases and declines. The based aircraft in 2017 numbered 20.

The Airport reports that there are currently 20 based aircraft in FY 2019. Of these, 18 were single-engine aircraft, and 2 were multi-engine aircraft. No jets, rotorcraft, ultralights, or seaplanes were reported.

2.5.2 Aircraft Operations

Like the based aircraft forecast, the number of annual operations was taken from the January 2019 FAA Terminal Area Forecast (TAF). The data is shown Figure 2-5 and Table 2-9.

Figure 2-5
HISTORICAL ANNUAL AIRCRAFT OPERATIONS

Source: FAA Terminal Area Forecast and Airport Master Record

From the year 1996 through the year 2000, the Airport reported the number of annual operations at 4,720. In 2001, the number of annual operations was reported at 24,375. The Airport has continued to report 24,375 annual operations for the last 16 years.

Table 2-9
HISTORICAL ANNUAL AIRCRAFT OPERATIONS

Year	Total Annual Operations
1996	4,720
1997	4,720
1998	4,720
1999	4,720
2000	4,720
2001	24,375
2002	24,375
2003	24,375
2004	24,375
2005	24,375
2006	24,375
2007	24,375
2008	24,375
2009	24,375
2010	24,375
2011	24,375
2012	24,375
2013	24,375
2014	24,375
2015	24,375
2016	24,375
2017	24,375

2.6 AIRSIDE FACILITIES

Airside facilities are those facilities required to support the movement and operation of aircraft. This involves not only the Airport's runway and taxiway system; it also includes the airfield lighting, pavement markings, takeoff and landing aids, and airfield signage.

2.6.1 Aircraft Movement Areas

Aircraft movement areas include paved and unpaved surfaces that enable aircraft to move to and from a runway. This includes not only the runway and taxiways, but the Airport's aprons.



Figure 2-6
APALACHICOLA AIRPORT AERIAL PHOTO

Figure 2-6 provides an aerial view of the runways at the Airport, which currently has three runways; Runway 14/32 is the primary runway, Runway 6/24 is the secondary, crosswind runway, and Runway 18/36 is also a secondary, crosswind runway.

2.6.2 Runway 14/32

Runway 14/32 is oriented in a northwest/southeast direction and currently meets the design criteria for an Airport Reference Code (ARC) of B-II. An ARC is composed of the Airplane Design Group (ADG), which is the classification of aircraft based on wingspan and tail height, and the Aircraft Approach Speed, which is the FAA classification of aircraft based on approach speeds.

Table 2-10
AIRCRAFT APPROACH CATEGORIES

Aircraft Approach Category	Aircraft Approach Speed
Α	Less than 91 knots
В	91 knots or more but less than 121 knots
С	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
Е	166 knots or more

The second component, the ADG, is depicted by a Roman numeral and relates to either the wingspan or the tail height of the aircraft; whichever is more restrictive. The levels of the ADG are shown in Table 2-11.

Table 2-11
AIRPLANE DESIGN GROUPS

Group Number	Tail Height in Feet	Wingspan in Feet
I	Less than 20	Less than 49
II	20 to less than 30	49 to less than 79
III	30 to less than 45	79 to less than 118
IV	45 to less than 60	118 to less than 171
V	60 to less than 66	171 to less than 214
VI	66 to less than 80	214 to less than 262

The ARC classification B-II means Runway 14/32 accommodates aircraft with wingspans up to but not including 79 feet, and having approach speeds up to 121 knots. Examples of B-II aircraft include the Beech Super King Air 350, the Cessna Citation Excel, and the Dassault Falcon/Mystère 50.

Runway 14/32 is a 5,425-foot long by 150-foot-wide concrete runway. Displaced thresholds are thresholds located at a point on a runway beyond the beginning of the runway. Displaced thresholds shorten the length of the runway and are typically put into effect to allow aircraft to avoid obstructions to the airspace at the ends of a runway. Runway 14/32 currently does not have a displaced threshold.

Per the FDOT Statewide Airfield Pavement Management Program Report of February 2017, the pavement of Runway 14/32 was in satisfactory condition with a Pavement Condition Index (PCI) of 73. The shoulders were in fair condition with a PCI of 67.

2.6.3 Runway 6/24

Runway 6/24 is oriented in a northeast by southwest direction. It meets the design criteria for an ARC of a B-II runway.

Runway 6/24 is a 5,271-foot long by 150-foot-wide concrete runway. Runway 6 does not currently have any displaced thresholds. Runway 24 has a displaced threshold of 217 feet. Per the FDOT Statewide Airfield Pavement Management Program Report of February 2017, the pavement of Runway 6/24 was in satisfactory condition with a PCI of 74. The shoulders had a PCI of 69 or fair.

2.6.3.1 Runway 18/36

Runway 18/36 is oriented in a north/south direction. It meets the design criteria for an ARC B-II runway.

Runway 18/36 is a 5,251-foot long by 150-foot-wide concrete runway. Runway 18 does not currently have any displaced thresholds. Runway 36 has a displaced threshold of 502 feet. Per the FDOT Statewide Airfield Pavement Management Program Report of February 2017, the pavement of Runway 18/36 was in fair condition with a PCI of 69. The shoulders had a PCI of 58 or fair.

Table 2-12
APALACHICOLA REGIONAL AIRPORT RUNWAY DATA

Characteristic	Runway 14/32	Runway 6/24	Runway 18/36
Length and Width (feet)	5,425' x 150'	5,271' x 150'	5,251' x 150'
Displaced Threshold	None	None and 217'	None and 502'
Surface Type	Concrete	Concrete	Concrete
Marking (condition)	Non-Precision (Fair)	Non-Precision (Fair)	Basic (Poor)
Approach Aids	2-Light PAPI	2 Light PAPI	
Weight Bearing Capacity (PCN)	12/R/B/X/T	12/R/B/X/T	12/R/B/X/T
Effective Gradient (%)	0.055%	0.002%	0.08%
Pavement Condition Index (PCI) (2017)	73 (Satisfactory)	74 (Satisfactory)	69 (Fair)

The FAA has developed various safety standards to provide an adequate safety margin for aircraft operators and for others in the general vicinity of a runway. These standards vary based upon the design aircraft wingspan and approach speed, as well as the approved approach procedures to each runway end. The following provides a brief description of the runway safety criteria set by the FAA:

- Runway Safety Area (RSA): These areas are centered upon the runway centerline and run along the sides and ends of each runway. The terrain within the RSA must be able to support maintenance and emergency response vehicles, as well as the occasional passage of aircraft. These areas must be smoothly graded and be free of any objects (except those needed to support aircraft operations), including aircraft and vehicles while an operation is occurring on the runway. The purpose of an RSA is to minimize damage to aircraft and injuries to passengers in the event an aircraft leaves the runway. The RSA dimensions depend on the aircraft approach category and on the physical characteristics of the critical aircraft identified for the runway.
- Runway Object Free Area (ROFA): This safety criterion provides a defined area, which
 runs along the sides of and beyond the runway end, which must be free of any
 permanent objects. It is permissible to taxi and hold aircraft within a ROFA, but not to
 park them in this area.
- Runway Object Free Zone (OFZ): Very like the ROFA, the OFZ is centered on the runway centerline, is 250 feet wide, and extends beyond each runway end by 200 feet. The OFZ must remain free of all objects during an aircraft operation.
- Runway Protection Zones (RPZ): The RPZ is a trapezoid shape located at the end of each runway, with the shortest side located 200 feet beyond the runway threshold and centered on the runway centerline. The RPZ is designed to protect property and people on the ground off the end of a runway as this area is statistically where most aircraft accidents are likely to occur. The RPZs at opposite runway ends may have different dimensions as determined by the approved procedure to that specific runway end. Airport operators are recommended by the FAA to have legal control over the property within the defined RPZ at each runway end.

Table 2-13 provides a listing of the current design standards for each of these safety criteria for Runways 14/32, 6/24, and 18/36.

Table 2-13
RUNWAY SAFETY AREA CRITERIA

Safety Criteria	B-II (in feet)
Runway Safety Area (RSA) Width	150
RSA Length Beyond Departure End	300
Runway Object Free Area (ROFA) Width	500
ROFA Length Beyond Runway End	300
Obstacle Free Zone (OFZ) Width	250
OFZ Length Beyond Runway End	200
Runway Protection Zone RPZ)	1,000 x 700 x 500

Note: RPZ dimensions given as length x outer width x inner width

Source: Apalachicola Regional Airport Layout Plan, 2006 and FAA Form 5010

2.6.3.2 <u>Taxiways</u>

The purpose of any taxiway system is to support the operational activity and enhance the safety of aircraft ground movements. Taxiways also act to enhance the capacity of the runway system by allowing aircraft to move on and off the active runway system in an efficient manner. A good taxiway system is designed to provide freedom of movement to and from the runways and between aviation facilities at an airport. At a minimum, the FAA recommends that each end of the primary runway should be easily accessible from the terminal and hangar areas. Ideally, all runway ends would be easily accessible from the terminal and hangar areas. Taxiway systems include entrance and exit taxiways, by-pass taxiways, taxiway run-up areas, apron taxiways, and taxilanes. The Airport currently has three principal taxiways.

Taxiway A travels in a northwest/southeast direction, is 75-feet wide, and is a full-length parallel taxiway to Runway 14/32. It connects Runway 14/32 with the terminal area, the corporate hangars, the tie-down apron, Taxiway B, and Runway 6/24. Per the FDOT Statewide Airfield Pavement Management Program Report of February 2017, the pavement of Taxiway A was in fair condition with a PCI of 69. The Taxiway A stubs had the following PCIs:

- Taxiway A North 61 Fair
- Taxiway A South 39 Very Poor
- Taxiway A1 North 42 Poor
- Taxiway A1 South 60 Fair
- Taxiway A2 North 53 Poor
- Taxiway A2 South 61 Fair
- Taxiway A3 North 60 Fair
- Taxiway A3 South 65 Fair

Taxiway B travels northeast/southwest, is 75-feet wide, and is a partial-length parallel taxiway to Runway 6/24. It connects Runway 6/24 with Taxiway A and the T-hangar area. The FDOT

report does not indicate that this is an apron edge taxiway and incorporates it totally into the adjacent apron. Per the FDOT Statewide Airfield Pavement Management Program Report of February 2017, the pavement of Taxiway B/apron was in poor condition with a PCI of 54. The Taxiway B stubs had the following PCIs:

- Taxiway B1 North 59 Fair
- Taxiway B1 South 52 Poor
- Taxiway B2 North 57 Fair
- Taxiway B2 South 51 Poor
- Taxiway B3 North 72 Satisfactory
- Taxiway B3 South 59 Fair

Taxiway C is 75-feet wide, travels in a north-south direction, and is a partial length parallel taxiway to Runway 18/36. It connects Runways 18 and 24. Per the FDOT Statewide Airfield Pavement Management Program Report of February 2017, the pavement of Taxiway C was in fair condition on both the east side and the west side with a PCIs of 66, or fair, in both portions. The Taxiway C stubs had the following PCIs:

- Taxiway C1 North 70 Fair
- Taxiway C1 South 57 Fair
- Taxiway C2 North 72 Satisfactory
- Taxiway C2 South 64 Fair

The required distance between a taxiway/taxilane centerline and other objects is based on the required wingtip clearance, which is a function of the wingspan of the Airport Design Group (ADG) for the corresponding runway. All three runways have an ADG of II. The requirements for Taxiway ADG-II are shown in Table 2-14Table 2-14 and are compared with the current metrics of the Taxiways A, B, and C.

Table 2-14
DESIGN STANDARDS FOR ADG II TAXIWAYS AND TAXIWAYS A, B, AND C

	ADG-II Taxiways (in feet)	Taxiways A, B, and C (in feet)
Taxiway Safety Area Width (TSA)	79	79
Taxiway Object Free Area Width (OFA)	131	131
Taxiway Centerline to Parallel Runway Centerline	240	540
Taxiway Centerline to Parallel Taxiway/Taxilane Centerline	105	n/a
Taxiway Centerline to Fixed or Moveable Object	57.5	57.5

Pavement width requirements for taxiing aircraft are based on the Taxiway Design Group (TDG), which is based on the dimensions of the aircraft's undercarriage. The requirements for TDG 1 and TDG 2 taxiways are shown in Table 2-15, which compares these requirements against the current metrics of the three taxiways.

Table 2-15
DESIGN STANDARDS FOR TDG 2 TAXIWAYS

	TDG 2 Taxiway (ii			n feet)		
Item	(in feet)	Α	В	C		
Taxiway Width	35	50	50	50		
Taxiway Edge Safety Margin	7.5	10	10	10		
Taxiway Shoulder Width	15	n/a	n/a	n/a		

Paved taxiway shoulders are only required for ADG-IV and higher taxiways, and are recommended for taxiways, taxilanes, and aprons accommodating ADG-III aircraft. Turf, aggregate-turf, soil cement, lime or bituminous stabilized soil are recommended adjacent to paved surfaces accommodating ADG-I and ADG-II aircraft. Currently, none of the taxiways at Apalachicola have shoulders.

2.6.4 Airfield Lighting

Proper airfield lighting is required at all airports that have nighttime operations. Apalachicola Regional Airport has lighting systems that enable it to accommodate nighttime aircraft operations.

2.6.4.1 <u>Identification Lighting</u>

A rotating beacon indicates the location and presence of an airport at night or in adverse weather conditions. The beacon's tower is equipped with an optical rotating system that projects two beams of light, one green and one white, 180 degrees apart, in accordance with FAA criteria. These colors indicate that the Airport is a civil airport. An airport rotating beacon is a visual navigational aid (navaid) located at many airports, including the Apalachicola Regional Airport. The beacon and the rotating assembly were replaced in May 2016. The

Airport's Rotating Beacon is located approximately 200 feet from the FBO/Terminal and is shown in Figure 2-7.



Figure 2-7
AIRPORT ROTATING BEACON

The rotating beacon is in satisfactory condition. It operates dusk to dawn and when the airfield is operating under Instrument Flight Rules (IFR) conditions.

2.6.4.2 Runway Lighting

Runway lights allow pilots to identify the edges of a runway and assist them in determining the remaining length at night and during periods of restricted visibility. These lighting systems are classified per their intensity or brightness. Runway 14/32 and Runway 6/24 are equipped with Medium Intensity Runway Lights (MIRL). Runway 14/32 was equipped with Light Emitting Diode (LED) lights in 2018. This system can be activated by pilots through the Common Traffic

Advisory Frequency (CTAF), frequency 122.800 MHz. Runway 6/24 is scheduled to receive LED lights in early 2020.

2.6.4.3 Taxiway Lighting

Each of the taxiways have Medium Intensity Taxiway Edge Lights (MITL). The lights for Taxiway A were replaced with LED lights in 2018. The condition of the lights on Taxiways B and C varies from section to section. The lights on Taxiway B are scheduled to be replaced with LED lights in early 2020.

2.6.5 Pavement Markings

Pavement markings delineate the various movement areas on the airfield. Runway 14/32 and Runway 6/24 have designation numbers and centerline striping. Runways 14, 32, 6, and 24 also have threshold bars and aiming point markers. These markings indicate a non-precision instrument approach, and they are in fair condition. Runways 18 and 36 have designation numbers but they are in poor condition. They do not have aiming points or threshold markings. This indicates a basic runway marking. Runway 24 has displaced threshold markings. While Runway 36 has a displaced threshold, it is not marked. Neither displaced threshold is published.

The designation markings identify the Runways by their magnetic azimuth, while the threshold markings identify the beginning of the available landing area. All the Runway markings are painted white.

Except for Taxiway C, each of the taxiways has visible centerline stripes with runway holding position markings located at the required locations. The taxiway centerline markings are yellow.

2.6.6 Take-off and Landing Aids

There are several different takeoff and landing aids at the Apalachicola Regional Airport. As with the runway and taxiway lighting, any takeoff or landing lights that emit light, except for the lighted windsock, are pilot controlled through the Common Traffic Advisory Frequency (CTAF).

2.6.6.1 Wind Indicators and Segmented Circle

Perhaps the most basic takeoff and landing aid is the windsock, which indicates wind direction and speed. Currently, there is one lighted windsock on the Airport. It is located at the intersection of Runways 14/32 and 6/24 and Taxiways A and B.

Segmented circles are often co-located with a windsock. A segmented circle performs two functions; it aids the pilot in locating airports and it provides a centralized location for indicators and signal devices that may be required on an airport. Segmented circles are recommended at airports receiving FAA funds in FAA AC 150/5340-5D and are particularly helpful to pilots at non-towered airports. The Apalachicola Regional Airport does not have a segmented circle.

2.6.6.2 Runway End Identification Lights

The identification of the runway ends and thresholds are critical to a pilot during landing and takeoff. Therefore, runway ends are often equipped with special lighting configurations to aid in their identification. Runway End Identifier Lights (REIL) provide pilots with rapid and positive visual identification of the approach end of a runway during night, instrument, and marginal weather conditions. REILs also aid in the identification of a runway end in areas that have a featureless terrain. The systems consist of a pair of synchronized white flashing lights, which are located on each side and abeam of a runway end threshold light. None of the runways at Apalachicola Regional Airport have REILs.

2.6.6.3 Precision Approach Path Indicators

There are several systems installed at airports that provide guidance information of the aircraft's position relative to the correct approach, in the vertical plane, to a runway. At the Apalachicola Regional Airport, Precision Approach Path Indicators (PAPI) systems have been installed on both ends of Runways 14/32 and 6/24. These lights operate continuously.

PAPIs provide the pilot with visual descent information during an approach to a runway. These lights are typically visible from five miles during the day and up to 20 miles or more at night. PAPIs use a light bar unit that is installed in a single row perpendicular to the runway edge. The lights project a beam of white light in the upper segment and red light in the lower segment. Depending on the aircraft's angle in relation to these lights, the pilot will receive a visual indication of the aircraft's position relative to the desired 3.00-degree approach slope. Both ends of Runways 14/32 and 6/24 have a 2-light PAPI system located on the right side of the Runway when viewed from an approaching aircraft. The 2-light PAPI system is an older system that is being phased out in favor of 4-light systems. It is anticipated that it will soon become difficult to find replacement parts for those airports that still have 2-light PAPI systems.

2.7 AIRSPACE AND AIR TRAFFIC CONTROL

The FAA has regulatory control over flight routes whether enroute, on approach, or departure from an airport. The FAA has divided the airspace over and between airports into various classifications. These classifications are separated into controlled airspace and uncontrolled airspace. The controlled airspaces are defined as shown in Table 2-16.

Table 2-16
AIRSPACE CLASSIFICATIONS

Controlled Airspace Classification	Description
	Begins at 18,000 feet above mean sea level (AMSL) and continues upward.
Α	Used to manage enroute air traffic
В	Surrounds the busiest airports such as Orlando and Tampa
С	Surrounds the next level of busy airports. These include such airports as Orlando Sanford and Daytona Beach
D	Surrounds airports that have an air traffic control tower that are not located in Class B or C airspace
E	Any other controlled airspace
G	Any uncontrolled airspace

The Apalachicola Regional Airport does not have an air traffic control tower and it is not located within the close environs of another busy airport. It has published instrument approach procedures for Runways 6, 13, 24, and 32. Its airspace is classified as Class E. Class E airspace is typically established around airports without an air traffic control tower.

The Airport is also situated beneath the Tyndall G Military Operating Area (MOA), which i excludes at and below 1,500 feet above ground level. The Airport is also immediately adjacent to, and south and east of Tyndall F MOA.

FL 600 CLASS A MSL 18,000 14,500 MSL CLASS E CLASS B CLASS C CLASS D **▶**1200 AGL 1200 AGL Nontowered 700 AGL 700 AG Airport CLASS G MSL - mean sea level AGL - above ground level FL - flight level

Figure 2-8
AIRSPACE CLASSIFICATIONS

Source: Avstop.com

There is other controlled airspace near the Airport, as shown in Figure 2-9. These include those for the Tyndall Air Force Base (PAM) to the northwest, Costin (A51) to the west, St. George Island (F47) to the southeast, and Carrabelle-Thompson (X13) to the northeast. Figure 2-9 also

shows the edges of the airspace for Northwest Florida Beach International (ECP) to the northwest and Quincy (2J9) and Tallahassee International (TLH) to the northeast.

2.7.1 Approach Procedures

Apalachicola Regional Airport features non-precision approaches for Runways 6, 14, 24, and 32. Table 2-17 shows the required approach minima for these runways. The approach plates current to the Airport as of June 4, 2019, are included as Appendix B.

Table 2-17 APALACHICOLA REGIONAL AIRPORT INSTRUMENT APPROACH PROCEDURES

		Minimum Descent Altitude
Procedure Name	Minimum Visibility	Mean Sea Level
	Aircraft Groups A and B: 1 mile,	
	Groups C: 1 ½ miles, and Group D: 2	
RNAV (GPS) Runway 6	miles	460 feet
	Aircraft Groups A and B: 1 mile,	
	Groups C: 1 ½ miles, and Group D: 2	
RNAV (GPS) Runway 14	miles	460 feet
	Aircraft Groups A and B: 1 mile, Group	
RNAV (GPS) Runway 24	C: 1 ½ miles, Group D: 2 miles	500 feet
	Aircraft Groups A and B: 1 mile,	
	Aircraft Group C: 1 ½ miles, and Group	
RNAV (GPS) Runway 32	D: 2 miles	460 feet
	Groups A and B: 1 mile, Group C: 1 ¾	
NDB Runway 14	Miles, and Group D: 2 1/4 miles	

Source: FAA Southeast Terminal Procedures, Date 23 May 2019 to 20 June 2019

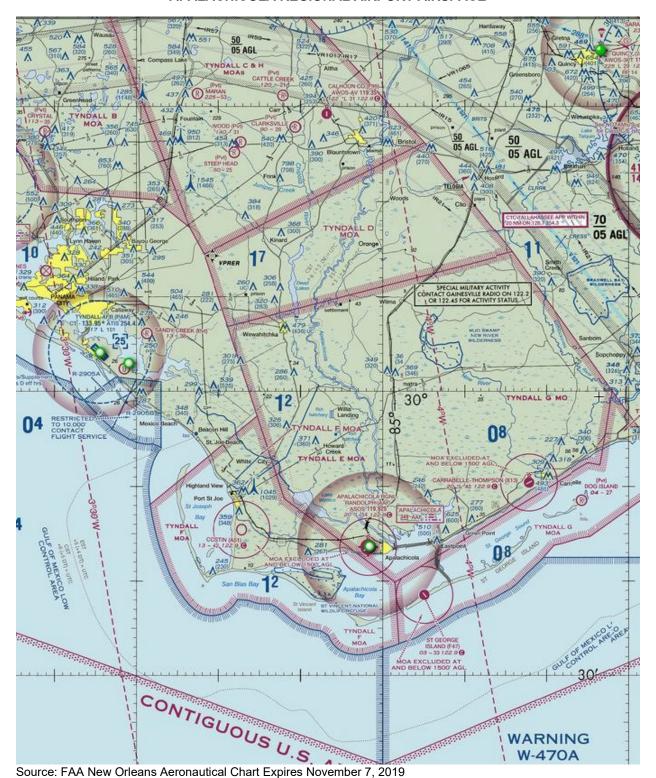


Figure 2-9
APALACHICOLA REGIONAL AIRPORT AIRSPACE

2.7.2 Vicinity Airports

Pilots who use Apalachicola Regional Airport can travel to a large variety of airports within a short distance. Commercial service, general aviation, and private airports surround the Airport and provide many different services to the flying public. Table 2-18 presents a list of commercial service airports within the vicinity of Apalachicola Regional Airport. This list also details the number of runways, instrument approaches, services available, based aircraft, and annual operations for each of the listed airports. Table 2-19 is a list of general aviation publicuse airports located within 60 nautical miles of the Apalachicola Regional Airport.

Table 2-18 VICINITY COMMERCIAL AIRPORTS

						Services					Nautical
Airport	ID	City	Runways	Pavement	Instrument Approaches	Fuel	Airframe and Powerplant	Avionics	Based Aircraft	Annual Operations	Miles from Apalachicola Regional
Tallahassee			9/27: 8,000 x 150,	asphalt,		100LL,					
International	TLH	Tallahassee	18/36: 7,000 x 150	asphalt	ILS, GPS, VOR	Jet A	Yes	Yes	110	66,795	53.4
Northwest											
Florida											
Beaches		Panama				100LL,					
International	ECP	City Beach	16/34: 10,000x150	Concrete	ILS, GPS, VOR	Jet A	Yes	Yes	96	62,780	55

Table 2-19 PUBLIC-USE GENERAL AVIATION AIRPORTS WITHIN 60 NAUTICAL MILES

						Services				Nautical	
Airport	ID	City	Runways	Pavement	Instrument Approaches	Fuel	Airframe and Powerplant	Avionics	Based Aircraft	Annual Operations	Miles from Apalachicola Regional
Apalachicola Regional	AAF	Apalachicola	14/32: 5,425x150 6/24: 5,271x150 18/36: 5,251x150	concrete, concrete, concrete	GPS	100LL, Jet A	Yes	Yes	20	24,375	0
St. George Island	F47	Apalachicola	14/32: 3,339x65	asphalt	none	none	No	No	0	505	7.7
Costin	A51	Port St. Joe	18/36:4,230x65	turf	none	none	No	No	5	3,224	13.8
Carrabelle- Thompson	X13	Carrabelle	5/23: 4,000x75	asphalt	none	100LL	No	No	6	4,265	18.3
Wakulla	2J0	Panacea	18/36: 2,570x70	turf	none	none	No	No	3	2,392	36.4
Calhoun County	F95	Blountstown	18/36: 3,608x75	asphalt	none	none	Yes	No	11	1,976	45.8
Quincy Municipal	2J9	Quincy	16/34: ,2,964x75	asphalt	none	100LL	Yes	No	37	6,240	57.6

2.8 AIRPORT FACILITIES

Most of the Airport's facilities are located on the center of the airfield in the south quadrant formed by the intersection of Runways 14/32 and 6/24. This area is accessed from U.S. 98 via Apalachee Street and Airport Road.

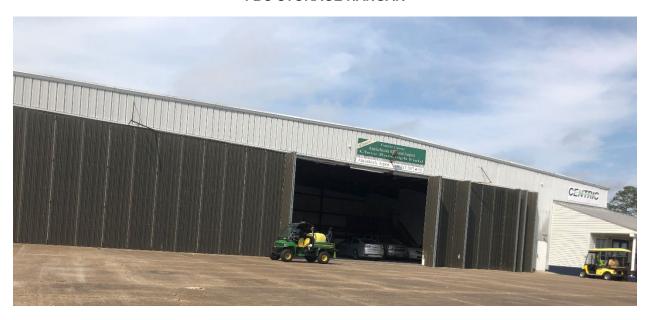
2.8.1 Airport Terminal and FBO

The Airport Terminal and Fixed Base Operator are co-located and are accessed from Airport Road. The terminal building contains the Airport administration offices, the Fixed Base Operator (FBO), a pilot's lounge, a conference room, and restrooms. The terminal has approximately 2,000 square feet on two floors and 14 vehicle parking spaces. The terminal is collocated with an approximately 12,000 square foot conventional hangar that is managed by the FBO and is used for aircraft storage.



Figure 2-10
APALACHICOLA REGIONAL AIRPORT TERMINAL AND FBO

Figure 2-11 FBO STORAGE HANGAR



2.8.2 Hangars and Other Buildings

There are several types of hangars, and Apalachicola Regional hosts at least two different types; T-hangars and conventional or "box" hangars. T-hangars typically house a single small aircraft. Several of these are usually nested together in such a way that the footprint of an individual hangar looks like a "T", while the combined footprint is long and linear. Conventional hangars are built in several sizes and can house one or more aircraft depending on the size of the structure.

2.8.2.1 <u>T-Hangars</u>

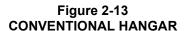
The Airport currently has five buildings of T-hangars. Each building has eight T-hangar units. The T-hangars appear to be in good condition, as shown in Figure 2-12.

Figure 2-12 T-HANGARS



2.8.2.2 Conventional Hangars

In addition to the FBO storage hangar, there are four conventional hangars on the Airport. The first is located adjacent to Runway 6 and has approximately 7,200 square feet. It is shown in Figure 2-13.





The second conventional hangars is located south of the intersection of Runways 14/32 and 6/24. It contains approximately 12,750 square feet and is shown in Figure 2-14.





The third hangar is located southeast of the FBO storage hangar near Runway 32. It has approximately 4,800 square feet and is shown in Figure 2-15.

Figure 2-15 CONVENTIONAL HANGAR



The fourth conventional hangar is located southest of the third hangar, near Runway 32. It has approximately 6,400 square feet within the hangar and another approximately 3,300 square feet of offices in a lean-to attached to the hangar. This hangar is shown in Figure 2-16.





2.8.3 Aircraft Parking Aprons

There is approximately 63,800 square yards of aircraft parking apron at the Airport in addition to the 1,990 square yards associated with the FBO storage hangar. There are approximately 24,600 square yards that run parallel to Taxiway A. Within that area there are 22 marked tiedown areas that are used predominantly by transient aircraft. There is approximately 39,250 square yards of apron located adjacent to Taxiway B.

Figure 2-17
TRANSIENT AIRCRAFT PARKING APRON ALONG TAXIWAY A

Source: Google Earth: June 2019



Figure 2-18
AIRCRAFT PARKING APRON ALONG TAXIWAY B

Source: Google Earth, June 2019. Photo taken during relief efforts for Hurricane Michael.

2.8.4 Aviation Fuel Storage

The Airport has three 12,000-gallon fuel tanks. One tank contains 100 Low Lead (LL) fuel or Avgas. The second tank supports Jet A fuel. The third tank is currently unused.



Figure 2-19
FUEL FACILITY

2.8.5 <u>Automated Surface Observing System</u>

The Airport is equipped with an Automated Surface Observing System (ASOS). ASOS is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year.



Figure 2-20
AUTOMATED SURFACE OBSERVING SYSTEM

2.8.6 Airfield Electrical Vault

The Airport's airfield electrical vault is located approximately 130 feet northwest of the FBO aircraft storage hangar.

2.8.7 <u>Airfield Security Fencing</u>

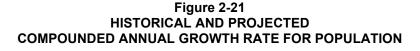
The FDOT encourages all airports in the state of Florida to completely enclose the airport with a six-foot high fence with three strands of barbed wire at the top. The boundary fence at the Apalachicola Regional Airport has been neglected and there are several breaches. There are areas where the fence is overgrown with foliage. There are several gates within the fence for efficient access to the airfield.

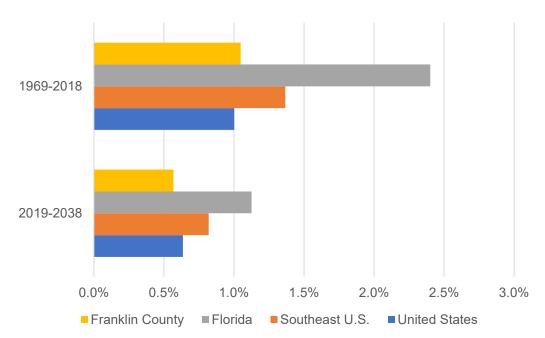
2.9 AREA DEMOGRAPHICS

Aviation activity levels have traditionally been linked to several socioeconomic indicators. The connection is related to the relatively high cost of operating an aircraft and, in some cases, the percent of population using the services of general aviation airports remains constant. This section presents data on population, employment, and personal income per capita for the United States, the Southeastern United States, Florida, and Franklin County, Florida areas. The Southeastern United States for this data are defined as Kentucky, West Virginia, Virginia, Tennessee, North Carolina, South Carolina, Arkansas, Louisiana, Mississippi, Alabama, Georgia, and Florida.

2.9.1 Population

The population in Franklin County experienced an average annual growth rate of 1.0 percent in the period between 1969 and 2018. This rate of growth was only slightly ahead of that of the United States, but less than that of the Southeast United States and Florida. The Southeast region and Florida had 1.4 percent and 2.4 percent average annual growth during this period as shown in Figure 2-21 and Table 2-20.





For the period between 2019 and 2038, the average annual rate of growth for each of the areas is anticipated to slow. Franklin County's average annual rate of growth is anticipated to continue to be less than the other sectors for the next 20 years with an average annual growth rate of 0.6 percent. This is nearly the same as that for the United States. The Southeast U.S. and Florida are forecast to decrease significantly, but still outpace Franklin County.

Table 2-20
HISTORICAL AND PROJECTED COMPOUNDED ANNUAL GROWTH RATE FOR POPULATION

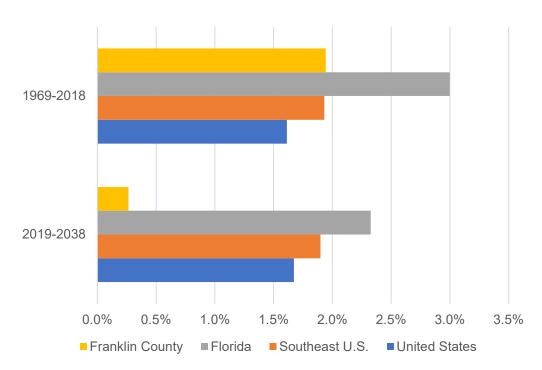
Years	United States	Southeast U.S.	Florida	Franklin County
2019-2038	0.6%	0.8%	1.1%	0.6%
1969-2018	1.0%	1.4%	2.4%	1.0%

Source: Woods and Poole Economics

2.9.2 Employment

The average annual growth rate for employment in Franklin County during the years between 1969 and 2018 was about the same as that of the Southeast U.S. with an average annual growth rate of 1.9 percent. Again, both the Southeastern U.S. and Florida outpaced the average of the United States. Florida experienced an average annual growth rate of 3.0 percent, and the Southeast U.S. experienced a 1.9 percent average annual rate of growth as shown in Figure 2-22 and Table 2-21.





Franklin County's employment growth is anticipated to be much smaller than the other sectors, achieving an average annual growth rate of 0.3 percent for the next 20 years. The average annual growth rate for employment for the other comparative areas is anticipated to remain about the same with the Florida and the Southeast regions anticipated to have 2.3 percent and 1.9 percent average annual rates of growth respectively over the same period. The United States alone is projected to increase only slightly to 1.7 percent.

Table 2-21
HISTORICAL AND PROJECTED COMPOUNDED ANNUAL GROWTH RATE FOR EMPLOYMENT

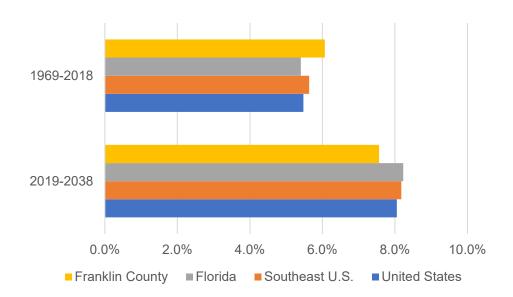
Years	United States	Southeast U.S.	Florida	Franklin County
2019-2038	1.7%	1.9%	2.3%	0.3%
1969-2018	1.6%	1.9%	3.0%	1.9%

Source: Woods and Poole Economics

2.9.3 Personal Income Per Capita

At 6.1 percent, the Personal Income Per Capita average annual growth rate in Franklin County was ahead of the comparative areas during the period from 1969 through 2018. However, each of the comparative areas was between 5.4 and 5.6 percent average annual compounded growth, as shown in Figure 2-23 and Table 2-22.

Figure 2-23
HISTORICAL AND PROJECTED
COMPOUNDED ANNUAL GROWTH RATE FOR PERSONAL INCOME PER CAPITA



During the period between 2019 and 2038, it is anticipated that the average annual compounded growth will increase to between 7.6 percent and 8.2 percent average annual growth for all sectors. The Personal Income Per Capita for Franklin County is anticipated to fall behind the other regions with an average annual compounded rate of 7.6 percent.

Table 2-22
HISTORICAL AND PROJECTED COMPOUNDED ANNUAL GROWTH RATE FOR PERSONAL INCOME PER CAPITA

Years	United States	Southeast U.S.	Florida	Franklin County
2019-2038	8.1%	8.2%	8.2%	7.6%
1969-2018	5.5%	5.6%	5.4%	6.1%

Source: Woods and Poole Economics

2.10 LAND USES/COMMUNITY CHARACTERISTICS

The information regarding the land use surrounding the Airport is important as it is necessary to ensure that the Airport is compatible with the surrounding community. It is equally essential that the surrounding community does not encroach upon the operations of the Airport. This section will explore the land use planning surrounding the Airport.

2.10.1 Florida Statutes Chapter 333

Local government regulations of land use in areas surrounding airports is generally the primary method of protecting airports from incompatible development. Florida Statutes Chapter 333 requires local governments to exercise their land use planning and regulations authority to protect airports from incompatible development and loss of navigable airspace. Protecting the surrounding land and airspace of an airport is important so that future developments will not hinder future airport activities. All local governments, such as Franklin County, with an airport area within its territorial limits are required to adopt, administer, and enforce airport zoning. An airport hazard as defined by Chapter 333 as any obstruction to air navigation which affects the safe and efficient use of navigable airspace or the operation of planned or existing air navigation and communication facilities.

Development within 10-nautical miles from the Airport Reference Point (ARP) may also require an FDOT Airspace Obstruction Permit. A permit is required if the development is taking place in an area that does not have airport zoning and if the height of the development exceeds federal obstruction standards contained in Federal Regulation Title 14 Part 77.

2.10.1.1 Landfill Restrictions

Chapter 333 also requires communities to consider airport zoning regulations that regulate the location of sanitary landfills with respect to airports. Landfills tend to attract birds, and bird strikes pose a serious risk to aircraft and to individuals on the aircraft. Sanitary landfills should be:

- 10,000 feet from the nearest point on the runways used by turbine aircraft
- 5,000 feet from the nearest point on runways used only by non-turbine aircraft
- Located outside the lateral limits of an airport's 14 C.F. R. Part 77.19 surfaces

Where such landfills exist and there are hazardous bird movements associated with the landfill, the landfill operator must begin bird management techniques or other practices to minimize bird hazards to airborne aircraft.

Figure 2-24 shows the areas around the Apalachicola Regional Airport that would be restricted from having a landfill. Currently, there are no landfills located within these limits. The nearest solid waste landfill and recycling center in Eastpoint, FL, which is over 11 miles away from the Airport.

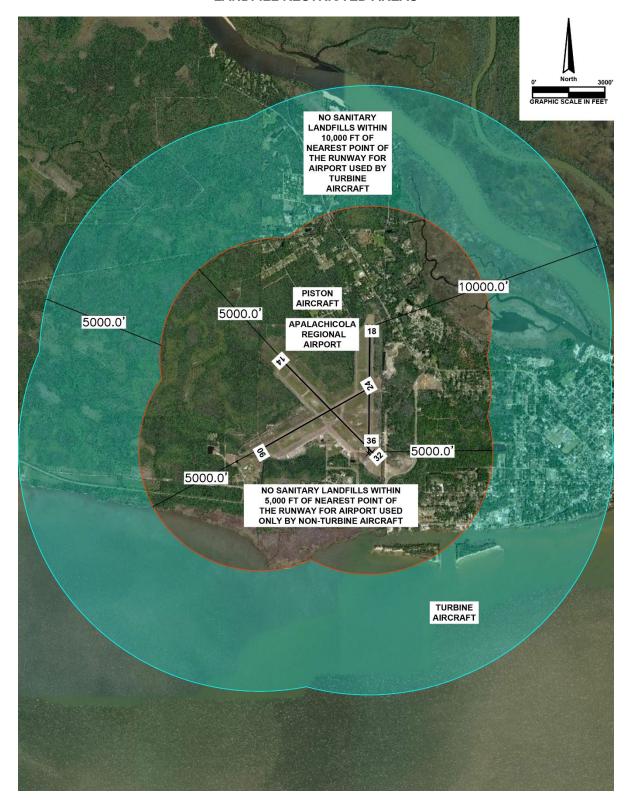


Figure 2-24
LANDFILL RESTRICTED AREAS

2.10.1.2 Residential and Educational Restrictions

If an airport authority has conducted a noise study in compliance with 14 C.F.R. Part 150, or if noise contours have been established for an airport through another study approved by the FAA, then the specific recommendations that are a result of either or both studies will be used as restrictions.

If such studies have not been conducted as is the case at Apalachicola Regional Airport, then residential and educational development except for aviation school facilities are prohibited within an oval area centered on each runway end. The width of the oval should be equal to one-half of the longest runway at an airport and is centered on the centerline of each runway. The oval extends out from each runway end one half the length of the longest runway. Figure 2-25 shows the extent of the residential and educational restrictions with respect to the Airport.

There are several areas of residential development in the highlighted areas. However, Chapter 333 specifically does not require the "removal, alteration, sound conditioning, or other change, or to interfere with the continued use or adjacent expansion of any educational facility or site in existence on July 1, 1993." This is a prohibition on the construction of new schools or residences within the highlighted areas. There are no schools located within the highlighted areas. The nearest school is the Dove Christian Academy which is located 1.045 miles southeast of Runway 36.

2.10.1.3 Changes to Chapter 333

Changes to Chapter 333, which went into effect on July 1, 2016, specify that those jurisdictions with airport protection zoning regulations and airport land use compatibility zoning regulations, as well as amendments must provide a copy of these regulations to the FDOT Office of Aviation by July 31, 2016. If any of the regulations do not conform with the 2016 changes to Chapter 333, amendments must be made to the regulations by July 1, 2017. If the jurisdiction has an airport within its limits, and does not have such regulations, they must adopt such regulations by July 1, 2017. Until such regulations are adopted, the FDOT will administer the permitting process as outlined in Chapter 333.025, *Permit Required for Obstructions*.

No Airport Zoning Ordinance was found for Franklin County except for that of the Carrabelle Airport Authority. The sole reference to the Apalachicola Regional Airport within the zoning ordinances states:

Sec. 13-2. - Obstruction of airport runways, ramps. No vehicles shall be driven upon or parked upon any of the runways at Apalachicola Airport. Vehicles shall not be permitted upon paved aircraft ramps at the Apalachicola Airport. It shall be unlawful for any person to obstruct any runway or place any obstruction upon any runway at the Apalachicola Airport. (Ord. No. 82-1, § 2, 1-19-82)

It does not appear that this language meets the requirements of Chapter 333. It is highly recommended that the County review the requirements of Airport Zoning as contained in Chapter 333 of the Florida Statutes. A copy can be found in Appendix C of this report.

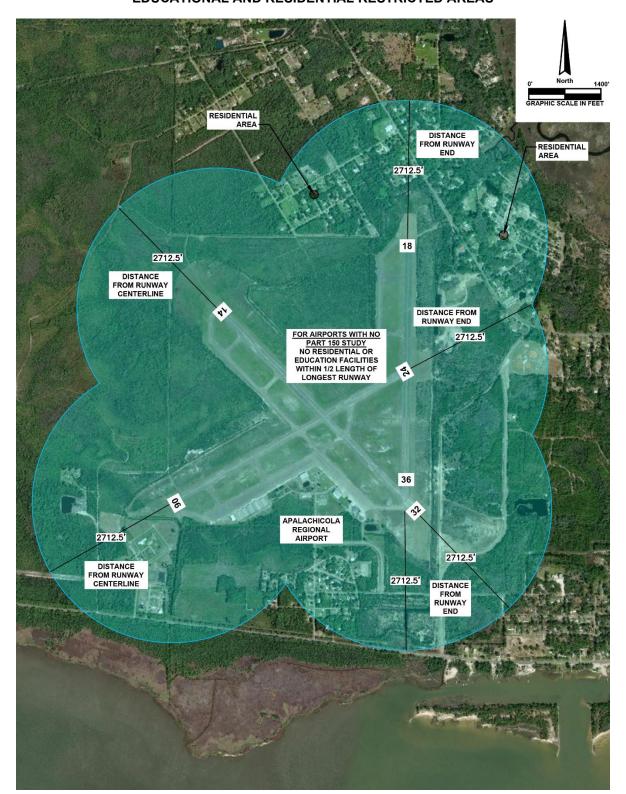


Figure 2-25
EDUCATIONAL AND RESIDENTIAL RESTRICTED AREAS

2.10.2 <u>Local Government Comprehensive Plans</u>

Florida Statute Chapter 163, *Intergovernmental Programs*, generally known as the Growth Management Act, requires all counties and cities to adopt a Local Government Comprehensive Plan. These are intended to guide the future growth and development of the respective governments.

Development projects within an FAA-approved master plan for licensed, publicly operated airports are exempt from oversight by the local community with respect to the Local Government Comprehensive Plan. However, there should be coordination between an airport, the local government, and, where applicable, the Metropolitan Planning Organization (MPO). Franklin County is not part of an MPO. Projects developed because of this Master Plan Update can be inconsistent with the Local Government Comprehensive Plan; however, such projects must be thoroughly documented in the Master Plan Update. Regardless, unless they are consistent with the Local Government Comprehensive Plan, they will not be eligible for FDOT Aviation funding. The current Franklin County Comprehensive Plan as published on the Franklin County website makes no mention of the Apalachicola Regional Airport.

2.11 INVENTORY OF EXISTING CONDITIONS SUMMARY

This inventory discussion has focused on the existing conditions and facilities located at and around the Apalachicola Regional Airport. As noted, many of the Airport's facilities are in good condition, whereas others need some repair, rehabilitation, or replacement. The information in this chapter will serve as the basis of comparison for the Facility Requirements Analysis.

3 AVIATION ACTIVITY FORECASTS

3.1 OVERVIEW

The forecasts of aviation activity form the basis and justification for all planning and development on an airport. These forecasts are the basis for determining how many and what type of facilities will be needed within designated periods. The forecasts are typically divided into three periods. The first is the short-term period and usually occurs within the first five years of the forecasts (2018-2023). The second is the medium-term period and usually takes place within the second five years of the forecasts (2024-2028). The third, or long-term, period usually takes place within the last ten years of the forecasts (2029-2038).

To adequately forecast the future needs of the Airport, specific forecasts or projections are necessary for an airport with the characteristics of the Apalachicola Regional Airport. These forecasts include:

- Based Aircraft
 - o Single Engine
 - o Multi-engine
 - o Jets
 - Rotorcraft
 - o Other (Gliders, Light Sport, Experimental, Balloons, etc.)
- Aircraft Operations
 - Annual Operations
 - Local Versus Itinerant Activity
 - Operational Fleet Mix
- · Peak Period Activity
 - o Peak Month
 - Average Day of the Peak Month
 - o Peak Hour
- Critical Aircraft

The forecasts in this chapter include a review of forecasts previously developed for the Airport. New forecasts have also been developed. From these forecasts, preferred based aircraft and annual operations forecasts are recommended.

3.2 HISTORICAL ACTIVITY

The historical aviation activity data for the Airport was taken from the 2019 FAA Terminal Area Forecast (2019 FAA TAF). This historical data is typically reported to the FAA by each airport annually via the FAA Airport Master Record (Form 5010). The FAA TAF is a forecast developed annually by the FAA for each of the airports in the National Plan of Integrated Airport Systems (NPIAS). The 2019 FAA TAF was released in January 2019 and is based on data received by the FAA through the end of their FY 2017 fiscal year on September 30, 2017. The FAA TAF

information is based on data received by airport sponsors via local state inspections and the requirements in FAA Form 5010, *Airport Master Record*, updates. The historical numbers of based aircraft for Apalachicola Regional Airport are shown in Table 3-1 and Figure 3-1.

Table 3-1
HISTORICAL BASED AIRCRAFT

Year	Historical Based Aircraft
1996	22
1997	24
1998	24
1999	36
2000	36
2001	30
2002	30
2003	30
2004	30
2005	30
2006	30
2007	30
2008	42
2009	32
2010	22
2011	24
2012	24
2013	23
2014	24
2015	23
2016	22
2017	20

Source: 2019 FAA TAF

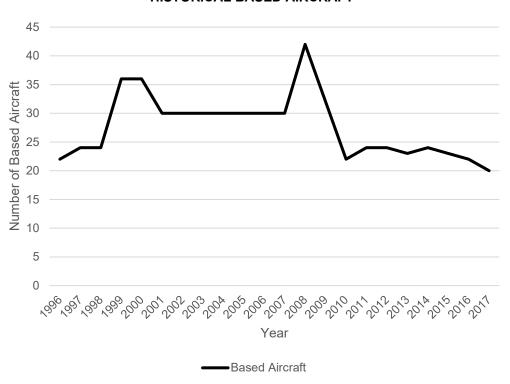


Figure 3-1
HISTORICAL BASED AIRCRAFT

The number of aircraft based at the Apalachicola Regional Airport has varied over the last 21 years. The high number of 42 aircraft occurred in the year 2008 appears to be an error as the number of based aircraft recorded the year before and the year after were 30 and 32 respectively. This anomaly could also be due to the recession that became evident in 2008. However, there are no records at the Airport that can verify either theory.

In the year 2009, 32 based aircraft were reported at the Airport. The next year, the number fell to 22. Since then, the number of based aircraft have varied between 22 and 24, before falling to 20 in 2017.

The number of annual operations for the Airport was gathered from the 2019 FAA TAF. These numbers are shown in Table 3-2 and Figure 3-2. Only two numbers have been reported: 4,720 between 1996 and 2000 and 24,375 annual operations for each of the years between 2001 and 2017. This total consistency in the numbers would leave open the accuracy of the numbers.

Table 3-2
HISTORICAL ANNUAL OPERATIONS

Year	Total Annual Operations
1996	4,720
1997	4,720
1998	4,720
1999	4,720
2000	4,720
2001	24,375
2002	24,375
2003	24,375
2004	24,375
2005	24,375
2006	24,375
2007	24,375
2008	24,375
2009	24,375
2010	24,375
2011	24,375
2012	24,375
2013	24,375
2014	24,375
2015	24,375
2016	24,375
2017	24,375

Source: 2019 FAA TAF

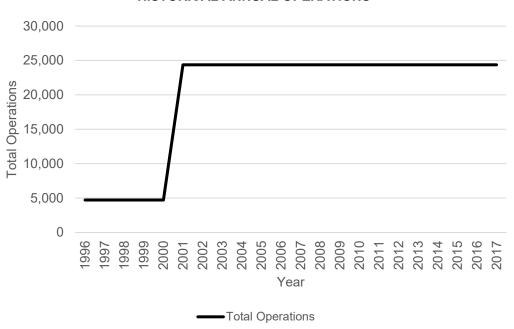


Figure 3-2
HISTORICAL ANNUAL OPERATIONS

3.3 FORECAST OF BASED AIRCRAFT

The forecast of based aircraft at an airport is based on the historical number of aircraft that are "operational and air worthy". This generally means that the aircraft has a current registration and has been flown at least one hour during the calendar year. It also means that the aircraft is typically stored at the airport for most of the year. These historical counts are used to develop a forecast of the number of aircraft that can be anticipated to be based at an airport in the future. These numbers are used to anticipate the number of tie-down positions and hangars that will need to be available to accommodate these aircraft.

3.3.1 Previous Based Aircraft Forecasts

At least three previous forecasts have recently been developed for the Apalachicola Regional Airport. These forecasts result in projections of various numbers of based aircraft and are reviewed in this section.

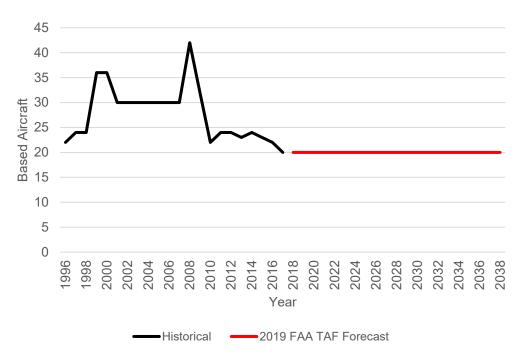
The first forecast of based aircraft previously developed for the Airport was developed by the FAA in their annual Terminal Area Forecast (TAF). This forecast is developed annually by the FAA for each public use airport in the NPIAS and is developed as a means of forecasting the FAA's workload. The 2019 FAA TAF shown in Table 3-3 and Figure 3-3 was released in January of 2019.

Table 3-3
2019 FAA TAF BASED AIRCRAFT FORECAST

Year	Historical	2019 FAA TAF Forecast
		1 Olecast
1997	24	
2002	30	
2007	30	
2012	24	
2017	20	
2018		20
2023		20
2028		20
2038		20
AACG		
1997-2017	-0.9%	
2018-2023		0.0%
2023-2028		0.0%
2028-2038		0.0%
2018-2038		0.0%

Note: TAF = Terminal Area Forecast, AACG = Average Annual Compounded Growth Source; 2019 FAA Terminal Area Forecast

Figure 3-3 2019 FAA TAF FORECAST



The 2019 FAA TAF indicates that the Airport had 20 based aircraft in 2017. The FAA anticipates that the 20 aircraft will remain constant through the year 2038.

The 2006 Airport Layout Plan narrative report, developed from 2004 data, counted 30 based aircraft at the Airport in 2004. It was anticipated, at that time, that the number would increase to 35 based aircraft in 2009 as shown in

Table **3-4** and Figure 3-4, and that the number would grow to 45 based aircraft by the year 2025.

Table 3-4
2006 AIRPORT LAYOUT PLAN PLAN BASED AIRCRAFT FORECAST

Year	Historical Based Aircraft	2006 ALP Forecast Operations
1996	22	
2000	36	
2004	30	
2005		33
2010		36
2015		39
2025		45
AACG	•	
1996-2004	4.0%	
2005-2010		1.8%
2010-2015		1.6%
2015-2025		1.4%
2005-2025		1.6%

Note: ALP = Airport Layout Plan Update, AACG=

Average Annual Compounded Growth Source: 2006 Airport Layout Plan Update

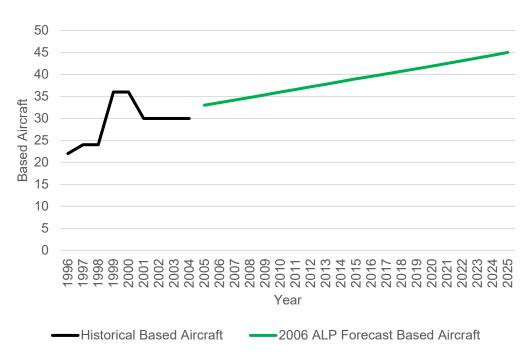


Figure 3-4
2006 AIRPORT LAYOUT PLAN BASED AIRCRAFT FORECAST

In 2015, a forecast for the Apalachicola Regional Airport was developed for the Florida Aviation Database (FAD). The FAD is developed and maintained by the Florida Department of Transportation, in cooperation with the Federal Aviation Administration, Florida Airports Council, and Florida's Public Airport Sponsors, and is the central repository for Florida aviation system data. The Continuing Florida Aviation System Planning Process (CFASPP) was established by the FAA and Florida Department of Transportation (FDOT) to help maintain a viable statewide aviation environment to keep the Florida Aviation System Plan (FASP) in step with constant changes by updating it periodically.

The FAD forecast indicated that the Airport had 24 based aircraft in 2014, that this number would grow to 25 by the year 2020 and would eventually reach 32 aircraft in the year 2035 as shown in Table 3-5 and Figure 3-5.

Table 3-5
2015 FAD BASED AIRCRAFT FORECAST

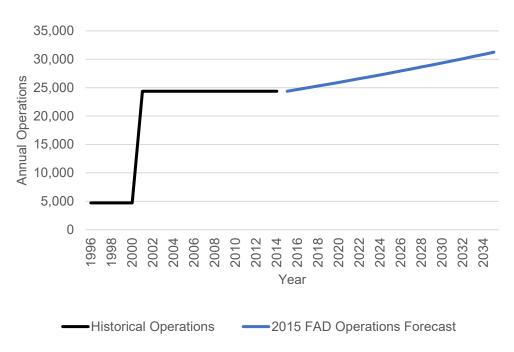
Year	Historical Based Aircraft	2015 FAD Based Aircraft Forecast
1999	36	
2004	30	
2009	32	
2014	24	
2015		23
2020		25
2025		27
2035		32
AACG		
1999-2014	-2.7%	
2015-2020		1.7%
2020-2025		1.6%
2025-2030		1.7%
2030-2035		1.7%

Note: FAD = Florida Aviation Database, AACG = Average

Annual Compounded Growth

Source: 2014 Florida Aviation Database

Figure 3-5
2015 FAD BASED AIRCRAFT FORECAST



A comparison of the three previously developed forecasts is shown in Table 3-6 and Figure 3-6. The 2006 Airport Layout Plan (ALP) is the oldest document and begins from a higher level of based aircraft. The 2015 FAD begins with a lower level of based aircraft. The average annual rate of growth for both the 2006 ALP and the 2015 FAD are very similar. The 2019 FAA TAF begins at a lower level of based aircraft and shows no growth in the number of based aircraft over the next twenty years.

Table 3-6
COMPARISON OF PREVIOUS BASED AIRCRAFT FORECASTS

Year	Historical	2019 FAA TAF	2006 ALP	2015 FAD
1997	24			
2002	30			
2007	30			
2012	24			
2017	20			
2018		20	41	24
2023		20	44	26
2028		20	n/a	28
2038		20	n/a	n/a
AACG				
1997-2017	-0.9%			
2018-2023		0.0%	1.4%	1.6%
2023-2028		0.0%	n/a	1.6%
2028-2038		0.0%	n/a	n/a
2018-2038		0.0%	n/a	n/a

Note: FAD = Florida Aviation Database, ALP = Airport Layout Plan, TAF = Terminal Area Forecast, AACG = Average Annual Compounded Growth

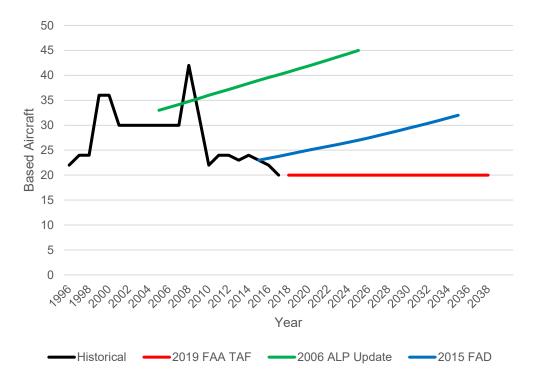


Figure 3-6
COMPARISON OF PREVIOUS BASED AIRCRAFT FORECASTS

3.3.2 Based Aircraft Forecasts

In addition to the previously developed forecasts of based aircraft, this Master Plan Update has also developed seven additional forecasts of based aircraft. The first and second forecasts of based aircraft developed for this Master Plan Update are the Market Share of all aircraft based at general aviation, public-use airports in Florida and the Market Share of all aircraft based at all public-use airports in Florida. The first forecast of these two takes the number of aircraft at Apalachicola Regional Airport and compares it to the total number of aircraft based at all public-use general aviation airports in the State of Florida in the year 2017. This is the Airport's market share of based aircraft. This forecast presumes that the market share of the Airport will remain the same over the planning period. The second of the two forecasts, compares the based aircraft at the Airport with all the public-use airports in Florida, general aviation and commercial. It also presumes that the market share of the Airport will remain the same over the planning period. The results for both forecasts are shown in Table 3-7 and Figure 3-7.

Table 3-7
MARKET SHARE OF FLORIDA BASED AIRCRAFT

Year	Historical Based Aircraft	Historical All Florida Airports	Historical Only Florida GA Airports	AAF Market Share All Florida Airports	AAF Market Share Florida GA Airports
1997	24	11,297	8,684		
2002	30	12,698	9,927		
2007	30	12,790	9,978		
2012	24	10,997	8,521		
2017	20	11,327	8,780		
2018				20	20
2023				22	22
2028				23	23
2038				26	26
Market Shar	re e				
2017		0.18%	0.23%		
AACG					
1997-2017	-0.9%				
2018-2023				1.4%	1.3%
2023-2028				1.3%	1.2%
2028-2038				1.3%	1.2%
2018-2038				1.3%	1.2%

Note: FL = Florida, GA = General Aviation, AAF = Apalachicola Regional Airport, AACG = Average

Annual Compounded Growth Source: 2019 FAA TAF

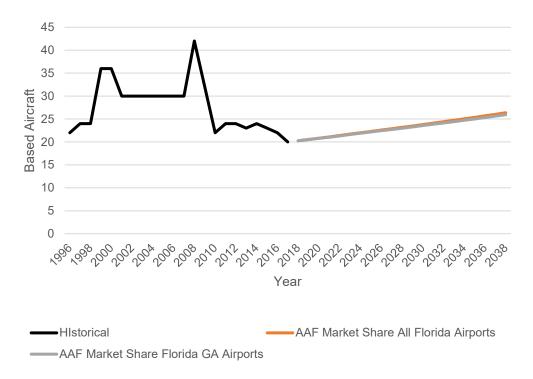


Figure 3-7
MARKET SHARE OF FLORIDA BASED AIRCRAFT

Both Market Share forecasts produce similar results and indicate that the Airport should have 22 based aircraft in 2023, 23 in 2028, and 26 in 2038. This is an overall average annual compounded rate of growth of 1.2 percent for the Florida GA Airports forecast and 1.3 percent for the All-Florida Airports forecast.

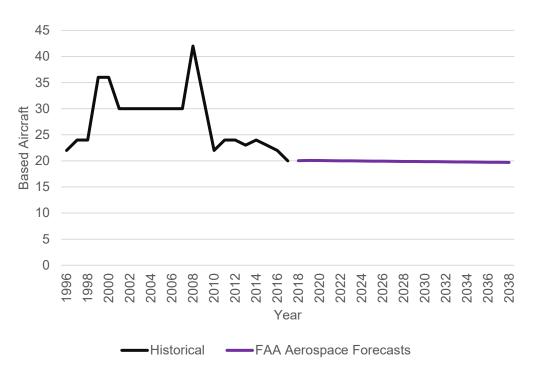
The third forecast is one that was developed using the *FAA Aerospace Forecasts 2019-2039*. The FAA develops these annually and they are much more global in nature than the Terminal Area Forecasts. They have forecasts for commercial operations, aircraft, and enplanements, as well as information on general aviation aircraft, pilots, and operations. The *FAA Aerospace Forecasts 2019-2039*, Table 28, *Active General Aviation and Air Taxi Aircraft* projects that the total number of general aviation aircraft will increase by an average of 0.2 percent per year from 2018-2019 and that the total number will decrease by a negative 0.1 percent from 2019-2039. By applying these percentages to the based aircraft at Apalachicola Regional, the resulting numbers of based aircraft are shown in Table 3-8 and Figure 3-8.

Table 3-8
PROJECTIONS USING FAA AEROSPACE FORECASTS

Year	Historical	FAA Aerospace Forecasts
1997	24	
2002	30	
2007	30	
2012	24	
2017	20	
2018		20
2023		20
2028		20
2038		20
AACG		
1997-2017	-0.9%	
2018-2023		0.0%
2023-2028		-0.1%
2028-2038		-0.1%
2018-2038		-0.1%

Note: AACG = Average Annual Compounded Growth Source: FAA Aerospace Forecasts 2016-2036

Figure 3-8
PROJECTIONS USING FAA AEROSPACE FORECASTS



The fourth through seventh forecasts are based on the historic trend in the number of based aircraft and a trend line analysis. The linear trend methodology examines historical growth trends in the number of based aircraft at the Airport and applies this trend to the current demand levels to produce projections of future activity. Linear trend analysis presumes that the numbers and the factors that have historically affected those numbers will continue to influence demand levels at similar rates over an extended period. Linear trend projections are typically used to provide baseline forecasts that reflect stable market conditions. Over the period of the last 20 years, the Airport has averaged a negative 0.9 percent average annual growth in the number of based aircraft. By projecting this percentage and other shorter historical periods, the results shown in Table 3-9 and Figure 3-9 are obtained.

Table 3-9
HISTORICAL TREND FORECASTS

Year	Historical	Forecast Based on 1996- 2017 Trend	Forecast Based on 2007- 2017 Trend	Forecast Based on 1998-2008 Trend	Forecast Based on 1996-2006 Trend
1997	24				
2002	30				
2007	30				
2012	24				
2017	20				
2018		20	20	21	21
2023		19	16	28	24
2028		19	13	37	28
2038		18	9	65	38
AACG					
1997-2017	-0.9%				
2018-2023		-0.5%	-4.0%	5.8%	3.2%
2023-2028		-0.5%	-4.0%	5.8%	3.2%
2028-2038		-0.5%	-4.0%	5.8%	3.2%
2018-2038		-0.5%	-4.0%	5.8%	3.2%

Note: AACG = Average Annual Compounded Growth

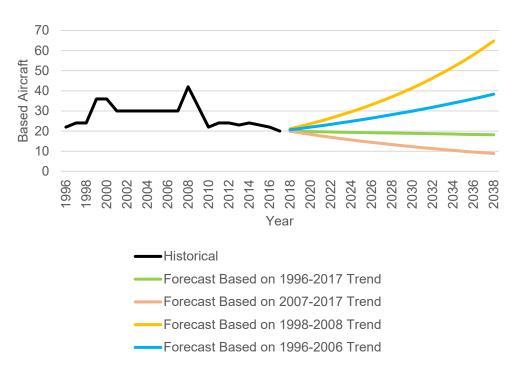


Figure 3-9
HISTORICAL TREND FORECASTS

Using the historical trend methodology for the period from 1996 through 2017, there would be 19 based aircraft at the Airport in 2023. By the year 2038, it is projected that there would be 18 based aircraft. While this rate of growth occurred between the years 1996 and 2017, which is a period of the last 21 years, it is a negative rate of growth.

The historical trend methodology used for the period between 2007 and 2017 would yield 16 based aircraft at the Airport in 2023 and only 9 based aircraft in the year 2038. The negative growth rate of the last ten years is even more steep than that for the last 21 years. It must be recognized, however, that the recession occurred between 2006 and 2008 with many of the effects lasting well after the recession.

By using the period between 1998 and 2008, the result would be 28 based aircraft in 2023 and 65 based aircraft in the year 2038. The period between 1998 and 2008 also contains the recession, but it also contains the period before the recession when the economy was very exuberant. This trend forecast would repeat the exuberant trend.

The period between 1996 and 2006 saw an average annual growth rate of 3.2 percent. If this were projected forward, the result would be 24 based aircraft in 2023 and 38 based aircraft in the year 2038. The trending period is 10 years, and the rate of growth is reasonable.

One other forecasting methodology was also applied. This is called exponential smoothing. Exponential smoothing is used to smooth out the peaks and valleys of a time series to recognize trends more easily. The FAA recognizes exponential smoothing as a viable forecasting methodology. However, it is better suited to short-term forecasting than that of 20 or

more years. While the exponential forecasting methodology was applied to the Apalachicola Regional Airport for both based aircraft and annual operations, the results were not satisfactory and have not been included in this report.

The 2019 FAA TAF was compared to two of the previously developed forecasts, the 2015 FAD and the 2006 ALP forecast, as well as the newly developed forecasts for based aircraft. These are shown in Table 3-12 and Figure 3-12.

Table 3-10 COMPARISON OF BASED AIRCRAFT FORECASTS

Year	Historical	2019 FAA TAF	2006 ALP	2015 FAD	AAF Market Share All Florida Airports	AAF Market Share Florida GA Airports	FAA Aerospace Forecasts	Forecast Based on 1996- 2017 Trend	Forecast Based on 2007- 2017 Trend	Forecast Based on 1998- 2008 Trend	Forecast Based on 1996- 2006 Trend
1997	24										
2002	30										
2007	30										
2012	24										
2017	20										
2018		20	41	24	20	20	20	20	20	21	21
2023		20	44	26	22	22	20	19	16	28	24
2028		20	n/a	28	23	23	20	19	13	37	28
2038		20	n/a	n/a	26	26	20	18	9	65	38
AACG											
1997-2017	-0.9%	_				_					
2018-2023		0.0%	1.4%	1.6%	1.7%	1.7%	0.0%	-0.5%	-4.0%	5.8%	3.2%
2023-2028		0.0%	n/a	1.6%	0.9%	0.9%	-0.1%	-0.5%	-4.0%	5.8%	3.2%
2028-2038		0.0%	n/a	n/a	1.2%	1.2%	-0.1%	-0.5%	-4.0%	5.8%	3.2%
2018-2038		0.0%	n/a	n/a	1.3%	1.3%	-0.1%	-0.5%	-4.0%	5.8%	3.2%

Note 1: FAD = Florida Aviation Database, ALP = Airport Layout Plan, FL = Florida, GA = General Aviation, n/a = Not available, AACG = Average Annual Compounded Growth

Note 2: For the forecasts developed prior to this Master Plan Update, the based aircraft numbers have been interpolated to reflect the years shown in this table.

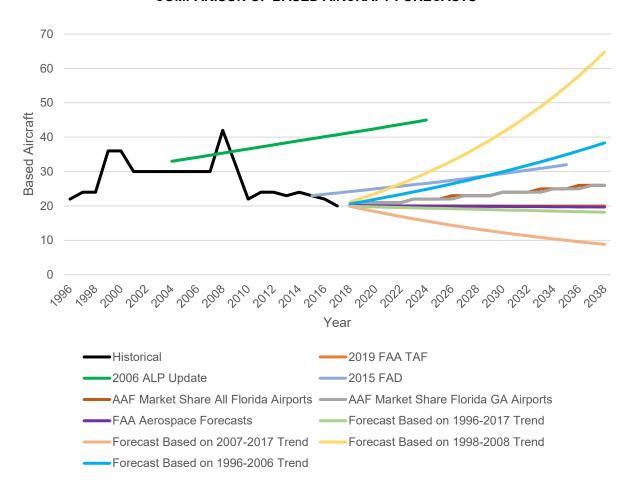


Figure 3-10
COMPARISON OF BASED AIRCRAFT FORECASTS

3.3.3 Preferred Based Aircraft Forecast

After comparing the ten forecasts, it was determined that the results achieved by applying the two market share forecasts is the preferred forecast. The two forecasts yielded virtually the same results. They both show moderate sustainable growth over the forecast period.

The FAA requires that locally developed forecasts be consistent with the FAA TAF. The FAA considers a forecast to be consistent with the TAF if "forecasts differ by less than 10 percent in the 5-year forecast period, and 15 percent in the 10-year period." In a June 2008 Memorandum, the FAA states that if a forecast is not consistent with the TAF, the results of the forecast "cannot be used in FAA decision making." The 2019 FAA TAF predicts that there will be 20 based aircraft at the Airport in 2023 and 20 based aircraft in 2028. Thus, the allowable range of based aircraft would be between 18 and 22 in the year 2023 and between 17 and 23 in the year 2028. The 2015 FAD, the 2006 ALP, and the three of the four Trend forecasts each fall outside of these ranges. Of the remaining forecasts, the two Market Share forecasts result in

the highest number of based aircraft. The selected preferred forecast projects a steady average annual compounded growth of 1.3 percent per year, as shown in Table 3-11 and Figure 3-11.

Table 3-11
PREFERRED BASED AIRCRAFT FORECAST

Year	Historical	Preferred Forecast
1997	24	
2002	30	
2007	30	
2012	24	
2017	20	
2018		20
2023		22
2028		23
2038		26
AACG		
1997-2017	-0.9%	
2018-2023		1.7%
2023-2028		0.9%
2028-2038		1.2%
2018-2038		1.3%

Note: AACG = Average Annual Compounded Growth

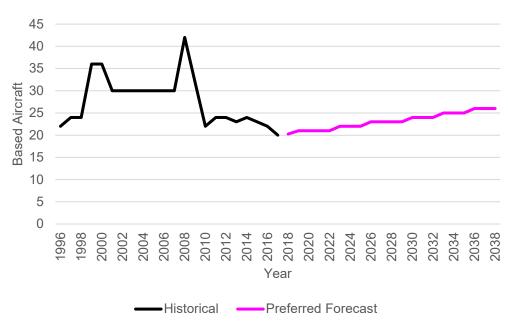


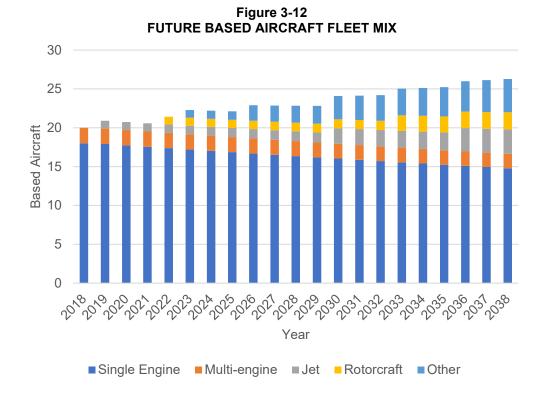
Figure 3-11
PREFERRED BASED AIRCRAFT FORECAST

3.3.4 Based Aircraft Fleet Mix Forecast

The forecast of based aircraft fleet mix is based on the preferred based aircraft forecast. It is then divided by the number of single engine aircraft, multiple engine aircraft, jets, rotorcraft, and "other" types of aircraft that are likely to be based at the Airport in any given year. The "other" classification of aircraft could include ultra-light aircraft, powered parachutes, gliders, balloons, and other light sport or experimental aircraft. The various percentages of these types of aircraft are based on the average annual rate of growth projected in each category by the *FAA Aerospace Forecasts 2019-2039*. The resulting fleet mix is shown in Table 3-12 and Figure 3-12.

Single Multi-Year Jet Rotorcraft Other Total Engine engine 2018 18 2 0 0 0 20 2023 17 2 1 1 1 22 2028 2 1 2 23 16 1 2 2033 16 2 2 3 25 2038 15 2 3 2 4 26 Percentage of Based Aircraft 0.0% 0.0% 0.0% 100.0% 2018 90.0% 10.0% 2023 77.2% 8.8% 5.0% 4.6% 4.5% 100.0% 2028 71.6% 8.4% 5.5% 4.9% 9.6% 100.0% 2033 62.1% 7.5% 8.6% 8.0% 13.7% 100.0% 56.3% 7.0% 16.4% 2038 12.0% 8.3% 100.0%

Table 3-12
FUTURE BASED AIRCRAFT FLEET MIX



The percentage of single-engine aircraft operating in the United States and at the Airport is projected to decline over the next 20 years. In 2018, there were reportedly 20 based aircraft on the Airport. Of these, 18 were single-engine aircraft or 90.0 percent of the total based aircraft. The Airport is anticipated to have 15 single-engine based aircraft in the year 2038, which will represent only 56.3 percent of the total based aircraft.

Multiple-engine aircraft based at the Airport are projected to remain steady over the same period from the 2 in 2018 to 2 in the year 2038. The percentage of multiple-engine aircraft in the fleet mix will fall from 10.0 percent in 2018 to 7.0 percent in 2038.

There are currently no jets based at the Airport. This number is projected to increase to 3 in the year 2038. The percentage of jets in the fleet mix is anticipated to increase from the current zero to 12 percent in 2038.

There was no rotorcraft based at the Airport in 2018. This number is projected to increase to 2 in 2038. The rotorcraft of 2018 represented zero percent of the fleet mix. This is anticipated to rise to 8.3 percent of the fleet mix in 2038.

There are currently no ultralights based at the Airport. The number of aircraft within the "other" category is anticipated to increase to 4 by 2038. The percentage of "other" aircraft is expected to rise from the current zero percent to 16.4 percent in 2038. This number will probably not be

exclusively ultralights but could also include other aircraft in this category such as gliders, balloons, light sport, or experimental aircraft.

3.4 ANNUAL OPERATIONS FORECAST

Apalachicola Regional Airport is classified as a general aviation airport. General aviation activities include all segments of the aviation industry except those conducted by commercial airline passenger and cargo carriers. Typical activities include the training of new pilots, medical flights, aerial surveys, recreational flying, law enforcement, spraying services, sightseeing, aerial photography, and business and personal travel.

The FAA defines an operation to be either the takeoff or the landing of a single aircraft. A touch and go training procedure would be considered two operations. Operations are further divided into the categories of local or itinerant. Local operations are those performed by aircraft that remain in the airport traffic pattern or are within sight of the local airport. This area is considered to cover a 20-nautical mile radius of the airfield. Local operations are often associated with training activities and flight instruction. At the Apalachicola Regional Airport, recreational flying makes up most of the local operations.

Itinerant operations are arrivals or departures other than local operations performed by either based or itinerant aircraft. Itinerant general aviation operations include business or personal operations to or from another airport. However, itinerant operations may also include law enforcement or medical flights that operate outside of the local limits of an airport.

3.4.1 Forecast of Annual Operations

Forecasts of annual operations allow the Airport to predict the number of operations that are likely to occur at the Airport over the next 20 years. This provides the Airport with the basis for deciding both the level of capital improvements and the timing for the necessary investments.

3.4.1.1 Previous Annual Operations Forecasts

Three forecasts of annual operations at the Apalachicola Regional Airport were completed prior to the initiation of this Master Plan Update. These include the 2019 TAF forecast developed by the FAA, the 2006 Airport Layout Plan Update, and the 2015 Florida Aviation Database.

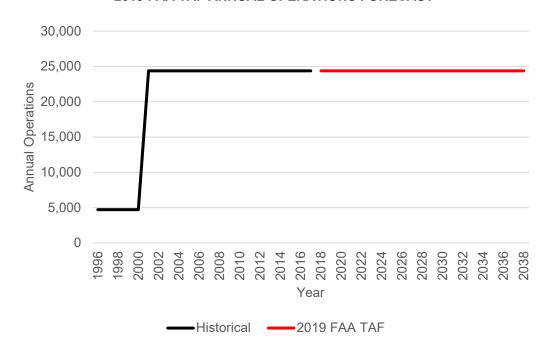
Not only does the 2019 FAA TAF give historical data and forecast projections for based aircraft, it also provides the same information for annual operations. Further, the 2019 FAA TAF breaks the annual operations into local and itinerant traffic. The latest FAA TAF was published in January 2019 and is shown in Table 3-13Table 3-13 and Figure 3-13.

Table 3-13
2019 FAA TAF ANNUAL OPERATIONS FORECAST

		2019 FAA TAF
Year	Historical	Forecast
1997	4,720	
2002	24,375	
2007	24,375	
2012	24,375	
2017	24,375	
2018		24,375
2023		24,375
2028		24,375
2038		24,375
AACG		
1997-2017	8.6%	
2018-2023		0.0%
2023-2028		0.0%
2028-2038		0.0%
2018-2038		0.0%

Note: TAF = Terminal Area Forecast, AACG = Average Annual Compounded Growth Source: 2019 FAA Terminal Area Forecast

Figure 3-13
2019 FAA TAF ANNUAL OPERATIONS FORECAST



The 2019 FAA TAF predicts that the annual operations at the Airport will remain at the same level of 24,375 for the next twenty years as it has been reported since 2001. This is an overall average annual compounded growth rate of zero percent per year.

The 2006 Airport Layout Plan developed a forecast that can be seen in Table 3-14 and Figure 3-14.

Table 3-14
2006 AIRPORT LAYOUT PLAN ANNUAL OPERATIONS FORECAST

Year	Historical Operations	2006 ALP Forecast Operations
1996	4,720	
2000	4,720	
2004	24,375	
2005		24,680
2010		26,261
2015		27,944
2025		31,640
AACG		
1996-2004	22.8%	
2005-2010		1.2%
2010-2015		1.3%
2015-2025		1.2%
2005-2025		1.2%

Note: ALP = Airport Layout Plan, AACG = Average Annual Compounded Growth Source: 2006 Apalachicola Regional Airport

Airport Layout Plan

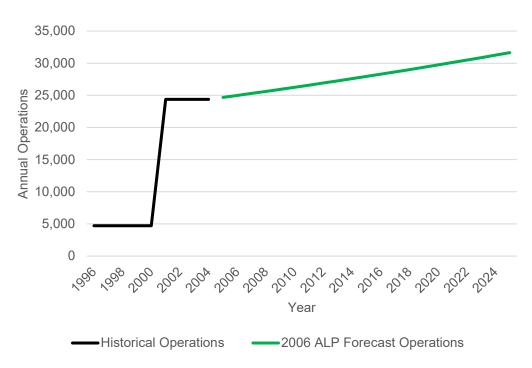


Figure 3-14
2006 AIRPORT LAYOUT PLAN ANNUAL OPERATIONS FORECAST

The 2006 Airport Layout Plan reported that there were 24,375 operations at the Airport in 2004. The Airport Layout Plan projected that there would be 24,680 annual operations in 2005, and 31,640 in the year 2025. This projection represents an average annual compounded growth rate of 1.2 percent.

The Florida Aviation Database (FAD) developed a forecast of annual operations for the Apalachicola Regional Airport in 2015. This is shown in Table 3-15 and Figure 3-15.

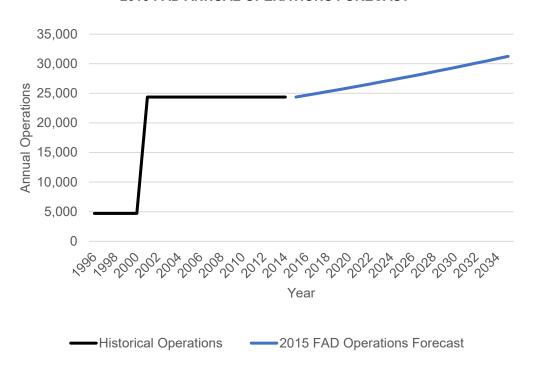
Table 3-15
2015 FAD ANNUAL OPERATIONS FORECAST

Year	Historical Operations	2015 FAD Operations Forecast
1999	4,720	
2004	24,375	
2009	24,375	
2014	24,375	
2015		24,375
2020		25,937
2025		27,599
2035		31,250
AACG		
1999-2014	11.6%	
2015-2020		1.2%
2020-2025		1.2%
2025-2035		1.3%
2015-2035		1.3%

Note: FAD = Florida Aviation Database, AACG = Average Annual Compounded Growth

Source: Florida Aviation Database

Figure 3-15
2015 FAD ANNUAL OPERATIONS FORECAST



The FAD forecasts indicated that the 24,375 annual operations in 2014 would grow to 25,937 in the year 2020 and to 27,599 annual operations in the year 2025. Finally, the annual operations would climb to 31,250 in the year 2035. This represents an average annual compounded growth rate of 1.3 percent per year for the planning period.

The three previously developed forecasts of annual operations for the Airport were compared. These are shown in Table 3-16 and Figure 3-16.

Table 3-16
COMPARISON OF PREVIOUSLY DEVELOPED FORECASTS OF ANNUAL OPERATIONS

Year	Historical	2019 FAA TAF	2006 ALP Update	2015 FAD
1997	4,720			
2002	24,375			
2007	24,375			
2012	24,375			
2017	24,375			
2018		24,375	29,005	25,301
2023		24,375	30,864	26,922
2028		24,375	n/a	28,647
2038		24,375	n/a	n/a
AACG				
1997-2017	8.6%			
2018-2023		0.0%	1.2%	1.2%
2023-2028		0.0%	n/a	1.3%
2028-2038		0.0%	n/a	n/a
2018-2038		0.0%	n/a	n/a

Note: ALP = Airport Layout Plan, FAD = Florida Aviation Database, TAF = Terminal Area Forecast

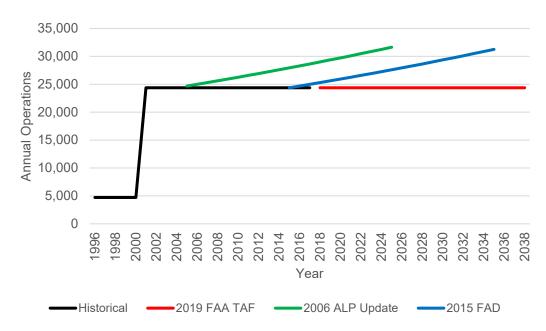


Figure 3-16
COMPARISON OF PREVIOUSLY DEVELOPED FORECASTS OF ANNUAL OPERATIONS

The 2006 Airport Layout Plan forecast, which is the oldest of the forecasts, began at the same level as the historical forecasts and ascended at a steady 1.2 percent average annual compounded rate of growth resulting in 30,864 annual operations in 2023. The 2015 FAD forecast predicted the same rate of growth of 1.2 percent per year resulting 28,647 annual operations by the year 2028. The 2019 FAA TAF begins at the same level of historic annual operations and has predicted that the Airport would continue to report the same number of operations per year, 24,375, for the next twenty years.

3.4.1.2 Annual Operations Forecast

This Master Plan Update developed four additional forecasts of annual operations. The first and second forecasts use the Florida General Aviation Market Share of annual operations forecast and the Total Florida Market Share of annual operations forecast. These forecasts take the annual operations at Apalachicola Regional Airport and compares them to the total annual operations at all general aviation airports in the State of Florida in the year 2017 and all the annual operations at <u>all</u> the public-use airports in the State of Florida in 2017 respectively. These forecasts presume that the market share of the Airport will remain the same over the planning period with the results shown in Table 3-17 and Figure 3-17.

Table 3-17
MARKET SHARE OF FLORIDA OPERATIONS

Year	Historical Operations	Historical All Florida Airports	Historical Only Florida GA Airports	AAF Market Share All Florida Airports	AAF Market Share Florida GA Airports
1997	4,720	8,290,543	4,871,276		
2002	24,375	9,293,217	5,972,102		
2007	24,375	8,851,519	5,588,310		
2012	24,375	7,608,241	4,922,111		
2017	24,375	8,149,646	5,314,242		
2018				25,639	25,692
2023				27,225	27,048
2028				28,452	27,962
2038				31,218	30,018
Market Share					
2017		0.30%	0.46%		
AACG					
1997-2017	8.6%				
2018-2023				1.2%	1.0%
2023-2028	_		· ·	0.9%	0.7%
2028-2038				0.9%	0.7%
2018-2038				1.0%	0.8%

Note: FL = Florida, GA = General Aviation, AACG = Average Annual Compounded

Growth

Source: 2019 FAA Terminal Area Forecast

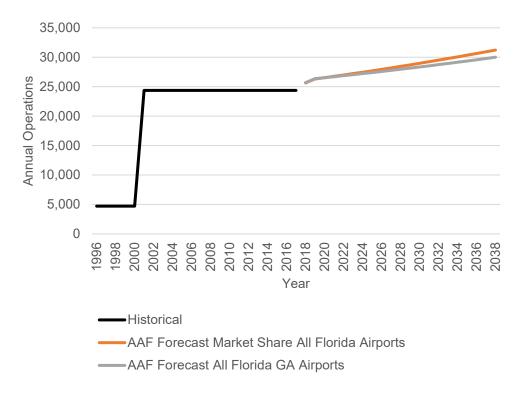


Figure 3-17
MARKET SHARE OF FLORIDA ANNUAL OPERATIONS

Using the Florida General Aviation Market Share, the results would be 27,048 annual operations in the year 2023; 27,962 in the year 2028; and 30,018 the year 2038. This would be an average annual compounded growth rate of 0.8 percent.

Using the Total Florida Aviation Market Share, the results would be 27,225 annual operations in the year 2023; 28,452 in the year 2028; and 31,218 in the year 2038. This would be an average annual compounded growth rate of 1.0 percent.

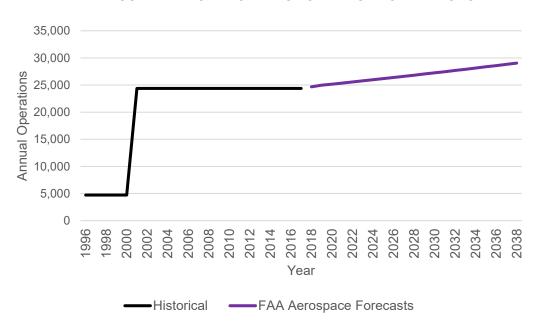
The third forecast is one that was developed using the *FAA Aerospace Forecasts 2019-2039* like that done for the based aircraft. The *FAA Aerospace Forecasts 2019-2039*, Table 29, *Active General Aviation and Air Taxi Hours Flown* projects that the total number of general aviation hours flown will increase by an average of 1.2 percent per year from 2018 through 2019, and by 0.8 percent from 2019 through 2039. By applying these percentages, the resulting number of annual operations are shown in Table 3-18 and Figure 3-18.

Table 3-18
FAA AEROSPACE BASED FORECAST OF ANNUAL OPERATIONS

Year	Historical	FAA Aerospace Forecasts
1997	4,720	
2002	24,375	
2007	24,375	
2012	24,375	
2017	24,375	
2018		24,668
2023		25,772
2028		26,819
2038		29,044
AACG		
1997-2017	8.6%	
2018-2023		0.9%
2023-2028		0.8%
2028-2038		0.8%
2018-2038		0.8%

Note: AACG = Average Annual Compounded Growth Source: FAA Aerospace Forecasts 2016-2036

Figure 3-18
FAA AEROSPACE BASED FORECAST OF ANNUAL OPERATIONS



The fourth forecasting methodology used to develop a forecast of annual operations is one that is based on the historic trend in the number of annual operations and a trend line analysis like the ones that were done for based aircraft. The linear trend methodology examines historical growth trends of at least ten years in the number of annual operation and applies this trend to the current demand levels to produce projections of future activity. Over the period of the last 21 years, the Airport has averaged an 8.6 percent annual growth in the number of annual operations. By projecting this percentage, as well as those of the period between 2007 and 2017, the results shown in Table 3-19 and Figure 3-19 are obtained.

Table 3-19
HISTORICAL TREND FORECAST OF ANNUAL OPERATIONS

Year	Historical	Forecast Based on 1996-2017 Trend	Forecast Based on 2007-2017 Trend
1997	4,720		
2002	24,375		
2007	24,375		
2012	24,375		
2017	24,375		
2018		26,357	24,375
2023		38,964	24,375
2028		57,600	24,375
2038		125,877	24,375
AACG			
1997-2017	8.6%		
2018-2023		8.1%	0.0%
2023-2028		8.1%	0.0%
2028-2038		8.1%	0.0%
2018-2038		8.1%	0.0%

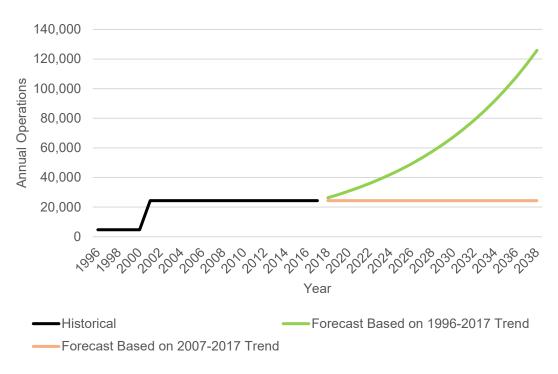


Figure 3-19
HISTORICAL TREND FORECAST OF ANNUAL OPERATIONS

The period between 1997 and 2017 was a period where the annual operations were reported to have risen from 4,720 annual operations in 1996 to 24,375 in 2017, a period of 21 years. The average annual compounded growth rate was 8.6 percent during this period, which is very high. When this is applied to the forecast of future annual enplanements, the result is 38,964 in 2023 and 125,877 annual operations in 2038. For an airport that has been reporting a flat line number of 24,375 annual operations for the last 16 years, there is no reason to expect that this forecast is viable. This forecast will be dropped from further consideration.

The period between 2007 and 2017, which encompasses the last ten years of activity at the Airport, shows a consistent reporting of 24,375 annual operations. This represents zero percent in average annual compounded growth. The results for the forecasts based on this activity show the same consistent 24,375 annual operations for the next twenty years.

The 2019 FAA TAF was compared to the previously developed forecasts; the 2015 FAD Forecast and the 2006 Airport Layout Plan. It was also compared to the newly developed forecasts: the FL GA Market Share, the Total FL Market Share, the FAA Aerospace, and the Historical Trends forecasts. These are shown in Table 3-20 and Figure 3-20.

Table 3-20 COMPARISON OF ANNUAL OPERATIONS FORECASTS

Year	Historical	2019 FAA TAF	2006 ALP Update	2015 FAD	AAF Market Share All Florida Airports	AAF Market Share Florida GA Airports	FAA Aerospace Forecasts	Forecast Based on 2007- 2017 Trend
1997	4,720							
2002	24,375							
2007	24,375							
2012	24,375							
2017	24,375							
2018		24,375	29,005	25,301	25,639	25,692	24,668	24,375
2023		24,375	30,864	26,922	27,225	27,048	25,772	24,375
2028		24,375	n/a	28,647	28,452	27,962	26,819	24,375
2038		24,375	n/a	n/a	31,218	30,018	29,044	24,375
AACG								
1997-2017	8.6%							
2018-2023		0.0%	1.2%	1.2%	1.2%	1.0%	0.9%	0.0%
2023-2028		0.0%	n/a	1.3%	0.9%	0.7%	0.8%	0.0%
2028-2038		0.0%	n/a	n/a	0.9%	0.7%	0.8%	0.0%
2018-2038		0.0%	n/a	n/a	1.0%	0.8%	0.8%	0.0%

Note 1: FAD = Florida Aviation Database, ALP = Airport Layout Plan, FL = Florida, GA = General Aviation, TAF = Terminal Area Forecast, AACG = Average Annual Compounded Growth

Note 2: For the forecasts developed prior to this Master Plan Update, the annual operations numbers have been interpolated to reflect the years shown in this table.

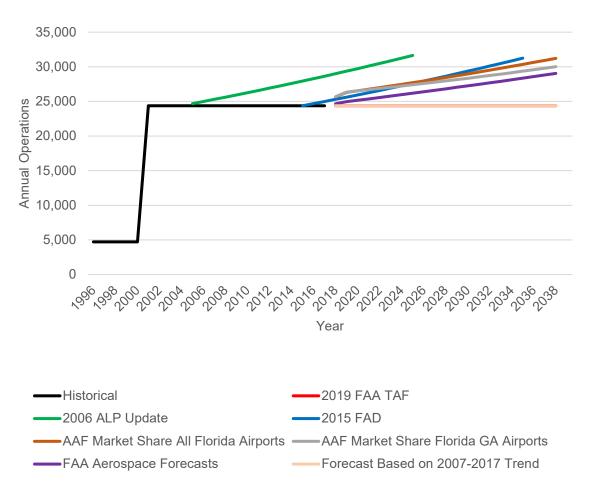


Figure 3-20 COMPARISON OF CURRENT FORECASTS OF ANNUAL OPERATIONS

3.4.1.3 Preferred Annual Operations Forecast

After comparing the six remaining forecasts, it was determined that the 2019-2039 FAA Aerospace Forecast resulted in the highest number of annual operations, while still being consistent with the 2017 FAA TAF. A forecast is consistent with the FAA TAF if "forecasts differ by less than 10 percent in the 5-year forecast period, and 15 percent in the 10-year period."

In a June 2008 Memorandum, the FAA states that if a forecast is not consistent with the TAF, the results of the forecast "cannot be used in FAA decision making." The 2019 FAA TAF forecasts that the Airport will have 24,375 annual operations in 2023 and 24,375 annual operations in 2028. Thus, the allowable ranges would be between 21,938 and 26,813 in the year 2023, and between 20,719 and 28,031 in the year 2028. This would eliminate the 2006 ALP Update, the 2015 FAD, and both Market Share forecasts. The two remaining are the 2019-2039 FAA Aerospace forecast and the forecast based on the 2007-2017 Trend. The 2019-2039 FAA Aerospace Forecast has the highest number of forecast annual operations. It projects a

steady 0.8 percent average annual compounded growth throughout the 20 years of the planning period as shown in Table 3-21 and Figure 3-21.

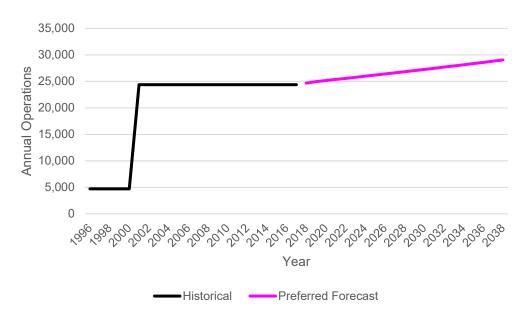
Table 3-21
PREFERRED ANNUAL OPERATIONS FORECAST

EIGHED MINIONE OF EIGHTONOT ONE					
Year	Historical	Preferred Forecast			
1997	4,720				
2002	24,375				
2007	24,375				
2012	24,375				
2017	24,375				
2018		24,668			
2023		25,772			
2028		26,819			
2038		29,044			
AACG					
1997-2017	8.6%				
2018-2023		0.9%			
2023-2028		0.8%			
2028-2038		0.8%			
2018-2038		0.8%			

Note: AACG = Average Annual Compounded

Growth

Figure 3-21
PREFERRED ANNUAL OPERATIONS FORECAST



3.4.2 Local Versus Itinerant Operations Distribution Forecast

The historical split between local and itinerant aircraft operations as recorded by the 2019 FAA TAF has varied somewhat over the years. In the first five years, when the total annual operations were 4,720 each year, the split was reported to be 32 percent local to 68 percent itinerant. In the year 2001, when the annual operations were reported to have jumped to 24,375, the split between local and itinerant also shifted. The local operations are now being reported annually as being 62 percent of the operations while 38 are being reported as Itinerant. The average split of local to itinerant between the years 1996 and 2017 has been 54.8 percent local and 45.2 percent itinerant. This split has been distributed across the preferred forecast for annual operations with the results as shown in Table 3-22 and Figure 3-22.

Table 3-22
LOCAL VERSUS ITINERANT OPERATIONS DISTRIBUTION

	Historical		Fore	ecast	
Year	Local	Itinerant	Local	Itinerant	
1997	1,500	3,220			
2002	15,000	9,375			
2007	15,000	9,375			
2012	15,000	9,375			
2017	15,000	9,375			
2018			13,512	11,156	
2023			14,117	11,655	
2028			14,690	12,129	
2038			15,909	13,135	

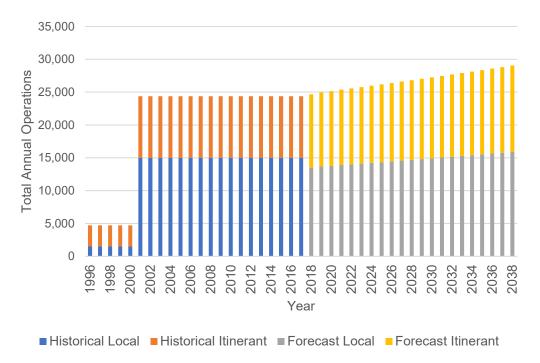


Figure 3-22
LOCAL VERSUS ITINERANT OPERATIONS DISTRIBUTION

3.4.3 Commercial Operations

In addition to local and itinerant, operations are also divided between commercial operations, military operations, and general aviation operations. Commercial operations include regularly scheduled passenger services, air taxi, charter, and air cargo services. Apalachicola Regional Airport has had no commercial operations since 1996. The 2019 FAA TAF projects that there will be no commercial operations at the Airport throughout the planning period. There is no evidence supporting an alternative forecast and no additional projections have been made to include commercial operations at the Airport.

3.4.4 Military Operations

Military operations are those officially carried out by a branch of the U.S. military services. The 2019 FAA TAF indicates that the Airport has not seen any local military operations at the Airport since the year since 1996. Between 1996 and 2000, there were 220 itinerant military operations reported. In 2001, the number shifted to 147 annual military operations. The 2019 FAA TAF projects that the itinerant military operations will remain constant at 147 operations throughout the planning period. There is no evidence supporting an alternative forecast and no additional projections have been made to include military operations at the Airport. The remainder of the operations at the Airport are general aviation operations.

3.4.5 <u>Airport Operational Fleet Mix</u>

The forecast of the split of operations based on the forecast fleet mix is commonly called the operational fleet mix. This forecast is based on the based aircraft fleet mix and the preferred forecast of annual operations, while also considering itinerant operations. The various growth percentages of these types of aircraft operations are based on the average annual rate of growth projected in each aircraft operations category by the *FAA Aerospace Forecasts 2019-20396*. The resulting operational fleet mix is shown in Table 3-23 and Figure 3-23.

Table 3-23
OPERATIONAL FLEET MIX

Year	Single Engine	Multi- engine	Jet	Rotorcraft	Other	Total
2018	13,863	5,624	5,082	99	-	24,668
2023	14,291	5,524	5,777	108	72	25,772
2028	14,628	5,414	6,568	118	90	26,819
2033	14,894	5,307	7,468	129	113	27,910
2038	15,069	5,201	8,491	141	141	29,044
Percentag	ge of Operation	ons				
2018	56.2%	22.8%	20.6%	0.4%	0.0%	100.0%
2023	55.5%	21.4%	22.4%	0.4%	0.3%	100.0%
2028	54.5%	20.2%	24.5%	0.4%	0.3%	100.0%
2033	53.4%	19.0%	26.8%	0.5%	0.4%	100.0%
2038	51.9%	17.9%	29.2%	0.5%	0.5%	100.0%

Note: Rows may not equal totals shown due to rounding

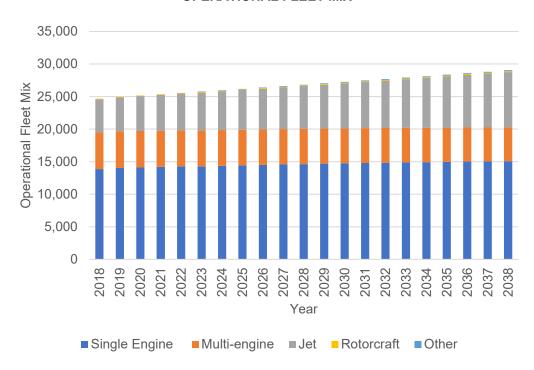


Figure 3-23
OPERATIONAL FLEET MIX

Except for single engine and multi-engine aircraft, each category of aircraft is anticipated to increase the annual number of operations at the Airport over the next twenty years. Jets, rotorcraft, and "other" aircraft are anticipated to increase their respective number of operations at the Airport. The percentage of single-engine and multi-engine aircraft operations are forecast to decline as the other sectors increase. Single engine aircraft will continue to perform most of the operations at the Airport throughout the planning period.

3.5 PEAKING ACTIVITY

Peak activity forecasts are used to size facilities such as aprons and terminals. Typically, aircraft do not land and take off consistently from one hour to the next or even from one month to the next. The peak activity forecasts typically projected are the peak month, the average day of the peak month, and the peak hour of the average day. This is not intended to forecast the busiest hour of the busiest day of the year. If a facility were designed to accommodate the busiest day of the busiest month of the year, the facility would be underutilized most the year. By designing to the peak hour of the average day of the peak month, the result is a facility that is comfortably utilized about 85 percent of the year. There will be times when the facility is underutilized, and there will also be times when it is crowded for short periods.

The Airport typically has the highest levels of activity during the months beginning in March and ending in June. This is largely due to the mild weather in Florida during these months and before the hurricane season becomes active. It was estimated that approximately 13 percent of

the Airport's annual activity would occur during the peak month due to this activity. The 13 percent of annual operations was used to determine the peak month activities through the year 2038 as shown in Table 3-24.

Table 3-24
PROJECTED PEAK OPERATIONS

Year	Annual Operations	Peak Month Operations	Average Day Operations	Peak Hour
2017	24,375	1,875		
2018	24,668	1,898	63	6
2023	25,772	1,982	66	6
2028	26,819	2,063	69	7
2038	29,044	2,234	74	7

To achieve the average day peak month activity, the peak month activities would be divided by the number of days in the month. Each of the peak month activity numbers have been divided by 30. An estimate of a tenth of the average day operations was used to calculate the peak hour operations.

3.6 CRITICAL AIRCRAFT

The Airport Reference Code identified for all three runways at Apalachicola Regional Airport in the approved 2006 Airport Layout Plan was B-II. It also showed the Falcon 50 as the critical aircraft for Runway 14/32 and the King Air as the critical aircraft for Runways 6/24 and 18/36. The Falcon 50 has an approach speed of 113 knots, a wingspan of 61.88 feet, a tail height of 22.09 feet, and a Maximum Take Off Weight (MTOW) of 40,780 pounds. This brings the design aircraft for Runway 14/32 solidly into the B-II category.

Runways 6/24 and 18/36 were assigned a Runway Design Code of B-II and the critical aircraft of the King Air. The King Air 200 has an approach speed of 98 knots, a wingspan of 54.5 feet, a tail height of 15 feet, and an MTOW of 11,800 pounds. The Beechcraft King Air 200 qualifies as a B-II aircraft.

The FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, defines the critical aircraft at an airport as "the most demanding aircraft type or grouping of aircraft with similar characteristics, that make regular use of an airport. Regular use is defined by the FAA as 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. The Advisory Circular further states that Critical Aircraft, Design Aircraft and Critical Design Aircraft are synonymous.

To determine the current critical aircraft at this non-towered airport. The FAA's data for Traffic Flow Management System Counts (TFMSC) was downloaded for the Airport for the period of April 2018 through March 2019. These counts are for those IFR operations where a flight plan was filed for the operation and the Airport was a part of that operation either as an origin or as a

destination, or where the operation was caught on radar. The TFMSC does not capture VFR flights. Not all operations have flight plans filed. However, a significant number do, especially for operations of larger aircraft, and these operations can be verified. Further, the TFMSC tracks the aircraft model, so it can be determined what aircraft are flying into and out of the Airport. The operations logged into the TFMSC database for the Apalachicola Regional Airport during the year-long period are summarized in Table 5-6. The full output from the TFMSC can be found as Appendix D.

Table 3-25
TFMSC ANNUAL OPERATIONS

Aircraft	Physical Class	Total TFMSC Operations	Total Naturalized TFMSC Operations
A-I			
BE33 - Beech Bonanza 33	Piston	32	32
BE35 - Beech Bonanza 35	Piston	27	27
BE36 - Beech Bonanza 36	Piston	142	142
BE55 - Beech Baron 55	Piston	111	111
BE76 - Beech 76 Duchess	Piston	3	3
BL17 - Bellanca Viking	Piston	3	3
C172 - Cessna Skyhawk 172/Cutlass	Piston	44	44
C175 - Cessna 175 Skylark	Piston	1	1
C177 - Cessna 177 Cardinal	Piston	1	1
C180 - Cessna 180	Piston	7	7
C182 - Cessna Skylane 182	Piston	72	72
C185 - Cessna Skywagon 185	Piston	3	3
C210 - Cessna 210 Centurion	Piston	26	26
C240 - Cessna TTx Model T240	Piston	2	2
C310 - Cessna 310	Piston	17	17
C77R - Cessna Cardinal RG	Piston	5	5
C82R - Cessna Skylane RG	Piston	4	4
COL3 - Lancair LC-40 Columbia 400	Piston	6	6
COL4 - Lancair LC-41 Columbia 400	Piston	2	2
DA40 - Diamond Star DA40	Piston	8	8
DA42 - Diamond Twin Star	Piston	62	62
EA50 - Eclipse 500	Jet	13	14
EPIC - Dynasty	Turbine	53	62
KODI - Quest Kodiak	Turbine	3	6
M20 - Mooney M-20C Ranger	Piston	1	1
M20P - Mooney M-20C Ranger	Piston	18	18

M20J - Mooney M-205	Piston	1	1
M20T - Turbo Mooney M20K	Piston	12	12
MO20 - Mooney M-20	Piston	12	12
MU2 - Mitsubishi Marquise/Solitaire	Turbine	2	2
P210 - Riley Super P210	Piston	11	11
P28A - Piper Cherokee	Piston	31	31
P28B - Piper Turbo Dakota	Piston	1	1
P28R - Cherokee Arrow/Turbo	Piston	5	5
P28S - Airborne Piper Turbo Arrow 3	Piston	2	2
P32R - Piper 32	Piston	19	19
P46T - Piper Malibu Meridian	Turbine	17	22
PA23 - Piper PA-23	Piston	8	8
PA24 - Piper PA-24	Piston	9	9
PA27 - Piper Aztec	Piston	5	5
PA28 - Piper Cherokee	Piston	1	1
PA30 - Piper PA-30	Piston	2	2
PA31 - Piper Navajo PA-31	Piston	5	5
PA32 - Piper Cherokee Six	Piston	57	57
PA34 - Piper PA-34 Seneca	Piston	2	2
PA46 - Piper Malibu	Piston	36	36
RV7 - Experimental RV-7	Piston	2	2
RV10 - Experimental	Piston	4	4
S22T - Cirrus SR-22 Turbo	Piston	4	4
SF50 - Cirrus Vision SF50	Jet	2	2
SR20 - Cirrus SR-20	Piston	8	8
SR22 - Cirrus SR 22	Piston	275	275
T210 - Cessna T210M	Piston	1	1
TBM7 - Socata TBM-7	Turbine	2	2
TBM8 - Socata TBM-850	Turbine	3	4
TBM9 - Socata TBM	Turbine	4	4
		1,198	1,217
A-II		ı	
PC12 - Pilatus PC-12	Turbine	31	34
		31	34
B-I			
AC90 - Gulfstream Commander	Turbine	3	4
AEST - Piper Aero Star	Piston	2	2
BE10 - Beech King Air 100 A/B	Turbine	1	2
BE40 - Raytheon/Beech Beechjet 400/T-1	Jet	13	14
BE58 - Beech 58	Piston	109	109
BE60 - Beech 60 Duke	Piston	2	2

		1	
BE9L - Beech King Air 90	Turbine	107	110
BL8 - Bellanca 8 Scout	Piston	2	2
C206 - Cessna 206 Stationair	Piston	3	3
C25A - Cessna Citation CJ2	Jet	2	2
C25M - Cessna Citation M2	Jet	17	18
C340 - Cessna 340	Piston	13	13
C402 - Cessna 401/402	Piston	16	16
C414 - Cessna Chancellor 414	Piston	27	27
C421 - Cessna Golden Eagle 421	Piston	20	20
C500 - Cessna 500/Citation I	Jet	4	4
C510 - Cessna Citation Mustang	Jet	5	6
C525 - Cessna CitationJet/CJ1	Jet	60	64
E50P - Embraer Phenom 100	Jet	4	4
FA10 - Dassault Falcon/Mystère 10	Jet	2	2
HDJT - HONDA HA-420 HondaJet	Jet	2	2
P180 - Piaggio P-180 Avanti	Turbine	4	4
PAY1 - Piper Cheyenne 1	Turbine	2	2
PRM1 - Raytheon Premier 1/390 Premier 1	Jet	6	6
SBR1 - North American Rockwell Sabre 40/60	Jet	4	4
TEX2 - Raytheon Texan 2	Turbine	1	2
		431	444
B-II			
D250 Deceb Cuper King Air 250			
B350 - Beech Super King Air 350	Turbine	36	36
BE20 - Beech 200 Super King	Turbine Turbine	36 105	36 110
· -			
BE20 - Beech 200 Super King	Turbine	105	110
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air	Turbine Turbine	105	110 4
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air	Turbine Turbine Turbine	105 3 2	110 4 2
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3	Turbine Turbine Turbine Turbine	105 3 2 24	110 4 2 26
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4	Turbine Turbine Turbine Turbine Jet	105 3 2 24 7	110 4 2 26 8
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest	Turbine Turbine Turbine Turbine Jet Jet Turbine	105 3 2 24 7 47	110 4 2 26 8 48 6
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo	Turbine Turbine Turbine Turbine Jet Jet Turbine Jet Turbine	105 3 2 24 7 47 6	110 4 2 26 8 48
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo C551 - Cessna Citation II/SP	Turbine Turbine Turbine Turbine Jet Jet Turbine Jet Jet Turbine Jet Jet	105 3 2 24 7 47 6 99 2	110 4 2 26 8 48 6 102 2
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo	Turbine Turbine Turbine Turbine Jet Jet Turbine Jet Turbine	105 3 2 24 7 47 6 99	110 4 2 26 8 48 6 102 2 22
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo C551 - Cessna Citation II/SP C560 - Cessna Citation V/Ultra/Encore C56X - Cessna Excel/XLS	Turbine Turbine Turbine Turbine Jet Jet Turbine Jet Jet Jet Jet Jet Jet Jet Jet	105 3 2 24 7 47 6 99 2 19	110 4 2 26 8 48 6 102 2
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo C551 - Cessna Citation II/SP C560 - Cessna Citation V/Ultra/Encore C56X - Cessna Excel/XLS C680 - Cessna Citation Sovereign	Turbine Turbine Turbine Turbine Jet Jet Jurbine Jet Jet Jet Jet Jet Jet Jet Jet Jet Je	105 3 2 24 7 47 6 99 2	110 4 2 26 8 48 6 102 2 22 34
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo C551 - Cessna Citation II/SP C560 - Cessna Citation V/Ultra/Encore C56X - Cessna Excel/XLS C680 - Cessna Citation Sovereign C68A - Cessna Citation Latitude	Turbine Turbine Turbine Turbine Jet Jet Jurbine Jet Jet Jet Jet Jet Jet Jet Jet Jet Je	105 3 2 24 7 47 6 99 2 19 34 4	110 4 2 26 8 48 6 102 2 22 34 4
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo C551 - Cessna Citation II/SP C560 - Cessna Citation V/Ultra/Encore C56X - Cessna Excel/XLS C680 - Cessna Citation Sovereign C68A - Cessna Citation Latitude C750 - Cessna Citation X	Turbine Turbine Turbine Turbine Jet Jet Jet Jet Jet Jet Jet Jet Jet Je	105 3 2 24 7 47 6 99 2 19 34 4 4	110 4 2 26 8 48 6 102 2 22 34 4 4
BE20 - Beech 200 Super King BE30 - Raytheon 300 Super King Air BE9T - Beech F90 King Air C208 - Cessna 208 Caravan C25B - Cessna Citation CJ3 C25C - Cessna Citation CJ4 C441 - Cessna Conquest C550 - Cessna Citation II/Bravo C551 - Cessna Citation II/SP C560 - Cessna Citation V/Ultra/Encore C56X - Cessna Excel/XLS C680 - Cessna Citation Sovereign C68A - Cessna Citation Latitude	Turbine Turbine Turbine Turbine Jet Jet Jurbine Jet Jet Jet Jet Jet Jet Jet Jet Jet Je	105 3 2 24 7 47 6 99 2 19 34 4	110 4 2 26 8 48 6 102 2 22 34 4

FA20 - Dassault Falcon/Mystère 20	Jet	2	2
FA50 - Dassault Falcon/Mystère 50	Jet	2	2
		441	460
B-III			
CN35 - CASA CN-235	Turbine	32	46
		32	46
C-I			
H25B - BAe HS 125/700-800/Hawker 800	Jet	15	16
LJ31 - Bombardier Learjet 31/A/B	Jet	7	8
LJ45 - Bombardier Learjet 45	Jet	17	18
LJ55 - Bombardier Learjet 55	Jet	2	2
LJ60 - Bombardier Learjet 60	Jet	2	2
		43	46
C-II			
ASTR - IAI Astra 1125	Jet	6	6
CL30 - Bombardier (Canadair) Challenger	Jet	10	10
CL60 - Bombardier Challenger 600/601/604	Jet	12	12
G150 - Gulfstream G150	Jet	2	2
		30	30

Note: TFMSC = Traffic Flow Management System Counts

Table 3-25 shows the TFMSC operations attributed to the Airport for a full year in the third column. The fourth column shows these same numbers "naturalized" where-by the number of operations for turbine and jet operations are modified to show complete flights. So, if only an arrival or landing was recorded, a second operation is added to represent a complete flight with both an arrival and a departure. The operations represented by piston aircraft were not naturalized. There was no one aircraft that recorded 500 or more operations within the year. However, the A-I aircraft, as a group, do have well over 500 annual operations. The aircraft with the most operations is the Cirrus SR-22, a Group A-I aircraft. The B-II aircraft were only 40 operations shy of 500 annual operations. Because the Group B-II aircraft were determined to be the critical aircraft in the 2006 Interim ALP and after coordination with the FAA Orlando Airports District Office (ADO), it was determined that the B-II aircraft, as a group, were the critical aircraft, with the Beech 200 Super King as representative of that group. It should be noted that before any future design or construction is performed on the airfield that the critical aircraft should be reviewed again.

The Future Critical Aircraft was determined by Aircraft Approach Category groups and by Airplane Design Groups as shown in Table 3-27. The numbers for the studied period, April 2018 through March 2019, correspond to the naturalized TFMSC for 2018 shown in Table 3-27. The forecast years were calculated using the average annual compounded rate of growth of 0.8

percent as shown for the average annual compounded growth for the preferred forecast for operations.

Table 3-26 FUTURE CRITICAL AIRCRAFT GROUPS

					2038	
Aircraft Groups	2018	2023	2028	2033		
Total Operations By AAC						
Α	1,251	1,293	1,345	1,400	1,457	
В	950	990	1,030	1,072	1,115	
С	76	79	82	86	89	
Total Operations By ADG						
I	1,707	1,778	1,850	1,926	2,004	
II	524	546	568	591	615	
III	43	48	50	52	54	

Note: ACC = Aircraft Approach Category, ADG = Airplane Design Group

Table 3-26 shows that it is likely that the Critical Aircraft Group will remain with the existing B-II through the planning period. The Future Critical Aircraft representative of the group is likely to remain the Beechcraft Super King 200. The Critical Aircraft for Runways 6/24 and 18/36 is likely to remain as the Group A-I aircraft, the Cirrus SR-22 throughout the planning period.

3.7 <u>COMPARISON OF PREFERRED FORECASTS TO FAA TERMINAL AREA</u> FORECASTS

If an airport is included in the FAA Terminal Area Forecasts, any new aviation activity forecasts need to be reviewed and approved by the FAA before they can be applied to further analyses. During this review, the FAA looks to see if the based aircraft and annual operations forecasts differ from the TAF by less than 10 percent in the first five years and 15 percent in the first 10 years. In accordance with FAA preference and for informational purposes, a comparison of the preferred forecast to the 2019 FAA TAF is shown in Table 3-27.

Table 3-27
COMPARISON OF 2019 FAA TAF AND PREFERRED FORECASTS

	Forecast	Preferred Forecast	2019 FAA TAF	Difference
В	ased Aircraft			
	Base Year (2018)	20	20	1.3%
	5 Year (2023)	22	20	10.0%
	10 Year (2028)	23	20	15.0%
Α	nnual Operations			
	Base Year (2018)	24,668	24,375	1.2%
	5 Year (2023)	25,772	24,375	5.7%
	10 Year (2028)	26,819	24,375	10.0%

The preferred based aircraft and annual operations forecasts are well within the limits set by the FAA. For the reasons stated in this chapter, the forecasts of based aircraft and annual operations recommended in this study are considered reasonable and valid for planning purposes.

3.8 SUMMARY OF AVIATION ACTIVITY FORECASTS

The data and methods used to forecast aviation demand for the Airport are consistent with those used by the FAA and other general aviation airports around the nation. The forecasts selected in this study reflect the activity anticipated at the Apalachicola Regional Airport over the next 20 years without being either too conservative or too optimistic. Table 3-28 shows an overview of the recommended forecasts.

Table 3-28
SUMMARY OF AVIATION ACTIVITY FORECASTS

	2018	2023	2028	2033	2038	
Based Aircraft	Based Aircraft					
Single-Engine	18	17	16	16	15	
Multiple Engine	2	2	2	2	2	
Jet	0	1	1	2	3	
Rotorcraft	0	1	1	2	2	
Other	0	1	2	3	4	
Total	20	22	23	25	26	
Annual Operation	S					
Local	13,512	14,117	14,690	15,287	15,909	
Itinerant	11,156	11,655	12,129	12,622	13,135	
Total	24,668	25,772	26,819	27,910	29,044	

Note: Columns may not equal totals shown due to rounding

4 ENVIRONMENTAL CONSIDERATIONS

An environmental study was performed to identify Recognized Environmental Conditions (RECs) associated with the Apalachicola Regional Airport property. This is intended to constitute "all appropriate inquiry" into the previous ownership and uses of the Airport consistent with good commercial and customary practices as defined by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (42 USC § 9601). In addition, the study is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations to CERCLA liability.

This study addresses existing and past uses and conditions relating to the Airport property. No representation is made regarding the future or potential use of the Airport property except for those items explicitly stated in this report.

This assessment was conducted in general accordance with the scope and limitations of ASTM Standard E-1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (the Standard Practice) unless otherwise stated herein. The assessment, conclusions and recommendations are based on site conditions, observations, interviews, and a review of readily available information, as they existed at the time of the review.

4.1 INTRODUCTION

This study is described as general characterizations of environmentally sensitive activities and conditions that are identifiable through practically reviewable information and visual, non-invasive observations for the purpose of identifying RECs. The Standard Practice provides the following definition for a REC:

- REC the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term REC includes hazardous substances or petroleum products, even under conditions in compliance with laws.
 - The Standard Practice also provides the following definitions for an HREC, a CREC and a BER:
- HREC a past release of any hazardous substances or petroleum products that has
 occurred in connection with the property and has been addressed to the satisfaction of
 the applicable regulatory authority or meeting unrestricted use criteria established by a
 regulatory authority, without subjecting the property to any required controls (for
 example, property use restrictions, activity and use limitations, institutional controls, or
 engineering controls).

- CREC a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).
- BER a risk that may have a material environmental or environmentally-driven impact
 on the business associated with the current or planned use of a parcel of commercial
 real estate, not necessarily limited to those environmental issues required to be
 investigated in this practice.

These terms are not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

In addition, the potential for *vapor migration* in the subsurface discussed in this assessment should not be construed as the identification of Vapor Encroachment Conditions (VEC) defined by ASTM Standard E-2600, *Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions*.

Services performed for this project include a process involving and/or considering the following:

- Review of available environmental lists published by federal and state agencies (i.e., regulatory database report) in an attempt to identify environmentally sensitive activities (past or present) on the subject and adjoining properties.
- Review of physical characteristics of the Airport through field observations and a review of readily available documents including geologic and topographic maps, aerial photographs, and historic maps.
- Reconnaissance of reasonably accessible portions of the Airport Property and surrounding areas to visually identify obvious present or past conditions or activities that may pose an environmental threat to the Airport property.
- Interview of local regulatory agency personnel and others knowledgeable about the history of the Airport property.
- A qualitative hydrogeological evaluation of the Airport property and vicinity using both published topographic maps and field observations.
- Preparation of this report summarizing our services, findings, and conclusions.

A site vicinity map, topographic map, aerial photograph, site photographs, regulatory database report, regulatory and/or government agency correspondence, and other supporting documents and information are included as appendices to this chapter.

The sampling and testing of soil, air and/or other materials is beyond the scope of this study. The identification of asbestos containing materials (ACM), radon, vapor encroachment, lead based paint (LBP), lead in drinking water, wetlands, Waters of the United States, Waters of the State, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, rare or endangered species, air quality, noise impacts, biological agents and mold are also beyond the scope of this Phase I ESA. No implication is intended as to the relative importance of these additional environmental items, and this list of items is not intended to be all inclusive.

4.2 ASSUMPTIONS

The information gathered during this assessment was information that was "practically reviewable." This is, by definition, information that is provided by the source in a manner and in a form that, upon examination, yields information relevant to the property without the need for extraordinary analysis of irrelevant data. The form of the information is such that the environmental professional can review the records for a limited geographic area. Records that cannot be feasibly retrieved by reference to the location of the property or a geographic area in which the property is located (such as records that are sorted chronologically) are not considered practically reviewable.

In addition, for large databases with numerous records it is common for an unmanageable number of sites to be identified, even within a smaller geographic area such as a ZIP code. In these cases, when so much data is generated that it cannot be feasibly reviewed for its impact on the property, it is considered not practically reviewable.

The information provided herein is that which is publicly available. Information that is publicly available means that the source of the information allows access to the information by anyone upon request at a reasonable time and cost.

4.3 LIMITATIONS AND EXCEPTIONS

This study was performed in accordance with the Standard Practice, which is a limited inquiry into a property's environmental status and is not sufficient to discover every potential source of environmental liability or environmental impact, if any, of the property to be evaluated. No Environmental Site Assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs in connection with a property, and this practice recognizes reasonable limits of time and cost.

The appropriate level of inquiry is variable. Not every property will warrant the same level of assessment. Consistent with good commercial or customary practices, the appropriate level of environmental site assessment will be guided by the type of property subject to assessment, the expertise and risk tolerance of the Users, and the information developed in the course of the inquiry.

The findings, opinions, and conclusions are based on information which is reasonably ascertainable from standard sources at the time of the assessment through site

reconnaissance, visual assessment of surficial conditions, records review, interviews and other standard investigative techniques used in the industry at this time. It is possible that other information exists or may subsequently become known that may impact or change the site assessment after the AVCON Team's services are complete.

In conducting this Phase I ESA and preparing the ESA report, the AVCON Team reviewed, interpreted, and relied upon information provided by others, including, but not limited to individuals, government authorities, subcontractors, and other entities. The AVCON Team has not performed an independent evaluation of the accuracy or completeness of such information.

Specific limitations, exceptions, and/or data gaps/failures related to this ESA were encountered.

- Historical information was available from 1940 to present. The ASTM standard requires verification of property history to at least 1940 or first developed use and requires indicates no more than an approximate 5-year gap between resources. Although the requirement for research to first developed use was achieved, the requisite 5-year interval was not met between 1942-1953, 1953-1959, 1959-1969, 1976-1984, and 1984- 1994. Although there are data gaps, the available data indicate apparent developed usage during this period.
- Other former property owners, tenants, and/or site managers were not available for interviews regarding the Airport's history and use.
- Chain-of-title, which is optional per the ASTM standard, was not available for review.
- The AVCON Team could not gain access to two (2) main areas during the scheduled site visit. These areas, including the apparent historical dump sites and the closed correctional facility, were locked and gated. Additionally, most of the buildings and individually leased hangers were not accessible.

The AVCON Team's professional opinion regarding the significance and/or materiality of these limiting conditions, exceptions, and/or data gaps is provided in Section 4.13.

4.4 SITE DESCRIPTION

4.4.1 Location and Legal Description

The Airport currently consists of six (6) parcels owned by Franklin County with an approximate area of 786 acres. The Property Appraiser information lists the Airport address of 28 Airport Road, Franklin County, Apalachicola, Florida. A site location map is provided in Appendix E (A).

A Site Location Map and a Topographic Map depicting the location of the Airport and its surrounding topography are included in Appendix E(A). The approximate latitude and longitude coordinates of the Airport are 29.43328° north and -85.10376° west, respectively.

4.4.2 Airport Property and Vicinity General Characteristics

The Airport property contains an airport, wastewater plant, prison building, and associated facilities. The existing site grades are approximately level. The vicinity of the Airport property generally includes developed lots and is bordered by the following:

Table 4-1
LAND USE DESCRIPTIONS AND OBSERVATIONS

Direction	Land Use Description/Observations
North	Primarily residential land use and Apalachicola River
East	A baseball field, residential properties, and undeveloped land
South	Residential properties, Highway 98, and Apalachicola Bay
West	Undeveloped land and residential properties

Select photographs of the Airport taken during the site reconnaissance activities (see Section 4.10) are included as Appendix E (B).

4.4.3 Current Use of the Property

At the time of this investigation, the Airport property is a developed airfield with associated buildings and other peripheral areas. The following items were noted during the site reconnaissance:

- General debris
- 55-gallon plastic drum containers with apparent gasoline inside near the maintenance shed.

Photos of the items listed above are included and referenced in Appendix E (B).

4.4.4 Descriptions of Property Improvements

The Airport, as observed during the site reconnaissance activities, currently consists of approximately 786 acres comprised of five (5) parcels. The Airport contains a single-story 12,376 square foot pre-engineered metal frame building built in 1993, a single-story 3,318 square foot masonry frame building built in 1978, a total of six (6) leased hangers towards Runway 6 adjacent to three (3) active fuel tanks, a maintenance shed west of Apalachee Street, a series of hangars in the southwest corner of the Airport, four (4) hangars and other smaller buildings, as well as three (3) active runways designated 6/24, 18/36, and 14/32 with associated taxiways. Further, two (2) ponds southwest of Runway 32 and one (1) on the very eastern end of the property north of the hangars, a single-story 3,644 masonry weather station building with associated tower, and a metal frame hanger southwest of Runway 32.

4.5 AIRPORT PROVIDED INFORMATION

The "All Appropriate Inquiries" Final Rule (40 CFR Part 312) requires certain tasks be performed by the User to qualify for one of the Landowner Liability Protections (LLPs) to CERCLA liability. Failure to provide this information could result in a determination that all appropriate inquiry is not complete; consequently, fulfillment of these User responsibilities is key to qualification for the available defenses to CERCLA liability.

The User is asked to provide information or knowledge of the following:

4.5.1 Land Title Records

Chain-of-Title information was not available to the AVCON Team for review during this analysis but will be done as a later task of the Master Plan Update. The chain-of-title information is optional to this environmental analysis per the Standard Practice. No Institutional Controls (ICs) nor Engineering Controls (ECs) were reported within the ERIS® database information.

4.5.2 Environmental Liens or Activity and Use Limitations

No Environmental Liens or Activity Use Limitations (AULs) were reported to or encountered by the AVCON Team during the conduct of this study.

4.5.3 **Specialized Knowledge**

Information was not provided in the ASTM Questionnaire regarding specialized knowledge or experience that is material to the identification of RECs in connection with the Airport.

4.5.4 Actual Knowledge

No actual knowledge was provided in the Questionnaire that indicated any information that would identify RECs in connection with the Airport Property.

4.5.5 Valuation Reduction for Environmental Issues

It was revealed to the AVCON Team that the valuation of the Airport is considered fair market value and not diminished due to known or perceived environmental impacts at this time.

4.5.6 Commonly Known or Reasonably Ascertainable Information

The User has stated that they are not aware of any commonly known or reasonably ascertainable information that is material to the identification of *REC*s in connection with the Airport property at this time.

4.5.7 Obvious Indicators

Obvious indicators are those that are plain or evident, a condition or fact that could not be ignored or overlooked by a reasonable observer while visually or physically observing the property. The Airport did not comment on obvious indicators of environmental conditions or concerns in connection with the Airport property. The AVCON Team inspector did not observe any obvious indicators of subsurface contamination at the time of the inspection.

4.6 INTERVIEWS

As part of the Phase I ESA, interviews were conducted with select persons familiar with the Airport property to provide insight into past activities or conditions material to the identification of RECs in connection with the Airport property.

4.6.1 Interview with Owner

Attempts were made to contact Franklin County to complete an owner questionnaire. No response was received prior to the completion of this assessment.

4.6.2 Interviews with Site Manager

No other site managers were designated during the assessment activities.

4.6.3 Interviews with Occupants

None of the occupants were available for interview during the site inspection.

4.6.4 Interviews with Local Government Officials

The AVCON Team contacted the Florida Department of Environmental Protection (FDEP) via email for request information related to any potential violations, environmental permits, storage tanks and discharges, or spills/emergency responses related to possible groundwater contamination for the Airport property. A response to this FOIA request was received stating that there were no additional FDEP records for the Airport that are not located in publicly available databases.

The AVCON Team contacted the Florida Department of Health (FLDOH) via email to request information related to the on-site water well and septic tank systems related to possible groundwater contamination, in addition to asbestos, radon, or lead based paint issues or violations for the Airport. A response to this FOIA request was not received at the time of completion of this report.

Any future responses that lead to the identification of RECs will be forwarded to the user as an addendum to this report.

4.7 RECORDS REVIEW

4.7.1 Physical Setting Sources

4.7.1.1 Topography

The irregularly shaped Airport, consisting of eight (8) individual adjacent parcels, is located within the West Pass, Florida, United States Geological Survey, 7.5-minute series topographic quadrangle map. Topographically, the Airport property is generally flat at elevations ranging from approximately twelve (12) to twenty (20) feet above mean sea level (MSL).

4.7.1.2 Site and Area Geology

The Airport is in Franklin County, Florida and according to the United States Geological Survey (USGS), is situated within the Gulf Coastal Plain, separated from the Florida Platform by geologic structures known as the Gulf Trough and Apalachicola Embayment. These structures formed a bathymetric and environmental barrier from the earliest Eocene or earliest Oligocene periods into the Miocene.

According to the "Text to Accompany the Geologic Map of Florida" by Scott, 2001, the site is generally underlain by undifferentiated sediments deposited during the Holocene period. These sediments typically consist of quartz sands, carbonate sands, muds, and organics.

 Residuum on Holocene sediments (Tro) The undifferentiated Oligocene residuum, mapped on parts of the Chattahoochee "Anticline", characteristically consists of reddish brown, variably sandy clay with inclusions of variably fossiliferous, silicified limestone (Huddlestun, 1993). The residuum includes Lower and Upper Oligocene weathered sediments (Huddlestun, 1993). Surficial soils in the region are primarily siliciclastic sediments deposited in response to the renewed uplift and erosion in the Appalachian highlands to the north and sea-level fluctuations. The extent and type of deposit is influenced by numerous factors, including mineral composition of the parent rock.

4.7.1.3 <u>Hydrogeology</u>

Groundwater in the Gulf Coastal Plain typically occurs as an unconfined aquifer condition. Recharge is provided by the infiltration of rainfall and surface water through the soil overburden. More permeable zones in the soil matrix can affect groundwater conditions. The groundwater table is expected to be a subdued replica of the original surface topography.

Regional groundwater flow is likely to be variable based on the area's topography, subsurface conditions, and relative locations to the low-lying wetland areas, lakes, bayous, drainage ditches, and ponds in the area.

Actual groundwater flow and estimated groundwater levels may also be influenced by underground structures, seasonal fluctuations in rainfall, tidal influences, local usage demands, soil and bedrock geology, nearby bodies of water, production/irrigation wells or dewatering operations.

4.7.1.4 Soils

Based on a review of the United States Department of Agriculture (USDA) online web soil survey (WSS) maps for Walton County, Florida and USDA Soil Survey of Walton County, Florida (published 2016), the Airport property is primarily underlain by:

- Leon Sand 0 to 2 percent slopes The Leon series is the prevailing soil on the site.
 It exhibits rapid permeability in the surface and subsurface layers. It is usually present
 from 0 to 300' in elevation and can be found in the Florida flatwoods or marine terraces.
 The parent material is from marine deposits. The depth to water table is typically 2 to 18
 inches.
- Scranton Fine Sand 0 to 2 percent slopes The Scranton series is a similar unit to those found onsite. It can usually be found in the Florida flatwoods or marine terraces from 0 to 450' in elevation. The parent material is marine deposits. The depth to water table is typically 6 to 18 inches.
- Rutlege Loamy Fine Sand 0 to 2 percent slopes The Rutlege series consists of loamy fine sand from 0 to 11 inches and sand from 11 to 80 inches. It occurs in depressions on marine terraces from 0 to 450' in elevation with a parent material of sandy marine deposits or fluvial marine deposits. The depth to water table is about 0 inches.
- Lynn Haven Sand 0 to 2 percent slopes The Lynn Haven series consists of sand from 0 to 80 inches. It occurs on the Florida flatwoods and marine terraces from 0 to 300' in elevation. The parent material is from a marine deposit. The depth to the water table is 0 to 6 inches.

- Resota Fine Sand 0 to 5 percent slopes The Resota series consists of fine sand from 0 to 80 inches. It occurs on the ridges and knolls of marine terraces meaning that its usually present at the summit of hills. It can usually be found 10 to 40' in elevation. The parent material is a marine deposit. The depth to water table is about 42 to 60 inches.
- Mandarine Fine Sand 0 to 2 percent slopes The Mandarine series consists of fine sand from 0 to 32 inches and sand from 32 to 80 inches. It occurs of the Florida flats and rises of marine terraces from 0 to 100' in elevation. The parent material is from a sandy marine deposit. The depth to water table is about 18 to 42 inches.

4.7.1.5 Groundwater

The actual groundwater flow direction under the Airport property can be accurately determined only by installing groundwater monitoring wells, which was beyond the scope of work for this project. Surface water runoff at the Airport property is expected to generally follow the Airport property's contoured surface topography and discharge offsite to the south.

4.7.1.6 Flood Zone Information

Based on a review of the Federal Emergency Management Agency (FEMA) online Flood Insurance Rate Maps (FIRM) (map number 1203 7C0507F and 12037C0510F, effective 2/5/2014, the Airport property is located within Zone X-12 (developed portions of the property) and AE-01 through most of the undeveloped areas. Zone X is defined as areas outside the 0.1-percent annual- chance flood event and therefore an area of minimal flood hazard. Areas located with AE-01 are defined as areas subject to frequent inundation and flooding.

A copy of the Physical Settings Report for the Airport property is attached in Appendix E (C), Regulatory Records Documentation.

4.7.1.7 Record of Water Wells

A review of the ERIS[®] *Physical Setting Source Summary* addendum identified the presence a total of sixty-four (64) water wells within the designated search radius. A total of eight (8) wells were identified within the boundaries of the Airport property. The wells on the property are all 4" cased with total depths ranging from approximately 10' - 420' below land surface. Additional well construction or usage details were not provided.

A copy of the *Physical Setting Report* is attached in Appendix E (C), Regulatory Documentation.

4.8 ENVIRONMENTAL RECORD SOURCES

ERIS® of Ontario, Canada conducted a commercial database search of regulatory databases. This is a review of published governmental records from federal and state environmental regulatory agencies. It was conducted to identify use, generation, storage, treatment or disposal of hazardous substances and petroleum products, and/or release

incidents of such materials that may have the potential to impact the A i r p o r t p roperty or nearby sites.

The federal and state/tribal environmental databases obtained from ERIS[®] and reviewed by the AVCON Team were generated in general accordance with the ASTM E1527-13 guidelines for standard environmental record sources for this assessment. Such reports are typically used to review the potential environmental impact of activities at the Airport property or nearby sites. The full ERIS[®] database search report for this project is included in Appendix E (C).

Table 4-2 STANDARD ENVIRONMENTAL REFERENCES

Federal Database	Search Distances
Federal NPL site list	1.0 mile
Federal Delisted NPL site list	0.5 mile
Federal CERCLIS list	0.5 mile
Federal CERCLIS NFRAP site list	0.5 mile
Federal RCRA CORRACTS facilities list	1.0 mile
Federal RCRA non-CORRACTS TSD facilities list	0.5 mile
Federal RCRA generators list	Property and adjoining properties
Federal Institutional control/engineering control registries	Property only
Federal ERNS List	Property only
State/Tribal Database	Search Distances
State and tribal equivalent NPL	1.0 mile
State and tribal equivalent CERCLIS	0.5 mile
State and tribal landfill and/or solid waste disposal site lists	0.5 mile
State and tribal equivalent leaking storage tank lists	0.5 mile
State and tribal registered storage tank lists	Property and adjoining properties
State and tribal Institutional control/engineering control	
registries	Property only
State and tribal voluntary cleanup sites	0.5 mile
State and tribal Brownfield sites	0.5 mile

In addition to the above standard databases, several non-standard/supplemental databases were reported by $\mathsf{ERIS}^{\circledR}$ and reviewed by the AVCON Team as part of this investigation. Further details regarding database names, search radii, and responsible agencies are included in the $\mathsf{ERIS}^{\circledR}$ report attached in Appendix E (C), Regulatory Records Documentation.

4.8.1 Airport Property

The databases searched by ERIS® identified a total of eight (8) regulatory listings for the Airport property, as noted in Table 4-3.

Table 4-3 REGULATORY LISTINGS FOR THE AIRPORT AND ADJACENT PROPERTY

Site Name/Address	Databases	Distance	Information
Apalachicola Radio Relay Annex no address noted	DWM CONTAM, DEL CONTAM SITE	SITE	Not available
Franklin County – Apalachicola Airport, 8 Airport Road Apalachicola Florida 32320	AST, FINDS/FRS, STCS	SITE	As described below
National Weather Service Office Municipal Airport, PO Box 831 Apalachicola Florida 32320	STCS	SITE	As described below
Apalachicola Airbase Dump N-S Runway Rd & Garbage Dump Rd Apalachicola Florida 32320	SWF/LF	SITE	Minimal information as described below
City of Apalachicola – Waste Treatment Plant, 29 Chapman Road Apalachicola, Florida 32320	TIER 2, ERNS	SITE	As described below (chlorine spill)
Apalachicola Army Air Forces Apalachicola, Florida 32320	DWM CONTAM	SITE	Facility ID #: I04FL0059 Other information as described below
Franklin County Road & Bridge Apalachicola, Bluff Road Apalachicola, Florida 32320	SWF/LF	SITE	As described below
Florida Department of Corrections- Franklin Work Camp, Highway 98 West Apalachicola, Florida 32420	DEL STORAGE TANK, STCS, WELL SURVEILLANCE	SITE	As described below

4.8.1.1 Apalachicola Radio Relay

The Airport property is listed in the DWM CONTAM and the DEL CONTAM regulatory listings for a record of contamination that is not actively being assessed or remediated on due to lack of funding. This contamination is usually associated with petroleum and/or dry cleaning but may include other contaminants. The listing was also present as a DEL CONTAM database, meaning it was once on the DWM CONTAIM regulatory listing but was either cleaned up or closed under risk based corrective action. The database listing includes no FDEP Facility ID number, and therefore associated documents for this listing could not be obtained and are unavailable at this time.

4.8.1.2 Apalachicola Army Air Forces (Historical Military Facility)

This site operated as a satellite base to Tyndall Field from 1939 to 1947 and then was operated by the Army Corp of Engineers until it was turned over to Franklin County. The Airport property was listed with AST, FINDS/FRS, and the STCS in the database search. The Airport property was identified as having aboveground storage tanks (AST) on the property, reportedly three (3) 12,000- gallon ASTs. Two (2) are listed to contain jet fuel and one (1) AST is listed to contain aviation gas. After reviewing the regulatory information, it appears the ASTs are within compliance. The FINDS/FRS is a centrally managed database that identifies facilities subject to environmental regulation or of environmental concern. This site was listed with a terminated permit from the Clean Water Act (CWA) under the ICIS-NPDES system since 2014. The site is also listed in the Storage Tank/Contaminated Facility Search (STCS) which means there is the possibility of unregulated storage tanks that contain petroleum. Since this airport was present pre-1942, there was activity of fueling before the current ASTs were installed in 1992. There have not been any records found of above ground or underground storage tanks associated with aircraft use before this time. Fueling and maintenance activities obviously occurred onsite to service airplanes. According to the historical aerials, there appears to have been historical structures west of Apalachee Road and are suspected for these historical fueling and maintenance.

4.8.1.3 County-owned Conventional Hangar

This listing is located on the Airport property as 8 Airport Road, was formerly occupied by the U.S. Weather Service, and includes three buildings with a radio tower. The STCS listing indicates there were most likely the presence of unregistered USTs/ASTs on the site, however no specific details were provided. It appears that most of these details were either withheld or not required (during registration) due to association with the Department of Defense. After review of the minimal records for the site, there is evidence of a removed underground storage tank used for an onsite generator from July 1983 to April 1997. The available records indicate the leakage of a 550-gallon diesel fuel tank from the pipes leading to the generator. There does appear to be records including an application to the Petroleum Cleanup Participation Program (PCPP), indicating the date of discharge to be April of 1997 and due to the overfill of the tank. The inspection documents indicate there is resolution by the removal of the tank but do not have any information regarding how much diesel fuel was spilled on the site or steps taken to remediate the contamination.

4.8.1.4 <u>Apalachicola Airbase Dump</u>

This listing indicates a Solid Waste Facility/Landfill (SWF/LF) due to inclusion of FDEP's list of municipal solid waste, landfills, dumps, construction and demolition disposal, recycling facilities and other sites which contain general waste. This area is located just east of the start of Runway 36 and is registered as a closed solid waste facility with no groundwater monitoring.

4.8.1.5 City of Apalachicola – Waste Treatment Plant

This facility is located on the southern portion of the Airport property at 29 Chapman Road, adjacent to the Franklin County Public Works building, and appeared on the TIER 2 and ERNS databases. TIER 2 is described as a site required to register for the storage of specific chemicals provided by the Florida Division of Emergency Management. This listing indicates diesel fuel for a generator and chlorine for use in water treatment. Emergency Response Notification System (ERNS) is a regulatory database for substance spill report controlled by the National Response Center. A spill of chlorine occurred in January of 2016 due to a hole at the bottom of a cylinder due to equipment failure. The chlorine reportedly pooled on the concrete under the cylinder. A HAZMAT team responded to the incident with the spill not being contained per their report. Emergency action procedures and spill resolution details were not provided to show potential environmental impact.

4.8.1.6 Apalachicola AAF

The Apalachicola Regional Airport was formerly a satellite airfield for Tyndall Airforce base operated by the United States Army Air forces (USAAF). This site is located just southeast of the start of Runway 24. The Airport was present on the DWM CONTAM database, which is indicative of groundwater contamination. According to the aerials in 1953, there appears to have been excavations (groundwater is exposed and visible) and subsequently filled as of 1959. No other details were provided.

4.8.1.7 Franklin County Road and Bridge Apalachicola

This facility appeared as a similar SWF/LF listing. This area is reportedly located just southeast of the start of Runway 180 with the entrance to the site just off Bluff Road. According to the regulatory records, the site was used for hurricane debris management starting April of 2012, with the most recent compliance inspection occurring in February of 2019. The inspection was listed to be compliant at that time; however, historical aerials indicate activity of excavation and dumping on the site pre-2012 with no associated records.

4.8.1.8 Florida Department of Corrections Franklin Work Camp

This site is located on the southwestern corner of the Airport just north of the wastewater treatment plant on Highway 98. This listing corresponds with the closed correctional facility. This regulatory database listings include DEL STORAGE TANK, STCS, DWM CONTAM, DEL CONTAM, and WELL SURVEILLANCE. The DEL STORAGE TANK and STCS both relate to above and underground storage tanks (AST and UST) registered for the facility. Details indicate three (3) 1,000-gallon tanks installed in August 1990, June 1997, and September 1997. The tanks were

removed in March of 2019 with no contamination reported at that time. The site was also similarly present on the DWM CONTAM and the DEL CONTAM regulatory listings as described above. No other information was available for the reported contamination. The WELL SURVEILLANCE database indicates the presence of an investigative survey well, sampled to determine if groundwater contamination exists around the well. Per regulatory review, this well is located just south of the correctional facility near the spray field and north of the water treatment plant. No records were found supporting the presence of groundwater contamination. FDEP records indicate compliance at the end of the tank service.

4.8.2 Adjoining Sites

Adjoining sites are sites, the border of which are contiguous or partially contiguous with that of the Airport, or that would be contiguous or partially contiguous with that of the Airport but for a street, road or other public thoroughfare separating them.

There are two (2) adjoining sites bordering the Airport property listed below.

Side Down Site Name/ Address Databases Distance Jp Gradient|Gradient Gradient Roughly 125 feet south DW Wilson Seafood Inc. and west of STCS 39 Alan Drive Χ site boundary City of Apalachicola Wastewater Treatment 605 feet Plant TIER 2 Χ

Table 4-4
ADJOINING SITES

4.8.2.1 DW Wilson Seafood Inc.

This site is located near Chapman Road at 39 Alan Drive and identified within the STCS database. Reportedly, a 1,000-gallon underground diesel storage tank was installed in July of 1982 and was never used. Based on the available information, the DW Wilson Seafood Inc. facility is not considered a *REC* in connection with the Airport property at this time.

4.8.2.2 <u>Orphan Sites</u>

Several "unmappable" or "orphan" sites were identified in the ERIS[®] database report. These sites are not individually considered to be a *REC* based on the available information including the physical setting, supplemental research, and actual distance removed from the Airport property upon further research.

4.9 HISTORICAL USE INFORMATION

The AVCON Team attempted to conduct a review of previous reasonably ascertainable environmental reports, historical maps, and aerial photographs to gain an understanding of the

development history of the Airport. Available historical records reviewed by the AVCON Team were used to review the potential environmental impact of activities on the integrity of the Airport property.

4.9.1 Topographical Maps

The AVCON Team reviewed historical 7.5-minute topographic maps of the West Pass, Florida Quadrangle for the years 1943, 1982, 1992, and 2015 as provided by ERIS®.

The 1943 topographic map indicates the Airport property as "Apalachicola Airport". The exiting runways are present, as well as historical buildings in the area of the current hangars. Approximately 1/3 of the Airport peripheral areas are generalized as undeveloped wooded land, as well as other parcels to the west, north, and east. Other wooded land is depicted to the south along Highway 98. Low-lying swampy areas are present the west and north, as well as some minimal perimeter areas of the Airport property. Roadways are present at the main (south) entrance extending north to the hangar buildings, and at the center of the north, west, and east property boundaries. Roadways also surround the runways. The existing residential community (possible base housing) is present at the main/south entrance and along Highway 98 to the east, with other rural residences scattered throughout the area. The Apalachicola Northern Railway is visible to the northeast. The crossroads present to the north of the Airport property is labeled as the town of Franklin, and several small buildings are depicted in the nearby area.

The 1982 topographic map overlies an aerial photograph and indicates a similar airport configuration ("Apalachicola Municipal Airport"). The NOAA Weather Service Facility and Radio Tower are depicted at the southeast portion of the runways. The westernmost historical hanger building is labeled as the "APA Army Test Facility". Specific details of past military operations are not known at this time. The surrounding area is similar, with additional residential development to the north and east.

The 1992 topographic map also overlies an aerial photograph and indicates an airport configuration similar to that observed today ("Apalachicola Municipal Airport"). Additional support roads are present throughout the Airport property. The NOAA Weather Service Facility, Radio Tower and the "APA Army Test Facility" remain in the previous locations. The Subject Area also appears similar to that observed today.

The 2015 topographic map indicates the existing onsite runways (Airport property labeled as Apalachicola Regional Airport), surface water features, and roads in the Subject Area in their current configurations.

The maps reviewed by the AVCON Team did not reveal any nearby pipelines, underground mines, landfills, or other features of potential environmental concern. Copies of the topographical maps are included in Appendix E (D).

4.9.2 Sanborn® Maps

Copies of Certified Sanborn® Maps were requested from ERIS®. A copy of the Sanborn Map "No Coverage" Letter is included in Appendix E (D).

4.9.3 <u>Historical Aerial Photographs</u>

Copies of historical aerial photographs taken in the years 1942, 1953, 1959, 1969, 1976, 1984, 1994, 1999, 2005, 2006, 2007, 2013, 2015, and 2017 were obtained by the AVCON Team from ERIS[®]. These aerial photographs were reviewed to identify changes in land use and areas of potential environmental concern. Copies of the aerial photographs are included in Appendix E (D). The following are descriptions and interpretations from the aerial photograph reviews:

- 1942 1976 Aerial Photographs: These aerial photographs indicate the Airport property as a developed airfield (similar to that observed today), with associated hangers and other facilities in the location of current buildings. A circular drive is present on the east central portion of the Airport property. The surrounding area is comprised primarily of undeveloped wooded land or swamps. The residential base housing community is present to the south. In 1959, multiple buildings are present around the circular drive. In 1969, excavation activities are present at the east central portion of the Airport property. Residential development of the area increases in each of the aerial photographs.
- 1984 1999 Aerial Photographs: These photographs are similar to that shown in 1976, other than the existing wastewater treatment plant is present to the southwest of the Airport property. The north portion of the flocculation pond extends past the property boundary and onto the Airport property. The 1994 photograph vaguely shows the development of the corrections work camp on the southwest of the Airport property, north of the wastewater treatment plant. Other excavation is visible on the east-northeast portion of the Airport property. The weather station and radio tower facility are visible on the south-southeast portion of the Airport property. In 1999, tree harvesting is visible on the southeast corner of the Airport and other excavations are present on the southeast central, east, and northeast portions of the Airport property. Additional (existing) hangars have been constructed just east of the southwest end of the runways. Most of the older military buildings are no longer visible (demolished). In 1999, further expansion of hanger buildings continues to the southwest and east. The southeast tree harvesting area has been cleared (exposed dirt). The extreme south-southeast corner of the Airport property has been disturbed with apparent excavation.
- 2005 Aerial Photograph: These photographs are similar to that shown in 1999, other than excavation activities and debris piles visible in the east central portion of the Airport property. Pine stands are present to the west and northwest of the runways. In 2007, landfill and debris accumulation areas in the east-northeast portion of the Airport property have been enclosed into an apparent compound.
- 2013 2017 Aerial Photographs: These photographs show the re-constitution of vegetation on the southeastern section of the Airport property (remainder of the photograph similar to that observed today).

4.9.4 Historical City Directories

Copies of historical city directories were obtained for select years spanning 1974 to 2018. The following listed business listings were present for the Airport property during our review of the historical directories. The Airport property address does not appear in the searched City directories until 1997 and is listed at 8 Airport Road at that time. The address lists Apalachicola International Ctr and Apalachicola Car Rental from 1997 to 2018. The Apalachicola Sewer/Wastewater Treatment Plant was listed at 991 Highway 98 beginning in 2006, as well as Franklin/Bay City Work Camp at 1001 Highway 98.

No other notable properties in the directory search were found that either have not been discussed elsewhere in this report or were otherwise found to be innocuous based on the available information. Copies of the historical city directories provided by $ERIS^{\textcircled{R}}$ are included in Appendix E(D).

4.9.5 <u>Previous Environmental Reports on Airport Property</u>

Previous environmental reports for the Airport property were not provided to the AVCON Team for review. Available information was also searched for on the FDEP OCULUS database management system, with no pertinent information identified.

4.9.6 <u>Previous Environmental Reports on Surrounding Sites</u>

Previous environmental reports on sites surrounding the Airport property were not available to the AVCON Team for review. Available information was reviewed on the FDEP OCULUS database management system. Pertinent records and information have been attached in Appendix E (E).

4.10 AIRPORT RECONNAISSANCE

4.10.1 Methodology and Limiting Conditions

A site visit was conducted on September 24, 2019. The site visit consisted of an initial site reconnaissance, a walk along the perimeter of the site, interior inspection of selected buildings (made available by the Airport), and a walk along the immediate site area. Additionally, an area reconnaissance was conducted as a driving tour to identify facilities within specified regulatory search distances listed within the previously referenced ERIS[®] report.

The site reconnaissance was performed to identify observed obvious indications of present or past activities that may have caused a significant environmental impact(s) to the site. Select photographs of the site taken by the AVCON Team during the site reconnaissance are included in Appendix E (B).

4.10.2 General Property Setting

The Airport is located at 28 Airport Road in Apalachicola, Franklin County, Florida, and currently consists of five (5) parcels. The Airport currently consists of approximately 786 acres of partially developed land.

4.10.3 Observations

Site observations and conditions identified during the site reconnaissance are summarized as follows:

4.10.3.1 Interior and Exterior Observations

Hazardous Substances and Petroleum Products in Connection with Identified Uses: Six (6) 55-gallon plastic drums of petroleum were identified near the maintenance storage area for fueling of miscellaneous equipment.

Storage Tanks: Three (3) 12,000-gallon storage tanks are located south of the southern end of Runway 240. Secondary containment is present, and no staining was noted around the ASTs. Information regarding historical onsite tank usage for plane/vehicle fueling was not available as regulatory registration was not required at that time.

Odors: None noted.

Pools of Liquid: None noted other than standing surface water.

Drums: Six (6) 55-gallon plastic barrels of petroleum was identified near the maintenance storage area. These tanks were found on pallets with no secondary containment. Additionally, three (3) drums were noted within the containment area near the 12,000-gallon ASTs. The AVCON Team was not given access to this area and therefore could not verify the contents of these drums.

Hazardous Substances and Petroleum Products Containers (Not Necessarily in Connection with Identified Uses): None were noted.

Unidentified Substance Containers: None were observed.

PCBs (Electrical Transformers): Multiple pole mounted transformers were noted on the Airport property. No evidence of leakage or discharge was noted under or around the transformer units.

4.10.3.2 Interior Observations

Heating and Cooling: The Airport property utilizes central electric (package and split system) air conditioning. No environmental concerns are noted. Minimal/typical oily staining was observed in the roadway/runway and parking portions of the Airport property, consistent with its use for planes and/or cars and trucks. A review of the ERIS® Physical Setting Source Summary addendum identified the presence a total of sixty-four (64) water wells within the designated search radius. A total of eight (8) wells were identified within the boundaries of the Airport property. The wells on the property are all 4" cased with total depths ranging from approximately 10' - 420' below land surface. Additional well construction or usage details were not provided.

Stains or Corrosion: None observed.

Drains and Sumps: Not observed.

4.10.3.3 Exterior Observations

Pits, Ponds, and Lagoons: Three (3) ponds were observed during the site inspection. Excavations were noted in historical resources, however access to these areas was not provided during the site visit.

Stained Soil or Pavement: Some areas showed general minor staining of concrete and pavement, typical of usage for planes and/or cars and trucks.

Stressed Vegetation: None observed.

Solid Waste: None observed.

Wastewater (including Storm Water): Ponds were present onsite as described above.

Wells: No wells were observed on the Airport during the site visit. A review of the ERIS® Physical Setting Source Summary addendum identified wells on the property. All of the listed wells are 4-inch cased with total depths ranging from approximately 10-foot – 420-foot below land surface. Additional well construction or usage details were not provided.

Septic Systems: No evidence of any septic tanks was observed. Additionally, health department records did not indicate the registration of any such systems.

Surface Water: Ponds were present onsite as described above.

4.10.3.4 Other Observations

None noted.

4.11 NON-ASTM CONSIDERATIONS/OBSERVATIONS

4.11.1 <u>Asbestos-Containing Materials</u>

Asbestos is the name given to several naturally occurring, fibrous silicate minerals mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is commonly used as an acoustic insulator, thermal insulation, fireproofing, and in other building materials. Exposure to airborne friable asbestos may result in a potential health risk because persons breathing the air may breathe in asbestos fibers. Continued exposure can increase the amount of fibers that remain in the lungs. Fibers embedded in lung tissue over time may cause serious lung diseases, including asbestosis, lung cancer, or mesothelioma. An asbestos assessment is beyond the scope of this study.

An asbestos study was not performed during this assessment. Based on the ages of the buildings, there is the possibility of Asbestos Containing Materials (ACMs) to be present in building materials onsite. A comprehensive asbestos survey of the building is always required prior to any renovation or demolition activities.

4.11.2 <u>Lead-Based Paint</u>

A Lead Based Paint (LBP) study was not performed during this assessment. Based on the age of the older structure, LBP may be of concern for the older building constructed prior to the 1980s. Site contractors must be aware of regulations regarding the handling and disposal of any lead-containing building materials.

4.11.3 Lead in Drinking Water

The Airport property is connected to the municipal water supply and based on a review of the 2018 Franklin County Sanitary Engineering Department; Lead in Drinking water is not considered a concern at this time.

4.11.4 Mold

Molds are microscopic organisms found virtually everywhere, indoors, and outdoors. Mold will grow and multiply under the right conditions, needing only sufficient moisture (e.g., in the form of very high humidity, condensation, or water from a leaking pipe, etc.) and organic material (e.g., ceiling tile, drywall, paper, or natural fiber carpet padding). Mold growths often appear as discoloration, staining, or fuzzy growth on building materials or furnishings and are varied colors of white, gray, brown, black, yellow, and green. In large quantities, molds can cause allergic symptoms when inhaled or through the toxins the molds.

It is likely for this site to have the presence of mold due to open hangers and Florida climate.

4.11.5 <u>Radon</u>

Radon is a colorless, odorless, naturally occurring, radioactive, inert, gaseous element formed by radioactive decay of radium (Ra) atoms. The EPA has prepared a map to assist national, state, and local organizations to target their resources and to implement radon-resistant building codes. The map divides the country into three (3) Radon Zones, with Zone 1 being those areas with the average predicted indoor radon concentration in residential dwellings exceeding the EPA Action Limit of 4 picoCuries per Liter (pCi/L).

It is important to note that the EPA has found homes with elevated levels of radon in all three (3) zones, and the EPA recommends property-specific testing to determine radon levels at a specific location. However, the map does give a valuable indication of the propensity of radon gas accumulation in structures.

Radon sampling was not conducted as part of this assessment. Review of the USEPA Map of Radon Zones for Franklin County places the Airport property in Zone 3, where average predicted radon levels are below 2 pCi/L, and, therefore, radon is not expected to be a significant environmental concern.

4.12 Findings, Opinions and Conclusions

An environmental site study was performed in general conformance with the scope and limitations of ASTM Practice E1527-13 for the Apalachicola Regional Airport.

Findings, opinions, conclusions, and recommendations reported herein are based on information obtained during the course of the studies and upon the AVCON Team's experience. Information provided in this report is relevant to the dates of the site work and should not be relied on to represent conditions at substantially later dates or locations not investigated.

This assessment has revealed no evidence of RECs in connection with the Airport property at this time, except as follows:

4.12.1 Recognized Environmental Conditions

A total of eight (8) recognized environmental conditions (RECs) are associated with the Airport property, as listed below:

- Two (2) on-site conditions were observed during the site reconnaissance performed by the AVCON Team personnel that resulted in the discovery of a REC in connection with the Airport Property:
 - Six (6) 55-gallon plastic barrels filled with fuel are located near the maintenance shed. The drums are not sealed, and no secondary containment is present. No current staining was observed; however, the presence of open and uncovered/unsecured exterior drums presents the potential for the stored contents to overflow and migrate to the surrounding soil.
 - A spray field is present south of the correctional site. These areas are used to spray wastewater effluent, and therefore minimize volume via evaporation.
 Spray fields are an area of environmental concern due to the potential for subsurface accumulation of semi-volatile or non-volatile contaminants found in the wastewater.
- One (1) historical on-site condition is anticipated to constitute a REC in connection with the Airport Property: The Airport was historically used for military operations prior to conversion to the existing commercial and private usage. Military practices at that time included extensive chlorinated solvent usage for cleaning metal aircraft pieces.
- Five (5) onsite conditions were noted in the regulatory review:
 - According to the historical aerials, there appears to have been historical structures west of Apalachee Road. These buildings existed onsite during early operation of the military airfield and would likely have been used for historical fueling and maintenance activities.
 - Facility inspection documents indicate removal of an historical diesel tank;
 however, no closure documentation was provided and no detailed information regarding spills was encountered.
 - An apparent historical landfill was located immediately southeast of Runway 24 just beyond the tree line. Based on historical aerials, apparent excavations are present from at least 1953 to 1959 during military usage of the Airport property. Regulatory authorities are unaware of the dump site due to its age (used prior to the current registration requirements for landfills).
 - A similar landfill was noted southeast of the start of Runway 180. Based on historical aerials, excavation and dumping activities were also noted in this area with no associated regulatory records.

 The wastewater treatment plant, located at 29 Chapman Road, reported emergency response for a significant discharge of chlorine. No information was provided regarding the emergency response or cleanup of the discharge.

No off-site issues or conditions were observed during the site reconnaissance performed by the AVCON Team personnel or in the review of regulatory databases that resulted in RECs in connection with the Airport property at this time.

4.12.2 Controlled Recognized Environmental Conditions

No on-site or off-site issues or conditions were identified during the site reconnaissance performed by the AVCON Team personnel or in the review of regulatory databases that resulted in *CREC*s in connection with the Airport property at this time.

4.12.3 <u>Historical Recognized Environmental Conditions</u>

No HRECs exist for the Airport property, currently.

4.12.4 Business Environmental Risks

The potential presence of asbestos and lead-based paint within the older buildings present Business Environmental Risks (BERs) in connection with the Airport property, currently.

4.12.5 Vapor Migration

Vapor migration conditions should be evaluated if impacted soil/groundwater contamination is identified during future site assessment activities.

Potential <u>offsite</u> vapor migration conditions that require further assessment have not been identified near the Airport property at this time through the non-intrusive reconnaissance and records research activities discussed herein.

4.12.6 De Minimis Conditions

De minimis conditions were not observed on the parcel at the time of this investigation.

4.12.7 Recommendations

Based on the findings, opinions, and conclusions of this Phase I ESA, the AVCON Team recommends further assessment before individual projects are begun. Additionally, a Ground Penetrating Radar (GPR) survey would allow for the identification of old underground storage tanks (USTs) or buried items (drums or debris) not visible from the surface. All drums currently present onsite should be stored under cover and on secondary containment to minimize the potential for release.

This summary is provided for convenience and should not be substituted for review of the full report, including all attachments as provided herein.

4.13 DEVIATIONS

Deletions or substantial deviations from the ASTM E1527-13 standard practice were not noted. Specific limitations, exceptions, and/or data gaps/failures related to this ESA are as follows:

- Historical information was available from 1940 to present. The ASTM standard requires verification of property history to at least 1940 or first developed use and requires indicates no more than an approximate 5-year gap between resources. Although the requirement for research to first developed use was achieved, the requisite 5-year interval was not met between 1942-1953, 1953-1959, 1959-1969, 1976-1984, and 1984- 1994. Although there is data failure, the available data indicate apparent developed usage this time period.
- Other former property owners, tenants, and/or site managers were not available for interviews regarding the Airport property's history and use.
- Chain-of-title, which is optional per the ASTM standard, was not provided to the AVCON Team for review.
- The AVCON Team could not gain access to two main areas within the Airport property on September 24. These areas include the apparent dump sites and the closed correctional facility. These areas were locked and gated, providing no way to assess them. Also, most of the buildings and hangers were not accessible.

However, it is our professional opinion that these data gaps are not significant, and do not impact the ability to identify RECs, or impact the findings or conclusions of this report.

4.14 THREATENED AND ENDANGERED SPECIES

There are many threatened and endangered species that have habitat in Franklin County, both on the federal and state lists. These are shown in Table 4-5.

Table 4-5
THREATENED AND ENDANGERED SPECIES

Common Name	Scientific Name	U.S. Fish and Wildlife Status	Florida Status
Amphibians:			
Gopher Frog	Rana Capito	Petition	ce
One-toed amphiuma	Amphiuma pholeter	Petition	
Reticulated flatwoods salamander	Ambystoma bishop	E (CH)	
Birds:			
Bald Eagle	Haliaeetus leucocephalus	BGEPA	
Southeastern kestral	Falco sparverius paulus	се	Т
Wood stork	Mycteria americana	E (CH)	Е
Crustaceans			
Dougherty plain cave crayfish	Cambarus cryptodytes	Petition	
Fish			
Bluestripe shiner	Cyprinella callitaenia	Petition	
Broadstripe shiner	Pteronotropis euryzonus	Petition	
Gulf sturgeon	Acipenser oxyrinchus desotoi	T (CH)	Т
Insects			
Yellow-sided clubtail	Stylurus potulentus	Petition	
Mammals			
Southeastern big-eared bat	Plecotus rafinesquii	ce	
Mussels			
Apalacicola floater	Anodonta eardi	Petition	
Chipola slabshell	Elliptio chipolaensis	T (CH)	Т
Delicate spike	Elliptio arcata	Petition	
Fat threeridge	Amblema neislerii	E (CH)	Е
Gulf moccasinshelll	Medionidus penicillatus	E (CH)	Е

Table 4-3 Continued from Previous Page				
Common Name	Scientific Name	U.S. Fish and Wildlife Status	Florida Status	
Inflated spike	Elliptio purpurella	Petition		
Oval pigtoe	Pleurobema pyriforme	E (CH)	Е	
Purple bankclimber	Elliptoideus sloatianus	T (CH)	Т	
Rayed creekshell	Anodontoides radiates	Petition		
Shinyrayed pocketbook	Hammiota (=Lampsilis) subangulata	E (CH)	E	
Southern elktoe	Aasmidonta triangulate	Petition		
Reptiles				
Alligator snapping turtle	Macroclemys temminckii	Petition	SSC	
Barbour's map turtle	Graptemys barbouri	Petition	SSC	
Eastern Indigo snake	Drymarchon couperi	Т	Т	
Florida pine snake	Pituophis melanoleucus mugitus	Petition	SSC	
Florida red-bellied turtle	Pseudemys nelsoni	Petition		
Gopher tortoise	Gopherus polyphemus	С	Т	
Plants				
Alternate-leaf or pagoda dogwood	Cornus alternifolia		Е	
Apalachicola wild indigo	Baptisia megacarpa	Petition	Е	
Baltzell's sedge	Carex baltzellii	ce	Т	
Buckthorn	Bumelia lyciodes		Е	
Chapman's crownbeard	Verbesina chapmanii	SSC	Т	
Ciliate-leaf tickweed	Coreopsis integrifolia	Petition	E	
Curtiss' loosestrife	Lythrum curtissii	Petition	E	
Dark-headed hatpin	Eriocaulon nigrobracteatum	Petition	Е	
Decumbant pitcher plant	Sarracenia purpurea		Т	
Eastern ninebark	Physocrpus opulifolius		E	
Gentian pinkroot	Spigelia gentianoides	E	Е	
Giant water-dropwort	Oxypolis greenmanii		E	
Godfrey's (violet) butterwort	Pinguicula ionanthus	Т	E	
Hairy fever tree	Pinckneya bracteata		Т	
	1	i		

Rhexia parviflora

Meadowbeauty

Ε

Petition

Table 4-3 Continued from Previous Page						
Common Name	Scientific Name	U.S. Fish and Wildlife Status	Florida Status			
Mountain laurel	Kalmia latfolia		T			
Orange azalea	Rhododendron austrinum		Е			
Panhandle meadowbeauty	Rhexia salicifolia	Petition				
Parrot pitcher plant	Sarracenia psittacina		Т			
Primrose-flower butterwort	Pinguicula primulifolia		Е			
Pyramid magnolia	Magnolia pyramidata		Е			
Sicklepod	Arabis canadensis		Е			
Silky camellia	Stewartia malacodendron		Е			
Snowy orchid	Platanthera nivea		Т			
Southern red lily	Lilium catesbaei		Т			
Spoon-leaved sundew	Drosera intermedia		Т			
Sweet shrub	Calycanthus floridus		Е			
Thorne's beakrush	Tynchospora thornei	Petition				
Trailing arbutus	Epigaea repens		Е			
Tropical waxweed	Cuphea aspera	SSC	Е			
Variable-leaved indian plantain	Arnoglossum diversifolium	Petition	Т			
West's flax	Linum westii	Petition	Е			
White-top pitcher plant	Sarracenia leucophylia	SSC	Е			
Wiregrass gentian	Gentiana pennelliana	SSC	Е			
Yellow butterwort	Pinguicula lutea		Т			
Yellow fringed orchid	Platanther ciliaris		Т			
Yellow fringeless orchid	Platanther integra	ce	Е			

Note: E = endangered, T = threatened, CH = critical habitat, ce = consideration encouraged, BGEPA = Bald and Golden Eagle Protection Act, Petition = has been petitioned for listing.

This is not an exhaustive list of where species occur, but a guide to indicate areas that might require surveys if appropriate habitat exists prior to the commencement of a construction project.

4.15 FAA WILDLIFE STRIKE DATABASE

The Airport does not have Wildlife Hazard Management Plan. Technically, it is not required to unless it is a Part 139 operation, which means that it receives regularly scheduled commercial passenger service, or unless it has a significant number of wildlife strikes. A check of the FAA Wildlife Strike Database shows that no wildlife strikes have ever been reported to the FAA. This does not necessarily mean that there have not been any strikes, only that none have been reported.

4.16 ENVIRONMENTAL CONSIDERATIONS SUMMARY

An Environmental Site Assessment (ESA) was performed in conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Practice E1527- 13 for the developed airport located at 28 Airport Road in Apalachicola, Franklin County, Florida (the "Airport"). Any exceptions to, or deletions from, this practice are described in Section 4.13 of this report.

4.16.1 Recognized Environmental Conditions

A total of eight (8) recognized environmental conditions (RECs) are associated with the Airport property, as listed below:

- 1. Two (2) on-site conditions resulted in the discovery of REC connections with the Airport property:
 - Six (6) 55-gallon plastic barrels filled with fuel are located near the maintenance shed.
 - o A spray field is present south of the correctional site.
- 2. One (1) historical on-site condition is anticipated to constitute a REC in connection with the Airport property: The Airport was historically used for military operations. Military practices at that time included extensive chlorinated solvent usage for cleaning metal aircraft pieces.
- 3. Six (6) onsite conditions were noted in the regulatory review:
 - o There appears to have been historical structures west of Apalachee Road. These would likely have been used for historical fueling and maintenance activities.
 - Facility inspection documents indicate removal of a historical diesel tank; however, no closure documentation was provided and no detailed information regarding spills was encountered.
 - An apparent historical landfill was located immediately southeast of Runway 24
 Apparent excavations are present from at least 1953 to 1959 during military usage of the Airport property.
 - A similar landfill was noted southeast of the start of Runway 18. Excavation and dumping activities were also noted in this area with no associated regulatory records.
 - The wastewater treatment plant reported emergency response for a significant discharge of chlorine.

4.16.2 <u>Business Environmental Risks</u>

The potential presence of asbestos and lead-based paint within the older buildings present *Business Environmental Risks* (*BER*s) in connection with the Airport property, currently.

4.16.3 Vapor Migration

Vapor migration conditions should be evaluated if impacted soil/groundwater contamination is identified during future site assessment activities.

4.16.4 Recommendations

Based on the findings, opinions, and conclusions of this analysis, further assessment is recommended as specific projects on the Airport are identified. Additionally, a Ground Penetrating Radar (GPR) survey would allow for the identification of old underground storage tanks (USTs) or buried items (drums or debris) not visible from the surface. All drums currently present onsite should be stored under cover and within secondary containment to minimize the potential for release.

5 Facility Requirements

5.1 INTRODUCTION

This chapter builds upon the Inventory of Existing Conditions and the Forecast of Aviation Activities chapters to develop an understanding of how many and what types of facilities will be required to meet the forecast demand. It compares what is already available with what will be required over the next 20-year planning period and determines in five-year increments what facilities are likely to be needed and when.

5.2 AIRSPACE

There are two commercial service airports located within 55 nautical miles of the Apalachicola Regional Airport. Tallahassee International Airport and Northwest Florida Beaches International Airport. These are augmented by seven public-use general aviation airports located within 60 nautical miles.

The Apalachicola Regional Airport does not have an air traffic control tower. It has published instrument approach procedures for Runways 6, 14, 24, and 32. Therefore, its airspace is classified as Class E, which is typically established around any airport without an air traffic control tower. Based on available data, no known airspace conflicts currently exist. Except for the Tyndall Air Force Military Operating Areas (MOA) E, F, and G, the airspace around the Airport is relatively uncongested.

5.2.1 Approaches

There are many types of approaches that can be executed into airports. There are those that occur during Visual Flight Rule (VFR) operations and those that occur during Instrument Flight Rules (IFR) operations. VFR operations are those that occur under Visual Meteorological Conditions (VMC) that are clear enough that the pilot can see where the aircraft is going. The VFR Weather Minimums are specific to types of airspace and altitudes but are generally based on "see and avoid." IFR operations are those that occur during Instrument Meteorological Conditions (IMC), or where the pilot's visibility is obscured.

IFR approaches are designed so that the pilot of an aircraft in IMC can land by using instruments, Global Positioning System (GPS), or Inertial Navigation System (INS) navigation without assistance from air traffic control. IFR approaches are generally classified as either precision or non-precision approaches. Precision approaches are those that provide both lateral (through use of a localizer or a very high frequency omnidirectional range (VOR)) and vertical (through use of a glideslope) electronic information. Non-precision approaches provide lateral information only.

The Apalachicola Regional Airport does not have any precision approaches. All existing IFR approaches to the Airport are non-precision. GPS based non-precision approaches are published for Runways 6, 14, 24, and 32. GPS is a satellite-based navigation system that provides location and time information in all weather, anywhere there is an unobstructed line of

sight to four or more GPS satellites. The U.S. government maintains the GPS system and it is freely accessible to anyone with a GPS receiver.

The approach plates for the Airport indicate that for Aircraft Category A and B, the visibility minima are one mile. For Aircraft Categories C, the visibility minima are 1 ½ miles and for Aircraft Category D it is 2 miles. Approaches with lower visibility minimums would require:

- The widening of the Part 77 Primary Surface from the existing 500 feet to 1,000 feet
- Significant lengthening and widening of the Runway Protection Zone (RPZ)
- The installation of runway approach lights

The widening of the primary surface, to achieve the lower visibility minimums would encroach on and diminish the utility of the developable land within the current Airport boundaries. Records show that weather conditions with lower than one-mile visibility minimums only occur between one and three percent of the time annually at the Airport.

It is recommended by the FAA that the Airport sponsor (Franklin County) acquire or control all the land in the RPZ. Currently, the Franklin County owns the land beneath all the RPZs, except for a small part of the RPZ for Runway 14.

The FAA Memorandum *Guidance on Land Uses Within a Runway Protection Zone* found in Appendix E indicates that no public roads are allowed in an RPZ. Currently, there are no roads in any of the Airports RPZ's. Currently, the FAA is only enforcing the Memorandum for existing land uses when one or more of three conditions is planned to occur:

- Extension of the associated runway for the RPZ
- Changing the size of the RPZ
- Changing the critical aircraft to a larger aircraft.

None of these conditions are currently planned.

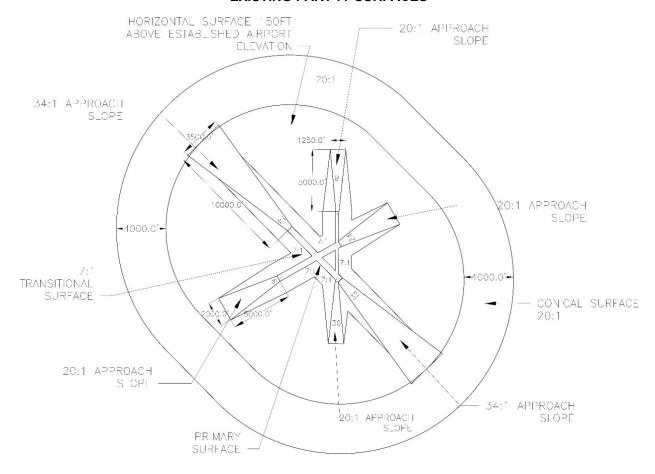
5.2.2 Part 77 Surfaces

Code of Federal Regulations (CFR) Title 14, Chapter 1, Part 77, *Objects Affecting Navigable Airspace* (Part 77), sets criteria for protecting airspace near airports. These regulations define numerous airspace surfaces that exist on and around airports. The size and dimensions of these surfaces are dependent upon the runway type, i.e., utility, or non-utility, and the approved or planned approach procedures. Objects, whether natural or man-made, should not penetrate these defined Part 77 surfaces. The dimensions of the existing Part 77 surfaces for Apalachicola Regional Airport are given in Table 5-1 and the surfaces themselves are depicted in Figure 5.1.

Table 5-1
EXISTING PART 77 SURFACES

Surface	Non-Precision Instrument Runway (feet) (Runways 14 and 32)	Non-Precision Runway (feet) (Runways 6 and 24)	Visual Runway (feet) (Runways 18 and 36)	
Width of Primary Approach Surface and Approach Surface Width at Inner End	500	500	500	
Approach Canade Width at Illier End	000	000	000	
Radius of Horizontal Surface	10,000	5,000	5,000	
Approach Surface Width at End	3,500	2,000	1,500	
Approach Surface Length	10,000	5,000	5,000	
Approach Slope	34:1	20:1	20:1	

Figure 5-1
EXISTING PART 77 SURFACES



5.3 AIRFIELD

The airfield is a system of components upon which aircraft operate. These include runways, taxiways, and aircraft parking aprons. Airfield requirements are affected by demand capacity, aircraft mix, runway, and taxiway design standards, airspace, and navigational and visual aids. This section looks at each of these components as they relate to the Apalachicola Regional Airport.

5.3.1 Airfield Configuration

The number, orientation, and spatial layout of the runways at an airport make up the airfield configuration. The configuration is adequate if it provides enough operational capacity and appropriate wind coverage for the aircraft operating or expected to operate at the Airport through the end of the planning period.

The existing airfield configuration at the Airport consists of three runways, one of 5,425 feet in length, Runway 14/32; one of 5,721 feet in length, Runway 6/24; and one of 5,251 feet, Runway 18/36. Runway 14/32 is situated in a northwest/southeast direction on the airfield, and it has a full-length, parallel taxiway, Taxiway A, with five connector taxiways. Runway 14/32 has been designated the primary runway for the Airport.

Runway 6/24 is situated in a northeast/southwest direction. It has a partial-length parallel taxiway, Taxiway B. Taxiway B has five taxiway connectors to the Runway. Runway 6/24 is designated as the crosswind runway.

Runway 18/36 is oriented in a north/south direction. It has a partial-length parallel taxiway, Taxiway C. Taxiway C has three taxiway connectors to the Runway. Runway 18/36 would be designated as an additional runway.

5.3.2 Airfield Demand Capacity

It is recommended by the FAA that the operational capacity of an airport be determined on a periodic basis. This allows for any adjustments that might be required based on such an analysis. An airfield capacity analysis determines what percentage of the airfield's theoretical capacity is being used and what potential delays might develop given the calculated capacity. The FAA Advisory Circular (AC) 150/5060-5, *Airport Capacity and Delay*, provides a methodology for performing the analysis.

The Annual Service Volume (ASV) is the theoretical capacity of the Airport on an annual basis given the runway configuration, the number and location of taxiways, the aircraft fleet mix, the percentage of aircraft arrivals, the percentage of touch-and-go activity at the Airport, and the historical meteorological conditions. The analysis performed with the methodology provided in FAA AC 150/5060-5 indicates that the current theoretical hourly capacity for the Airport during Visual Flight Rules (VFR) weather is approximately 77 operations as shown in Table 5.2.

Table 5-2 AIRFIELD CAPACITY

	Theoretical Capacity	2018 Operations	Percent of Capacity	2038 Operations	Percent of Capacity
Operations Per Hour	77	6	7.8%	7	9.1%
Operations Per Hour	56	4	7.1%	5	8.9%
Operations Per Year	215,000	24,668	11.5%	29,044	13.5%

Note: VFR = Visual Flight Rules, IFR = Instrument Flight Rules

While the theoretical capacity of the Airport indicates as many as 77 operations per hour could occur during VFR weather, the Airport is not anticipated to approach this number of hourly operations during the planning period. The forecasts of aviation activity indicate that the average peak hour operations in 2018 were 6 and that they are expected to rise to 7 in the year 2038. The Annual Service Volume (ASV) of the Airport is calculated at 215,000 annual operations. However, it is reported that only 24,668 annual operations occurred at the Airport in 2018. This is approximately 7.8 percent of the ASV. The forecasts of aviation activity indicate that the annual operations will increase to 29,044 by the year 2038. This would equate to approximately 13.5 percent of the ASV. Based on this analysis, no delays are anticipated based on airfield demand capacity.

5.3.3 Runway Design Code

Each runway on an airport has an established FAA Runway Design Code (RDC), which is determined by the Aircraft Approach Category (AAC), the Airplane Design Group (ADG), and the approach visibility minimums for that runway. The first component, the AAC, is depicted by a letter and relates to an aircraft's approach speed as shown in Table 5.3.

Table 5-3
AIRCRAFT APPROACH CATEGORIES

Aircraft Approach Category	Aircraft Approach Speed
Α	Less than 91 knots
В	91 knots or more but less than 121 knots
С	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

The second component, the ADG, is depicted by a Roman numeral and relates to either the wingspan or the tail height of the aircraft; whichever is more restrictive. The levels of the ADG are shown in Table 5.4.

Table 5-4 AIRPLANE DESIGN GROUPS

Group Number	Tail Height in Feet	Wingspan in Feet
I	Less than 20	Less than 49
II	20 to less than 30	49 to less than 79
III	30 to less than 45	79 to less than 118
IV	45 to less than 60	118 to less than 171
V	60 to less than 66	171 to less than 214
VI	66 to less than 80	214 to less than 262

The third component, the approach visibility minimums, are expressed by Runway Visual Range (RVR) values in feet of 1,200; 1,600; 2,400; and 4,000 as shown in Table 5-5. The third component would read "VIS" for runways designated with a visual approach only.

Table 5-5
VISIBILITY MINIMUMS

RVR in Feet	Instrument Flight Visibility Category in Statute Miles
5,000	Not Lower than 1 mile
4,000	Lower than 1 mile but not lower than ¾ mile (APV ≥ 3/4 mile but < 1 mile)
2,400	Lower than ¾ mile but not lower than ½ mile (CAT–I PA)
1,600	Lower than ½ mile but not lower than ¼ mile (CAT–II PA)
1,200	Lower than ¼ mile (CAT-III PA)

Note: RVR = Runway Visual Range, APV = Approach Procedure with Vertical Guidance, CAT-I PA = Instrument Landing System (ILS) Category I Precision Approach, CAT-II PA = ILS Category II Precision Approach, CAT-III PA = ILS Category III Precision Approach.

In the Aviation Activity Forecasts Chapter, the Critical Aircraft identified for Runway 14/32 was the Beechcraft Super King 200. This aircraft has an approach speed of 98 knots, a wingspan of 54.5 feet, a tail height of 15 feet, and a Maximum Take Off Weight (MTOW) of 12,500 pounds. This brings the design aircraft solidly into the B-II category.

The Critical Aircraft identified for Runways 6/24 and 18/36 is the Cirrus SR-22. This aircraft has an approach speed of 78 knots, a wingspan of 38.33 feet, a tail height of 8.92 feet, and an MTOW of 2,358 pounds. The Cirrus SR-22 qualifies as an A-I aircraft.

The Airport has GPS coverage; however, it does not have vertical guidance. A visibility minimum of not lower than one mile has been implemented for Runway 14/32. This results in an RDC of B-II-5000 for Runway 14/32. Runway 6/24 has an RDC of A-I-5,000. Because

Runway 18/36 is a visual runway, the RDC is A-I-VIS. The RDC is based on current or planned development and does not have an operational application.

5.3.4 Airport Reference Code

The FAA has established a tiered system of Airport Reference Codes (ARC), which determines the design standards for runways, separation distances, safety areas, and many other airfield facilities. The ARC is an airport designation that signifies the airport's highest Runway Design Code (RDC), minus the third component, visibility, of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely on the Airport. Currently, the highest RDC on the Airport is for Runway 14/32 with an RDC of B-II-5000. Therefore, the current Airport ARC is B-II. An aircraft with a higher AAC and/or ADG would have to document 500 or more annual operations before a change to the ARC could be considered.

The B-II designation indicates that the primary runway is designed to accommodate aircraft with approach speeds up to but not including 121 knots and wingspans up to but not including 79 feet. In addition to the Beechcraft King Air 200, the runway critical aircraft, aircraft that are within the B-II designation include aircraft found in Table 5-6.

Table 5-6
SAMPLE ARC B-II AIRCRAFT

Aircraft	MTOW (pounds)	Approach Speed (knots)	Wingspan (feet)	
Aerospatial NORD 262	23.801	96	74.2	
ATR 42-300	33,450	103	58.0	
Beechcraft 1900	17,120	113	58.0	
Beechcraft King Air C90-1	10,100	100	50.3	
Beechcraft King Air B200	12,500	98	54.5	
Beechcraft 60 Duke	6,768	98	39.4	
Beechcraft King Air F90	10,950	108	45.9	
Cessna 441	9,925	100	49.3	
Cessna 675	8,000	104	52.1	
Cessna Citation C25A	12,500	118	49.8	
Cessna Citation C550	14,800	112	52.2	
Cessna Citation C560	16,830	107	55.8	
Cessna Citation C650	22,000	114	53.5	
Dassault Falcon 900	15,500	100	63.4	
Embraer 110 Bandeirante	13,007	92	50.3	
Grumman Gulfstream I	36,000	113	78.3	
Raytheon 300	12,500	103	54.1	
Rockwell Aero Commander 500	6,750	97	49.1	
Sabreliner 65	24,000	105	50.5	
Shorts 360	26,000	104	78.8	

Note: ARC = Aircraft Reference Code, MTOW = Maximum Take Off Weight, ATR = Avions de Transport Regional, Heavy Border indicates the Critical Aircraft for Runway 14/32.

5.3.5 Runway Length Analysis

Runway length analyses were performed for both runways, based on the Aviation Activity Forecasts presented in Chapter 3 of this report and approved by the FAA. The FAA Advisory Circular 150/5328-4B, *Runway Length Requirements for Airport Design*, was used in the preparation of this analysis.

The methodology used for determining the applicable runway length for Runway 14/32 is contained in Table 1-1, *Airplane Weight Categorization for Runway Length Requirements*, of the FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*. The line for aircraft weighing more than 12,500 pounds but less than 60,000 pounds was used.

Information specific to Apalachicola Regional Airport was used in conjunction with Figure 3-1, 75 Percent of Fleet at 60 or 90 Percent Useful Load. The Airport specific information used is found in Table 5-7.

Table 5-7 APALACHICOLA REGIONAL AIRPORT SPECIFIC INFORMATION

Category	Information
Hottest Month	July
Mean Maximum Temperature for the Hottest Month	90° Fahrenheit
Airport Elevation Above Mean Sea Level	19.7 Feet

Figure 3-1 of the 150/5325-4B AC was used at 60 percent of the useful load. This resulted in an initial runway length of 4,650 feet.

Title 14, Code of Federal Regulations (CFR), *Aeronautics and Space*, requires that runway landing distances for turbo-jet aircraft be increased by 15 percent when landing on wet or slippery runways. Further, the take-off distances are to be increased by 15 percent or up to 5,500 feet, whichever is less, for effective runway gradients greater than zero. This would result in a runway length of 5,348 feet. As the Apalachicola Regional Airport currently has projected over 500 turbojet operations per year within the planning period per the FAA approved Forecasts of Aviation Activity, this calculation is valid for Runway 14/32.

For takeoff only, the effective runway gradient is also considered. The 4,650-foot runway length taken from the original calculation would be increased at a rate of 10 feet for each foot of elevation difference between the high and low points of the centerline. For Runway 14/32, the difference in elevation between the high and low points of the runway is three feet. This would equate to 30 feet or a total runway length of 4,680 lineal feet. As the landing requirements are longer, in this case, the 5,348-foot length is recommended. Runway 14/32 is currently 5,424 feet in length.

For Runways 6/24 and 18/36, the runway length analysis also used Table 1-1, *Airplane Weight Categorization for Runway Length Requirements*, of the FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*. The line for aircraft weighing 12,500 pounds or less with Approach Speeds of 50 knots or more and with less than 10 Passengers. Information specific to Apalachicola Regional Airport was used in conjunction with Figure 2-1, *Small Airplanes with Fewer than 10 Passenger Seats (Excludes Pilot and Co-pilot)* and at 95 *Percent of Fleet*, of FAA AC 150/5325-4B to obtain a single runway length for the entire group of A-I aircraft. The Airport specific information used is found in Table 5-7.

Title 14, Code of Federal Regulations (CFR), *Aeronautics and Space*, requires that runway landing distances for turbo-jet aircraft be increased by 15 percent when landing on wet or slippery runways. Further, the take-off distances are to be increased by 15 percent or up to 5,500 feet, whichever is less, for effective runway gradients greater than zero. Runway 6/24 is the crosswind runway, and while there are jets that regularly use this runway for takeoff, the Advisory Circular advises that the length of the crosswind runway be determined by the lower

crosswind capable airplanes using the primary runway. Therefore, the additional 15 percent calculation was not used for this runway.

For Runway 18/36, the runway length analysis also used Table 1-1, *Airplane Weight Categorization for Runway Length Requirements*, of the FAA AC 150/5325-4B, *Runway Length Requirements for Airport Design*. The line for aircraft weighing 12,500 pounds or less with Approach Speeds of 50 knots or more and with less than 10 Passengers. Information specific to Apalachicola Regional Airport was used in conjunction with Figure 2-1, *Small Airplanes with Fewer than 10 Passenger Seats (Excludes Pilot and Co-pilot)* and at 95 *Percent of Fleet*, of FAA AC 150/5325-4B to obtain a single runway length for the entire group of A-I aircraft. The Airport specific information used is found in Table 5-7.

For takeoff only, the effective runway gradient as also considered. The 3,100-foot runway length taken from the original calculation was be increased at a rate of 10 feet for each foot of elevation difference between the high and low points of the centerline. For Runway 6/24, the difference in elevation between the runway ends is 4.4 feet. This would equate to 44 feet or a total runway length of 3,144 lineal feet. Runway 18/36 is currently 5,271 feet in length. The recommended length and current runway lengths are shown in Table 5-8.

 Runway
 Recommended Length (Feet)
 Current Length (Feet)

 14/33
 5,348
 5,424

 6/24
 3,101
 5,271

 18/36
 3,444
 5,251

Table 5-8
RUNWAY LENGTH ANALYSIS

5.3.6 Declared Distances

Declared distances are defined as the distance that the Airport owner declares available for a turbine powered aircraft's take-off run, take-off distance, accelerate-stop distance, and landing distance requirements. The four types of declared distances are:

- <u>Takeoff Run Available (TORA)</u> the runway length declared available and suitable for the ground run of an aircraft taking off
- <u>Takeoff Distance Available (TODA)</u> the TORA plus the length of any remaining runway or clearway beyond the end of the TORA
- Accelerate-Stop Distance Available (ASDA) the Runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff
- <u>Landing Distance Available (LDA)</u> the runway length declared available and suitable for landing an aircraft.

Declared distances can be applied to mitigate obstructions, non-standard runway safety/object free areas, and incompatible land uses within the arrival or departure runway protection zones. In some instances, declared distances can be applied to increase the TODA or ASDA through the designation of clearways or stopways, respectively.

At the Apalachicola Regional Airport, Runways 6/24 and 18/36 have declared distances established. While these distances have been painted on the respective runways, they have not been published. Table 5-9 summarizes the declared distances.

Table 5-9
EXISTING DECLARED DISTANCES

Declared Distance	Runway 14 (feet)	Runway 32 (feet)	Runway 6 (feet)	Runway 24 (feet)	Runway 18 (feet)	Runway 36 (feet)
TORA	5,348	5,348	5,054	5,271	4,749	5,251
TODA	5,348	5,348	5,271	5,271	5,251	5,251
ASDA	5,348	5,348	5,271	5,271	5,251	5,251
LDA	5,348	5,348	5,271	5054	5,251	4,749

Note: TORA = Takeoff Run Available, TODA = Takeoff Distance Available, ASDA = Accelerate-Stop Distance Available, LDA = Landing Distance Available

5.3.7 Runway Width Analysis

For a runway, such as Runway 14/32, that has an AAC of A or B, an ADG of II, and a visibility minimum of not lower than one mile, the FAA approved runway width would be 75 feet with 10-foot-wide shoulders. Runway 14/32 is currently 100 feet in width with 25-foot-wide shoulders and meets/exceeds FAA standards.

For a runway, such as Runway 6/24 that has an AAC of A or B, an ADG of I, and a visibility minimum of not lower than one mile, the FAA approved runway width would be 60-feet with 10-foot-wide shoulders. Runway 6/24 is currently 100 feet in width with 25-foot-wide shoulders and meets/exceeds FAA standards.

For a runway, such as Runway 18/36 that has an AAC of A or B, an ADG of I, and is a visual runway, the FAA approved runway width would be 60-feet with 10-foot-wide shoulders. Runway is 6/24 is currently 100 feet in width with 25-foot-wide shoulders and meets/exceeds FAA standards.

It should be noted that for ADG I and II runways, paved shoulders are not required. Turf, aggregate-turf, soil cement, lime or bituminous stabilized soil are recommended adjacent to paved surfaces accommodating ADG-I and ADG-II aircraft.

5.3.8 Runway Design Standards

The FAA requires certain dimensional standards be met for a runway based on the identified Runway Design Code (RDC), which is based on the approach speed, wingspan, and tail height

of the design aircraft and the visibility minimums of the runway. Table 5-10 compares the dimensions of the runway and various safety areas with the FAA standards for B-II, and A-I runways. All three runways meet or exceed these standards. Table 5-11 compares the existing runway protection zone dimensions with those recommended by the FAA. All existing runway protection zone dimensions meet the FAA standards. Table 5-12 shows runway separation distances to a holding position, a parallel taxiway/taxilane centerline, and an aircraft parking area with the design standards for B-II and A-I runways, which are representative of the existing runways. All three runways at the Airport meet/exceed the standards set by the FAA.

Table 5-10
RUNWAY DESIGN STANDARDS

Design Parameter	B-II Standards (feet)	A-I Small Aircraft Standards (feet)	Runway 14/32 (feet)	Runway 6/24 (feet)	Runway 18/36 (feet)
Width	75	60	100	100	100
Paved Shoulder Width	101,2	10 ^{1,2}	25	25	25
Crosswind Component in Knots	13	10.5	13	10.5	10.5
Runway Safety Area					
Length Beyond Departure End	300	240	300	240	240
Length Prior to Threshold	300	240	300	240	240
Width	150	120	150	120	120
Runway Object Free Area					
Length Beyond Runway End	300	240	300	240	240
Length Prior to Threshold	300	240	300	240	240
Width	500	250	500	250	250
Runway Obstacle Free Zone					
Length Beyond Each Runway	200	200	200	200	200
Width	250	250	250	250	250

Note: 1) Paved runway shoulders are not required for ADG Group II and I aircraft.

²⁾ Turf, aggregate-turf, soil cement, lime, or bituminous stabilized soil are recommended adjacent to ADG-II and ADG-I aircraft, but not required.

Table 5-11
RUNWAY PROTECTION ZONE DIMENSIONS

	B-II Aircraft A-I Small					Ru	nway		
RPZ Dimension	Standards Not Lower Than 1 Mile (feet)	Standards Not Lower Than 1 Mile (feet)	Aircraft Standards Visual (feet)	14	32	6	24	18	36
Approach Runway Protection Zone									
Length	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Inner Width	500	250	250	500	500	250	250	250	250
Outer	700	450	450	700	700	450	450	450	450
Departure Ru	ınway Protect	ion Zone							
Length	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Inner Width	500	250	250	500	500	250	250	250	250
Outer	700	450	450	700	700	450	450	450	450

Note: RPZ = Runway Protection Zone

Table 5-12
RUNWAY SEPARATIONS DISTANCES IN FEET

	B-II Standards	Runway 14/32	A-I Small Aircraft Standards	Runway 6/24	Runway 18/36
Holding Position	200	250	125	225	190
Parallel Taxiway/Taxilane Centerline	240	537	150	517	537.5
Aircraft Parking Areas	250	685	125	680	875

5.3.9 Runway Designations

Runway designation markings are provided on each end of a runway and are used by pilots to properly identify the runway. The designation identifies a runway according to the inbound compass heading and consists of a number. The designation number represents the whole number nearest the compass heading when viewed from the direction of approach. For example, where a compass heading is 183 degrees, the runway designation would be 18, and for a compass heading of 87 degrees, the runway designation would be 9.

The Earth's magnetic field and large objects in the vicinity affect compass readings. The effect of magnetic objects in the vicinity is called "deviation". The effect of the Earth's magnetic field is called "variation". Compass headings corrected for nearby objects (deviation) are "magnetic" directions. Correcting for the Earth's magnetic field (variation) gives us a "true" direction. When on land, "variation" is referred to as "magnetic declination" or sometimes "deviation."

The compass heading is determined by correcting a runway's true bearing for magnetic declination. To accomplish this modification, westerly magnetic declination values are added to a runway's true bearing, while easterly magnetic declination values are subtracted. The magnetic declination for Apalachicola Regional Airport is 06° 03' 00" West. Since the magnetic declination is westerly, the compass headings associated with the runways at the Airport are determined by adding the declination value to the true bearing values. The true bearing, the compass heading, the true designation, and the next anticipated designation change for each runway is shown in Table 5-13.

Table 5-13 RUNWAY DESIGNATIONS

Category	Measure
Airport Declination	4° 15' 00" West ±
Rate of Declination Change Per Year	0° 5' West
Runway 14	
True Bearing	135° 27' 30"
Compass Bearing	139° 42' 30"
Correct Runway Designation	14
Approximate Years to Next Designation Change	51
Runway 32	
True Bearing	315° 27' 30"
Compass Bearing	319° 52' 30"
Correct Runway Designation	32
Approximate Years to Next Designation Change	51
Runway 6	
True Bearing	60° 37' 40"
Compass Bearing	64° 52' 40"
Correct Runway Designation	6
Approximate Years to Next Designation Change	40
Runway 24	
True Bearing	240° 37' 40"
Compass Bearing	244° 52' 40"
Correct Runway Designation	24
Approximate Years to Next Designation Change	40
Runway 18	
True Bearing	180° 18' 45"
Compass Bearing	184° 33' 45"
Correct Runway Designation	18
Approximate Years to Next Designation Change	0
Runway 36	
True Bearing	00° 18' 45"
Compass Bearing	04° 33' 45"
Correct Runway Designation	36
Approximate Years to Next Designation Change	0

Source: National Oceanic and Atmospheric Administration National Geophysical Data Center accessed 6 September 2019

It appears that the last time that the runway ends at the Airport were surveyed was in 2012. The information in Table 5-13 is based on that survey. Table 5-13 shows that given the current rate of change, the runway ends for Runway 18/36 probably changed enough since 2012 that

this runway should probably be re-designated as runway 01/19 and re-marked as soon as feasible, probably with a runway rehabilitation project.

An Airports Geographic Information System (AGIS) survey in compliance with FAA AC 150/5300-18B, General Guidance and Specifications for Submission of Aeronautical Surveys to NGS: Field Data Collection and Geographic Information System (GIS) Standards, is being conducted as part of this Master Plan Update. When the new survey information regarding the runway ends is available, Table 5-13 will be updated accordingly.

5.3.10 Runway Pavement Condition and Strength

In September of 2017, the FDOT published the *Statewide Airfield Pavement Management Program, Airfield Pavement Evaluation Report* for Apalachicola Regional Airport (2017 FDOT PCI Report). PCIs are ranked from 0 to 100 with 100 generally representing brand new pavement in good condition. Pavement with a PCI of between 86 to 100 is good. Pavement rated between 71 and 85 is satisfactory. Ratings of between 56 and 70 are fair. Rankings of between 41 and 55 are poor. Rankings between 26 and 40 are very poor. Rankings between 11 and 25 are serious. Rankings of 0 to 10 are failed.

Through the planning period, the condition of the pavement should be monitored to ensure that basic maintenance of the pavement is assured. It is recommended that pavement with a Pavement Condition Index (PCI) ranging from 90 to 75 be maintained with crack sealing, partial depth patching, full depth patching, or surface treatment. Once the PCI reaches 74 or below, it is recommended that rehabilitation in the form of mill and overlay, concrete pavement restoration, or full depth pavement reconstruction be considered and planned for before the pavement reaches a PCI at or below 41, which would indicate that the pavement is in poor condition. Pavement rehabilitation will lengthen the useful life of a runway and ensure that it is operable well into the future.

The pavement of Runway 14/32 is concrete and was in satisfactory condition with a PCI of 73. The shoulders for this runway have a PCI of 67 or fair. The original runway is estimated to have been constructed in January of 1940. Typically, a runway would not require full rehabilitation or reconstruction for 15 to 20 years. It may, however, require some maintenance and repair approximately every five to seven years depending on the wear. Runway 14/32 will likely require mill and overlay within the planning period. The FDOT performs the PCI testing and resultant reports on a rotating basis with all public-use airports in Florida. This rotation typically occurs every three years. Therefore, it is reasonable to assume that Apalachicola Regional Airport's pavements will be analyzed again in 2020. The results of that testing and report should be monitored to determine if Runway 14/32 will require a mill and overlay or a more robust pavement rehabilitation.

The pavement of Runways 6/24 is also concrete and has a PCI of 74, or satisfactory. The shoulders have a PCI of 69, or fair. This runway is also estimated to have been constructed in January 1940. It is anticipated that this runway will also likely require some form of rehabilitation during the planning period.

Runway 18/36 is constructed of concrete with a PCI of 69, or fair. The shoulders have a PCI of 58 or fair. This runway was also estimated to have been constructed in January of 1940 and is most likely to require rehabilitation within the planning period.

Airports have varying pavement strengths based on the aircraft types they expect to serve. All three runways have weight bearing capacities of a Pavement Classification Number (PCN) of 12/R/B/X/T. This means that the pavement has a load bearing capacity of 12, is made up of a rigid material (concrete), is on a medium-strength sub-grade, has a maximum tire-pressure of 254 pounds per square inch, and has been calculated through a technical evaluation.

Most of the aircraft operating at the Airport do not exceed 12,500 pounds; however, a growing number of operations by aircraft weighing over 12,500 pounds do occur. This is not currently projected to change significantly over the planning period. The existing pavement strength is anticipated to be suitable for the projected operations throughout the planning period.

5.3.11 Runway Markings and Lighting

The current non-precision markings at both ends of Runway 14/32 are in fair condition. These follow the FAA required non-precision markings for GPS non-precision approaches. Runway 6/24 has non-precision markings that are in fair condition. Runway 18/36 has basic runway markings that are faded and in poor condition. The runway ends for Runway 18/36 will require re-marking as soon as practicable as magnetic declination has changed the runway end designations.

Runways 14/32 and 6/24 are equipped with Medium Intensity Runway Lights (MIRL). Runway 18/36 is not equipped with lights.

5.3.12 Taxiway and Taxilane Standards

Taxiways and taxilanes also have design standards that are detailed in FAA AC 150/5300-13A, *Airport Design*. The design standards for taxiways and taxilanes are based in part on the Airplane Design Group (ADG) of the critical aircraft of the runway. However, taxiway design is also based on a Taxiway Design Group (TDG) designation, which is based on the dimensions of an aircraft's Main Gear Width (MGW) and the Cockpit to Main Gear (CMG) distance as shown in Figure 4-6 of the Advisory Circular. The Beechcraft King Air B-200, the critical design aircraft for Runway 14/32, is an ADG-II aircraft.

The Beechcraft King Air B-200 has an ARC of B-II, an MGW of 17.5 feet, a CMG of 6.45 feet, and a TDG of 1A. However, for purposes of the taxiway design, it is recommended that the TDG 2 be used for taxiways accessing Runway 14/32, as there are aircraft in the B-II classification, which are classified as TDG 2, such as the Dassault Falcon/Mystère 50, which regularly use Runway 14/32.

Runway 14/32 is served by a full-length, 75-foot wide, parallel taxiway, Taxiway A. In addition, to Taxiway B, there are five taxiway connectors between Taxiway A and Runway 14/32 with widths of 75-feet each. Taxiway A is located 537 feet from Runway 14/32, centerline to centerline, and exceeds the 240-foot separation requirement of an ADG II runway. As Taxiway

A is 75 feet wide, it could meet the requirements of a TDG 5. This far exceeds the requirements for the Critical Aircraft for Runway 14/32, the Beechcraft King Air B-200.

Runway 6/24 is served by a partial-length, 75-foot wide, parallel taxiway; Taxiway B, which connects the Runway 6 end with Runway 14/32. There are five taxiway connectors between Taxiway B and Runway 6/24 each with a width of 75 feet. The centerline of Taxiway B to the centerline of Runway 6/24 is 517 feet and exceeds the 150-foot separation requirement of an ADG I (small) runway. As Taxiway B is 50 feet wide, it could meet the requirements of a TDG 3. As the critical aircraft for Runway 6/24 is a Cirrus SR-22, which has an ARC of A-I and a TDG of 1A, this far exceeds the requirements.

Runway 18/36 is served by a partial-length parallel taxiway; Taxiway C, which has a width of 75 feet and a distance between the Taxiway C centerline and the Runway 8/36 centerline of 537.5 feet. Taxiway C has three connectors to Runway 18/36, which are each 75 feet wide.

The taxiway design standards based on Airplane Design Group for ADG-II and ADG-I are shown in Table 5-14. The existing dimensions for each of the existing taxiways are also shown. The taxiway design standards based on taxiway design standards for both TDG-1A and TDG-2 are shown in Table 5-15, as well as the actual measurements for Taxiways A, B, and C.

Table 5-14
TAXIWAY DESIGN STANDARDS BASED ON AIRPLANE DESIGN GROUP

Item	ADG II (feet)	Taxiway A (feet)	ADG I (feet)	Taxiway B (feet)	Taxiway C (feet)
Taxiway Protection					
Taxiway Safety Area (TSA) Width	79	79	49	79	79
Taxiway Object Free Area (TOFA) Width	131	131	89	131	131
Taxiway Separation					
Taxiway Centerline to Parallel	105	n/a	70	n/a	n/a
Taxiway Centerline to Fixed or Movable	65.5	65.5	44.5	44.5	44.5
Wingtip Clearance					
Taxiway Wingtip Clearance	26	26	20	20	20

Note: n/a = Not applicable, ADG = Airplane Design Group

Table 5-15
TAXIWAY DESIGN STANDARDS BASED ON TAXIWAY DESIGN GROUPS

	TDG 1A	TDG 2	Taxiway		
Item	(feet)	(feet)	Α	В	С
Taxiway Width	25	35	75	75	75
Taxiway Edge Safety Margin	5	7.5	7.5	5	5
Taxiway Shoulder Width	10	15	n/a	n/a	n/a

Note: n/a = Not applicable, TDG = Taxiway Design Group

5.3.13 Taxiway Design

FAA Advisory Circular 150/5300-13A, *Airport Design*, recommends that taxiways not be allowed to lead directly from an apron to a runway without requiring a turn. Taxiways that lead directly from an apron to a runway can lead to confusion when a pilot expects to encounter a parallel taxiway but instead accidentally enters a runway. The following taxiways currently lead directly from an apron to a runway.

- Both ends of Taxiway A
- Taxiway A4
- Taxiway B3
- Taxiway B4

These must be addressed in the Development and Evaluation of Alternatives chapter and on the Airport Layout Plan.

Further, entrance/exit taxiways to runways must meet at right angles, as this provides "the best visual perspective to a pilot approaching an intersection with a runway to observe aircraft in both the left and the right directions. It is recommended that the taxiway approach the Runway with two 90 degree turns. There are several instances where the current entrance/exit taxiway does not meet the runway correctly. These are:

- Taxiway A1
- Taxiway A5
- Taxiway B1
- Taxiway B5
- Taxiway C3
- Taxiway D

These will also be addressed in the Development and Evaluation of Alternatives chapter and on the Airport Layout Plan later in this study.

5.3.14 Taxiway Conditions Assessment

All the runways are constructed of concrete, with varying levels of condition. Table 5-16 shows a portion of the airfield pavement conditions inventory. A graphic from the 2017 FDOT PCI Report for the Airport is shown as Figure 5-2.

Table 5-16
AIRFIELD PAVEMENT CONDITION INVENTORY

				T A		Last
				True Area in Square		Last Construction
Branch ID	Branch Name	PCI	PCI Category	Feet	Material	Date
Diancirio	Branch Name	1 01	l of oategory	1 001	Waterial	Date
105	Taxiway C	66	Fair	153,704	PCC	1942
110	Taxiway C	66	Fair	77,718	PCC	1942
145	Taxiway C2	66	Fair	10,646	PCC	1942
150	Taxiway C2	72	Satisfactory	34,830	PCC	1940
155	Taxiway C1	57	Fair	10,613	PCC	1942
160	Taxiway C1	70	Fair	34,877	PCC	1940
205	Taxiway A	61	Fair	31,535	PCC	1940
210	Taxiway A	39	Very Poor	16,092	PCC	1942
220	Taxiway A	66	Fair	154,199	PCC	1940
225	Taxiway A	69	Fair	75,620	PCC	1942
230	Taxiway A1	42	Poor	32,807	PCC	1940
235	Taxiway A1	60	Fair	11,058	PCC	1942
240	Taxiway A3	53	Poor	34,679	PCC	1940
245	Taxiway A2	61	Fair	10,796	PCC	1942
250	Taxiway A3	60	Fair	35,036	PCC	1940
255	Taxiway A2	65	Fair	10,441	PCC	1942
305	Taxiway B1	59	Fair	29,556	PCC	1940
310	Taxiway B1	52	Poor	15,572	PCC	1942
315	Taxiway B2	51	Poor	34,613	PCC	1940
320	Taxiway B2	57	Fair	10,600	PCC	1940
325	Taxiway B3	59	Fair	34,613	PCC	1940
330	Taxiway B3	72	Satisfactory	10,600	PCC	1942
335	Taxiway D	46	Poor	15,082	PCC	1942
345	Taxiway A	48	Poor	29,764	PCC	n/a
350	Taxiway A	69	Fair	10,975	PCC	n/a
4105	Apron	54	Poor	979,973	PCC	1940
6105	Runway 14/32	73	Satisfactory	512,205	PCC	1940
6110	Runway 14/32	67	Fair	256,102	PCC	1940
6205	Runway 6/24	74	Satisfactory	498,541	PCC	1940
6210	Runway 6/24	69	Fair	249,271	PCC	1940
6305	Runway 18/36	69	Fair	525,250	PCC	1940
6310	Runway 18/36	58	Fair	262,625	PCC	1940

Note: PCI = Pavement Condition Index, PCC = Portland Cement Concrete, n/a = not available

Source: Statewide Airfield Pavement Management Program, September 2017



Source: Statewide Airfield Pavement Management Program, September 2017

Figure 5-2
AIRFIELD PAVEMENT CONDITIONS MAP

5-22 Facility Requirements

5.3.15 Taxiway Markings and Lighting

All taxiways at the Airport are currently marked with yellow centerline markings in fair to good condition. All holdlines are marked and are in good condition. Only Taxiway A and its associated taxiway connectors have Medium Intensity Taxiway Lights (MITL). The other taxiways are not currently lit. However, a project is currently planned in FY 2020 to install LED lights on Taxiway B.

5.3.16 Additional Taxiways

The FAA recommends that there be taxiways that will allow aircraft to easily maneuver from the terminal/FBO area to both ends of at least the primary runway of an airport. Taxiway A provides access to the terminal/FBO area from both ends of Runway 14/32. Taxiway A also provides access to Runway 36 from the terminal/FBO area. Taxiway B provides from Runway 6 to the terminal/FBO area. Neither Runway 24 nor Runway 18 are accessible to the terminal/FBO area without traveling along the either Runway 6/24 or Runway 18/36.

Additional taxiways and taxilanes may be required at the Airport, as further aviation development occurs. New taxiways could also support development in new areas of the Airport. Taxilanes would also be required to access new hangars or aprons.

5.3.17 Apron Pavement

2017 FDOT PCI Report, categorizes all the apron into one section. This section has a PCI of 54, which has been determined to be a poor condition. The apron will most likely require rehabilitation within the planning period.

5.3.18 Navigational Aids

A navigational aid or NAVAID is any marker or piece of equipment that assists the pilot in navigating with greater precision and accuracy. They can include items as simple as the aircraft's magnetic compass to Global Positioning Systems (GPS). This section discusses a few that are associated with the Apalachicola Regional Airport.

Precision Approach Path Indicators (PAPI) provide vertical plane guidance information to help a pilot acquire and maintain the correct approach to the Airport. They can usually be seen from about three miles out during the day and up to 20 miles out at night. Runways 14/32 and 6/24 have 2-light PAPIs on each end of both runways. Runway 18/36 does not have PAPIs.

Runway End Identifier Lights (REILs) at the ends of runways improve a pilot's ability to find a runway end in inclement weather or rough terrain. None of the six runway ends on the Airport have REILs. It is recommended that REILs be installed on at least Runways 14/32 and 6/24.

The Airport has a Rotating Beacon that is in fair condition. A rotating beacon is used to identify itself as an airport to pilots at night. It is mounted on a tower or above a building so that pilots can see it from all directions. The Airport's Rotating Beacon flashes alternating green and white lights indicating that it is a civilian airport.

The Airport also has one lighted windsock. It is located south of the intersection of Runways 14/32 and 6/24. Typically, windsocks are co-located with segmented circles, which are recommended by the FAA. The Airport does not have a segmented circle.

The Airport has a non-directional beacon that transmits a low frequency omni-directional signal that is received by equipment on an aircraft. The pilot uses the signal and the aircraft equipment to determine the direction of the aircraft from the Airport.

5.3.19 Weather Equipment

The Airport has an Automated Surface Observing System (ASOS). ASOS facilities are a joint effort of the National Weather Service (NWS), the FAA, and the Department of Defense (DOD). An ASOS supports weather forecast activities and aviation operations and, at the same time, supports the needs of the meteorological, hydrological, and climatological research communities. The current ASOS equipment appears to be in good condition.

5.4 LANDSIDE

Landside facilities are those that interface between the airfield and the public infrastructure. Landside facilities typically include hangars, terminals, roads, vehicular parking, and other support structures.

5.4.1 Based Aircraft Storage

The FAA approved forecast for based aircraft indicates that there were 20 aircraft based on the Airport in 2018. At this time, the Airport has not entered any of the based aircraft into the FAA's National Based Aircraft Inventory Program at www.basedaircraft.com. This is a data base that lists aircraft entered by non-Primary NPIAS airports to provide validated based aircraft counts for single-engine aircraft, multi-engine aircraft, jets, and helicopters. It is highly recommended that the Airport enter their based aircraft into the database. The database operators will then verify that each aircraft is not based at any other airports. If an aircraft is already certified as being based at another airport, the database operator will work with both airports to resolve the issue.

Based aircraft are typically housed in conventional hangars, T-hangars, or other single-module types of hangars. Based aircraft can also be stored at tie-downs in a specified area of the ramp or grassy areas on an airport or are in conventional hangars. There are currently five T-hangar buildings with a total of 40 T-hangar units on the Airport. In addition, there are three conventional hangars, exclusive of the U.S. Weather Service hangar and the FBO hangar.

There are currently 22 marked tie-down positions located on the apron that runs parallel to Taxiway A. There are currently no grass tie-down areas at the Airport, nor are any currently planned. Table 5-17 shows the FAA approved Forecast of Aviation Activity Forecast of based aircraft and the distribution of the based aircraft stored in hangars and at tie-downs.

Table 5-17
BASED AIRCRAFT STORAGE

	2018	2023	2028	2033	2038
Based Aircraft	20	22	23	25	26
Based Aircraft in T-Hangars	17	19	20	21	22
Based Aircraft in Conventional and Box Hangars	3	3	3	4	4
Based Aircraft at Tie-downs	0	0	0	0	0

As the number of based aircraft grows over the planning period, it is anticipated that based aircraft will continue to be stored in either T-hangars, conventional hangars, or box hangars. In 2023, the forecast calculates that 19-based aircraft will be stored in T-hangars and that 3-based aircraft will be stored in conventional or box hangars. By the year 2038, the forecast indicates that 22 based aircraft will be stored in T-hangars and that 4 based aircraft will be stored in conventional or box hangars.

There are currently 40 T-hangar units at the Airport and four conventional hangars at the Airport. Of the five conventional hangars, the one associated with the FBO typically houses itinerant aircraft and the U.S. Weather Service hangar houses only their own aircraft and equipment. The remaining three conventional hangars could probably accommodate more than one aircraft, but that is up to the discretion of the lessee. Table 5-18 shows how the hangar storage of based aircraft might be distributed between T-Hangars and conventional hangars throughout the planning period based on the distribution of aircraft at the Airport in 2018.

Table 5-18
BASED AIRCRAFT HANGAR SPACES AVAILABLE VERSUS REQUIRED

	2018	2023	2028	2033	2038
Number of Required Hangar Spaces for Based Aircraft	20	22	23	25	26
T-Hangars	•				
Number of T-Hangars Required for Based Aircraft	17	19	20	21	22
Number of Existing T-hangar Units	40	40	40	40	40
Surplus/(Deficit)	23	21	20	19	18
Conventional Hangars					
Number of Required Spaces	3	3	3	4	4
Number of Existing Conventional and Box Hangar Spaces	3	3	3	3	
Surplus/(Deficit)	0	0	0	(1)	(1)

Table 5-19 shows the number of aircraft at the Airport that will require to be stored in hangars at the Airport. This number is divided between those that are stored in T-hangars versus those

that are stored in conventional, or box hangars based on the current distribution of stored aircraft.

The FAA Approved Based Aircraft Forecast indicates that there will be a surplus of 21 T-hangar units in 2023 and that by the year 2038, there will still be a surplus of 18 T-hangar units. Based on the FAA Approved Forecasts, the conventional hangars space is at capacity for storing based aircraft and additional space will likely be required by at least 2033.

Not only should the proper number of aircraft parking spaces in hangars be provided, but the size of the hangars should also be taken into consideration. Table 5-19 shows the comparison of the amount of hangar space available to the amount that will be required throughout the planning period.

Table 5-19
BASED AIRCRAFT HANGAR AREA AVAILABLE VERSUS REQUIRED

	2018	2023	2028	2033	2038
Existing and Planned Aircraft Storage Areas					
Square Foot Area of T-Hangars	43,750	43,750	43,750	43,750	43,750
Average Square Foot Area Per T-Hangar	1,094	1,094	1,094	1,094	1,094
Square Foot Area of Conventional Hangars	24,130	24,130	24,130	24,130	24,130
Average Square Foot Area Per Conventional	6,033	6,033	6,033	6,033	6,033
Total Square Foot Area of Aircraft Storage	67,880	67,880	67,880	67,880	67,880
Hangar Requirements					
Number of Single Engine Aircraft in Hangars	18	17	16	16	15
Square feet Per Single Engine Aircraft	850	850	850	850	850
Number of Multi-engine Aircraft in Hangars	2	2	2	2	2
Square feet per Multi-engine Aircraft	1,550	1,550	1,550	1,550	1,550
Number of Jets in Hangars	0	1	1	2	3
Square Feet per Jet in Hangars	2,450	2,450	2,450	2,450	2,450
Number of Rotorcraft in Hangars	0	1	1	2	2
Square Feet per Rotorcraft	850	850	850	850	850
Number of Others in Hangars	0	1	2	3	4
Square Feet per Other Aircraft	850	850	850	850	850
Total Area Required for Based Aircraft in Hangars	18,400	21,700	21,700	25,850	28,300
Surplus/(Deficit) Square Feet from Existing	49,480	46,180	46,180	42,030	39,580

Currently, there are approximately 67,880 square feet of aircraft storage in hangars located across the Airport. This does not include either the FBO hangar or the U.S. Weather Service hangar. Of this amount, 24,130 square feet are in conventional and box hangars. However, only 21,700 square feet of space will be required for based aircraft storage in 2023. It is anticipated that 28,300 square feet will be required in 2038. It is understood that not all the space within the conventional and box hangars is used for aircraft storage. Area within these

hangars is also used for offices, work areas, maintenance, and storage of aviation material. The surplus will reduce as additional aircraft are based at the Airport.

As an alternative to storing aircraft in hangars, owners may elect to store their aircraft at dedicated tie-down positions. While this alternative exposes the aircraft to the elements, it is typically a less expensive alternative to storage in aircraft hangars. There are currently no based aircraft that are stored at the Airport's tie-down areas, and it is proposed that this will continue throughout the planning period.

5.4.2 <u>Itinerant Aircraft Storage</u>

Itinerant aircraft are those aircraft that are not based at the Airport, but which are visiting. Alternatively, itinerant aircraft can spend extended periods at the Airport as the owner/pilot may be a "snowbird" or have other extended business in the area. The pilots could be visiting for reasons of business or pleasure; however itinerant aircraft also arrive for special events either at the Airport or within the community. The itinerant aircraft require an area where they can be stored on a temporary basis. Most itinerant aircraft are typically stored for only for a couple of days.

Table 5-20 shows the methodology for calculating the apron requirements for itinerant aircraft as defined in FAA AC 150/5300-13 Change 18, *Airport Design*, Appendix 5, *Small Airport Buildings, Airplane Parking and Tiedowns*. The revised FAA AC 150/5300-13A does not include this methodology, however it is still a viable methodology for determining the number of required iterant tie-down spaces required.

Table 5-20
ITINERANT AIRCRAFT STORED ON APRON

	2018	2023	2028	2033	2038
Total Annual Operations	24,668	25,772	26,819	27,910	29,044
Percent of Annual Operations Occurring in the Busiest Month	13%	13%	13%	13%	13%
Busiest Month Operations	3,207	3,350	3,486	3,628	3,776
Average Day Operations of Busiest Month	103	108	112	117	122
Busiest Day Operations (Average Day + 10%)	114	119	124	129	134
Percent of Itinerant Operations	45.2%	45.2%	45.2%	45.2%	45.2%
Number of Itinerant Operations on Busiest Day	51	54	56	58	61
Number of Itinerant Aircraft Landing Operations	26	27	28	29	30
Percent of Itinerant Operations on Ground at Same Time	50%	50%	50%	50%	50%
Number of Itinerant Aircraft on Ground at Same Time	13	13	14	15	15
Percentage of Itinerant Aircraft Stored on the Apron	60%	60%	60%	60%	60%
Number of Itinerant Aircraft Stored on the Apron	8	8	8	9	9

Using the FAA methodology shown in Table 5-21, it is anticipated that 13 itinerant aircraft could be on the ground at the Airport at the same time in 2023. Of these, 8 will require tie-down spaces on the apron and 5 will be stored in hangars, based on the tie-down to hangar split existing today. By 2038, it is anticipated that 15 itinerant aircraft are likely to be on the ground at the same time and that 9 of these will require tie-down areas on the apron.

Table 5-21
SQUARE YARD AREA OF ITINERANT APRON REQUIRED

	2018	2023	2028	2033	2038
Existing Apron Total Square Feet	592,560	592,560	592,560	592,560	592,560
Existing Apron Total Square Yards	65,840	65,840	65,840	65,840	65,840
Number of Tie-downs at Airport	22	22	22	22	22
Average Square Yards per Tie-down	251	251	251	251	251
Number of Based Aircraft at Tie-downs	0	0	0	0	0
Number of Tie-downs Available for Itinerant Aircraft	22	22	22	22	22
Number of Itinerant Tie-downs Required	13	13	14	15	15
Surplus/(Deficit)	9	9	8	7	7
Square Yard Surplus/Deficit of Itinerant Tie-downs	2,288	2,144	2,007	1,865	1,717

In 2023, it is forecast that there will be a surplus of 9 itinerant tie-down areas and 2,144 square yards of apron on the Airport's busiest day of the year. The available area for itinerant aircraft tie-down spaces in 2038 is expected to equal approximately 5,522 square yards with only 15 positions or 3,765 square yards being required by itinerant aircraft on the Airport's busiest day leaving 7 positions and 1,757 square yards available. This would indicate that no additional itinerant tie-down spaces will be required during the planning period.

Not all itinerant aircraft are or will be stored at tie-downs on the apron. Some itinerant aircraft will be temporarily stored in hangars. Table 5-22 illustrates those itinerant aircraft that are anticipated to be stored in hangars.

5-29

Table 5-22
ITINERANT AIRCRAFT STORED IN HANGARS

	2018	2023	2028	2033	2038
Number of Itinerant Aircraft on the Ground	13	13	14	15	15
Simultaneously					
Percentage of Itinerant Aircraft Stored in Hangars	40%	40%	40%	40%	40%
Number of Itinerant Aircraft Stored in Hangars	5	5	6	6	6
Percent Group I Aircraft Stored in Hangar	40%	40%	40%	40%	40%
Number of Group I Aircraft Stored in Hangar	2	2	2	2	2
Percent Group II Aircraft Stored in Hangar	58%	58%	58%	58%	58%
Number of Group II Aircraft Stored in Hangar	3	3	3	3	3
Percent of Group III Aircraft Stored in Hangar	2%	2%	2%	2%	2%
Number of Group III Aircraft Stored in Hangar	0	0	0	0	0
Square Feet per Group I Aircraft in Hangar	850	850	850	850	850
Square Feet per Group II Aircraft in Hangar	1,550	1,550	1,550	1,550	1,550
Square Feet per Group III Aircraft in Hangar	2,450	2,450	2,450	2,450	2,450
Square Feet of Itinerant Aircraft Storage Required	6,698	6,698	7,213	7,728	7,728
Additional Hangar Area Required for Admin, Storage	1,340	1,340	1,443	1,546	1,546
& Shops	, -	, -	, -	, -	, -
Total Itinerant Aircraft Hangar Storage Required	8,037	8,037	8,655	9,274	9,274
Existing Square Feet of FBO Hangar	11,200	11,200	11,200	11,200	11,200
Surplus/(Deficit)	3,163	3,163	2,545	1,926	1,926

Note: FBO = Fixed Base Operator

It is calculated that in 2023, an average of 5 itinerant aircraft will be housed in hangars. In the year 2038, it is anticipated that on average 6 itinerant aircraft will be stored in hangars simultaneously. It is also calculated that there will be more than enough capacity to house these aircraft.

However, the Fixed Base Operator, Centric Aviation, has stated that many of the itinerant aircraft owners currently located on the apron would prefer that their aircraft be stored in hangars, if these were available.

5.4.3 Apron Capacity

It is not recommended that based aircraft stored at the tie-downs and the itinerant aircraft parking occur in the same vicinity on the apron. Some consideration should be given to keeping these areas separate as they typically support different levels and types of activities. While the previous paragraphs indicate that there will likely be enough apron area to serve both the based aircraft and the itinerant aircraft, it is possible that the number of aircraft requiring tie-down space in either category could increase unexpectedly. This is particularly likely during periods of high activity. The total anticipated aircraft parking apron requirements and existing and planned capacity are shown in Table 5-23.

Table 5-23
AIRCRAFT APRON PARKING AREA REQUIREMENTS

	2018	2023	2028	2033	2038
Number of Itinerant Tie-downs Required	13	13	14	15	15
Required Itinerant Aircraft Apron in Square Yards	3,223	3,367	3,504	3,646	3,795
Number of Based Aircraft Tie-downs Required	0	0	0	0	0
Required Based Aircraft Apron in Square Yards	0	0	0	0	0
Total Number of Tie-downs Required	13	13	14	15	15
Total Number of Tie-downs Existing	22	22	22	22	22
Surplus/(Deficit)	9	9	8	7	7
Total Square Yards of Apron Required	3,223	3,367	3,504	3,646	3,795
Total Square Yards of Existing Tie-down Area	5,511	5,511	5,511	5,511	5,511
Surplus/(Deficit)	2,288	2,144	2,007	1,865	1,717

Table 5-23 shows that there was a surplus of aircraft storage on the apron in 2018 of approximately 2,288 square yards. In 2038, it is anticipated that there will continue to be a surplus of apron with 7 positions open and 1,717 square yards available.

In addition to the aprons that are used to store aircraft, there is also a need for aprons to be in front of the conventional hangars. These aprons serve as a transition between an apron or taxiway/taxilane and a hangar and can be used for temporary storage or staging of the aircraft housed in the hangar. This is particularly true if the hangar is to be used for aircraft service or maintenance. Typically, these aprons should be sized to be no less than the same size as the hangar that it serves, with one and one half the size of the hangar size being optimal.

Table 5-24 shows the existing conventional and box hangars and their associated apron sizes and compares that apron to the typically sized apron for a conventional hangar.

Table 5-24
CONVENTIONAL HANGAR APRON AREA

Conventional Hangar	Existing Hangar in Square Feet	Existing Hangar in Square Yards	Minimum Recommended Apron in Size in Square yards	Optimum Recommended Apron Size in Square Yards	Existing Apron in Front of Hangar in Square Yards	Surplus/ (Deficit) in Square Yards
Fixed Base Operator Hangar	11,200	1,244	1,244	1,867	1,708	464
CAAZ, Inc. 369 Airport Road (Blue Hangar)	12,750	1,417	1,417	2,125	83	(1,333)
264 Airport Road	6,400	711	711	1,067	107	604
Large Hangar	12,070	1,341	1,341	2,012	316	(1,026)
Total	42,420	4,713	4,713	7,070	2,214	(1,291)

Note: The U.S. Weather Service hangar has not been included in this table

Table 5-24 shows that most of the conventional hangars on the Airport do not have the recommended apron area in front of the respective hangars. This likely reflects the desire of those that originally developed the respective hangars, cost saving programs, and the desire to use as little land as possible. However, it limits the use of the hangar by current and future prospective tenants. Only two of the four aprons meet or exceed the minimum recommended apron size. It is recommended that as additional hangars are constructed that they be required to at least meet the recommended apron size and encouraged to meet the optimum apron size.

5.4.4 Support Facilities

In addition to the primary facilities located on the airside and landside of the Apalachicola Regional Airport, there are other facilities located on the Airport that support the operation of the airside and landside facilities. These include the airfield electrical vault, the self-fueling station, the FBO facilities, and the vehicular parking.

5.4.4.1 Fueling Facilities

The Airport has three 12,000-gallon fuel tanks. One tank contains 100 Low Lead (LL) fuel or Avgas. The second tank supports Jet A fuel. The third tank is currently unused. The fuel facilities are available 24 hours a day 7 days a week with the use of a credit card. As the Airport operations are anticipated to only have a modest increase through the planning period, it is anticipated that the existing capacity of the fuel farm will serve the Airport throughout the planning period.

Consideration should be given to providing landside vehicular access to the fuel delivery trucks so that they do not have to be escorted on airside in order to make the delivery. It is understood that the FBO manager or other designee must be available for deliveries in any event, but it is not a best practice to allow fueling trucks onto the airside.

5.4.4.2 Fixed Base Operator Facilities

There is one FBO located on the Airport, Centric Aviation, which has a general aviation terminal located adjacent to the itinerant aircraft parking ramp. Currently, the general aviation terminal is collocated with the FBO Hangar. The general aviation terminal has about 2,000 square feet. It is anticipated that the facility may become tight during the planning period. If that happens, consideration may be given to putting an addition onto the general aviation terminal. Table 5-25 shows the basic facility requirements for a general aviation terminal based on the number of annual operations forecast.

Table 5-25
FBO TERMINAL REQUIREMENTS

	2018	2023	2028	2033	2038
Total Annual Operations	24,668	25,772	26,819	27,910	29,044
Busiest Month Operations	3,207	3,350	3,486	3,628	3,776
Average Day Operations of Busiest Month	103	108	112	117	122
Number of Itinerant Aircraft Stored on the Apron	13	13	14	15	15
Projected Peak Hour Passengers	26	27	28	29	30
Passenger Lounge	482	504	525	546	568
Pilot Lounge	68	71	74	77	80
Flight Planning	51	54	56	58	61
Concessions/Vending	161	168	175	182	189
First Conference Room	193	202	210	218	227
Second Conference Room	96	101	105	109	114
Offices (2)	160	160	160	160	160
File and Workroom	147	153	159	166	173
Restrooms	127	132	138	143	149
FBO Administration	77	81	84	87	91
FBO Operations	225	235	245	255	265
Storage and Maintenance	70	73	76	79	82
Circulation	370	390	400	420	430
Mechanical	220	230	240	250	260
Building Structure	50	50	50	60	60
Total Building Area	2,498	2,604	2,696	2,811	2,909

5.4.4.3 Access Roads and Entrances to the Airport

The Apalachicola Regional Airport is located west of the City of Apalachicola and is accessed from U.S. Highway 98, which is located south of the Airport. U.S. 98 is accessed from the Airport via Apalachee Street, which travels into the terminal area of the Airport. However, Apalachee Street is closed north of Chapman Drive and the traveler must turn east on either Chapman Road or Thomas Road/Brownsville Road to access Airport Road to access Apalachee Street once again and thereby enter the Airport.

5.4.4.4 Vehicular Parking

It is common at general aviation airports for automobiles to be parked in the various hangar facilities or adjacent to the structure, while a personal aircraft is in use. Parking of personal vehicles on the airside should be avoided as it increases the risk of an incursion between an aircraft and a personal vehicle. It is recommended that vehicular parking be made available to pilots on the landside of the Airport. While there is landside parking available at the Airport, it is located a considerable distance from the T-hangars.

There are several parking areas on the Airport. There are 14 marked spaces adjacent to the FBO/general aviation terminal. There is also a paved but poorly marked parking area off Apalachee Street as it enters the terminal area that has the capacity to park about 54 vehicles. Th large hangar located near the intersection of the runways has a separate parking area with the marked capacity to hold 13 vehicles. There is a paved area adjacent to the U.S. Weather Emergency Operations Center that has the capacity to hold about 13 vehicles. The hangar located at the far southeastern end of the apron adjacent to Taxiway A has vehicular parking spaces for at least five vehicles. There are no parking spaces adjacent to any of the T-hangars, or the conventional hangar currently located between the fuel farm and the T-hangars.

For airports, it is typical to allow approximately 1.0 parking space per 1,000 square feet of gross floor area. This is not a requirement by the FAA or FDOT. With the 47,220 square feet of conventional hangars, this would equate to 47 parking spaces. This is in line with the 45 parking spaces currently located on the Airport.

The parking needs of the T-hangars are underserved. There are no marked parking spaces near any of the T-hangars located on the Airport. While it is common for those using T-hangars to park their street vehicles in or adjacent to their respective T-hangars, it should not be encouraged to allow street vehicles in areas common to aircraft movements. It is recommended that as additional T-hangars are constructed, that adequate vehicular parking be included with each new T-hangar building.

As new facilities are built, and the use of existing facilities change function, the needs for the vehicle parking at each structure will also change. When developing future facilities, an adequate amount of parking spaces should be considered to meet both the local codes as well as the functional requirements of the facility. Each new conventional hangar should have a separate parking area dedicated to that hangar. Each set of T-hangars should also consider

conveniently located joint-use parking to accommodate the pilots and passengers without influencing them to park on the airside of the Airport.

5.4.4.5 *Fencing*

The Airport airfield is enclosed with a six-foot high fence with three strands of barbed wire on the top. There are several security gates within the fence for access to the airfield. One of these gates is located across Apalachee Street just north of Chapman Drive, blocking the road. This forces those attempting to access the Airport from U.S. 98 to turn east on either Chapman Road or Thomas Road/Brownsville Road to access Airport Road to access Apalachee Street once again and thereby enter the Airport. Another gate is located at the northern end of Airport Road as it accesses the airfield adjacent to the FBO/GA Terminal.

5.4.4.6 <u>Stormwater Management</u>

Currently, there is a system of ditches and ponds that control the drainage of stormwater in the different basins on Airport property. The system appears to be working well. These facilities should be monitored and maintained by the County to ensure that they continue to work properly. Routine maintenance includes trimming vegetation, cleaning pipes, and removing silt where applicable to ensure that the system continues to function properly.

As new facilities are constructed on the Airport, the stormwater management system will require modification and expansion to control the increased volume of runoff. Additional inlets, pipes and dry retention ponds will need to be constructed as more impervious surfaces are added.

During construction activities, topsoil and vegetation are typically removed. This exposes the underlying soil to erosion during rainfall events. Contractors should be required to use best management practices, such as silt barriers, hay bales, and temporary seeding to minimize erosion and silt contamination of neighboring waterways. It is recommended that the County secure for the Airport a General Permit for Construction, Operation, Maintenance, Alternation, Abandonment, or Removal of Airport Airside Stormwater Management Systems as set forth in the Florida Administrative Code 62-330.449.

5.5 FACILITY REQUIREMENTS SUMMARY

This chapter addresses several development issues that may need to be addressed over the 20-year planning period. Many of these are tied to the FAA approved Forecasts of Aviation Activity. Table 5-26 is a summary of the requirements and recommendations from this chapter. Each of these requirements and recommendations is tied to a "trigger" that will allow the Airport and the County to know when an event is being approached that would trigger additional development regardless of the period.

Table 5-26 FACILITY REQUIREMENTS SUMMARY

Facility	Existing Condition	Recommendations	Triggers
Runway Protection Zones	A very small portion of the RPZ for Runway 14 is not on Airport property.	Should that property become available in the future, the County should consider purchasing the property	When the property is available for purchase.
	Current Critical Aircraft is the Falcon 50 (B-II). Future Critical Aircraft is the Citation X (C-II)	Replace current Critical Aircraft with a Beechcraft Super King 200 a B-II aircraft. Future Critical Aircraft likely to remain the same, the Beechcraft Super King 200.	Should the number of documented flights to and from the Airport for an ARC C-II aircraft exceed 500 annual operations change the Critical Aircraft at that time.
	Portions had a PCI of 67 in 2017	Mill and overlay before the PCI reaches 41	Short-term planning period
Runway 14/32	Runway width is 100 feet with 25-foot-wide shoulders	FAA recommended width is 75 feet with 10-foot shoulders	Unlikely that FAA will fund the rehabilitation of the existing full width of the runway without a justification study.

Facility	Existing Condition	Recommendations	Triggers
	Current Critical Aircraft is the King Air (B-II). Future Critical Aircraft is the Falcon 50 (B-II)	Replace current Critical Aircraft with a Cirrus SR-22 an A-I aircraft. Future Critical Aircraft likely to remain the same, the Cirrus SR-22	Should the number of documented flights to and from this Runway for an ARC B-II aircraft exceed 500 annual operations change the Critical Aircraft at that time.
	Portions had a PCI of 69 in 2017	Mill and overlay before the PCI reaches 41	Short-term planning period.
Runway 6/24	Runway width is 100 feet with 25-foot-wide shoulders	FAA recommended width for a B- II runway is 60 feet with 10-foot shoulders	Unlikely that FAA will fund the rehabilitation of the existing full width of the runway without a justification study.

Facility	Existing Condition	Recommendations	Triggers
	This is the third runway on the Airport and is not needed for crosswind coverage	Neither the FAA nor the FDOT are unlikely to fund anything associated with this runway. Recommend the County find alternative funding source for Capital Improvements.	When the pavement condition deteriorates to the point that Foreign Object Debris (FOD) becomes an issue and aircraft engines are likely to ingest it. This is likely to occur within the short-term planning period
	Current Critical Aircraft is the King Air (B-II). Future Critical Aircraft is the Falcon 50 (B-II)	Replace current Critical Aircraft with a Cirrus SR-22 an A-I aircraft. Future Critical Aircraft likely to remain the same, the Cirrus SR-22	Should the number of documented flights to and from this Runway for an ARC B-II aircraft exceed 500 annual operations change the Critical Aircraft at that time.
	Highest PCI was 69 lowest was 58 in 2017	Mill and overlay before the PCI reaches 41	Short-term planning period.
	The designation for the runway is likely incorrect	Check the runway designation again after the survey of runway ends is completed. Re-mark the runway ends to the correct designation	The next time the runway is rehabilitated.
Runway 18/36	Runway width is 100 feet with 25-foot-wide shoulders	FAA recommended width for a B- II runway is 60 feet with 10-foot shoulders	Unlikely that FAA will fund the rehabilitation of the existing full width of the runway without a justification study.

Facility	Existing Condition	Recommendations	Triggers
Runway Lighting and Marking	Runways 14/32 and 6/24 have non-precision markings in good condition and are equipped with MIRL	No additional markings and lightings are anticipated within the planning period	As runway markings begin to fade, re-mark
Visual NAVAIDS	Runways 14/32 and 6/24 have 2-light PAPIs. There is a lighted windsock, but no segmented circle. None of the runway ends have REILs.	Recommend adding REILs to the ends of Runways 14/32 and 6/24. Recommend the addition of a segmented circle.	Next time either Runway is rehabilitated for the REILs. Within the short-term planning period for the segmented circle.
	Highest PCI was 69 lowest was 39 in 2017	Mill and overlay applicable portions, before the PCI reaches 41. Full depth reconstruction of those portions with a PCI at or below 41	Short-term planning period.
	Taxiway A1 leads directly from an Apron to a runway and does not meet Runway 14/32 at a right angle	Reposition or eliminate Taxiway A1	Within the short-term planning period
Taxiway A	Both ends of Taxiway A do not meet Runway 14/32 at right angles	Reconfigure both ends of Taxiway A to meet Runway 14/32 at a right angle	Within the short-term planning period

Facility	Existing Condition	Recommendations	Triggers
	Highest PCI was 57 lowest was 51 in 2017	Mill and overlay before the PCI reaches 41.	Short-term planning period.
	Taxiways B2 and B3 lead directly from the Apron to the runway	Reposition or eliminate Taxiways B2 and B3	Within the short-term planning period
Taxiway B	Taxiway B1 leads directly from the Apron to Runway 6 but does not enter the Runway at a right angle.	Reconfigure Taxiway B1 to meet Runway 6 at a right angle	Within the short-term planning period
	Highest PCI was 72 lowest was 57 in 2017	Mill and overlay before the PCI reaches 41.	Short-term planning period
Taxiway C	Taxiway C does not enter Runway 18 at a right angle.	Reconfigure Taxiway C to meet Runway 18 at a right angle	Within the short-term planning period
	Has PCIs of 46 and 52	Mill and overlay before the PCI reaches 41.	Short-term planning period
Taxiway D	Does not meet either Runway 14/32 or 6/24 at right angles	Reposition or eliminate Taxiway D	Short-term planning period
Taxiway Lighting and Marking	All taxiways are currently adequately and appropriately marked. Taxiway A has MITL.	Add LED MITL lights to Taxiway B	As taxiway markings begin to fade, re-mark
	Runway 14/32 has no associated run-up pads	Add run-up pads at both ends of Taxiway A	As needed or requested
Run-up Pads	Runway 6/24 has no associated run-up pads	Add run-up pads at both eds of Taxiway B	As needed or requested

Facility	lity Existing Condition Recommendations		Triggers
		When the next PCI report for AAF	
		is released, likely in 2020, if the	
		PCI is higher than 41 mill and	
		overlay, if the PCI is at or below	
Aircraft Aprons	PCI was 54 in 2017	41, full depth reconstruction	Short-term planning period
		Number of itinerant aircraft tie-	
	Total of 22 itinerant tie-down	down spaces appears to be	
Itinerant Aircraft Tie-downs	spaces.	adequate	Enough for the planning period
	Currently, no based aircraft are	No additional based aircraft tie-	
Based Aircraft Tie-downs	stored on the apron	down spaced required	Enough for the planning period
		No additional T-hangars are	
	Currently, 40 T-hangars on the	anticipated to be needed during	
T-Hangars	Airport	the planning period	Enough for the planning period
	Currently, there are five		
	conventional hangars on the		
	Airport. The FBO hangar houses		
	itinerant aircraft. FBO states that there are requests for additional	Currently need about two more parking spaces for the	
	hangar storage for itinerant	conventional hangars. Need	As required to meet market
Conventional Hangars	aircraft.	about	demand
Conveniena mangare	an orani.		domana
		Currently need 2 additional	
	Currently have 45 marked	parking spaces for the conventional hangars and about	
	Currently have 45 marked vehicular parking spaces on the	60 parking spaces for the T-	Needed now and as additional
Vehicular Parking	Airport.	hangars.	facilities are added
3	,		

Facility	Existing Condition	Recommendations	Triggers
Fuel Facilities	Airport has three 12,000-gallon tanks; one each for Jet A fuel and 100 LL fuel. The third tank is currently un-used	No additional fuel storage capacity is anticipated throughout the planning period	In the unlikely event that fuel deliveries increase to more than one per week, additional capacity should be added.
FBO Terminal Facilities	Currently there is approximately 2,000 square feet of FBO/General Aviation Terminal Area.	Anticipate that and additional 500 square feet is need today on busy days and that a total of an additional 909 square feet will be needed by 2038	As required to meet demand

6 DEVELOPMENT AND EVALUATION OF ALTERNATIVES

6.1 INTRODUCTION

This chapter takes into consideration the Facility Requirements developed in the last chapter, which were generated to address the requirements of the Airport based on the Forecasts of Aviation Activity. The potential locations of new, rehabilitated, or replacement airport related facilities are considered in this chapter. Additional development is also considered. This chapter looks not only at the improvements that could ideally be made to the Airport, but also considers how these improvements will affect the Airport operationally, while avoiding as much as possible any environmental conflicts.

All the alternatives were presented to the Franklin County Commission on October 27, 2020. Because of the COVID-19 Pandemic shutdown, the advertised and noticed meeting was held virtually with a PowerPoint presentation. The PowerPoint presentation was also placed on the County Commission website along with the meeting minutes. The presentation can also be found as Appendix I to this report.

6.2 ELEMENTS AFFECTING DEVELOPMENT OF ALTERNATIVES

In addition to elements that have been presented in the Environmental Consideration, Forecasts of Aviation Activity, and Facility Requirements chapters, there are a couple of other elements that should be considered when considering the development of alternatives. These include the area wetlands and proposed development within the region. These are addressed in this section.

6.2.1 Wetlands

The Apalachicola Regional Airport is largely surrounded by water and the Airport property has many wetland areas. Those on the Airport are collectively shown in Figure 6-1. These jurisdictional wetlands have been previously identified by the U.S. Fish and Wildlife Service, which has many defined types of wetlands within the United States. Those found on the Airport include:

- PAB4Hx: <u>Palustrine</u>: The Palustrine System includes all wetlands dominated by trees, shrubs, persistent emergent mosses, or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean derived salts is below 0.5 parts-per-trillion (ppt). It also includes wetlands lacking such vegetation, but with all the following four characteristics:
 - 1. Area less than 8 hectares (20 acres)
 - 2. Active wave-formed or bedrock shoreline features lacking water depth in the deepest part of the basin less than 2.5 meters (8.2 feet at low water)
 - 3. Salinity due to ocean-derived salts less than 0.5 ppt.

<u>Class Aquatic Bed (AB):</u> Includes wetlands and deep-water habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years.



Source: U.S. Fish & Wildlife Service (2020)

Figure 6-1 ON-AIRPORT WETLANDS

<u>Subclass Floating Vascular (4)</u>: Beds of floating vascular plants occur mainly in the Lacustrine, Palustrine, and Riverine systems and in the fresher waters of the Estuarine System. The plants float freely either in the water or on its surface. They are found primarily in protected portions of slow-flowing rivers. They are moved about by wind or water currents and cover a large area of water, particularly in the southeast United States.

<u>Water Regime Permanently Flooded (H):</u> Water covers the substrate throughout the year in all years.

<u>Special Modifier Excavated (x):</u> This modifier is used to identify wetland basins or channels that were excavated by humans.

• **PEM1B**: Palustrine

<u>EM Class Emergent</u>: Characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants.

<u>Subclass: Persistent (1)</u>: Dominated by species that normally remain standing at least until the beginning of the next growing season. This subclass is only found in Estuarine and Palustrine systems.

<u>Water Regime Seasonally Saturated (B)</u>: The substrate is saturated at or near the surface for extended periods during the growing season, but unsaturated conditions prevail by the end of the season in most years. Subsurface water is typically absent but may occur for days after heavy rain and upland runoff.

PEM1C: Palustrine.

EM Class Emergent.

Subclass: Persistent (1)

<u>Water Regime: Seasonally Flooded (C):</u> Surface water is present for extended periods especially early in the growing season but is absent by the end of the growing season in most years. The water table after flooding season ceases is variable, extending from saturated to the surface to a water table well below the ground surface.

PEM1Cx: Palustrine.

EM Class Emergent.

Subclass: Persistent (1)

Water Regime: Seasonally Flooded (C).

Special Modifier Excavated (x):

• PEM1/SS4C: Palustrine.

EM Class Emergent.

Subclass: Persistent (1)

<u>Split Class Scrub-Shrub (SS):</u> Includes areas dominated by woody vegetation less than 6m (20 feet) tall. The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.

<u>Split Subclass Needle-Leaved Evergreen (4):</u> The dominant species in Needle-leaved Evergreen wetlands are young or stunted trees such as black spruce or pond pine.

Water Regime Seasonally Flooded (C).

PFO1C: Palustrine.

<u>Class Forested (FO)</u>: Characterized by woody vegetation that is 6 m tall or taller.

<u>Subclass Broad-Leaved Deciduous (1)</u>: Woody angiosperms (trees or shrubs with relatively wide, flat leaves that are shed during cold or dry season, e.g., black ash (Fraxinus nigra).

Water Regime Seasonally Flooded (C).

PFO1/2C: Palustrine.

Class Forested (FO).

Subclass Broad-Leaved Deciduous (1).

<u>Split Subclass Needle-Leaved Deciduous (2)</u>: This subclass, consisting of wetlands where trees or shrubs are predominantly deciduous and needle leaved, is represented by young or stunted trees such as tamarack or bald cypress.

Water Regime Seasonally Flooded (C).

PFO1/4C: <u>Palustrine</u>.

Class Forested (FO).

Subclass Broad-Leaved Deciduous (1).

Split Subclass Needle-Leaved Evergreen (4).

Water Regime Seasonally Flooded (C).

• PFO2/F: Palustrine.

Class Forested (FO)

Subclass Needle-Leaved Deciduous (2):

<u>Water Regime Semi Permanently Flooded: (F):</u> Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

• PFO4/1B: Palustrine.

Class Forested (FO).

Subclass Needle-Leaved Evergreen (4).

Split Subclass Broad-Leaved Deciduous (1).

Water Regime Seasonally Saturated (B)

PFO4/EM1B: Palustrine.

Class Forested (FO).

Subclass Needle-Leaved Evergreen (4)

EM Class Emergent.

Subclass Persistent (1).

Water Regime Seasonally Saturated (B).

• PSS1C: Palustrine.

Split Class Scrub-Shrub (SS).

Subclass Persistent (1).

Water Regime Seasonally Flooded (C).

• PSS1/FO4: Palustrine.

Class Scrub-Shrub (SS).

Subclass Broadleaved Deciduous (1).

Split Class Forested (FO).

Split Subclass Needle-Leaved Evergreen (4)

• PSS3/1B: Palustrine.

Class Scrub-Shrub (SS).

<u>Subclass Broad-Leaved Evergreen (3)</u>: Woody angiosperms (trees or shrubs) with relatively wide, flat leaves that generally remain green and are usually persistent for a year or more, e.g., red mangrove (Rhizophora mangle).

Split Subclass Persistent (1).

Water Regime Seasonally Saturated (B).

• **PSS4/3C:** Palustrine.

Class Scrub-Shrub (SS)

Subclass Needle-Leaved Evergreen (4).

Split Subclass Broad -Leaved Evergreen (3).

Water Regime Seasonally Flooded (C)

• PSS4B: Palustrine.

Class Scrub-Shrub (SS)

Subclass Needle-Leaved Evergreen (4).

Water Regime Seasonally Saturated (B).

• PSS4/EM1B: Palustrine.

Class Scrub-Shrub (SS)

Subclass Needle-Leaved Evergreen (4).

Split Class Emergent (EM).

Split Subclass Persistent (1)

Water Regime Seasonally Saturated (B)

PUBHx Palustrine.

<u>UB Class Unconsolidated Bottom:</u> Includes all wetlands and deep-water habitats with at least 25% cover of particles smaller than stones (less than 6 to 7 centimeters), and a vegetative cover less than 30 percent.

<u>Water Regime Permanently Flooded (H):</u> Water covers the substrate throughout the year in all years.

Special Modifier Excavated (x).

The Gulf to Gadsden Freight Logistics Zone

In August of 2017, it was announced that Gulf, Gadsden, Liberty, and Franklin Counties had established the Gulf to Gadsden Freight Logistics Zone (FLZ), which would "promote the planning and funding of infrastructure improvements, intermodal connectivity, and facilitate freight activities and services within the region." An FLZ is structured to provide the counties with priority funding from the State of Florida when certain types of projects are pursued within that zone. An assortment of infrastructure associated with the moving of freight is proposed within the zone. This infrastructure in turn will allow other economic development opportunities to blossom. The purpose of the FLZ is to provide the framework to enhance the transportation network through infrastructure investment. By working with the State of Florida on prioritized funding, it is anticipated that all companies within the region will benefit from growth, economic development, and increased employment opportunities.

A study was conducted that included a Strategic Sites Inventory (SSI) in each of the four counties with the goal of identifying "potential high quality industrial and commercial sites situated along or near key transportation assets." The site searches were limited within a twomile buffer along state and federal highway corridors and the Apalachicola Northern Railroad line, which is owned by the St. Joe Company, and within a three-mile radius of the Port of St. Joe and the Port of Panama City in neighboring Gulf and Bay Counties, as shown in Figure 6-2.

The Apalachicola Regional Airport is a crucial anchor to the FLZ. It was stated that "the capacity of the Airport to accommodate cargo and rail access immediately to the north positions the Airport as a strategic intermodal asset." The Airport is entirely located within the FLZ and is the only airport in the FLZ. U.S. Highway 98 travels east-west just south of the Airport. The Apalachicola Northern Railroad is located northwest of the Airport, as shown in Figure 6-3. This places the Airport firmly between two other strategic modes of transportation within the FLZ.

Sites within Franklin County identified by the SSI are proposed for wood product manufacturing for both construction materials and the repurposing of wood waste byproducts into recycled materials. Sites were also identified that are suitable for light manufacturing and aviation related light industrial and commercial operations.

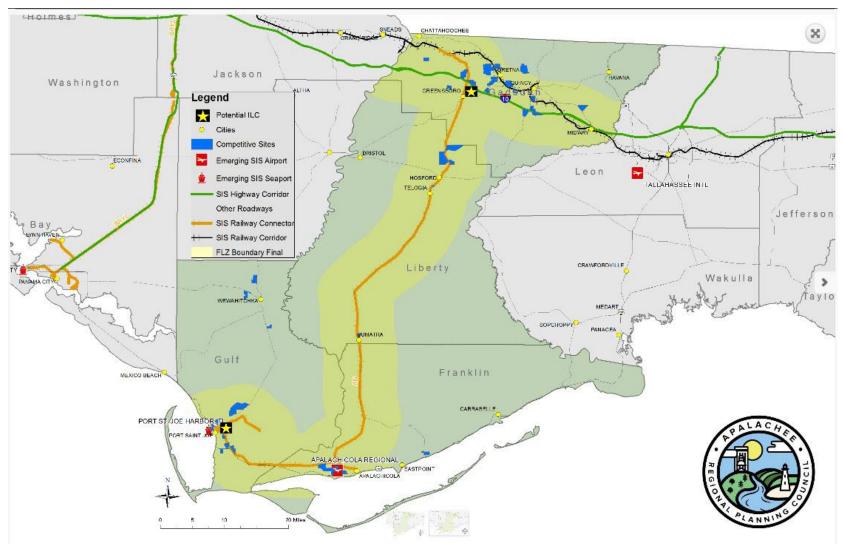


Figure 6-2
GULF TO GADSDEN FREIGHT LOGISTICS ZONE

Source: Apalachee Regional Planning Council (2017)

6-8



Figure 6-3
APALACHICOLA NORTHERN RAILROAD LOCATION

6.3 <u>DEVELOPMENT OF ALTERNATIVES</u>

The Facility Requirements were generated based on the Forecasts of Aviation Activity and were established to develop the required airport support and aviation related facilities immediately prior to when they would most likely be needed. However, future aviation industry events do not always follow a predictable timeline. The Airport should be developed so that the facilities can accommodate the identified demand as it materializes and minimize the resulting operational constraints. Facilities should not be implemented if the demand has not materialized as projected.

6.3.1 Airfield Development

FAA Advisory Circular 150/5300-13A, *Airport Design*, provides guidelines on the configuration of runways and taxiways, among other airport elements. In the latest edition, there are new stipulations against certain configurations of runways, taxiways, and aprons and how these airfield pavement areas meet. There are several instances on the Apalachicola Regional Airport that are affected by these new FAA airport design standards. This section speaks to these airfield issues.

6.3.1.1 Runways

The Airport currently has three runways that were originally developed when the Airport was a constructed as a military base. These runways include:

- Runway 14/32, which is a 5,425-foot-long runway by 150-foot-wide concrete runway that has been designated as the primary runway for the Airport.
- Runway 6/24, which is a 5,271-foot long by 150-foot-wide concrete runway that has been designated as the Airport's crosswind runway.
- Runway 18/36, which is a 5,251-foot long by 150-foot-wide concrete runway that is designated as an additional runway.

The wind coverage for each of the runways is discussed in Section 2.3.2 of this report, and it can be concluded that none of the three runways can be solely relied upon to provide the FAA's recommended 95 percent wind coverage recommended by FAA AC 150/5300-13A. However, when combined, Runways 14/32 and 6/24 provide the optimal wind coverage on a two of three-runway combination.

It is the current policy of the FAA to not provide any funding for the rehabilitation of additional runways when a combination of two runways will provide adequate wind coverage. Additionally, the FDOT has, in the past, informed the Airport that they are also unlikely to fund a third runway when the wind coverage has been satisfied by two runways.

In looking at the Pavement Condition Index (PCI) for the three runways, the following values were reported by FDOT in February of 2017:

- Runway 14/32: PCI of 73, or Satisfactory, and shoulders with a PCI of 67, or Fair
- Runway 6/24: PCI of 74, or Satisfactory, and shoulders with a PCI of 69, or Fair
- Runway 18/36: PCI of 69, or Fair, and shoulders with a PCI of 58, or Fair

The FDOT's recommended minimum service level PCI for a runway is 75 PCI. Each of the three runways were below this recommended minimum level in 2017 and all have likely continued to deteriorate since that time. However, with a PCI of 69, the pavement for Runway 18/36 is in the worst condition of the three runways.

It is unlikely that either the FAA or the FDOT will continue to fund the rehabilitation, maintenance, and/or other major improvement of Runway 18/36. Both agencies have also stated that they will not participate in any other projects associated with the Runway such as the removal of obstructions, primarily trees, that currently encroach on the approach surfaces of the Runway. The sole responsibility and cost of maintaining and/or rehabilitating the runway and any associated projects will then rest with the County. If the Runway and adjacent airfield pavement is not maintained/rehabilitated it will continue to deteriorate and could be deemed "unsafe" for aircraft to utilize. It will become increasingly likely that chunks of the pavement will separate and could potentially be ingested into an aircraft engine using the runway, with disastrous results for the aircraft, passengers, and crew on board.

As the Airport Owner and Sponsor, it is the County's decision whether to close the runway. Therefore, two alternatives have been identified:

- 1. One that shows the runway and its partial parallel taxiway closed, as shown in Figure 6-
- 2. One that shows the runway remaining open, as shown in Figure 6-5.

An additional recommendation is the separation of the Runway Safety Areas (RSA) of Runway 24 from Runway 18/36 and the separation of the RSAs of Runway 32 from Runway 36. This would be easily accomplished with the closure of Runway 18/36. However, if Runway 18/36 were to remain operational, the length of Runways 24 and 32 would need to be reduced to separate these RSA's as shown in Table 6–1 and Figure 6-6.

Table 6-1
REDUCTION OF RUNWAY LENGTH TO SEPARATE RUNWAY SAFETY AREAS

Runway	Airport Reference Code	Current Runway Length	RSA Distance Beyond Runway End	RSA Width	New Runway Length
Runway 14/32	B-II	5,425	300	150	4,757
Runway 6/24	A-I	5,271	240	120	4,898

In the Facility Requirements chapter, a Runway Length Analysis was done which demonstrated that Runway 14/32 was justified in being at least 5,348 feet long. As the separation of the RSAs would reduce this runway length to 4,757, it is justified to extend the Runway 14 end by 591 feet to the northwest.

It was determined in the Runway Length Analysis that Runway 6/24 only needs to be 3,101 feet long. Therefore, currently, the reduction of Runway 6/24 from 5,271 feet to 4,898 feet does not justify an extension to Runway 6.

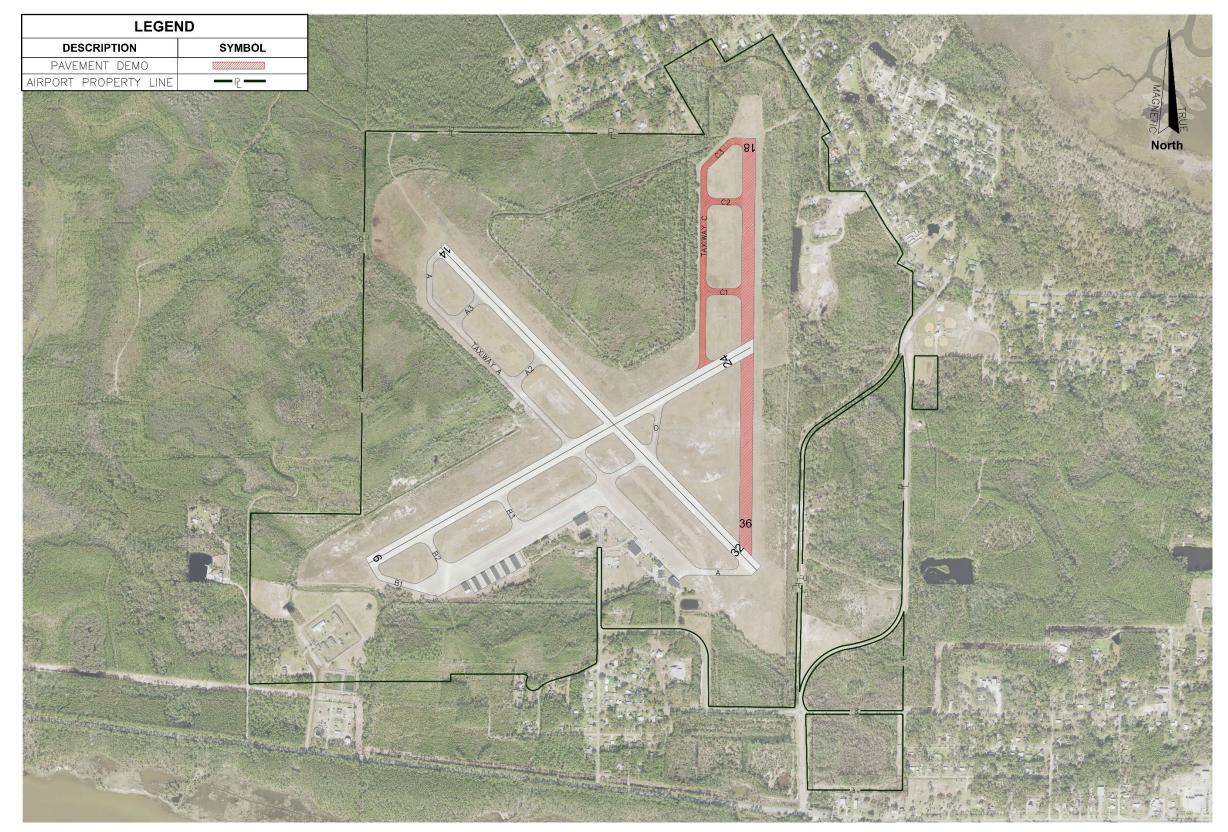


Figure 6-4 RUNWAY CONFIGURATION ONE: RUNWAY 18/36 CLOSED

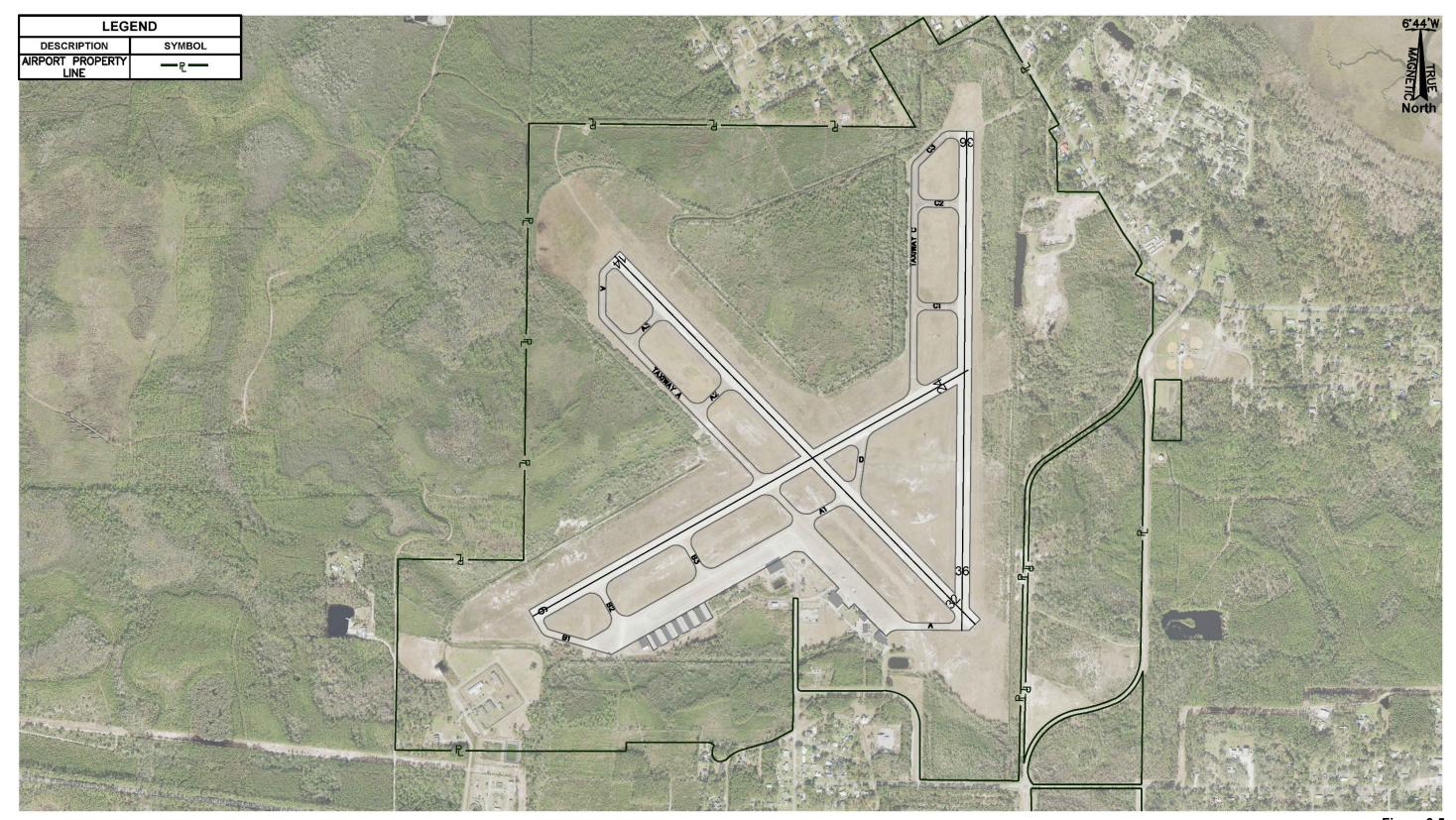


Figure 6-5 RUNWAY CONFIGURATION TWO: RUNWAY 18/36 REMAINS OPEN

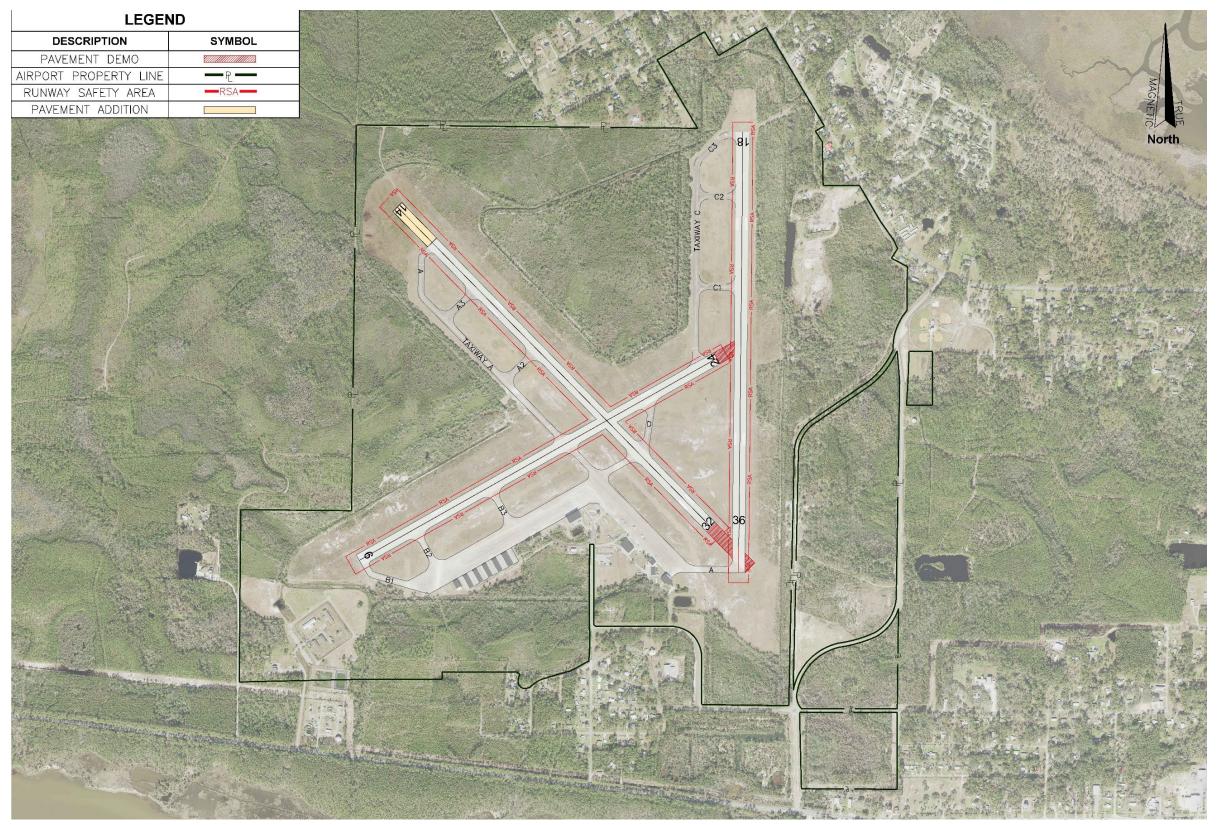


Figure 6-6 SEPARATION OF RUNWAY SAFETY AREAS

6.3.1.2 <u>Taxiways</u>

The FAA AC 150/5300-13A also recommends that taxiways should ideally be positioned to approach a runway from a 90-degree angle and taxiways should not lead directly from an apron to a runway. Both conditions have been the cause of runway incursions in the past at many airports, nationwide. Therefore, several modifications are proposed for the taxiway geometry at the Apalachicola Regional Airport.

Taxiway Alternative One, as shown in Figure 6-8, would correct the current 45-degree angled entrances located at Taxiway A1 to Runway 14, Taxiways B-1 and existing B5 to Runway 6/24, and existing Taxiway C3 (renamed Taxiway C4) to Runway 18/36. It would also reconfigure Taxiway C to approach the newly relocated Runway 24 at a right angle with the new Taxiway C1.

Taxiway Alternative One would also address the issue of taxiways traveling directly from an apron to a runway, by removing portions of apron pavement to physically separate the existing apron from the existing apron-edge Taxiway B at the location of Taxiways B1, B2, and B3. It would also separate the apron from the apron edge Taxiway A at Taxiways A4, A5, and A6. This would prevent the direct access from the apron to the respective Runways.

Taxiway Alternative One would also add a new Taxiway A5 to connect the apron to the newly relocated Runway 32 end. The existing Taxiway A5 would be renamed Taxiway A6.

Taxiway Alternative Two, as shown in Figure 6-9, would correct the 45-degree angled entrances of Taxiway A1 to Runway 14, Taxiways B-1 and existing B5 to Runway 6/24, and existing Taxiway C3 (renamed Taxiway C4) from Runway 18 in a manner like that in Taxiway Alternative One. As with Taxiway Alternative One, a new Taxiway A5 would connect the relocated Runway 32 to the apron and the existing Taxiway A5 would be renamed Taxiway A6.

This alternative would also build a new parallel Taxiway B closer to Runway 6/24 to replace the existing apron edge Taxiway B. The existing taxiway connectors B2 and B3 would be staggered to allow new indirect access between the apron and the new Taxiway B without infringing on the existing apron area. Indeed, in the future, if it is desired and justified, both aprons could be expanded toward the respective runways.

With both taxiway alternatives, the cost for the changes to Taxiways C, C1, C2, C3, or C4 would also most likely be ineligible for funding by either the FAA or the FDOT, as these taxiways directly support Runway 18/36.

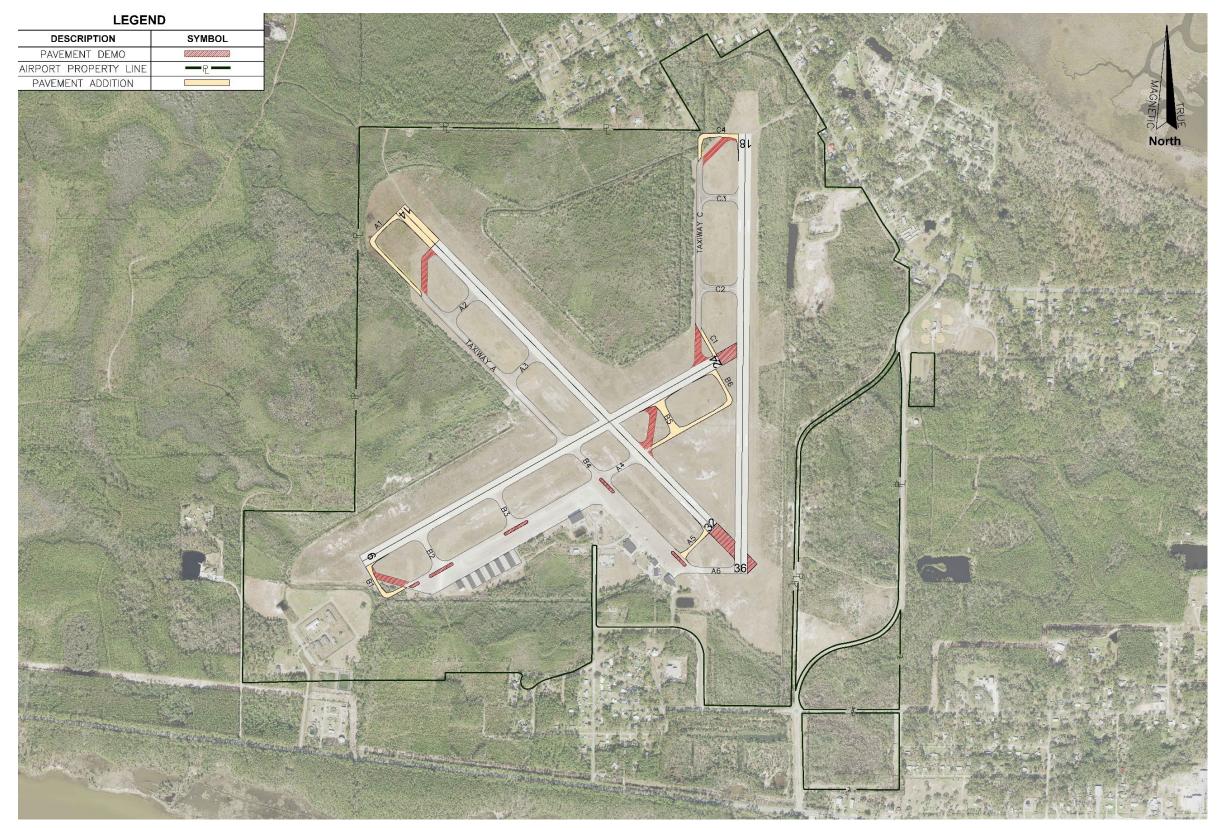


Figure 6-7
TAXIWAY CONFIGURATION ONE: REMOVE TAXIWAYS FROM EXISTING APRONS

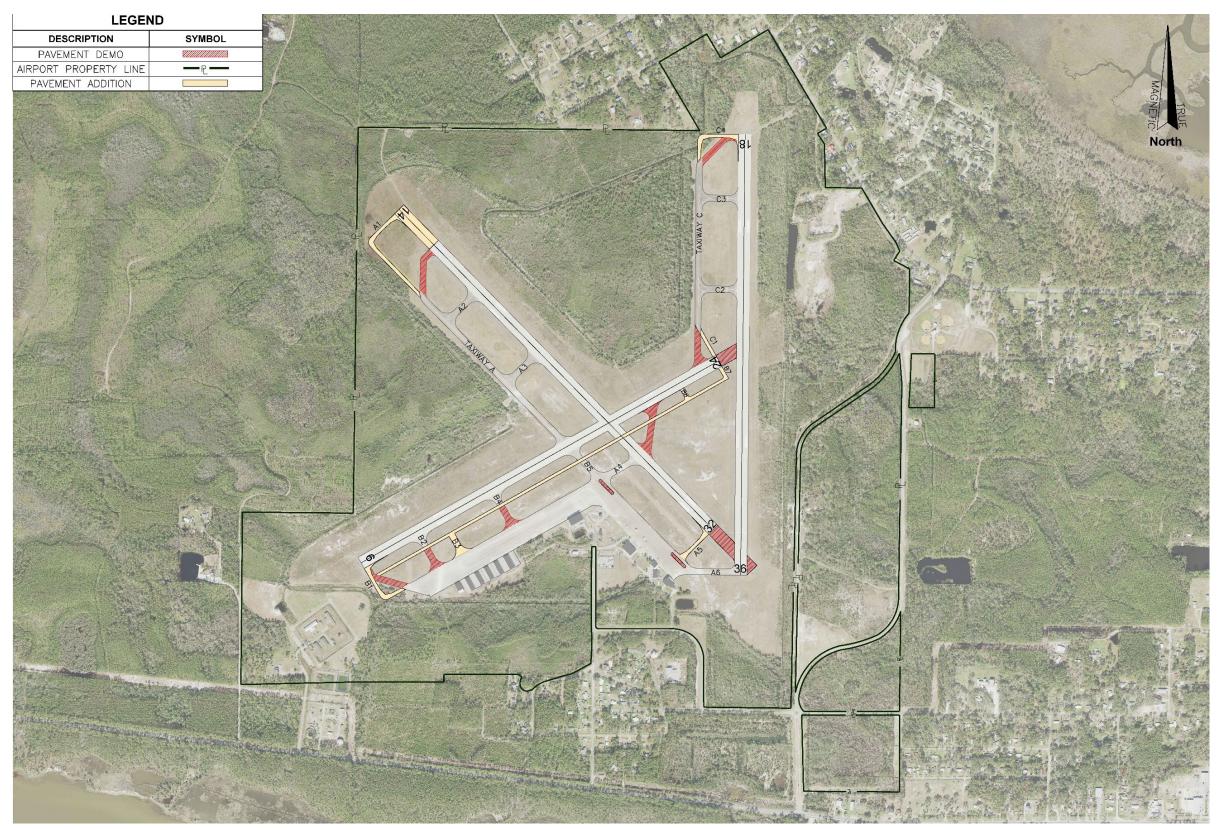


Figure 6-8
TAXIWAY CONFIGURATION TWO: ADD NEW PARALLEL TAXIWAY BETWEEN RUNWAY AND APRON

6.3.2 Roads and Runway Protection Zones

The FAA does not consider public roads to be compatible land uses within a Runway Protection Zone (RPZ). A memorandum from the FAA discussing this issue can be found as Appendix F. This memorandum advises that the FAA Airports District Offices (ADO) should work with airport sponsors to remove or mitigate the risk of existing incompatible land uses in the RPZ as practicable. However, currently, the FAA is only enforcing this memorandum for existing land uses when one of three conditions are planned to occur:

- The extension of the associated runway
- The changing of size of the RPZ
- The changing of the critical aircraft to a larger aircraft.

There are currently eight RPZ's associated with the Airport. Runways 24 and 36 each have two RPZs due to displaced thresholds. Of the eight RPZs, there are four RPZs that have dirt tracks running through them. In each case, these are on Airport property and can be controlled by Airport personnel. These RPZs are:

- Runway 14 Approach and Departure RPZ
- Runway 24 Approach RPZ
- Runway 24 Departure RPZ
- Runway 32 Approach and Departure RPZ

There is one additional RPZ with a road in it. The northwest portion of the road that circles the Correctional Facility is within the Approach and Departure RPZ to Runway 6. This is a private road that provides access to the correctional facility.

None of the runways are justified to be extended at this time. It has been proposed that the critical aircraft for Runway 14/32 will likely change from an A-I to a B-II aircraft in the short-term, likely about the year 2023. When this occurs, it is recommended that the dirt road currently in the RPZ for Runway 14 either be closed or relocated outside of the RPZ. The Airport's current RPZs are shown in Figure 6-9.

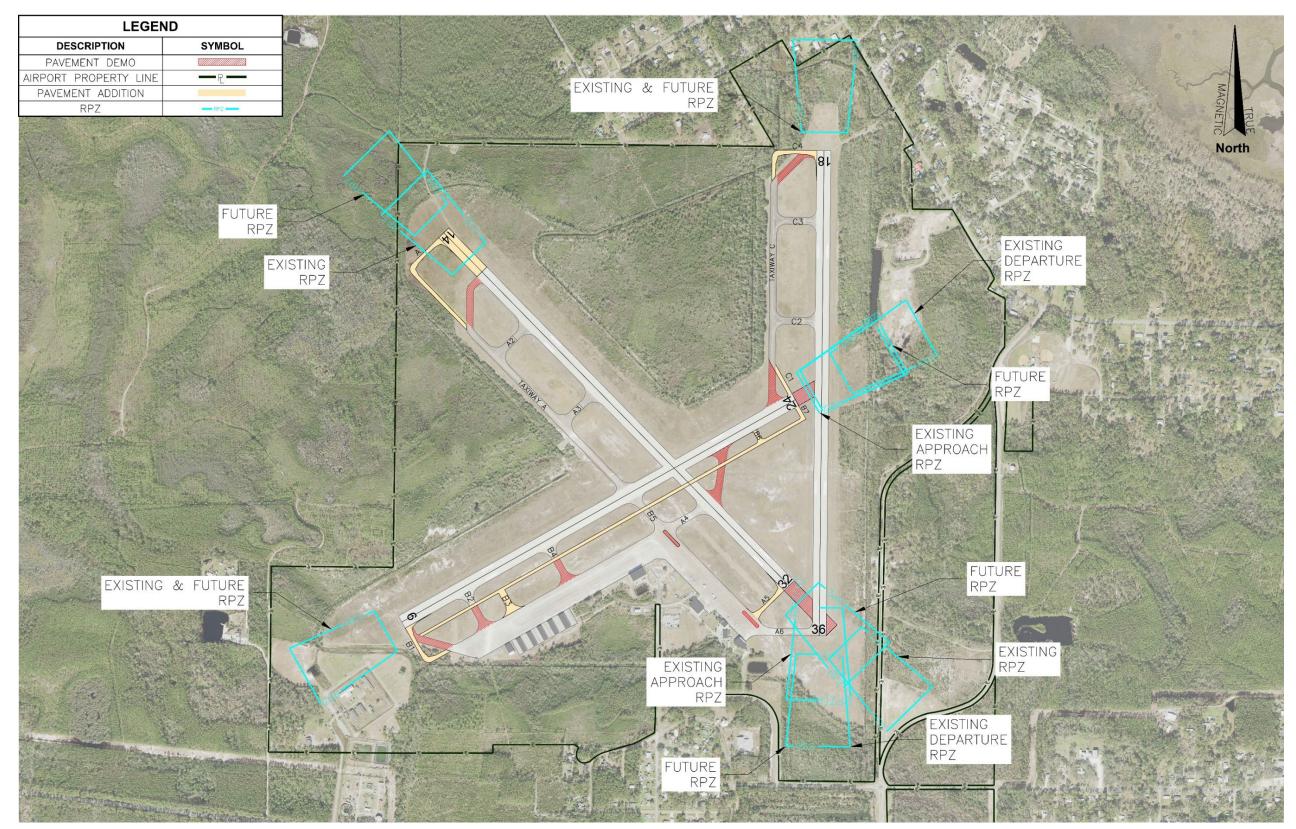


Figure 6-9 AIRPORT'S CURRENT AND FUTURE RUNWAY PROTECTION ZONES

6.4 <u>DEVELOPMENT AREA ALTERNATIVES</u>

For the purposes of this airport planning study, the Airport was divided into six smaller areas. Alternatives were developed in some of these areas. The Facility Requirements chapter does not indicate that much development will be required on the Airport outside of recommended changes to the airfield. The alternatives were developed to meet the Facility Requirements, as well as a few additional facilities desired by the Airport or to allow the Airport options should unforeseen demand develop.

6.4.1 Potential Development Areas

The potential Airport development areas are defined by the existing Airport property boundaries, the RPZs for the runway ends, the limits of the approach and departure slopes to each runway end, the Runway Visibility Zone (RVZ), and the Building Restriction Lines (BRLs). These features are shown in Figure 6-10 for those alternatives that would keep Runway 18/36 open and in Figure 6-11 for those alternatives that would close Runway 18/36.

The Part 77 Approach Surfaces (P77AS) are shown in navy blue. The Threshold Siting Surfaces (TSS) are shown in purple. The departure surfaces, where applicable, are shown in fuchsia. The Runway Visibility Zone, shown in black, is an area around the intersection of the runways that must remain clear of obstructions so that pilots on one runway can see aircraft on the other runway(s). The BRL is a line on either side of each runway past which no buildings should be built as it would then penetrate the navigable airspace of the runway. Typically, the BRL is located to allow a building of a 35-foot-high structure immediately adjacent to the BRL, although this can vary. The BRLs are shown in orange.

Six development areas result from these features, as shown in Figures 6-10 and 6-11. These Airport development areas have been identified as North, Northeast, Southeast, South, Southwest, and West for convenience.

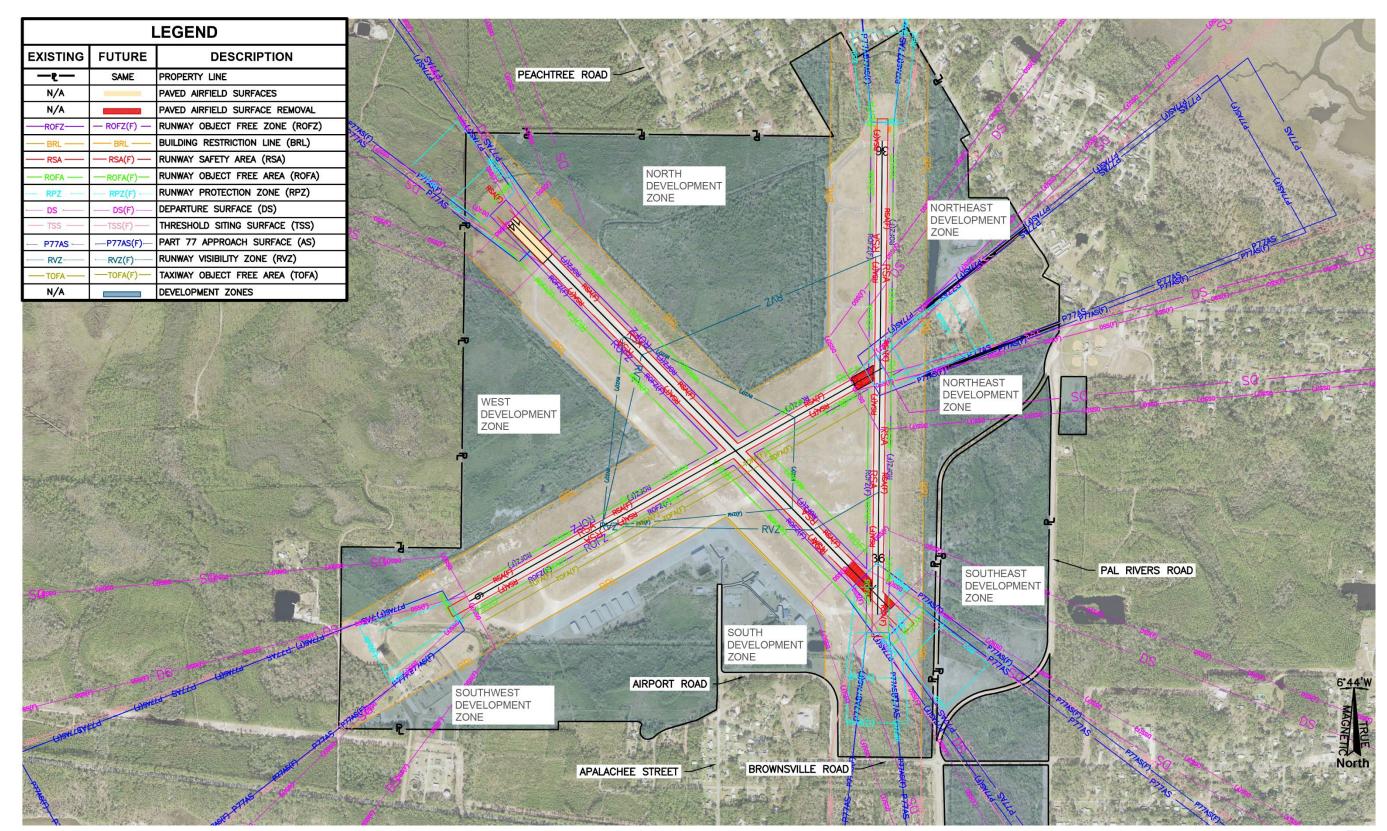


Figure 6-10 POTENTIAL AIRPORT DEVELOPMENT AREAS FOR ALTERNATIVES THAT RETAIN RUNWAY 18/36

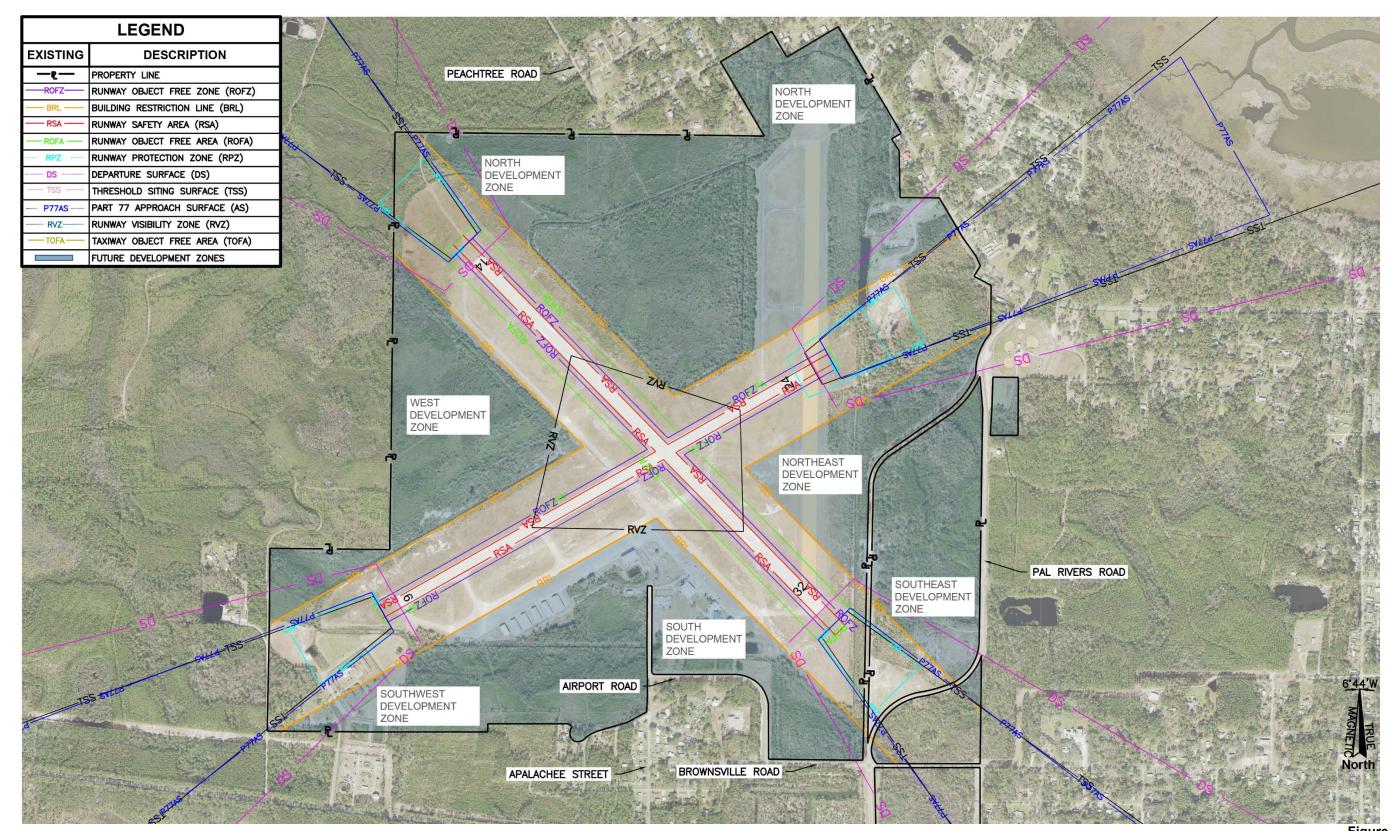


Figure 6-11
POTENTIAL AIRPORT DEVELOPMENT AREAS FOR ALTERNATIVES THAT CLOSE RUNWAY 18/36

6.4.2 South Development Area

The South Development Area is the area that is currently the most developed on the Airport. It is bordered to the north by the Building Restriction Line and the Departure Surface for Runway 32 to the north and the east. It is bordered to the west by Apalachee Street and to the south by Airport Road and Brownsville Road and is shown in Figure 6-12.

The area is currently accessible via Brownsville Road, Airport Road, and Apalachee Road. Large amounts of the area that have not already been developed have wetlands. However, there are three sub-areas that do not have any wetlands and they include:

- A site adjacent to the terminal area parking lot
- A site to the northeast of the curve of Airport Road
- A site located at the northeast corner of Airport Road and Brownsville Road.

Of all the development areas, this area has the best access to existing utilities and would have the least number of supporting projects needed to be accomplished prior to any hangar or other building construction project.

In the Facility Requirements chapter, it was identified that at least one additional aircraft parking space would be needed within a conventional hangar during the planning period. Additionally, the FBO operator has indicated that they have the market to provide additional itinerant aircraft parking spaces, should the hangar space be available. They have also expressed the desire to park the vehicles of their clients under cover in the vicinity of the hangar that is attached to the FBO terminal.

There is also a need for a small amount of additional vehicular parking to accommodate the remaining conventional hangars and about 60 vehicle spaces needed for the T-hangars.

6.4.3 Southwest Development Area

The Southwest Development Area is bordered by the Building Restriction Line and the Departure Surface for Runway 6 on the north and west. It is bordered on the east by Apalachee Street and on the south by the Airport Property Line. It is shown as Figure 6-13.

The Southwest Development Area also has existing development. However, the remaining land within the Development Area is largely wetlands, except for those parcels immediately adjacent to the apron that runs adjacent to Runway 6.

The Southwest Development Area currently contains all the existing T-hangars. It is logical to continue to add additional T-hangars in this area as the need arises. Projected needs from the Facility Requirements chapter do not indicate that additional T-hangars will be needed at the Airport during the planning period. However, a few additional T-hangars have been added to accommodate future unexpected growth in this area. Additionally, vehicle parking for the T-hangars has been shown in this Development Area.

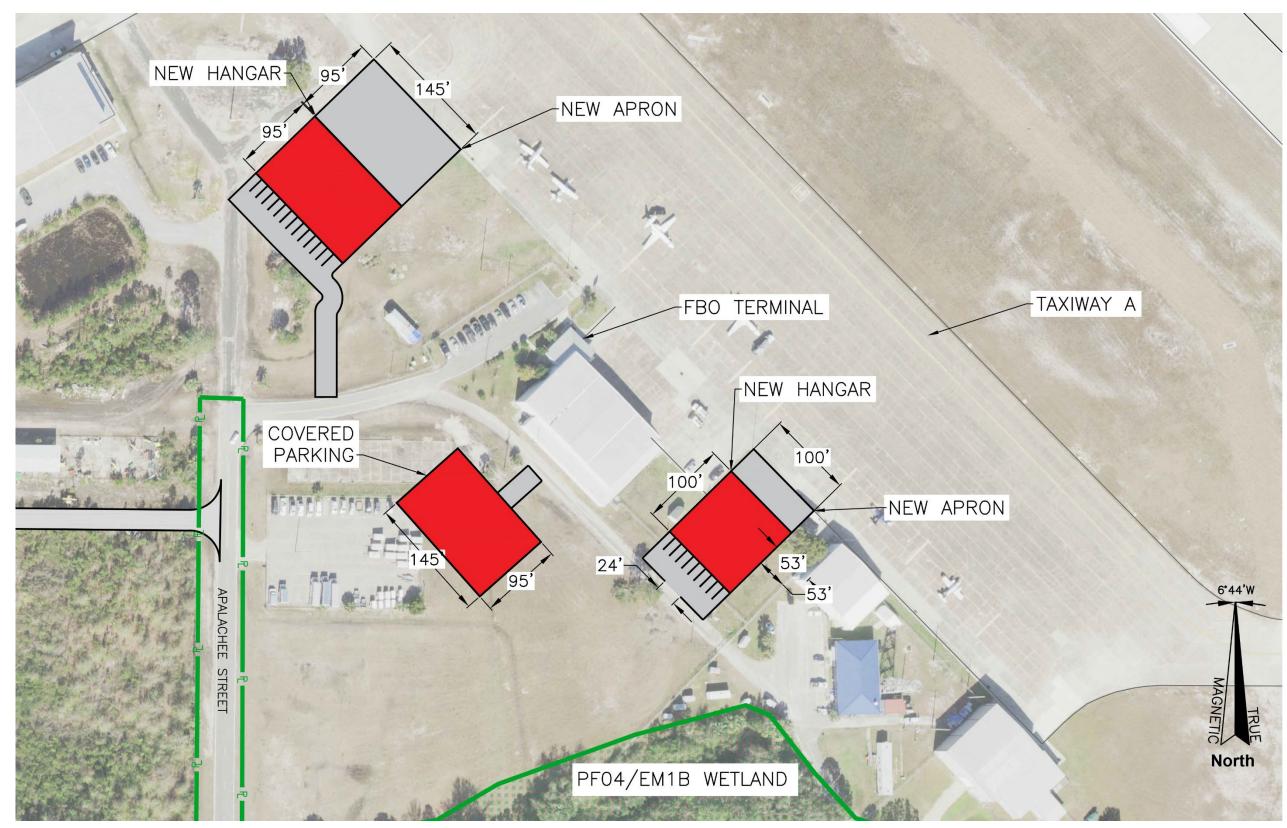


Figure 6-12 SOUTH DEVELOPMENT AREA

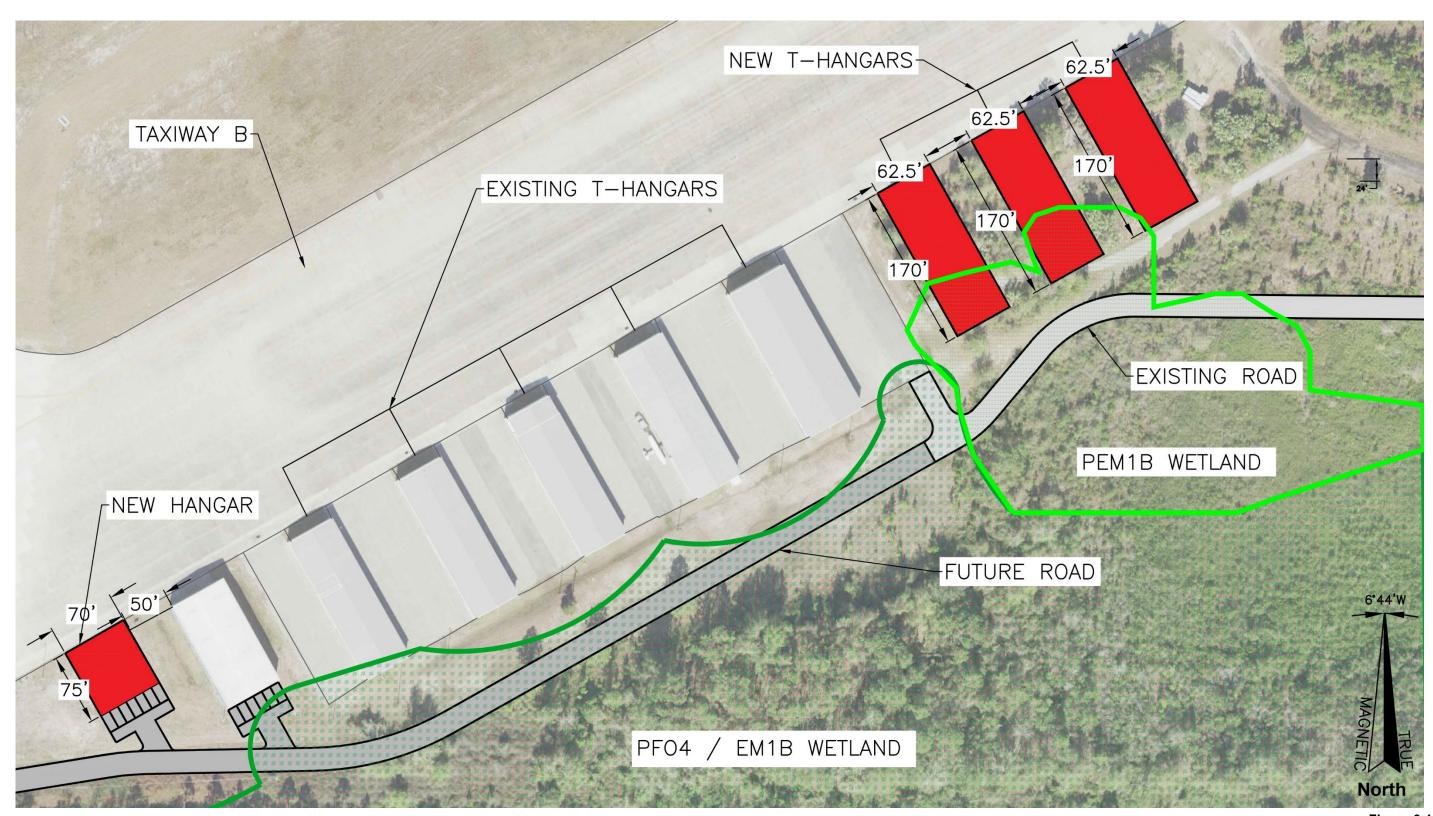


Figure 6-13 SOUTHWEST DEVELOPMENT AREA

The remainder of the development areas have been identified, but it is not anticipated that any development will occur within them during this planning period, unless significant progress is made in the development of the Gulf to Gadsden Freight Logistics Zone.

6.4.4 Southeast Development Area

The Southeast Development Zone is bordered by the unpaved road identified in the previous section to the west and north and by Pal Rivers Road to the south and east. There are large areas of wetlands, but there are also at least three sub-sites where significant development could be planned.

6.4.5 North Development Area

The North Development Area is bordered by the Building Restriction Line for Runway 14 to the west and south and by the Building Restriction Line for Runway 18 to the east and south. The northern border of the North Development Area is the Airport's northern property line.

This area is undeveloped and the only public access road to the area is Peachtree Road, which is a paved, two-lane, asphalt road. While there are a couple of pockets of wetland in this area, it is largely an area without wetlands.

This area has tremendous potential for development in conjunction with the Gulf to Gadsden Freight Logistics Zone. It will, however, require a lot of site preparation and infrastructure development prior to any actual development occurring in this area.

6.4.6 Northeast Development Area

The Northeast Development Zone is bordered by the Building Restriction Line and the Departure Surface of Runway 24 to the northeast and by an unpaved road to the southeast. This area can be accessed by the unpaved road that runs parallel to and east of Runway 18/36, although the road would have to be upgraded before serious development could occur in the area. This area is accessible via Pal Rivers Road. There are wetlands in this section, however careful positioning of new infrastructure could avoid many of these.

6.4.7 West Development Area

The West Development Area is bordered by the Building Restriction Lines and the Runway Visibility Zone for Runways 6 and 14 to the north, east, and south. It is bordered to the west by the Airport Property Line.

This area is not currently accessible by any existing public road. Further, while there are a few open areas within this Area, this site is largely covered with wetlands. For these reasons, this area was not considered at this time for development. As other development areas are exhausted, this area may become more viable for future development.

This area also has some potential for the development in conjunction with the Gulf to Gadsden Freight Logistics Zone. However, due to the number of wetlands in the area, this area would be considered secondary to the North Development Area.

6.5 AIRPORT DEVELOPMENT COMPOSITE ALTERNATIVES

On January 5, 2021, the Franklin County Board of County Commissioners made the decision to keep Runway 18/36 open. The County understood that the FAA and the FDOT have stated that they will no longer fund any projects associated with Runway 18/36. When making their decision, the County Commissioners stated that they will revisit the closure of Runway 18/36 during the process of the next Master Plan Update, which typically would begin five to ten years after the completion of this current Master Plan Update. Further, the Commissioners stated that they would seek funding for capital projects associated with Runway 18/36 from other funding sources. Thus, all the Airport Development Composite alternatives shown include only those alternatives that would keep Runway 18/36 open.

6.5.1 <u>Airport Development Composite One</u>

Airport Development Composite One consists of the runway alternative that keeps Runway 18/36 open. It also uses Taxiway Alternative One, which separates the existing apron edge Taxiways A and B from the adjacent apron by removing pavement from the apron to prevent aircraft from entering directly from the apron to the runway without making at least one 90-degree turn. This alternative also includes the proposed development in the South and Southwest Development Areas. Airport Development Composite One is shown in Figure 6-15.

6.5.2 Airport Development Composite Two

Airport Development Composite Two consists of the runway alternative that keeps Runway 18/36 open. It also uses Taxiway Alternative Two, which separates the existing apron edge Taxiway A from the adjacent apron by removing small areas of pavement from the apron to prevent aircraft from entering the Taxiways A4, A5, and A6 directly from the apron without making at least one 90-degree turn. It also would place a new Taxiway B closer to Runway 6/24, offset the existing Taxiway B2, rename existing Taxiway B3 to Taxiway B4, discontinue existing Taxiways B2 and B3 between the new Taxiway B and add a new Taxiway B3 between the apron and the new Taxiway B. This alternative also includes the proposed development in the South and Southwest Development Areas. Airport Development Composite Two is shown in Figure 6-16.

6.6 EVALUATION OF ALTERNATIVES

The major difference between the two Airport Development Composite Alternatives is how each addresses the issue of preventing aircraft from accessing either Runway 14/32 or Runway 6/24 directly from the aprons. Airport Development Composite One would largely remove small portions of apron pavement at the entrances to Taxiways A4, A5, A6, B1, B2, and B3. An apron utilization study was recently completed as part of the Airport's apron rehabilitation project. The apron utilization study indicates that the Apron has sufficient capacity even with the small portions of the pavement removed to be able to accommodate the based aircraft and the anticipated itinerant aircraft. It will also be able to continue to serve in emergency management endeavors in a manner like that following Hurricane Michael in 2018.

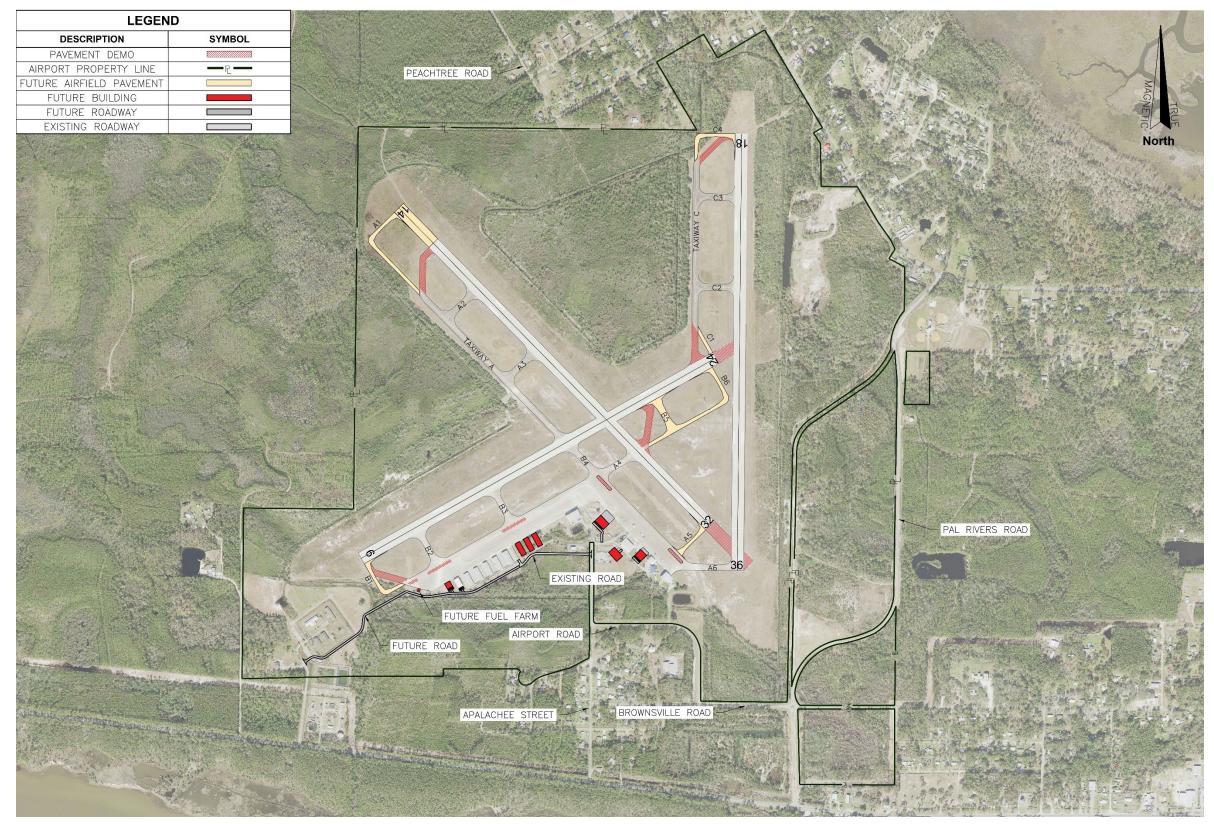


Figure 6-14
AIRPORT DEVELOPMENT COMPOSITE ONE

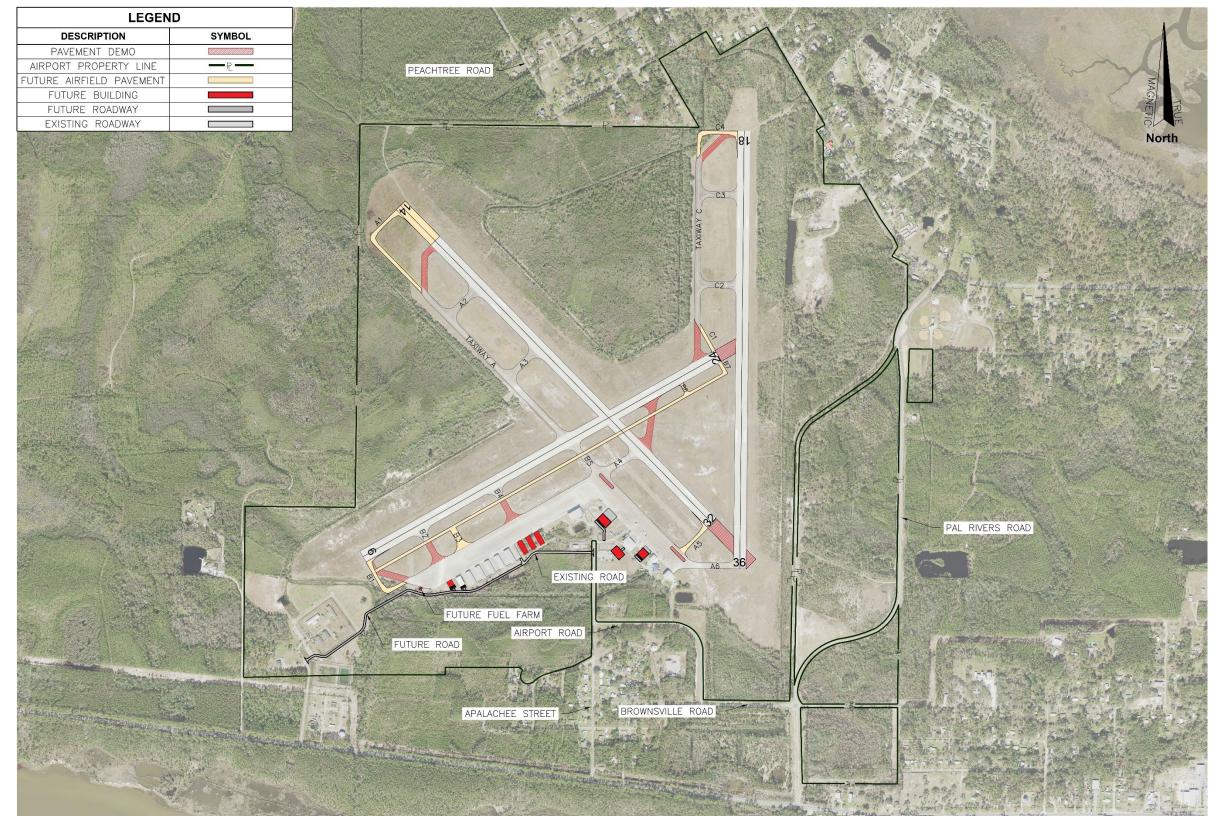


Figure 6-15
AIRPORT DEVELOPMENT COMPOSITE TWO

It is also anticipated that to remove small portions of the apron pavement will cost less than to construct a new Taxiway B, add another stub taxiway, and remove the pavement of most of two additional taxiways. For these reasons, it is recommended that Airport Development Composite One be selected as the preferred alternative.

6.7 DEVELOPMENT AND EVALUATION OF ALTERNATIVES SUMMARY

This chapter takes into consideration the Facility Requirements Forecasts developed in Chapter 5, which are based on the Aviation Activity Forecasts. In the Facility Requirements Chapter, several items were identified that needed to be addressed. These facilities have been addressed within this chapter as has the introduction of a few proposed hangars and some commercial development on the south side of the Airport. The overall development plan, as shown in Figure 6-16, results in the recommended Preferred Alternative for the Airport during the planning period. The Preferred Alternative meets all the facility requirements and addresses some airfield deficiencies.

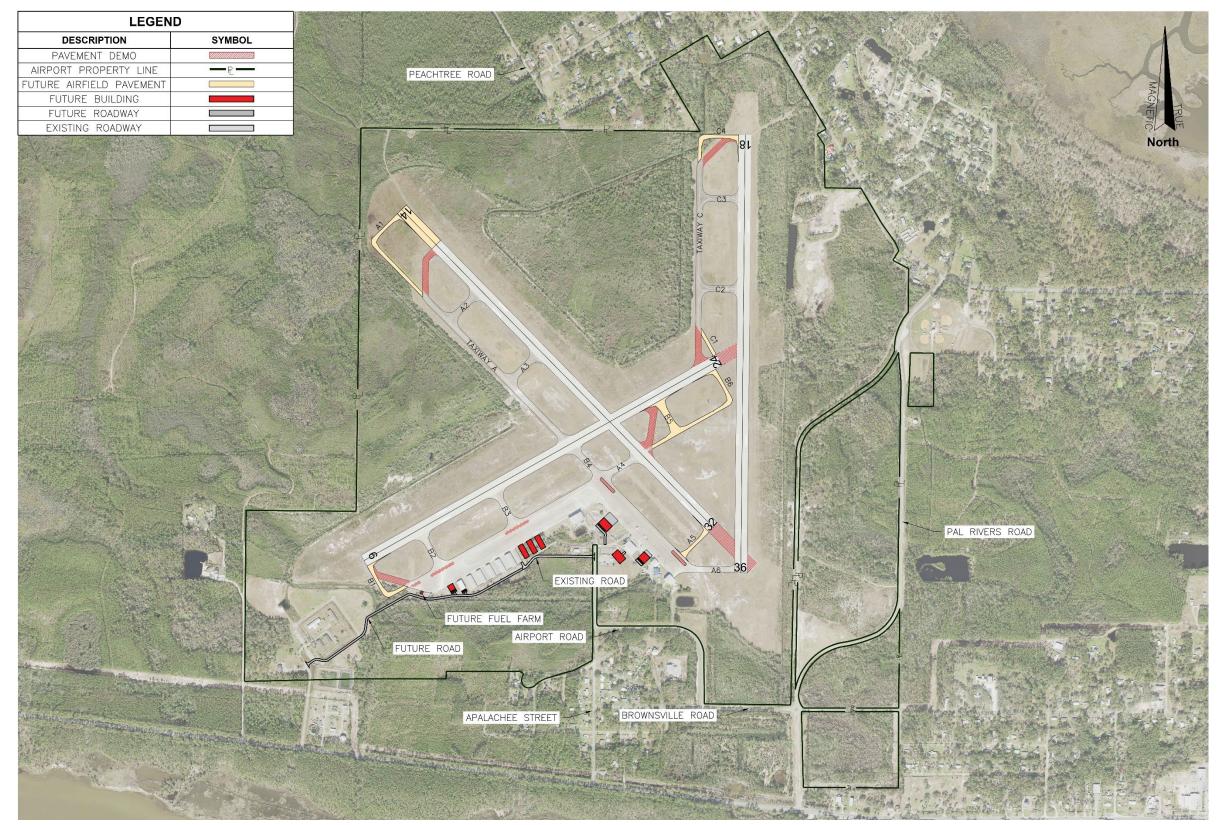


Figure 6-16 PREFERRED ALTERNATIVE

7 AIRPORT LAYOUT PLAN SET

7.1 INTRODUCTION

This chapter describes the Airport Layout Plan (ALP) set for the development of the Apalachicola Regional Airport from 2018 through 2038, presents the Airport's compliance with Federal Aviation Administration (FAA) design standards, lists revisions to the ALP, and presents a reduced size ALP set. The ALP graphically illustrates the existing facilities of the Airport, as well as the proposed development based on the aviation forecasts, facility requirements, and the alternatives analysis. An ALP set is made up of the ALP drawing, as well as other supporting drawings that are appended to the ALP drawing. As presented in the FAA Advisory Circular 150/5070-6B, *Airport Master Plans*, five primary functions of the ALP define its purpose:

- The approved plans are necessary to receive financial assistance under terms of the Airport and Airway Improvement Act of 1982 (AIP), as amended, and specific passenger facility charge actions. The current AIP program was originally established in 1944 as the Federal-Aid Airport Program (FAAP) and has evolved over time. The maintenance of a current plan and conformity to the plan are codified under 49 USC 47107, General Written Assurances. Compliance with the written grant assurances is required for an airport on which federal funds have been expended per the AIP Program, as amended.
- The plans create a blueprint for airport development by depicting proposed facility improvements consistent with the strategic vision of the airport sponsor. The plans provide a guideline by which the airport sponsor can assure that development maintains airport design standards and safety requirements and is consistent with airport and community land use plans.
- The ALP serves as a public document that is a record of aeronautical requirements, both present and future, and as a reference for community deliberations on land use proposals and budget resource planning.
- The approved ALP provides the FAA and the FDOT with a plan for airport development.
 This will allow compatible planning for FAA owned facility improvements at the Airport. It also allows the FAA and the FDOT to anticipate needs for budgetary and procedural needs. The approved ALP will also allow the FAA to protect necessary airspace for planned facility or approach procedure improvements.
- The plans can be a working tool for use by Franklin County and Airport management.

The FAA and the FDOT require a complete ALP set for consideration of future funding. Programming of FAA and FDOT funds are based on development projects depicted on the ALP sheet.

The FAA provides airport design standards to ensure safe and efficient airport operations. The plans have been developed in accordance with the following:

- FAA Advisory Circular 150/5070-6B, Airport Master Plans
- FAA Advisory Circular 150/5070-6B, Appendix F, Airport Layout Plan Drawing Set
- FAA Advisory Circular 150/5300-13A, Airport Design
- Federal Regulations Part 77, Safe, Efficient Use and Preservation of the Navigable Airspace
- FAA Order 5200, Runway Safety Area Program
- FAA ARP Standard Operating Procedures No. 2, ALP Review Checklist
- FAA ARP Standard Operating Procedures No. 3, Exhibit 'A' Review Checklist

The ALP Drawing Set developed as a part of this master plan update complies with each of these documents.

7.2 AIRPORT LAYOUT PLAN SET

The complete Apalachicola Regional ALP set, and the Exhibit "A" consists of 31 drawings. The purpose of each drawing is described in this section. The ALP drawings are produced on 24-inch by 36-inch sheets and have been submitted to Franklin County; the FDOT; and the FAA for review and approval. Reduced reproductions of the ALP are included at the end of this chapter for illustration purposes. All the ALP set, and Exhibit "A" drawings were created using AutoCAD version 2018.

7.1.1 Cover Sheet

The cover sheet of the ALP set provides basic Airport data that is not found elsewhere on the ALP. The cover sheet includes the Airport's name, the associated county, date, the project name, FAA, and FDOT grant numbers and the name of Franklin County as the Airport Sponsor. The cover sheet also displays a location map, which indicates the Airport, major cities in Florida, and major roads near the Airport.

7.1.2 <u>Data Sheets</u>

The three data sheets are separate sheets that contain the basic Airport and runway data tables. In this case, one also includes the wind roses and the wind observation data.

7.1.3 Existing Airport Layout Plan Drawing

The Existing ALP drawing is a graphic representation of existing Airport facilities. The ALP is the key document that shows the existing facilities as they exist today, and which have been constructed or demolished since the last ALP update. The drawing includes dimensional information for safety areas in accordance with FAA planning and design recommendations outlined in FAA Advisory Circular 150/5300-13A, *Airport Design*, and 150/5070-6B, *Airport Master Plans*.

7.1.4 Future Airport Layout Plan Drawing

The Future ALP drawing is a graphic representation of existing and future Airport facilities. The Future ALP is the key document that reflects changes in physical features on and near the Airport, which may affect navigable airspace or the ability of the Airport to operate. The drawing includes dimensional information for recommended development in accordance with FAA

planning and design recommendations outlined in FAA Advisory Circular 150/5300-13A, *Airport Design*, and 150/5070-6B, *Airport Master Plans*. Development shown on the ALP corresponds to the Airport's Capital Improvement Program (CIP) for the 20-year period, with emphasis on the first five-year period.

7.1.5 Terminal Area Plan

The Terminal Area Plan, as shown on sheet seven is a large-scale depiction of the areas on the Airport that are linked to terminal facility development. The expanded drawing includes the FBO Terminal and associate parking, the terminal area ramp, the terminal area parking, several existing and new hangars.

7.1.6 FAR Part 77 Airport Airspace Drawing

The Airport airspace drawing depicts "imaginary surfaces" that surround the Airport as defined in Federal Aviation Regulation (FAR) Chapter 14, Part 77 (FAR Part 77). They consist of the Primary Surface, the Approach Surface, the Transitional Surface, the Horizontal Surface, and the Conical Surface. The drawing is based on the runway configuration as planned to occur within the twenty-year planning period. Known obstructions have been identified.

7.1.7 Inner Portion of the Approach Surfaces for Runway 14/32

Sheets nine and ten show the plan and profile views of the inner portion of the approach surfaces to the runway ends of Runways 14 and 32 respectively at the Apalachicola Regional Airport. In addition to the approach surfaces contained in FAR Part 77, the drawing also depicts the threshold siting surfaces.

7.1.8 Inner Portion of the Approach Surfaces for Runway 6/24

Sheets 11 and 12 show the plan and profile views of the inner portion of the approach surfaces to the runway ends of Runways 6 and 24 respectively at the Airport. In addition to the approach surfaces contained in FAR Part 77, the drawing also depicts the threshold siting surfaces.

7.1.9 Inner Portion of the Approach Surfaces for Runway 18/36

Sheets 13 and 14 show the plan and profile views of the inner portion of the approach surfaces to the runway ends of Runways 18 and 36 respectively at the Airport. In addition to the approach surfaces contained in FAR Part 77, the drawing also depicts the threshold siting surfaces.

7.1.10 Obstacle Action and Disposition Plans

Sheets 15 through 20 show the Obstacle Action and Disposition Plans (OAP) while sheet 21 shows the Obstructions filed with the FAA through the FAA OE/AAA website. The purpose of the OAP and Disposition plans is to document existing obstacles within the approach and departures surfaces and to document the phases necessary to accomplish the mitigation of obstacles penetrating those surfaces in an expedited manner, to the maximum extent possible. Because of the large number of obstacles on and in the vicinity of the Airport, the obstacles were grouped into 200-foot by 200-foot grids and only the tallest obstacle within each grid was filed through the FAA OE/AAA.

7.1.11 <u>Departures Surfaces Plan</u>

The Departure Surfaces Plan shows the applicable departure surfaces for instrument departures for the Airport. The surfaces shown are three-dimensionally shaped surfaces beginning at the threshold of the respective runway. Obstructions are identified that penetrate the surface out from each runway end that is designated for instrument departures out to 10,200 feet beyond the runway threshold. The runways with Departure Surfaces are Runway 14/32 and Runway 6/24. Runway 18/36 does not have a Departure Surface because it is a visual approach runway without an Instrument Approach.

7.1.12 Land Use Plan

Sheet 23 depicts the Airport Land Use Plan. The property areas to be reserved for basic Airport functions are delineated on this drawing. Such functions include aeronautical and non-aeronautical land uses. These land uses are consistent with the Airport's requirements for aircraft operations and safety as well as compatible land use. The drawing also shows the existing land uses of areas adjacent to the Airport and the proposed future land uses both on-and off-Airport.

7.1.13 Airport Exhibit 'A' Property Inventory Map

The Airport Exhibit 'A' Property Inventory Map consists of two sheets and depicts the Airport's boundary and the various tracts of land that were sold after the County re-acquired the Airport after World War II. There are an additional six sheets that show the Airport boundary survey and parcel descriptions. The Exhibit "A" must be updated when the Airport changes any property boundary, acquires new property, sells property, or acquires new easements.

7.3 ALP HIGHLIGHTS AND MODIFICATIONS

This section highlights significant elements of the proposed ALP and notes significant changes from the previous ALP prepared for the Apalachicola Regional Airport. These changes include:

- Decoupling of the Runway Safety Areas (RSA)
- Addressing Taxiways that lead directly from the Apron to a Runway
- Adding T-hangars
- Adding Corporate Hangars
- Adding Covered Vehicular Parking
- Relocating the Fuel Farm
- Adding a future extension to Runway 14

7.4 SUMMARY

The Airport Layout Plan represents the facility needs that have been justified and documented in the preceding chapters. This development of the Airport Layout Plan brings the document up to date by showing development for which the construction is already complete or very near completion. As discussed in the FAA Order 5100.38C, *AIP Handbook*, a current ALP that shows the proposed project and which has FAA approval from the standpoint of safety, utility, and efficiency of the Airport shall be required before a development project is approved. Thus,

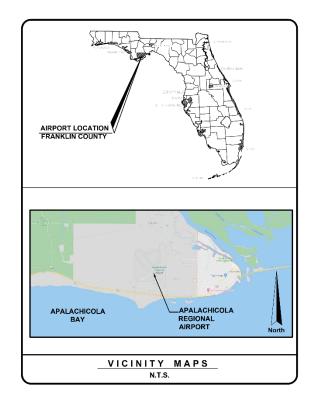
this update shows projects that are proposed to be completed within the next twenty years with an emphasis on the next five years.

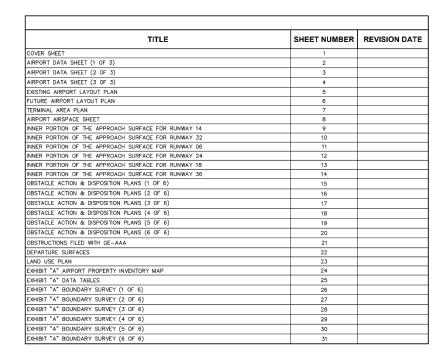
APALACHICOLA REGIONAL AIRPORT

FRANKLIN COUNTY, FLORIDA

AIRPORT MASTER PLAN UPDATE

APRIL 2022





	FLORIDA DEPART TRANSPORTATION	
	FDOT SIGNATURE	DATE
_	NAME	
	TITLE	

SPONSOR APPROVAL THIS AIRPORT DRAWING IS APPROVED BY:			
SIGNATURE RICKY D. JONES	DATE		
NAME CHAIRMAN, FRANKLIN COUNTY BOARD OF COMMISSIONERS TITLE			

AVO	ON PRO	JECT NO. 201	8.158.01
	A AIP NO. OT FM NO		
	R	EVISIONS	
NO.	DATE	DESCRIPTION	SHEETS





Figure 7-1 COVER SHEET

RUNWAY DATA TABLE														
DESCRIPTION		RUNWAY 14			RUNWAY 32		RUNWA	Y 06	RUNWAY		RUNWAY		RUNWAY	/ 36
	EXISTING	FUTURE	ULTIMATE	EXISTING	FUTURE	ULTIMATE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE	EXISTING	FUTURE
RUNWAY DESIGN CODE (RDC)	B-II-5000	SAME	SAME	B-II-5000	SAME	SAME	A-I-5000	SAME	A-I-5000	SAME	A-I-VIS	SAME	A-I-VIS	SAME
APPROACH REFERENCE CODE (APRC)	B-II-5000	SAME	SAME	B-II-5000	SAME	SAME	A-I-5000	SAME	A-I-5000	SAME	A-I-VIS	SAME	A-I-VIS	SAME
DEPARTURE REFERENCE CODE (DPRC)	B-II	SAME	SAME	B-II	SAME	SAME	A-I	SAME	A-I	SAME	A-I	SAME	A-I	SAME
RUNWAY PAVEMENT MATERIAL	CONCRETE	SAME	SAME	CONCRETE	SAME	SAME	CONCRETE	SAME	CONCRETE	SAME	CONCRETE	SAME	CONCRETE	SAME
PAVEMENT STRENGTH BY PAVEMENT CLASSIFICATION NUMBER (PCN)	12/R/B/X/T	SAME	SAME	12/R/B/X/T	SAME	SAME	12/R/B/X/T	SAME	12/R/B/X/T	SAME	12/R/B/X/T	SAME	12/R/B/X/T	SAME
CRITICAL AIRCRAFT	BEECHCRAFT SUPER KING 200	SAME	SAME	BEECHCRAFT SUPER KING 200	SAME	SAME	CIRRUS SR-22	SAME	CIRRUS SR-22	SAME	CIRRUS SR-22	SAME	CIRRUS SR-22	SAME
PAVEMENT STRENGTH BY PCI	73 (SATISFACTORY)	TBD	SAME	73 (SATISFACTORY)	TBD	SAME	74 (SATISFACTORY)	TBD	74 (SATISFACTORY)	TBD	69 (FAIR)	TBD	69 (FAIR)	TBD
PAVEMENT SURFACE TREATMENT	NONE	TBD	SAME	NONE	TBD	SAME	NONE	TBD	NONE	TBD	NONE	TBD	NONE	TBD
FFECTIVE RUNWAY GRADIENT	0.057%	TBD	SAME	0.057%	TBD	SAME	0.003%	TBD	0.003%	TBD	0.084%	TBD	0.084%	TBD
PERCENT WIND COVERAGE IFR (10.5 KNOTS/13 KNOTS/16 KNOTS)	93.68%/96.57%/98.82%	TBD	SAME	93.68%/96.57%/98.82	% TBD	SAME	91.93%/95.40%/98.56%	TBD	91.93%/95.40%/98.56%	TBD	94.86%/96.97%/98.84%	TBD	94.86%/96.97%/98.84%	TBD
PERCENT WIND COVERAGE VFR (10.5 KNOTS/13 KNOTS/16 KNOTS)	93.49%/96.84%/99.53%	TBD	SAME	93.49%/96.84%/99.53	% TBD	SAME	92.67%/96.29%/99.35%	TBD	92.67%/96.29%/99.35%	TBD	93.28%/96.56%/99.41%	TBD	93.28%/96.56%/99.41%	TBD
PERCENT WIND COVERAGE ALL WEATHER (10.5 KNOTS/13 KNOTS/16 KNOTS)	93,44%/96.66%/99.23%	TBD	SAME	93.44%/96.66%/99.23	% TBD	SAME	92.44%/96.01%/99.05%	TBD	92.44%/96.01%/99.05%	TBD	93.56%/96.64%/99.31%	TBD	93.56%/96.64%/99.31%	TBD
RUNWAY DIMENSIONS (LENGTH X WIDTH)	5,424' X 150'	5,348' X 150'	8,000 X 150'	5,424' X 150'	5,348' X 150'	8,000 X 150'	5,271' X 150'	4,882' X 150'	5,271' X 150'	4,882' X 150'	5,251' X 150'	SAME	5,251' X 150'	SAME
RUNWAY SHOULDER WIDTH	25'	SAME	SAME	25'	SAME	SAME	25'	SAME	25'	SAME	25'	SAME	25'	SAME
RUNWAY SAFETY AREA WIDTH	150'	SAME	SAME	150'	SAME	SAME	120'	SAME	120'	SAME	120'	SAME	120'	SAME
RUNWAY SAFETY AREA LENGTH BEYOND	300'	SAME	SAME	300'	SAME	SAME	240'	SAME	240'	SAME	240'	SAME	240'	SAME
DEPARTURE END RUNWAY SAFETY AREA LENGTH PRIOR TO ITHRESHOLD	300'	SAME	SAME	300'	SAME	SAME	240'	SAME	240'	SAME	240'	SAME	240'	SAME
RUNWAY END LATITUDE — (NAD83)	29° 43' 58.0406" N	29° 44′ 2.04″ N	29° 44° 20.76″ N	29° 43' 19.8607" N	29° 43° 24.60" N	SAME	29° 43' 20.4703" N	SAME	29° 43′ 46,3349" N	29° 43′ 44.40° N	29° 44° 11.1962" N	SAME	29° 43' 19.2191" N	SAME
RUNWAY END LONGITUDE - (NAD83)	85° 02' 05.086" W	85° 02' 09.96" W	85° 02' 30.84" W	85° 01' 21.8192" W	85° 01' 27.12" W	SAME	85° 02' 14.7297" W	SAME	85° 01' 22.8104" W	85" 01' 26.40" W	85" 01" 23.0882" W	SAME	85° 01' 23.415" ₩	SAME
RUNWAY END ELEVATION - (NAVD88)	15.1'	TBD	TBD	18.2'	TBD	TBD	19.4'	SAME	19.3*	TBD	15.1'	SAME	19.5'	SAME
TRUE BEARING	135" 27" 30"	SAME	SAME	315' 33' 30"	SAME	SAME	60' 37' 40"	SAME	240" 23' 20"	SAME	180" 18" 45"	SAME	00' 18' 15"	SAME
	NONE	SAME	SAME	NONE.	SAME	SAME	NONE	SAME		NONE	NONE	SAME		NONE
DISPLACED THRESHOLD		SAME	SAME		SAME	SAME			217'	N/A	N/A	SAME	502'	
DISPLACED THRESHOLD END LATITUDE (NAD83)	N/A	SAME	SAME	N/A			N/A	SAME	29° 43′ 45.266″ N		***	SAME	29' 43' 24.1849" N	N/A
DISPLACED THRESHOLD END LONGITUDE (NAD83)	N/A			N/A	SAME	SAME	N/A	SAME	85" 01" 24.952" W	N/A	N/A		85" 01" 23.3891" W	N/A
DISPLACED THRESHOLD ELEVATION (MSL)	N/A	SAME	SAME	N/A	SAME	SAME	N/A	SAME	19.54	N/A	N/A	SAME	19.55'	N/A
RUNWAY LIGHTING TYPE	MIRL	SAME	SAME	MIRL	SAME	SAME	MIRL	SAME	MIRL	SAME	NONE	SAME	NONE	SAME
RPZ INNER WIDTH DIMENSION	500'	SAME	SAME	500'	SAME	SAME	250'	SAME	250'	SAME	250'	SAME	250'	SAME
RPZ OUTER WIDTH DIMENSION RPZ LENGTH	700° 1,000°	SAME SAME	SAME SAME	700'	SAME SAME	SAME SAME	450' 1,000'	SAME SAME	450' 1,000'	SAME	450' 1,000'	SAME SAME	450' 1,000'	SAME SAME
RPZ LENGIH	·	SAME	SAME			SAME	-	SAME	· · · · · · · · · · · · · · · · · · ·	SAME		SAME		SAME
RUNWAY MARKING TYPE (CONDITION)	NON-PRECISION (FAIR)	SAME	SAME	NON-PRECISION (FAIR		SAME	NON-PRECISION (FAIR)	SAME	NON-PRECISION (FAIR)	SAME	BASIC (POOR)	SAME	BASIC (POOR)	SAME
14 CFR FAR PART 77 APPROACH SLOPE	34:1 NON-PRECISION	SAME SAME	SAME SAME	34:1 NON-PRECISION	SAME SAME	SAME SAME	34:1	SAME SAME	34:1	SAME SAME	20:1	SAME SAME	20:1	SAME SAME
14 CFR FAR PART 77 APPROACH TYPE 14 CFR FAR PART 77 APPROACH DIMENSIONS							NON-PRECISION		NON-PRECISION		VISUAL		VISUAL	
(IWXOWXL) 14 CFR FAR PART 77 APPROACH VISIBILITY	500'X3,500'X10,000'	SAME	SAME	500'X3,500'X10,000'	SAME	SAME	500'X3,500'X10,000'	SAME	500'X3,500'X10,000'	SAME	250'X1,250'X5,000'	SAME	250'X1,250'X5,000'	SAME
MINIMUMS	1-MILE	SAME	SAME	1-MILE	SAME	SAME	1-MILE	SAME	1-MILE	SAME	VISUAL	SAME	VISUAL	SAME
VISIBILITY MINIMUMS (RVR)	5000	SAME	SAME	5000	SAME	SAME	5000	SAME	5000	SAME	VISUAL	SAME	VISUAL	SAME
TYPE OF AERONAUTICAL SURVEY REQUIRED	NOT VERTICALLY GUIDED	SAME	SAME	NOT VERTICALLY GUIDE		SAME	NOT VERTICALLY GUIDED	SAME	NOT VERTICALLY GUIDED	SAME	NOT VERTICALLY GUIDED	SAME	NOT VERTICALLY GUIDED	SAME
RUNWAY DEPARTURE SURFACE RUNWAY OBJECT FREE AREA LENGTH (ROFA)	YES	SAME	SAME	YES	SAME	SAME	YES	SAME	YES	SAME	NO	SAME	NO	SAME
REYOND RUNWAY END RUNWAY OBJECT FREE AREA (ROFA) WIDTH	300' 500'	SAME	SAME SAME	300' 500'	SAME	SAME SAME	240' 250'	SAME	240' 250'	SAME	240' 250'	SAME	240' 250'	SAME
RUNWAY OBSTACLE FREE ZONE (ROFZ) LENGTH	200'	SAME	SAME	200'	SAME	SAME	200'	SAME	200'	SAME	200'	SAME	200'	SAME
BEYOND RUNWAY END RUNWAY OBSTACLE FREE ZONE (ROFZ) WIDTH	250'	SAME	SAME	250'	SAME	SAME	250'	SAME	250'	SAME	250'	SAME	250'	SAME
THRESHOLD SITING SURFACE (TSS) SLOPE (TYPE	20:1	SAME	SAME	250	SAME	SAME	20:1	SAME	20:1	SAME	250	SAME	20:1	SAME
DEPARTURE SITING SURFACE (DSS) SLOPE	40:1	SAME	SAME	40:1	SAME	SAME	40:1	SAME	40:1	SAME	N/A	SAME	N/A	SAME
	NON-PRECISION (GPS)	SAME	SAME	NON-PRECISION (GPS)		SAME	NON-PRECISION (GPS)	SAME	NON-PRECISION (GPS)	SAME	N/A VISUAL UTILITY	SAME	N/A VISUAL UTILITY	SAME
TYPES OF INSTRUMENT APPROACH NAVIGATIONAL AIDS	GPS GPS	SAME	SAME	GPS GPS	SAME	SAME	GPS GPS	SAME	GPS GPS	SAME	NONE	SAME	NONE	SAME
		- Crunc				G/ MILE				O. IIIC				O and
VISUAL AND INSTRUMENT NAVAIDS	2-LIGHT PAPI	SAME	SAME	2-UGHT PAPI	SAME	SAME	2-LIGHT PAPI	SAME	2-LIGHT PAPI	SAME	NONE	SAME	NONE	SAME
TOUCHDOWN ZONE ELEVATION TAXIWAY DESIGN GROUP	20*	TBD SAME	TBD SAME	20'	TBD	TBD SAME	20'	TBD SAME	20'	TBD SAME	20'	SAME SAME	20'	SAME SAME
TAXIWAY WIDTH	75'	SAME 35'	SAME	75'	SAME 35'	SAME	75'	SAME 35'	75'	35'	75'	35'	75'	35'
FAXIWAY SAFETY AREA WIDTH	79*	SAME	SAME	79'	SAME	SAME	75 49'	SAME	49'	SAME	/5 49'	SAME	49'	SAME
TAXIWAY AND TAXILANE OBJECT FREE AREA WIDTH	131'/ 115'	SAME	SAME	131'/ 115'	SAME	SAME	89' / 79'	SAME	89'/ 79'	SAME	89'/ 79'	SAME	89'/ 79'	SAME
- (TOFA) AND (TLOFA) FAXIWAY/TAXILANE SEPARATION	N/A	SAME	SAME	N/A	SAME	SAME	N/A	SAME	N/A	SAME	N/A	SAME	N/A	SAME
TAXIWAY/TAXILANE LIGHTING	MITL	SAME	SAME	MITL	SAME	SAME	NONE	LED	NONE	LED	NONE	SAME	NONE	SAME
,	AIRPORT DATA TA	ABLE			•		AIRPORT DA	TA TABLE	•	•	TAY	WAY DES	IGN GROUPS (TDG)
DESCRIPTION	EXISTING		UTURE ULTI	MATE	DESCR	IPTION		ISTING	FUTURE	ULTIMATE	1 —		ICH GROUPS (. 56)
AIRPORT IDENTIFIER	AAF	SAME	SAME		RT CRITICAL AIRCRAFT			T KING AIR B200		SAME	⊣ т .	AXIWAY	TDG	

AIRPORT MAGNETIC VARIATION/DATE

NPIAS SERVICE LEVEL STATE SERVICE LEVEL

NPIAS ROLE

AIRPORT MAGNETIC VARIATION SOURCE

ARPORT IDENTIFIER AAF
AIRPORT REFERENCE CODE (ARC) FOR THE AIRPORT B-II
MEAN MAXIMUM TEMPERATURE OF THE HOTTEST
(MORTH-).

90' (J

AIRPORT REFERENCE POINT LATITUDE - (NAD83)

AIRPORT REFERENCE POINT LONGITUDE - (NAD83)

AIRPORT ELEVATION - (NAVD83)(MSL)

ISCELLANEOUS FACILITIES

90' (JULY)

29' 43' 39.1762"N

85° 01' 38.5585" W

29° 43′ 40.53″N

85" 01' 44.06" W

29' 43' 43.76"N

85' 01' 44.21" W



REGIONAL **AIRPORT** AIRPORT LAYOUT PLAN SET

APALACHICOLA

AIRPORT DATA SHEET (1 OF 3)

SCALE: DESIGNED BY: DRAWN BY: J.P CHECKED BY: M.S

FAA AIP NO. 3-12-001-009-2018 FDOT FM NO 416047-3-94-01 (G1695) AVCON PROJECT NO. 2018.158.01

APPROVED BY:

SHEET NUMBER

__2_

Figure 7-2 AIRPORT DATA SHEET (1 OF 3)

M.S

JULY 2021

BEECHCRAFT KING AIR B200 SAME

4' 15' 00" W ± 0' 5' W/ SEPT 2019 TBD

NATIONAL GEOPHYSICAL DATA CENTER SAME
GENERAL AVIATION SAME
GENERAL AVIATION SAME

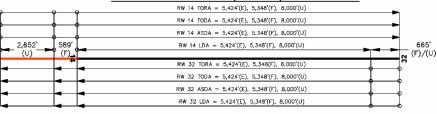
SAME

TBD

SAME

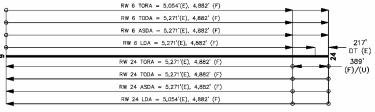
DECLARED DISTANCES TABLE							
		RUNWAY 14		RUNWAY 32			
	EXISTING	FUTURE	ULTIMATE	EXISTING	FUTURE	ULTIMATE	
TAKE OFF RUN AVAILABLE (TORA)	5,424	5,348'	8,000	5,424	5,348'	8,000	
TAKE OFF DISTANCE AVAILABLE (TODA)	5,424	5,348'	8,000'	5,424'	5,348'	8,000'	
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	5,424'	5,348'	8,000'	5,424'	5,348'	8,000'	
LANDING DISTANCE AVAILABLE (LDA)	5,424'	5,348'	8,000'	5,424'	5,348'	8,000'	

RUNWAY 14-32 EXISTING, FUTURE, AND ULTIMATE



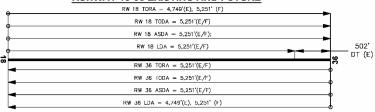
DECLARED DISTANCES TABLE						
	RUNW	/AY 06	RUNWAY 24			
	EXISTING	FUTURE	EXISTING	FUTURE		
TAKE OFF RUN AVAILABLE (TORA)	5,054'	4,882*	5,271	4,882		
TAKE OFF DISTANCE AVAILABLE (TODA)	5,271	4,882'	5,271	4,882'		
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	5,271	4,882'	5,271	4,882'		
LANDING DISTANCE AVAILABLE (LDA)	5,271	4,882	5,054	4,882'		

RUNWAY 6-24 EXISTING AND FUTURE



DECLARED DISTANCES TABLE						
	RUNWAY 18		RUNW	/AY 36		
	EXISTING	FUTURE	EXISTING	FUTURE		
TAKE OFF RUN AVAILABLE (TORA)	4,749*	5,251	5,251	5,251		
TAKE OFF DISTANCE AVAILABLE (TODA)	5,251'	5,251'	5,251'	5,251'		
ACCELERATED STOP DISTANCE AVAILABLE (ASDA)	5,251'	5,251'	5,251	5,251'		
LANDING DISTANCE AVAILABLE (LDA)	5,251	5,251'	4,749'	5,251'		

RUNWAY 18-36 EXISTING AND FUTURE



GENERAL NOTES

1. ALL LATITUDE AND LONGITUDE COORDINATES ARE NORTH AMERICAN DATUM OF 1983 (NAD83)

2. ALL ELEVATIONS ARE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

RUNWAY MEETS RUNWAY VISIBILITY REQUIREMENTS

MODIFICATIONS TO STANDARDS APPROVAL TABLE DESCRIPTION OF MODIFICATION STANDARD DATE OF MODIFICATION APPROVAL

ABBREVIATIONS

AMSL ABOVE MEAN SEA LEVEL

ARC	AIRPORT REFERENCE CODE
ARP	AIRPORT REFERENCE POINT
AS	APPROACH SLOPE
ASDA	ACCELERATED STOP DISTANCE AVAILABLE
AWOS	AUTOMATIC WEATHER OBSERVATION STATION
BRL	BUILDING RESTRICTION LINE
DS	DEPARTURE SLOPE
EL	ELEVATION
F	FAHRENHEIT
GA	GENERAL AVIATION
GPS	GLOBAL POSITIONING SYSTEM
IFR	INSTRUMENT FLIGHT RULES
LAT	LATITUDE
LDA	LANDING DISTANCE AVAILABLE
LONG	LONGITUDE
LBS	POUNDS
MIRL	MEDIUM INTENSITY RUNWAY LIGHTS
MN	MAGNETIC NORTH
MPH	MILES PER HOUR
NAD83	NORTH AMERICAN DATUM OF 1983
N/A	NOT AVAILABLE
NAVAIDS	NAVIGATIONAL AIDS
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
NGDC	NATIONAL GEOPHYSICAL DATA CENTER
NOAA	NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NPIAS	NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS
PAPI	PRECISION APPROACH PATH INDICATORS
PCI	PAVEMENT CONDITION INDEX
RDC	RUNWAY DESIGN CODE
REIL	RUNWAY END IDENTIFIER LIGHTS
ROFA	RUNWAY OBJECT FREE AREA
ROFZ	RUNWAY OBJECT FREE ZONE
RPZ	RUNWAY PROTECTION ZONE
RRC	RUNWAY REFERENCE CODE
RSA	RUNWAY ŞAFETY AREA
R₩	RUNWAY
SW	SINGLE WHEEL
TBD	TO BE DETERMINED

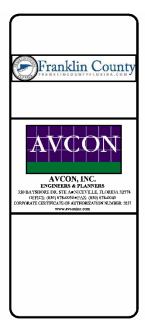
TDZE TOUCHDOWN ZONE ELEVATION

TSA TAXIWAY SAFETY AREA
TSS THRESHOLD SITING SURFACE

TAKE OFF RUN AVAILABLE

TN TRUE NORTH
TODA TAKE OFF DISTANCE AVAILABLE

TORA



APALACHICOLA REGIONAL AIRPORT

AIRPORT LAYOUT PLAN SET

AIRPORT DATA SHEET (2 OF 3)

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SCALE:

NO.	DATE	DESCRIPTION	
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\neg			
\perp			
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DESI	GNED B	/ -	M.S
DESIGNED BT:			M.J
DRAWN BY:			J.P.

 DRAWN BY:
 J.P

 CHECKED BY:
 M.S

 APPROVED BY:
 M.S

 DATE:
 APRIL 2022

AVCON PROJECT NO. 2018.158.01

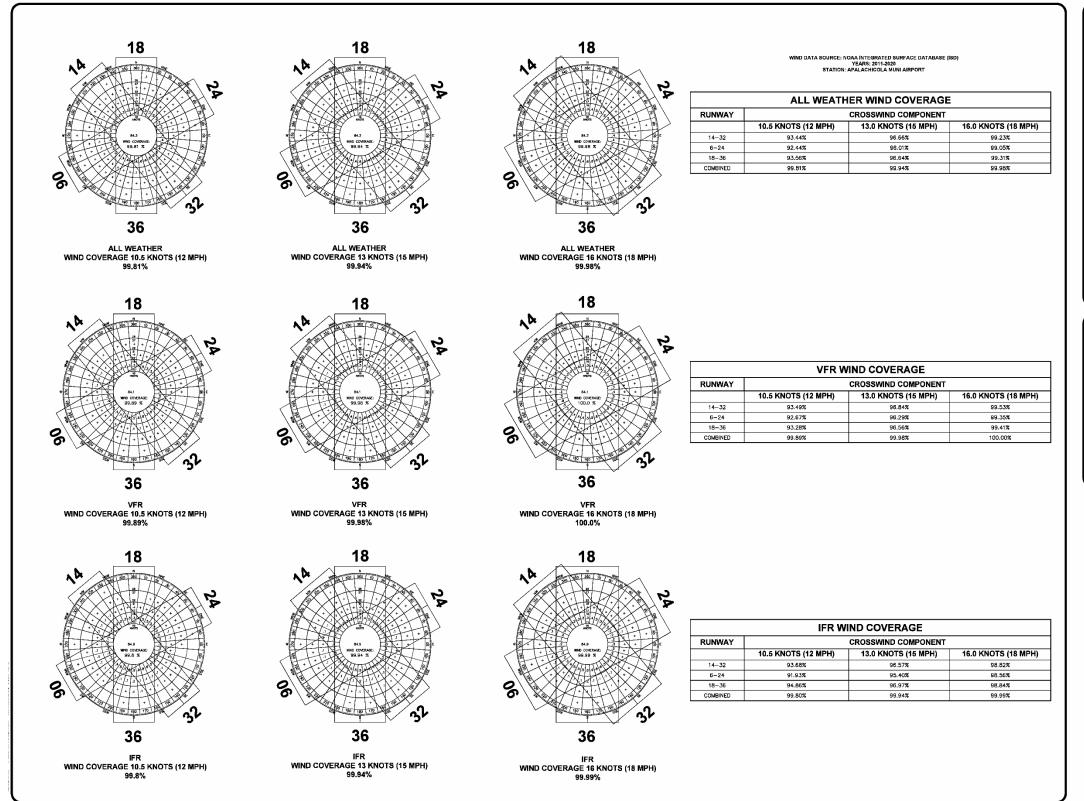
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Figure 7-3 AIRPORT DATA SHEET (2 OF 3)

7-8 Airport Layout Plan Set



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ENGINEERS & PLANNERS
300 BAYBRODS STATE AND FRANKES
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APALACHICOLA
REGIONAL
AIRPORT

AIRPORT LAYOUT PLAN
SET

AIRPORT DATA SHEET
(3 OF 3)

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REVISIONS:

NO. DATE BY DESCRIPTION

DESIGNED BY:

DESIGNED BY: M.S
DRAWN BY: J.P
CHECKED BY: M.S
APPROVED BY: M.S
APRIL 2022

FAA AIP NO. 3-12-001-009-2018
FDOT FM NO 416047-3-94-01 (G1695)
AVCON PROJECT NO. 2018.158.01

SHEET NUMBER

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Figure 7-4 AIRPORT DATA SHEET (3 OF 3)

AVCON, INC. ENGINEERS & PLANNERS

APALACHICOLA

REGIONAL

AIRPORT

AIRPORT LAYOUT PLAN

EXISTING

AIRPORT LAYOUT

PLAN

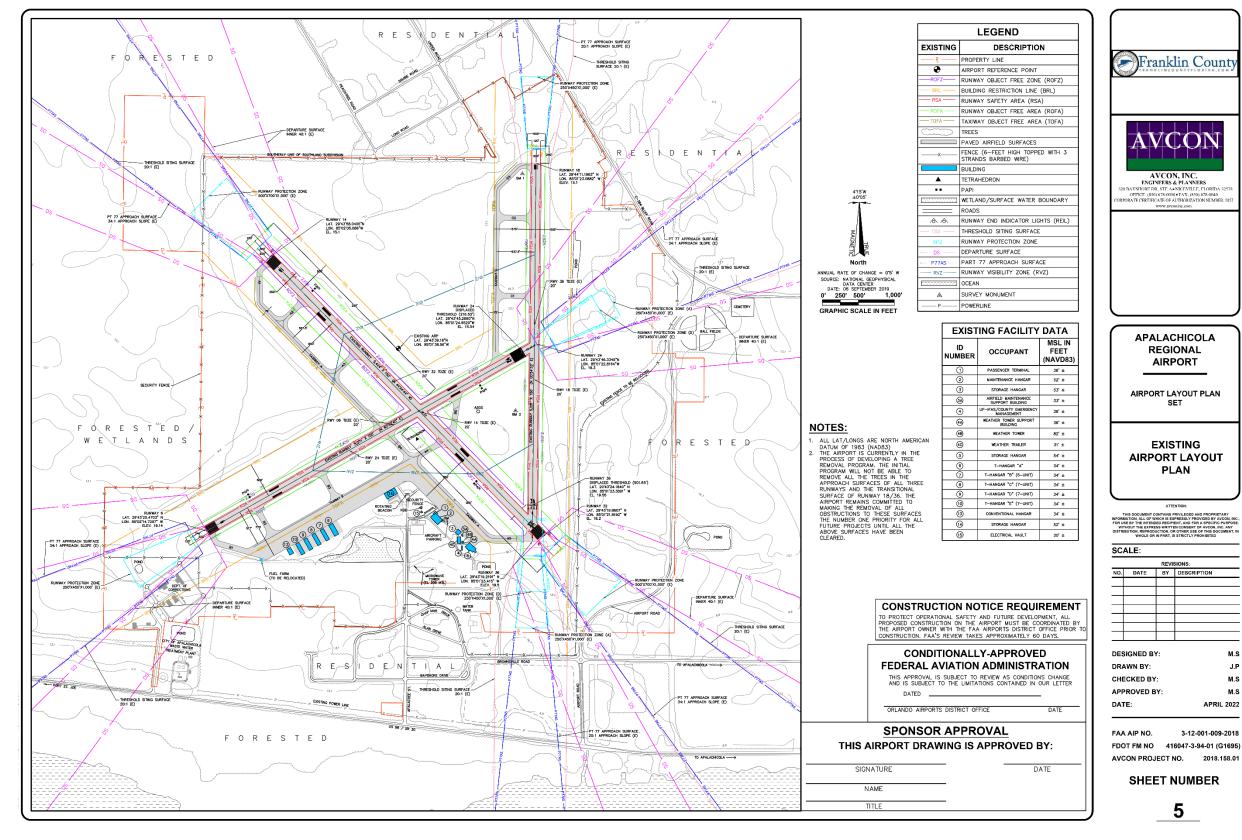


Figure 7-5 **EXISTING AIRPORT LAYOUT PLAN**

J.P

M.S

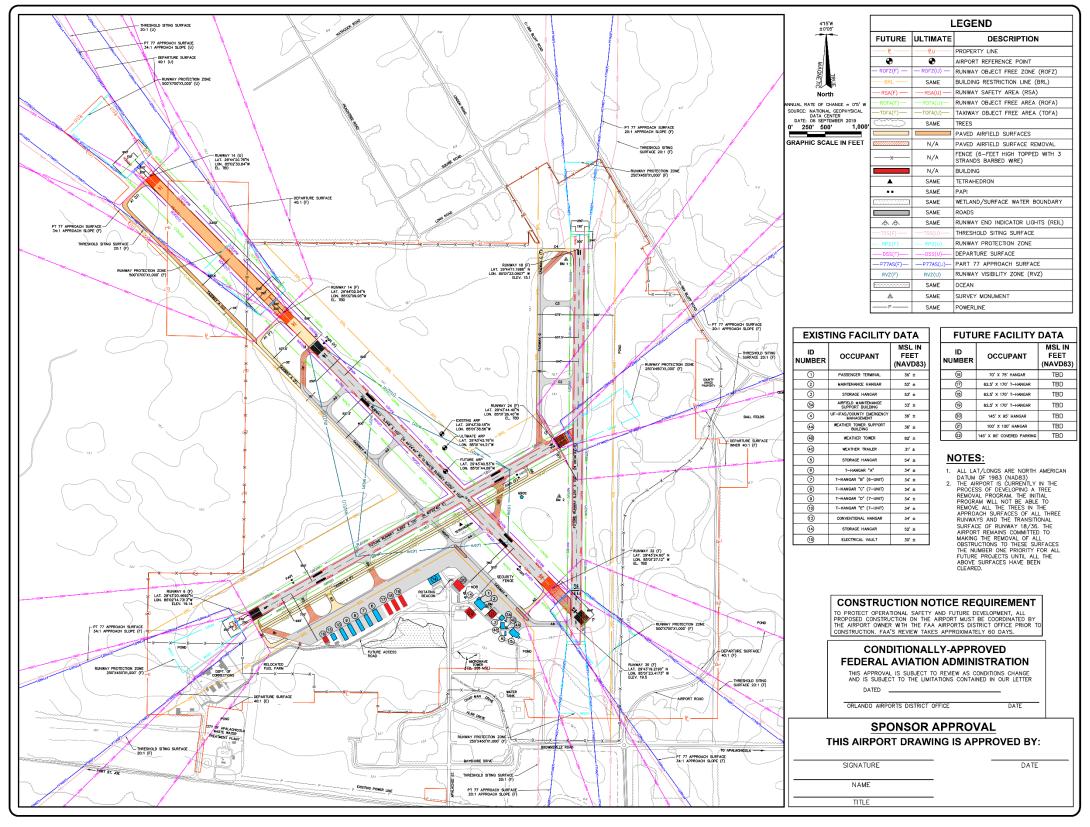
M.S

APRIL 2022

3-12-001-009-2018

SHEET NUMBER

5



Franklin County

Frank Lincounty

AVCON, INC.

ENGINEERS & PLANNERS

500 BAYWHORD PR, SYT A ANICHYLL F. I DRIDA 2578

CORPORATE CERTIFICATION OF THE STATE OF THE

APALACHICOLA REGIONAL AIRPORT

AIRPORT LAYOUT PLAN

FUTURE AIRPORT LAYOUT PLAN

ATTENTI

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NO. DATE BY DESCRIPTION

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DESIGNED BY: M.S
DRAWN BY: J.P
CHECKED BY: M.S
APPROVED BY: M.S
DATE: APRIL 2022

FAA AIP NO. 3-12-001-009-2018 FDOT FM NO 416047-3-94-01 (G1695) AVCON PROJECT NO. 2018.158.01

SHEET NUMBER

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Figure 7-6
FUTURE AIRPORT LAYOUT PLAN

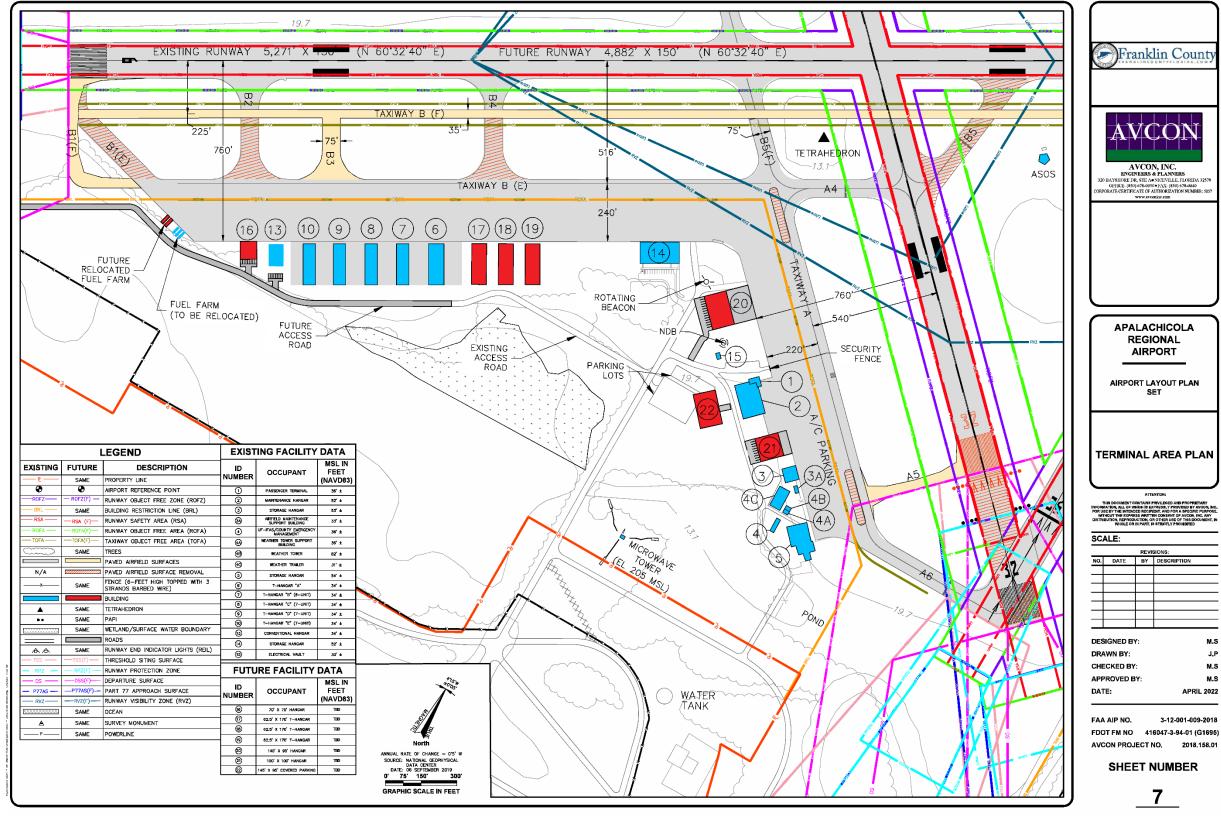


Figure 7-7 TERMINAL AREA PLAN

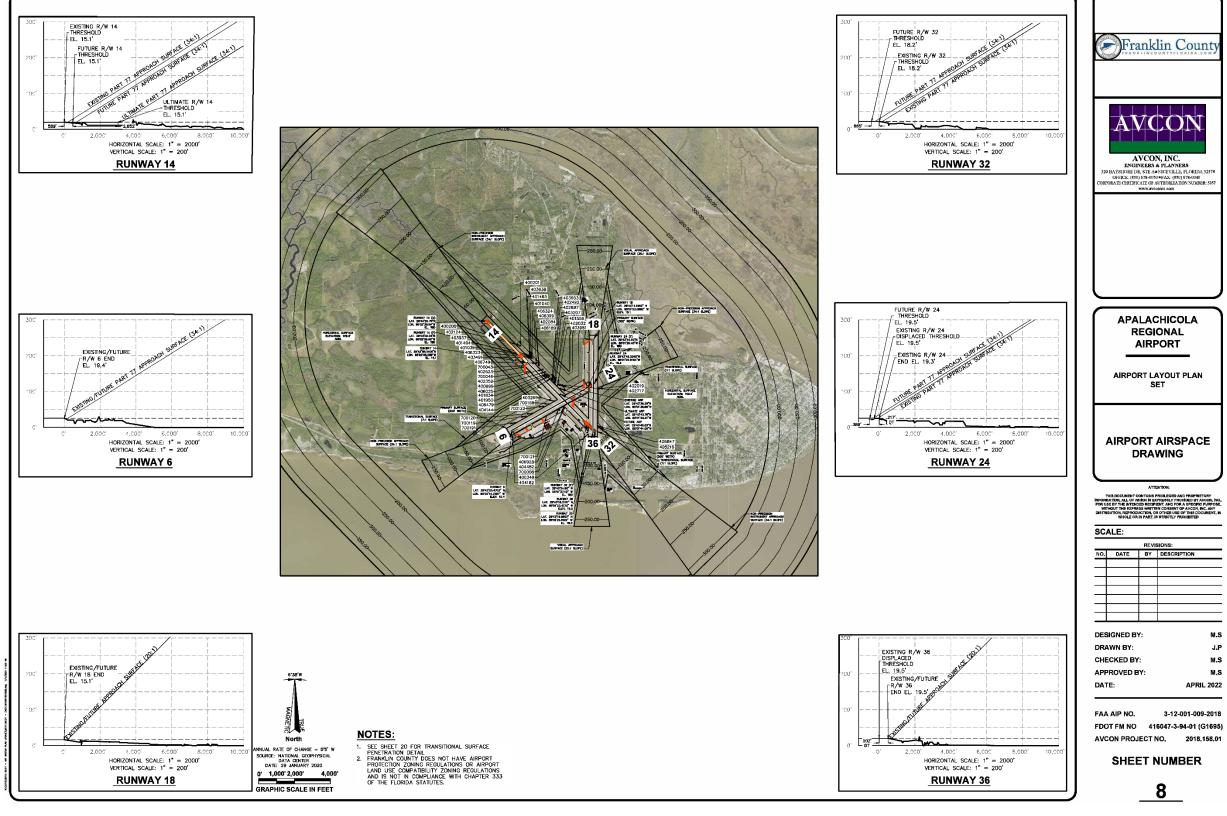


Figure 7-8
AIRPORT AIRSPACE ANALYSIS

7-13

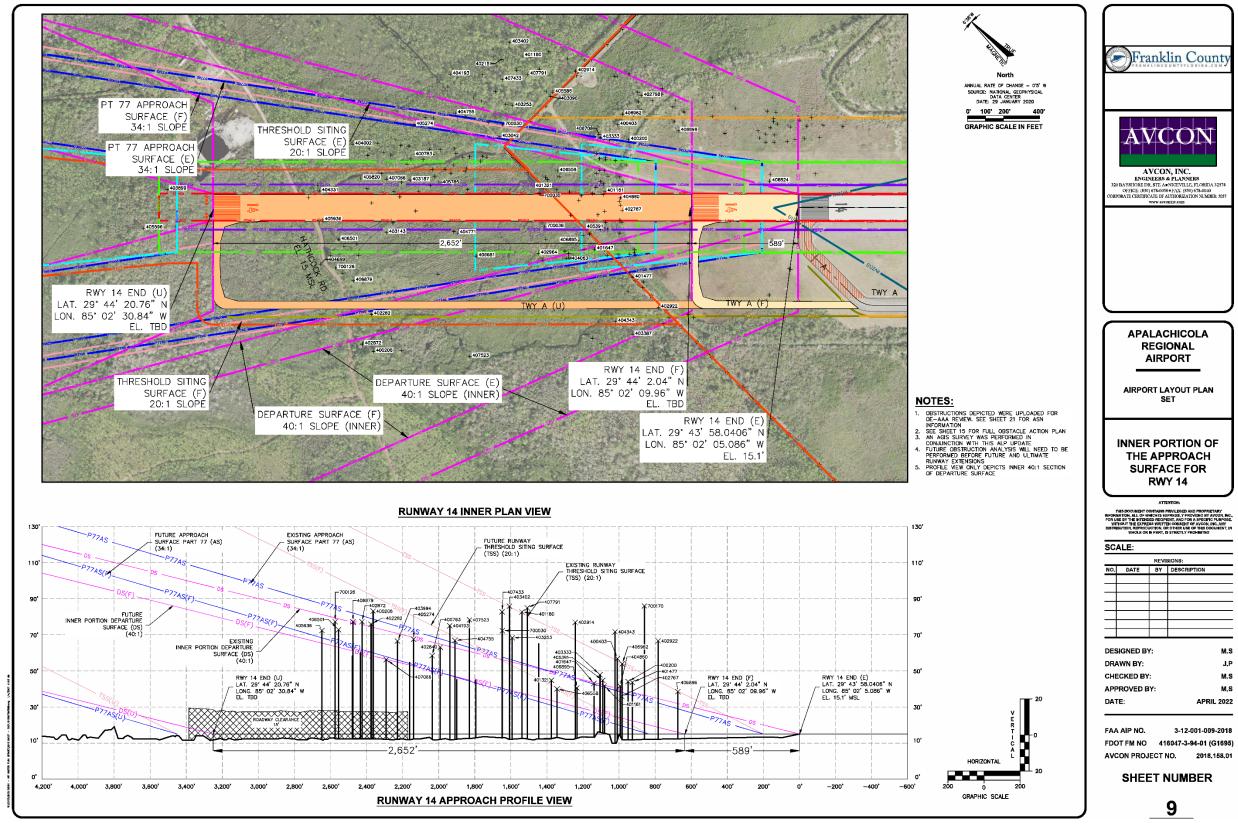


Figure 7-9
INNER PORTION OF THE APPROACH SURFACE FOR RUNWAY 14

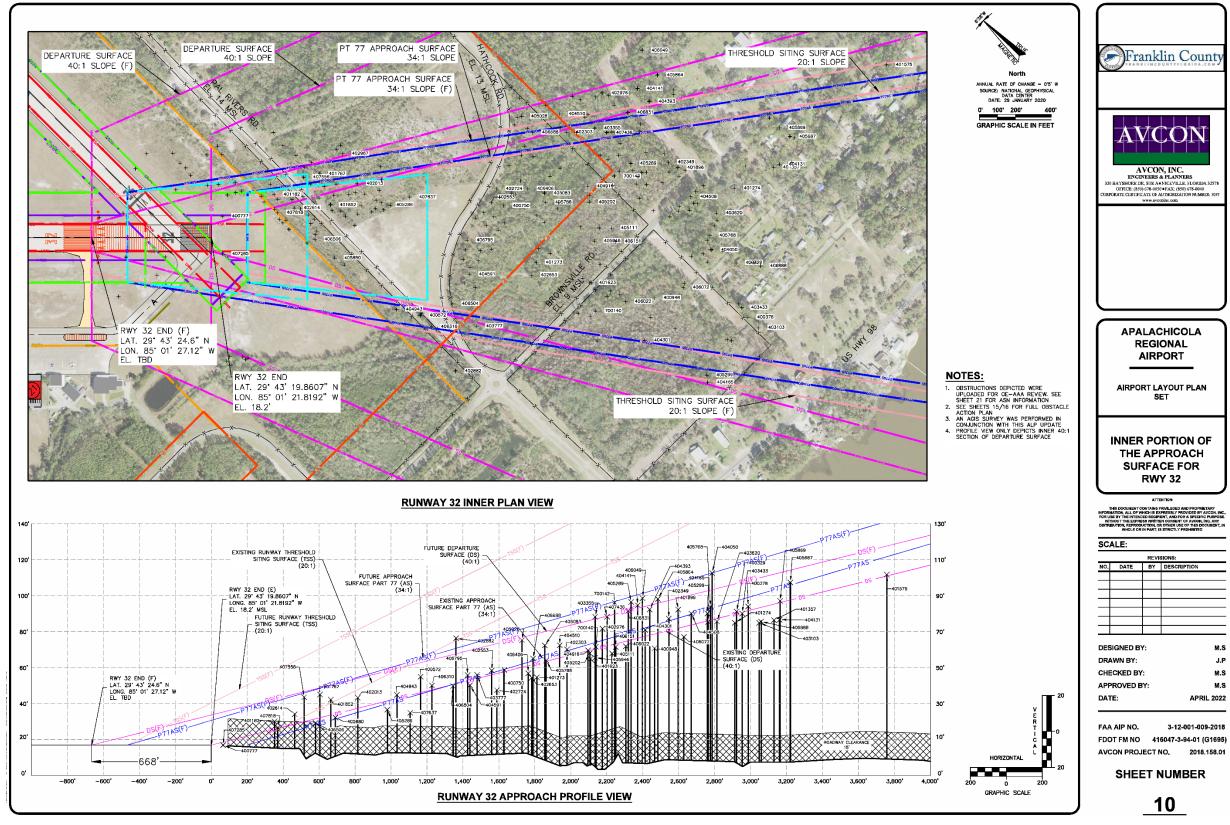


Figure 7-10 INNER PORTION OF THE APPROACH SURFACE OF RUNWAY 32

7-15 Airport Layout Plan Set

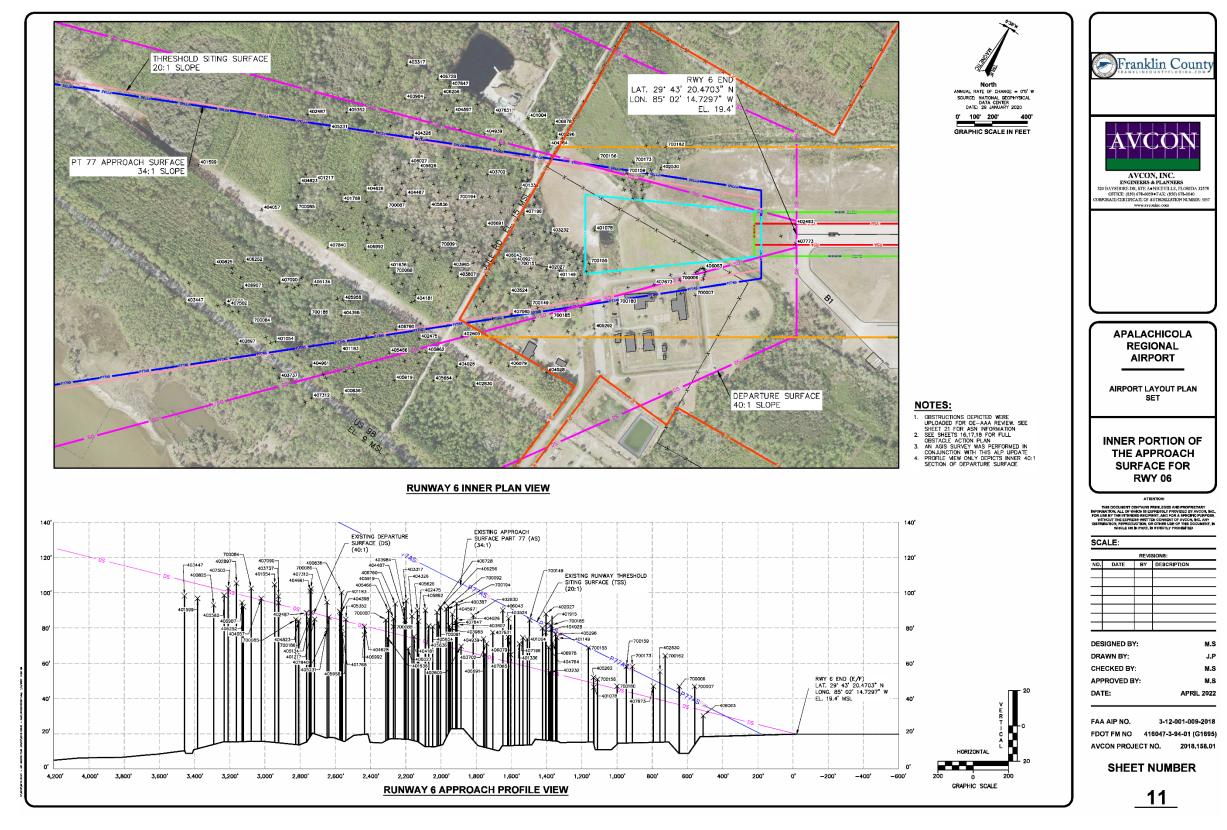


Figure 7-11 INNER PORTION OF THE APPROACH SURFACE FOR RUNWAY 06

7-16 Airport Layout Plan Set

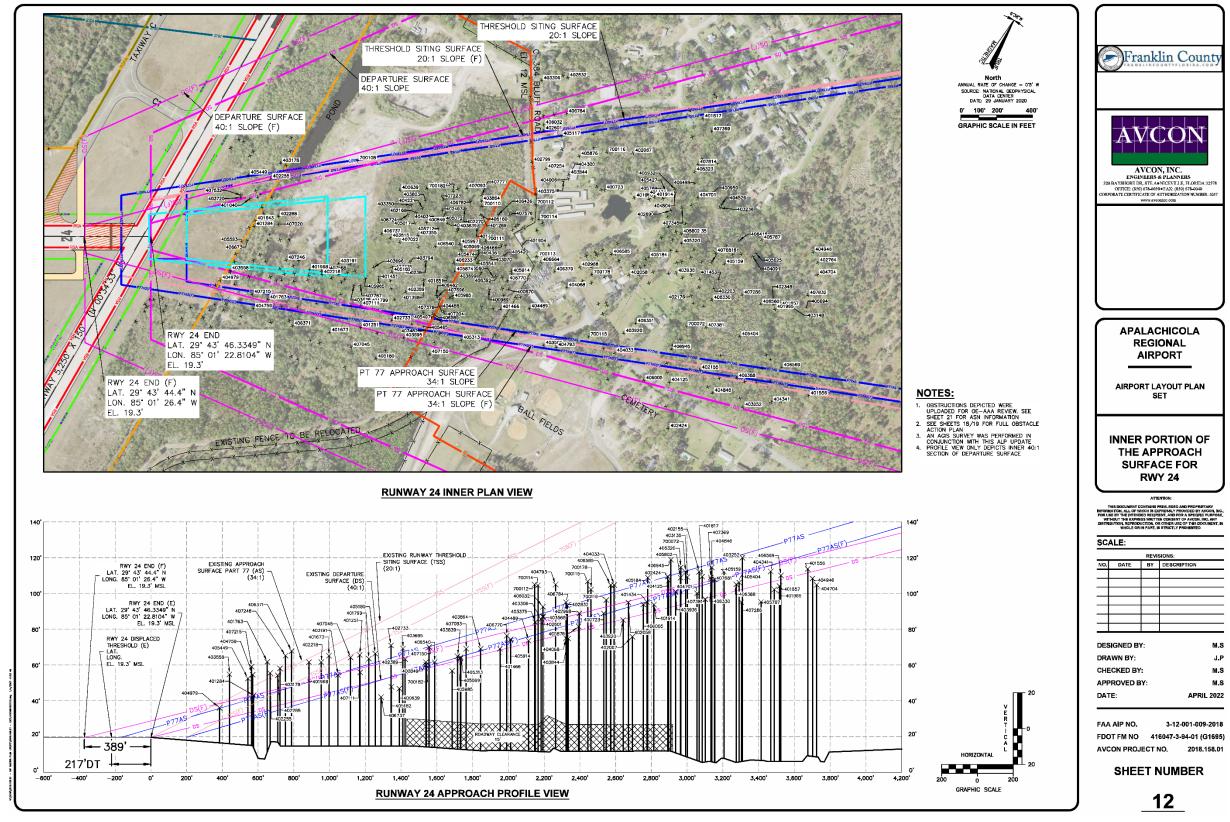


Figure 7-12 INNER PORTION OF THE APPROACH SURFACE FOR RUNWAY 24

7-17 Airport Layout Plan Set

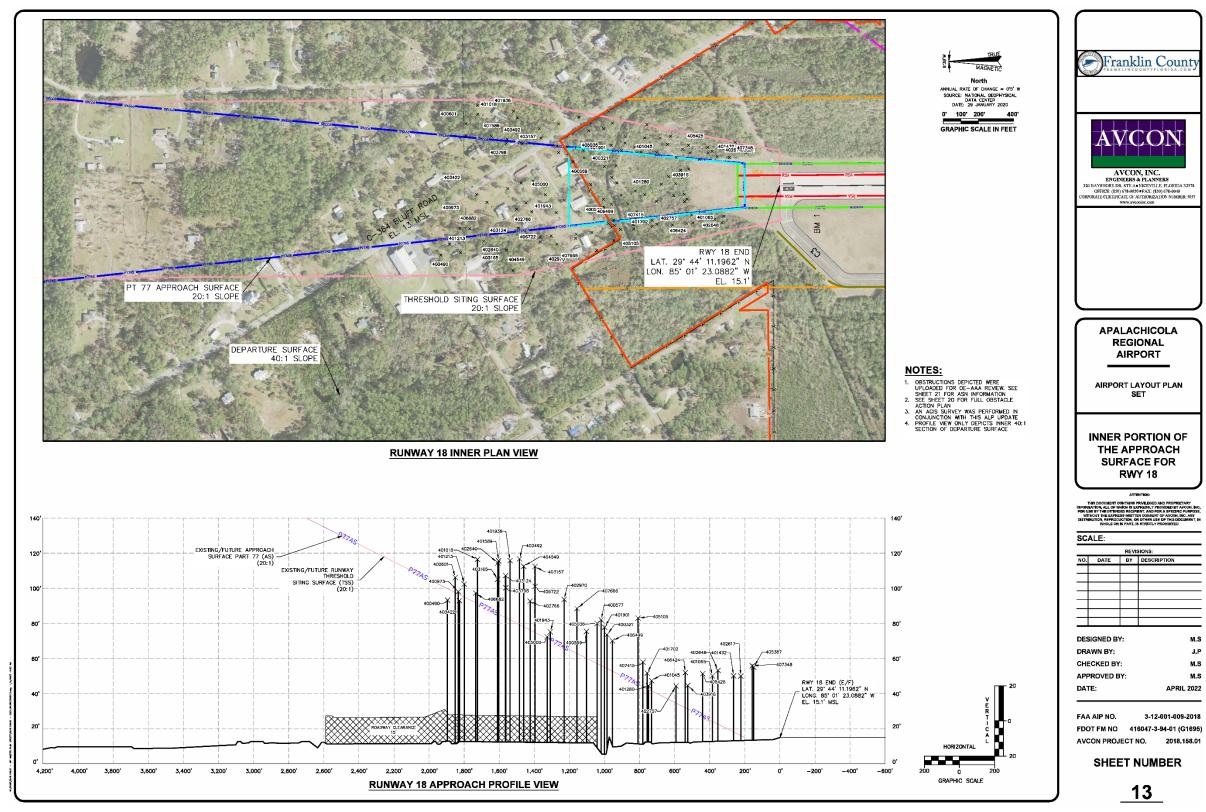


Figure 7-13 INNER PORTION OF THE APPROACH SURFACE FOR RUNWAY 18

7-18 Airport Layout Plan Set

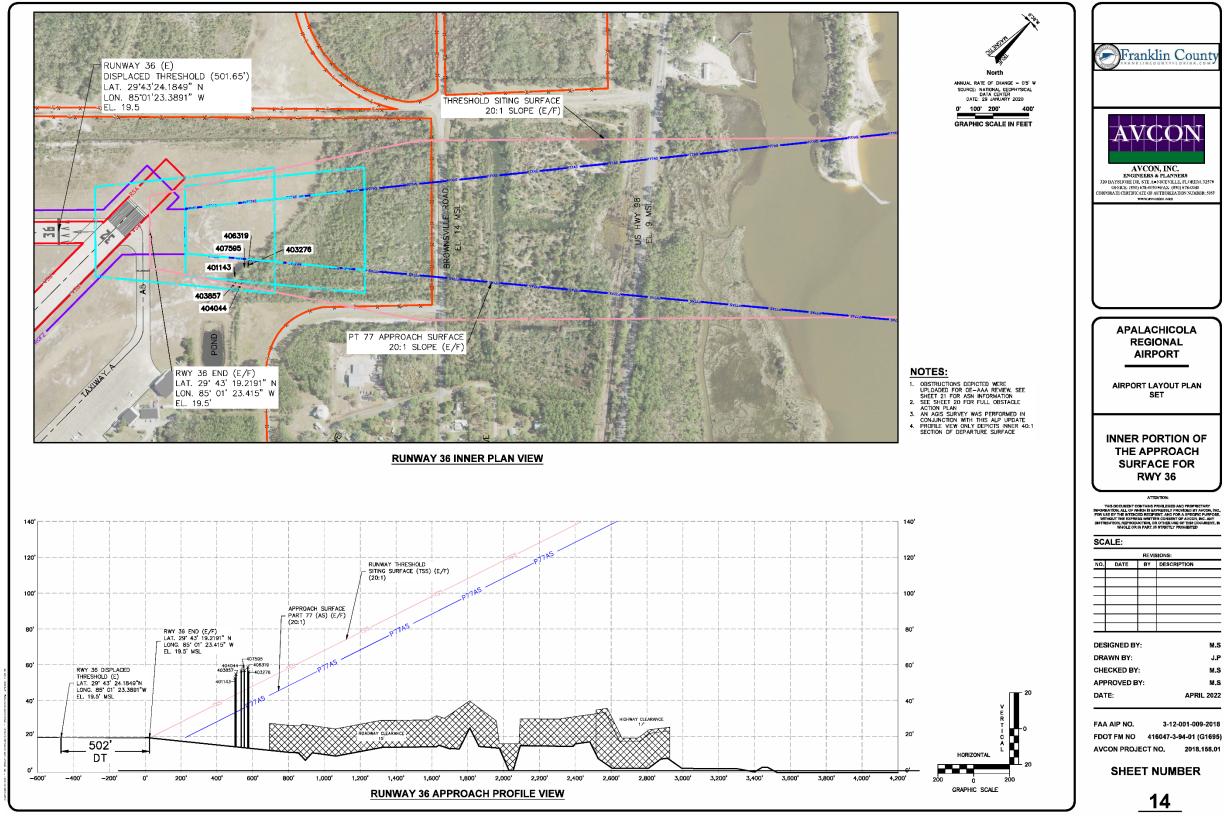


Figure 7-14
INNER PORTION OF THE APPROACH SURFACE FOR RUNWAY 36

7-19 Airport Layout Plan Set

		OF 3)	TION PLAN (1	BSTACLE AC	AY 32 O	RUNW)	2 OF 2)	TION PLAN (BSTACLE AC	/AY 14 C	RUNW			1 OF 2)	TION PLAN (BSTACLE AC	AY 14 O	RUNW	
	DISPOSITION	TSS	DEP. SURFACE		TOP EL	DESCRIPTION	OBS	DISP	TSS		APPR. SURFACE	TOP EL	DESCRIPTION	OBS	DISPOSITION	TSS	DEP. SURFACE		TOP EL	DESCRIPTION	OBS
		(20:1)		(20:1)	(MSL)		NO.		(20:1)	(40:1)	(20:1)	(MSL)		NO.		(20:1)	(40:1)	(20:1)	(MSL)		NO.
Franklin C	REMOVE REMOVE		5.32 10.24	3.25	80.13 91.35	TREE	400284 400329	RE		7.48	12.80 8.12	41.02 42.31	TREE	404860 404865	REMOVE REMOVE		0.81		43.77 83.01	TREE	400200 400206
FRANKLINGOUNTYFLO	REMOVE		10.55	3.27	93.26	TREE	400378	RE		15.87	0.12	67.81	TREE	404866	REMOVE		4.33	5.46	36.34	TREE	400226
	REMOVE		21.75	17.22	88.92	TREE	400519	RE		6.45	7.06	41.4	TREE	404904	REMOVE		1.43		50.58	TREE	400268
	REMOVE		3.37		54.78	TREE	400572	RE		12.73	13.89	44.54	TREE	404971	REMOVE		7.07	8.47	37.53	TREE	400350
	REMOVE		9.97	8.69	58.72	TREE	400750	RE		4.41	2.67	52.67	TREE	405267	REMOVE		6.12		56.86	TREE	400403
	NONE		-7.20		17.49	GROUND	400777 400948	RE		10.36	6.83	68.72 69.94	TREE	405274 405291	REMOVE		-6.23	7.50	40.65	TREE	400640 400774
17700	REMOVE		1.06 2.26		70.75 82.68	TREE	400948	RE		8.66 11.63	12.73	43.8	TREE	405291	REMOVE REMOVE		5.95 2.35	7.52	35.49 58.16	TREE	400774
	REMOVE		17.38	11.44	92.52	TREE	401066	RE		-6	12.73	61.5	TREE	405586	REMOVE		4.75	2.59	55.42	TREE	400783
	REMOVE		10.50	8.79	61.69	TREE	401120	RE		6.59	7.63	39.12	TREE	405604	REMOVE		1.69	3.21	31.52	TREE	401016
	REMOVE		-3.05	17.96	30.45	TREE	401182	RE		1.00		55.91	TREE	405785	REMOVE		4.08	4.93	37.68	TREE	401064
AVCON, INC.	REMOVE		3.35	1.26	56.66	TREE	401273	RE		8.28		71.32	TREE	405879	REMOVE		15.13	16.15	47.78	TREE	401117
ENGINEERS & PLANNE 320 BAYSHORE DR, STE AUNICEVILLE	REMOVE		4.22		85.08	TREE	401274	RE		1.22		72.31	TREE	405936	REMOVE		9.25	10.39	41.17	TREE	401161
OFFICE: (850) 678-9050 FAX: (850) CORPORATE CERTIFICATE OF AUTHORIZATI	REMOVE		0.38		86.68	TREE	401357	RE		9.4		77.27	TREE	405937	REMOVE		-4.11		82.28	TREE	401180
WWW.aveonine.com	REMOVE		10.52		62.09	TREE	401362	RE		7.59	8.63	40.09	TREE	405971	REMOVE		4.93	4.63	45.09	TREE	401192
	REMOVE	13.03	-1.28	16.49	29.53	BUSH	401368	RE		1.71		53.32	TREE	406013	REMOVE		0.33	0.37	38.55	TREE	401219
	REMOVE		11.87	5.84	87.52	TREE	401408	RE		-7.42	10.00	74.64	TREE	406156	REMOVE		5.45	5.30	44.73	TREE	401321
	REMOVE		5.5 1 1.09	2.90	61.83 54.69	TREE	401433 401471	RE	-	8.98 4.09	10.09	41.13 55.38	TREE	406243 406249	REMOVE		11.27 6.34	8.01 7.85	68.1 36.2	TREE	401327 401333
	REMOVE		2.07		81.64	TREE	401471	RE		7.75	8.97	39.28	TREE	406249	REMOVE		2.12	7.03	70.47	TREE	401333
	REMOVE		25.38	19.20	101.86	TREE	401508	RE		4.15		72.94	TREE	406501	REMOVE		1.92	0.08	50.78	TREE	401418
	REMOVE		10.16		112.15	TREE	401575	RE		1.35	1.34	39.85	TREE	406558	REMOVE		-1.42		42.97	TREE	401477
	REMOVE		4.50	1.09	65.26	TREE	401623	RE		-3.94		71.82	TREE	406636	REMOVE		8.61	8.32	48.73	TREE	401570
	REMOVE		-1.76		82.17	TREE	401671	RE		3.67	16.35	46.41	TREE	406676	REMOVE		-1.7		66.2	TREE	401593
	REMOVE		0.74		44.95	TREE	401767	RE		1.1		46.89	TREE	406708	REMOVE		9.76	10.65	43.14	TREE	401647
	REMOVE		2.54	4.40	33.44	TREE	401796	RE		5.47		55.08	TREE	406729	REMOVE		0.98		62.64	TREE	401925
	REMOVE	10.55	1.74	20.00	63.85	TREE	401806	N N		-7.39	6.00	14.17	GROUND	406824	REMOVE		1.78	3.54	30.22	TREE	401987
APALACHICO	REMOVE REMOVE	10.81 4.16	17.35 7.59	20.32	42.01 29.14	TREE	401852 401867	RE		11.03 4.81	6.03 5.29	77.82 40.56	TREE	406879 406895	REMOVE REMOVE		4.91 11.41	6.43 12.35	34.74 44.55	TREE	402090 402124
REGIONAL	REMOVE	4.10	19.11	13.55	92.1	TREE	401867	RE		-8.28	3.27	39.34	TREE	406895	REMOVE		-7.69	12.33	76.9	TREE	402124
	REMOVE		9.26	8.97	52.37	TREE	401993	RE		-2.98		53.18	TREE	406962	REMOVE		11.86		76.13	TREE	402282
AIRPORT	REMOVE		1.37		60.78	TREE	402007	RE		5.58	6.51	38.76	TREE	407036	REMOVE		10.13	11.16	42.77	TREE	402293
	REMOVE	3.29	2.80	15.88	41.97	TREE	402013	RE		13.32	9.13	75.5	TREE	407066	REMOVE		10.62	7.57	66.27	TREE	402302
	REMOVE		21.30		89.06	TREE	402030	RE		6.28	2.44	66.5	TREE	407132	REMOVE		6.55	8.07	36.35	TREE	402381
AIRPORT LAYOUT	REMOVE	4.61	4.54	8.68	22.58	BUSH	402055	RE		3.94	5.81	31.77	TREE	407300	REMOVE		1.79	3.66	29.58	TREE	402448
SET	REMOVE		27.01	22.56	93.72	TREE	402092	RE		7.27	8.39	39.36	TREE	407382	REMOVE		3.89		83.17	TREE	402517
	REMOVE		1.65		83.06	TREE	402113	RE		7.81		81.97	TREE	407433	REMOVE		6.18	7.38	37.81	TREE	402698
	REMOVE		8.30	4.49	71.41	TREE	402146	RE		5.31		84.13	TREE	407434	REMOVE		5.46	6.40	38.56	TREE	402747
	REMOVE REMOVE		16.06 -6.83	11.45	83.66 62.53	TREE	402211 402232	RE		-6.35 -5.62		79.02 80	TREE	407523 407586	REMOVE REMOVE		6.63	8.20 8.05	36.14 38.96	TREE	402767 402780
OBSTACLE ACT	REMOVE	10.91	15.30	18.65	37.81	TREE	402262	RE		3.66		80.31	TREE	407700	REMOVE		2.54	8.03	72.87	TREE	402793
DISPOSITION P	REMOVE	10.01	13.07	20100	70.59	TREE	402303	RE		8.16		84.95	TREE	407791	REMOVE		7.05	8.64	36.41	TREE	402805
	REMOVE		12.85	8.08	81.36	TREE	402311	RE		26.26	24.91	72.34	TREE	700030	REMOVE		8.40	5.53	63.09	TREE	402840
(1 OF 6)	REMOVE		15.60	10.28	87.28	TREE	402349	RE		7.76		68.22	TREE	700034	REMOVE		-1.04		77.93	TREE	402872
<u> </u>	REMOVE		0.33	1.99	32.37	TREE	402356	RE		23.97	23.51	65	TREE	700035	REMOVE		-6.62		77.5	TREE	402914
ATTENTION:	REMOVE		0.88		62.88	TREE	402383	RE		18.74	18.42	59	TREE	700036	REMOVE		-8.65		65.85	TREE	402922
THIS DOCUMENT CONTAINS PRIVILEGED AN INFORMATION, ALL OF WHICH IS EXPRESSLY PRO	REMOVE		0.15		83.7	TREE	402393	RE		9.91	5.23	74.82	TREE	700103	REMOVE		2.30		55.09	TREE	403027
INFORMATION, ALL OF WHICH IS EXPRESSLY PRO FOR USE BY THE INTENDED RECIPIENT, AND FOR WITHOUT THE EXPRESS WRITTEN CONSENT O	REMOVE		11.85	10.87	58,89	TREE	402553	RE		13.93	10.99	69	TREE	700105	REMOVE		14.05	12.63	60.53	TREE	403042
WITHOUT THE EXPRESS WRITTEN CONSENT O DISTRIBUTION, REPRODUCTION, OR OTHER USE O WHOLE OR IN PART, IS STRUCTLY PR	REMOVE REMOVE	12.52	14.04	17.90	33.68 62.08	TREE	402614 402635	RE		8.44 10.71	3.00 5.79	77.7 77	TREE	700126 700127	REMOVE REMOVE		3.92 1.26	1 46	69.96 38.56	TREE	403046 403085
SCALE:	REMOVE		1.33		53.94	TREE	402653	RE		14.96	3.79	85.95	TREE	700127	REMOVE		-2.38	1.46	63.03	TREE	403085
	REMOVE	5.76	12.71	15.61	37.78	TREE	402694	, NE		14.50		03.33	Inct	700170	REMOVE		8.39		68.97	TREE	403056
NO. DATE BY DESCRIP	REMOVE	•	13.78	7.50	90.81	TREE	402713								REMOVE		4.31		48.34	TREE	403333
NO. DATE BY DESCRIP	REMOVE		0.03		47.8	TREE	402724								REMOVE		8.78		73.49	TREE	403394
 	REMOVE		5.45	8.08	32	TREE	402738					NOTES:	N		REMOVE		-7.47		85.83	TREE	403402
	REMOVE	12.44	2.24	17.51	32.87	BUSH	402763			TRUCTIONS FILED	D ROWS DEPICT OBS		1.		REMOVE		4.19	5.36	36.02	TREE	403421
	REMOVE		2.72	4.85	32.12	TREE	402857				AA. SEE SHEET 21 F				REMOVE		2.94	0.70	54.08	TREE	403460
+ + + -	REMOVE		-3.19		77.18	TREE	402882								REMOVE		11.10	9.40	59.14	TREE	403765
+ + + -	REMOVE		-8.90		47.03	TREE	402967								REMOVE		1.24	1.41	38.71	TREE	403812
	REMOVE REMOVE		-4.14 8.62	5 54	81.93 67.69	TREE	402976 402995								REMOVE REMOVE		1.29	2.05	35.38 64.48	TREE	403954 403974
DESIGNED BY:	REMOVE		8.62 3.93	5.51	67.59 83.12	TREE	402995								REMOVE		13.16	3.00	64.48	TREE	403974
DRAWN BY:	REMOVE	2.04	5.30	8.84	26.67	BUSH	402996								REMOVE		1.45	3.12	30.45	TREE	403994
CHECKED BY:	REMOVE		4.98	/	90.11	TREE	403075								REMOVE		3.07	3.89	36.81	TREE	404052
	REMOVE		0.64		84.88	TREE	403103								REMOVE		3.66	3.92	40.62	TREE	404063
APPROVED BY:	REMOVE		3.65	2.17	53.49	TREE	403196								REMOVE		-1.49		75.3	TREE	404193
DATE:	REMOVE	8.57	8.90	12.97	27.35	BUSH	403214								REMOVE		2.22	3.36	34.16	TREE	404248
	REMOVE		1.22		70.36	TREE	403327								REMOVE		-0.88		71.2	TREE	404343
	REMOVE		26.49		87.92	TREE	403355								REMOVE		4.09	5.06	36.99	TREE	404395
FAA AIP NO. 3-12-0	REMOVE	2.21	11.28	13.80	38.47	TREE	403366								REMOVE		7.99	9.21	39.49	TREE	404456
FDOT FM NO 416047-3-9	REMOVE		7.98	5.31	64.55	TREE	403409								REMOVE		5.07	2.19	59.81	TREE	404494
AVCON PROJECT NO.	REMOVE		6,28	2.91	66.89	TREE	403425								REMOVE		5.53	7.21	34.44	TREE	404535
	REMOVE		7.24	23.98	44.61 25.41	TREE	403428								REMOVE		1.00	10.47	69.13	TREE	404541
SHEET NUME	REMOVE REMOVE		3,67 7,91	5,39 0,78	35,41 89,78	TREE	403432 403433								REMOVE REMOVE		12,31 8,19	13.47 9.70	44,13 38.09	TREE	404635 404709
J.ILLI HOME	REMOVE		7,91 -3.07	0,78	89.78	TREE	403433								REMOVE		14.35	9,70	38.09 67	TREE	404709
_15	REMOVE		24.74	18.46	101.8	TREE	403565								REMOVE		3.44	4.93	33.39	TREE	404756
			a-7./4	23.70	202.0		.55565										1 2.77			· · · · · ·	.57750

Figure 7-15 OBSTACLE ACTION AND DISPOSITION PLANS (1 OF 6)

7-20 Airport Layout Plan Set

Column		RUNW	/AY 32 O	BSTACLE ACT	TION PLAN (2	2 OF 3)			RUNW	'AY 32 O	BSTACLE ACT	ION PLAN (3	3 OF 3)			RUNV	/AY 6 OI	BSTACLE ACT	ION PLAN (1	L OF 5)	
The column The		I	TOP EL	APPR. SURFACE	DEP. SURFACE	TSS	DISPOSITION			TOP EL	APPR. SURFACE	DEP. SURFACE	TSS	T			TOP EL	APPR. SURFACE	DEP. SURFACE	TSS	DISPOSITION
State Stat						(20:1)					(20:1)		(20:1)				<u> </u>	(20:1)		(20:1)	
Section March Ma	403661	TREE	43.16		4.57		REMOVE	406068	TREE	54.94	2.17	3.86		REMOVE	400387						
Section Sect				9.19							2.45										
Section Control Cont				5.15							2.45			-							
Mary											3.16										
196 196 196 197																					
Mary								_													
Column C								-													
Mary																					
100 101 101 102	_			0.75									0.02					3.73		3.73	
100								$\overline{}$													
				15.20		5.52							1.99								
1988 1987																			 		
Mary													4.14								
				7.72																	
Mary								406831										0.50		5.50	
Month Mont																					
																		3.76		3.26	
											2.07							5.20		3.20	
Sect				4.21				$\overline{}$													
See 1969 1969 1969 1969 1960 1				17.88							7,57										
March Marc						9.33					,										
Sect 1967 1968 1969 1976 1969 1976 1969 1976 1969 1976 1969 1976 1969 1976				6.03																	
1967 1968				0.03				$\overline{}$					3.10								
1				0.00																	
								-													
Proc. Proc								$\overline{}$													
Mile											7.54										
Mary																					
Fig. 1.0																					
Septem S				20101				-													
1935 1936						9.19					1.52										
MANONE M						5.25					3.72								 		
1.00 1.00								-					5.86					17.00		17.00	
						8.33		-										5.75		5.75	
Model The											7125							3.73		3.73	
100-2599 TREE 32-42																					
Model Tree 37.04 7.40 5.62 Memory				23.03				-				23.29									
40545 TREE 61.77 C				7.40								8.26	4.51								
405443 TREE				14.84		4.14															
405458 TREE 95.99													2.74								
405562 TREE 48.28 0.30 1.27 REMOVE 40568 TREE 35.63 1002 7.64 REMOVE 407818 BUSH 78.684 13.87 17.51 REMOVE 407818 BUSH 78.684 13.87 9.55 10.37 REMOVE 407818 BUSH 78.684 13.87 8.87 8.87 8.87 8.88 9.7 8.42 10.88 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.8 8.8								-										1.47		1.47	
405618 TREE						2.50		-													
40570 TREE 107.06 10.18 18.49 REMOVE 40570 TREE 56.41 7.09 8.26 REMOVE 407578 TREE 93.78 9.97 16.32 REMOVE 407578 TREE 53.76 6.22 8.54 REMOVE 407578 TREE 53.76 6.22 8.54 REMOVE 407578 TREE 63.16 6.22 8.54 REMOVE 407578 TREE 51.72 8.00 8.34 REMOVE 407578 TREE 97.02 2.02 10.07 REMOVE 407578 TREE 88 13.53 18.47 REMOVE 407578 TREE 57.37 4.14 REMOVE 407578 TREE 97.22 2.02 10.07 REMOVE 407578 TREE 88 13.53 18.47 REMOVE 407578 TREE 52.88 77.39 REMOVE 407578 TREE 57.07 4.14 REMOVE 407578 TREE 57.07 4.14 REMOVE 407578 TREE 51.72 8.00 8.34 REMOVE 407578 TREE 89 4.45 10.91 REMOVE 407578 TREE 77.79 4.14 REMOVE 4075													10.37								
405707 TREE 56.1 7.09 8.26 REMOVE A05758 TREE 73.12								407822				-1.79									
405768 TREE 93.78 9.97 16.32 REMOVE 700143 TREE 97.09 28.95 32.95 REMOVE 405778 TREE 54.37 9.64 REMOVE 700143 TREE 97.09 28.95 32.95 REMOVE 405857 TREE 63.16 6.22 8.54 REMOVE 405857 TREE 95.00 8.34 REMOVE 405864 TREE 95.02 10.07 REMOVE 405860 TREE 97.22 2.02 10.07 REMOVE 405860 TREE 32.01 9.57 6.71 REMOVE 405902 TREE 32.01 9.57 6.71 REMOVE 405902 TREE 45.15 22.60 6.42 REMOVE 405953 TREE 86.63 1.40 4.91 REMOVE 405953 TREE 87.09 5.67 11.61 16.95 REMOVE 405953 TREE 87.09 5.67 11.66 REMOVE 406003 TREE 87.09 5.67 11.66 REMOVE 406003 TREE 73.17 3.19 7.46 REMOVE 406003 TREE 73				7.09							6.92										
405778 TREE 54.37 -9.64 REMOVE 405878 TREE 63.16 6.22 8.54 REMOVE 405867 TREE 98.07 2.64 REMOVE 405869 TREE 98.07 2.22 2.02 10.07 REMOVE 405800 TREE 32.01 9.57 6.71 REMOVE 405902 TREE 45.15 2.60 6.42 REMOVE 405902 TREE 45.15 2.60 6.42 REMOVE 405903 TREE 88.07 TREE				9,97							28.95										
405867 TREE 51.72 8.00 8.34 REMOVE 405864 TREE 98.07 2.20 10.07 REMOVE 405869 TREE 97.22 2.02 10.07 REMOVE 405869 TREE 32.01 9.57 6.71 REMOVE 405969 TREE 45.15 22.60 6.42 REMOVE 405966 TREE 66.33 1.40 4.91 REMOVE 405966 TREE 66.33 1.40 4.91 REMOVE 405966 TREE 87.09 5.67 11.61 16.95 REMOVE 406028 TREE 87.09 5.67 11.66 REMOVE 406028 TREE 73.17 3.19 7.46 REMOVE 406028 TREE 80.25 -1.03 REMOVE 406028 TREE 80.25 -1.03 REMOVE	405778						REMOVE	700143													
405864 TREE 98.07 2.2 2.02 10.07 REMOVE 405899 TREE 97.22 2.02 10.07 REMOVE 405800 TREE 32.01 9.57 6.71 REMOVE 405902 TREE 44.52 10.02 REMOVE 405902 TREE 45.15 22.60 6.42 REMOVE 405903 TREE 66.33 1.40 4.91 REMOVE 405903 TREE 88.07 11.61 16.95 REMOVE 405902 TREE 87.09 5.67 11.66 REMOVE 406028 TREE 77.317 3.19 7.46 REMOVE 406028 TREE 77.76 2.03 REMOVE 406028 TREE 77.76 2.03 REMOVE 402800 TREE 80.25 TREE 80.25 1.10 REMOVE 402800 TREE 80.25														_							
405869 TREE 97.22 2.02 10.07 REMOVE 40580 TREE 32.01 9.57 6.71 REMOVE 405902 TREE 45.15 22.60 6.42 REMOVE 405913 TREE 45.15 22.60 6.42 REMOVE 405913 TREE 86.33 1.40 4.91 REMOVE 405913 TREE 86.63 1.40 4.91 REMOVE 405913 TREE 87.09 5.67 11.61 16.95 REMOVE 406023 TREE 87.09 5.67 11.66 REMOVE 406023 TREE 73.17 3.19 7.46 REMOVE 406023 TREE 80.8 3.11 REMOVE 406023 TREE 80.25 TREE 80				8.00																	
405902 TREE 84.62 10.02 REMOVE 405901 TREE 45.15 22.60 6.42 REMOVE 405906 TREE 66.33 1.40 4.91 REMOVE 405905 TREE 88.67 11.61 16.95 REMOVE 405906 TREE 87.09 5.67 11.66 REMOVE 406020 TREE 73.17 3.19 7.46 REMOVE 406020 TREE 73.17 3.19 7.46 REMOVE 406020 TREE 77.76 2.03 REMOVE	405869	TREE			10.07		REMOVE														
405921 TREE 45.15 22.60 6.42 REMOVE 405946 TREE 66.33 1.40 4.91 REMOVE 405953 TREE 88.67 11.61 16.95 REMOVE 406008 TREE 87.09 5.67 11.66 REMOVE 406002 TREE 73.17 3.19 7.46 REMOVE 406023 TREE 72.76 2.03 REMOVE 40602 TREE 72.76 2.03 REMOVE				9.57																	
405946 TREE 66.33 1.40 4.91 REMOVE 405937 TREE 88.67 11.61 16.95 REMOVE 406028 TREE 87.09 5.67 11.66 REMOVE 406022 TREE 73.17 3.19 7.46 REMOVE 406023 TREE 72.76 8.8 3.11 REMOVE 406023 TREE 72.76 80.2 -1.03 REMOVE				22 60														4.64		4.64	
AUSSSS TREE 88.67 11.61 16.95 REMOVE AUSSSS TREE 88.96 -1.45 REMOVE AUSSSS TREE 87.09 5.67 11.66 REMOVE AUSSSS TREE 87.09 5.67 11.66 REMOVE AUSSSS TREE 87.17 3.19 7.46 REMOVE AUSSSS TREE 87.17 3.19 7.46 REMOVE AUSSSS TREE 87.17 AUSSSS TREE 87.17 AUSSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSS AUSSSS AUSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSSS AUSSS AUSSSS AUSSSS AUSSS AUS																					
406022 TREE 73.17 3.19 7.46 REMOVE 406023 TREE 72.76 2.03 REMOVE 406023 TREE 72.76 80.25 1.03 REMOVE															402898	TREE	83.96		-1.45		REMOVE
40923 TREE 72.76 2.03 REMOVE 402951 TREE 80.25 -1.03 REMOVE																					
				5.17																	
	406048	TREE	38.48		-9.23		REMOVE									TREE					



Figure 7-16 OBSTACLE ACTION AND DISPOSITION PLANS (2 OF 6)

<u> 16</u>

SHEET NUMBER

7-21 Airport Layout Plan Set

				TON PLAN (2				KUNN		BSTACLE ACT	,				KUNV		BSTACLE ACTI			
OBS NO.	DESCRIPTION	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITION	OBS NO.	DESCRIPTION	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITION	OBS NO.	DESCRIPTION	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITION
402972	TREE	100.74	(20.1)	20.36	(20.1)	REMOVE	404847	TREE	72.75	(20.1)	-4.85	(20.1)	REMOVE	406218	TREE	69.21	(20.1)	6.11	(20.1)	REMOVE
402978	TREE	75.35		11.63		REMOVE	404857	TREE	77.53		8.25		REMOVE	406234	LIGHTPOLE	46.46		13.01		LIGHT/MOVE
402980	TREE	45.03		12.00		REMOVE	404857	TREE	82.34		17.28		REMOVE	406234	TREE	73.19		6.83		REMOVE
402983	TREE	60.66		10.73		REMOVE	404870	TREE	74.47		5.19		REMOVE	406248	TREE	77.64		19.40		REMOVE
403045	TREE	83.47		5.32		REMOVE	404924	TREE	72.72		6.67		REMOVE	406252	TREE	91.85		3.92		REMOVE
403071	TREE	93.64		9.40		REMOVE	404939	TREE	73.72		8.13		REMOVE	406255	TREE	76.11		1.56		REMOVE
403102	TREE	84.41		3.64		REMOVE	404951	TREE	78.55		7.65		REMOVE	406256	TREE	91.57		5.01		REMOVE
403111	TREE	75.6		15.30		REMOVE	404961	TREE	101.41		22.98		REMOVE	406269	TREE	62.17		10.68		REMOVE
403128	TREE	70.79		19.20		REMOVE	405001	TREE	83.08		17.92		REMOVE	406276	TREE	56.03		15.35		REMOVE
403130	TREE	73.09		9.39		REMOVE	405010	TREE	77.98		11.24		REMOVE	406288	TREE	61.76		0.87		REMOVE
403179	TREE	79.22	5.95	32.81	5.95	REMOVE	405015	TREE	77.06		6.83		REMOVE	406291	TREE	68.8		9.78		REMOVE
403232	TREE	55.91		11.48		REMOVE	405046	PRIMARY ROAD	31.61	5.75	-3.33	5.75	LIGHT	406354	TREE	55.33		4.02		REMOVE
403288	VENT	40.5		-3.24		LIGHT	405071	TREE	60.68		0.68		REMOVE	406357	TREE	89.41		6.80		REMOVE
403317	TREE	95.65		-6.57		REMOVE	405073	TREE	50.71		1.02		REMOVE	406367	TREE	76.26		6.54		REMOVE
403346	TREE	87.03		10.58		REMOVE	405122	TREE	79.5		9.17		REMOVE	406448	TREE	79.54		26.93		REMOVE
403353	TREE	74.73		17.47		REMOVE	405134	TREE	88.47		10.16		REMOVE	406483	TREE	74.67		9.18		REMOVE
403377	TREE	65.75		23.02		REMOVE	405135	TREE	70.75		19.20		REMOVE	406512	TREE	70.28		15.29		REMOVE
403424	TREE	95.89		0.11		REMOVE	405147	TREE	87.16		6.61		REMOVE	406572	TREE	76.3		15.49		REMOVE
403431	TREE	79.43		23.38		REMOVE	405163	TREE	74.61		19.25		REMOVE	406599	TREE	90.33		20.93		REMOVE
403444	TREE	33.23		3.29		REMOVE	405174	TREE	75.97		5.44		REMOVE	406604	TREE	72.96		9.75		REMOVE
403447	TREE	96.91		0.61		REMOVE	405193	TREE	98.67		9.93		REMOVE	406610	TREE	92.49		4.90		REMOVE
403474	TREE	80.19		-9.5		REMOVE	405196	TREE	65.48		-5.29		REMOVE	406657	TREE	69.65		22.43		REMOVE
403506	PRIMARY ROAD	31.6	5.10	8.57	5.10	LIGHT	405199	TREE	59.67		19.13		REMOVE	406691	TREE	65.83		12.20		REMOVE
403524	TREE	85.73	4.75	35.46	4.75	REMOVE	405204	TREE	62.41		-4.62		REMOVE	406692	TREE	46.39	1.17	14.00	1.17	REMOVE
403573	TREE	78.26		7.26		REMOVE	405231	TREE	85.84		10.04		REMOVE	406706	TREE	73.22		6.65		REMOVE
403590	TREE	52.64		5.99		REMOVE	405259	TREE	82.02		21.57		REMOVE	406728	TREE	88.66		-5.94		REMOVE
403596	TREE	65.07		17.28		REMOVE	405262	TREE	52.24		-9.89		REMOVE	406733	TREE	41.65		-4.63		REMOVE
403702	TREE	70.83		17.42		REMOVE	405263	TREE	64.11	2.29	23.42	2.29	REMOVE	406760	TREE	93.14		26.77		REMOVE
403733	TREE	72.29		8.71		REMOVE	405278	TREE	76.45		3.54		REMOVE	406777	TREE	61.8		15.04		REMOVE
403737	TREE	98.73		15.78		REMOVE	405279	TREE	60.48		17.15		REMOVE	406778	TREE	79.85		33.57		REMOVE
403807	TREE	81.93		24.32		REMOVE	405292	TREE	75.73		8.58		REMOVE	406796	TREE	81.87		1.64		REMOVE
403822	TREE	58.52		12.15		REMOVE	405296	TREE	77.14		13.21		REMOVE	406823	TREE	82.85		11.35		REMOVE
403840	TREE	74.73		18.10		REMOVE	405311	PRIMARY ROAD	31.7	6.42	9.28	6.42	LIGHT	406836	TREE	46.27	3.05	14.88	3.05	REMOVE
403873	TREE	84.12		-3.56		REMOVE	405312	TREE	59		10.38		REMOVE	406857	PRIMARY ROAD	31.47	0.32	6.12	0.32	LIGHT
403934	TREE	76.28		18.24		REMOVE	405314	TREE	62.71	0.36	21.75	0.36	REMOVE	406867	LIGHTPOLE	46.46		-3.93		LIGHT/MOVE
403965	TREE	79.51		21.00		REMOVE	405352	TREE	84.71		11.33		REMOVE	406870	PRIMARY ROAD	31.47	4.13	8.02	4.13	LIGHT
403984	TREE	90.9		6.82		REMOVE	405414	TREE	96.96		12.14		REMOVE	406907	TREE	93.89		5.77		REMOVE
403997	TREE	38.71		6.03		REMOVE	405466	TREE	90.39		23.05		REMOVE	406939	TREE	78.08		4.73		REMOVE
404015	TREE	97.91		14.10		REMOVE	405505	TREE	79.38		18.13		REMOVE	406966	TREE	75.56		10.44		REMOVE
404026	TREE	83.65		1.24		REMOVE	405508	TREE	65.29		17.68		REMOVE	406978	TREE	72.15		1.39		REMOVE
404028	TREE	77.63		-7.81		REMOVE	405516	PRIMARY ROAD	31.48		4.12		LIGHT	406992	TREE	76.74		5.99		REMOVE
404057	UTILITY POLE	96.83		11.42		LIGHT	405518	TREE	68.73		0.99		REMOVE	407035	VENT	40.98		-4.86		LIGHT
404166	TREE	63.42	2.70	23.28	2.70	REMOVE	405545	TREE	80.7		16.73		REMOVE	407065	TREE	81.67		31.72		REMOVE
404181	TREE	75.84	2.70	12.14	2.70	REMOVE	405569	TREE	82.9		16.78		REMOVE	407072	TREE	74.82		13.84		REMOVE
404291	TREE	81.5		12.54		REMOVE	405582	TREE	97.89		7.22		REMOVE	407090	TREE	94.44		11.51		REMOVE
404311	TREE	74.06		-3.33		REMOVE	405626	TREE	90.08		26.86		REMOVE	407113	TREE	61.05		19.84		REMOVE
404326	TREE	86.93		22.94		REMOVE	405654	TREE	80.9		-8.97		REMOVE	407117	TREE	80.03		4.55		REMOVE
404396	TREE	72.66	11.14	32.12	11.14	REMOVE	405659	TREE	87.74		3.03		REMOVE	407161	TREE	88.23		17.68		REMOVE
404398	TREE	88.35	11.14	14.22	11.14	REMOVE	405697	TREE	77.92		12.37		REMOVE	407189	PRIMARY ROAD	31.47		-4.95	5.56	LIGHT
404446	TREE	79.2		11.03		REMOVE	405713	TREE	90.58		5.54		REMOVE	407196	TREE	74.45		26.20	5.50	REMOVE
404449	TREE	90.28		0.64		REMOVE	405719	TREE	74.97		20.48		REMOVE	407248	TREE	65.57		22.64		REMOVE
404449	TREE	76.75	8.08	32.64	8.08	REMOVE	405719	TREE	77.79		20.48		REMOVE	407248	LIGHTPOLE	46.69	 	-2.46		LIGHT/MOVE
404471		88.82	0.00	9.39	0.00	REMOVE	405747	TREE	95.98	<u> </u>	11.84		REMOVE	407249	TREE	83.34	 	23.77		REMOVE
404477	TREE	83.7		18.73		REMOVE	405/84	TREE	95.98 81.5		19.89		REMOVE	407262	TREE	75.1		23.77		REMOVE
404467	TREE	76.4		21.70		REMOVE	405862	TREE	90.25		15.56		REMOVE	407312	TREE	103.6		4.69		REMOVE
404502	PRIMARY ROAD	31.66	5.62	8.86	5.62	LIGHT	405867	TREE	76.86		20.67		REMOVE	407312	TREE	64.34		21.15		REMOVE
404512	TREE	71.62	5.02	13.85	5.02	REMOVE	405904	TREE	53.87		6.18		REMOVE	407357	TREE	80.07		17.32		REMOVE
404512		18.98		7.31		NONE	405904	TREE	74.17	<u> </u>	8.00		REMOVE	407416	TREE	81.72		1.42		REMOVE
404521		78.99		8.42		REMOVE	405910	TREE	68.37	<u> </u>	19.97		REMOVE	407416	TREE	46.02	 	6.53		REMOVE
404558	TREE	78.99 92.59		4.13		REMOVE	405911	TREE	85.08		-4.45		REMOVE	407417	TREE	71.6		13.48		REMOVE
404558		74.52		10.39		REMOVE	405919	TREE	64.94		11.91		REMOVE	407424	TREE	84.29		8.24		REMOVE
404565	TREE	93.73		11.34		REMOVE	405923	TREE	74.26	1	7.49		REMOVE	407435						REMOVE
404571		93.73 82.83		11.34	-	REMOVE	405924	TREE	100.22	1	10.62		REMOVE	407457	TREE	83.07	4.46	20.56 30.01	A Ar	
404592	TREE	82.83 87.64		1.03		REMOVE	405934	TREE	79.03		19.49		REMOVE	407461	TREE	75.11	4.45		4.46	REMOVE
	TREE	81.28		10.6				TREE					REMOVE		TREE	55.11		7.10		REMOVE
404628 404630			6.27		6.27	REMOVE	405952		70.16		16.94 3.25			407474	TREE	78.28		20.79		REMOVE
		31.7	6.27	9.21	6.27	LIGHT	405958	TREE	77.14				REMOVE	407502	TREE	102.44		12.34		REMOVE
404643	TREE	72.16		5.29		REMOVE	406027	TREE	68.89	£ 0.0	4.35	£ 0.5	REMOVE	407516	TREE	90.69		2.27		REMOVE
404679	TREE	61.11		12.07	—	REMOVE	406043	TREE	89.59	6.96	38.50	6.96	REMOVE	407582	TREE	72.24		-8.07		REMOVE
404693	TREE	75.35		1.58		REMOVE	406059	TREE	47.56	4.18	16.09	4.18	REMOVE	407591	TREE	86.61		27.31		REMOVE
404696	TREE	44.99		5.64		REMOVE	406063	PRIMARY ROAD	31.69	5.99	9.06	5.99	LIGHT	407609	TREE	67.21		15.44	-	REMOVE
404731	TREE	72.25		6.18		REMOVE	406070	TREE	84.03		7.34		REMOVE	407612	TREE	71.7		4.75		REMOVE
404753	TREE	72.69		4.41		REMOVE	406079	TREE	75.11		-6.98		REMOVE	407615	TREE	63.7		21.96	-	REMOVE
404764	TREE	69.17		9.82		REMOVE	406134	TREE	63.23		10.55		REMOVE	407619	TREE	51.69		1.82		REMOVE
404767	TREE	89.91		24.35		REMOVE	406135	TREE	43.69		9.73		REMOVE	407631	TREE	77.51		0.83		REMOVE
404806	TREE	81.21		22.99		REMOVE	406136	TREE	82.32		3.17		REMOVE	407633	TREE	60.68		19.60		REMOVE
404823	TREE	83.62		3.52		REMOVE	406148	TREE	67.55		15.08		REMOVE	407639	TREE	64.13		19.98		REMOVE
404824	TREE	50.04 82.14		-9.31		REMOVE	406170	TREE	62.1		11.75		REMOVE	407673	LIGHTPOLE	46.97	7.12	17.27	7.12	LIGHT/MOVE
04839	TREE		6.38	34.48	6.38	REMOVE	406187	TREE	60.05	1	12.82		REMOVE	407683	TREE	83.61	1	-1.22		REMOVE

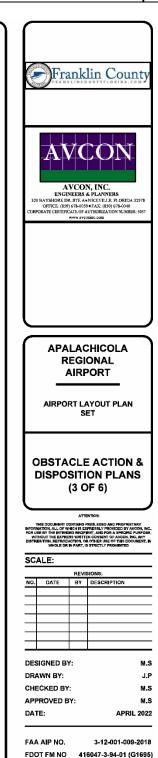


Figure 7-17 OBSTACLE ACTION AND DISPOSITION PLANS (3 OF 6)

<u>17</u>

AVCON PROJECT NO. 2018.158.01

SHEET NUMBER

7-22 Airport Layout Plan Set

	RUNW	AY 6 OB	STACLE ACTI	ON PLAN (5	OF 5)			RUNW	AY 24 O	BSTACLE ACT	ON PLAN (1	OF 5)			RUNWA	Y 24 O	BSTACLE ACT	ION PLAN (2	OF 5)	
OBS	DESCRIPTION	TOP EL	APPR. SURFACE		TSS	DISPOSITION	OBS	DESCRIPTION	TOP EL	APPR. SURFACE		TSS	DISPOSITIO	OBS	DESCRIPTION	TOP EL	APPR. SURFACE		TSS	DISPOSITION
NO. 407773	AIRFIELD LIGHT	(MSL) 19.51	(20:1)	(40:1) 9.85	(20:1)	LIGHT/MOVE	NO. 400238	TREE	(MSL) 56.6	(20:1)	(40:1) 8.92	(20:1)	N REMOVE	NO. 402176	TREE	(MSL) 93.61	(20:1)	(40:1) 8.84	(20:1)	REMOVE
407774	TREE	80.33		0.60		REMOVE	400294	TREE	46.77	19.02	23.24	8.17	REMOVE	402203	TREE	94.45		6.51		REMOVE
407779	TREE	79.87		-3.22		REMOVE	400312	TREE	52.82		15.74		REMOVE	402204	TREE	65.81	26.82	36.67	15.97	REMOVE
407780 407790	TREE	54.12		1.59		REMOVE REMOVE	400385 400481	TREE	47.56 52.67	26.27 13.45	16.77 23.41	15.42 2.60	REMOVE REMOVE	402218 402255	TREE	61.04 57.03	14.08	27.91 14.46	3.23	REMOVE
407790	TREE	73.8 57.89		21.39 15.85		REMOVE	400548	TREE	108.04	13.43	18.33	2.60	REMOVE	402233	TREE	58.87		5.74		REMOVE
407796	TREE	64.46		15.92		REMOVE	400558	TREE	71.58		10.68		REMOVE	402288	TREE	53.86	19.04	26.80	8.19	REMOVE
407800	TREE	85.76		0.97		REMOVE	400639	TREE	46.58		2.53		REMOVE	402348	TREE	99.94		3.61		REMOVE
407805	TREE	86.02		-7.38		REMOVE	400710 400723	TREE	102.81 88.63		25.17 15.97		REMOVE REMOVE	402355 402357	TREE TREE	98.87 100.82		26.51 14.96		REMOVE
407840 407847	TREE	78.94 81.55		2.88 -9.28		REMOVE REMOVE	400723	TREE	36.99	6.32	12.01		REMOVE	402374	TREE	63.9		7.77		REMOVE
700006	POLE	46.77	14.27	9.99	14.27	LIGHT/MOVE	400790	TREE	98.13		24.79		REMOVE	402377	TREE	68.38		10.05		REMOVE
700007	POLE	46.77		2.17		LIGHT/MOVE	400817	TREE	61.84		9.74		REMOVE	402389	TREE	63.32		18.44		REMOVE
700010	TRANSMISSION LINE	65.74		2.86		LIGHT/MOVE	400841	TREE	64.13		-8.02		REMOVE	402401	TREE	82.69		10.26		REMOVE
700013 700084	TRANSMISSION LINE TREE	68.63 102.87		-8.23 16.05		LIGHT/MOVE REMOVE	400849 400858	TREE	60.92 62.33		13.16 10.18		REMOVE REMOVE	402421 402424	TREE	89.23 109.18		-7.07 -3.01		REMOVE
700085	TREE	85.13		4.63		REMOVE	400864	TREE	60.52		11.99		REMOVE	402453	TREE	96.22		14.61		REMOVE
700086	TREE	93.79		17.73		REMOVE	400868	TREE	35.9	13.30	-1.18	2.45	REMOVE	402481	TREE	94.85		7.22		REMOVE
700087	TREE	85.13		17.42		REMOVE	400870	TREE	68.23		8.99		REMOVE	402493	TREE	58.67		8.70		REMOVE
700088	TREE	81		14.38		REMOVE	400888	TREE	71 91.21	-	10.43 3.42		REMOVE REMOVE	402561 402574	TREE	106.23 99.89	-	10.34 15.03		REMOVE
700089 700090	TREE	78 89.25		12.35 26.57	 	REMOVE REMOVE	400959	TREE	91.21 57.08		0.56		REMOVE	402601	TREE	99.89 86.6		15.03		REMOVE
700091	TREE	83.07		22.85		REMOVE	400992	TREE	107.14		13.21		REMOVE	402679	TREE	71.8		11.54		REMOVE
700092	TREE	92.97		34.15		REMOVE	401040	BUSH	25.59		2.55		REMOVE	402690	TREE	82.29		0.35		REMOVE
700093	TREE	83.89		26.05		REMOVE	401116	TREE	50.82	12.55	13.06		REMOVE	402733	TREE	71.7		15.64		REMOVE
700094 700095	TREE	73.17		17.95		REMOVE REMOVE	401220 401251	TREE	35.55 66.5	12.60	14.43 6.83	1.75	REMOVE REMOVE	402764 402769	TREE	105.84 74.19	-	3.35 7.28		REMOVE REMOVE
700095	TREE GROUND	77.29 30	5.29	23.26 7.87	5.29	NONE	401251	TREE	56.46		0.76		REMOVE	402769	TREE	70.43		7.92		REMOVE
700146	TREE	81.42		27.45		REMOVE	401284	TREE	42.5	14.45	18.82	3.60	REMOVE	402801	TREE	100.11		27.02		REMOVE
700147	TREE	85.13	6.07	35.82	6.07	REMOVE	401398	TREE	50.68		3.30		REMOVE	402832	TREE	92.67		-2.64		REMOVE
700148	TREE	80.18	3.44	32.03	3.44	REMOVE	401406	TREE	55.1		0.24		REMOVE	402917	TREE	86.64		1.12		REMOVE
700149 700150	TREE	84.3 60.38		37.01 15.05	9.29	REMOVE REMOVE	401434 401451	TREE	95.83 47.65		17.13 6.54		REMOVE REMOVE	402941 402968	TREE	101.07 88.79		12.78 19.57		REMOVE
700151	TREE	86.78	18.11	42.67	18.11	REMOVE	401453	TREE	92.73		4.13		REMOVE	403070	TREE	58.94		2.18		REMOVE
700152	TREE	76.88		12.93		REMOVE	401466	TREE	68.56		10.43		REMOVE	403079	TREE	58.88		9.83		REMOVE
700155	TREE	69	10.70	30.07	10.70	REMOVE	401468	BUSH	33.54	16.21	-4.67		REMOVE	403080	TREE	92.01		16.00		REMOVE
700156	TREE	51		-1.43		REMOVE	401513	TREE	116.61		34.44		REMOVE	403095	TREE	68.22	10.67	-6.88	7.00	REMOVE
700158 700159	TREE	54 59	5.34	19.89 14.24	5.34	REMOVE REMOVE	401521 401556	TREE	105.43 112.78		10.69 11.60		REMOVE REMOVE	403099 403135	TREE	38.77 108.99	18.67	5.59 24.65	7.82	REMOVE
700153	TREE	64		-0.17		REMOVE	401560	TREE	52.97	20.00	26.84	9.15	REMOVE	403148	TREE	103.33		4.65		REMOVE
700172	TREE	77		23.42		REMOVE	401582	TREE	92.01		11.43		REMOVE	403178	BUSH	58.79		8.09		REMOVE
700173	TREE	59		8.38		REMOVE	401643	TREE	32.56	4.22	8.74		REMOVE	403191	TREE	54.06	2.41	18.59		REMOVE
700180	TREE	47		-2.12		REMOVE	401659 401673	TREE	67.94 65.9		10.84 3.67		REMOVE REMOVE	403193 403200	TREE	52.2 49.75	11.81	22.36 13.88	0.96	REMOVE
700185 700186	TREE	81 85.54		24.39 6.93		REMOVE REMOVE	4017729	TREE	57.83		15.01		REMOVE	403236	TREE	90.1		1.30		REMOVE
700194	TREE	93.79		36.16		REMOVE	401740	TREE	100.67		15.75		REMOVE	403252	TREE	119.8		27.76		REMOVE
							401753	TREE	97.1		10.38		REMOVE	403261	TREE	101.31		17.33		REMOVE
							401763	TREE	61.26	2.22	16.12		REMOVE	403271	TREE	38.77	16.25	17.86	5.40	REMOVE
							401799 401805	TREE	63.52 52.1	3.23 16.35	23.73 24.58	5.50	REMOVE REMOVE	403275 403289	TREE TREE	64.45 65.4		6.47 10.01		REMOVE
							401817	TREE	109.25	25.55	22.84	0.50	REMOVE	403306	TREE	86.25		-7.53		REMOVE
							401823	TREE	54.8		3.31		REMOVE	403344	TREE	56.55	25.30	31.27	14.45	REMOVE
							401843	TREE	100.17		11.75		REMOVE	403350	TREE	49.71		4.09		REMOVE
							401851 401857	TREE	53.87 104		3.24 6.79		REMOVE REMOVE	403375 403466	TREE	83.3 95.29		20.23 25.19		REMOVE
							401837	TREE	67.81		9.30		REMOVE	403482	TREE	52.84		-8.23		REMOVE
							401904	TREE	69.38		8.17		REMOVE	403541	TREE	56.41		1.42		REMOVE
							401906	TREE	109.15		25.06		REMOVE	403558	TREE	56.39	35.09	36.09	24.24	REMOVE
							401907	TREE	108.42		17.85		REMOVE	403560	TREE	64.89		7.83		REMOVE
							401908 401910	TREE	87.91 79.29		-6.99 2.46		REMOVE REMOVE	403568 403577	TREE	87.08 92.51		22.92 19.63		REMOVE
							401914	TREE	92.56		12.90		REMOVE	403615	TREE	44.27		1.53		REMOVE
							401933	TREE	93.29		15.81		REMOVE	403633	TREE	57.74	14.44	26.44	3.59	REMOVE
							401949	TREE	45.2	12.89	19.40	2.04	REMOVE	403638	TREE	40.44		2.85		REMOVE
							401953 401964	TREE	88.85 102.84		17.03 30.34		REMOVE REMOVE	403645 403649	TREE	90.06 107.82	-	14.72 24.43		REMOVE
							401965	TREE	102.84		5.73		REMOVE	403656	TREE	47.39	18.37	24.43	7.52	REMOVE
							401966	TREE	101.38		14.84		REMOVE	403683	TREE	99.67	-5/67	10.77		REMOVE
							401968	TREE	61.05	17.51	29.63	6.66	REMOVE	403695	TREE	69.05		4.13		REMOVE
							402058	TREE	94.76		18.67		REMOVE	403696	TREE	45.41		5.00		REMOVE
							402067	TREE	77.12		0.46		REMOVE REMOVE	403699	TREE	55.8	2.04	0.39		REMOVE
							402081 402100	TREE	59.01 47.75		16.31 13.25		REMOVE	403720 403743	BUSH	27.18 47.93	2.94 8.83	-5.57 18.73		REMOVE
							402102	TREE	116.42		24.82		REMOVE	403748	TREE	98.49		18.67		REMOVE
							402133	TREE	85.51		12.49		REMOVE	403751	TREE	50.64	12.79	22.06	1.94	REMOVE
							402140	TREE	50.25		14.76		REMOVE	403794	TREE	54.1		8.66		REMOVE
							402155	TREE	112.05 52.03		26.06 5.73		REMOVE REMOVE	403803 403806	TREE	52.75 102		5.13 20.11		REMOVE REMOVE
							402168													



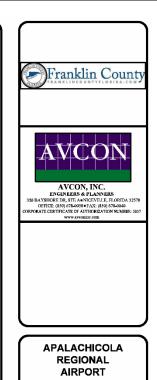
Figure 7-18 OBSTACLE ACTION AND DISPOSITION PLANS (4 OF 6)

18

7-23 Airport Layout Plan Set

OBS	DESCRIPTION	TOP EL	APPR. SURFACE		TSS	DICROCITION	OBS		TOP EL	APPR. SURFACE			DISPOSITION
NO.	DESCRIPTION	(MSL)	(20:1)	(40:1)	(20:1)	DISPOSITION	NO.	DESCRIPTION	(MSL)	(20:1)	(40:1)	(20:1)	DISPOSITIO
403824	TREE	95.14		18.46		REMOVE	405449	TREE	52.34		7.78		REMOVE
403839	TREE	65		12.80		REMOVE	405465	TREE	51.45		-7.59		REMOVE
403844	TREE	75.39		7.72		REMOVE	405474	TREE	59.99		4.91		REMOVE
403864	TREE	68.82		13.39		REMOVE	405497 405543	TREE	53.39		3.58		REMOVE
403869 403903	TREE	93.41 58.7	23.48	-7.27 31.44	12.63	REMOVE REMOVE	405543	TREE BUSH	52.55 26.98	5.63 2.44	19.44 5.06		REMOVE
403903	TREE	85.61	23.46	10.25	12.03	REMOVE	405624	TREE	113.99	2.44	32.60		REMOVE
403927	TREE	102		23.58		REMOVE	405625	TREE	94.3		0.44		REMOVE
403936	TREE	100.99		18.30		REMOVE	405689	TREE	49.37	20.88	13.05	10.03	REMOVE
403953	TREE	87.72		18.13		REMOVE	405712	TREE	57.19		7.79		REMOVE
403976	TREE	100.01		15.40		REMOVE	405769	TREE	84.02		3.19		REMOVE
404006	TREE	72.95		5.37		REMOVE	405787	TREE	96.08		1.41		REMOVE
404010	TREE	58.27		11.60		REMOVE	405797	TREE	99.49		26.79		REMOVE
404020	TREE	55.95	3.69	20.17		REMOVE	405802	TREE	108.97		25.59		REMOVE
404031	TREE	57.63		9.24		REMOVE	405874	TREE	52.95		1.25		REMOVE
404033	TREE	105.52		31.42		REMOVE	405876	TREE	82.12		13.00		REMOVE
404042	TREE	96.3		12.76		REMOVE	405914	TREE	73.81		14.19		REMOVE
404068	TREE	75.09		7.73		REMOVE	405932	TREE	82.51		0.01		REMOVE
404091	TREE	102.2		8.76		REMOVE	405965	TREE	44.14		4.93		REMOVE
404118 404125	TREE	72.5 107.32		12.83 25.60		REMOVE REMOVE	405985 405993	TREE	56.68 105.57		5.24 10.27		REMOVE
404125	TREE	58.53		11.25		REMOVE	405993	TREE	57.49		5.08		REMOVE
404221	TREE	49.09		1.90		REMOVE	406005	TREE	93.56		15.39		REMOVE
404241	TREE	60.4		-2.55		REMOVE	406032	TREE	92.18		28.04		REMOVE
404279	TREE	96.99		10.69		REMOVE	406085	TREE	97.89		16.28		REMOVE
404296	TREE	113.21		26.10		REMOVE	406095	TREE	103.15		24.91		REMOVE
404300	TREE	73.37		5.36		REMOVE	406119	TREE	87.31		15.10		REMOVE
404341	TREE	111.57		15.57		REMOVE	406184	TREE	84.65		21.47		REMOVE
404361	TREE	56.57		1.97		REMOVE	406215	TREE	56.16		11.66		REMOVE
404433	TREE	102.16		14.13		REMOVE	406233	TREE	57.56		5.96		REMOVE
404483	TREE	56.32	13.29	25.16	2.44	REMOVE	406301	TREE	46.74	20.15	13.50	9.30	REMOVE
404488	TREE	54.7		4.87		REMOVE	406325	TREE	98		26.66		REMOVE
404489	TREE	73.46		11.31		REMOVE	406330	TREE	108.28		20.60		REMOVE
404526 404568	TREE	89.26 60.78	28.28	0.24 34.88	17.43	REMOVE REMOVE	406351 406360	TREE	85.27 98.05		8.26 27.17		REMOVE REMOVE
404508	TREE	94.2	26.26	12.72	17.43	REMOVE	406360	TREE	67.96		7.81		REMOVE
404604	TREE	97.13		33.13		REMOVE	406377	TREE	64.25		-7.35		REMOVE
404701	TREE	100.02		14.33		REMOVE	406379	TREE	67.46		1.79		REMOVE
404704	TREE	105		2.57		REMOVE	406388	TREE	105.52		14.36		REMOVE
404752	TREE	83.92		12.33		REMOVE	406392	TREE	66.5		9.01		REMOVE
404759	TREE	54.14		-0.56		REMOVE	406397	TREE	60.56		-6.74		REMOVE
404778	TREE	49.47	19.64	24.91	8.79	REMOVE	406418	TREE	93.06		1.59		REMOVE
404793	TREE	104.74		38.84		REMOVE	406425	TREE	38.03	11.44	15.09	0.59	REMOVE
404804	TREE	83.75		1.24		REMOVE	406435	TREE	38.28	8.05	13.52		REMOVE
404817	TREE	67.36		11.22		REMOVE	406436	TREE	59.85		2.06		REMOVE
404834	TREE	105.13		19.99		REMOVE	406455	TREE	112.18		28.95		REMOVE
404846	TREE	114.14	12.40	26.37	1.55	REMOVE	406462	TREE	50.85		1.73		REMOVE
404879 404907	TREE	48.89 112.74	12.40	20.99 31.35	1.55	REMOVE REMOVE	406466 406498	TREE	64.44 88.3		6.22 3.06	 	REMOVE
404907	TREE	71.64		11.84		REMOVE	406540	TREE	61.36		12.37		REMOVE
404931	TREE	65.43		2.84		REMOVE	406560	TREE	98.47		3.96		REMOVE
404946	TREE	108.21		6.37		REMOVE	406569	TREE	110.03		12.61		REMOVE
404972	TREE	101.68		21.73		REMOVE	406574	TREE	52.76	17.50	25.48	6.65	REMOVE
404979	TREE	36.99	18.44	2.05	7.59	REMOVE	406585	TREE	104.93		31.31		REMOVE
405017	TREE	53.31		7.18		REMOVE	406589	TREE	52.57		3.90		REMOVE
405041	TREE	97.7		12.60		REMOVE	406593	TREE	96.7		10.47		REMOVE
405056	TREE	110.3		27.54		REMOVE	406664	TREE	67.41		3.65		REMOVE
405069	TREE	64.09		11.49		REMOVE	406673	TREE	29.95	3.89	7.27		REMOVE
405072	TREE	58.85		8.39		REMOVE	406694	TREE	102.11		1.17		REMOVE
405117	TREE	67.14		0.51		REMOVE	406724	TREE	52.2		7.02		REMOVE
405159 405160	TREE	112.12 59.8		22.67 4.41		REMOVE REMOVE	406725 406737	TREE	102.24 41.8		20.10 0.30		REMOVE REMOVE
405160	TREE	66.74		-9.21		REMOVE	406756	TREE	41.8 56.87		8.24		REMOVE
405180	TREE	47.75		4.80		REMOVE	406758	TREE	55.59		4.60		REMOVE
405184	TREE	108.54		29.73		REMOVE	406770	TREE	77.31		18.23		REMOVE
405192	TREE	51.43	19.60	25.87	8.75	REMOVE	406782	TREE	57.7		3.84		REMOVE
405232	TREE	87.11		15.99		REMOVE	406784	TREE	95.2		27.84		REMOVE
405275	TREE	101.46		27.32		REMOVE	406841	TREE	55.41		8.39		REMOVE
405293	TREE	109.02		20.32		REMOVE	406878	TREE	98.78		27.19		REMOVE
405313	TREE	64.14		-2.01		REMOVE	406884	TREE	102.44		22.99		REMOVE
405320	TREE	114.64		31.23		REMOVE	406929	TREE	69.95		11.62		REMOVE
405323	TREE	91.28		6.01		REMOVE	406945	TREE	118.4		36.36		REMOVE
405338	TREE	64.6		-8.81		REMOVE	407020	TREE	34.72		7,66		REMOVE
405401	TREE	93.11		30.55		REMOVE	407022	TREE	47.66		3.63		REMOVE
405404	TREE	106.45		14.87		REMOVE	407045	TREE	63		-6.85		REMOVE
405420	TREE	59.31		0.69		REMOVE	407053	TREE	56.51	11.57	24.39	0.72	REMOVE
405427	TREE	89.47		8.27		REMOVE	407069 407079	TREE	50.56		-6.48 20.93		REMOVE
405439	TREE	62.54		19.26		REMOVE		TREE	63.92				REMOVE

	RUNW		BSTACLE ACT			
OBS NO.	DESCRIPTION	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITIO
407091	TREE	109.78		17.53		REMOVE
407093	TREE	68.95		15.54		REMOVE
407104	TREE	111.47		14.10		REMOVE
407111	TREE	57.23		18.65		REMOVE
407122	TREE	88.7		9.85		REMOVE
407137	TREE	105.69		9.83		REMOVE
407150	TREE	69.41		-4.12		REMOVE
407158	TREE	107.97		23.25		REMOVE
407172	TREE	50.28 50.96		0.82		REMOVE
407199 407204	TREE	54.58	3.14	17.40 4.39		REMOVE REMOVE
407204	TREE	105.15		20.38		REMOVE
407209	TREE	58.59		16.35		REMOVE
407216	TREE	94.76		15.87		REMOVE
407223	TREE	58.53		8.37		REMOVE
407228	TREE	50.05		13.37		REMOVE
407246	TREE	66.16	29.15	38.01	18.30	REMOVE
407254	TREE	65.92		1.45		REMOVE
407286	TREE	95.36		3.46		REMOVE
407318	TREE	68.72		9.92		REMOVE
407345	TREE	92.12		8.63		REMOVE
407355	TREE	55.31		8.72		REMOVE
407369	TREE	108.59		20.97		REMOVE
407379	TREE	51.79		2.16		REMOVE
407381	TREE	96.65		9.80		REMOVE
407522	TREE	58.6		7.88		REMOVE
407532	BUSH	27.71	3.32	-6.36		REMOVE
407533	TREE	93.65		23.65		REMOVE
407544	TREE	107.39		23.45		REMOVE
407550	TREE	79.51		14.64		REMOVE
407576	TREE	60.2		0.77		REMOVE
407588	TREE	42.05		7.98		REMOVE
407589	TREE	52.49		16.17		REMOVE
407606	TREE	91.66		20.55		REMOVE
407611	TREE	107.99		25.20		REMOVE
407681	TREE	108.11		19.95		REMOVE
407696	TREE	55.24		5.93		REMOVE
407704	TREE	56.57	22.41	29.84	11.56	REMOVE
407712	TREE	105.07		16.75		REMOVE
407736	TREE	44.34		1.37		REMOVE
407763	TREE	100.4		17.75		REMOVE
407771	TREE	61.43		5.93		REMOVE
407787	TREE	43.2		4.68		REMOVE
407798	TREE	96.53		25.69		REMOVE
407814	TREE	89.33		3.61		REMOVE
407832	TREE	101.27		0.18		REMOVE
700071	TREE	113.18		29.50		REMOVE
700072	TREE	112.35		28.27		REMOVE
700073	TREE	107.82		21.82		REMOVE
700074	TREE	106.58	24.50	14.80	12.71	REMOVE
700100 700108	TREE	54.19 57	24.56	29.72 4.96	13.71	REMOVE
700108	TREE	89		4.96 33.45		REMOVE
700110	TREE	89		33.45 26.95		REMOVE
700111	TREE	105.34		26.95 42.37		REMOVE
700112	TREE	98		42.37 34.78		REMOVE
700113	TREE	105.34		41.89		REMOVE
700114	TREE	105.34		36.17		REMOVE
700115	TREE	97.09		24.08		REMOVE
700116	TREE	104.93		30.29		REMOVE
700163	TREE	104.93		30.29 26.34		REMOVE
700165	TREE	95.03		20.46		REMOVE
700165	TREE	95.03		13.26		REMOVE
700171	TREE	101.63		30.76		REMOVE
700178	TREE	60		12.17		REMOVE
	INCL			44.4/		ILLIAIO A E



OBSTACLE ACTION &
DISPOSITION PLANS
(5 OF 6)

ATTENTION:

ATTENTION:

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SCALE:

REVISIONS:

NO. DATE BY DESCRIPTION

DESIGNED BY:

DRAWN BY:

DRAWN BY: J.P
CHECKED BY: M.S
APPROVED BY: M.S
DATE: APRIL 2022

FAA AIP NO. 3-12-001-009-2018 FDOT FM NO 416047-3-94-01 (G1695) AVCON PROJECT NO. 2018.158.01

SHEET NUMBER

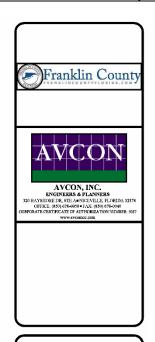
19

Figure 7-19
OBSTACLE ACTION AND DISPOSITION PLANS (5 OF 6)

7-24 Airport Layout Plan Set

		RUNWAY	18 OBSTACLE ACTION					F	UNWAY 18		TION PLAN (2 OF 3	3)	
OBS NO.	DESCRIPTION	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITION	OBS NO.	DESCRIPTION	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITION
400219	TREE	94.16 95.84	4.42		-5.41 -5.61	REMOVE REMOVE	403364	TREE	53.59	1==7		-3.34	REMOVE
400244	TREE	30.04	2.04		-7.99	REMOVE	403422	TREE	91.75	-4.63			REMOVE
400317	TREE	66.9	16.62		6.59	REMOVE	403452	TREE	60.28	-8.25			REMOVE
400321	TREE	72.85	18.57		8.54	REMOVE	403492	TREE	116.68			27.49	REMOVE
400396	TREE	110.88			13.71	REMOVE	403515	TREE	111.68			19.02	REMOVE
400415	TREE	63.41	15.02		4.99	REMOVE	403545	TREE	93.93	28.34		18.31	REMOVE
400437	TREE	60.58	14.73		4.70	REMOVE	403569	TREE	41.47	6.16		-3.87	REMOVE
400470	TREE	30.44	-4.08			REMOVE	403584	TREE	75.45			12.95	REMOVE
400480	TREE	75.83	15.06		5.03	REMOVE	403609	TREE	64.83	5.86		-4.16	REMOVE
400515	TREE	78.57			9.12	REMOVE	403640	TREE	36.99	3.67		-6.36	REMOVE
400529	TREE	60.06	-8.75			REMOVE	403772 403798	TREE	97.5 100.55	17.43		8.97 7.41	REMOVE REMOVE
400568	TREE	87.25	4.70		-5.33	REMOVE	403/98	TREE	76.76	-0.66		7.41	REMOVE
400569	TREE	76.32	16.19		6.17	REMOVE	403902	TREE	71.08	16.08		6.05	REMOVE
400577	TREE	81.62	25.58		15.55	REMOVE	403916	TREE	43.76	12.50		2.48	REMOVE
400601 400608	TREE	106.59 36.28			-0.90 5.37	REMOVE REMOVE	403958	TREE	80.21	24.96		14.93	REMOVE
400608	TREE	67.28			2.10	REMOVE	404003	TREE	43.25			-9.60	REMOVE
400724	TREE	49.91			16.22	REMOVE	404160	TREE	73.03			0.87	REMOVE
400793	TREE	39.2			-0.71	REMOVE	404161	TREE	43.51	8.78		-1.25	REMOVE
400798	TREE	99.21			16.16	REMOVE	404198	BUSH	25.48	-6.79			REMOVE
400829	TREE	114.29			24.53	REMOVE	404215	TREE	111.91			17.14	REMOVE
400973	TREE	97.78	1.03		-9.00	REMOVE	404226	TREE	99.91			-4.49	REMOVE
401018	TREE	116.68			15.57	REMOVE	404272	TREE	71.9	0.03			REMOVE
401027	TREE	51.33			23.61	REMOVE	404318	TREE	37.88	5.54		-4.49	REMOVE
401045	TREE	47.45			-4.10	REMOVE	404401	TREE	51.71	21.00		-7.19	REMOVE
401065	TREE	50.14			15.78	REMOVE	404426	TREE	101.48	21.88		11.85	REMOVE
401077	TREE	112.42			21.56	REMOVE	404465 404549	TREE	70.55 111.75	-4.83		23.54	REMOVE
401119	TREE	110.54	27.62		17.60	REMOVE	404549	TREE	33.01			-2.53	REMOVE
401176	TREE	71.27	-7.53			REMOVE	404723	TREE	44.58			2.88	REMOVE
401213	TREE	101.7			-3.41	REMOVE	404791	TREE	79.68			-0.65	REMOVE
401280	TREE	43.57	1.08		-8.95	REMOVE	404851	TREE	65.14	12.65		2.62	REMOVE
401288 401311	TREE	74.98 34.75	19.64 3.79		9.61 -6.24	REMOVE REMOVE	405000	TREE	71.68	0.32		-9.70	REMOVE
401311	TREE	107.81	3./9		24.25	REMOVE	405036	TREE	79.61			12.52	REMOVE
401347	TREE	52.82			28.11	REMOVE	405105	TREE	81.77			26.18	REMOVE
401360	TREE	49.13	-2.54		20.11	REMOVE	405161	TREE	42.79			2.48	REMOVE
401432	TREE	50.2	2.07		21.97	REMOVE	405244	TREE	65.12	-2.90			REMOVE
401588	TREE	43.15			-6.00	REMOVE	405288	TREE	90.4			6.95	REMOVE
401589	TREE	115.66			20.54	REMOVE	405363	TREE	31.47			-9.15	REMOVE
401601	TREE	52.39			0.85	REMOVE	405387	TREE	54.56			32.07	REMOVE
401702	TREE	51.7			-1.27	REMOVE	405425	TREE	51.61			14.62	REMOVE
40 1 715	TREE	85.86	10.06		0.03	REMOVE	405481	TREE	43.46	10.65		0.62	REMOVE
401743	TREE	100.42	22.02		11.99	REMOVE	405554	TREE	94.15			10.74	REMOVE
401785	TREE	43.11			8.79	REMOVE	405757	TREE	112.76			11.74	REMOVE
401835	TREE	41.13			-1.65	REMOVE	405981	TREE	40.25			-8.02 2.51	REMOVE
401871	TREE	102.87			24.85	REMOVE	406000 406052	TREE	35.4 115.49			16.72	REMOVE
401875	TREE	64.14	-2.38			REMOVE	406052	TREE	104.26	21.20		11.17	REMOVE
401893	TREE	35.52			6.13	REMOVE	406133	TREE	49.97	21.20		-0.21	REMOVE
401901	TREE	78.07			13.10	REMOVE	406318	TREE	55.01	11.45		1.43	REMOVE
401936	TREE	115.83	4.00		23.98	REMOVE	406332	TREE	78.06			18.62	REMOVE
401943 402080	TREE	75.45 101.22	4.92 7.73		-5.11	REMOVE REMOVE	406352	TREE	53.44			-3.39	REMOVE
402080	TREE	47.26	1./3	_	-2.30 0.19	REMOVE	406424	TREE	52.07			9.95	REMOVE
402094	TREE	102.4	15.92	 	5.89	REMOVE	406441	TREE	53,46			-7.10	REMOVE
402247	TREE	109.2	24.27		14.25	REMOVE	406499	TREE	69.92	17.10		7.07	REMOVE
402419	TREE	69.26	/		1.87	REMOVE	406568	TREE	103.36			10.25	REMOVE
402545	TREE	39.35	0.53		-9.50	REMOVE	406678	TREE	65.03	11.95		1.92	REMOVE
402607	TREE	69.9			7.19	REMOVE	406682	TREE	97.78	6.00		-4.03	REMOVE
402617	TREE	49.44			23.28	REMOVE	406722	TREE	100.67			15.75	REMOVE
402640	TREE	114.08			18.50	REMOVE	406845	TREE	44.2			12.55	REMOVE
402648	TREE	53.31			20.53	REMOVE	406846	TREE	45.46	-0.80			REMOVE
402658	TREE	105.56			14.28	REMOVE	406942	TREE	39.52	2.79		-7.24	REMOVE
402723	TREE	42.71			-7.39	REMOVE	406969	TREE	49.91			-1.60	REMOVE
402740	TREE	64.31	0.40		-9.63	REMOVE	407126	TREE	38.34	6.83		-3.20	REMOVE
402757	TREE	44.3			-0.41	REMOVE	407179	TREE	89.06	7.07		10.36	REMOVE
402766	TREE	91.97	15.67		5.65	REMOVE	407315	TREE	58.56	7.07		-2.95	REMOVE
402887	TREE	59.97	13.78		3.75	REMOVE	407320	TREE	86.79	-8.03		22.44	REMOVE
402961	TREE	34.73			-0.72	REMOVE	407348	TREE	56.35	1/1 10		33.44 4.15	REMOVE
402970	TREE	93.32			16.62	REMOVE	407415 407519	TREE	58.33 47.28	14.18		1.54	REMOVE
403124	TREE	107.42	24.11		14.09	REMOVE	407565	TREE	43.38			12,28	REMOVE
403145	TREE	40.59	0.35		-9.67	REMOVE	407598	TREE	40.74			-5.42	REMOVE
403146	TREE	96.56	8.02		-2.01	REMOVE	407666	TREE	88.78			15.76	REMOVE
403157	TREE	111.99			27.23	REMOVE	407669	TREE	55.43	2.51		-7.52	REMOVE
403165 403227	TREE	105.7			10.06	REMOVE	407672	TREE	70.34	9.29		-0.74	REMOVE
		83.37	3.29		- 6 .74	REMOVE							

RUNWAY 36 OBSTACLE ACTION PLAN (1 OF 1)			TRANSITIONAL SURFACE PENETRATIONS								
BS NO.	DESCRIPTIO N	TOP EL (MSL)	APPR. SURFACE (20:1)	DEP. SURFACE (40:1)	TSS (20:1)	DISPOSITION	OBS NO.	DESCRIPTION	TOP EL (MSL)	TRANSITIONAL (7:1)	DISPOSITIO
101143	TREE	52.18			9.05	REMOVE	400200	TREE	43.77	9.13	REMOVE
103276	TREE	56.11			9.10	REMOVE	400348	GROUND	17.48	-2.92	NONE
103857	TREE	55.03			11.64	REMOVE	400996	BUSH	23.46	-6.49	REMOVE
104044	TREE	56.64			11.74	REMOVE	401039	BUSH	25.98	-6.34	REMOVE
106319	TREE	58.83			12.07	REMOVE	401494	BUSH	26.54	-4.94	REMOVE
107595	TREE	57.5			11.74	REMOVE	401559	BUSH	31.72	-1.22	REMOVE
				•			401834	BUSH	26.36	-2.34	REMOVE
							401950	BUSH	31.17	-0.92	REMOVE
							402019	BUSH	32.95	-0.25	REMOVE
							402032	BUSH	28.16	-0.89	REMOVE
							402084	BUSH	20.67	-8.4	REMOVE
							402124	TREE	44.55	19.67	REMOVE
							402352	BUSH	23.25	-6,86	REMOVE
							402492	BUSH	33.97	4.71	REMOVE
							402523	AIRFIELD SIGN	17.15	-9.8	NONE
							402697	BUSH	30.18	2.58	REMOVE
							402717	BUSH	24.33	-9.67	REMOVE
							403207	BUSH	29.91	1.49	REMOVE
							403269	AIRFIELD SIGN	20.92	-2.59	NONE
							403491	TREE	31.99	-2.63	REMOVE
							403653	TREE	36.54	4.31	REMOVE
							403937	TREE	31.5	-0.05	REMOVE
							403981	BUSH	24.07	-8.77	REMOVE
							404144	BUSH	28.16	1.35	REMOVE
							404182	TREE	39.42	9.09	REMOVE
							404437	BUSH	29.37	1.6	REMOVE
							404469	BUSH	22.5	-7.61	REMOVE
							404482	POST	19.34	-7.44	LIGHT
							405216	BUSH	28.68	-3.39	REMOVE
							405831	BUSH	22.16	-5.26	REMOVE
							406025	BUSH	22.68	-2.99	REMOVE
							406189	BUSH	23.88	-8.01	REMOVE
							406323	BUSH	25.71	-7.94	REMOVE
							406399	BUSH	24.26	-4.95	REMOVE
							406479	BUSH	27.86	0.89	REMOVE
							406559	BUSH	23.57	-4.34	REMOVE
							406749	BUSH	23.52	-6.5	REMOVE
							406809	BUSH	23.25	-6.47	REMOVE
							406847	BUSH	27.77	-6.59	REMOVE
							406928 700008	AIRFIELD SIGN POLE	21.3	-2.1 11.27	NONE
							700043	TREE	21	-7.21	REMOVE
							700046	NATURAL HIGH POINT	17	-7.21	NONE
							700119	GROUND	33	6.53	NONE
							700120	TREE	35	12.46	REMOVE
							700121	GROUND	28	6.66	NONE
							700122	GROUND	24	-3.14	NONE
							700168	GROUND	23	3.56	NONE
							700191	GROUND	31	7.55	NONE



APALACHICOLA REGIONAL AIRPORT AIRPORT LAYOUT PLAN SET OBSTACLE ACTION & DISPOSITION PLANS (6 OF 6)

SCALE: REVISIONS:
NO. DATE BY DESCRIPTION DRAWN BY: CHECKED BY: M,S APPROVED BY: **APRIL 2022**

FAA AIP NO. 3-12-001-009-2018 FDOT FM NO 416047-3-94-01 (G1695) AVCON PROJECT NO. 2018.158.01

SHEET NUMBER

20

Figure 7-20 **OBSTACLE ACTION AND DISPOSITION PLANS (6 OF 6)**

7-25 Airport Layout Plan Set

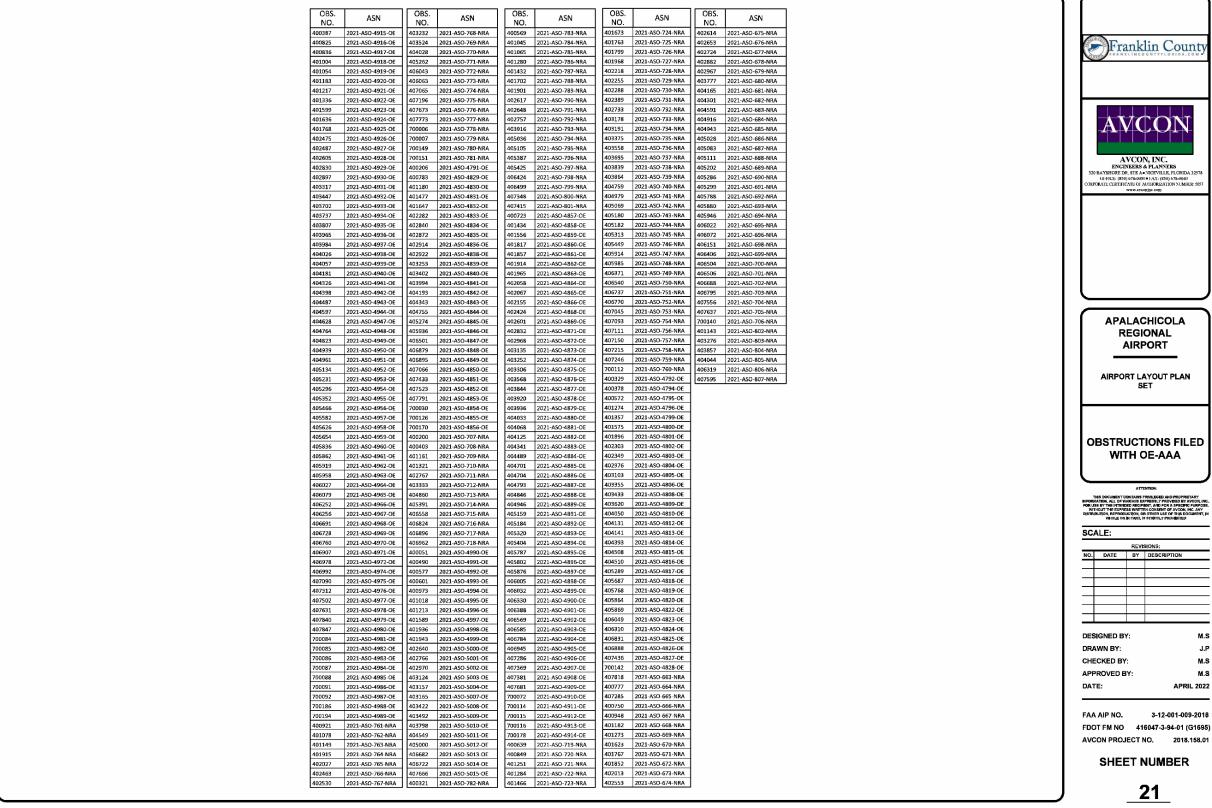


Figure 7-21 **OBSTRUCTIONS FILED WITH OE/AAA**

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7-26 Airport Layout Plan Set

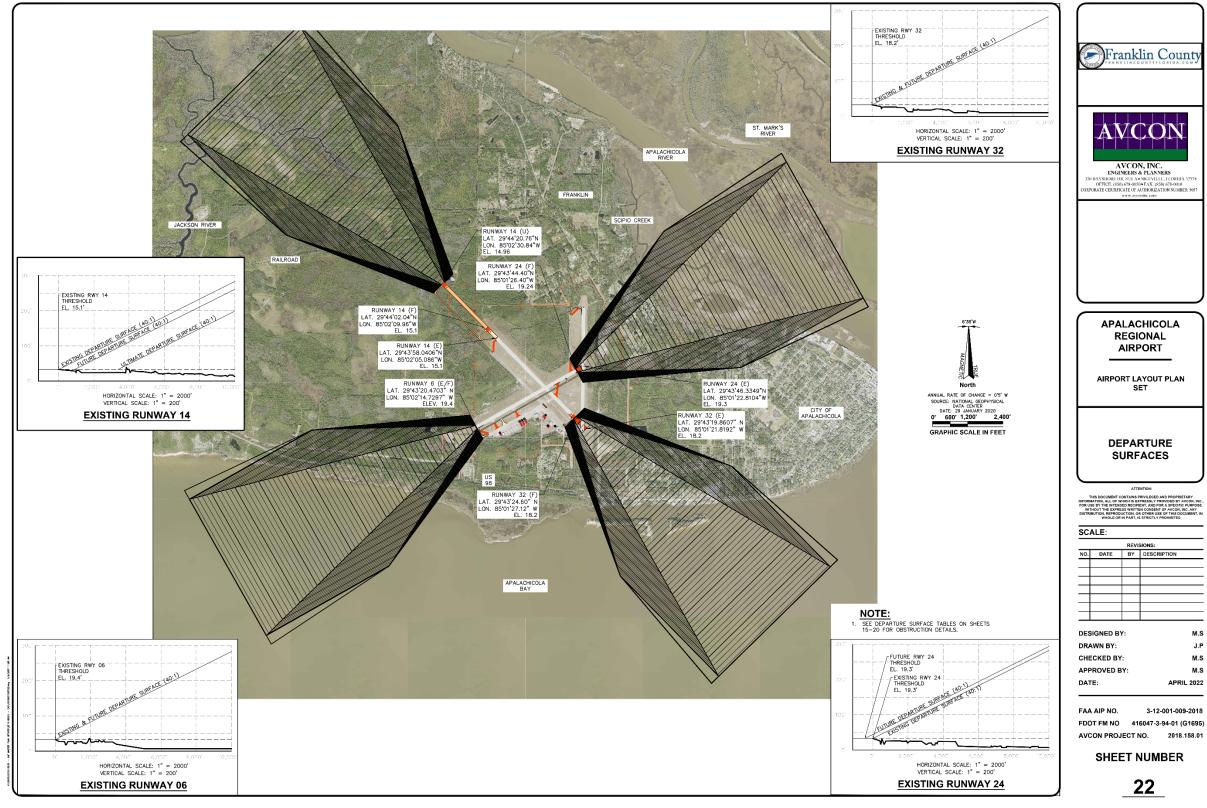


Figure 7-22 DEPARTURE SURFACES

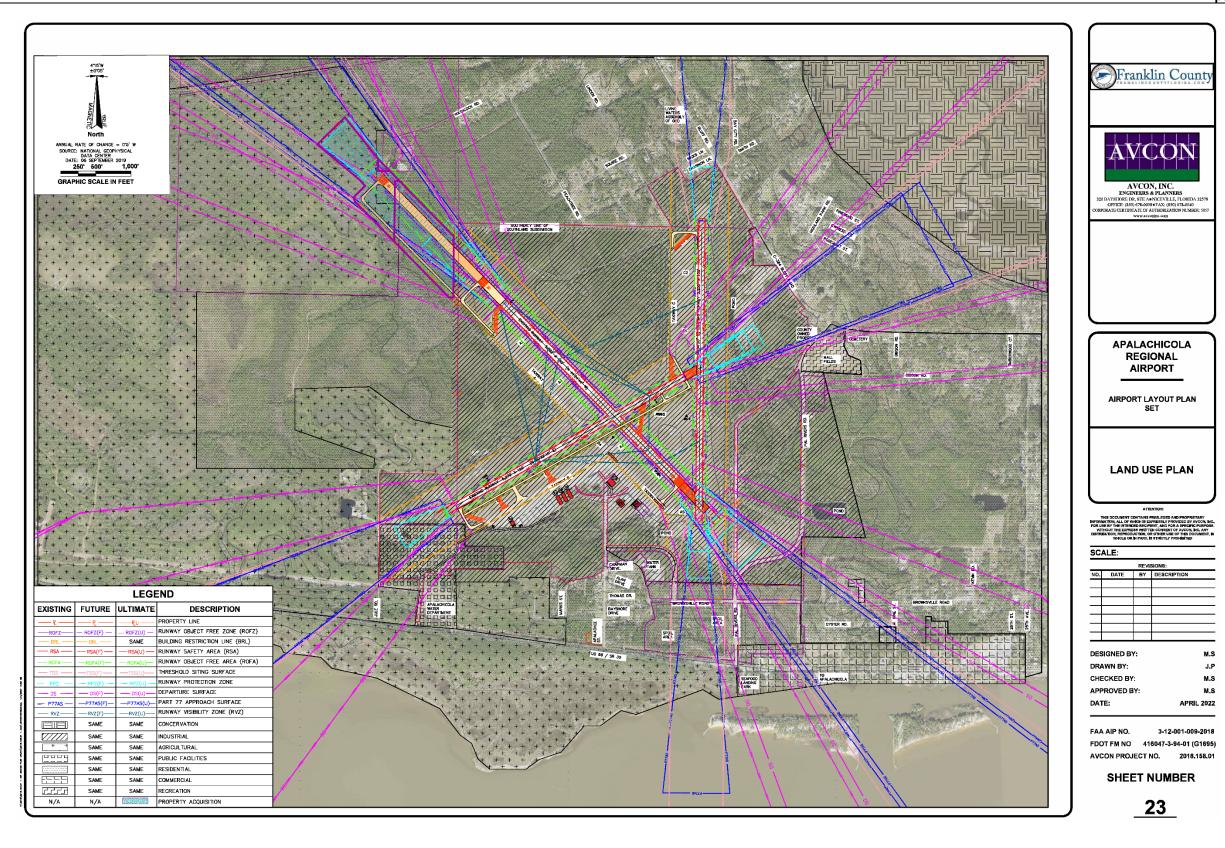


Figure 7-23 LAND USE PLAN

7-28 Airport Layout Plan Set

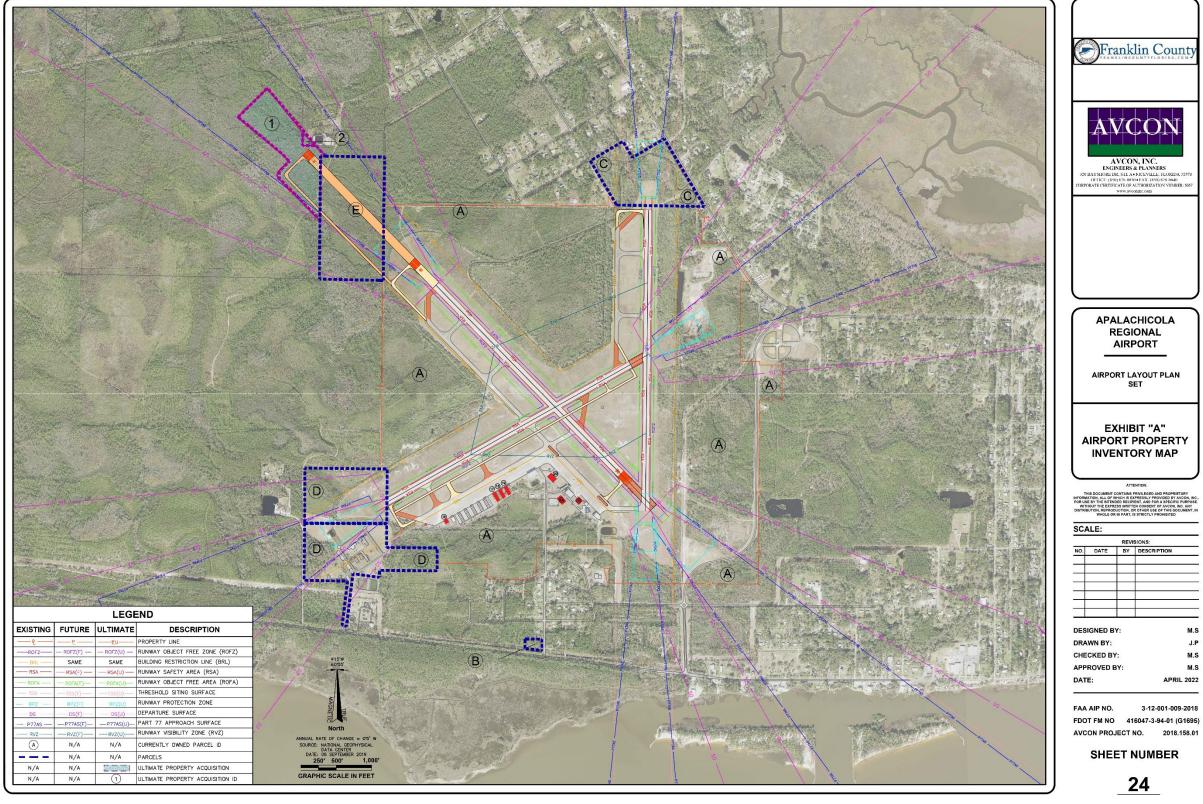


Figure 7-24
EXHIBIT "A" AIRPORT PROPERTY INVENTORY MAP (1 OF 2)

7-29 Airport Layout Plan Set

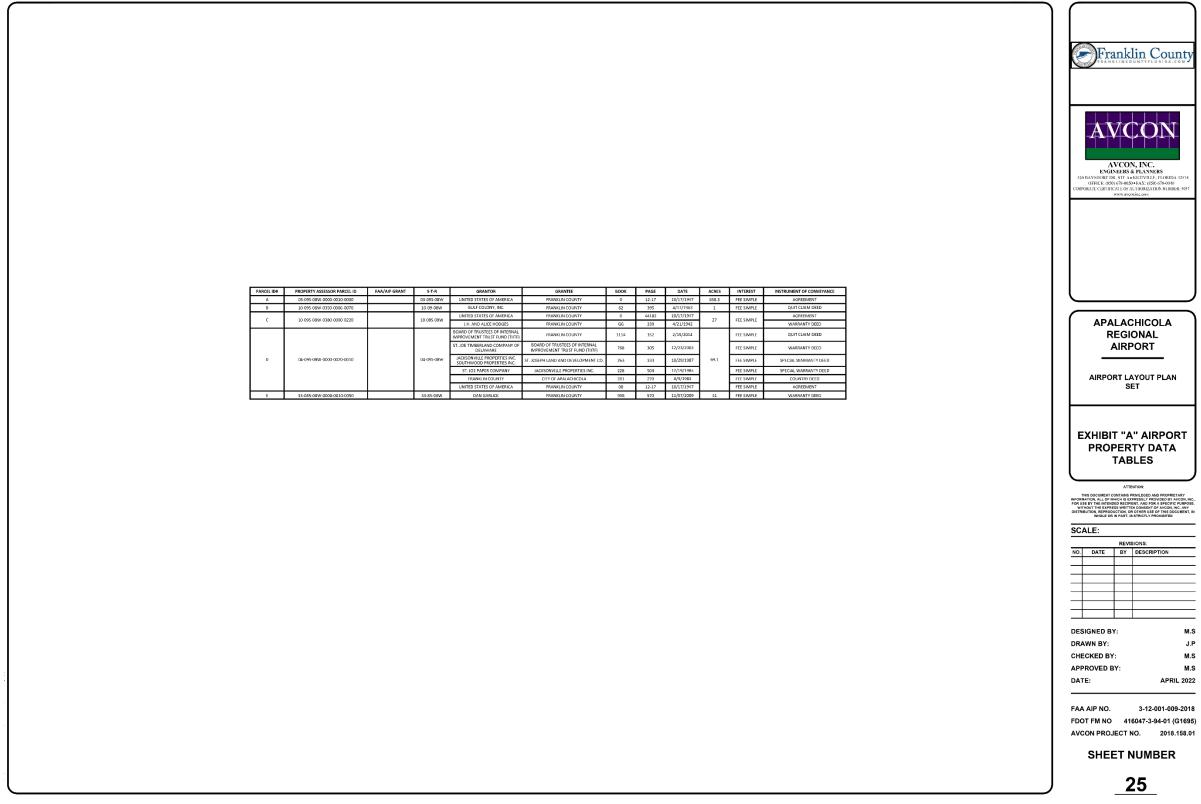


Figure 7-25 EXHIBIT "A" AIRPORT PROPERTY INVENTORY MAP (2 OF 2)

7-30 Airport Layout Plan Set

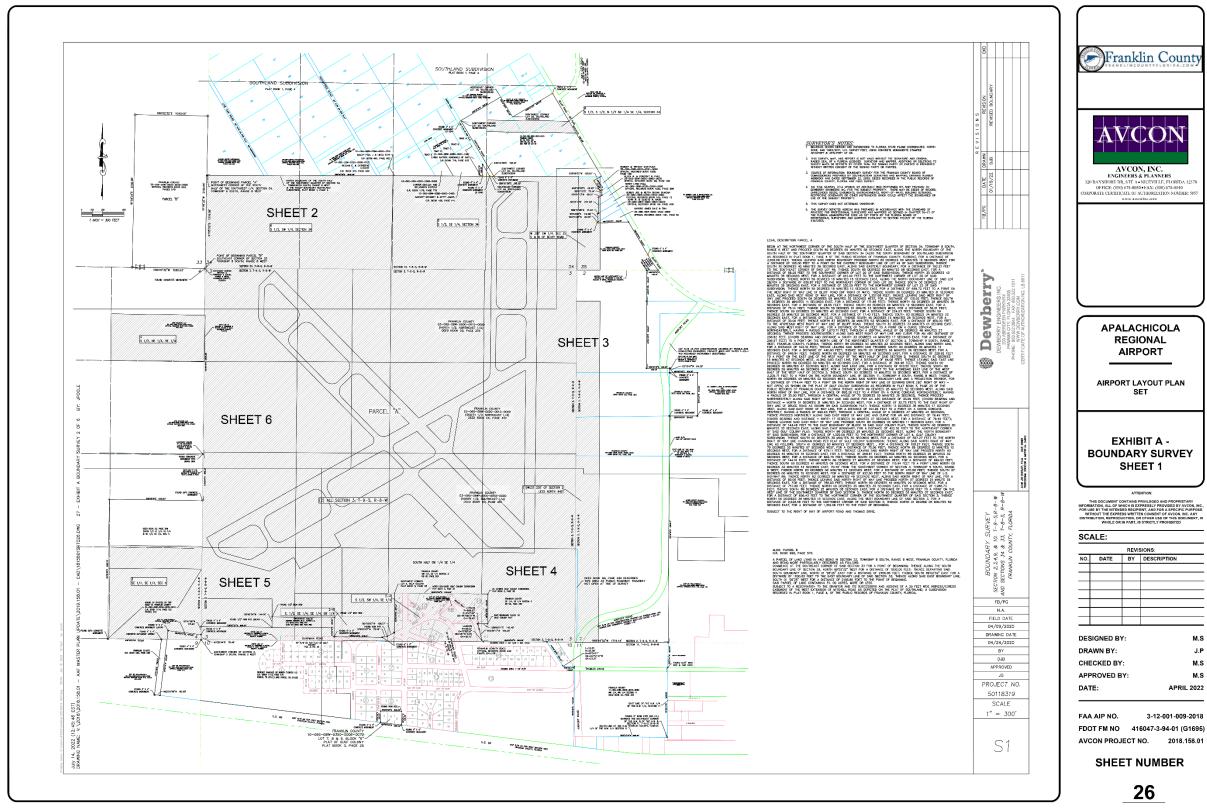


Figure 7-26 EXHIBIT "A" BOUNDARY SURVEY AND PARCEL DESCRIPTION (1 OF 6)

7-31 Airport Layout Plan Set

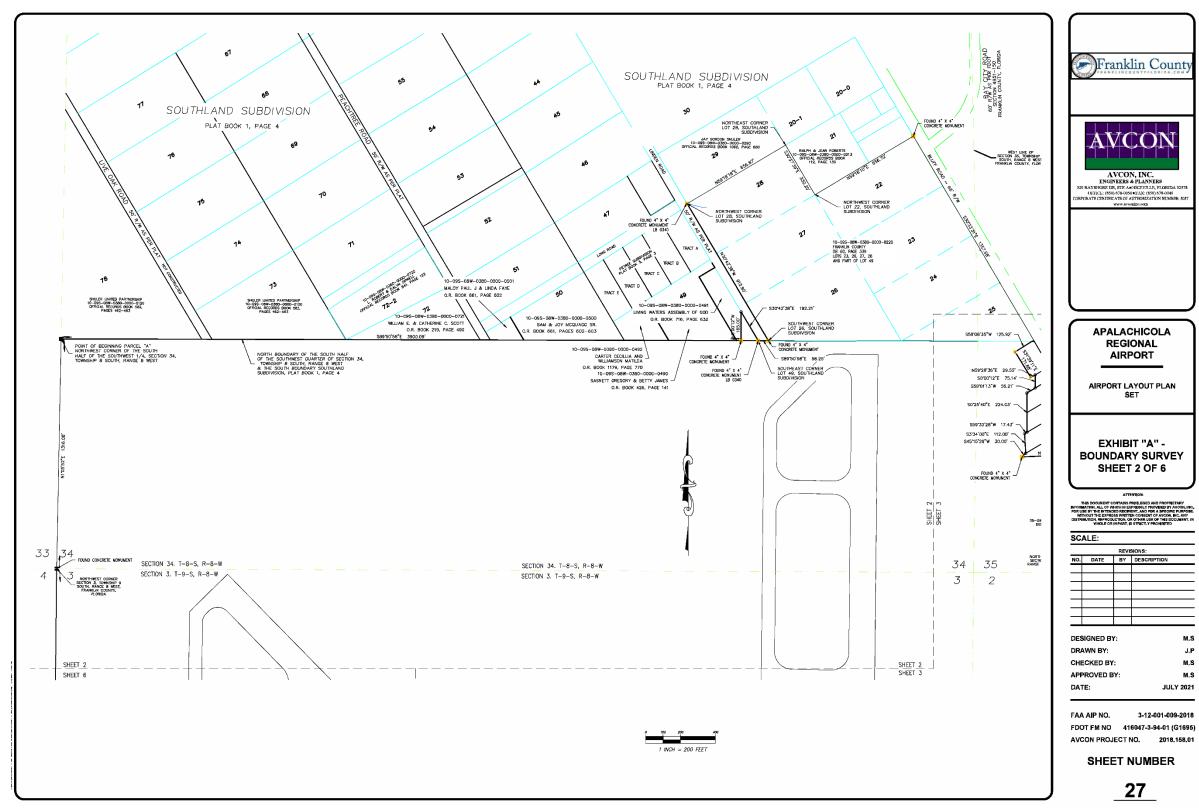


Figure 7-27 EXHIBIT "A" BOUNDARY SURVEY AND PARCEL DESCRIPTION (2 OF 6)

7-32 Airport Layout Plan Set

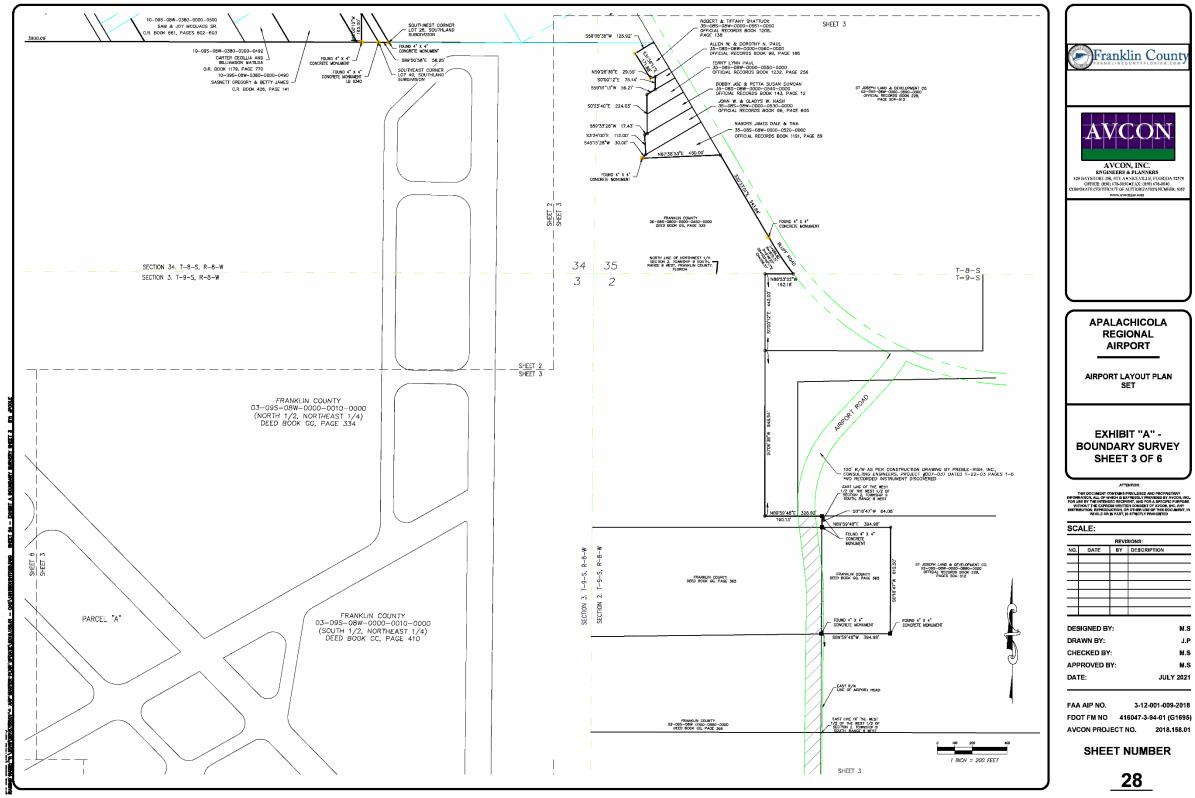


Figure 7-28 EXHIBIT "A" BOUNDARY SURVEY AND PARCEL DESCRIPTION (3 OF 6)

7-33 Airport Layout Plan Set

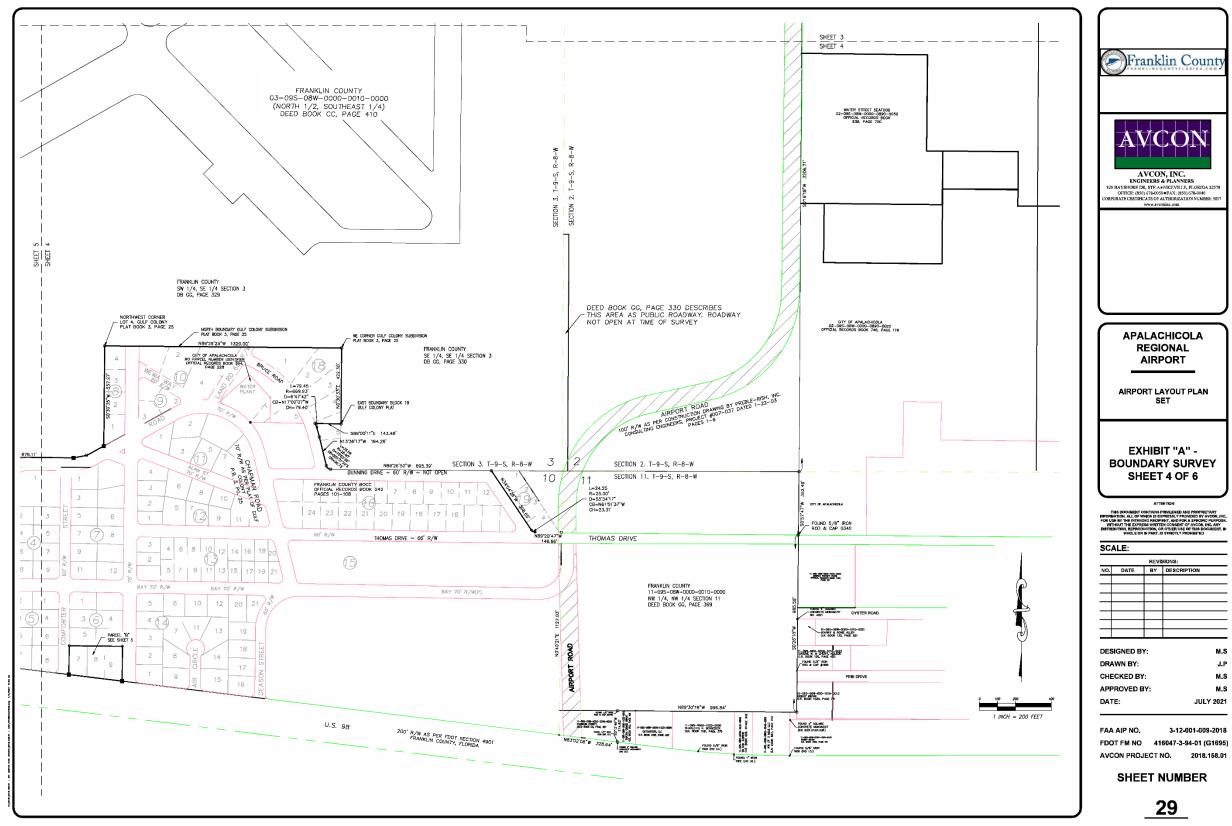


Figure 7-29 EXHIBIT "A" BOUNDARY SURVEY AND PARCEL DESCRIPTION (4 OF 6)

7-34 Airport Layout Plan Set

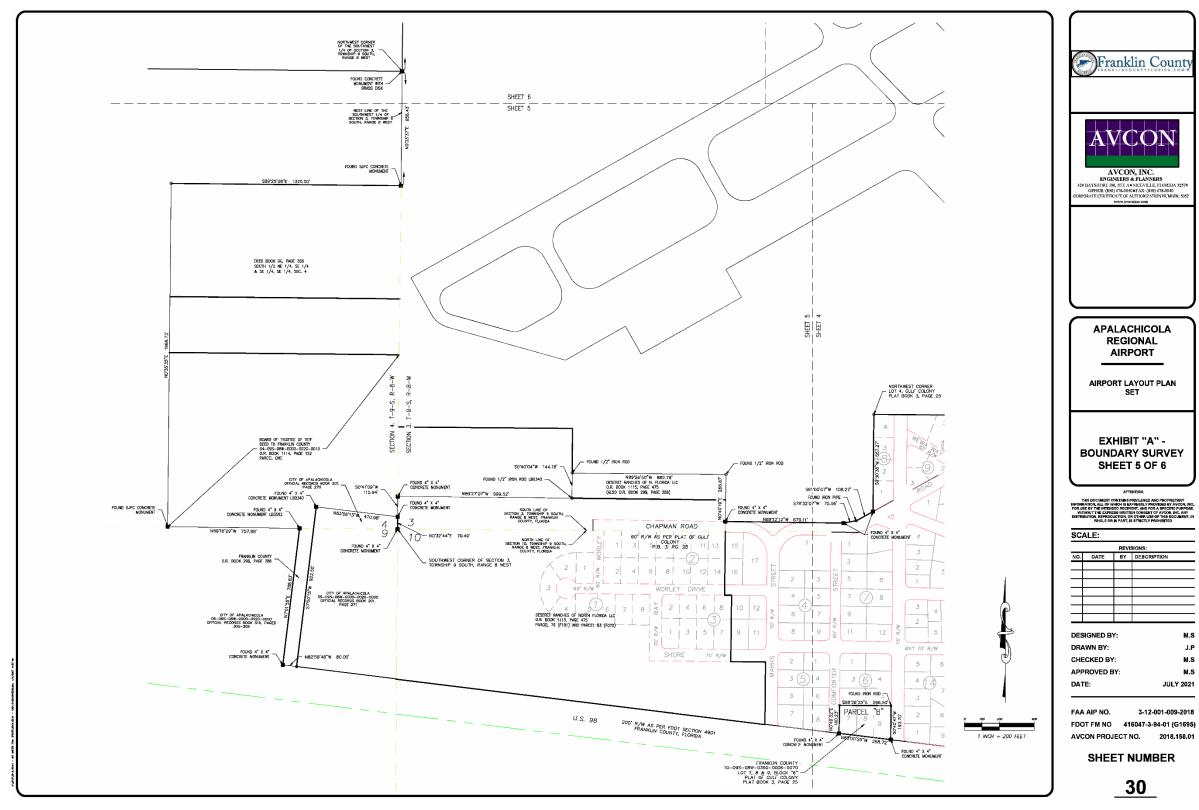


Figure 7-30 EXHIBIT "A" BOUNDARY SURVEY AND PARCEL DESCRIPTION (5 OF 6)

7-35 Airport Layout Plan Set

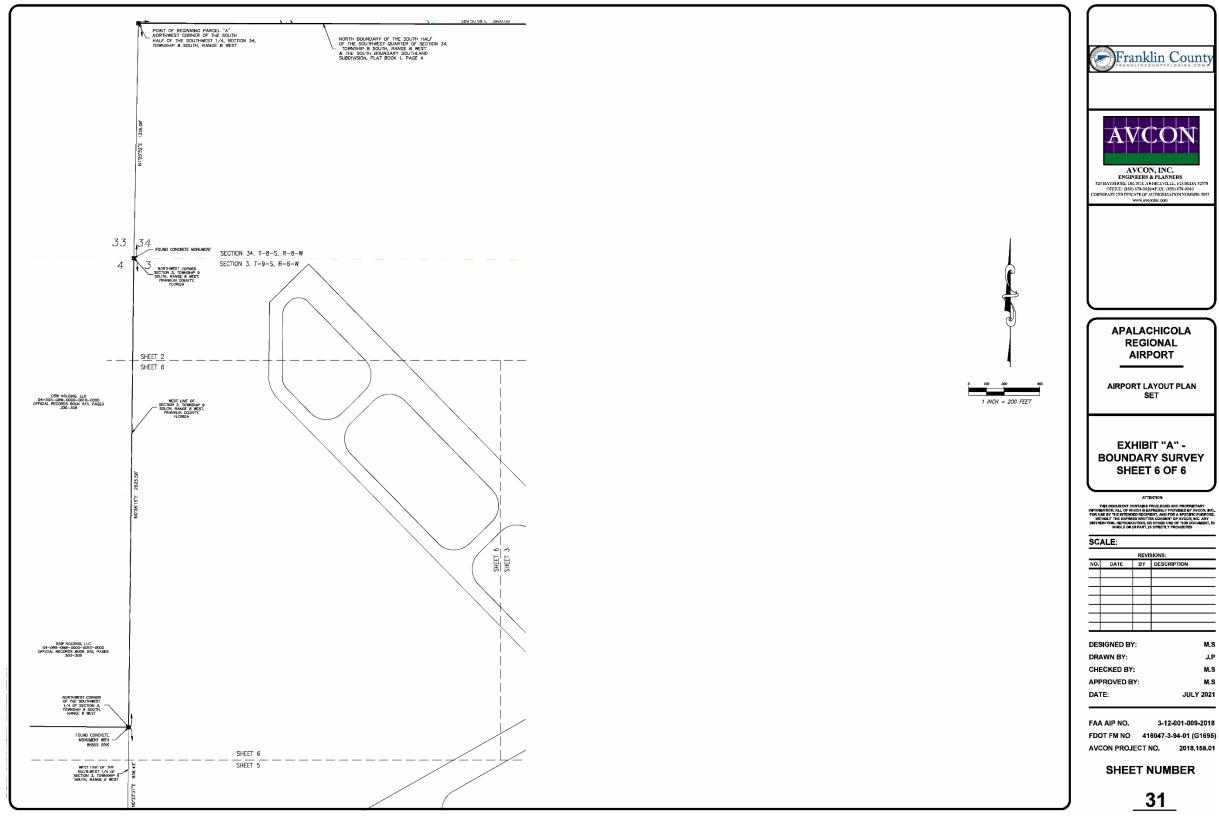


Figure 7-31 EXHIBIT "A" BOUNDARY SURVEY AND PARCEL DESCRIPTION (6 OF 6)

7-36 Airport Layout Plan Set

8 CAPITAL IMPROVEMENT PROGRAM

8.1 INTRODUCTION

The Capital Improvement Program (CIP) for Apalachicola Regional Airport has been developed based on the Airport's current and future needs as justified in Chapter 3, *Forecast of Aviation Activity*, and as identified in the Chapter 4, *Facility Requirements*. The development captures the various airport projects identified within the Airport Layout Plan over the 20-year planning period. Recognizing the costs associated with these projects along with the various federal and state funding programs and requirements are essential in determining the feasibility of the planned projects. Accordingly, the goal of this chapter is to:

- Provide a list of projects that will fulfill CIP requirements
- Give a brief description of each project
- Provide a general cost estimate of each project
- Give general financial guidance to Airport management concerning potential funding sources
- Provide a recommended schedule that logically balances the need for a project with the prospects of available funds for the project

The various projects identified in the CIP are broken out over three-time frames:

- Short-term (2019-2023) five years
- Mid-term (2024-2028) five years
- Long-term (2029-2038) 10 years

The proposed implementation schedule provided herein gives estimated time periods for initiating the proposed projects. Continuous re-evaluation of these timelines is necessary to account for changes in aviation demand, funding availability, and other unforeseen factors. Actual project implementation should generally occur just prior to when the actual need for an improvement is anticipated to occur and when funding for the project is available. This will allow the facility to be available just as the need is realized. Additionally, other improvements not identified in this report may be needed over the planning period.

All projects noted in this chapter are compatible with the development noted on the ALP. However, there may be occasions where certain projects may require an FAA and FDOT approved amendment to the ALP.

The project cost estimates provided in this chapter reflect a preliminary opinion of probable implementation costs. Included in the implementation costs are construction costs, engineering, testing, and surveying fees, and a pricing allowance. All cost estimates are provided in 2021 dollars.

The projects have been arranged in recognition of the probable availability of FAA and FDOT funds as well as through input from the Airport and the County, when available. Franklin County

is a Rural Economic Development Initiative (REDI) approved community. The Florida statutes established the REDI to better serve Florida's economically distressed rural communities by providing a more focused and coordinated effort among state and regional agencies that provide programs and services for rural areas. As the Florida Department of Transportation Aviation Office supports the REDI, the FDOT typically will fund up to 100 percent on projects in which there is no FAA participation and up to 10 percent of the project where there is FAA participation. Thus, the local share is most often reduced to zero.

It is possible that the Airport may identify additional funding resources that may allow projects to be moved forward sooner than anticipated. It is just as possible that any of the funding sources may not be as available as shown in this document. In that event, one or more projects may be pushed to a later year.

8.2 **SHORT-TERM PROJECTS (2019-2023)**

The projects planned over the short-term will become the basis for the FAA/FDOT JACIP process, where the appropriate funding can be programmed and applied for following submittal and acceptance of this report. A probable breakdown of the funding sources for the individual projects is also presented in this chapter. The total project cost over the short-term time frame is estimated at \$8.1 million in 2021 dollars. While cost estimates for the completed projects are provided, the exact scopes of these projects have yet to be completed and will be subject to change. These projects costs are estimated as accurately as possible based upon available data. Prior to the initiation of these projects, a detailed engineering investigation may be needed to obtain a more detailed cost estimate.

19-01.and 19-02 Design and Construct Runway 6/24 and Taxiways B and D Lighting Rehabilitation

Project Cost: \$779,711

This project is for the design and construction of the rehabilitation of the lights on Runway 6/24, Taxiway B, and Taxiway D. In particular, the lights will be converted to light emitting diode (LED) lights.

19-03 Airport Master Plan Update

Project Cost: \$380,000

The Airport Master Plan Update is the funding of the project that is producing this report, as well as the Airport Layout Plan and the Exhibit "A" Airport Property Inventory Map.

20-01 Rehabilitate Airfield Pavements

Project Cost: \$600,000

This project is the design and construction of the pavement rehabilitation that is in the most need of the work. In this instance these funds have gone toward the design and of the rehabilitation of the east and west aprons.

22-01 Procure Mowing Equipment

Project Cost: \$150,000

The Airport needs new mowing equipment that can cleanly and efficiently keep the airfield mowed and up to standards. The existing equipment is outdated, constantly breaking down, and the parts are becoming difficult and at times impossible to find.

22-02 Bring Taxiway A into Compliance (Design)

Project Cost: \$200,000

The Taxiway A is not in compliance with FAA AC 150/5300-13A, *Airport Design*, in that the ends of the taxiway do not meet Runways 14 and 32 at 90-degree angles. This project would correct this deficiency.

22-03 Relocate Fuel Farm

Project Cost: \$1,100,000

The current fuel farm was built in 2007 and the equipment and tanks are in bad condition. This project would relocate the fuel farm to position adjacent to the existing facility and would allow the existing facility to remain functional until the new facility is operational.

23-01 Stormwater and Drainage Improvements

Project Cost: \$1,600,000

As the Airport is very close to the Apalachicola Bay and the official surveyed elevation of the Airport is only 19.6 feet, flooding can often be a constraining issue. This project would design and construct a unified drainage system for the Airport that should keep the Airport from flooding as much as possible.

23-02 Pavement Reconstruction

Project Cost: \$800,000

This project is to be used for whichever pavement is in the most need of rehabilitation. It is anticipated that this project will be used to begin construction of the east and west apron pavement rehabilitation begun in Project 20-01.

23-03 Bring Taxiway B into Compliance

Project Cost: \$1,650,000

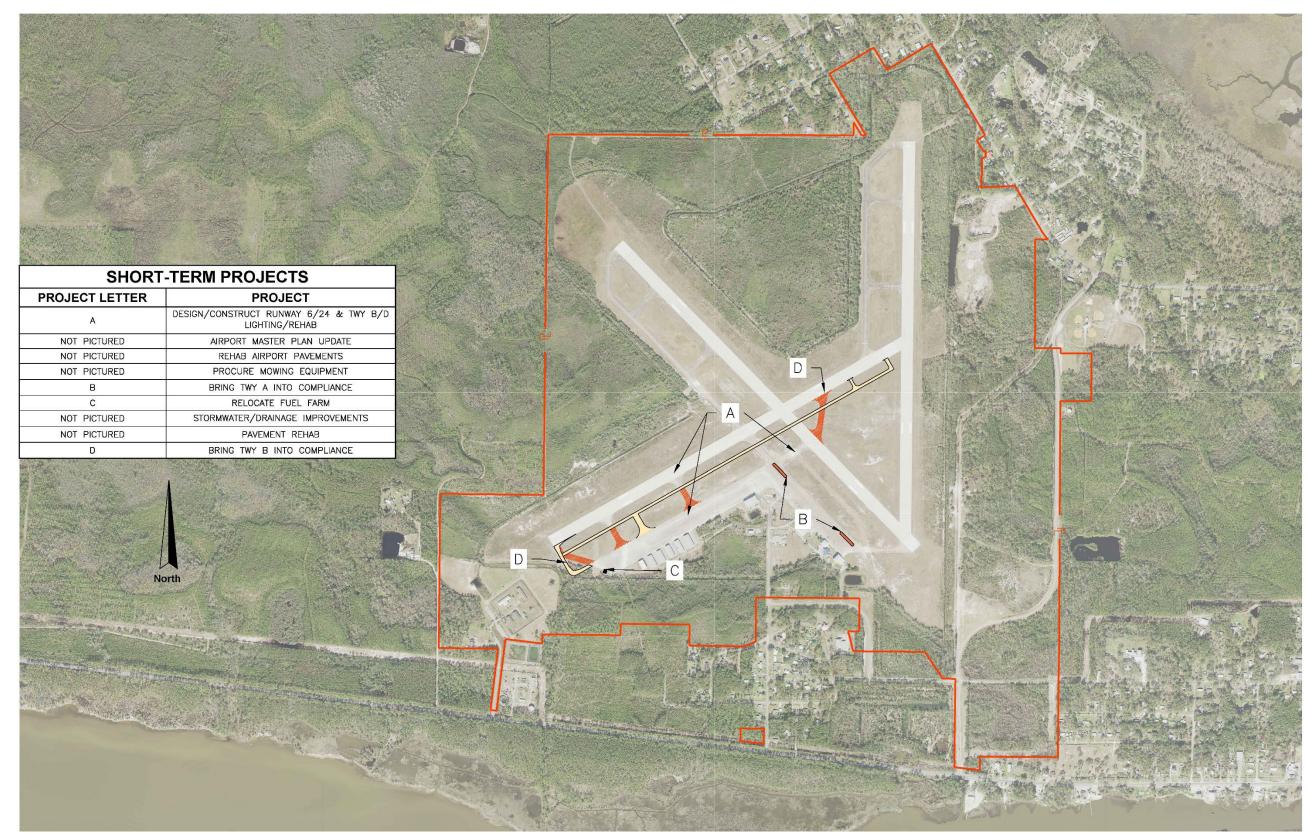
Taxiway B is not in compliance with FAA AC 150/5300-13A, Airport Design, as it does not meet Runway 24 at a 90-degree angle. Further, it allows direct access from the west apron directly to Runway 6/24. This project would correct these deficiencies.

Table 8 1 presents the list of projects anticipated to occur in the Short-term as well as the proposed year. An order of magnitude cost estimate in 2021 dollars is also provided. Figure 8-1 shows the location and extent of each project.

Table 8-1 SHORT-TERM CAPITAL IMPROVEMENT PROGRAM PROJECTS

Year	Project Number	•		Estimated Project Cost	
2019	19-01	Design and Construct Runway 6/24 and Taxiways B and D Lighting and Rehabilitation	\$	779,711	
	19-02	Design and Construct Runway 6/24 and Taxiways B and D Lighting and Rehabilitation	\$	800,000	
	19-03	Airport Master Plan Update	\$	380,000	
2020	20-01	Rehabilitate Airfield Pavements		600,000	
2021		No Designated Projects			
2022	22-01	Procure Mowing Equipment	\$	150,000	
	22-02	Bring Taxiway A into Compliance (Design)	\$	200,000	
	22-03	Relocate Fuel Farm	\$	1,100,000	
2023	23-01	Stormwater and Drainage Improvements	\$	1,600,000	
	23-02	Pavement Rehabilitation	\$	800,000	
	23-03	Bring Taxiway B into Compliance		1,650,000	
		TOTALS:	\$	8,059,711	

Note: All dollar amounts on this table are in 2021 dollars



8-5

Figure 8-1 SHORT-TERM PROJECTS

8.3 MID-TERM PROJECTS (2024-2028)

The mid-term projects have been identified for submittal to the FAA and FDOT for funding purposes. The sum of the development project costs and anticipated funding needs over the mid-term period is estimated to be approximately \$14.7 million in 2021 dollars. Some of the projects identified as mid-term projects may move forward into the short-term as additional funds are identified. Conversely, if anticipated funding sources are not available some-term projects may be pushed back into the mid-term. The primary focus of the mid-term program is the development of hangars and the rehabilitation of existing airfield pavement. The following is a summary of the mid-term projects:

24-01 Design and Construction Utility Improvements

Project Cost: \$800,000

The existing utilities at the Airport are old and are beginning to deteriorate. Additionally, any additional buildings or infrastructure will overburden the existing system. This project would design and construct the improvements to the mitigate this situation.

25-01 Design and Construct Pavement Rehabilitation

Project Cost: \$2,000,000

This project is the design and construction of the pavement rehabilitation that is in the most need of the work. In this case, it is anticipated that it will most likely be used for the completion of the construction of the rehabilitation of the east and west aprons.

25-02 Design and Construct Security Fence Improvements - Phase 1

Project Cost: \$500,000

The existing security fence and gates need rehabilitation and improvements. This project will rehabilitate existing fencing as needed and will provide needed security equipment, cameras, and remote control of the gates.

25-03 Design and Construct Pavement Rehabilitation

Project Cost: \$2,000,000

This project is the design and construction of the pavement rehabilitation that is most in need of the work as determined by the FDOT Statewide Airfield Pavement Management Program.

25-04 Construct New Landside Road to West Apron Fuel Farm (Phase 2)

Project Cost: \$1,570,000

This project will complete the new landside road to the West Apron Fuel Farm to the west to meet the road that accesses the former correction facility. This project will complete the new, recently completed commercial road that provides access from Airport Road to the back of the T-hangars on the West Apron.

26-01 Design and Construct Equipment Storage Structure; Wall and Doors

Project Cost: \$500,000

The existing Maintenance Building does not have any walls, doors, or windows due to a budget shortage when the original building was first constructed. This project would complete the project by enclosing it.

26-02 Design and Construct Security Fence Improvements – Phase 2

Project Cost: \$500,000

The existing security fence and gates need rehabilitation and improvements. This project will rehabilitate existing fencing as needed and will provide needed security equipment, cameras, and remote control of the gates. This project is a continuation of Project 25-02.

26-03 Bring Taxiway C into Compliance

Project Cost: \$1,180,000

Taxiway C is not in compliance with FAA AC 150/5300-13A, *Airport Design*, as it does not meet Runway 18 at a 90-degree angle. Neither does it access Runway 24 at a 90-degree angle. This project would correct these deficiencies. This project is not eligible for either FAA or FDOT funding as it solely provides access to Runway 18, which is not eligible for funding.

27-01 Design and Execute Obstruction Removal Runways 6/24 and 14/32

Project Cost: \$700,000

There are many obstructions in the approach, departure and transitional surfaces of Runways 6/24 and 14/32 as illustrated in the Airport Layout Plan. These obstructions must be removed or otherwise mitigated. This project would design and remove the obstructions on all four of these runways.

27-02 Design and Construct Runway 6/24 Rehabilitation

Project Cost: \$1,500,000

Runway 6/24 had a PCI of Satisfactory (74) to Fair (69) in 2017. By the year 2027, it is anticipated that this runway will be in even greater need of a mill and overlay rehabilitation.

27-03 Purchase Land for Future Runway 14 Extension and RPZ

Proiect Cost: \$80.000

It is proposed in this Master Plan Update that Runway 32 be separated from Runway 18/36. It is also recommended that the Primary Runway, Runway 14/32 be extended by a commiserate amount to ensure that the runway length be at least 3,348 feet. This project would purchase the land needed for the runway extension project as well as the relocated RPZ.

28-01 Separate Runways 24, 36, and 18/36 Runway Safety Areas and Extend Runway 14

Project Cost: \$2,960,000

This project would physically separate Runways 24 and 36 from Runway 18/36 as described in the Chapter 6 of this report.

28-02 Master Plan Update

Project Cost: \$400,000

This project would be the Master Plan Update to this report. It is proposed to occur five to seven years after the completion of this current project.

Table 8-2 presents the list of projects anticipated to occur in the Mid-term as well as the proposed year. An order of magnitude cost estimate in 2021 dollars is also provided. Figure 8-2 shows the location and extent of each project.

Table 8-2
MID-TERM CAPITAL IMPROVEMENT PROGRAM PROJECTS

Year	Project Number	Project Description	Estimated Project Cost
2024	24-01	Design and Construct Utility Improvements	\$ 800,000
2025	25-01	Design and Construct Pavement Rehabilitation	\$ 2,000,000
	25-02	Design and Construct Security Fence Improvements	\$ 500,000
	25-03	Design and Construct Pavement Rehabilitation	\$ 2,000,000
	25-04	Construct New Landside Road to the West Apron Fuel Farm (Phase 2)	\$ 1,570,000
2026	26-01	Design and Construct Equipment Storage Structure; Walls and Doors	\$ 500,000
	26-02	Design and Construct Security Fence improvements	\$ 500,000
	26-03	Bring Taxiway C into Compliance	\$ 1,180,000
2027	27-01	Design and Execute Obstruction Removal	\$ 700,000
	27-02	Design and Construct Runway 6/24 Rehabilitation	\$ 1,500,000
	27-03	Purchase Land for Future Runway 14 Extension and RPZ	\$ 80,000
2028	28-01	Separate Runways24, 36, and 18/36 Runway Safety Areas and Extend Runway 14	\$ 2,960,000
	28-02	Master Plan Update	\$ 400,000
		TOTAL	\$ 14,690,000

Note: All dollar amounts in this Table are in 2021 dollars

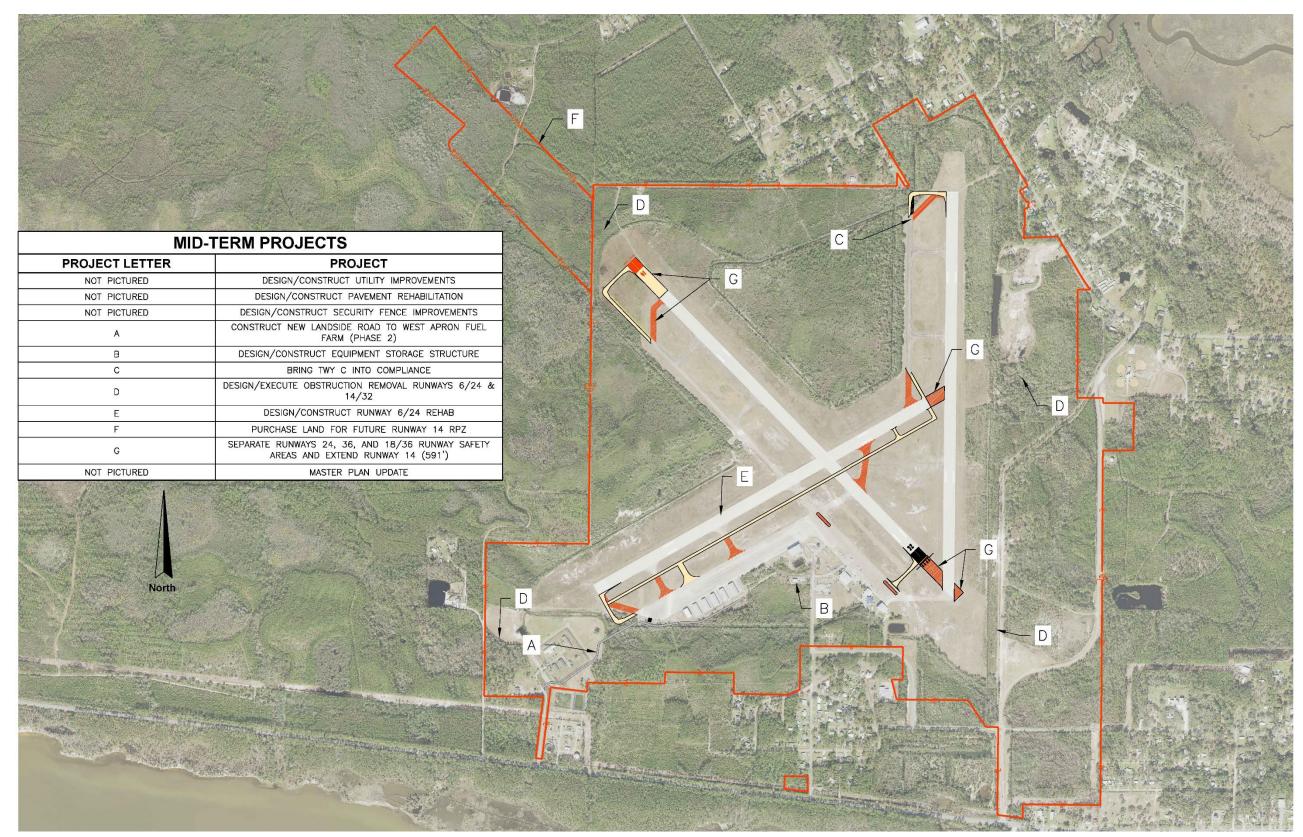


Figure 8-2 MID-TERM PROJECTS

8.4 LONG-TERM PROJECTS (2029-2038)

Based upon the anticipated need and available funding, many projects associated with the preferred alternative of development will be developed over the ten-year, long-term period. The projects have been scheduled for specific years but are loosely prioritized. The total project development costs and funding needs over the long-term period is estimated in 2021 dollars at approximately \$43.9 million in 2021 dollars. The projects included in the long-term are:

29-01 Obstruction Removal Runway 18/36

Project Cost: \$79,500

Many obstructions to the approach, departure and transition slopes to Runway 18/36 have been noted in the Airport Layout Plan set associated with this report. This project would involve the design and actual removal of these obstructions. This project is not eligible for either FAA or FDOT funding.

30-01 Rehabilitate Runway 14/32

Project Cost: \$12,150,000

Runway 14/32 had a PCI rating of Satisfactory (73) to Fair (67) in 2017. It will have continued to deteriorate since that time so that in 2030 it would be eligible for rehabilitation.

31-01 Rehabilitate Runway 18/36

Project Cost: \$11,410,000

Runway 18/36 had a PCI rating of Fair (58-69). This runway will have continued to deteriorate since that time so that in 2031 it would be eligible for rehabilitation. However, Runway 18/36 is not eligible for either FAA or FDOT funding.

32-01 Rehabilitate Runway 6/24

Project Cost: \$2,150,000

Runway 6/24 would have had a mill and overlay rehabilitation in 2027. It is anticipated that by the year 2032, it will probably need a full-depth rehabilitation. This project would provide the design and construction for the project.

33-01 Master Plan Update

Project Cost: \$450,000

This Master Plan Update would update the master plan update proposed for 2028.

33-02 Design and Construct 8-unit T-hangar

Project Cost: \$1,476,000

This would be the first hangar project proposed for the Airport within this master plan update but has been postponed to a later date due to funding priorities. The eight t-hangars are needed to accommodate the projected based aircraft. If based aircraft numbers increase faster than projected, this project will need to be moved to an earlier year.

34-01 Design and Construct 100-foot x 100-foot Hangar

Project Cost: \$950,000

This is the first conventional hangar project proposed by this master plan project. This would be a conventional hangar built to house either based aircraft, itinerant aircraft, or as a speculation hangar to bring in a business that could provide jobs to the region.

35-01 Design and Construct 8-unit T-hangar

Project Cost: \$1,476,000

This T-hangar project will be required to store additional based aircraft and should be built to not only accommodate existing based aircraft but to draw additional based aircraft to the Airport.

36-01 Design and Construct 70-foot by 70-foot Hangar

Project Cost: \$560,000

This would be a conventional hangar built to store either based aircraft, itinerant aircraft, or as a speculation hangar to bring in a business that could provide jobs to the region.

37-01 Design and Construct 8-unit T-hangar

Project Cost: \$1,476,000

This T-hangar project will be required to house additional based aircraft and should be built to not only accommodate existing based aircraft but to draw additional based aircraft to the Airport.

38-01 Design and Construct 145-foot by 95-foot Hangar

Project Cost: \$1,700,000

This would be a conventional hangar built to house either based aircraft, itinerant aircraft, or as a speculation hangar to bring in a business that could provide jobs to the region.

Table 8-3 presents the list of projects anticipated to occur in the long-term, as well as the proposed year. An order of magnitude cost estimate in 2021 dollars is also provided.

Table 8-3
LONG-TERM CAPITAL IMPROVEMENT PROGRAM PROJECTS

Year	Project Number	Project Description	Estimated Project Cost
2029	29-01	Obstruction Removal Runway 18/36	\$ 79,500
2030	30-01	Rehabilitate Runway 14-32	\$ 12,150,000
2031	31-01	Rehabilitate Runway 18/36	\$ 11,410,000
2032	32-01	Rehabilitate Runway 6/24	\$ 12,150,000
2033	33-01	Master Plan Update	\$ 450,000
	33-02	Design and Construct 8-unit T-hangar Building	\$ 1,476,000
2034	34-01	Design and Construct 100-foot by 100-foot Hangar	\$ 950,000
2035	35-01	Design and Construct 8-unit T-hangar	\$ 1,476,000
2036	36-01	Design and Construct 70-foot by 70-foot Hangar	\$ 560,000
2037	37-01	Design and Construct 8-unit T-hangar	\$ 1,476,000
2038	38-01	Design and Construct 145-foot by 95-foot Hangar	\$ 1,700,000
		TOTAL	\$ 43,877,500

Note: All dollar amounts on this Table are in 2021 dollars.

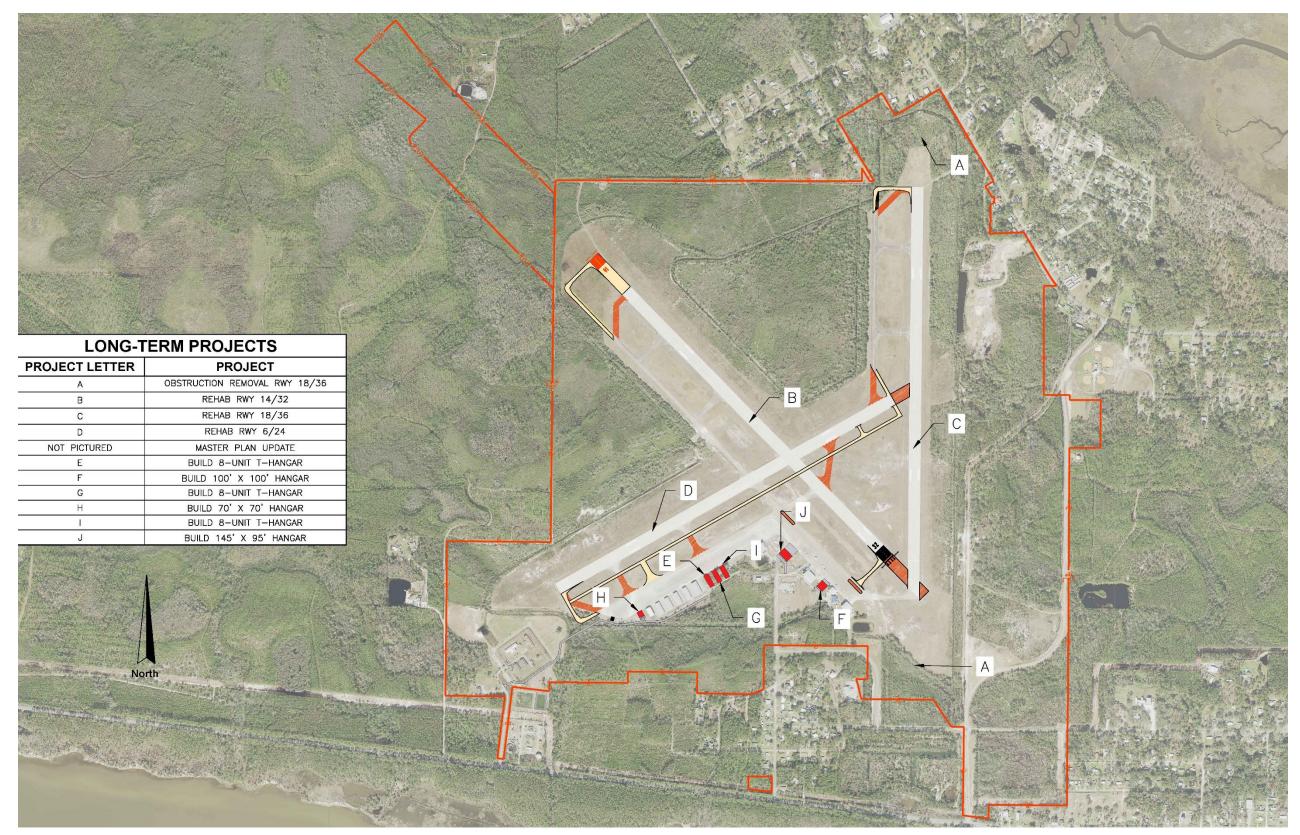


Figure 8-3 LONG-TERM PROJECTS

8.5 POTENTIAL FUNDING SOURCES

Airports rely primarily on revenues from tenants and funding from governmental sources. Generally, funding from the FAA and state agencies such as the Florida Department of Transportation (FDOT) are very important to airports. While the main revenue from tenant leases and fuel sales may cover operating costs and some existing debt service, there are limited residual funds to cover the costs of necessary airport capital improvement projects.

Depending on the project, these capital improvements may be eligible for FAA or FDOT funding. However, the Airport is competing with every other airport in the State and in the United States for the same funding. Because a project is eligible for federal, or state funding does not ensure that any or all of the funding will be received. The following sections describe several funding programs and general eligibility requirements associated with each.

7.1.14 Federal Funding

The Airport Improvement Program (AIP), administered by the FAA, was established to assist in the growth of public-use airports within the National Plan of Integrated Airport System (NPIAS). The AIP provides grants to public-use airports such as Apalachicola Regional Airport for a wide variety of airport improvement projects. Projects funded by the AIP include runway and taxiway rehabilitation and construction, land acquisition, planning and environmental studies, navigational aid installation, and airfield marking and signage projects. Airports must be in the NPIAS to be eligible for AIP funds. Apalachicola Regional Airport is one of 3,328 airports in the nation that is eligible for federal funding.

For General Aviation (GA) airports such as Apalachicola Regional Airport, the AIP will fund up to 90 percent of the eligible costs of the project. The remaining percentage is the responsibility of an airport's local governing body and potential matching monies from the state. Some of the projects over the 20-year planning period at the Airport that are eligible for AIP funding include runway and taxiway rehabilitation, aprons, lighting, and visual aids. Additionally, land acquisition, planning, and environmental projects are also eligible for AIP funds. However, most revenue producing projects, such as hangars, fuel farms, FBO facilities, and routine maintenance are not AIP eligible.

The AIP typically allows for the annual disbursement of \$150,000 to applicable GA airports within the NPIAS. The annual \$150,000 is referred to as a Non-Primary Entitlement. For an airport to receive this money it must be applied for each year. Additionally, the money may only be used towards the development of projects that are approved for federal funding under the AIP. The Non-Primary Entitlement funds can be rolled over from year to year for a maximum of three years.

When entitlement funds are not sufficient to cover the costs of AIP eligible projects, airports can also apply for FAA discretionary funds. To allocate those discretionary grants, the FAA has developed a priority ranking system, which accounts for the type of project and airport. Projects concerning runway safety are generally the priority. From these rankings the appropriate funds are distributed.

7.1.15 State Funding

Like the FAA, FDOT has established a program to support the funding of various airport improvement projects. The FDOT aviation grant program provides funding to four major types of projects: airport planning, airport improvement, land acquisition, and airport economic development. Examples of projects funded under these different categories include:

- Airport Planning: master plans, master drainage plans, and environmental assessments
- Airport Improvements: terminal building improvements and runway/taxiway construction
- Land Acquisition: acquisition of land, aviation easements, and mitigation land
- Airport Economic Development: hangar construction, commerce park infrastructure and building development, and the development of other facilities that will enhance economic impact.

FDOT may provide up to 80 percent of the remaining (non-federal) share of general aviation airport project costs when federal funding is available. Basically, if FAA is providing 90 percent of funding for a project, FDOT can fund up to 80 percent of the remaining 10 percent. When FAA funding is not available, FDOT may fund up to 80 percent of the total project cost. For on-airport revenue-producing economic development projects such as industrial parks or buildings, FDOT may fund up to 50 percent of the project costs.

The remaining cost of a project is typically covered by the Airport Sponsor, in this case, Franklin County. However, if the airport is in a Rural Economic Development Initiative (REDI) area, The state may also pay the share typically allocated to the Airport Sponsor. The REDI program provides financial assistance to certain rural counties and communities. The FDOT is a member of REDI. Counties and communities that meet certain statutory criteria may request a waiver or reduction of the local match requirements. Franklin County is a REDI approved county.

Other FDOT Aviation funding programs include the Secure Airports for Florida's Economy (SAFE) and the Strategic Airport Investment Program. The SAFE Funds program was created in 2002 as a mechanism to fund security-related aviation projects. The Strategic Airport Investment Program, which was created in 2014 by the Florida Legislature, can provide funding up to 100 percent for projects that meet the following criteria:

- Provide important access and on-airport capacity improvements.
- Provide capital improvements to strategically position the state to maximize opportunities in international trade, logistics, and the aviation industry.
- Achieve state goals of an integrated intermodal transportation system.
- Demonstrate the feasibility and availability of matching funds through federal, local, or private partners.

FDOT has other funding programs that may be used for certain types of projects. This includes the State Infrastructure Bank Program, The Transportation Regional Incentive Program (TRIP),

and the Economic Development Transportation Fund Program (EDTF). The State Infrastructure Bank Program (SIB) is a revolving loan and credit enhancement program used to leverage funds to improve project feasibility. The SIB can provide loans and other assistance to public or private entities carrying out or proposing to carry out projects eligible for assistance under federal and state law. The SIB cannot help in the form of a grant.

TRIP provides state matching funds for improvements to regionally significant transportation facilities identified and prioritized by regional partners. TRIP funds are to be used to match local or regional funds up to 50 percent of the total project costs for public transportation projects.

The EDTF Program is an economic incentive program that works collaboratively with other state-specific economic incentive programs to attract businesses and jobs in state-targeted industry sectors. Eligible projects typically include but are not limited to safety and capacity improvements to existing roadways, the development of new roads and rail spurs, and certain seaport, airport, and spaceport infrastructure improvements. EDTF is a reimbursement of eligible costs program.

Additionally, the state of Florida has established numerous economic development programs to provide incentives for companies to locate to Florida. These programs are administered through Enterprise Florida, a public-private partnership responsible for leading Florida's statewide economic development efforts. Some of the programs administered by Enterprise Florida include:

- Qualified Target Industry Tax Refund: Available for companies that create high wage jobs in targeted high value-added industries.
- Qualified Defense Contractor Tax Refund: Up to \$5,000 is offered per job created or saved in Florida through the conversion of defense jobs to civilian production, the acquisition of a new defense contract, or the consolidation of a defense contract, which results in at least a 25 percent increase in Florida employment or a minimum of 80 jobs.
- Capital Investment Tax Credit: is used to attract and grow capital-intensive industries in Florida.
- The High Impact Performance Incentive: A negotiated grant used to attract and grow major high impact facilities in Florida.
- Enterprise Zone Incentives: Assortment of tax incentives to businesses that choose to create employment within an enterprise zone, which is a specific geographic area targeted for economic revitalization.

While these programs are not meant to specifically fund airport improvement projects, they may be utilized to fund commercial development areas, like those planned for the Airport.

7.1.16 Local Funding

Depending on the type of project funding available, local funding sources may or may not account for a major part in the costs of an airport improvement project. Sources of local funding can vary over a diverse group from county and city governments to private investors. While it is usually necessary for an airport or its sponsor to cover some percentage of the costs associated with these projects, the local percentage is generally quite small compared to that of other entities.

The local share of airport improvement projects that receive FAA or FDOT funding are generally funded through the governing body of the airport, typically referred to as the Airport Sponsor. Franklin County would be responsible for funding the local share of the improvement projects at the Apalachicola Regional Airport, except that Franklin County is a REDI approved county and FDOT may also fund all or part of the local match. Other projects throughout the Airport that may receive additional funding from the County could include development areas that would increase the number of revenue producing tenants on Airport property. For those local matching funds that the state does not cover, how the County goes about funding their share of a project can vary.

Funding may be drawn from various sources, or it may be drawn from programs such as issuing a development bond. Although issuing bonds is more common at larger commercial service airports, which produce larger revenues as opposed to small GA airports, it remains a viable source of funding.

There can be projects on an airport for which neither the FAA nor the FDOT will elect to fund. All projects associated with Runway 18/36 will most likely not be funded by the FAA not the FDOT. This runway, the associated Taxiway C, are not considered to be necessary by these funding agencies as together, Runways 14/32 and 6/24 cover more than 95 percent of the reported wind and crosswind patterns on the Airport over a ten-year period. All projects associated with Runway 18/36 and Taxiway C must be funded by the Airport Sponsor or a source or sources other than the FAA and FDOT.

In the case of private development on an airport, local funding may account for a much higher portion if not all the funding necessary for certain developments. Historically, private investors are generally not a major source of funding for airport improvement projects unless they have a very significant impact on a current or future tenant. However, recent occurrences at more than one airport include private investors wishing to fully fund developments that are strictly investments such as T-hangar complexes for subsequent lease, hangar, apron, or other facilities.

8.6 POTENTIAL ALLOCATION OF FUNDING

Tables 8-4 through 8-6 provide a companion oversight of grant funding scenarios for the short, mid-, and long-term time periods based upon current programs and eligible funding sources. It should be noted that these current programs are subject to change and the CIP should be updated at least annually to adjust for changes in funding and priorities, as necessary. In

addition to the funding sources, the projected cost estimated for the various airport improvement projects are provided in 2021 dollars. These costs should also be updated annually.

The proper management of funds is important to achieve self-sufficiency and to safely develop the Airport to match the projected growth over the planning period. It is recommended that the Airport apply for all available grant money for which it is eligible. It is also imperative that Airport Management meet often with the local representatives of the FAA and FDOT to provide them with a clear, consistent vision of what the County desires to accomplish at the Airport.

By obtaining government assistance to fund airport improvements throughout the planning period, the ability of the Airport to progress toward operational and capital self-sufficiency will be greatly enhanced in future years. Additionally, a sound Capital Improvement Program may reduce the Airport's reliance on governmental aid as the Airport continues to grow and mature as an economic engine.

7.1.17 Capital Improvement Program Funding Availability

It is important to understand that the development of the Airport's Capital Improvement Program does not represent an obligation of local funds or commitment of federal or state funding until proper project justification and environmental consent has been determined. Additionally, other state and local agency coordination may also be necessary, depending upon the project. Collaboration with the FAA and the FDOT is vital in facilitating project formulation and coordinating project implementation in a timely manner.

Table 8-4
POTENTIAL ALLOCATION OF SHORT-TERM (2019-2023) CIP PROJECT FUNDING

Year	Project	Project	Total				F	FAA		FDC	ОТ	Local	
	Number				Enti	tlements	Dis	cretionary	Percentage	Amount	Percentage	Amount	Percentage
2019	19-01	Design and Construct Runway 6/24 and Taxiway B and D Lighting and Rehabilitation	\$	3,000,000	\$	-	\$	_	0%	\$ 779,711	26%	\$ -	0%
	19-02	Design and Construct Runway 6/24 and Taxiway B and D Lighting and Rehabilitation	\$	800,000	\$	-	\$	-	0%	\$ 800,000	100%	\$ -	0%
	19-03	Airport Master Plan Update	\$	380,000	\$	300,000	\$	-	79%	\$ 80,000	21%	\$ -	0%
2020	20-01	Rehabilitate Airfield Pavements	\$	600,000	\$	-	\$	-	0%	\$ 600,000	100%	\$ -	0%
2021			\$	-	\$	-	\$	-	0%	\$ -	0%		0%
2022	22-01	Procure Mowing Equipment	\$	155,250					0%	\$ 155,250	100%	\$ -	0%
	22-02	Bring Taxiway A into Compliance (Design)	\$	207,000					0%	\$ 207,000	100%		0%
	22-03	Relocate Fuel Farm	\$	1,138,500					0%	\$ 1,138,500	100%	\$ -	0%
2023	23-01	Stormwater and Drainage Improvements	\$	1,713,960					-	\$ 1,713,960	100%	\$ -	0%
	23-02	Pavement Rehabilitation	\$	856,980					-	\$ 856,980	100%	\$ -	0%
	23-03	Bring Taxiway B into Compliance	\$	1,767,521	\$	450,000	\$	1,140,769	90%	\$ 176,752	10%	\$ -	0%
Totals													
		TOTALS	\$	10,619,211	\$	750,000	\$	1,140,769	18%	\$ 6,508,153	61%	\$ -	0%

Note: The Dollars shown for years 2019 through 2021 are shown in 2021 dollars. Dollars for years 2022 and 2023 have been escalated to the respective year in this table.

Table 8-5
POTENTIAL ALLOCATION OF MID-TERM (2024-2028) CIP PROJECT FUNDING

Year	Project Number	Project	Total				FAA				FDO	т		Loca	al
	Number				Entitlements		Discretionary		Total	otal Amount		Percentage	Amount		Percentage
2024	24-01	Design and Construct Utility Improvements	\$	886,974	\$	-	\$	-	0%	\$	886,974	100%	\$	1	0%
2025	25-01	Design and Construct Pavement Rehabilitation	\$	2,295,046	\$	300,000	\$	1,765,541	90%	\$	229,505	10%		-	0%
2025	25-02	Design and Construct Security Fence Improvements	\$	573,762	\$	-	\$	-	0%	\$	573,762	100%	<u> </u>	-	0%
2025	25-03	Design and Construct Pavement Rehabilitation	\$	2,295,046	\$	-	\$	-	0%	\$	2,295,046	100%	\$	-	0%
2025	25-04	Construct New Landside Road to West Apron Fuel Farm (Phase 2)	\$	1,801,611	\$	-	\$	-	0%	\$	1,801,611	100%	\$	-	0%
				500.040	Φ.				00/		500.040	4000/			20/
2026	26-01	Design and Construct Equipment Storage Structure, Wall, and Doors	\$	593,843	\$	-	\$	-	0%	\$	593,843	100%		-	0%
2026	26-02	Design and Construct Security Fence Improvements	\$	593,843	\$	-	\$	-	0%	\$	593,843	100%	\$	-	0%
2026	26-03	Bring Taxiway C into Compliance	\$	1,401,470	\$	-	\$		0%	\$	-	0%	\$	1,401,470	100%
2027	27-01	Design and Execute Obstruction Removal	\$	860,479	\$	-	\$	-	0%	\$	860,479	100%	\$	-	0%
2027	27-02	Design and Construct Runway 6/24 Rehabilitation	\$	1,843,883	\$	-	\$	-	0%	\$	1,843,883	100%	\$	-	0%
2027	27-03	Purchase Land for Future Runway 14 RPZ	\$	98,340	\$	-	\$	-	0%	\$	98,340	100%	\$	-	0%
2028	28-01	Separate Runways 24, 36, and 18/36 Runway Safety Areas and Extend Runway 14 (591')	\$	3,765,947	\$	450,000	\$	2,939,352	90%	\$	376,595	10%	\$	-	0%
	28-02	Master Plan Update	\$	508,912	\$	-	\$	-	0%	\$	508,912	100%	\$	-	0%
		TOTALS	Φ	17,519,156	Ф.	750,000	Φ	4,704,893	31%	\$	10,662,792	61%	Ф	1,401,470	8%
		TOTALS	Φ	17,519,136	Ф	750,000	Ф	4,704,093	3170	Ф	10,002,792	01%	\$	1,401,470	0%

Note: All dollar amounts shown this page are escalated from 2021 dollars to the year in which they are currently shown.

Table 8-6
POTENTIAL FUNDING OF LONG-TERM (2029-2038) CIP PROJECT FUNDING

Year	Project	Project	т	Total					FDO	т		Local			
	Number				Enti	tlements	Dis	scretionary	Percentage		Amount	Percentage		Amount	Percentage
2029	29-01	Obstruction Removal Runway 18 and 36	\$	104,686	\$	-	\$	-	0%	\$	-	0%	\$	104,686	100%
2020	20.04	Debabilitate Durane 44.00	Φ.	40 550 000	Φ.	450,000	Φ.	44 452 202	000/	Φ.	4.055.000	400/	Φ.		00/
2030	30-01	Rehabilitate Runway 14-32	\$	16,559,203	\$	450,000	\$	14,453,283	90%	\$	1,655,920	10%	\$	-	0%
2031	31-02	Rehabilitate Runway 18/36	\$	16,094,932	\$	-	\$	-	0%	\$	-	0%	\$	16,094,932	100%
2032	32-01	Rehabilitate Runway 6/24	\$	17,738,632	\$	-	\$	15,964,769	90%	\$	1,773,863	10%	\$	-	0%
2033	33-01	Master Plan Update	\$	679,981	\$	450,000	\$		66%	\$	229,981	34%	\$		0%
2000	33-02	Build 8-unit T-hangar	\$	2,230,337	\$	-	\$		0%	\$	2,230,337	100%		_	0%
		<u> </u>		, ,											
2034	34-01	Build 100' x 100' Hangar	\$	1,485,758	\$	-	\$		0%	\$	1,485,758	100%	\$		0%
2035	35-01	Build 8-unit T-hangar	\$	2,389,193	\$	_	\$	_	0%	\$	2,389,193	100%	\$		0%
2000	00 01	Dana o ariit i mangar	Ψ	2,000,100	Ψ		Ψ		3,0	Ψ	2,000,100	10070	Ψ		070
2036	36-01	Build 70' x 70' Hangar	\$	938,195	\$	-	\$	-	0%	\$	938,195	100%	\$	-	0%
2037	37-01	Build 8- unit T-hangar	\$	2,559,363	\$		\$		0%	\$	2,559,363	100%	4		0%
2037	37-01	Bullu 6- utilit 1-itatigat	Φ	2,009,000	Ф	-	Φ		076	φ	2,559,565	100%	φ	-	076
2038	38-01	Build 145' x 95' Hangar	\$	3,050,948	\$	-	\$	-	0%	\$	3,050,948	100%	\$	-	0%
		TOTALS	\$	63,831,230	\$	900,000	\$	30,418,051	49%	\$	16,313,560	26%	\$	16,199,618	25%

Note: All dollar amounts shown this page are escalated from 2021 dollars to the year in which they are currently shown.

8.7 **SUMMARY**

Table 8-7 shows the estimated cost of the Short-term CIP Projects over a five-year period beginning in 2019 and ending in 2023.

Table 8-7
SHORT-TERM PROJECTS AND COSTS

Year	Project	20:	21 Dollars	_	scalated Dollars
2019	Design and Construct Runway 6/24 and Taxiway B and D Lighting and Rehabilitation	\$	779,711	\$	3,000,000
	Design and Construct Runway 6/24 and Taxiway B and D Lighting and Rehabilitation	\$	800,000	\$	800,000
	Airport Master Plan Update	\$	380,000	\$	380,000
2020	Rehabilitate Airfield Pavements	\$	600,000	\$	600,000
2021					
2022	Procure Mowing Equipment	\$	150,000	\$	155,250
	Bring Taxiway A into Compliance (Design)	\$	200,000	\$	207,000
	Relocate Fuel Farm	\$	1,100,000	\$	1,138,500
2023	Stormwater and Drainage Improvements	\$	1,600,000	\$	1,713,960
	Pavement Rehabilitation	\$	800,000	\$	856,980
	Bring Taxiway B into Compliance	\$	1,650,000	\$	1,767,521
	TOTAL	\$	8,059,711	\$	10,619,211

The potential funding of the proposed Short-term Projects is shown in Table 8-8 with both 2021 dollars and escalated costs to the appropriate year.

Table 8-8
POTENTIAL FUNDING SOURCES OF SHORT-TERM PROJECTS

Project	2021 Dollars			scalated Dollars
FAA Entitlement Funds	\$	750,000	\$	750,000
FAA Discretionary Funds	\$	1,035,000	\$	1,140,769
FDOT	\$	6,274,711	\$	6,508,153
Franklin County	\$	-	\$	-
TOTAL	\$	8,059,711	\$	8,398,922

The projects and their respective costs for the Mid-term Period are shown in Table 8-9.

Table 8-9 MID-TERM PROJECTS AND COSTS

Year	Project	20	21 Dollars	E	scalated Dollars
2024	Design and Construct Utility Improvements	\$	800,000	\$	886,974
2025	Design and Construct Pavement Rehabilitation	\$	2,000,000	\$	2,295,046
	Design and Construct Security Fence Improvements	\$	500,000	\$	573,762
	Design and Construct Pavement Rehabilitation	\$	2,000,000	\$	2,295,046
	Construct New Landside Road to West Apron Fuel Farm (Phase 2)	\$	1,570,000	\$	1,801,611
2026	Design and Construct Equipment Storage Structure, Wall, and Doors	\$	500,000	\$	593,843
	Design and Construct Security Fence Improvements	\$	500,000	\$	593,843
	Bring Taxiway C into Compliance	\$	1,180,000	\$	1,401,470
2027	Design and Execute Obstruction Removal	\$	700,000	\$	860,479
	Design and Construct Runway 6/24 Rehabilitation	\$	1,500,000	\$	1,843,883
	Purchase Land for Future Runway 14 RPZ	\$	80,000	\$	98,340
2028	Separate Runways 24, 36, and 18/36 Runway Safety Areas and Extend Runway 14 (591')	\$	2,960,000	\$	3,765,947
	Master Plan Update	\$	400,000	\$	508,912
	TOTAL	\$	14,690,000	\$	17,519,156

The potential funding of the proposed Mid-term Projects is as shown in Table 8-10.

Table 8-10
POTENTIAL FUNDING SOURCES OF MID-TERM PROJECTS

Project		021 Dollars	Escalated Dollars	
FAA Entitlement Funds	\$	750,000	\$	750,000
FAA Discretionary Funds	\$	3,714,000	\$	4,704,893
FDOT	\$	9,046,000	\$	10,662,792
Franklin County	\$	1,180,000	\$	1,401,470
TOTAL	\$	14,690,000	\$	17,519,156

The list of Long-term Projects and the estimated cost of each is found in Table 8-11.

Table 8-11 LONG-TERM PROJECTS AND COSTS

Year	Project	2021 Dollars	Escalated Dollars
2029	Obstruction Removal Runway 18 and 36	\$ 79,500	\$ 104,686
2030	Rehabilitate Runway 14-32	\$12,150,000	\$16,559,203
2031	Rehabilitate Runway 18/36	\$11,410,000	\$16,094,932
2032	Rehabilitate Runway 6/24	\$12,150,000	\$17,738,632
2033	Master Plan Update	\$ 450,000	\$ 679,981
	Build 8-unit T-hangar	\$ 1,476,000	\$ 2,230,337
2034	Build 100' x 100' Hangar	\$ 950,000	\$ 1,485,758
2035	Build 8-unit T-hangar	\$ 1,476,000	\$ 2,389,193
2036	Build 70' x 70' Hangar	\$ 560,000	\$ 938,195
2037	Build 8- unit T-hangar	\$ 1,476,000	\$ 2,559,363
2038	Build 145' x 95' Hangar	\$ 1,700,000	\$ 3,050,948
	TOTAL	\$ 43,877,500.	\$63,831,230

The potential funding of the proposed Long-term Projects is shown in Table 8-12.

Table 8-12
POTENTIAL FUNDING OF LONG-TERM PROJECTS

Project	2021 Dollars	Escalated Dollars		
FAA Entitlement Funds	\$ 900,000	\$ 900,000		
FAA Discretionary Funds	\$21,420,000	\$30,418,051		
FDOT	\$10,068,000	\$16,313,560		
Franklin County	\$11,489,500	\$16,199,618		
TOTAL	\$43,877,500	\$63,831,230		