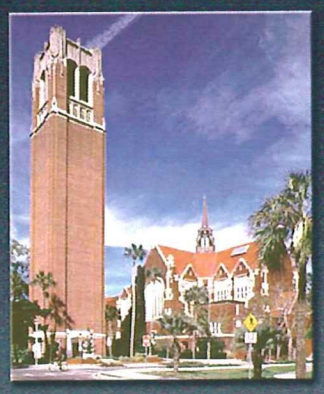














Master Plan - Volume 1

GAINESVILLE REGIONAL AIRPORT

Prepared for:

Gainesville-Alachua County Regional Airport Authority

RSH No. 201-3363-001

FINAL REPORT

Prepared by:

RS&H Team

Reynolds, Smith and Hills, Inc.
Birkitt Environmental Services, Inc.
Southeastern Archaeological Research, Inc.

TABLE OF CONTENTS

CHAPTER 1: ISSUES AND EXISTING CONDITIONS

1.1 Introduction 1-1

1.2 Goals and Objectives 1-2

1.3 Airport Setting 1-3
1.3.1 Airport Location 1-3
1.3.2 Airport History 1-4
1.3.3 Airport Land Ownership 1-4
1.3.4 Adjacent Airports and Services 1-4

1.4 Airport Classification and Role 1-10
1.4.1 Current FAA Classification and Role Criteria 1-10
1.4.2 GNV Classification and Role 1-11

1.5 Climate 1-11
1.5.1 Temperature and Precipitation 1-11
1.5.2 Winds 1-11

1.6 Airside Facilities 1-15
1.6.1 Runways 1-15
1.6.2 Taxiways 1-18
1.6.3 Approach and Airfield Lighting 1-19
1.6.4 Radio Navigational Aids (NAVAIDS) 1-20
1.6.5 Visual NAVAIDS 1-23
1.6.6 Automated Surface Observation System (ASOS) 1-24
1.6.7 Runway Visual Range (RVR) System 1-25

1.7 Aeronautical Environment 1-25
1.7.1 Airspace Classifications 1-26
1.7.2 Surrounding North-Central Florida 1-29
1.7.3 Published Instrument Procedures 1-34

1.8 Air Traffic Control 1-45
1.8.1 Flight Service Station (FSS) 1-45
1.8.2 Air Traffic Control Tower (ATCT) 1-47
1.8.3 Terminal Radar Approach Control (TRACON) 1-49
1.8.4 Air Route Traffic Control Centers (ARTCC) 1-49
1.8.5 Airway Facilities Service Station 1-49

1.9 Passenger Terminal Environment 1-50
1.9.1 Passenger Terminal Apron 1-52
1.9.2 Terminal Auto Parking 1-52
1.9.3 Terminal Curb 1-52

1.9.4 Terminal Access 1-53
1.9.5 Air Carrier Fueling....1-53
1.9.6 Rental Car Facilities....1-54

1.10 General Aviation (GA) Area....1-55
1.10.1 Fixed Base Operators (FBO) and Services....1-55
1.10.2 GA Aprons and Tiedowns....1-56
1.10.3 Covered Aircraft Storage....1-59
1.10.4 Fueling Facilities....1-60

1.11 Landside Support Services....1-61
1.11.1 Aircraft Rescue and Firefighting Facility....1-61
1.11.2 Air Cargo....1-62
1.11.3 Airport Maintenance....1-63
1.11.4 Utilities....1-64
1.11.5 Airport Industrial Park....1-65
1.11.6 Archery, Skeet and Rifle Range....1-65
1.11.7 Foreign Trade Zone....1-65
1.11.8 Customs Service....1-66

1.12 Airport Access....1-66
1.12.1 Airport Area....1-67
1.12.2 Public Transportation....1-67
1.12.3 Taxicab Service....1-67
1.12.4 Future Plans....1-70

1.13 Airport Environment and Land Use....1-70
1.13.1 Existing Airport Land Use and Zoning....1-70
1.13.2 Surrounding Future Land Use and Zoning....1-70
1.13.3 Other Environmental Issues....1-72
1.13.4 Local Government Planning Process....1-72
1.13.5 Airport Hazard District....1-72
1.13.6 Noise Zones....1-77

1.14 Previous Planning Studies....1-77

CHAPTER 2: AVIATION DEMAND FORECASTS

2.1 Introduction…. 2-1

2.2 Socioeconomic Trends.... 2-1
2.2.1 Airport Primary Air Service Area.... 2-1
2.2.2 Factors Affecting Future Aviation Demand.... 2-4
2.2.3 Population.... 2-4
2.2.4 Employment.... 2-4
2.2.5 Per Capita Personal Income.... 2-4
2.2.6 National Economic Conditions.... 2-7
2.2.7 Airfares.... 2-7
2.2.8 Airline Competition and Service.... 2-7
2.2.9 Effects of September 11, 2001.... 2-7

2.2.10 Socioeconomic Summary 2-8

2.3 Scheduled Service Forecasts 2-8
2.3.1 Historical Enplanements at GNV 2-8
2.3.2 Enplanement Projections 2-11
2.3.3 Scheduled Service Operations Analysis and Projections 2-15

2.4 General Aviation Forecasts 2-18
2.4.1 National Trends 2-18
2.4.2 Based Aircraft Forecasts 2-18
2.4.3 Based Aircraft Splits 2-20
2.4.4 General Aviation Operations Forecast 2-20
2.4.5 General Aviation Local/Itinerant Operational Splits 2-23

2.5 Military Forecasts 2-23

2.6 Itinerant and Local Operations Totals for GNV 2-24

2.7 Design Day/Design Hour Activity Forecasts 2-25

2.8 Annual Instrument Approaches 2-29

2.9 Air Cargo Forecasts 2-30

2.10 Comparison with Other Forecast Efforts 2-31

2.11 Summary of Forecasts 2-33

CHAPTER 3: DEMAND/CAPACITY ANALYSIS AND FACILITY REQUIREMENTS

3.1 Introduction 3-1

3.2 Airspace 3-1
3.2.1 Surrounding Airspace 3-1
3.2.2 Obstructions 3-3
3.2.3 Airfield Layout 3-3

3.3 Demand Capacity Analysis 3-4
3.3.1 Factors Affecting Airfield Capacity 3-4
3.3.2 Airfield Capacity Estimates 3-11
3.3.3 Capacity Enhancement Alternatives, Summary and Conclusions 3-13

3.4 Design Aircraft and Airport Reference Code 3-14

3.5 Runway Analysis 3-16
3.5.1 Runway Designation 3-16
3.5.2 Runway Wind Coverage 3-17
3.5.3 Runway Length Requirements 3-18
3.5.4 Runway Navigational Aids 3-20
3.5.5 Runway Visual Aids 3-21

3.5.6 Airfield Pavement Conditions 3-22
3.5.7 Runway Protection Zones 3-23
3.5.8 Runway Safety Area 3-24
3.5.9 Runway Object Free Areas 3-24

3.6 Taxiway Analysis 3-25
3.6.1 Taxiway Design Standards 3-25
3.6.2 Taxiway Pavements 3-25
3.6.3 Taxiway Exits 3-26
3.6.4 Taxiway Fillets 3-26
3.6.5 Taxiway Hold Aprons/Bypass Taxiways 3-27
3.6.6 Taxiway Lighting and Visual Aids 3-27

3.7 Air Carrier Terminal Area Requirements 3-27
3.7.1 Air Carrier Terminal Building 3-27
3.7.2 Air Carrier Terminal Apron 3-28
3.7.3 Auto Parking 3-29

3.8 Aviation Support Facilities 3-30
3.8.1 Airport Rescue and Firefighting Facilities 3-30
3.8.2 Fuel Farm 3-31
3.8.3 Air Traffic Control Tower 3-32
3.8.4 Airport Maintenance Building 3-32
3.8.5 Consolidated Rental Car Maintenance Facility 3-32
3.8.6 Aircraft Wash Rack 3-33

3.9 Air Cargo Facilities 3-33

3.10 General Aviation Facilities 3-34
3.10.1 Aircraft Aprons and Tiedowns 3-35
3.10.2 Transient Apron Parking Requirements 3-35
3.10.3 Local Parking Apron/Tiedown Requirements 3-37
3.10.4 Aircraft Hangars 3-38

3.11 Non-Aviation Support and Miscellaneous Recommendations 3-40
3.11.1 Rifle Range 3-40
3.11.2 Archery Range 3-40
3.11.3 Former Police Academy Driving Range 3-40
3.11.4 Cell Tower 3-40
3.11.5 Commercial/Industrial Development 3-40
3.11.6 Hotel/Business Park Development 3-41
3.11.7 Stormwater Management 3-41
3.11.8 SWPPP and SPCC Plans 3-41
3.11.9 Environmental Mitigation 3-42
3.11.10 Security Concerns 3-43
3.11.11 Fencing 3-43
3.11.12 Part 150 Study 3-43
3.11.13 Local Comprehensive Plans 3-43

3.12 Airport Access 3-44

3.13 Airport Lands 3-44

3.14 Summary 3-44

CHAPTER 4: IDENTIFICATION AND EVALUTION OF ALTERNATIVES

4.1 Introduction 4-1
4.1.1 Evaluation Criteria 4-1

4.2 Runway 6/24 Extension Alternatives 4-2
4.2.1 "No-Build" Alternative 4-3
4.2.2 Alternative A-1-A: Extend Runway 6/24 2,820 Feet, Relocate Runway 6 Threshold 500 Feet and Install ILS for Runway 6 4-5
4.2.3 Alternative A-2-A: Extend Runway 6/24 3,320 Feet, Relocate Runway 6 Threshold 1,000 Feet and Install ILS for Runway 6 4-8
4.2.4 Alternative A-3-A: Extend Runway 6/24 4,800 Feet, Relocate Runway 6 Threshold 2,500 Feet and Install ILS for Runway 6 4-11
4.2.5 Runway 6/24 Extension Alternatives Comparison 4-14

4.3 Air Cargo Development Alternatives 4-15
4.3.1 "No-Build" Alternative 4-15
4.3.2 Alternative AC-1: Northeast Cargo Development 4-17
4.3.3 Alternative AC-2: Southeast Air Cargo Development 4-17

4.4 Air Traffic Control Tower Location Alternatives 4-21
4.4.1 "No-Build" Alternative 4-21
4.4.2 Alternative ATC-1: Trim and/or Remove Trees and Vegetation Obstructing Line-of-Sight Between Runway 24 and ATCT 4-21
4.4.3 Alternative ATC-2: Increase Tower Height/Build New Tower in Proximity 4-23
4.4.4 Alternative ATC-3: Relocate ATCT to Flight Service Station Location on the West Portion of the Airfield 4-23
4.4.5 Alternative ATC-4: Relocate ATCT to West of the Passenger Terminal 4-23

4.5 General Aviation (GA) Area 4-25
4.5.1 Apron Expansion 4-25
4.5.2 T-Hangar Expansion 4-29
4.5.3 Corporate Hangar Expansion 4-29

4.6 Miscellaneous Development 4-29

4.7 Alternatives Summary 4-31

CHAPTER 5: ENVIRONMENTAL OVERVIEW

5.1 Introduction 5-1

5.2 Federal Environmental Regulations 5-2
5.2.1 Categorical Exclusions 5-2
5.2.2 Environmental Assessment 5-3
5.2.3 Environmental Impact Statement 5-3

5.3 Federal, State, Regional and Local Environmental Coordination 5-4

5.4 Airport Master Plan Environmental Overview..... 5-4
5.4.1 Noise 5-5
5.4.2 Compatible Land Use 5-10
5.4.3 Social Impacts 5-33
5.4.4 Induced Socioeconomic Impacts.....5-33
5.4.5 Air Quality 5-34
5.4.6 Water Quality 5-35
5.4.7 Department of Transportation Act, Section 4(f) 5-40
5.4.8 Historic, Architectural, Archaeological and Cultural Resources 5-40
5.4.9 Biotic communities 5-40
5.4.10 Habitat Assessment 5-42
5.4.11 Threatened, Endangered, and Sensitive Species.....5-43
5.4.12 Wetlands.....5-48
5.4.13 Wetlands Classification 5-52
5.4.14 Floodplains 5-55
5.4.15 Coastal Zone Management Program 5-56
5.4.16 Coastal Barriers 5-58
5.4.17 Wild and Scenic Rivers 5-58
5.4.18 Prime and Unique Farmland 5-58
5.4.19 Energy Supply and Natural Resources 5-59
5.4.20 Light Emissions.....5-59
5.4.21 Solid Waste Impact 5-60
5.4.22 Construction Impacts 5-60
5.4.23 Other Considerations 5-61

5.5 Environmental Processing 5-61

5.6 Environmental Overview –Summary.....5-61

CHAPTER 6: AIRPORT PLANS

6.1 Introduction 6-1

6.2 Cover Sheet (Sheet 1 of 13) 6-2

6.3 Facilities Layout Plan (Sheet 2 of 13) 6-4

6.4 Airport Layout Plan (Sheet 3 of 13)..... 6-6

6.5 Terminal Area Plan (Sheet 4 of 13) 6-8

6.6 General Aviation Building Area Plan (Sheet 5 of 13).....6-10

6.7 Inner Portion of Approach Surface Plan – Runway 10 (Sheet 6 of 13).....6-12

6.8 Inner Portion of Approach Surface Plan – Runway 28 (Sheet 7 of 13).....6-14

6.9 Inner Portion of Approach Surface Plan – Runway 6 (Sheet 8 of 13).....6-16

6.10 Inner Portion of Approach Surface Plan – Runway 24 (Sheet 9 of 13) 6-18

6.11 FAR Part 77 Airspace Surfaces (Sheet 10 of 13) 6-20

6.12 Existing (2003) Land Use Plan and Noise Contours (Sheet 11 of 13) 6-22

6.13 Future (2023) Land Use Plan and Noise Contours (Sheet 12 of 13) 6-24

6.14 Airport Property Map (Sheet 13 of 13) 6-26

6.15 Summary 6-28

CHAPTER 7: PLAN IMPLEMENTATION

7.1 Introduction 7-1

7.2. Development Phasing 7-1
7.2.1 Short Term (2203-2008) Airport Development 7-1
7.2.2 Phase 2 (2009-2013) Airport Capital Development 7-8
7.2.3 Phase 3 (2014-2023) Airport Capital Development 7-11

7.3 Capital Improvement Financial Plan (CIP) 7-14

CHAPTER 8: FINANCIAL IMPLEMENTATION ANALYSIS

8.1 Financial Analysis Objectives 8-1

8.2 Overall Approach 8-1

8.3 Capital Funding Sources 8-2

8.3.1 FAA Airport Improvement Program Grants 8-2
8.3.2 FAA Facilities & Equipment Funds 8-3
8.3.3 Florida Department of Transportation Grants 8-3
8.3.4 Passenger Facility Charges 8-3
8.3.5 Federal Transit Authority Highway/Intermodal Funding 8-4
8.3.6 Rental Car Company Customer Facility Charges 8-4
8.3.7 Other Funding 8-5
8.3.8 Private Third Party Financing 8-5
8.3.9 Cash Reserves/Airport Net Revenues 8-5

8.4 Financial Analysis and Implementation Plan
For the Master Plan Capital Improvement Program 8-6

8.4.1 Estimated Project Costs and Development Schedule 8-6
8.4.2 Sources and Uses of Capital Funding 8-6
8.4.3 Projected Operations and Maintenance Expenses 8-10
8.4.4 Projected operating Revenues 8-12

8.4.5 Financial Plan Summary 8-12

8.5 Financial Analysis Tables 8-17

LIST OF TABLES

CHAPTER 1: ISSUES AND EXISTING CONDITIONS

Table 1-1 GNV and Surrounding GA Airports and Associated Services 1-7

Table 1-2 GNV and Other Surrounding Commercial Service Airports and Associated Services 1-8

Table 1-3 Special Use Airspace Surrounding GNV 1-32

Table 1-4 Published Instrument Approach Procedures 1-34

Table 1-5 Gainesville FSS Communication Frequencies 1-47

Table 1-6 Breakdown of Terminal Space Usage 1-52

Table 1-7 Annual Amount of Fuel Delivered to Air Carriers (1989-2001) 1-54

Table 1-8 Conventional Hangars at GNV 1-59

Table 1-9 Aviation Fuel Delivered by Flightline Aviation (1989-2001) 1-60

Table 1-10 Maintenance Equipment Inventory 1-63

CHAPTER 2: AVIATION DEMAND FORECASTS

Table 2-1 Population Forecasts for Study Area 2-5

Table 2-2 Per Capita Personal Income Forecasts for Study Area 2-6

Table 2-3 Air Carrier Versus Commuters Enplanement Splits 2-14

Table 2-4 Air Carrier Versus Commuters Operations Splits 2-17

Table 2-5 Based Aircraft Splits 2-20

Table 2-6 General Aviation Local/Itinerant Splits 2-23

Table 2-7 Military Operations 2-24

Table 2-8 Total Local/Itinerant Splits 2-25

Table 2-9 Design Day/Design Hour Activity Forecasts 2-26

Table 2-10 Instrument Approaches 2-29

Table 2-11 TAF Comparison....2-32

Table 2-12 Forecast Summary....2-33

CHAPTER 3: DEMAND/CAPACITY ANALYSIS AND FACILITY REQUIREMENTS

Table 3-1 Special Use Airspace Surrounding GNV 3-2

Table 3-2 Approach Aids Assumed for Capacity Calculations 3-5

Table 3-3 Existing Taxiways – Runway 10/28 3-6

Table 3-4 Existing Taxiways – Runway 6/24 3-7

Table 3-5 Classification of Weather Conditions 3-8

Table 3-6 Occurrence of VFR and IFR Weather Conditions 3-8

Table 3-7 Aircraft Classifications for Determining the Fleet Mix Index 3-10

Table 3-8 Percent Breakdown of Class C Aircraft 3-10

Table 3-9 Annual Service Volume – Long-Range Planning Method 3-11

Table 3-10 Annual Service Volume – Detailed Method 3-13

Table 3-11 Comparison of Forecast Operations and Airfield Capacity 3-14

Table 3-12 Aircraft Approach Category and Airplane Design Group 3-15

Table 3-13 Airplane Design Group Aircraft 3-15

Table 3-14 Airfield Geometry 3-16

Table 3-15 Wind Coverage for Individual Runway Ends 3-18

Table 3-16 Aircraft Runway Length Requirements 3-18

Table 3-17 Facility Requirements: Runway Length 3-20

Table 3-18 NAVAID Facility Requirements 3-21

Table 3-19 Pavement Condition and Rehabilitation Recommendations 3-22

Table 3-20 Existing and Projected RPZ Dimensions 3-23

Table 3-21 Runway Safety and Object Free Area Standards 3-24

Table 3-22 Taxiway Pavement Condition and Rehabilitation Recommendations 3-26

Table 3-23 Air Carrier Terminal Facility Requirements....3-28

Table 3-24 Air Carrier Apron Pavement Condition and Rehabilitation Recommendations....3-28

Table 3-25 Auto Parking Requirements....3-30

Table 3-26 FAR Part 139 ARFF Equipment Requirements....3-31

Table 3-27 Aviation Fuel Delivered by Flightline Aviation (1989-2001)....3-31

Table 3-28 Facility Requirements: Air Cargo....3-34

Table 3-29 GA Apron Pavement Condition and Rehabilitation Recommendations....3-35

Table 3-30 Transient Aircraft Apron Parking Demand (2003-2023)....3-36

Table 3-31 Based GA Aircraft Tiedown/Parking Apron Requirements (2003-2023)....3-37

Table 3-32 Aircraft Apron Demand Summary (2003-2023)....3-38

Table 3-33 Aircraft Hangar Summary....3-38

Table 3-34 Projected Coverage Aircraft Storage Facilities Requirements....3-39

Table 3-35 Projected Covered Aircraft Storage Facilities....3-40

Table 3-36 GNV Facility Requirements Summary....3-44

CHAPTER 4: IDENTIFICATION AND EVALUTION OF ALTERNATIVES

Table 4-1 Runway Development Concept....4-14

Table 4-2 Air Cargo Development Concept....4-18

Table 4-3 ATCT Development Concept....4-24

CHAPTER 5: ENVIRONMENTAL OVERVIEW

Table 5-1 Land Use Compatibility Guidelines With Yearly Day-Night Average Sound Levels....5-8

Table 5-2 Soil Series Mapped on The Gainesville Regional Airport Study Site....5-38

Table 5-3 Wildlife Species Observed....5-43

Table 5-4 Threatened and Endangered Species in Alachua County....5-44

Table 5-5 Gopher Tortoise Observations....5-46

Table 5-6 Wetlands Classification and Acreages 5-52

Table 5-7 Dominant Wetland Species.....5-53

CHAPTER 8: FINANCIAL IMPLEMENTATION ANALYSIS

Table 8-1 Estimated Project Costs and Development Schedule 8-19

Table 8-2 Projected Capital Funding Sources.....8-28

Table 8-3 Actual, Estimated, Budgeted and Projected Operations & Maintenance Expenses 8-32

Table 8-4 Actual, Estimated, Budgeted and Projected Operating Revenues.....8-34

Table 8-5 Financial Plan Summary 8-36

LIST OF FIGURES

CHAPTER 1: ISSUES AND EXISTING CONDITIONS

Figure 1-1 Regional Area Map 1-4
Figure 1-2 Vicinity Map 1-6
Figure 1-3 Surrounding Airports 1-9
Figure 1-4 All Weather Wind Rose 1-13
Figure 1-5 IFR Wind Rose 1-14
Figure 1-6 Identification of Paved Surfaces 1-16
Figure 1-7 Pavement Condition 1-17
Figure 1-8 Location of Visual and Radio NAVAIDS 1-22
Figure 1-9 Types of Airspace 1-26
Figure 1-10 Jacksonville Sectional Aeronautical Chart 1-31
Figure 1-11 IFR Enroute Low Altitude Chart 1-33
Figure 1-12 ILS RWY28 1-35
Figure 1-13 RNAV (GPS) RWY 6 1-36
Figure 1-14 RNAV (GPS) RWY 10 1-37
Figure 1-15 RNAV (GPS) RWY 24 1-38
Figure 1-16 RNAV (GPS) RWY 28 1-39
Figure 1-17 VOR RWY 24 1-40
Figure 1-18 VOR RWY 28 1-41
Figure 1-19 VOR/DME RWY 6 1-42
Figure 1-20 VOR/DME RWY 10 1-43
Figure 1-21 NDB RWY 28 1-44
Figure 1-22 Terminal Environment Aerial 1-51
Figure 1-23 GA Area 1-56

Figure 1-24 GA Area (Continued) 1-57
Figure 1-25 Regional Highway Map 1-67
Figure 1-26 Highway Access to GNV 1-68
Figure 1-27 Generalized Future Land Use Map 1-70
Figure 1-28 Generalized Zoning Map 1-71
Figure 1-29 Airport Land Use 1-72
Figure 1-30 Airport Natural Features 1-74
Figure 1-31 Wellfield Protection Zones 1-75
Figure 1-32 Airport Clear Zones and Obstructions 1-77

CHAPTER 2: AVIATION DEMAND FORECASTS

Figure 2-1 Service Area Map 2-3
Figure 2-2 Historical Enplanement Events 2-9
Figure 2-3 Historical Enplanement 2-10
Figure 2-4 Enplanement Forecast 2-12
Figure 2-5 Commercial Service Operations Forecast 2-16
Figure 2-6 General Aviation Based Aircraft Forecast 2-19
Figure 2-7 General Aviation Operations Forecast 2-22
Figure 2-8 Monthly Distribution of Annual Enplanements 2-27
Figure 2-9 Monthly Distribution of Annual Operations 2-28
Figure 2-10 Forecast of Enplaned Cargo 2-31

CHAPTER 3: DEMAND/CAPACITY ANALYSIS AND FACILITY REQUIREMENTS

Figure 3-1 Taxiway Layout 3-6
Figure 3-2 Runway Use Configuration 3-9
Figure 3-3 Airport Business Park Development 3-42

CHAPTER 4: IDENTIFICATION AND EVALUTION OF ALTERNATIVES

Figure 4-1 Airport Business Park Development 4-4

Figure 4-2 Extend Runway 6/24 2,820 Feet, Relocate Runway 6 Threshold 500 Feet and Install ILS for Runway 6 4-6

Figure 4-3 Extend Runway 6/24 2,820 Feet, Relocate Runway 6 Threshold 500 Feet and Install ILS for Runway 24 4-7

Figure 4-4 Extend Runway 6/24 3,320 Feet, Relocate Runway 6 Threshold 1,000 Feet and Install ILS for Runway 6 4-9

Figure 4-5 Extend Runway 6/24 2,820 Feet, Relocate Runway 6 Threshold 1,000 Feet and Install ILS for Runway 24 4-10

Figure 4-6 Extend Runway 6/24 4,800 Feet, Relocate Runway 6 Threshold 2,500 Feet and Install ILS for Runway 6 4-12

Figure 4-7 Extend Runway 6/24 4,800 Feet, Relocate Runway 6 Threshold 2,500 Feet and Install ILS for Runway 24 4-13

Figure 4-8 Air Cargo "No-Build" Alternative 4-16

Figure 4-9 Air Cargo Development Alternative 1 – NE Site – North of Runway 24 Extension 4-19

Figure 4-10 Air Cargo Development Alternative 2 – SE Site – South of Runway 10/28 4-20

Figure 4-11 Air Traffic Control Tower Alternatives 4-22

Figure 4-12 General Aviation Development 4-26

Figure 4-13 General Aviation Development Area – A 4-27

Figure 4-14 General Aviation Development Area – B 4-28

Figure 4-15 Miscellaneous Development 4-30

CHAPTER 5: ENVIRONMENTAL OVERVIEW

Figure 5-1 2003 Noise Contours 5-11

Figure 5-2 2023 Noise Contours 5-12

Figure 5-3 Future Land Use Map 5-14

Figure 5-4 Existing Zoning Map 5-15

Figure 5-5 Airport Height Notification Zone 5-24

Figure 5-6 Airport Runway Clear Zone 5-25

Figure 5-7 Airport Noise Zone 5-26

Figure 5-8 Educational Facilities Overlay Zone 5-27

Figure 5-9 Airport Facilities Zoning Map 5-32

Figure 5-10 Wellfield Protection Map 5-39

Figure 5-11 Threatened and Endangered Species 5-47

Figure 5-12 Wetland Map 5-51

Figure 5-13 Floodplain Map 5-57

CHAPTER 8: FINANCIAL IMPLEMENTATION ANALYSIS

Figure 8-1 Summary of Base Year and Escalated Costs For the Capital Program 8-6

Figure 8-2 Summary of Sources and uses of Capital Funding 8-8

APPENDICIES

Appendix A – GACRAA and the City of Gainesville Master Plan Update Minutes

Appendix B – Birkitt Environmental Assessment Report

Appendix C – PAC/TAC Meeting Minutes

Appendix D – Individual Project Cost Estimates

Appendix E – ALP Checklist

CHAPTER 1
ISSUES AND EXISTING CONDITIONS

1.1 Introduction

The City owns, and the Gainesville-Alachua County Regional Airport Authority (GACRAA) operates and maintains the Gainesville Regional Airport (GNV), which provides commercial air transportation, General Aviation (GA), cargo and other aviation related services to North-Central Florida.

In the fall of 2002, GACRAA selected Reynolds, Smith and Hills, Inc. (RS&H) as the Prime Consultant to prepare an update to GNV's 1987 Airport Master Plan. GACRAA determined the update was necessary to direct future development at GNV as a result of changes in passenger demand, increased interest in the airport's GA facilities, and the need for considering long-term expansion alternatives of GNV's facilities and infrastructure.

Presented in this Airport Master Plan Update is an evaluation of the airport's existing facilities and an identification of actions recommended to meet air transportation needs of the region. Realizing airport facilities frequently change throughout the master planning process, the accuracy of Chapter 1 – Issues and Existing Conditions was predicated upon facilities, which existed at GNV as of January 2003. During the course of the Study, both Runway 6/24 and 10/28 changed designation to 7/25 and 11/29, respectively. However, previous designations are used throughout this report. The overall update process involved individual study elements that provided detailed examinations of the existing airport and operating facilities to include:

- An update of existing conditions at GNV;
- A forecast of future aviation activities using available studies;
- A demand/capacity analysis and facility requirements evaluation;
- The identification and evaluation of various facility and operational improvement alternatives;
- An environmental review designed to investigate the impact of proposed development on the environment around GNV;
- A computer-generated Airport Layout Plan (ALP) depicting proposed improvements resulting from the overall study; and
- A financial analysis necessary to estimate the cost of proposed airport development and to include proposed methods of financing.

The study format followed in this Airport Master Plan Update is consistent with the Federal Aviation Administration (FAA) suggested format as described in Advisory Circular 150/5070-6A, *Airport Master Plans*, and the Florida Department of Transportation (FDOT) *Guidebook for Airport Master Planning*. Consistent with FAA's format and FDOT guidance, the following report sections were developed in this Airport Master Plan Update.

I. Issues and Existing Conditions

II. Aviation Demand Forecasts
III. Demand/Capacity Analysis and Facility Requirements
IV. Identification and Evaluation of Alternatives
V. Environmental Overview
VI. Airport Plans
VII. Plan Implementation

The production of the ALP was developed in conformance with FAA and aviation industry standards. Guidelines for the preparation of these drawing plans are contained in FAA Advisory Circular 150/5300-13 *Airport Design*.

To assure the accuracy of the GNV Master Plan Update and determine if all goals and objectives had been achieved, each section of the Airport Master Plan was submitted for review and comment to GACRAA staff and members of the Technical Advisory Committee (TAC). Comments received from GACRAA staff and TAC members were then appropriately addressed and implemented throughout the study. Additional reviews and confirmations included governmental approval of the ALP and aviation demand forecasts, which were obtained from FAA and FDOT.

To meet state and federal funding eligibility requirements, proposed airport improvement projects must be included in an approved Airport Master Plan and ALP. However, since funding eligibility for proposed projects includes additional criteria, FAA and FDOT approval of development items recommended in the GNV Master Plan narrative report and reflected on the ALP commits neither agency to a funding provision for any of the proposed improvement projects.

1.2 Goals and Objectives

A preliminary list of goals and objectives to be addressed in the Airport Master Plan were prepared based upon the scope of work developed for this project, and an initial evaluation of the physical airport and surrounding environs. In addition to this initial list, input was obtained through meetings with GNV staff and members of the TAC. Specific goals and objectives established for GNV, as indicated by airport staff and the TAC, should be flexible to the degree required for the airport to meet these future aspirations while simultaneously being responsive to the needs of the region in which it serves. The following is a list of primary goals and objectives that were addressed in this study:

- Create a plan that meets the needs of the region throughout the study period.
- Develop a schedule for the implementation and construction of the following projects:
  - Extension of Runway 6/24 and implementation of an ILS
  - Development and expansion of air cargo facilities
  - Expansion of GA facilities
  - Relocation of the Air Traffic Control Tower (ATCT)
  - Safety improvements to the Runway Safety Area (RSA) serving the departure end of Runway 10
  - Rental car service facility
  - Airport maintenance facility
  - Development of communications infrastructure
  - Airline terminal renovation and expansion

- Provide better ground access to and from the airport including an improved linkage with I-75 and Waldo Road.
- Make transportation investments that maximize the potential of the region's tourism resources and promote economic growth.
- Increase the availability and flexibility of funds for air cargo needs.
- Coordination with the local Metropolitan Transportation Planning Organization (MTPO), North Central Florida Regional Planning Council (NCFRPC) and Florida Department of Community Affairs to gain exemption from the Development of Regional Impact (DRI) review requirements.
- Identify potential environmental impacts.
- Develop a Capital Improvement Program (CIP) that identifies funded projects, projects not funded, priorities and potential funding sources.
- Provide realistic project funding projections and justification for CIP projects.
- Develop sufficient conceptual alternatives and environmental information to serve as input for future project development, environmental analysis and design activities at GNV.
- Build a consensus among public and private transportation agencies responsible for the provision or administration of transportation services as needed to justify improvements.
- Meet FAA safety and security criteria for the entire airport.
- Promote further economic development of compatible on- and off- airport land uses.

1.3 Airport Setting

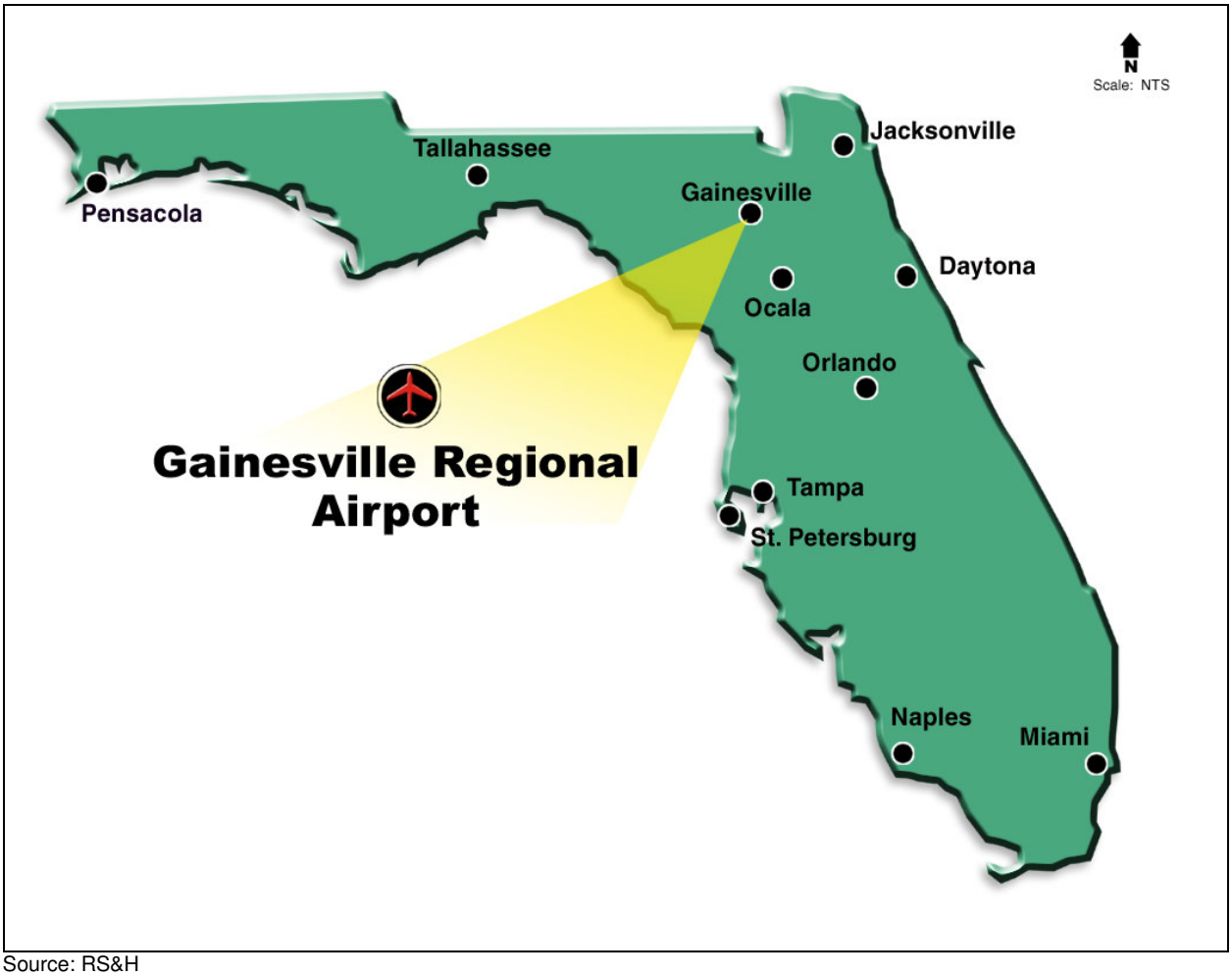
Alachua County, located in north central Florida, contains the City and GNV. The City, which is the Alachua County Seat, is centrally located within Alachua County. While the counties of Bradford, Columbia and Union border Alachua County to the north, Marion and Levy Counties border Alachua County to the south. Additionally, Putnam County borders Alachua County to the east and Gilchrist and Levy Counties to the west. Land area associated with Alachua County is approximately 570,880 acres or 892 square miles. Of the 570,880 acres composing Alachua County, approximately 31,000 acres or 5.0 percent is owned by the state of Florida. Geometrically, Alachua County measures approximately 36 miles east to west and 33 miles north to south.

1.3.1 Airport Location

GNV is located northeast of the city limits of Gainesville, Florida, approximately 155 miles southeast of Tallahassee, Florida, and approximately 70 miles southwest of Jacksonville, Florida. Additionally, GNV is positioned approximately 65 miles west of the Atlantic Ocean and approximately 75 miles east of the Gulf of Mexico.

The central business district associated with the City is positioned approximately three miles southwest of GNV and 45 miles north of Ocala. The University of Florida campus is located approximately four miles southwest of the airport. Additionally, GNV is located in the Gainesville Metropolitan Statistical Area (MSA), which shares the same borders as Alachua County. A regional area map presented in Figure 1-1 illustrates the location of the City and

Figure 1-1
REGIONAL AREA MAP



Source: RS&H

GNV relative to the Atlantic Ocean, Gulf of Mexico and the State of Florida. A vicinity map presented in Figure 1-2 illustrates the proximity of the City to GNV.

1.3.2 Airport History

The initial development of what is now known as GNV was completed in 1941 as a result of actions instituted by the Work Progress Administration (WPA). Construction of GNV was conducted under the guidance and leadership of the U.S. Engineering Department. Originally, GNV was named Alachua Army Airfield, which was used extensively by the Army Air Corp and Army Air Forces for training and deployment during World War II.

In 1942, the Gainesville City Council renamed the airfield the John R. Alison Airport. Alison was a local citizen and graduate of the University of Florida who became a highly decorated pilot as a result of his outstanding flying abilities demonstrated in World War II. Among Alison's awards and commendations was the Distinguished Flying Cross, received while serving with the Flying Tigers under General Chennault. In addition to his service to the U.S., Alison served in England as an Observer and in Russia as a military flight instructor. Later, President Truman selected Alison to fill the position of Assistant Secretary of Commerce for Aeronautics.

The Airport was officially deeded to the City in 1948. Though officially named the James R. Alison Airport, the city operated GNV as the Gainesville Municipal Airport. To recognize the demand fulfilled by GNV in meeting the area's air transportation needs, the airfield was officially renamed the GNV in 1977. The commercial air service terminal however, was dedicated to James R. Alison in 1979.

1.3.3 Airport Land Ownership

GNV is operated and maintained by the GACRAA. The GACRAA is composed of nine members who are responsible for making decisions regarding activity, policy, and budgeting measures necessary to manage operations at GNV. Of the nine-member board, the City appoints five members, while the Governor of the State of Florida appoints three members, and Alachua County appoints one.

GNV occupies approximately 1,870 acres within Alachua County. Of the total acreage, approximately 1,422 acres or 76 percent of the total area is designated for aeronautical purposes such as runways, terminal facilities and clear zones. Approximately 220 acres or 12 percent of the total 1,870 acres occupied by the airport has been designated for development of an industrial park. The land is currently owned by the City.

1.3.4 Adjacent Airports and Services

It is important to understand the geographic relationship of GNV to nearby facilities and services offered. Therefore, an inventory of GA and Commercial Service public use airports surrounding GNV was developed and is presented in Tables 1.1 and 1.2. The location of the surrounding airports is illustrated in Figure 1-3. The service areas depicted in Figure 1-3 will be discussed in greater detail in Chapter 2 of this report.

Figure 1-2
VICINITY MAP



Source: www.mapquest.com

Table 1-1
GNV AND SURROUNDING GA
AIRPORTS AND ASSOCIATED SERVICES

Airport	City	Runways	Pavement	Instrument Approaches	Services			Based Aircraft	Operations
					Fuel	Airframe and Power Plant	Avionics		
Flying Ten Airport	Archer, FL	18/36-3,220'x170'	Turf	VFR Only	100LL	No	No	22	30,000
Cecil Field	Jacksonville, FL	09R/27L-8,000'x200' 18L/36R-12,500'x200' 09L/27R-8,000'x200' 18R/36L-8,000'x200'	Asphalt-Concrete Asphalt-Concrete Asphalt-Concrete Asphalt-Concrete	VOR,GPS GPS	100LL Jet A	No	No	32	12,269
Marion County	Dunnellon, FL	05/23-4,941'x100' 09/27-4,702'x60'	Asphalt Asphalt	VOR,GPS	100LL Jet A	Yes	No	47	17,689
Gainesville Regional	Gainesville, FL	06/24-4,158'x100' 10/28-7,501'x150'	Asphalt Asphalt	GPS,VOR GPS,ILS,VOR, NDB	100LL Jet A	Yes	Yes	113	83,190
Rudy's Airport	High Springs, FL	16/34-2,825'x75'	Turf	VFR Only	None	No	No	3	200
Herlong Field	Jacksonville, FL	07/25-4,000'x100' 11/29-3,500'x100'	Asphalt Asphalt	NDB-A,GPS	100LL Jet A	Yes	No	130	65,000
Kay Larkin	Palatka, FL	09/27-5,003'x100' 12/30-3,000'x75' 17/35-3,500'x75'	Asphalt Asphalt Asphalt	NDB,GPS	100LL Jet A	Yes	No	77	40,596
Keystone Airpark	Keystone Heights, FL	04/22-5,044'x100' 10/28-4,899'x75' 16/34-4,400'x150'	Asphalt Asphalt Asphalt	VOR,GPS	100LL Jet A	Yes	No	38	24,500
Lake City Municipal	Lake City, FL	10/28-8,003'x150' 05/23-4,001'x75'	Asphalt Asphalt	GPS,NDB	100LL Jet A	Yes	No	26	29,941
Suwannee County	Live Oak, FL	07/25-4,000'x75'	Asphalt	VFR Only	100LL	Yes	No	20	2,640
Ocala Regional	Ocala, FL	18/36-6,907'x150' 08/26-3,010'x50'	Asphalt Asphalt	ILS,GPS,VOR, NDB	100LL Jet A	Yes	Yes	104	49,600
Williston Municipal	Williston, FL	05/23-6,390'x150' 14/32-4,330'x100'	Asphalt Asphalt	VOR,GPS	100LL Jet A	Yes	Yes	36	16,250

GPS – Global Positioning System
ILS – Instrument Landing System
NDB – Non-Directional Beacon
VFR – Visual Flight Rules
VOR – Very High-Frequency Omni Range

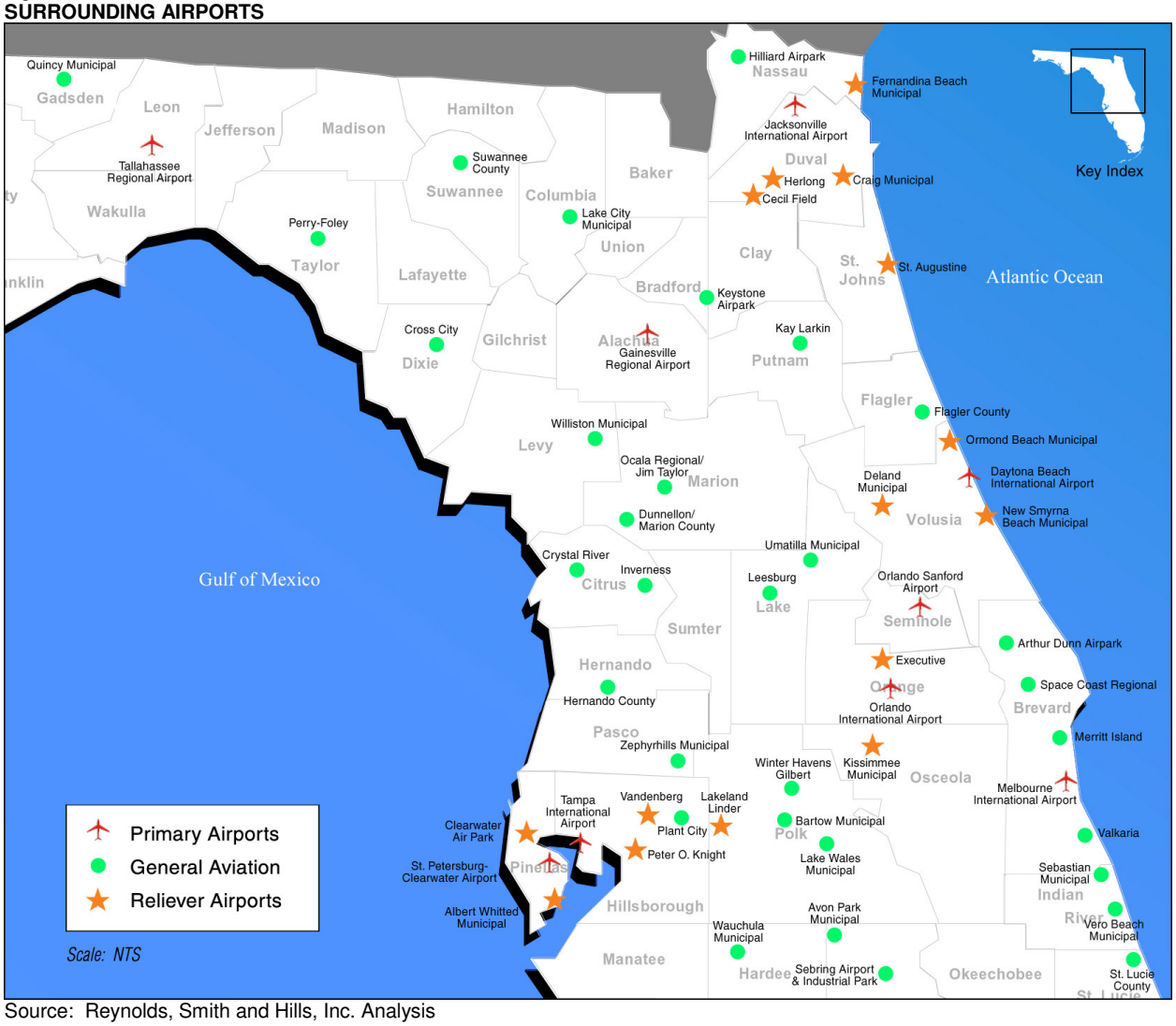
Source: Florida Airport Directory (2002)
Instrument Approach Procedures (November 28, 2002)

Table 1-2
GNV AND OTHER SURROUNDING
COMMERCIAL SERVICE AIRPORTS AND ASSOCIATED SERVICES

Airport	City	Runways	Pavement	Air Carriers	Daily Flights
Daytona Beach International	Daytona Beach, FL	07L/25R-10,500'X150' 07R/25L-3,195'X100' 16/34-6,001'X150'	Asphalt Asphalt Asphalt	6	23
Gainesville Regional	Gainesville, FL	06/24-4,158'x100' 10/28-7,501'x150'	Asphalt Asphalt	2	10
Jacksonville International	Jacksonville, FL	07/25-10,000'x150' 13/31-7,701x150'	Concrete Concrete	14	100
Orlando International	Orlando, FL	17/35-10,000'X150' 18L/36R-12,005'X200' 18R/36L-12,004'X200'	Concrete Asphalt Concrete	33	345
Tampa International	Tampa, FL	09/27-6,998'x150' 18L/36R-8,300'x150' 18R/36L-11,002'x150' H1-100'x100'	Asphalt Asphalt Concrete Asphalt	21	270
Tallahassee Regional	Tallahassee, FL	09/27-8,000'x150' 18/36-6,076x150'	Asphalt Asphalt	4	35

Source: Florida Airport Directory (2002)
Instrument Approach Procedures (November 28, 2002)

Figure 1-3
SURROUNDING AIRPORTS



Source: Reynolds, Smith and Hills, Inc. Analysis

1.4 Airport Classification And Role

The FAA determines an airport's classification and role, which is then used in the process of assembling the National Plan of Integrated Airport Systems (NPIAS) and determining airport project funding levels.

At present, the FDOT does not implement a system of classifying airports and therefore uses the classification system of the FAA. However, the state is in the process of developing a method of identifying airport roles, which will be used in the future to allocate state funds for meeting specific goals. The state's intentions are to include the classification system in the 2004 Florida Aviation System Plan (FASP).

1.4.1 Current FAA Classification and Role Criteria

Every two years, the FAA updates and publishes the National Plan of Integrated Airport Systems (NPIAS). The latest edition was published August 28, 2002, for the period 2001-2005. The NPIAS identifies airports that are significant to the national air transportation system and lists the infrastructure development needs for each facility. This document is then used by FAA management in administering the Airport Improvement Program. In the NPIAS, the role of each airport is identified as one of four basic service levels, including:

- **PR - Commercial Service – Primary** – These airports have more than 10,000 annual passenger emplacements. Primary airports are further subdivided according to hub size based on the ratio of annual passenger enplanements at the airport to the total number of annual passenger enplanements in the U.S. There are currently 422 commercial service primary airports in the United States.

  Large Hubs - These airports enplane at least 1 percent of all annual enplanements in the U.S. There are currently 31 large hub airports.

  Medium Hubs – These airports enplane between 0.25 percent and 1 percent of all annual enplanements in the U.S. There are currently 37 medium hub airports.

  Small Hubs – These airports enplane between 0.05 percent and 0.25 percent of all annual enplanements in the U.S> There are currently 74 small hub airports.

  Non-Hubs – These airports enplane over 10,000 annual enplanements, but less than 0.05 percent of all annual enplanements in the U.S. There are currently 280 non-hub primary airports.

- **CM – Commercial Service** – Non-Primary – These airports have 10,000 or fewer annual passenger enplanements. There are currently 124 non-primary airports in the United States.

- **RL – General Aviation Reliever** – These airports are typically located in major metropolitan areas and provide general aviation aircraft an alternative to congested hub airports. There are currently 260 reliever airports.

- **GA – General Aviation** – These airports support areas that do not receive scheduled commercial service and typically have at least 10 based aircraft. There are currently 2,558 general aviation airports.

1.4.2 GNV Classification and Role

The latest update to the NPIAS was released in August of 2002 and assembled according to calendar year 2001 data. The NPIAS indicates GNV is classified as a Primary Commercial Service Airport. Additionally, GNV's enplanement total accounted for less than 0.05 percent of the total number of U.S. enplanements further classifying the airport as a Non Hub facility. Projections prepared by the FAA and published in the 2001 NPIAS indicate GNV's classification will remain unchanged in the future.

1.5 Climate

A requirement of the airport master planning process is a review of prevailing climatological conditions to assist in the evaluation of aircraft performance characteristics. Temperature, amount of precipitation and winds are generally the elements used to summarize an area's climate. Overall the climate associated with North-Central Florida is mild. In 1995, Money Magazine named Gainesville, Florida the most desirable city in the United States in which to live. Among the factors stated for the area's desirability was mild climate. The mild climate of North-Central Florida is attributed to the community's inland location, which removes much of the danger associated with tropical storms.

1.5.1 Temperature and Precipitation

North-Central Florida is predominantly warm throughout the year. In the summer however, the temperature generally drops approximately 20 degrees Fahrenheit (F) at night. Additionally, the area experiences a noticeable change of seasons, which is accompanied by short cold spells in the winter. The average temperature ranges from 57.7 degrees F in January to 81.1 degrees F in August with an annual mean temperature of 70.1 degrees F. The average amount of sunshine per day is approximately 7.75 hours and the average annual rainfall is 49.97 inches.

1.5.2 Winds

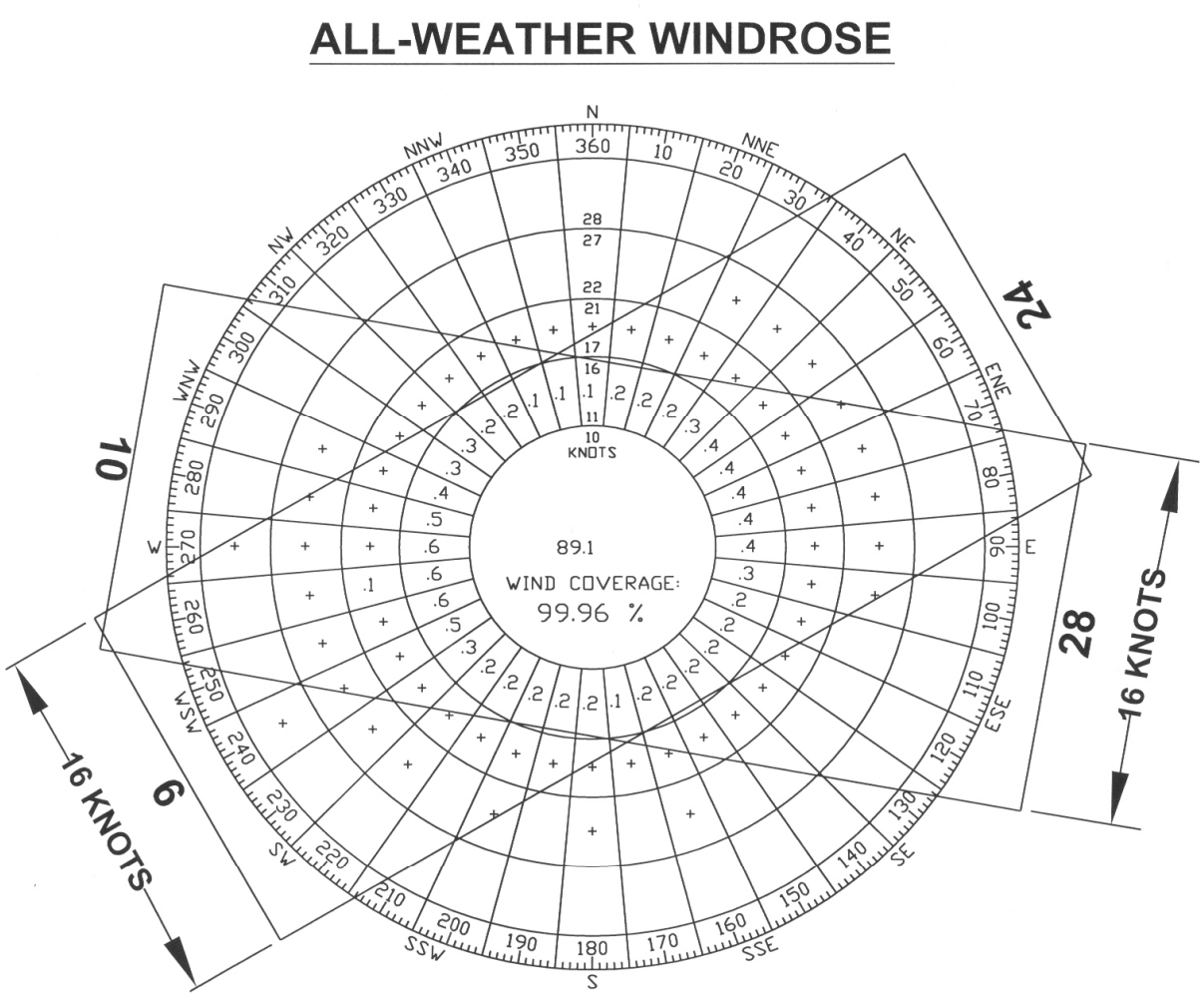
An important component of a climatological review associated with an airport is a wind analysis used for the development of runway wind roses. FAA planning guidelines recommend a 95 percent runway wind coverage for an airport based on a predetermined crosswind component for the Airport Reference Code (ARC). The ARC is a coding system used to relate airport design criteria to the operational and physical characteristics of airplanes operating and projected to operate at an airport. The ARC for GNV will be examined in Chapter 3 (Demand/Capacity Analysis and Facility Requirements).

Several crosswind coverage components (10.5, 13.0 and 16.0 knots) are used in the runway wind coverage analysis. The 10.5 and 13.0-knot components typically represent the crosswind limits of small propeller aircraft whereas the 16.0-knot component is used to accommodate larger turboprop and turbojet aircraft. If a single runway does not satisfy the FAA planning standard, a crosswind runway or additional runways may be required.

Data necessary to conduct the runway coverage wind analysis was obtained from the National Climatic Data Center. Hourly weather observation data for a ten-year period (1992-2001) recorded by an on-airport station was obtained. This data was integrated with the FAA's Airport Design computer program to generate the All-Weather and IFR wind roses for GNV. The wind

roses, which are provided in Figures 1-4 and 1-5, also identify the runway wind coverage for all crosswind components under each of these conditions.

Figure 1-4
ALL WEATHER WIND ROSE

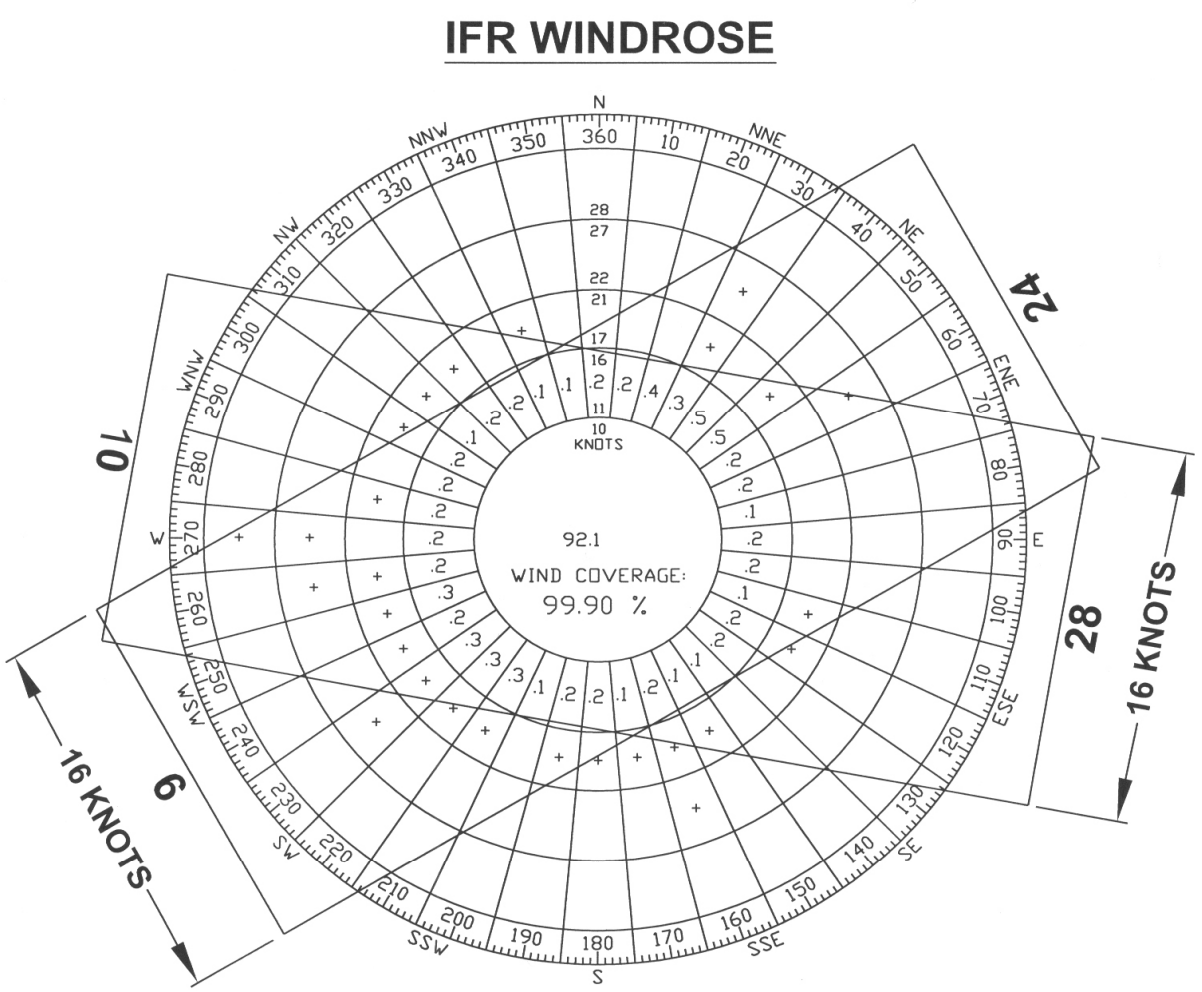


WIND COVERAGE

RUNWAY	CROSSWIND COMPONENT (KNOTS)		
	10.5	13.0	16.0
6/24	96.78%	98.52%	99.83%
10/28	96.80%	98.59%	99.81%
COMBINED	98.81%	99.64%	99.96%

Source: National Climatic Data Center, Gainesville Regional Airport 1992-2001

Figure 1-5
IFR WIND ROSE



WIND COVERAGE

RUNWAY	CROSSWIND COMPONENT (KNOTS)		
	10.5	13.0	16.0
6/24	97.35%	98.70%	99.75%
10/28	96.26%	98.22%	99.72%
COMBINED	98.66%	99.54%	99.90%

Source: National Climatic Data Center, Gainesville Regional Airport 1992-2001

1.6 Airside Facilities

This section presents a description of the existing airside facilities at GNV. The airside area of the airport, also referred to as the "Airport Operating Area" (AOA), is the area in which aircraft, support vehicles, and other aviation-specific operational activities take place. Figure 1-6 identifies the paved surfaces of GNV, while Figure 1-7 depicts the condition of each paved surface. The following facilities will be discussed in this section.

- Runways
- Taxiways
- Airfield Lighting
- Radio Navigational Aids (NAVAIDS)
- Visual NAVAIDS
- Automated Surface Observation System (ASOS)
- Runway Visual Range (RVR)

1.6.1 Runways

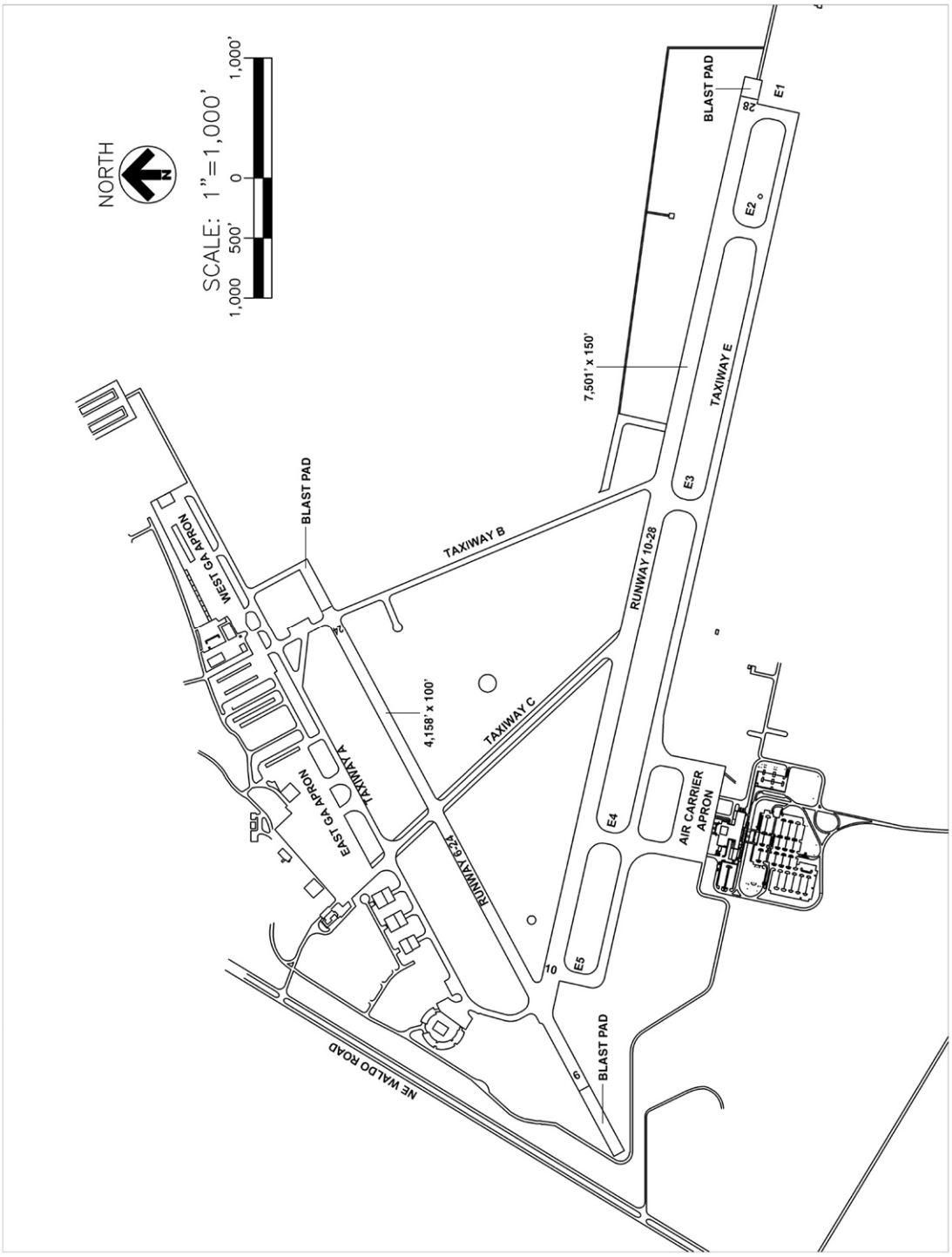
At GNV, two runways are provided for arriving and departing aircraft. These include Runway 10/28, which is oriented predominantly east and west and Runway 6/24, which is oriented northeast and southwest.

Runway 10/28 is the airport's primary runway and measures 7,501 feet in length and 150 feet in width. Runway 10/28 is composed of asphalt, is grooved and in fair condition. Additionally, Runway 10/28 is equipped with a High-Intensity Runway Lighting (HIRL) system and contains precision instrument approach markings at each end. Located at the approach end of Runway 28 is an asphalt blast pad, which measures 200 feet in length and 150 feet in width. A blast pad measuring 200 feet in length and 150 feet in width is also available at the approach end of Runway 10.

According to the latest updated ALP (September 1999), Runway 10/28 provides an estimated pavement strength of 75,000 pounds Single-Wheel Gear (SWG), 200,000 pounds Dual-Wheel Gear (DWG) and 260,000-pound Dual-Tandem Gear (DT). It should be noted that the current Airport Master Record (FAA Form 5010-1) indicates Runway 10/28 provides a runway weight bearing capacity of 260,000 pound DWG and 320,000-pound DT. Unless additional pavement data is available to support this higher figure, it is recommended the lower strength figure be coordinated with the FAA to ensure a more conservative assessment of the pavement strength.

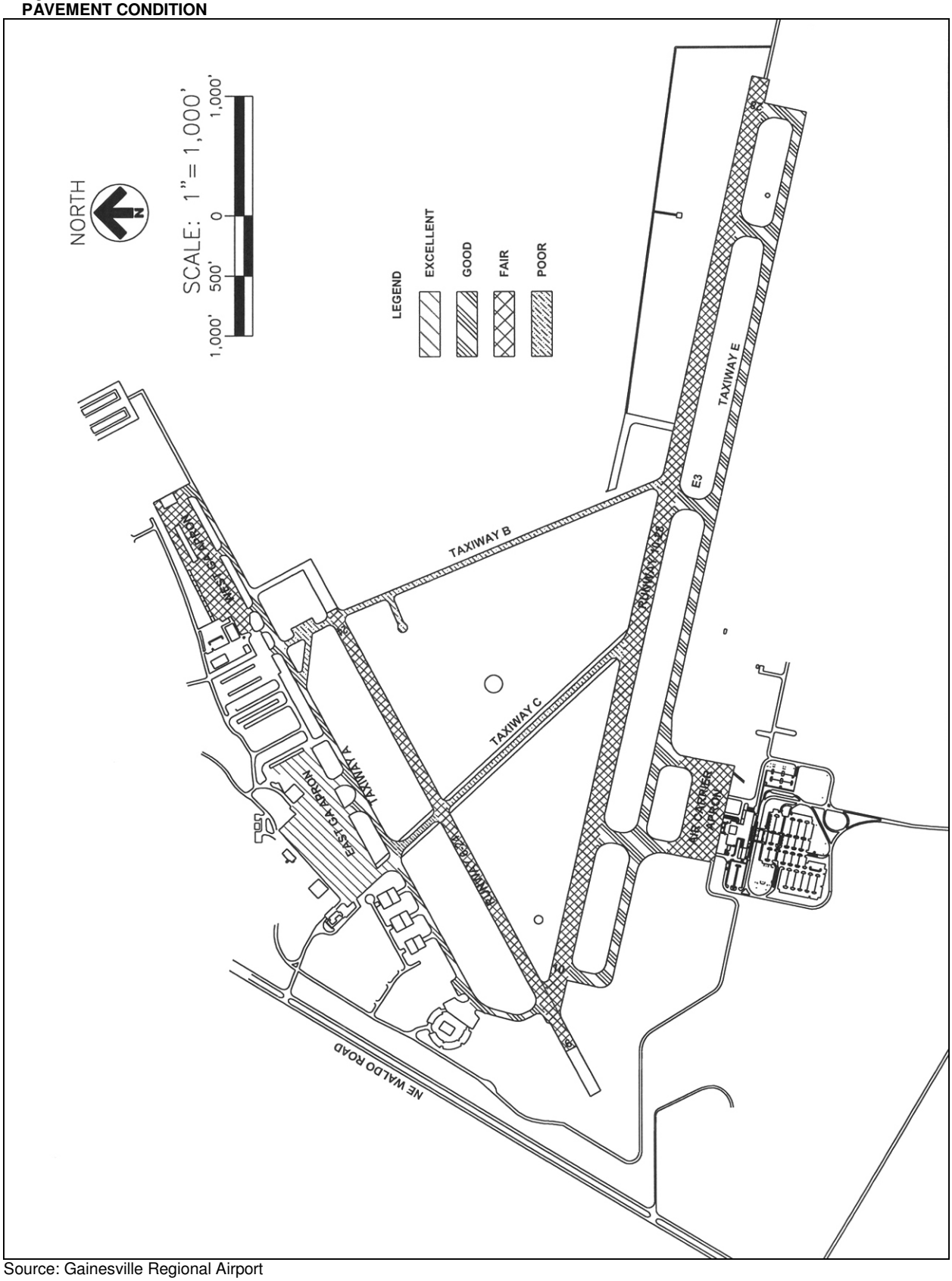
Runway 6/24 is the secondary runway and measures 4,158 feet in length and 100 feet in width. Runway 6/24 is composed of asphalt, is grooved and contains non-precision instrument runway markings. Additionally, Runway 6/24 is equipped with Medium-Intensity Runway Lights (MIRLs). Blast pads composed of asphalt are located at each end of Runway 6/24. The blast pad located at the approach end of Runway 6 measures 150 feet in width and 431 feet in length, while the blast pad at the approach end of Runway 24 measures 150 feet in width and 451 feet in length.

Figure 1-6
IDENTIFICATION OF PAVED SURFACES



Source: Gainesville Regional Airport

Figure 1-7
PAVEMENT CONDITION



Source: Gainesville Regional Airport

The Runway 6/24 pavement surface is in fair condition with an estimated pavement strength of 75,000-pound SWG, 150,000-pound DWG and 210,000 DT (source: 1999 ALP Update). These figures correspond with those of the latest Airport Master Record (FAA Form 5010-1).

1.6.2 Taxiways

To facilitate the movement of aircraft a taxiway system exists between aprons and runways. The following taxiways are part of this system:

- Taxiway A
- Taxiway B
- Taxiway C
- Taxiway E

Taxiway A is a full-length parallel taxiway and is in good condition. Taxiway A parallels Runway 6/24 and provides access to each runway end by connecting directly to each runway threshold. Additionally, Taxiway A provides access to the GA aircraft parking aprons and hangars located southwest and northeast of the GA terminal building. Separation between the Runway 6/24 centerline and the Taxiway A centerline is 525 feet. Taxiway A is equipped with a Medium-Intensity Taxiway Lighting (MITL) system.

Taxiway A is 50 feet wide heading eastward, past the intersection with Taxiway B. At the next intersection to the south (an unused asphalt pavement that connects to the extended Runway 6-24 pavement beyond the Runway 24 threshold) it narrows to a width of 40 feet. From there, it runs along the GA Apron until it reaches the eastern edge of the apron. At that point, it narrows to 35 feet as it leads to the T-hangar area to the east.

The Airport Facilities Directory indicates “irregular pavement strengths” along Taxiway A, requiring aircraft over 12,500 lb. to coordinate with the FBO Ops for parking instructions. According to the FBO, the eastern portion of Taxiway A provides pavement strength similar to Runway 6-24. This bearing capacity apparently extends along Taxiway A northeast of the intersection between Taxiway A and Taxiway C, through the first intersection beyond Taxiway C. Beyond the first intersection northeast of the Taxiway C and Taxiway A intersection, aircraft operations on Taxiway A are limited to 12,500 lb.

Taxiway B measures 50 feet in width and is composed of asphalt. Taxiway B extends from the approximate midpoint of Runway 10/28 to the Runway 24 threshold and continues across Taxiway A to the GA area located on the northeast side of the airfield. This taxiway is equipped with an MITL system and the pavement is in poor to fair condition.

Taxiway C measures 50 feet in width with paved shoulders, which measure 35 feet in width. Taxiway C begins at Runway 10/28 west of Taxiway B and extends to the approximate midpoint of Runway 6/24. Taxiway C continues from the approximate midpoint of Runway 6/24 to Taxiway A where access to the east GA apron may be gained. Taxiway C is equipped with an MITL system and is in poor to fair condition.

Taxiway E is composed of asphalt and measures 75 feet in width. This taxiway is a full-length taxiway, which parallels Runway 10/28 and serves as the primary avenue used by air carrier aircraft to access the passenger terminal apron positioned to the south of Taxiway E. Several

connector taxiways (Taxiways E1, E2, E3, E4 and E5) connect Taxiway E to Runway 10/28 and therefore facilitate the demand for accessing Taxiway B and Taxiway C. This taxiway is equipped with an MITL system and its pavement is in good condition. Separation between the centerline of Runway 10/28 and the centerline of Taxiway E is 400 feet.

1.6.3 Approach and Airfield Lighting

Airfield lighting systems are a necessary component to facilitating an airport's flight operations during periods of darkness and decreased visibility. In addition to a runway and taxiway lighting system, GNV also employs a Medium-Intensity Approach Lighting System with Runway Alignment Indicator (MALSR) lights and Runway End Identification Lights (REILs).

1.6.3.1 MALSR Approach Lighting System

The purpose of an approach lighting system is to assist pilots while transitioning from instrument to visual conditions during landing. As an aircraft descends during approach to a runway end, a pilot will have only a short period of time to make necessary adjustments to complete a landing. Approach lighting helps pilots to rapidly identify the proper alignment and orientation of the aircraft with respect to the runway.

Runway 10, Runway 6 and Runway 24 are not equipped with approach lighting systems. However, Runway 28 is served by an MALSR approach lighting system, which extends 2,400 feet into the runway approach area. The MALSR system is a standard approach lighting system for runways with Category I precision approaches. The MALSR system is composed of seven rows of five steady burning lights centered on the extended runway centerline. Beyond the seven rows of steady burning lights are five flashing lights. The five flashing lights are also centered with the extended runway centerline and assist the pilot in aligning the aircraft with the runway. This lighting system greatly assists pilots landing in instrument conditions.

1.6.3.2 REILS

REILs are installed to provide rapid and positive identification of the approach end of a particular runway. Runway 10 at GNV is equipped with a REIL system, which consists of a pair of synchronized flashing lights located laterally on each side of the runway threshold. REILs are effective for the following reasons:

- Identification of a runway surrounded by a preponderance of other lighting.
- Identification of a runway, which lacks contrast with surrounding terrain.
- Identification of a runway during reduced visibility.

1.6.3.3 Runway and Taxiway Edge Lights

Runway edge lights are used to identify the edge of structural pavements during periods of darkness or low visibility. Runway 10/28 is equipped with High-Intensity Runway Lights (HIRL) and Runway 6/24 is equipped with MIRLs. The runway edge lights are white except for those positioned along the last 2,000 feet of Runways 10 and 28, which are yellow. The yellow lights are a method of communicating to pilots the impending runway end. Lights marking the ends of the runway emit red light toward the runway to indicate the end of runway to a departing aircraft and emit green outward from the runway end to indicate the threshold to landing aircraft.

Taxiway edge lights are used to outline the edges of taxiways during periods of darkness or restricted visibility conditions. These fixtures emit blue light. All taxiways at Gainesville are equipped with MITL's. Additionally, the lights are equipped with a variable intensity rheostat, which allow controllers to adjust the light intensity at a pilot's request or as the controller deems necessary.

1.6.4 Radio Navigational Aids (NAVAIDS)

Various types of air radio NAVAIDs are in use today at GNV, each serving a special purpose. Many NAVAIDs used throughout the U.S. are owned, operated and maintained by the FAA. As a result, the FAA has the statutory authority to establish, operate and prescribe standards for the operation of any of these NAVAIDs used in federally controlled airspace. Figure 1-8 identifies the radio and visual NAVAIDS located at GNV.

Radio NAVAIDs located at GNV include the following:

- Very high frequency omni-directional range (VOR) co-located with a Tactical Air Navigation station (TACAN).
- VHF Omni-Directional Range/Tactical Air Navigation (VORTAC) and a Non-Directional Beacon (NDB).

1.6.4.1 VORTAC

A VORTAC provides three different types of information: VOR azimuth information, TACAN azimuth information and TACAN distance information known as Distance Measuring Equipment (DME) information. Although a VORTAC consists of more than one component using more than one antenna system, the networked devices are considered to be a unified navigational aid. A VOR provides location information to aircraft, while a TACAN provides both location and distance information and is generally used by military aircraft.

The VORTAC located at GNV is positioned east of Taxiway C and operates on the 116.2 radio frequency. On aeronautical publications, the NAVAID is identified as GATORS VORTAC. While the Gainesville VORTAC is used primarily as an enroute and terminal navigation aid, properly equipped aircraft can use the NAVAID to navigate to the airport and perform non-precision instrument approaches to Runways 06, 10, 24 and 28.

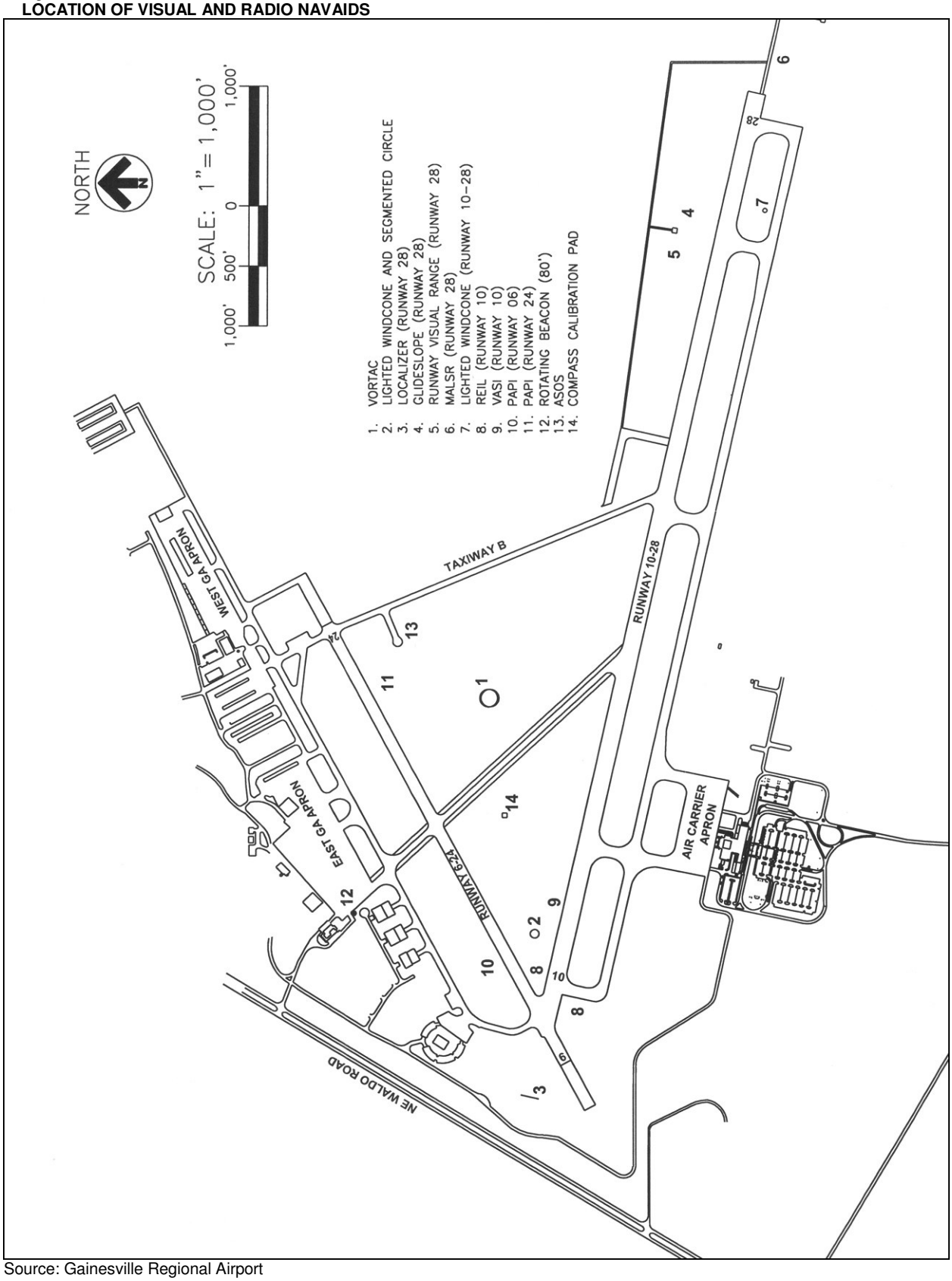
1.6.4.2 NDB

An NDB transmits non-directional signals whereby the pilot of an aircraft equipped with an Automatic Direction Finder (ADF) can determine bearings and track to or from a station. Additionally, an NDB can be installed in conjunction with an Instrument Landing System (ILS) marker beacon, which is called a compass locator. These facilities normally operate in the frequency band of 190 to 535 kilohertz (kHz) and transmit a continuous signal with either 400 or 1020 Hz modulation. An NDB is subject to disturbances, which may lead to erroneous bearing information. These disturbances result from such factors as lightning, precipitation and static. At night, NDBs are vulnerable to interference from distant stations.

GNV has one NDB, identified as WYNDS. WYNDS, which is located 4.6 miles east of the airport, and not identified in Figure 1-8, can be used for the purposes of enroute and approach

navigation. "WYNDS" utilizes the 269 radio frequency, which is set in the ADF located in the aircraft for navigation. At GNV, "WYNDS" serves as the Initial Approach Fix (IAF) and primary NAVAID for conducting the NDB Runway 28 approach. Additionally, "WYNDS" serves as the Locator Outer Marker (LOM) and Final Approach Fix (FAF) for the Runway 28 ILS.

Figure 1-8
LOCATION OF VISUAL AND RADIO NAVAIDS



Source: Gainesville Regional Airport

1.6.5 Visual NAVAIDS

To assist in conducting an effective approach and landing of an aircraft to a runway during periods of darkness or reduced visibility, pilots rely on visual NAVAIDs located at an airport. Visual NAVAIDs provided at GNV include the following:

- Rotating Beacon
- Visual Approach Slope Indicator (VASI)
- Precision Approach Path Indicator (PAPI)
- Lighted Wind Cone with a Segmented Circle

1.6.5.1 Airfield Beacon

At GNV, the rotating beacon is located directly south of the Aircraft Rescue and Fire Fighting (ARFF) station on an approximately 80-foot tall tower. Rotating beacons in general have a vertical light distribution, which results in the most effective emissions occurring in a range from one to 10 degrees above the horizon. For civilian airports, rotating beacons are required to flash between 24 and 30 times per minute and emit green and white light. Operation of the rotating beacon during the hours of daylight typically indicate ground visibility is less than three miles and/or ceilings are below 1,000 feet Above Ground Level (AGL) and Instrument Meteorological Conditions exist. At other times the rotating beacon is operated during the hours of darkness.

1.6.5.2 VASI

A VASI is a system of lights so arranged to provide visual descent guidance information during the approach to a runway. These lights are visible from three to five miles during the day and up to 20 miles or more at night. The visual glide path of a VASI provides safe obstruction clearance within plus or minus 10-degrees of the extended runway centerline and up to four N.M. from the runway threshold.

At GNV, a four-box VASI system is provided for Runway 10. Both light bars are located on the left side of the approach end of Runway 10. One light bar is positioned approximately 800 feet and the second is positioned approximately 1,500 feet east of the approach end of Runway 10. Included with each light bar are four light units, which are set to project light toward the approach end of Runway 10 at an angle of three-degrees above the horizon. This allows for a 45-foot threshold closing height. The VASI equipment is somewhat aged due to exposure to the weather, but appear to be in relatively good condition. Each light unit projects a beam of light having a white segment in the upper part of the beam and a red segment in the lower part of the beam. The light units are arranged in a manner to allow the color differentiation between the projected red and white light to create the glideslope followed by the pilot. Variation of the position of the red and white light viewed by the pilot is dependent upon the aircraft's altitude relative to the projected glide path and the aircraft's pitch angle relative to the horizon. The light signals are interpreted as follows:

- Red Light over Red Light – Below Glide Path
- White Light over White Light – Above Glide Path
- Red Light over White Light – On Glide Path

1.6.5.3 PAPI

A PAPI system provides vertical guidance for approaching aircraft utilizing light units similar to a VASI. However, light units associated with a PAPI are installed in a single row instead of multiple bars consistent with a VASI installation. Runway 6 and Runway 24 are each served by four-box PAPI systems. Each system consists of four light units positioned on the left side of the approach end of the respective runway in which they serve. Furthermore, the light units are arranged side-by-side and aligned perpendicular to the runway. The PAPI systems have an effective range of approximately five miles during the day and up to twenty miles at night. Similar to a VASI system, each light unit associated with a PAPI system is aligned to project a red and white segment of light at a three-degree angle toward the approach end of the runway. Both Runways 6 and 24 have a 40-foot threshold closing height. Similar to the VASI, the PAPI Systems are aged due to exposure to the weather but are in good operating condition. PAPI light signals are interpreted as follows:

- 0-Red Lights : 4-White Lights – More than 3.5-degree angle to the runway - Above glide path
- 1-Red Lights : 3-White Lights – Approximately 3.2-degree angle to the runway - Above glide path
- 2-Red Lights : 2-White Lights – On glide path (Approximately 3.0-degrees)
- 3-Red Lights : 1-White Lights – Approximately 2.8-degree angle to the runway - Below glide path
- 4-Red Lights : 0-White Lights – Approximately 2.5-degree angle to the runway - Below glide path

1.6.5.4 Lighted Wind Cone and Segmented Circle

During those periods when the ATCT is not operating, pilots obtain wind direction and traffic pattern information from a wind cone and segmented circle. Wind cones and segmented circles are placed in a location near the operational runways of an airport. Additionally, these visual aids are placed in a location, which will provide maximum visibility to pilots in the air and on the ground. At GNV, a lighted wind cone with a segmented circle is located east of Runway 6/24 and north of Runway 10/28. A supplemental lighted wind cone is located east of connector Taxiway E-2.

1.6.6 Automated Surface Observation System (ASOS)

To obtain weather information at GNV, pilots may elect to use the ASOS established at the airfield. The ASOS system is a joint program between the National Weather Service (NWS), FAA and Department of Defense designed to support aviation operations and weather forecast activities.

The ASOS sensors perform the basic function of data acquisition, which involves continuous sampling and measuring of the ambient environment, deriving raw sensor data and sending the data to the data collection package. The ASOS system provides continuous minute-by-minute observations and performs the functions necessary to generate a routine weather report and other aviation weather information. The ASOS weather report can be obtained by telephone.

The number used is 352/335-8672. A basic ASOS weather report contains the following information:

- Cloud Height
- Visibility
- Precipitation Identification (including Frozen Precipitation)
- Barometric Pressure
- Ambient Temperature/Dew Point Temperature
- Wind Direction/Speed
- Precipitation Accumulation

1.6.7 Runway Visual Range (RVR) System

In 2002, a RVR system was installed for aircraft operations on Runway 28. The RVR system is awaiting appropriate commissioning by the FAA before the system will become legally operational. The need for an RVR system on Runway 28 was evidenced by a combination of GNV's precision approach capabilities on Runway 28, the location of sensors associated with the ASOS and the formation of fog.

Runway 28 provides an ILS approach, which serves as the only precision instrument approach at the airfield. The purpose of an RVR system is to provide ATC horizontal visibility information for a given runway at the aircraft touchdown point. Because of the precision approach and lower minimums associated with an ILS, air carriers serving GNV prefer to use the Runway 28 ILS approach. However, air carriers operating under Federal Aviation Regulation (FAR) Part 121 are prohibited from initiating an instrument approach to a runway when the ceiling or visibility is reported to be below the published minimums. As a result of the location of the sensors associated with the ASOS system and the frequent formation, lifting and settling of fog at the airport, reported visibility values often do not accurately represent the visibility for Runway 28. Therefore, air carriers serving GNV are often delayed because of low visibility reports resulting from the location of the ASOS sensor, when in reality no fog is present on Runway 28.

In contrast to prevailing visibility or runway visibility, an RVR system reports a value, which represents the visibility a pilot should experience in an aircraft moving down the runway. An RVR value is reported in hundreds of feet and represents a measurement made by a transmissometer near the touchdown point of the runway. The transmissometer projector and receiver are mounted on towers 250 feet apart. A known intensity of light is emitted from the projector and measured by the receiver. Any obscuring matter reduces the light intensity arriving at the receiver. The resultant intensity measurement is then converted to an RVR value by the signal data converter.

1.7 Aeronautical Environment

GNV operates within the aeronautical environment associated with the local, regional, and national system of airports. The aeronautical environment includes the surrounding airspace and type of aeronautical activity, which takes place within the airspace including arrival and departure procedures. The following narrative provides a description of the elements composing the GNV aeronautical environment.

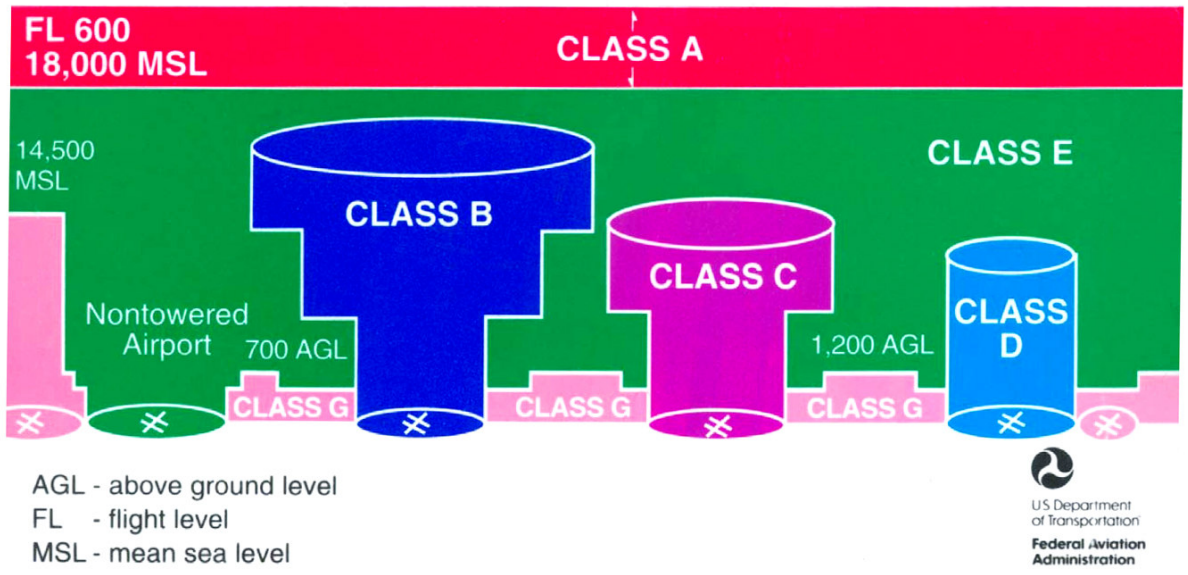
1.7.1 Airspace Classifications

Development of an Airport Master Plan Update must take into account the ability of local airspace to accommodate anticipated demand. Additionally, consideration needs to be given to potential changes in airport facilities, and the impacts such changes could have on airspace and on procedures by which aircraft are directed through and operate within the area.

For aircraft operations, the FAA has defined four types of airspace, which are illustrated in Figure 1-9. The following list includes the airspace types outlined in the Aeronautical Information Manual (AIM) and FARs Part 91.

- Controlled Airspace
- Uncontrolled Airspace
- Special Use Airspace
- Other Airspace

Figure 1-9
TYPES OF AIRSPACE



Source: FAA

1.7.1.1 Controlled Airspace

Controlled airspace includes all airspace categorized as Class A, B, C, D, and E airspace. In accordance with each airspace classification, Air Traffic Control (ATC) service is provided to aircraft operating under Instrument Flight Rules (IFR) and Visual Flight Rules (VFR).

- **Class A Airspace** - Class A Airspace begins at 18,000 feet Mean Sea Level (MSL) or Flight Level 180 (FL 180) and extends vertically up to and including 60,000 feet MSL or FL 600. As a requirement of the FARs, all persons operating an aircraft in Class A Airspace must be

flying under IFR. Although not specifically charted, Class A airspace includes that airspace overlying U.S. waters within 12 nautical miles (N.M.) of the coast of the 48 contiguous states and Alaska.

- **Class B Airspace** - Class B Airspace begins at the surface and extends vertically to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements. The configuration of each Class B Airspace area is individually tailored and consists of a surface area and two or more layers, and is designed to contain all published instrument procedures once an aircraft enters the airspace. Class B Airspace is charted on Sectional Charts, IFR En Route Low Altitude Charts, and Terminal Area Charts. The following list contains the airports in Florida, which maintain Class B Airspace:
    - Miami International Airport
    - Orlando International Airport
    - Tampa International Airport

- **Class C Airspace** - Class C Airspace begins at the surface and extends vertically to 4,000 feet above the airport's elevation (charted in MSL) surrounding those airports that have an operating control tower serviced by a radar approach control and facilitate a given number of annual IFR operations or passenger enplanements. Each Class C Airspace area is individually tailored. However, the airspace usually consists of a five-NM radius core surface area extending from the surface up to 4,000 feet above the airport elevation, and a 10-NM radius shelf area extending from 1,200 feet to 4,000 feet above the airport elevation. Class C Airspace is charted on Sectional Charts, IFR En Route Low Altitude Charts and Terminal Area Charts where appropriate. The following list contains the airports in Florida that maintain Class C Airspace:
    - Daytona Beach International Airport
    - Ft. Lauderdale/Hollywood International Airport
    - Jacksonville International Airport
    - Palm Beach International Airport
    - Pensacola NAS
    - Pensacola Regional Airport
    - Sarasota/Bradenton International Airport
    - Southwest Florida International Airport
    - Tallahassee Regional Airport
    - Whiting NAS

- **Class D Airspace** - Class D Airspace begins at the surface and extends to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports that have an operating control tower. The configuration of each Class D Airspace area is individually tailored and when instrument procedures are published, the airspace will normally be designed to contain the procedures. Class D Airspace areas are depicted on Sectional and Terminal Charts with blue, segmented lines and IFR En Route Low Altitude charts with a boxed [D]. There are 40 airports in Florida including GNV that contain Class D airspace.

- **Class E Airspace** - Airspace which is controlled, but not associated with a portion of airspace identified as Class A, Class B, Class C, or Class D Airspace, is designated Class E Airspace. Class E Airspace below 14,500 feet MSL is charted in a variety of forms on Sectional Charts, Terminal Charts, World Charts and IFR En Route Low Altitude Charts. The different forms of Class E Airspace are presented in the following list.
    - Surface area designated for an airport
    - Extension to a surface area
    - Airspace used for transition
    - En Route Domestic Areas
    - Federal Airways
    - Offshore Airspace Areas

1.7.1.2 Uncontrolled Airspace

Uncontrolled airspace is categorized as Class G airspace. Typically, Class G airspace includes all airspace not classified as Class A, Class B, Class C, Class D, or Class E airspace. Whereas ATC services are provided within controlled airspace, no ATC services are provided within Class G or uncontrolled airspace. Uncontrolled airspace is depicted in Figure 1-9.

1.7.1.3 Special Use Airspace

Special use airspace consists of areas in which activities within the airspace must be confined because of their nature, or limitations are imposed upon aircraft operations, which are not part of the specific activities taking place within the segregated area. Except for Controlled Firing Areas utilized during military training or testing exercises, special use airspace areas are depicted on aeronautical charts. The following list includes the different types of special use airspace areas.

- **Alert Areas** - Alert Areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training or an unusual type of aerial activity.
- **Controlled Firing Areas (CFA)** - CFAs contain activity, which if not conducted in a controlled environment, could be hazardous to nonparticipating aircraft.
- **Military Operating Areas (MOA)** - MOAs consist of airspace with defined vertical and lateral limits established for the purpose of separating certain military training activities from civilian air traffic. MOAs are depicted on Sectional Charts, VFR Terminal Area Charts, and En Route Low Altitude Charts.
- **National Security Areas (NSA)** - NSAs consist of airspace with defined vertical and lateral dimensions established at locations where there is a requirement for increased security and safety of ground facilities.
- **Prohibited Areas** - Prohibited Areas contain airspace of defined dimensions identified by an area on the surface of the earth within which the flight of aircraft is prohibited. These areas are published in the Federal Register and are depicted on aeronautical charts.
- **Restricted Areas** - Restricted Areas contain airspace identified by an area on the surface of the earth within which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Restricted Areas denote the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery or guided missiles. Restricted Airspace is

depicted on the Sectional and En Route Chart. Additionally, Restricted Areas are published in the Federal Register and constitute FAR Part 73.

- **Warning Areas** - A Warning Area is airspace of defined dimensions, extending from three NMs outward from the coast of the U.S. A Warning Area contains activity deemed hazardous to nonparticipating aircraft. Furthermore, a Warning Area may be established over domestic waters, international waters or a combination of both.

1.7.1.4 Other Airspace

Airspace designated as "Other Airspace" is primarily composed of Military Training Routes (MTRs). All MTRs positioned above 1,500 feet AGL are depicted on IFR Low Altitude En Route Charts. These routes have been established to provide a means for military aircraft to practice low-level combat tactics. Generally, MTRs are established below 10,000 feet MSL for operations at speeds in excess of 250 knots. Presented in the following list are additional forms of airspace identified as "Other Airspace."

- The area within 10 Statute Miles (SM) of an airport where a control tower is not operating, but where a Flight Service Station (FSS) is located, also known as an Airport Advisory Area.
- Areas in which the FAA has imposed temporary restrictions for aircraft operations.
- Parachute operations in the vicinity of an airport without an operating control tower.
- Areas of airspace containing published VFR flyways.

1.7.2 Surrounding North-Central Florida

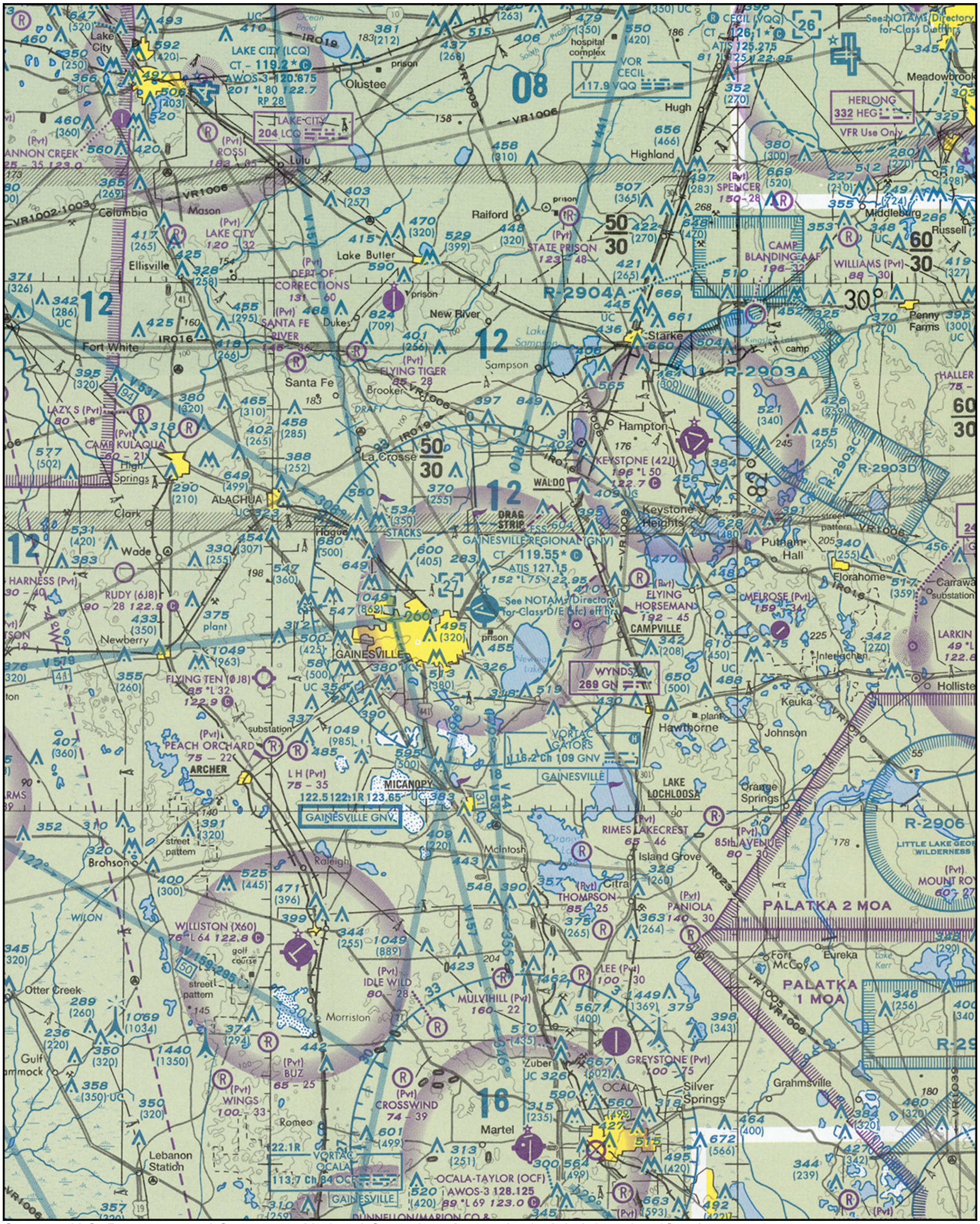
Airspace associated with GNV is depicted on the Jacksonville Sectional Aeronautical Chart, which is used for the purposes of VFR navigation. Presented in Figure 1-10 is the portion of the Jacksonville Sectional that illustrates the GNV and surrounding airspace.

Airspace immediately surrounding GNV is Class D Airspace, which extends from the surface to 2,700 feet MSL before converging with Class E Airspace. The nearest airspace designated as Class C is the outer perimeter of the Jacksonville International Airport airspace, which is located approximately 50 N.M. northeast of Gainesville. The outer perimeter of Class C Airspace associated with Daytona Beach International Airport is positioned approximately 60 N.M. southeast of Gainesville. The nearest airspace designated as Class B is the outer perimeter of the Orlando International Airport airspace, which is located approximately 60 N.M. south-southeast of Gainesville. The outer perimeter of Class B Airspace associated with Tampa International Airport is positioned approximately 100 N.M. southwest of Gainesville.

The aeronautical environment immediately adjacent to GNV's Class D Airspace includes several areas designated as Special Use Airspace. Areas of Special Use Airspace located within a 30 N.M. radius of Gainesville are presented in Table 1-3. In addition to the areas of Special Use Airspace identified in Table 1-3, the southern boundary of a Special Military Activity Area is located near the northern perimeter of GNV's Class D Airspace. The area's northern boundary is located approximately 26 N.M. miles north of the northern boundary of GNV's Class D Airspace and spans the entire width of the State of Florida. Lateral limits of the Special Military Activity Area range from 500 feet AGL to 6,000 feet MSL. In addition to training exercises within the Special Military Activity Area, the Department of Defense conducts periodic operations involving unmanned aerospace vehicles. These vehicles are escorted by tactical

aircraft, which as necessary, exercise override flight control of the unmanned vehicles. Status of the activity within Special Military Activity Area may be obtained from a FSS or Department of Defense (DOD) facility.

Figure 1-10
JACKSONVILLE SECTIONAL AERONAUTICAL CHART



Source: U.S. Department of Commerce National Oceanic & Atmospheric Administration (October 2002)

Table 1-3
SPECIAL USE AIRSPACE SURROUNDING GNV

Area Identification	Location	Altitude of Use (Feet)	Time of Use
MOA			
Live Oak	Live Oak, Florida	8,000 MSL	6:00 AM–2:00 AM Mon-Fri
Palatka 1	Palatka, Florida	3,000 AGL	Intermittent 5:00 AM-1:00 AM
Palatka 2	Palatka, Florida	3,000 AGL	Intermittent 5:00 AM-1:00 AM
Restricted			
R-2903A	Stevens Lake, Florida	Up to but not including FL230	Intermittent 7:00 AM-7:00 PM Tue-Sun
R-2903C	Stevens Lake, Florida	Up to 7,000 MSL	Intermittent 7:00 AM-7:00 PM Tue-Sun
R-2903D	Stevens Lake, Florida	Up to 5,000 MSL	Intermittent 7:00 AM-7:00 PM Tue-Sun
R-2904A	Starke, Florida	Up to but not including 1,800 MSL	Apr-Aug 8:00 AM-5:00 PM Daily Sep-Mar 8:00 AM-5:00 PM Sat-Sun
R-2906	Rodman, Florida	Up to 14,000 MSL	Intermittent 5:00 AM-1:00 AM Daily
R-2907A	Lake George, Florida	Up to FL 230	Intermittent 5:00 AM-1:00 AM Daily
R-2907B	Lake George, Florida	Up to 9,000 MSL from a line Longitude 81° 40' 00" W to Longitude 81° 42' 55" W Up to 6,000 MSL from a line Longitude 81° 42' 55" W to Longitude 81° 51' 50" W	Intermittent 5:00 AM-1:00 AM Daily
R-2910	Pinecastle, Florida	Up to FL 230 within 5 N.M. Radius Up to 9,000 MSL within NW Extension Up to 9,000 MSL within SE Extension Up to 6,000 MSL within SSE Extension	Intermittent 5:00 AM-1:00 AM Daily

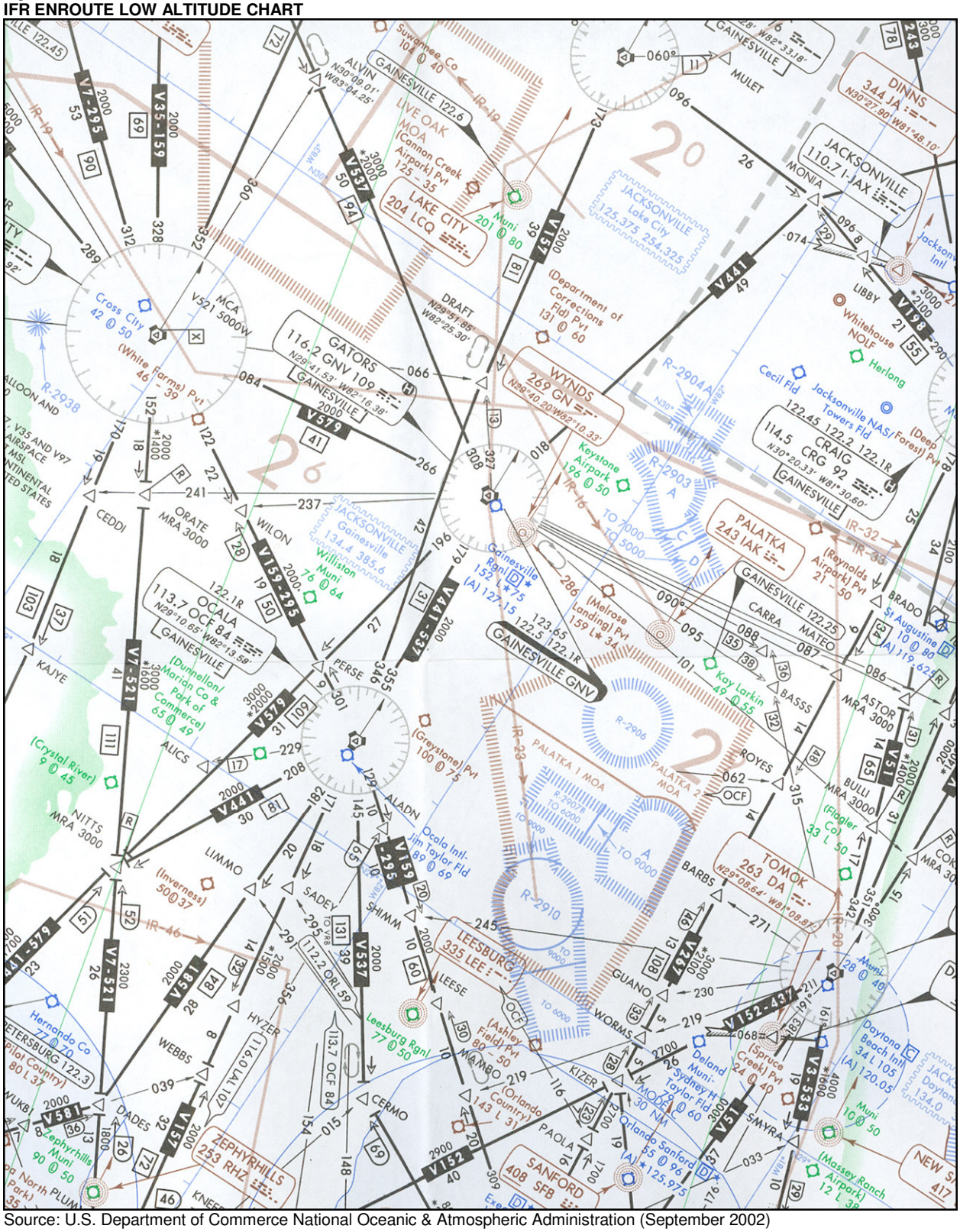
FL – Flight Level
Source: Jacksonville Sectional Aeronautical Chart (September 2003)

While operating an aircraft on an IFR flight plan, navigation is conducted using an IFR Enroute Low Altitude Chart. GNV is included on IFR Enroute Low Altitude Chart L-19, which is provided in Figure 1-11. In addition to NAVAIDs and airspace designations, IFR Enroute Low Altitude Charts display victor airways, and associated altitude and heading information.

Victor Airways measure eight N.M. horizontally and maintain vertical limits, which begin at 1,200 AGL and terminate at FL 180. Altitude information published for Airways transecting the airspace near GNV include Minimum Enroute Altitude (MEA) information and Minimum Obstruction Clearance Altitude (MOCA) information. An MEA assures acceptable navigational signal reception and meets obstacle clearance requirements for the entire airway segment joined by two navigational fixes. An MOCA is the lowest published altitude between two radio fixes, which meets obstacle clearance requirements for the entire route segment, but only assures acceptable navigational signal reception within 22 N.M. (25 Statute miles) of the VORs being used to define the airway. Victor airways, which either penetrate or come within close proximity of penetrating GNV's Class D Airspace include Victor (V) 157, V441, V537 and V579.

- **V157** - V157 passes approximately five miles west of GNV and is defined by the 346-degree radial off of the Ocala VOR and 173-degree radial off of the Taylor VOR. The MEA for this portion of V157 is 2,000 MSL.
- **V441** – V441, which passes directly over GNV, is defined to the northeast by the 18-degree radial off of Gator VOR, and to the south by the 179-degree radial off of Gator VOR. The portion of V441 nearest to GNV maintains an MEA of 2,000 MSL.

Figure 1-11
IFR ENROUTE LOW ALTITUDE CHART



Source: U.S. Department of Commerce National Oceanic & Atmospheric Administration (September 2002)

- **V537** – Similar to V441, V537 passes directly over GNV and is defined to the south by the 179-degree radial off of the Gator VOR. From the Gator VOR V537 extends to northwest on the 308-degree radial. While the MEA for the portion of V537 extending to the south is 2,000 MSL, the MEA for the portion of V537 extending to the northwest is 3,000 MSL. Additionally, V537 extending to the northwest of Gator VOR is also governed by a MOCA of 2,000 MSL.
- **V579** – V579 passes directly over GNV and is defined to the southwest by the 196-degree radial off of Gator VOR, and to the west by the 266-degree radial off of Gator VOR. From Gator VOR, V579 extends southwest to St. Petersburg VOR and west to Cross City VOR. From St. Petersburg VOR, V579 assumes a southeasterly outbound heading of 166-degrees. From Cross City VOR, V579 assumes a northwesterly heading of 352-degrees. The section of V579 extending west of GNV maintains an MEA of 2,000 MSL. While the section of V579 extending southwest of GNV maintains an MEA of 3,000 MSL, a MOCA of 2,000 MSL is also in place.

1.7.3 Published Instrument Procedures

Instrument procedures associated with an airport include Standard Terminal Arrivals (STAR), Standard Instrument Departures (SID) and instrument approach procedures. Currently, aeronautical operations at GNV do not include the use of a published SID or STAR. However, the airport is served by a variety of published instrument approaches, which utilize an array of NAVAIDs including Global Positioning System (GPS) technology. These instrument approach procedures are listed below in Table 1-4 and illustrated in Figures 1-12 through 1-21.

Table 1-4
PUBLISHED INSTRUMENT APPROACH PROCEDURES

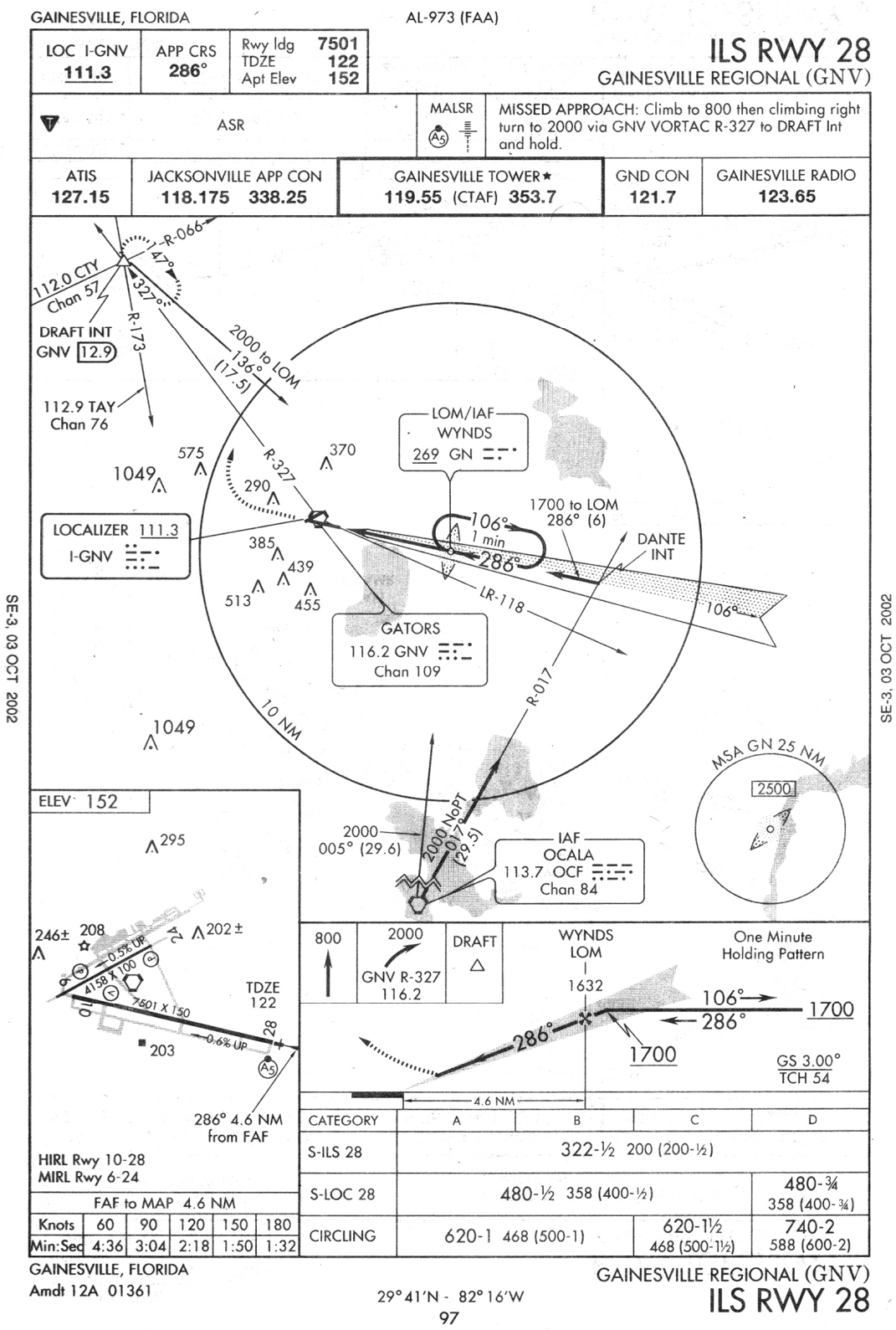
Runway	Approach	NAVAID Facility or Waypoint	Frequency	Inbound Heading	Decision Height/ Minimum Descent Altitude and Visibility (MSL Feet / Miles)
Runway 28	ILS	Localizer I-GNV	111.3	286°	200 / ½
	RNAV (GPS)	Tukse Waypoint	GPS Fix	286°	460 / ¾
	VOR	Gators VOR	116.2	294°	560 / ½
	NDB	Wynds NDB	269	286°	560 / ¾
Runway 10	RNAV (GPS)	Lolry Waypoint	GPS Fix	106°	520 / 1 ¼
	VOR/DME	Gators	116.2	95°	620 / 1
Runway 24	RNAV (GPS)	Imcef Waypoint	GPS Fix	245°	560 / 1 ½
	VOR	Gators	116.2	233°	960 / 1
Runway 6	RNAV (GPS)	Guznu Waypoint	GPS Fix	65°	620 / 1
	VOR/DME	Gators	116.2	73°	640 / 1

ILS – Instrument Landing System
NDB – Non-directional Beacon
RNAV (GPS) – Area Navigation (Global Positioning System)
VOR – Very High Frequency Omni-directional Range Station
VOR/DME - Very High Frequency Omni-directional Range Station / Distance Measuring Equipment

Source: Instrument Approach Procedures – Florida (October 2002)

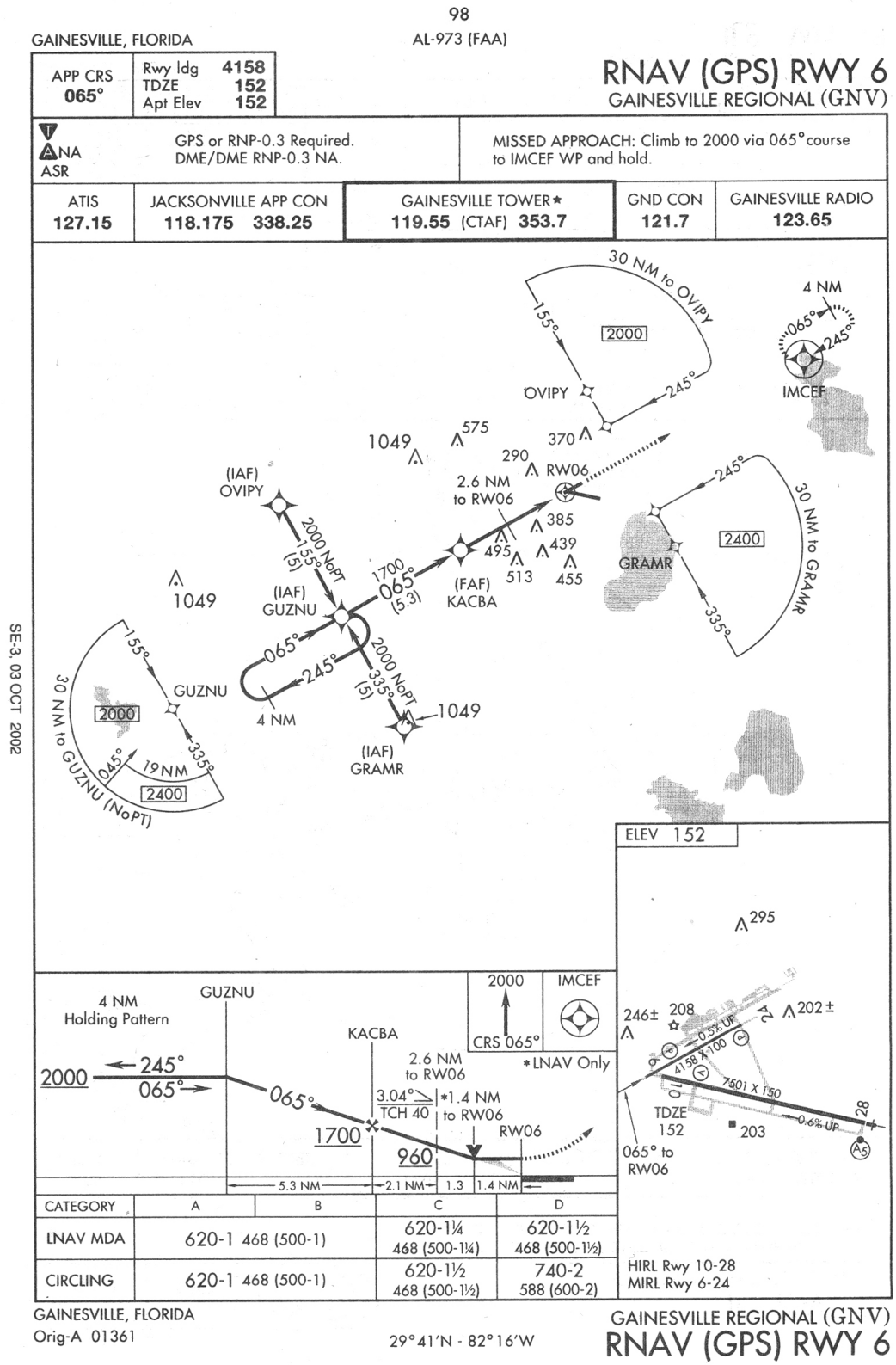
GNV utilizes standard FAR PART 91 IFR take-off minimums (aircraft having two engines or fewer – one statute mile. Aircraft having more than two engines – one-half statute mile) the airport also has a (obstacle) departure procedure for runway 6 and 24 to avoid trees. GNV has a non-standard IFR alternate minimum for the VOR approach to Runway 24 (category A, B 900-2 versus 800-2 standard). There are also published radar instrument approach minimums for GNV.

Figure 1-12
ILS RWY 28



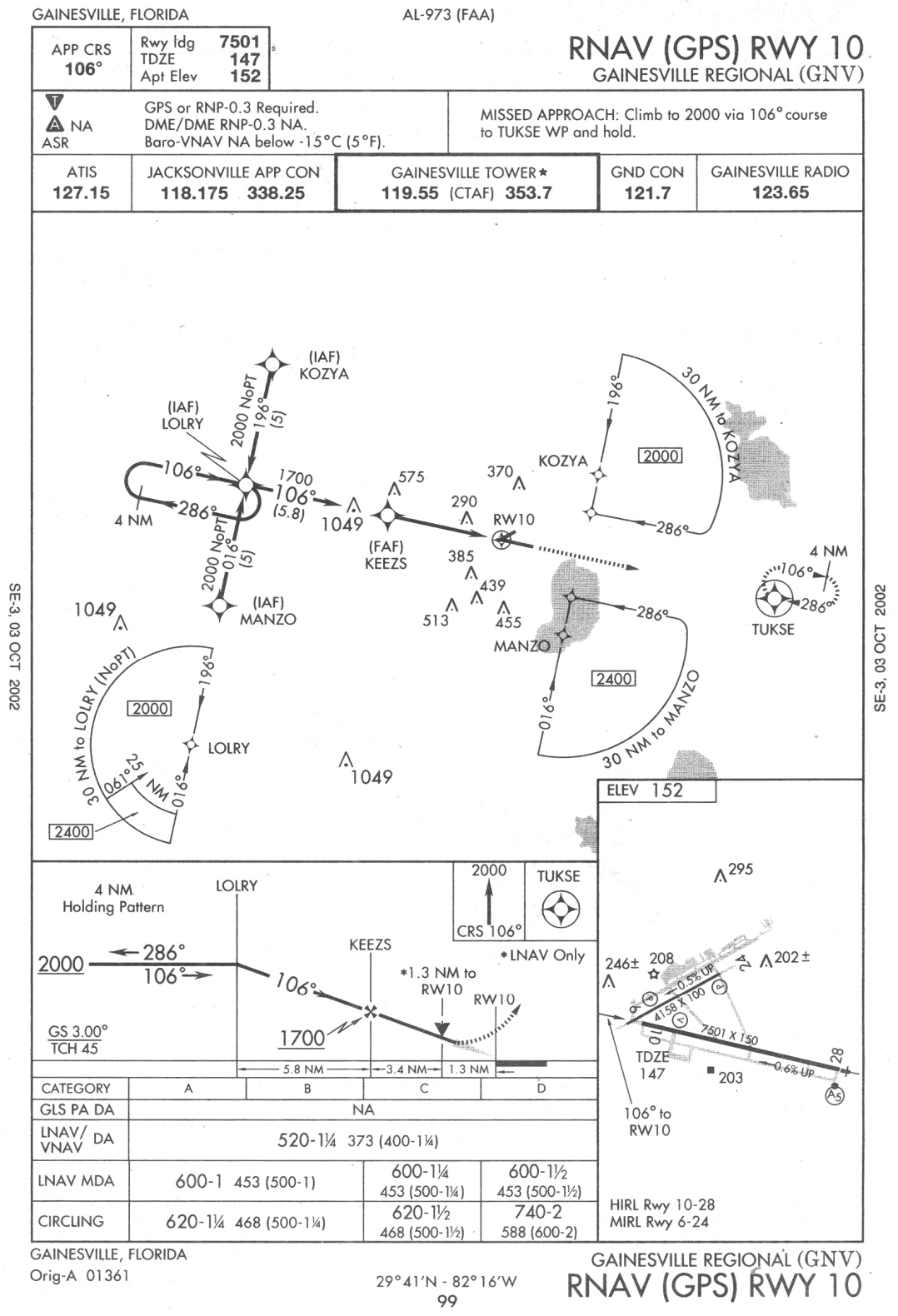
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure1-13
RNAV (GPS) RWY 6



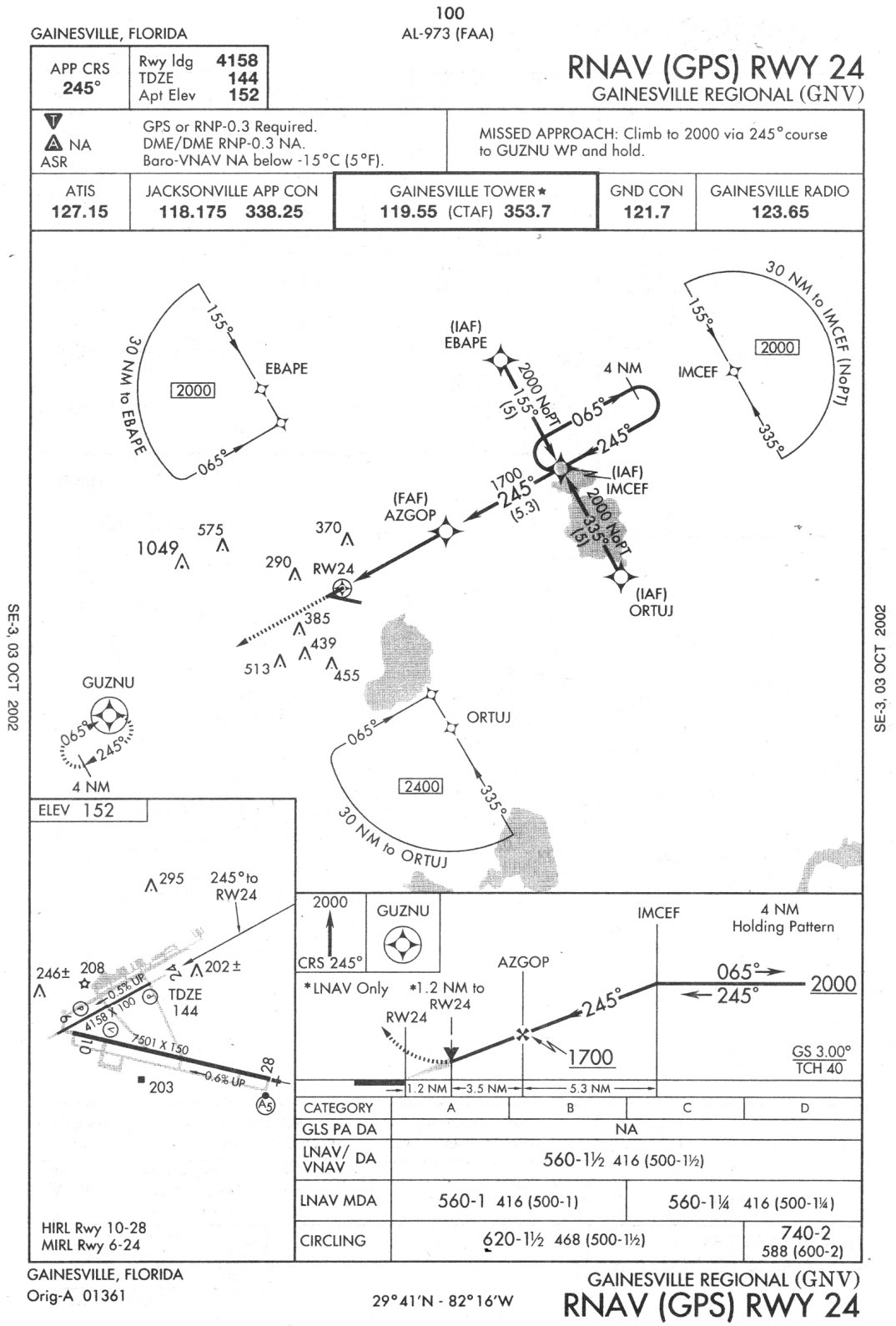
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-14
RNAV (GPS) RWY 10



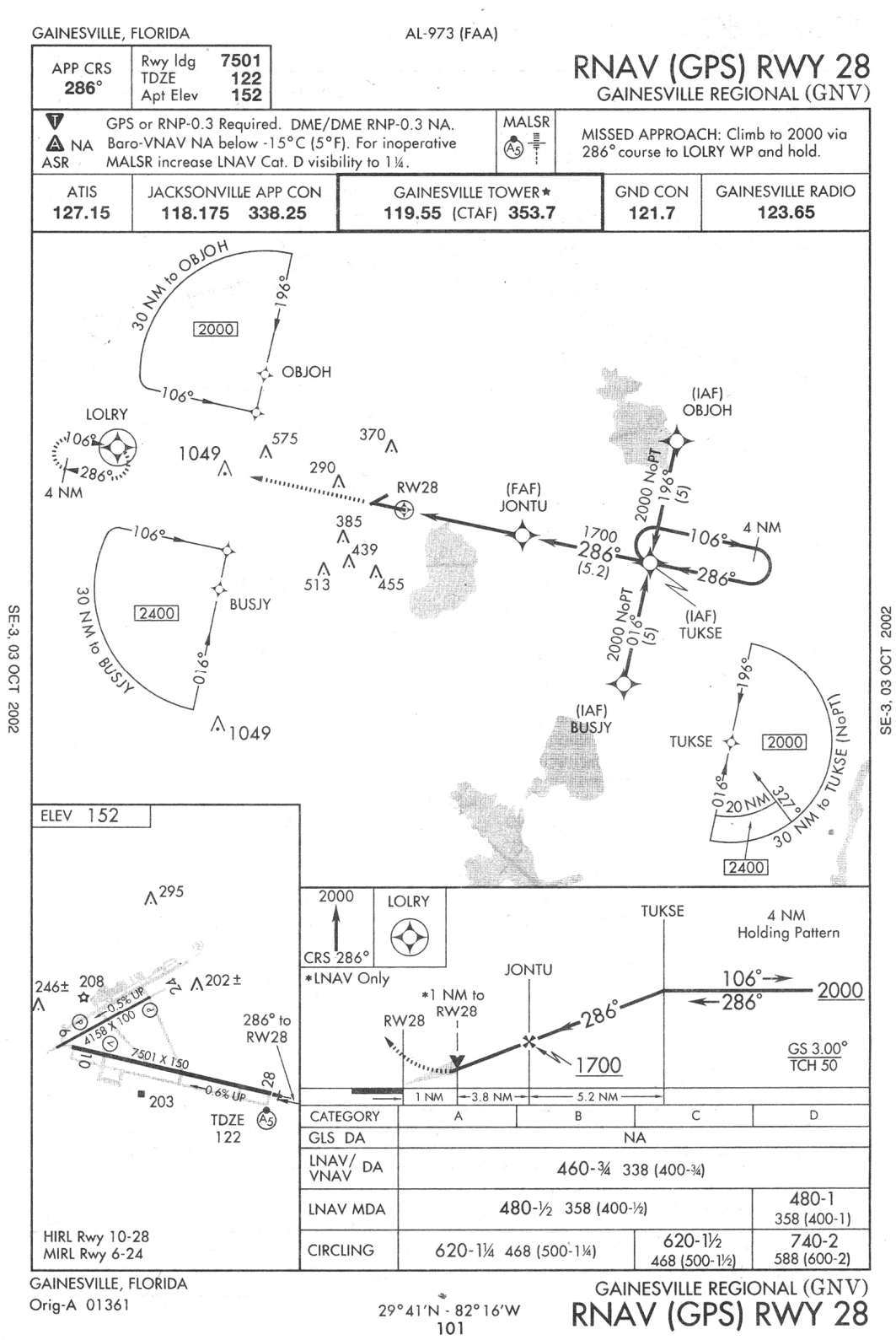
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-15
RNAV (GPS) RWY 24



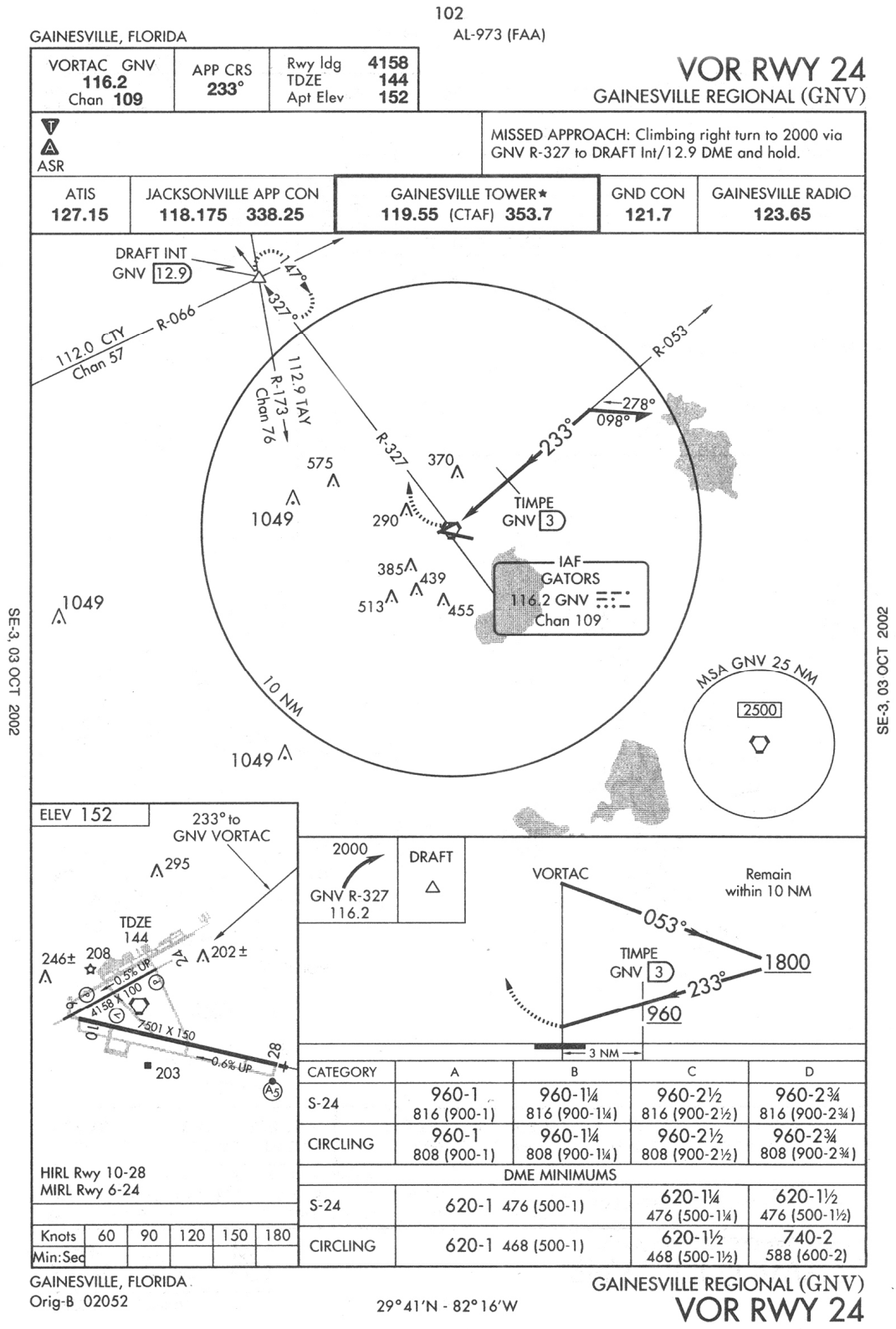
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-16
RNAV (GPS) RWY 28



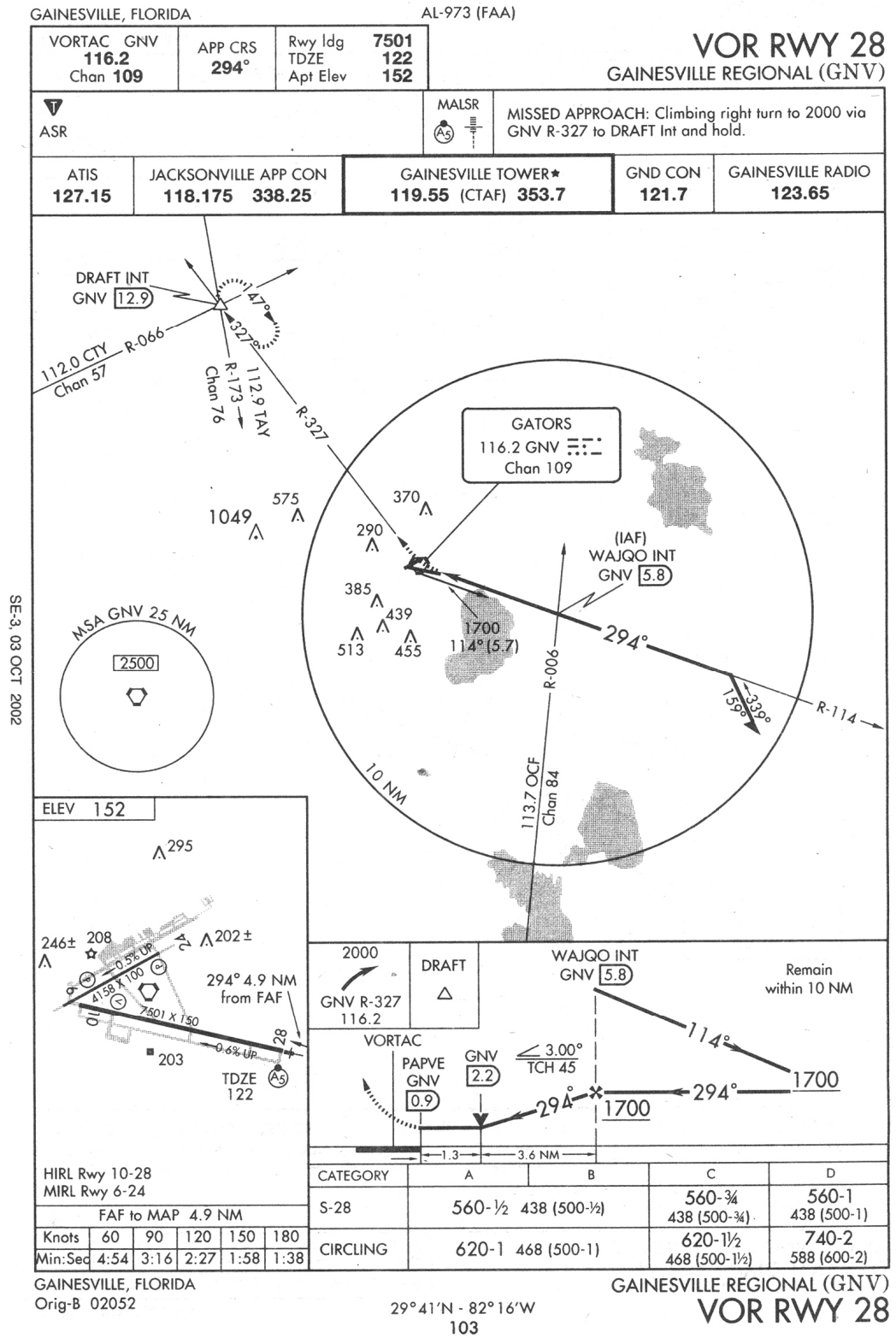
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-17
VOR RWY 24



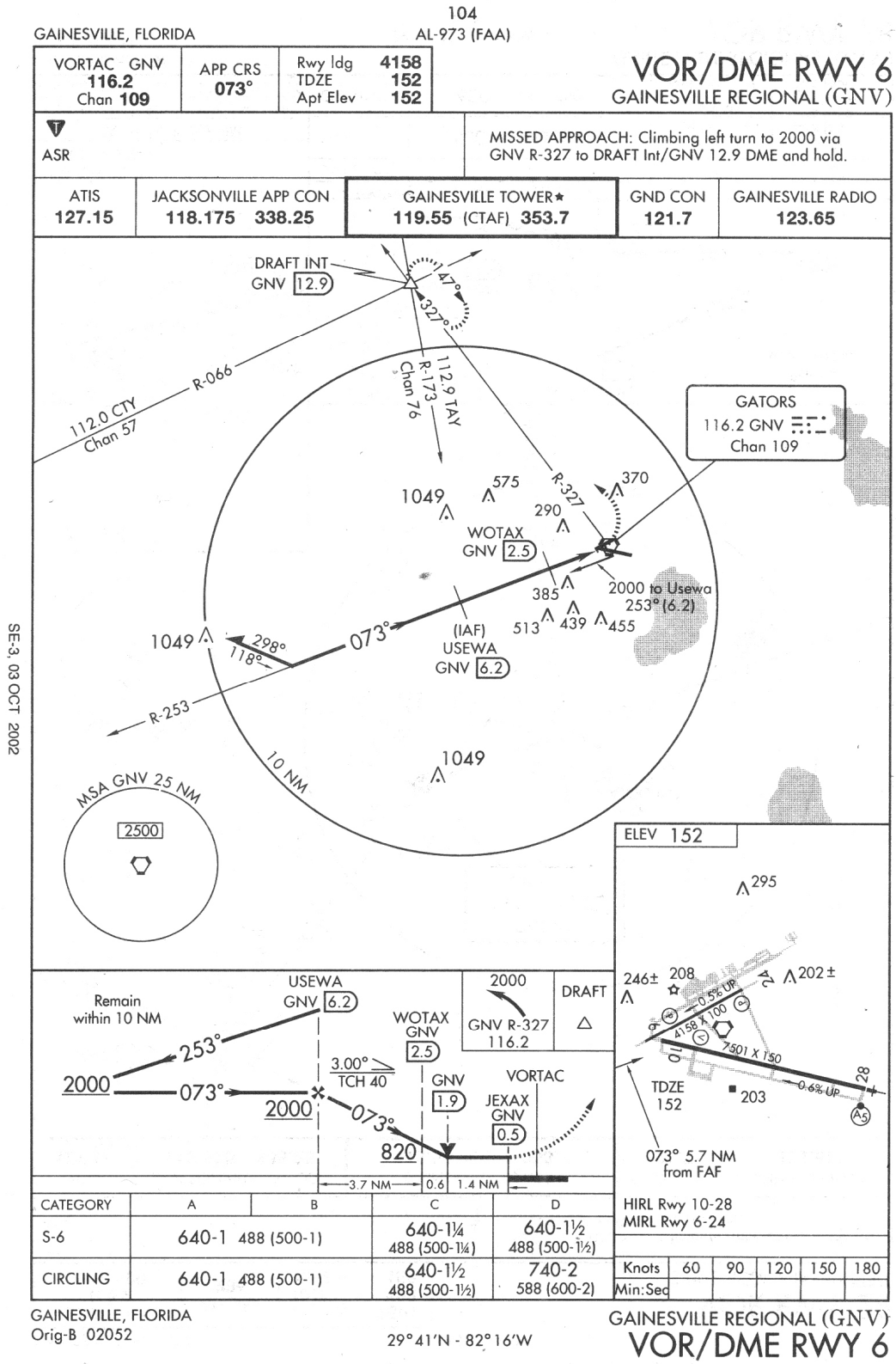
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-18
VOR RWY 28



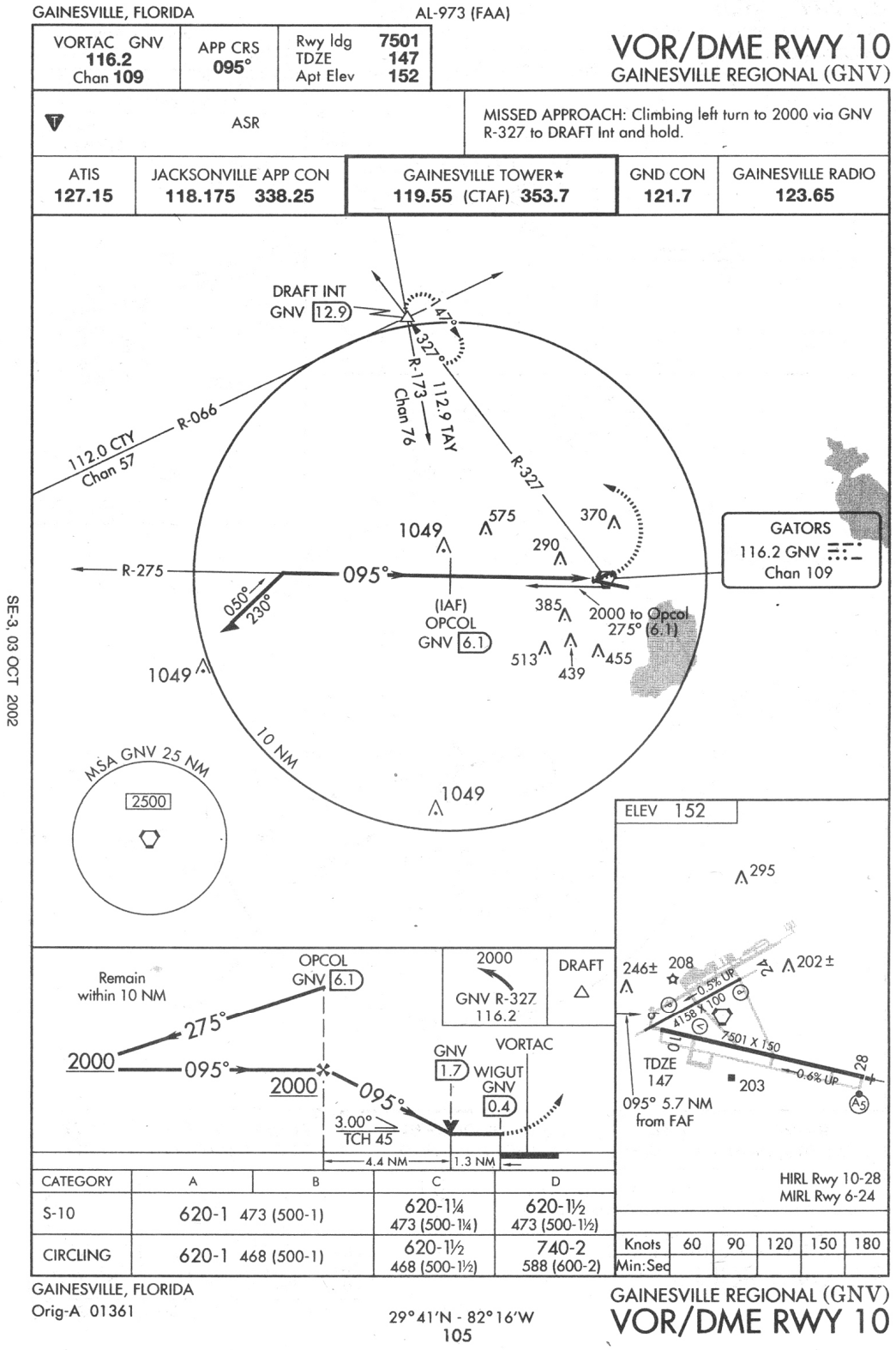
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-19
VOR/DME RWY 6



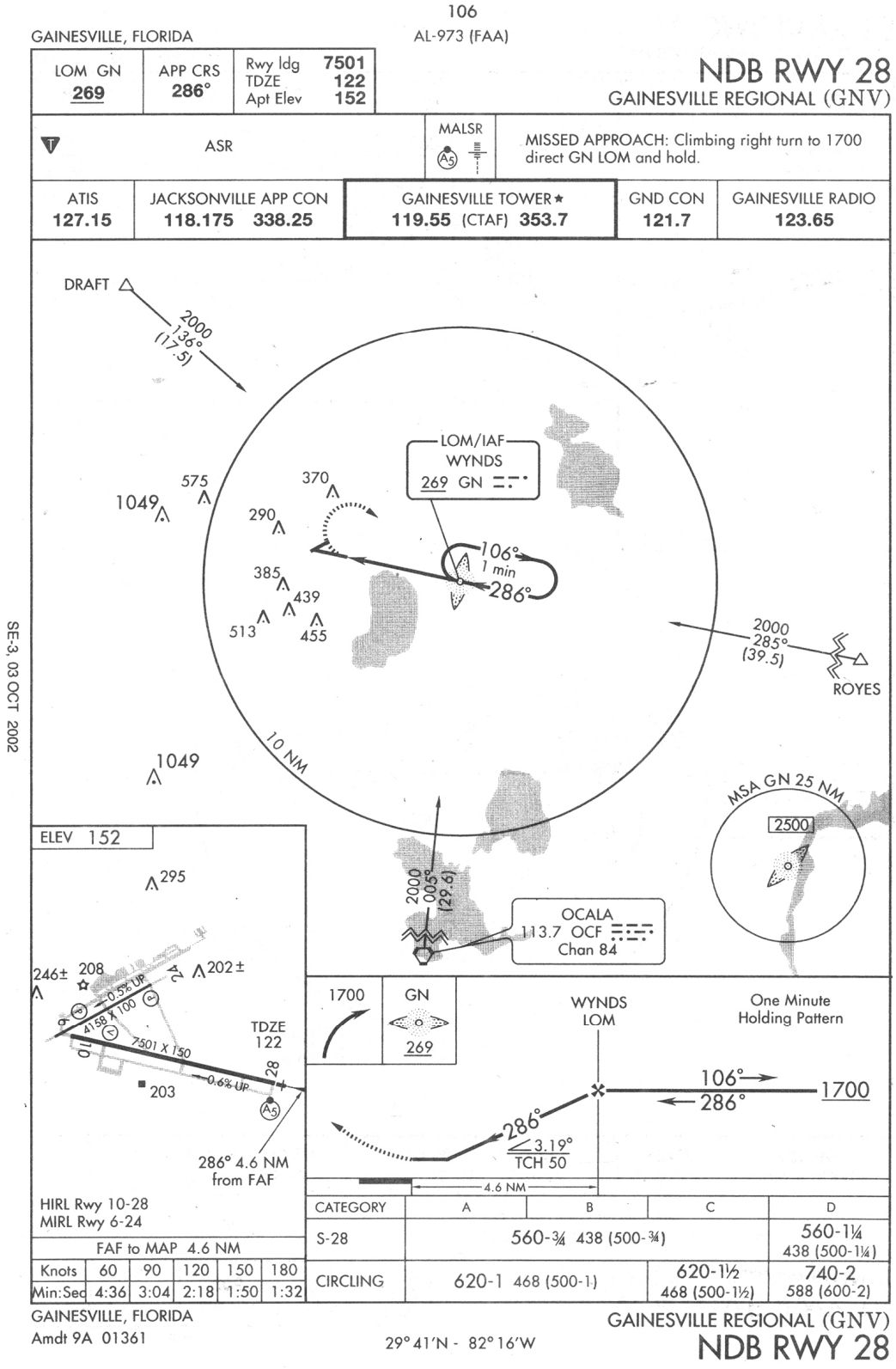
Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-20
VOR/DME RWY 10



Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

Figure 1-21
NDB RWY 28



Source: U.S. Department of Transportation – U.S. Terminal Procedures (October 2002)

1.8 Air Traffic Control

The FAA is responsible for providing a safe, secure and efficient national aviation system. To fulfill this responsibility, the Air Traffic Services Division of the FAA oversees the control and supervision of activity within the National Airspace System (NAS) to provide ATC. The following list includes the Air Traffic Services Division's operational responsibilities.

- Assurance of aircraft separation
- Air traffic management
- Dissemination of aviation information
- Management and maintenance of airways and NAVAID facilities
- Approach to landing procedures
- Aircraft search and rescue

Control within the NAS is maintained by incorporating a network of ATC facilities, which include Automated Flight Service Stations (AFSS), Air Route Traffic Control Centers (ARTCC), Terminal Radar Approach Control (TRACON) facilities and ATCTs. While AFSSs and ATCTs are primarily involved with the coordination of air traffic operations within the terminal environment, TRACON facilities coordinate air traffic in the approach and departure segments of flight and ARTCCs coordinate air traffic operations within the enroute segment. Air traffic facilities located at GNV include an AFSS, an Airway Facilities Sector Office and an ATCT.

1.8.1 Flight Service Station (FSS)

FSS are air traffic facilities responsible for providing pilot weather briefings. Weather data disseminated by Flight Service is obtained from the NWS and Weather Service International (WSI). In addition to pilot weather briefings, Flight Service maintains other responsibilities, which are related to the different components of flight operations. The following is a list of these additional responsibilities.

- VFR search and rescue services
- Enroute communications
- Originate Notices to Airmen (NOTAM)
- Receive and process VFR and IFR flight plans
- Take weather observations
- Issue airport advisories
- Provide assistance to lost aircraft
- Relay ATC clearances
- Broadcast aviation weather and NAS information
- Monitor NAVAIDs
- Provide enroute flight advisory service
- Advise U.S. Customs of transborder flights

The FAA currently maintains 61 AFSSs three of which are located in the State of Florida (locations at Gainesville, St. Petersburg and Miami). The Gainesville AFSS is located along Waldo Road near the airport's western perimeter and the approach end of Runway 6. Historically, the Gainesville AFSS has been granted the distinction of being an Outstanding

Facility by the FAA and recognized by the City for providing assistance during life-threatening situations, which affected the Gainesville community. Prior to being relocated to GNV in 1960, the Gainesville AFSS operated from an abandoned Army Airfield in Cross City, Florida. After relocating to Gainesville, the AFSS was initially operated from a 1,947-square-foot building on the north side of the airport. In 1990, the Gainesville AFSS moved into a new 5,000-square-foot building, which is the facility's current location. Efforts are currently underway to construct an eight-foot chain-link fence around the facility for security reasons. Additionally, existing plans are to install additional lighting fixtures in the AFSS parking lot to provide more security and increase the safety of individuals entering and exiting the facility after sunset.

Communications with Gainesville AFSS may be obtained by telephone at (800) 992-7433 or (352) 377-4681. In addition to the telephone, communications with Gainesville AFSS typically may be established by radio from an aircraft. Communications from an aircraft can be accomplished using different methods, which include direct communication within radio range of the AFSS, direct communication using a Remote Communications Outlet Transmitter (RCO), or indirect communications using a combination of RCO frequency, VOR frequency and/or direct communications frequency. Direct communications with Gainesville AFSS can be established on the 123.65 radio frequency by aircraft within approximately 25 N.M. of the station. Additionally, aircraft preparing to depart from Gainesville obtain clearance information from the AFSS on 123.65. Outside of the range of direct radio contact with Gainesville AFSS, radio communications can be achieved by transmitting and receiving through an RCO radio frequency or by transmitting through a VOR frequency and receiving through the 122.10 radio frequency. Radio frequencies and radio frequency combinations used to access Gainesville AFSS from different geographic locations within the stations' service area are identified in Table 1-5.

Table 1-5
GAINESVILLE AFSS COMMUNICATION FREQUENCIES

		Direct Communication	Indirect Communication	
Location	Ident.	RCO (Frequency)	Common Frequency (Receiving)	VOR Frequency (Transmitting)
Gainesville	GNV	123.65 122.50 122.20	122.10	116.20
Craig	CRG	122.20 122.45	122.10	114.50
Crestview	CEW	122.20 122.45	122.10	115.90
Ocala	OCF		122.10	113.70
Lake City	LCQ	122.60		
Palatka	28J	122.25		
Pensacola	PNS	122.20 122.60		
Perry Foley	40J	122.45		
Tallahassee	TLH	122.20 122.40	122.10	117.50
St. Augustine	SGF	122.30		
Greenville	GEF		122.10	109.00
Cross City	CTY		122.10	112.00
Saufley	NUN		122.10	108.80
Panama City	PFN		122.10	114.30
Taylor	TAY		122.10	112.90
Marianna	MAI		122.10	114.00

Source: http//www1.faa.gov/ats/afss/gnvafss/afss_area.htm (February 2003)

1.8.2 Air Traffic Control Tower (ATCT)

There are currently 266 FAA towered airports and 230 contract ATCTs. ATCT controllers are responsible for directing the landing and takeoff of arriving and departing aircraft. Additionally, these controllers are responsible for directing aircraft on the ground, relaying clearances to pilots, and maintaining the airport's Automatic Terminal Information Service (ATIS).

The Gainesville tower employs six air traffic controllers who fulfill the ATC functions of Ground Control, Tower Control and updating information broadcast over ATIS. In September 1995 the ATCT at GNV was designated a federal contract facility. This arrangement allows the FAA to maintain ownership of the facility and equipment, while ATC personnel are from the private sector and not Federal employees. The Gainesville tower begins operations daily at 6:45 AM and closes nightly at 10:30 PM. Through advanced coordination with the Gainesville Air Traffic Manager and FAA, provisions can be made to allow the ATCT to operate before 6:45 AM or after 10:30 PM if conditions necessitate.

1.8.2.1 Gainesville Ground Control

Communications with Ground Controllers at GNV may be established on radio frequency 121.70. Ground controllers are primarily responsible for the control and guidance of aircraft between the movement and non-movement areas of the airport. After receiving a clearance from Gainesville Ground Radio on 121.70, pilots of departing aircraft at GNV contact Ground Control for taxi instructions to the active runway. Ground Control also provides Clearance Delivery.

For arriving aircraft, pilots are in contact with Gainesville Tower Control while executing an approach and landing. Once the arriving aircraft has completed the landing rollout and exits the active runway, the Tower Controller instructs the pilot to contact Ground Control. Before the aircraft is permitted to continue, the pilot must receive taxi instructions and clearance to the ramp by the Ground Controller.

1.8.2.2 Gainesville Tower Control

Communications with Gainesville Tower Controllers may be established on the 119.55 radio frequency. The primary objective of Tower Control is to provide for a safe, orderly and expeditious flow of air traffic within the airport's Class D Airspace. After taxiing to the active runway and completing all preflight checks, pilots of departing aircraft at GNV inform Tower Control they are prepared for departure. The Tower Controller in-turn provides pilots with the necessary departure instructions and takeoff clearance. After takeoff and during transition from Gainesville's Class D Airspace, IFR aircraft are handed-off to Departure Control. Departure Control responsibilities for GNV are handled by the Jacksonville TRACON, which will be further discussed later in this section. During the hours that the ATCT is closed, communication is handled through AFSS.

Aircraft destined for GNV are handed-off to Gainesville Tower Control from Approach Control during transition into Gainesville's Class D Airspace. Similar to Departure Control, Approach Control responsibilities are handled by the Jacksonville TRACON. Once communications are established with Gainesville Tower Control, aircraft receive sequencing instructions and landing clearances.

As noted in Section 1.7 – Aeronautical Environment, GNV does not have a published SID or STAR for arriving and departing IFR aircraft. Significant transient air traffic worked by Gainesville controllers originates from St. Augustine, Jacksonville (Craig Field) and Daytona Beach (Embry-Riddle Aeronautical University).

There are no noise abatement departure procedures. Departing aircraft are routinely instructed to maintain the runway heading after departure and climb to 2,000 feet.

1.8.2.3 Automated Terminal Information Service (ATIS)

ATIS is the continuous broadcast of recorded information in selected high activity terminal areas. The following is a list of information included in a recorded ATIS broadcast.

- Time of the latest weather sequence
- Ceiling and Visibility

- Obstructions to visibility
- Temperature and Dew Point
- Wind Direction and Velocity
- Altimeter Setting (Barometric Pressure)
- Runways and Instrument Approaches in use
- Any other remarks pertinent to the arrival and departure of aircraft.

At GNV, ATIS information can be obtained on the 127.15 radio frequency. The purpose of ATIS is to improve ATC effectiveness and to relieve frequency congestion by automating the repetitive transmission of essential but routine information. The information is continuously broadcast over a discrete Very High Frequency (VHF) radio frequency or the voice portion of a local NAVAID and is receivable no greater than 60 N.M. from the ATIS site at an altitude of 25,000 feet AGL.

1.8.3 Terminal Radar Approach Control (TRACON)

All IFR and some VFR aircraft transitioning between the enroute and terminal segment of flight are under the guidance of approach and departure control. Approach and departure control responsibilities are carried out by TRACON facilities. Approximately 185 TRACON facilities are located throughout the U.S. TRACONS typically control airspace below an altitude of 15,000 feet and within a 30 N.M. radius of an airport, exclusive of airspace controlled by the ATCT. TRACON facilities use radar and air/ground communications to ensure separation between aircraft arriving, departing or transiting the airspace controlled by the facility.

A TRACON facility is not located at GNV. Therefore, separation of aircraft in the approach or departure mode of flight is the responsibility of the Jacksonville TRACON. Communications with the Jacksonville TRACON (the nearest TRACON) can be established on the 118.175 radio frequency.

1.8.4 Air Route Traffic Control Centers (ARTCC)

ARTCCs are established primarily to provide Air Traffic Service to aircraft operating on IFR flight plans within controlled airspace, and principally during the enroute phase of flight. There are 21 ARTCCs, which control enroute traffic for the U.S. and parts of the Atlantic and Pacific Oceans. The Jacksonville Center is responsible for the control of enroute traffic in the airspace surrounding GNV. Jacksonville Center has responsibility over airspace extending over northern Florida, southern Alabama, southern Georgia, eastern South Carolina, and portions of the Atlantic Ocean and Gulf of Mexico. Jacksonville Center's airspace is bordered to the north by airspace controlled by Atlanta Center and to the south by airspace controlled by Miami Center. In the vicinity of GNV communications can be established with Jacksonville Center on the 134.40 radio frequency.

1.8.5 Airway Facilities Sector Office

Airway Facilities Service is a division of Air Traffic Services responsible for maintaining and assessing performance of the network of NAVAIDs within the National Airways System. Additionally, Airway Facilities Service is responsible for some security to NAVAIDs. The need for the Airway Facilities Sector Office services has increased at a rate proportional to the growth

of aviation in the State of Florida. When abnormalities relative to a NAVAID are detected, Airway Facilities personnel are responsible for notifying all appropriate users and for coordinating with Air Traffic Services prior to the initiation of maintenance activities.

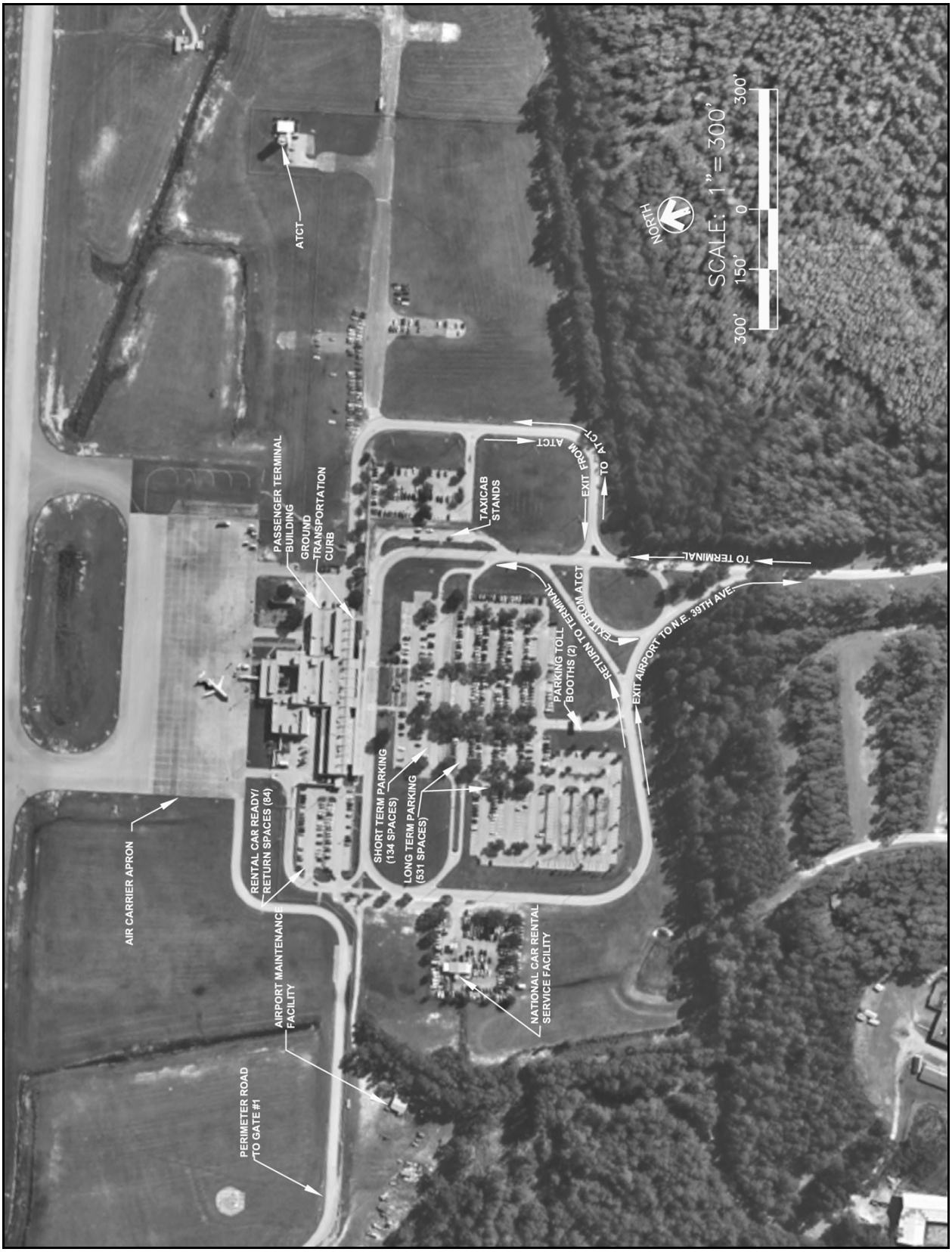
At GNV, a FAA Airway Facilities Service Station is located near the eastern boundary of the airport. Of the 15 personnel employed by the station, 13 are technicians. The Airway Facilities Station at Gainesville is responsible for NAVAIDs in a geographic region extending from the Atlantic Ocean to the east, to the Gulf of Mexico to the west, from Dunnellon, Florida to the south, and to Live Oak, Florida to the north.

1.9 Passenger Terminal Environment

The Gainesville Regional Airport Terminal Building consists of a single story splitfaced bock centered around an open courtyard. Table 1-6 provides a breakdown of existing terminal space. During the course of the Master Plan Update, the Airport embarked on a multi-phase effort to renovate and reconfigure the existing terminal building. One of the challenges facing the designer was the layout of the roof configuration as the building was constructed in the 1970's as a cutting edge solar design prototype. Since then, the majority of the solar equipment has been abandoned.

Phase I of the terminal renovation project included the installation of three (3) passenger boarding bridges and associated vestibules attached to the passenger boarding bridges to the building. Phase two of the planned renovation will reconfigure the heart of the terminal including the gate areas, the meter greeter areas, restrooms and airport administration areas. Later phases will include the ticketing counters and the baggage claim and rental car areas.

Figure 1-22
TERMINAL ENVIRONMENT AERIAL



Source: Reynolds, Smith and Hills, Inc. (2003)

Table 1-6
BREAKDOWN OF TERMINAL SPACE USAGE

Use	Area (S.F.)
Ticket Counter Area	2,840
Airline Offices	4,402
Bag Make-up	2,518
Tug Drives/Drop-Off	3,816
Bag Claim Area	1,885
Public Circulation	17,834
Rental Car Offices/Counters	2,475
Concession Support	1,315
Public Toilet Rooms	2,434
Mechanical Space	1,359
Holdroom Space	6,347
Authority Space	8,275
TSA Space	5,880
TOTAL:	61,470

Source: Airport Records

1.9.1 Passenger Terminal Apron

An apron is provided at the passenger terminal building to accommodate air carrier aircraft at GNV. The apron is positioned on the north side of the passenger terminal adjacent to Taxiway E. Total area encompassed by the apron is approximately 30,800 square yards. Of the total area, approximately 17,600 square yards is composed of concrete and approximately 13,200 square yards is composed of asphalt. The concrete portion of the apron is in fair to good condition. Of the 13,200 square yards of pavement associated with the asphalt portion of the apron, approximately 4,800 square yards is in poor condition and the remaining 7,400 square yards is in fair condition. According to the Airport Facilities Directory, the air carrier apron has a 25'x50' area of deteriorating pavement that is not usable for aircraft.

1.9.2 Terminal Auto Parking

Parking for passengers and employees is provided directly south of the terminal building. Until 145 spaces were added in December of 2000, the parking lot contained 520 parking spaces. This lot, which now contains a total of 665 parking spaces, is divided into short-term and long-term parking. The short-term parking area contains 134 paved parking spaces. The charge for short-term parking is $8.00 per day. The long-term parking area contains a total of 531 paved parking spaces. The charge for long-term parking is $6.50 per day.

Following the events of September 11, 2001, the FAA enacted a rule requiring terminals at airports meeting Category X, Category 1 and Category 2 enplanement levels to undergo a blast analysis. Prior to having the blast analysis completed, these airports are prohibited from allowing any automobile to park within 300 feet of the terminal during certain heightened threat-level conditions. GNV currently maintains an annual enplanement level necessary to be classified as a Category 3 airport. Therefore, the airport is presently in an exempt status with regard to the blast analysis and 300-foot rule and may use all available parking spaces. A blast analysis is being contemplated as part of the terminal study to mitigate any potential operational restrictions in the future.

Presently, U.S.A. Parking Company operates from two tollbooths. The tollbooths are in fair to poor condition. An extreme amount of corrosion and oxidization has resulted in both tollbooths

leaking. Additionally, the awning, which covers the tollbooths is small and inadequate for providing shelter from the elements for employees.

1.9.3 Terminal Curb

The curb element is considered part of the total airport terminal system. The terminal curb consists of the following major elements:

- Vehicular traffic lanes including; through, bypass, curb and maneuvering lanes
- Sidewalk platform
- Curbside baggage check-in points (optional)
- Building openings, entrances and exits
- Pedestrian crossing of the roadway

The terminal curb at GNV consists of a single-level configuration that accommodates arriving and departing passengers. The airport has three traffic lanes on the south side of the terminal building with two lanes reserved for through traffic and one lane reserved for off-loading and on-loading of passengers, and measures approximately 415 feet in length.

1.9.4 Terminal Access

The terminal access road system at GNV is a one-way "return loop" type system and runs in a counter-clockwise direction. The entrance to the main terminal access road is located southeast of the passenger terminal and terminal automobile parking facility, and extends from NE 39th Avenue. In the future, plans are to improve access to the terminal by incorporating an additional terminal entrance from Waldo Road, which serves as a primary artery for the City and is located adjacent to the east side of the airport.

1.9.5 Air Carrier Fueling

Fueling of air carrier aircraft at GNV is conducted by University Air Center (UAC), which is the Fixed Base Operator (FBO) located at the airport. The annual amount of fuel delivered to air carrier aircraft since 1989 is presented in Table 1-7.

Currently an in-ground hydrant fueling system is not provided on the air carrier apron. Therefore, employees of UAC use a 3,000-gallon jet fuel truck for fuel distribution. Before servicing an air carrier aircraft, UAC employees must first transport the jet fuel from the fuel farm located near the northwest perimeter of the airport to the air carrier apron, which is located near the southern perimeter of the airport. Presently, only a partial perimeter road is available. In order to overcome this obstacle, employees of UAC access the air carrier apron by way of Taxiway A using a handheld radio, which allows the driver to maintain communications with the GNV Ground Control.

Table 1-7
ANNUAL AMOUNT OF FUEL DELIVERED TO AIR CARRIERS (1989-2002)

Year	Fuel (gal.)
1989	1,992,537
1990	1,571,996
1991	1,201,974
1992	992,853
1993	690,910
1994	908,109
1995	1,014,107
1996	1,235,089
1997	1,424,821
1998	1,256,651
1999	1,026,110
2000	1,189,040
2001	1,406,586
2002	1,255,212

Source: Airport Records

1.9.6 Rental Car Facilities

Rental car operating facilities at GNV are located adjacent to the ground transportation curb west of the passenger terminal building. Currently, five rental car companies are affiliated with GNV. With the exception of Enterprise, all car rental companies affiliated with GNV lease space within the passenger terminal building. Car rental companies affiliated with GNV include the following:

- Avis
- Hertz
- National
- Enterprise
- Budget

Currently, National is the only rental car company serving GNV that maintains an onsite automobile service facility. For the remaining rental car companies, automobile maintenance and upkeep are conducted at the nearest service facility operated by the respective rental car companies or at a selected local automobile service station. Plans are currently being formulated to construct a consolidated rental car upkeep and maintenance facility. The facility will be designed to allow all rental car companies located at GNV to service and provide light maintenance for their vehicles.

Ready and return spaces for automobiles owned by the rental car companies are located on the western end of the passenger terminal building. These spaces, which total 84, are uncovered and separate from the passenger terminal parking facilities previously discussed. The number of ready and return spaces allotted to each rental car company is determined by the amount of revenue generated by each. The following is a brief description of the operations associated with each of the rental car companies.

- **Avis** – Avis became affiliated with GNV in 1992 and currently employs 42 full- and part-time personnel. At present, Avis processes approximately 1,000 rentals per month and utilizes 25 ready and return spaces.
- **Budget** – Budget began serving GNV in 1997 and employs eight full- and part-time personnel. At present, Budget processes approximately 300 rentals per month and utilizes 16 ready and return spaces.
- **Enterprise** – Enterprise is located approximately two miles from the airport on NW 39th Avenue and, therefore, does not occupy any ready and return spaces or administrative space at GNV. Since Enterprise currently does not have a facility located at the airport, passengers can arrange pick-up and drop-off service provided by the car rental company. At present, Enterprise processes between 10 and 20 rentals per month for passengers utilizing GNV.
- **Hertz** – Hertz began serving GNV shortly after the terminal was completed in 1979. At the airport, Hertz currently employs 40 full- and part-time personnel. Hertz processes between 1,000 and 1,500 rentals per month and utilizes 22 ready and return spaces.
- **National** – As previously mentioned, National is the only rental car company serving GNV that maintains an onsite service facility. The facility is located near the western edge of the passenger terminal parking area adjacent to the traffic lanes used for exiting the terminal area. The facility is shown in Figure 1-19. National began serving GNV in 1992 and employs 15 full- and part-time personnel. At present, National processes approximately 750 rentals per month and utilizes 21 ready and return spaces. National is currently in the process of merging with Alamo Rental Car Company.

1.10 General Aviation (GA) Area

The GA area is located on the northwest side of the airfield and is accessed from Waldo Road, which extends northeast and southwest along the northwestern perimeter of the airport. The GA area encompasses approximately 65 acres or 4 percent of the total 1,870 acres encompassing the airport. The area used for GA activity at GNV is illustrated in Figures 1-23 and 1-24.

1.10.1 Fixed Base Operators (FBOs) and Services

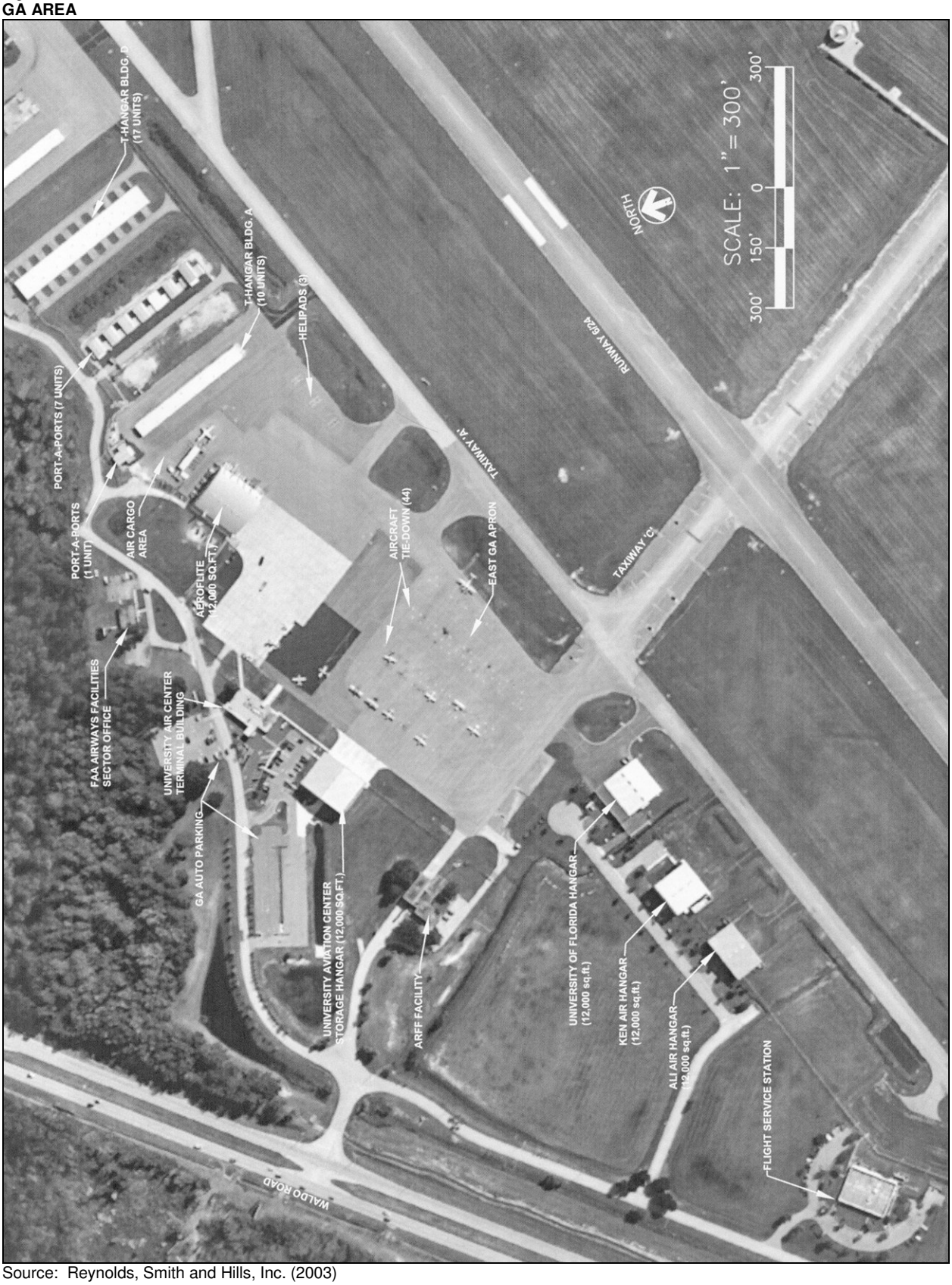
An FBO is a business primarily responsible for providing GA services at an airport. GNV is served by primarily University Air Center, which provides parking space for transient aircraft, aircraft storage and tiedowns, aircraft fueling, aircraft maintenance, aircraft rental, flight instruction and aircraft charter services. In addition to providing maintenance services for GA aircraft, University Air Center provides on-call commercial maintenance at GNV for Canadair Regional Jets operated by ASA and Cessna Caravans operated by Federal Express. In addition to University Air Center, Aeroflight, a second FBO, provides aircraft maintenance services only for based and transient aircraft.

Currently, GNV owns all structures and facilities associated with GA activity at the airport with the exception of the corporate hangars, which will be described later in the chapter.

University Air Charter employs 17 personnel. A breakdown of UAC employees is as follows:

- (5) Certified Flight Instructors (CFI)

Figure 1-23
GA AREA



Source: Reynolds, Smith and Hills, Inc. (2003)

Figure 1-24
GA AREA (CONTINUED)



Source: Reynolds, Smith and Hills, Inc. (2003)

- (4) Charter Pilots
- (5) Mechanics
- (3) Lineman

To provide aircraft charter services, UAC maintains a FAR Part 135 operating certificate. Included in the following list are the aircraft used by UAC for charter service:

- (1) Cessna Citation I
- (1) Cessna Citation II
- (1) Cessna 421
- (1) Cessna 340

With the exception of the Piper Seminole, all of the charter aircraft are stored in a hangar. The Piper Seminole is stored in a sunshade. In addition to corporate charter, University Air Center contracted to provide air ambulance service for the Shands Hospital. On average University Air Center operates each charter aircraft approximately 30 hours per month.

Flight training is also provided by UAC, which operates a flight school under FAR Part 141 criteria. The flight school uses four Cessna 152 aircraft and three Cessna 172 aircraft to conduct flight-training operations. Each of these aircraft operate approximately 40 hours per month and are stored on tiedowns, which are rented monthly from GNV.

Flight operations conducted by the University Air Center flight school accounts for approximately 30 percent of the GA traffic at GNV. Additionally, annual avgas purchases for flight school aircraft exceeds 35,000 gallons. On average between 30 and 40 pilots successfully complete flight-training programs offered by the University Air Center flight school annually.

1.10.2 GA Aprons and Tiedowns

Two general aviation aprons are available at GNV for the purpose of serving GA aircraft. The primary apron (East GA apron) serves based and transient aircraft, and is located immediately adjacent to Taxiway A and southwest of the GA terminal building. The apron is accessed using Taxiway A and Taxiway C. The area of this apron measures approximately 40,000 square yards and is in excellent condition. Approximately 31,500 square yards of the apron is composed of asphalt and was recently rehabilitated. The remaining 8,500 square yards is composed of concrete. Included within this area are 44 tiedowns (anchor type and marked) and three helicopter parking positions. For transient purposes, the apron can accommodate an additional 15 to 18 corporate aircraft.

The secondary apron (West GA apron) is also utilized by University Air Center and is positioned immediately adjacent to Taxiway A. This apron is in good condition and is composed of a seal-coated asphalt pavement and encompasses an area of approximately 30,000 square yards. This apron provides 41 tiedowns and two helicopter parking positions, in addition to parking space for aircraft associated with the maintenance facility and charter service. The secondary apron is used primarily by based aircraft.

Approximately 25 transient GA aircraft utilize the east GA apron daily. On average approximately seven transient aircraft remain overnight.

1.10.3 Covered Aircraft Storage

Covered storage for aircraft includes T-hangars, sunshades, Port-A-Port type hangars and conventional hangars. Aircraft storage facilities available for lease or rental in the GA area are owned and maintained by GNV with the exception of the corporate hangars, which are privately owned.

Single engine and light twin-engine aircraft primarily use T-hangars, sunshades and Port-A-Port type hangars for covered storage. At GNV, there are currently 59 T-hangar units, which are all occupied. The airport currently maintains a list of approximately 12 aircraft owners waiting for a T-hangar to become vacant or new T-hangars to be constructed. In addition to T-hangars, 18 Port-A-Port hangars and 17 sunshades are available for aircraft storage at GNV.

There are presently six conventional hangars at GNV. UAC leases three conventional hangars comprising 12,000 square feet, 8,500 square feet, respectively. The hangars are used for the storage of charter aircraft, aircraft maintenance and based/transient aircraft storage. UAC is also planning to construct an additional 12,000-square-foot conventional hangar within the next 18 months for additional aircraft storage. Aeroflight occupies a 12,000-square-foot World War II style hangar and is used for aircraft maintenance. The Joint Aviation Unit (JAU) is a 8,500-square-foot hangar comprised of the City and Alachua County aviation police personnel with three rotorcraft which are used for search and rescue and law enforcement activities. The University of Florida, Ken Air, and Ali Air each own an additional 12,000-square-foot conventional hangar for their corporate flight departments. Table 1.8 presents a breakdown of the each hangar type, tenant, size and ownership.

Table 1-8
AIRCRAFT HANGAR SUMMARY
GAINSEVILLE REGIONAL AIRPORT

Type	Tenant	Use	Ownership	Size	Condition
Conventional	University Air Center	Storage	GACRAA	12,000 sq. ft.	Excellent
Conventional	Aeroflight	Maintenance	GACRAA	12,000 sq. ft.	Fair
Conventional[1]	University Air Center	Maintenance	GACRAA	10,000 sq. ft.	Good
Conventional	University Air Center	Storage	GACRAA	8,500 sq. ft.	Good
Conventional	Joint Aviation Unit	Storage	GACRAA	6,000 sq. ft.	Fair
Conventional	Ali Air	Storage	Private	12,000 sq. ft.	Excellent
Conventional	Ken Air	Storage	Private	12,000 sq. ft.	Excellent
Conventional	University of Florida	Storage	Private	12,000 sq. ft.	Excellent
T-hangar	Building A	Storage	GACRAA	10 units	Good
T-hangar	Building D	Storage	GACRAA	17 units	Good
T-hangar	Building F	Storage	GACRAA	10 units	Good
T-hangar	Building I	Storage	GACRAA	11 units	Excellent
T-hangar	Building J	Storage	GACRAA	11 units	Excellent
Sunshades		Storage	GACRAA	14 units	Good
Port-A-Ports[2]		Storage	GACRAA	8 units	Fair

1 Includes lobby and flight instruction space.
2 Port-A-Ports are in two separate locations, comprising eight total units. Seven units owned, six – GACRAA, one privately owned.
Source: Airport Records; RS&H Analysis, 2003

1.10.4 Fueling Facilities

GNV is supported by one above ground fuel farm located near the northeastern perimeter of the airfield along NE 49th Street. The fuel farm, which is used by UAC and other tenants, is owned, managed and maintained by the GNV. The following is a breakdown of the fuel storage capacity maintained by the GNV fuel farm.

- (1) 25,000 Gallon Avgas Tank
- (3) 15,000 Gallon Jet Fuel Tanks
- (1) 1,200 Gallon Mogas (Auto Fuel) Tank
- (1) 1,200 Gallon Diesel Fuel Tank

UAC is responsible for providing fueling for all aircraft at GNV. Additionally, UAC has a government contract for aviation fuel services, which allows them to sell fuel to military aircraft. A summary of the annual amount of aviation fuel delivered by Flightline Aviation between 1989 and 2001 is presented in Table 1-9.

Table 1-9
AVIATION FUEL DELIVERED BY FLIGHTLINE AVIATION (1989-2001)

Year	Jet A (Gal.)		Avgas (Gal.)	Total (Gal.)
	Air Carrier	GA and Military		
1989	1,992,537	516,318	288,584	2,797,439
1990	1,571,996	567,629	303,949	2,443,574
1991	1,201,974	516,630	289,703	2,005,307
1992	992,853	450.532	280,331	1,723,716
1993	690,910	445,942	248,442	1,385,294
1994	908,109	395,809	233,383	1,537,301
1995	1,014,107	417,213	220,118	1,651,438
1996	1,235,089	343,580	185,710	1,764,379
1997	1,424,821	344,728	202,414	1,971,963
1998	1,256,651	418,898	201,987	1,877,536
1999	1,026,110	474,816	248,652	1,749,578
2000	1,189,040	454,954	241,300	1,885,294
2001	1,405,585	448,873	240,604	2,096,063
2002	1,255,212	513,426	227,463	1,996,101

Source: Airport Records

As previously mentioned, an in-ground hydrant system is not presently available on the passenger terminal apron at GNV. Therefore, all fuel delivery is accomplished using fuel trucks. The following are fuel trucks leased and operated by UAC:

- (2) 3,000 Gallon Jet A Trucks
- (1) 1,200 Gallon Avgas Truck
- (1) 1,000 Gallon Avgas Truck
- (1) 1,600 Gallon Jet A Truck

1.11 Landside Support Services

Existing landside support services available at GNV are listed below and illustrated in Figure 1-22, 1-23 and 1-24:

- ARFF Services
- Air Cargo Services
- Airport Maintenance Services
- Airport Utilities
- Airport Industrial Park
- Archery, Skeet and Rifle Ranges
- Foreign Trade Zone (FTZ)
- U.S. Customs Service (shared)

1.11.1 Aircraft Rescue and Firefighting Facility

The ARFF Facility at GNV is located on the west side of the airport approximately 600 feet west of the GA terminal building near Waldo Road. GNV's ARFF facilities meet FAA/ARFF Index A rating requirements and have the necessary capabilities and equipment available to achieve Index B requirements. The structure housing the ARFF facility was constructed in 1979 and contains 5,600 square feet. Response and fire fighting vehicles used by the ARFF facility include the following:

- **1993 E-One Truck** – The 1993 Model E-One is a rescue and firefighting truck in fair to good condition. The truck carries 1,500 gallons of water and 180 gallons of Aqueous Film-Forming Foam (AFFF). This truck pumps water at a rate of 1,250 gallons per minute and a pressure of 150 pounds per square inch.
- **1994 E-One Truck** – The 1994 Model E-One is a one-ton Rapid Intervention Vehicle (RIV) in excellent condition. This truck carries dry chemical, 150 gallons of water, 20 gallons of AFFF and 450 pounds of dry chemical.
- **1991 Equipment Truck** – The 1991 Model Equipment Truck is responsible for carrying apparatuses such as light stands and additional equipment including spare oxygen bottles.

The ARFF facility is designated as Station 6 and is staffed 24-hours a day by two personnel employed by the City Fire Department. Of the 148 firefighters employed by the City, 17 maintain the necessary training requirements to meet the FAA's ARFF certification requirements. Firefighters assigned to the airport work 24-hour shifts followed by 48 hours off.

The facility has four equipment/apparatus parking bays, in which two have immediate landside access and two have immediate airside access. Within the confines of the equipment bays are lockers for equipment storage and areas designated for equipment maintenance and upkeep. The living area of the ARFF facility encompasses approximately 3,300 square feet and includes administrative offices, a kitchen, a locker room, restrooms, training facilities and sleeping quarters.

1.11.2 Air Cargo

Air cargo service is provided by Federal Express, which began serving GNV in 2001 (see Figure 1-23). Since initiating service to Gainesville, Federal Express has handled 399,292 pounds of outbound cargo. Cargo inbound to Gainesville is originally sorted at Federal Express's sorting

facility in Memphis, Tennessee before being flown to Jacksonville, Florida. In Jacksonville the cargo is once again sorted before being flown to Gainesville. Once in Gainesville, the cargo is sorted by Federal Express employees and placed on trucks for local delivery.

For outbound service, cargo is flown to Jacksonville, Florida, where the cargo is placed on a larger aircraft and transported to the sorting facility in Memphis, Tennessee. An obstacle faced by Federal Express at GNV is the common occurrence of fog, which occasionally results in cargo being transported between Jacksonville and Gainesville by truck.

Equipment used to transport cargo from Jacksonville to Gainesville includes three Cessna Caravans. Future plans of Federal Express include incorporating a Fokker 27 (F-27) for Gainesville service. In Gainesville, scheduled or emergency aircraft maintenance and fuel is purchased through UAC.

Federal Express does not currently operate out of a building at GNV. Therefore, an area comprising approximately 10,000 square feet has been designated as the "air cargo area." This area is located on the northeast side of the airport approximately 600 feet east of the GA terminal building. The designated area is accessed by aircraft using Taxiway A and a connector taxiway linking the GA apron to the primary taxiway system. The designated area allows Federal Express to set up an open air sorting facility, under a permanent canopy, on a daily basis that provides adequate and easy access from Waldo Road and NE 39th Avenue. However, the small area and lack of permanent facilities constrains Federal Express's operations. Therefore, plans are currently being developed to provide Federal Express an enclosed structure at GNV and increase the operating area.

1.11.3 Airport Maintenance

The responsibility of the airport maintenance staff at GNV is to provide maintenance support for all facilities and equipment owned by the GACRAA. The staff is composed of the following positions.

- (6) Maintenance Crewmembers
- (8) Custodial Personnel
- (1) Mechanic
- (1) Electrician

The maintenance equipment owned and operated by GNV is provided in Table 1.10.

Table 1-10
MAINTENANCE EQUIPMENT INVENTORY

Type	Equipment Type
Trucks	
1	1986 Chevrolet Crew Cab (3/4-Ton)
2	1993 Chevrolet Multi-Stop Vans
1	1995 Chevrolet Van
1	1995 Chevrolet (1/2-Ton) Pickup Truck
1	2002 Chevrolet Blazer LS
2	Chevrolet Blazers (Military)
1	Chevrolet Service Truck (3/4 -Ton)
1	Daihatsu Hijet Off-Road Truck
1	1986 Dodge D-50 Pickup Truck
1	1988 Dodge (1/2-Ton) Pickup Truck
1	1987 GMC Blazer
1	2002 GMC Blazer
1	1980 International Harvester MN 1624 Truck
1	1982 International Harvester Bucket Truck
1	Military Wrecker (10-Ton)
1	2003 Polaris 6x6
Maintenance Equipment	
2	15-Foot 3615 Bush Hog Mowers
1	Aircraft Tow Tractor with AMC Diesel Engine
1	5-foot Bush Hog Mower
2	6610 Farm Tractors (1 with Alamo Slope Mower)
1	Forklift (15,000 Pound Capacity)
2	International Harvester 510B Loader
1	International Harvester I2500D-3 Tractor
1	John Deere Diesel Gator
1	4050 John Deere Tractor
1	F395 John Deere Mower
1	Koehring Crane (7½ Ton)
1	Military Tractor (5-Ton)
1	New Holland T-100 Tractor
1	1992 Isuzu Sweeper
1	10-Foot Terrain King Mower
1	72-inch Toro Groundsmaster Mower
1	15-Foot Woods Mower
1	Hydroscope Operator and Lower Unit
1	John Deere Air Compressor
1	1971 30-Foot Lowboy Trailer
1	Miller Welder
1	Onan Generator and Light Set
4	Sets Portable Flood Lights
1	Trailer Mounted Spray Rig

Source: GNV

1.11.4 Utilities

Utilities used by GNV include water, sanitary sewer and electric. All utilities are provided by Gainesville Regional Utilities. Potable water is supplied to the airport from the Gainesville water treatment facility. The sanitary sewer system is established to direct the airport's wastewater and sewage to the Gainesville wastewater treatment facility. The major of facilities at GNV are connected to the sanitary sewer system. However, some of the General Aviation Facilities use a septic field. The main electrical line extends parallel to Northeast 39th Avenue before coming on to airport property. GNV's electrical line is then connected at the electrical vault located north of the ATCT and south of Taxiway E.

GNV also maintains an emergency generator for use during power outages. The emergency generator is considered to be outdated and will only provide enough electricity to support a minimal amount of terminal facilities. The airfield vault also includes and emergency generator.

1.11.5 Airport Industrial Park

The GNV industrial park is located on the north side of the airport. The industrial park consists of land parcels encompassing approximately 220 acres owned and managed by the City. The City sells the parcels to companies electing to locate a facility within the industrial park. Money obtained by the City from the sale of parcels within the industrial park, the sum of which achieves fair market value, is forwarded to the airport for operating revenue. The following is a list of companies located in the industrial park:

- Fabco Air Incorporated
- Kenneth O. Lester Trucking
- Maris Distributing Company
- Florida Food Service Incorporated
- Heat Pipe Technology
- Nordstrom
- Ryder Trucking

1.11.6 Archery, Skeet and Rifle Ranges

Located near the eastern perimeter of the airport are an archery range, a skeet range and a rifle range. The archery range encompasses approximately 40 acres and is located in a wooded area on the west side of a gravel perimeter road, which traverses the east side of the airport. The archery range is currently in the process of relocating to a new location away from the airport.

A skeet range is located on the northeast side of the gravel perimeter road, which traverses the north side of the airport. The skeet range encompasses approximately 22 acres and provides several different stations, which offer a variety of target locations.

Located approximately 1,600 feet southeast of the skeet range is a pistol and rifle range. This facility has been inactive for several years. The North Central Florida Sportsman's Association (NCFSA) has recently expressed interest in reactivating the facility. Prior to reactivating the facility, however, safety modifications to the structure will be required before the City will provide site approval. To address the safety modifications, the NCFSA has prepared a site plan that implements the standards of a modern gun range recommended by the Florida Fish and Wildlife Commission and includes overhead and ground mounted baffles to address hazards to operating aircraft.

1.11.7 Foreign Trade Zone

Foreign Trade Zones (FTZ) are sites within the U.S., which are typically associated with or near a port of entry. FTZs are established to operate exclusive of U.S. duties or tariffs, thereby

allowing U.S. companies involved in international trade to compete more effectively. The nearest FTZ to GNV is FTZ #217 located in Ocala, Florida. The Ocala FTZ is comprised of five general-purpose sites located at Ocala International Airport, Dunnellon Airport, Ocala Airport Commerce Center, Ocala International Commerce Park and portions of the Silver Springs Shores Industrial Park. The City of Ocala manages the FTZ. Therefore, to utilize the FTZ, officials from GNV will need to continue discussion with the City of Ocala regarding either a general purpose site or a sub-zone.

1.11.8 Customs Service

The function of the U.S. Customs Service is to clear international flights and cargo entering the U.S. The nearest airport to GNV, which has been designated as a User Fee Airport providing full-time U.S. Customs Service, is Ocala International Airport. In October 2002, the City of Ocala invited GNV to participate in Ocala International Airport's U.S. Custom's program to aid in the economic development of the area and to share the expense associated with providing Customs Service. GNV has accepted the invitation and applied to federal agencies for the landing rights designation, which is necessary for an airport to become a port of entry. After receiving the landing rights designation, GNV will pay the City of Ocala $38,500 per year (current pro-rata share) to share in the U.S. Customs Service.

1.12 Airport Access

The City is located in Alachua County, in the North Central region of Florida, adjacent to I-75. I-75 is one of two major north-south routes in Florida; I-95, which runs along the east coast, is the second major route. These two interstates serve the vast majority of north-south traffic, including the seasonal residents who winter in Florida. I-75 extends from Sault Saint Marie, Michigan to Miami, Florida and I-10 initiates in Jacksonville, Florida and terminates in Los Angeles, California. I-95 extends from Miami north to the Canadian border near Houlton, Maine. Gainesville is approximately 45 (44.9) miles south of the I-10/I-75 interchange, approximately 30 miles north of Ocala and approximately 70 miles west of I-95. The regional highway network is shown in Figure 1-23.

The GNV is located on the eastern side of Gainesville. The airport property is bordered by State Road 24 (Waldo Road) on the west and State Road 222 (NE 39th Avenue) on the south. Waldo Road is a multilane facility with a grass median. Just north of the intersection with NE 39th Avenue, the two-directional Average Annual Daily Traffic (AADT) on Waldo Road is 18,700. The two-directional AADT on Waldo Road south of NE 39th Avenue near NE 23rd Avenue is 32,500. The two-directional AADT on NE 39th Avenue just east of the intersection with Waldo Road is 15,100. NE 39th Avenue is also a four-lane facility and the airport access road is located immediately west of where the facility is reduced from 4 lanes to 2 lanes.

Highway access to GNV is illustrated in Figure 1-25. Traveling from the north on I-75, access to the GNV is obtained by taking the exit for State Road 222 and traveling east approximately 11 miles (10.70 miles) on NW 39th Avenue. After traveling approximately eight miles (7.85 miles) east on NW 39th Avenue and crossing North Main Street, NW 39th Avenue becomes NE 39th Avenue. Continuing east, NE 39th Avenue curves south and intersects with Waldo Road on the eastern side of Gainesville. After passing the intersection of NE 39th Avenue and Waldo Road, GNV is located approximately 1 mile (.98 miles) on the north side of NE 39th Avenue.

Traveling from the south on I-75, access to the GNV is obtained by the State Road 121 exit and traveling east approximately 10 miles (9.87 miles) using NW 8th Avenue, Waldo Road and NE 39th Avenue.

1.12.1 Airport Area

The Airport Industrial Park is located immediately north of the airport and is accessed from Waldo Road. South of the airport, adjacent to NE 39th Avenue, there are several government facilities. These facilities are all accessed from NE 39th Avenue. The Alachua County Fairgrounds are located on the northeast corner of the intersection of Waldo Road and NE 39th Avenue. The fairground property is immediately adjacent to the southern boundary of the airport. East of the airport access along the north side of NE 39th Avenue is the Juvenile Detention Center. Located along the south side of NE 39th Avenue are the Santa Fe Correctional Center and the Alachua County Correctional Center.

1.12.2 Public Transportation

In addition to airport rental car companies and use of ones personal vehicle, daily ground transportation options at GNV are limited to the use of taxicab operators. In the past, the MTPO has attempted to incorporate the airport into the existing public transportation route network. However, at this time, the closest bus stop is located at the intersection of Waldo Road and NE 39th Avenue.

1.12.3 Taxicab Service

The method of ground transportation used by many of the itinerant passengers at GNV is by taxicab. A taxicab stand is positioned at the eastern end of the passenger terminal building adjacent to the airport's inbound entrance lane (see Figure 1-19). The taxicab stand area provides space to accommodate approximately 20 taxicabs. Taxicab operators serving GNV include the following:

- Unity Taxi and Transportation Services
- Diamond Cab Company
- Independent Taxi Services
- University Taxi
- Best Way Cab Company
- City Cab
- Gainesville Cab
- A Classic Moment (single permit holder)

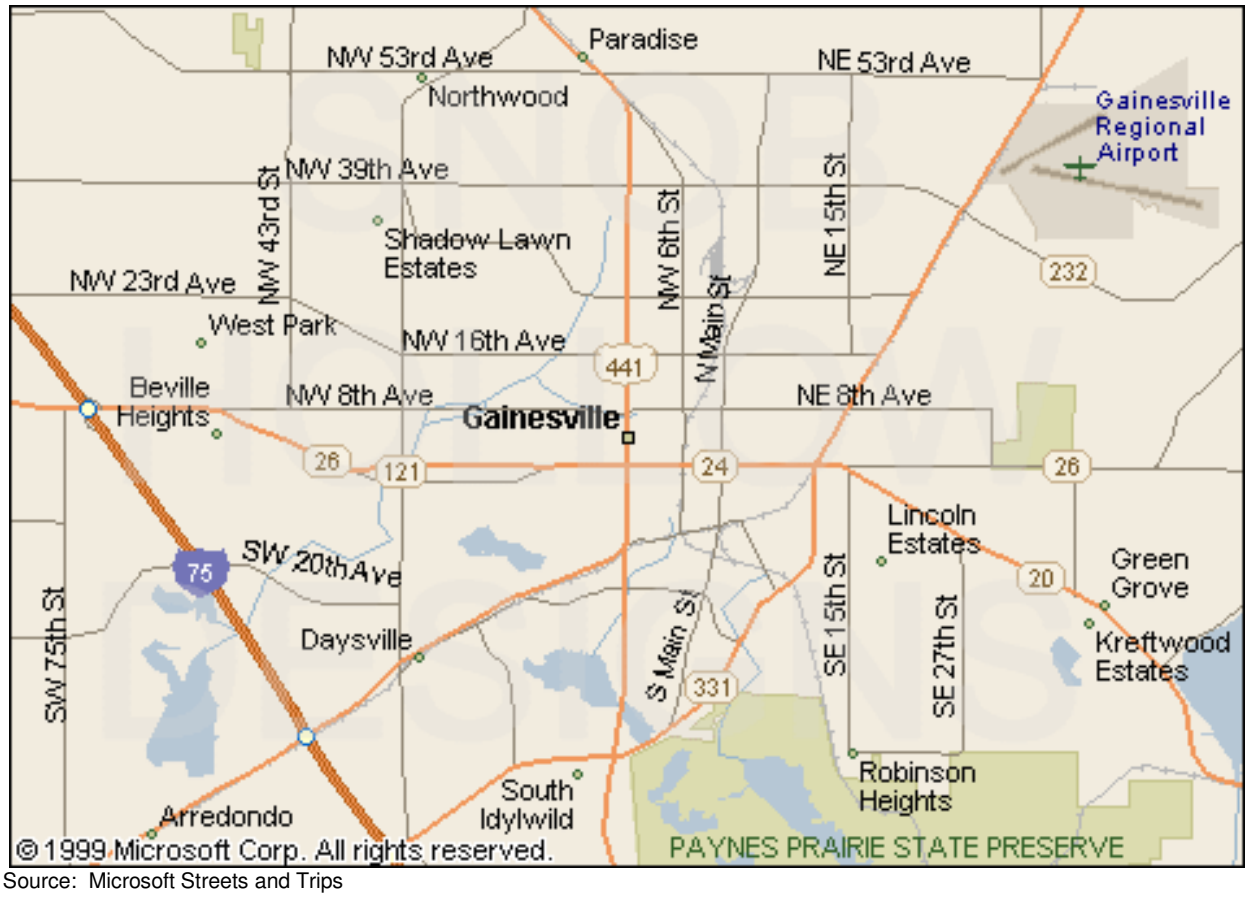
To hail a taxicab, passengers are directed to the eastern end of the Airport's ground transportation curb located adjacent to the passenger terminal building. At the eastern end of the ground transportation curb a button is provided, which activates a light signaling a taxicab to advance to the ground transportation curb. Currently a button and light are only available on the eastern end of the ground transportation curb. In the future, officials at the GNV are planning to implement a similar system for the western end of the ground transportation curb near the exit of the baggage claim area.

Figure 1-25
REGIONAL HIGHWAY MAP



Source: Rand McNally Road Atlas

Figure 1-26
HIGHWAY ACCESS TO GNV



Source: Microsoft Streets and Trips

1.12.4 Future Plans

The NCFRPC functions as the staff for the Gainesville area MTPO. This organization develops the long-range transportation plan and the Transportation Improvement Program for the metro area, which includes the central area of Alachua County.

The Airport staff requested a change in the primary access road to the airline passenger terminal. The proposed access road enters airport property from Waldo Road rather than NE 39th Avenue. The project was included in the Transportation Improvement Program in a special category called "Intermodal Connections". Other projects listed in this category include the extension of the Airport Industrial Park access road and the reconfiguration of the existing ingress/egress to airport property to better accommodate truck traffic. These projects were submitted to the FDOT as a part of the MTPO priority list.

A joint planning project between the City and Alachua County focusing on the revitalization of the eastern area of Gainesville is also underway. This year long study, conducted by the NCFRPC, involved the evaluation of land use, transportation and environmental issues within the area. A key component of this planning effort involves the relocation of the fairgrounds that are adjacent to the airport. The property is proposed to be used for an industrial, office, hotel/conference center development. Also included in the planning effort is a proposed Bus Rapid Transit system that would serve the planned mixed-use development and the airport, tying in with the existing transit system.

1.13 Airport Environment and Land Use

Airport Environmental and land use inventory items are provided in this section and will be discussed and analyzed in much greater detail later in the report. This section is broken into five major sections that will discuss existing on-airport land use, surrounding land use, the local government planning process, airport hazard district and airport noise zones around the GNV. These issues are a bit more complicated in regards to the GNV in that the airport actually lies within the geographic limits of the City but some portions of airport property actually form the boundary between the City and Alachua County. Therefore, this section will discuss pertinent sections from each jurisdiction.

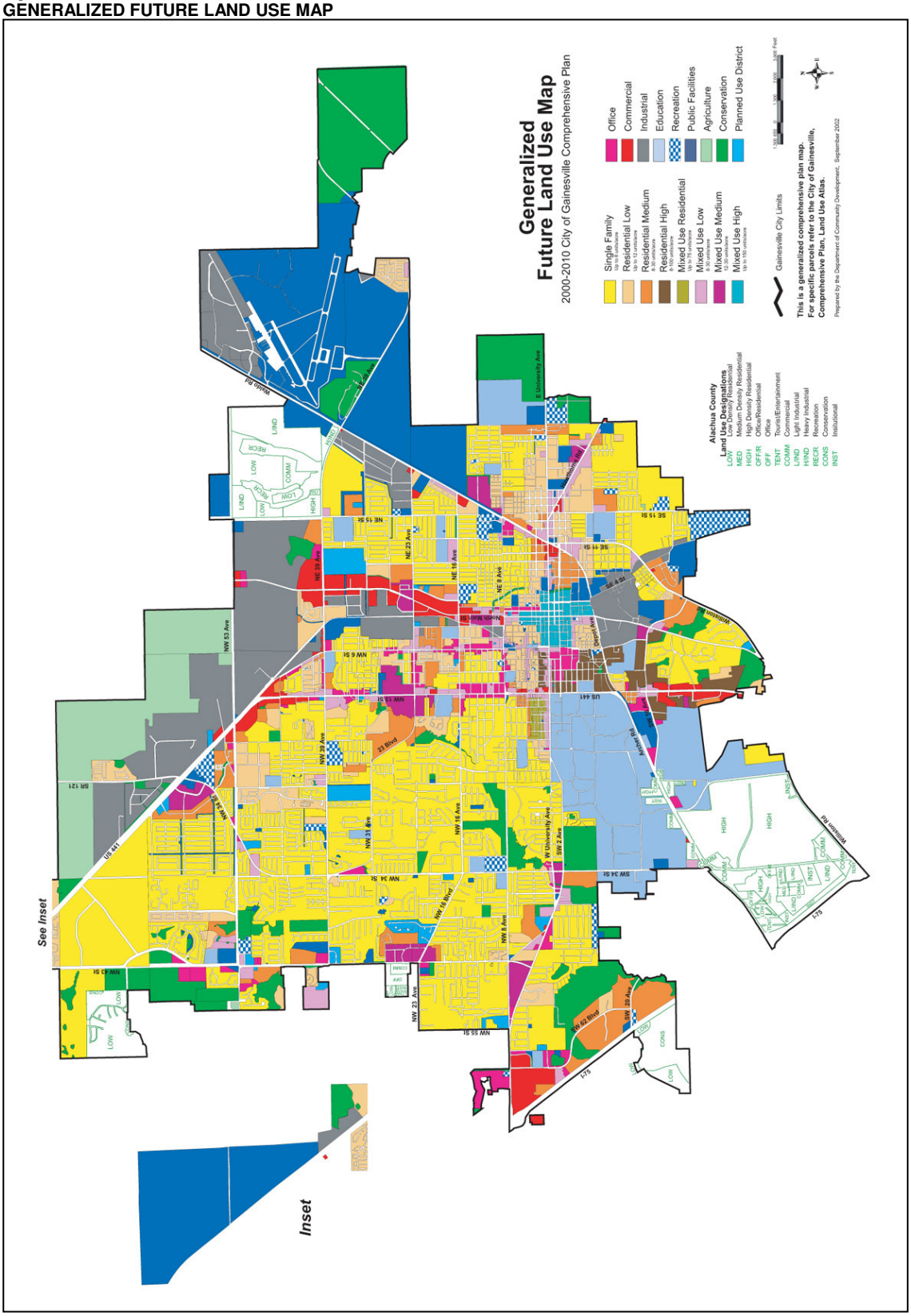
1.13.1 Existing Airport Land Use and Zoning

The GNV falls within the political jurisdiction of the City, which in turn has defined GNV's land use and zoning classification. The current Future land use Map for the City is shown in Figure 1-27 and classifies the future land on airport land use as a Planned Use District. Figure 1-28 presents the generalized zoning map for the City. The GNV current zoning classification is designated AF Airport Facilities. The Gainesville Land Development Code, Sec 30-76 establishes provisions for Airport growth, development and management in accordance with environmental concerns and public safety. An Airport Zoning Map designating permitted uses within the AF designation has not yet been adopted but currently is in the process of adoption and amended by Ordinacne.

1.13.2 Surrounding Future Land Use and Zoning

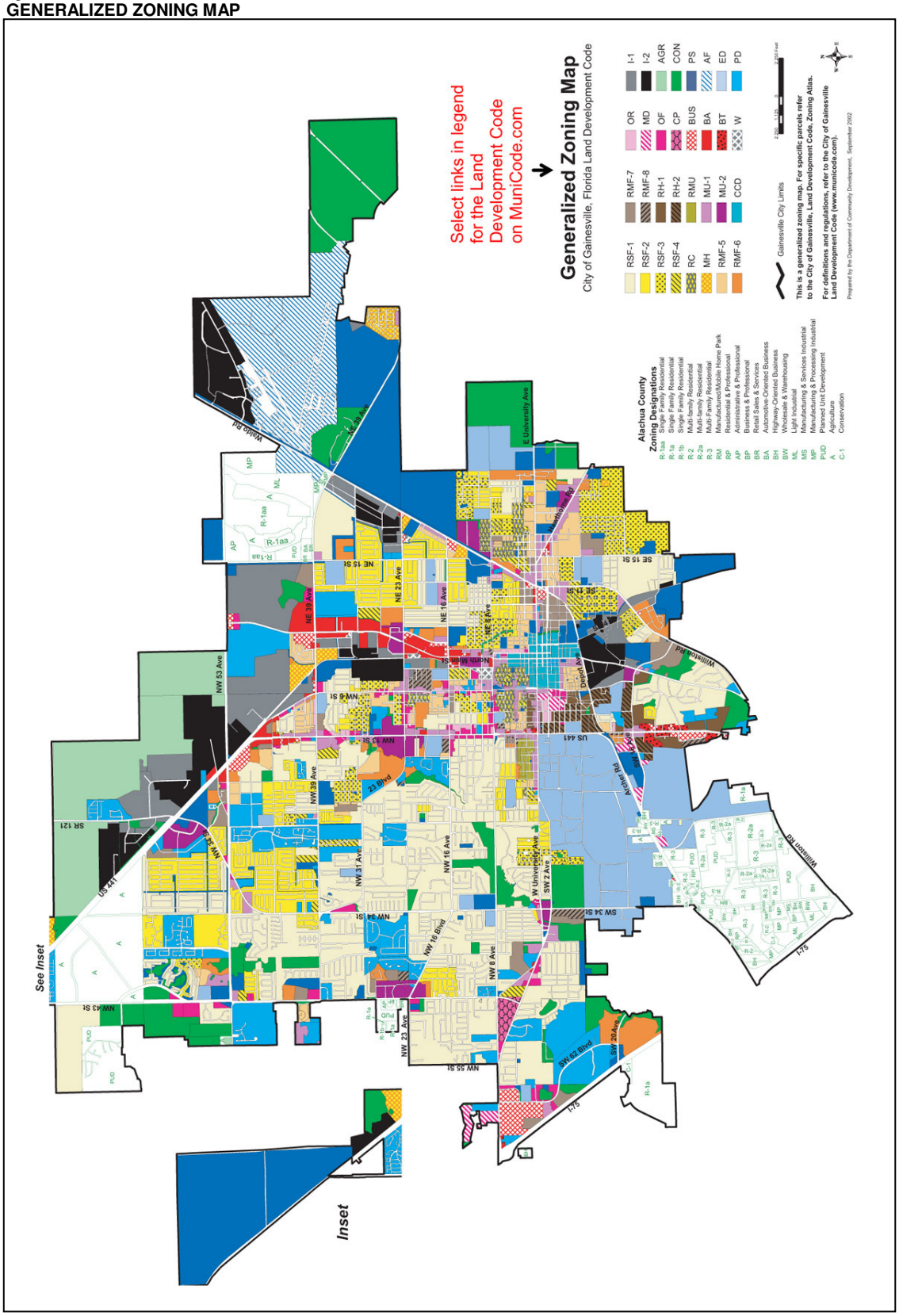
The surrounding future land uses and zoning for off airport property is generally compatible with Airport activity and operations. Figure 1-29 presents the Off Airport Land Use Plan 2003 which was prepared as part of the previous 1986 Airport Master Plan Update. This figure presents

Figure 1-27
GENERALIZED FUTURE LAND USE MAP



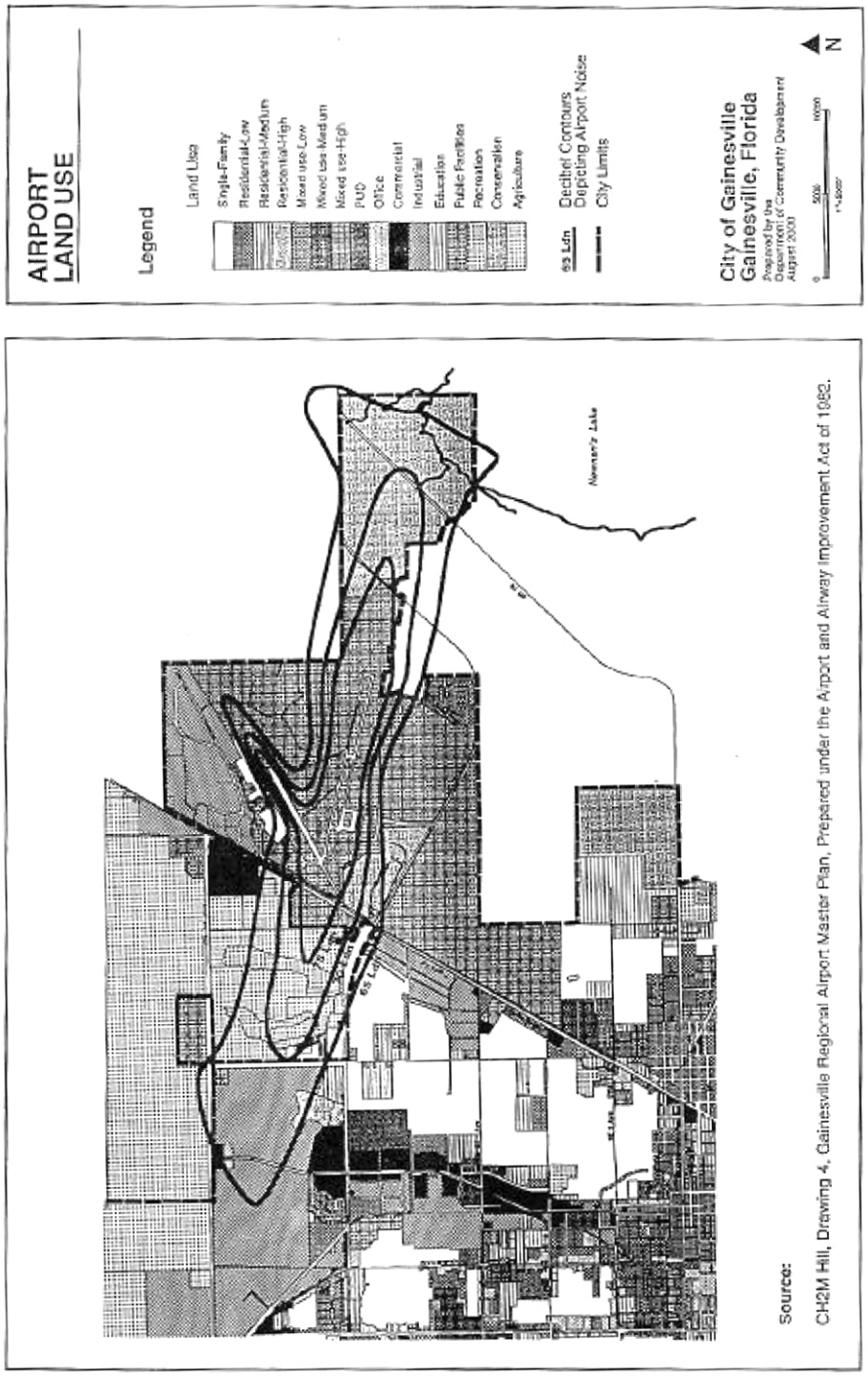
Source: City of Gainesville Comprehensive Plan

Figure 1-28
GENERALIZED ZONING MAP



Source: City of Gainesville Comprehensive Plan

Figure 1-29
AIRPORT LAND USE



Source: City of Gainesville Comprehensive Plan

future land uses along with projected noise contours that were produced in 1986 that depict compatible land uses both within the limits of the City and Alachua County. The current future land uses surrounding the GNV include Planned Use Development, Conservation, Industrial, and some limited residential areas to the Southeast. Current zoning for lands surrounding the airport include I-2 Industrial, CON Conservation, RSF-2 Residential, and PUD Planned Unit Development.

1.13.3 Other Environmental Issues

The Airport property contains several important environmental features that must be considered during the planning phase for future development. Some of the important environmental features include Little Hatchet Creek, wetlands, Gum Root Swamp to the east of GNV and the Murphree Wellfield designated secondary and tertiary management zones as shown in Figure 1-30. Figure 1-31 presents a more detailed map depicting the Wellfield Protection Zones.

1.13.4 Local Government Planning Process

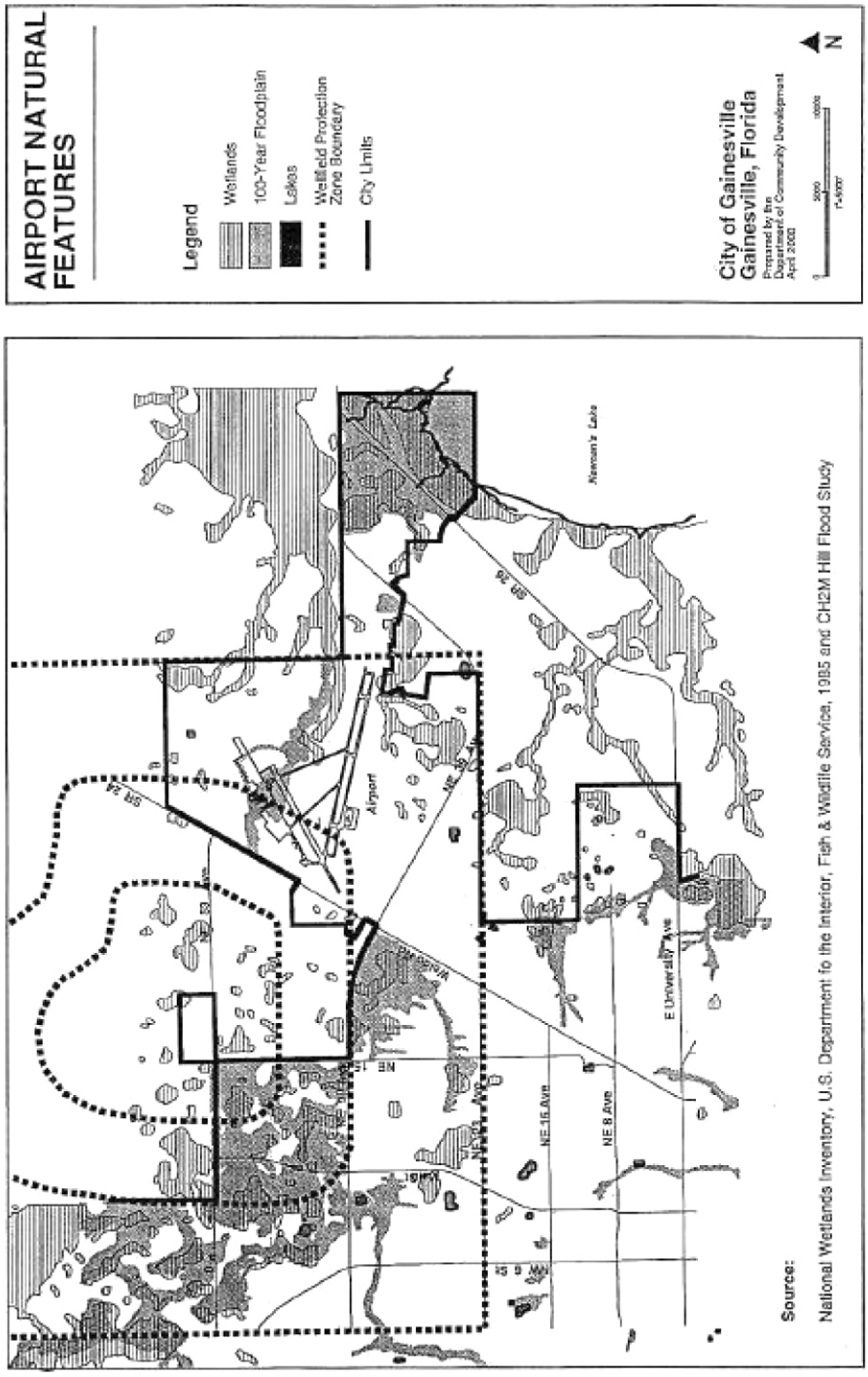
Similar to this Airport Master Plan Update, both the City and Alachua County have comprehensive plans which provide for the orderly growth of the their respective jurisdictions. Each comprehensive plan contains a transportation element required by the Florida Department of Community Affairs. It is important that this master planning process for the airport is coordinated with each local government. Representatives from each respective government have been included on the TAC to allow for a coordinated effort and to provide guidance regarding any sections of their comprehensive plan or land development code that must be updated to reflect the current development plans for the GNV.

1.13.5 Airport Hazard District

All Airports have a three-dimensional imaginary surfaces plan that identifies each airport's navigable airspace requirements as dictated by FAR Title 14, Part 77. FAR Part 77 establishes standards for identifying obstructions and publishes the design criteria for use in constructing the imaginary surfaces profile for each specific airport. The surfaces represent an imaginary "bowl" of airspace centered on the airport with long approach surfaces extending up and outward from each runway end. These imaginary surfaces surrounding the airport are also used to analyze all existing, future and proposed construction as to their potential for creating a hazard for aircraft operating at the airport. If a structure such as a natural object (i.e. a tree) penetrates into these surfaces, then it must be removed or modified. If the structure or obstacle intruding into the imaginary airspace as defined by FAR Part 77 cannot be easily removed, the FAA may extend a waiver and the structure will need to be identified by either painting, installing an obstruction light or both. In addition, the Airport's approach minimums pertaining to visibility may be impacted (i.e. increased) due to any obstructions to FAR Part 77 surfaces.

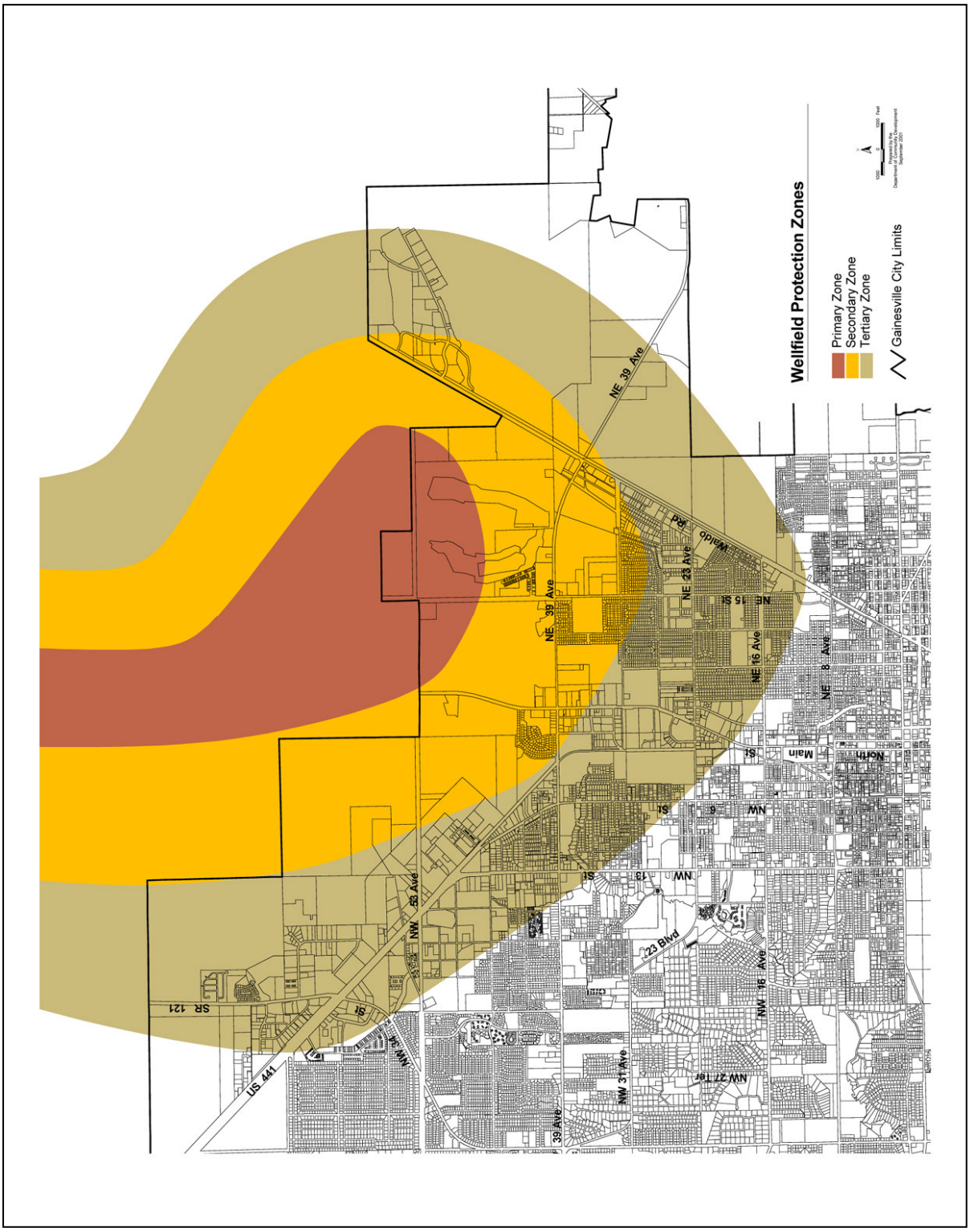
Florida Statutes, Chapter 333 outline the procedure to establish and enforce airport height restrictions and zoning regulations to ensure compatible land uses around airports. The chapter outlines the procedure to implement height-restrictive zoning and provides guidelines on how to administer these regulations. The FDOT strongly encourages airports to implement these regulations to encourage land use compatibility and to prevent tall structures around airports that would impact FAR Part 77 surfaces.

Figure 1-30
AIRPORT NATURAL FEATURES



Source: City of Gainesville Comprehensive Plan

Figure 1-31
WELLFIELD PROTECTION ZONES



Source: City of Gainesville Comprehensive Plan

Both the City and Alachua County have adopted ordinances to provide height regulations around the GNV. These zones are designated in the Gainesville Land Development Code, Appendix F "Airport Zoning Ordinance" and include the establishment of the airport height notification zone, airport runway clear zone and airport noise zone. These zones are shown in Figure 1-32.

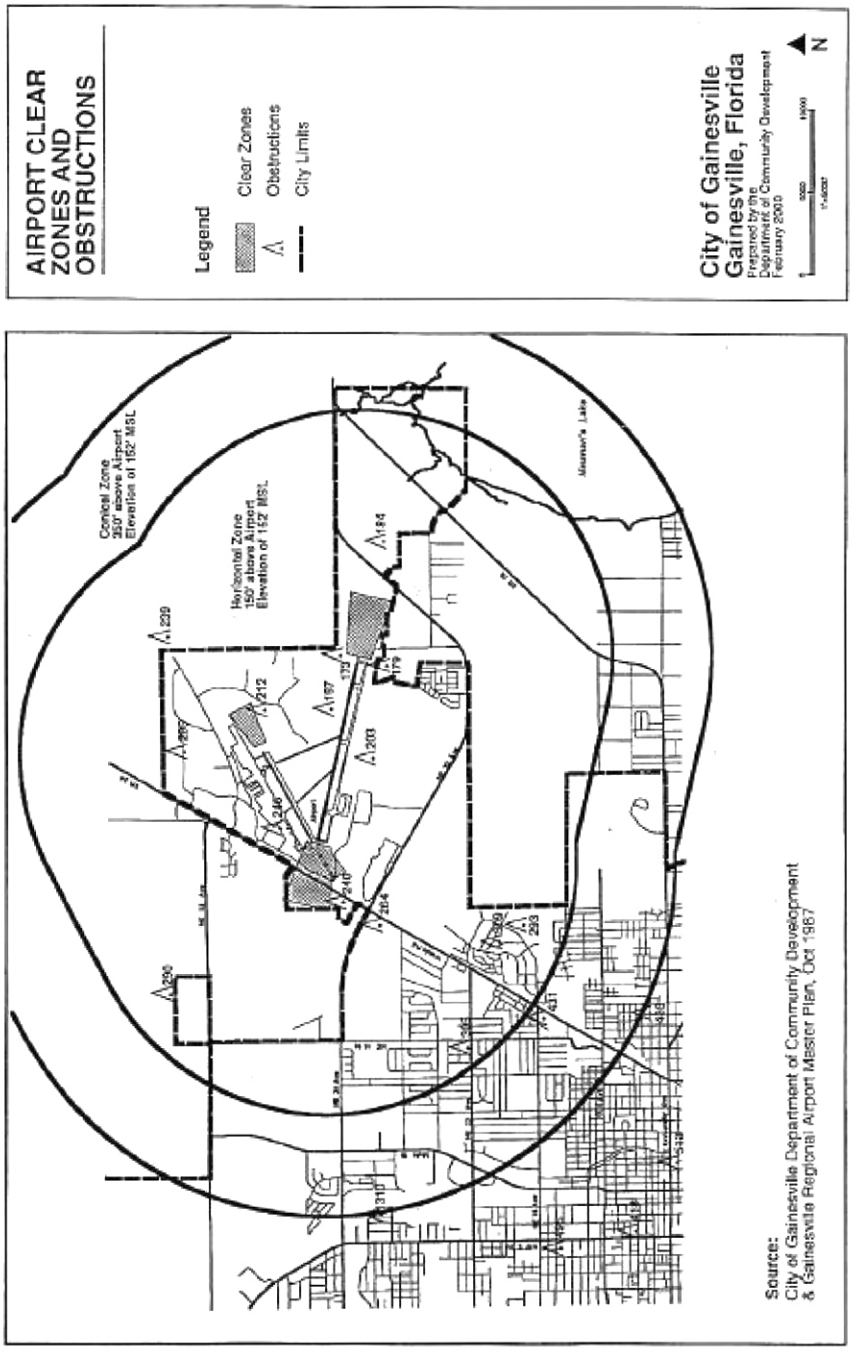
1.13.6 Noise Zones

Airport noise and compatible land use is regulated in FAR Part 150, which describes the process of establishing noise contours for an airport and the types of land uses, both on and off airport, that are compatible with certain noise levels. The GNV conducted a FAR Part 150 noise study, which was approved in 1986 that established noise levels and recommended land uses for both on and off airport property, as shown previously in Figure 1-29.

1.14 Previous Planning Studies

- **FAR Part 150 Noise Study:** In 1986, CH2M Hill prepared an FAR Part 150 Noise Study for GNV. The purpose of the study was to conduct noise monitoring and to document existing (1985) and future (1990) noise impacts. Additionally, the study's purpose included identifying and recommending actions to be used in the implementation of a noise abatement program.
- **GNV Master Plan Update:** CH2M Hill prepared the GNV Master Plan Update in October 1987. The 1987 Master Plan Update recommended that GA facilities located on the north side of the airfield be expanded to facilitate increasing GA demand. The 1987 Master Plan Update further recommended that additional study and evaluation of the passenger terminal complex should be conducted to ensure the facilities have the required expansion flexibility and capability to meet increasing passenger demand and passenger related activities.
- **Airport Layout Plan (ALP) Update:** In 1999, CH2M Hill prepared an update to the GNV ALP. The purpose of updating the ALP was to show changes to the airfield, which had occurred since completion of the 1987 Master Plan Update.

Figure 1-32
AIRPORT CLEAR ZONES AND OBSTRUCTIONS



Source: City of Gainesville Comprehensive Plan

CHAPTER 2
AVIATION DEMAND FORECASTS

2.1 Introduction

In this section, forecasts of aviation demand at the Gainesville Regional Airport (GNV) are presented for the 20-year planning period (2003-2023). These forecasts will be submitted to the Florida Department of Transportation (FDOT) and the Federal Aviation Administration (FAA) for review and approval during the development of the master plan update.

Forecasts outlined in this chapter include those prepared for scheduled air carriers, General Aviation (GA), military activity and air cargo. In addition, aviation activity projections were developed for passenger enplanements, annual aircraft operations, based aircraft, annual instrument approaches and peak hour projections. Aviation forecasts were projected for the traditional airport master planning timeframes as follows:

- Short-Term (2003 – 2007)
- Intermediate-Term (2008 – 2013)
- Long-Term (2014 – 2023)

The purpose of conducting aviation demand forecasts is to provide a quantitative baseline or foundation of projected aviation activity to be used as a timeline for planning future airport facilities. Therefore, forecasts developed for this chapter will be used in constructing the remaining sections of GNV Master Plan Update.

2.2 Socioeconomic Trends

The status and viability of a community's economic character is directly related to a community's ability to generate aviation-related activity. Consideration of a community's economic character is particularly important in the forecast of business travel, GA and air cargo levels. Prior to developing the aviation demand forecasts for GNV, an analysis of current and projected economic trends and population projections associated with GNV's Airport Service Area was conducted. The purpose of this section of the report is to describe the Airport Service Area and discuss the underlying economic base of the region, which will be used as a contrast to the forecasts generated for the master plan update.

2.2.1 Airport Primary Air Service Area

An airport's primary Airport Service Area is a defined region for which the airport is the preferred choice based on geographic proximity to the traveling public. An air service area was established for GNV that will be used to assist in the development of the aviation forecasts.

The establishment of the air service area was initiated through a review of previous studies, including the 1987 Gainesville Master Plan Update, 2001 Passenger Traffic Leakage analysis and discussions with GNV staff. Previous air service studies identified the airport service area as encompassing all or portions of a nine county region, including: Alachua, Bradford, Clay, Columbia, Gilchrist, Levy, Marion, Putnam and Union. The 1987 Airport Master Plan Update

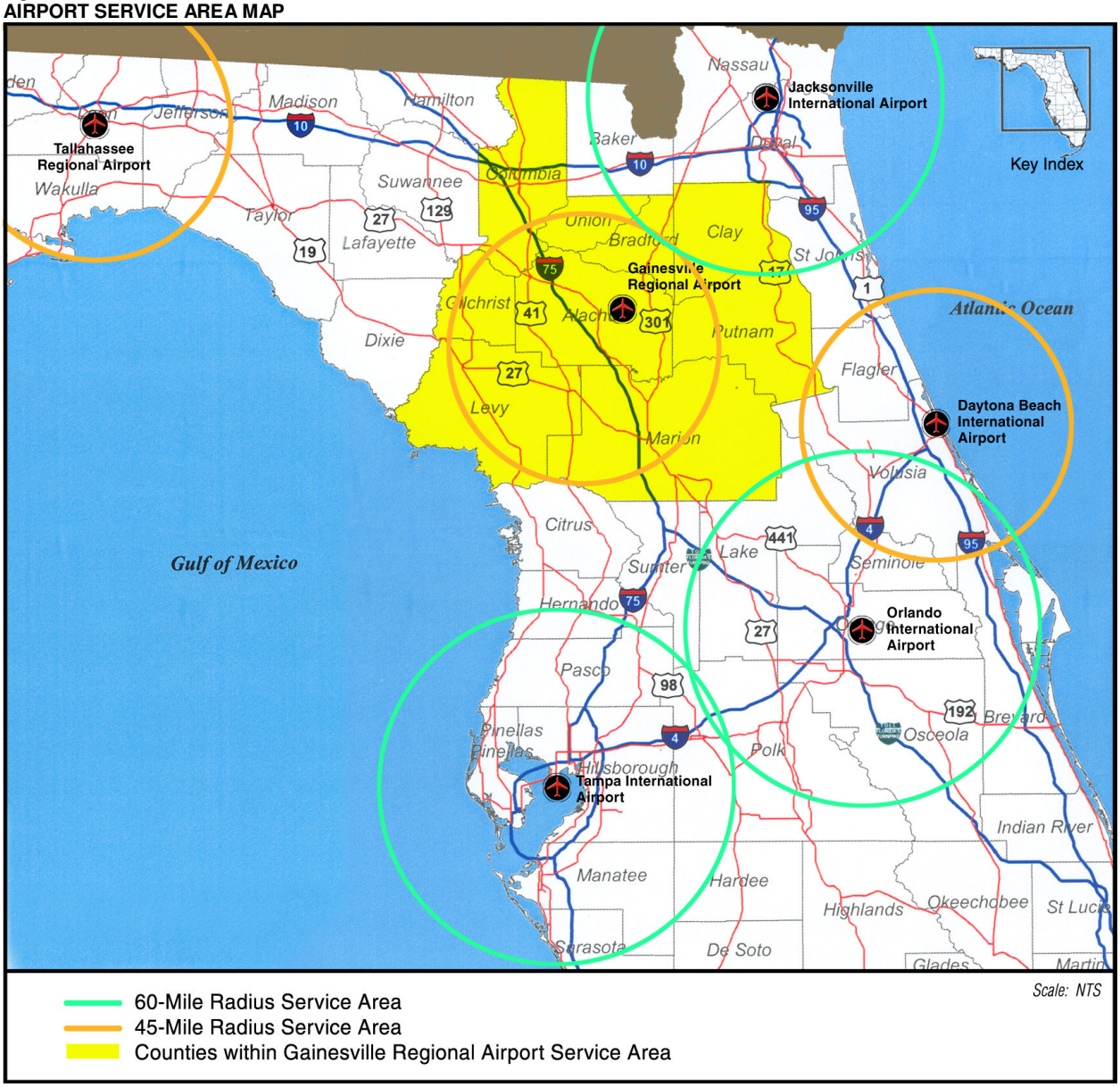
established the air service area to include only the counties of Alachua, Marion and Bradford as they made up the majority of the population of the region. The 2001 Passenger Leakage Study assumed the airport service area to be comprised primarily of the City of Gainesville (City) and Alachua County, which were the primary concentrations of population in the region. After reviewing this data and guidance for the preparation of forecasts from the FAA, a map was developed that included GNV and the surrounding airports of Jacksonville International Airport (JAX), Orlando International Airport (MCO), Tampa International Airport (TPA) and Daytona Beach International Airport (DAB). The close proximity of GNV market to the three larger commercial service airports; JAX, MCO and TPA which are 75 miles, 125 miles and 140 miles, respectively, from GNV, affect the development of the airport service area, as air travelers residing near the Gainesville region have a choice when selecting which facility to use. Passengers will often make their decision on which facility to use based on price, frequency and desirability of flights. Because JAX, MCO and TPA offer a larger number of flights, variety of airlines and greater frequency of flights, they typically have a larger airport service, which could overlap with the airport service area for GNV. For the purpose of this analysis, a 60-mile (1 hour) drive time radius was established for JAX, MCO and TPA and a slightly smaller 45-mile radius was established for both Gainesville and DAB for graphic purposes only in Figure 2-1. The defined airport service area includes all or portions of the counties of Alachua, Bradford, Clay, Columbia, Gilchrist, Levy, Marion, Putnam and Union. In addition, the airport service area is shown centered south of GNV due to the close proximity of JAX and the lack of an overlapping service area to the South. The establishment of the selected airport services area is further corroborated by a parking lot vehicle tag survey performed by airport management on a monthly basis. The most recent survey ending May 31, 2003 indicated that for the year-to-date, vehicles from Alachua and Marion County represented 49 percent and 28 percent, respectively of the vehicles parked at GNV.

It is important to note that GNV Service areas can change over time due to increasing/decreasing airline services, number of airlines, fares, ease of airport access and changes to population areas. It is also recognized that the airport service area for Gainesville may not capture the majority of the population of a county if it lies partially within the service area. For instance, Clay County lies within GNV service area. However, the majority of the population for Clay County lies within the Jacksonville MSA and would most likely utilize JAX. For this analysis, population and demographic trends for each entire county is presented to establish general trends within the airport service area for GNV.

The General Aviation (GA) service area was also evaluated. Generally, service areas for General Aviation is smaller due to the larger number of GA airports available and the desire of GA pilots to utilize the closest facility. Names and addresses for those persons owning aircraft based at GNV were obtained and plotted to determine the location of the largest concentration of owners. The majority of owners of aircraft at GNV have a City address, with the remaining owners residing in Alachua County. Therefore, the GA service area is assumed to include the City and Alachua County.

The next section will present the demographic information of the Airport Service Area for GNV.

Figure 2-1
AIRPORT SERVICE AREA MAP



Source: Map Quest and RS&H Analysis

2.2.2 Factors Affecting Future Aviation Demand

Numerous factors are considered when developing aviation forecasts for a Master Plan Update. The primary source for the development of the aviation forecasts prepared and presented in this document are the TAF prepared by the FAA and the Florida Aviation System Plan (FASP) prepared by the FDOT. However, it is important to consider current socio-demographic, economic, local and regional issues and industry trends that will be discussed in this section and to temper and validate these FAA and FDOT forecasts**.**

2.2.3 Population

Population trends are an important indicator of the potential growth in aviation demand for a region. Table 2-1 presents existing and forecasted population growth for GNV Service Area by county and the State of Florida population growth from 1985 through 2020. The year 2000 data was from the US Census Bureau and the forecasted years are from the University of Florida Bureau of Economic Research (BEBR) department.

From 1985 to 2000, population of GNV Service area increased an average of 2.5 percent per year and averaged between 1.0 percent to 4.2 percent per individual county. The State of Florida increased 2.4 percent during the same period. Population projections for the airport service area for the period of 2000 – 2020 predicts that the population of the airport service area is expected to increase 1.2 percent per year which is identical to the forecast for the same time period for the State of Florida.

2.2.4 Employment

The employment base for the North-Central Florida region is centered around the University of Florida, with approximately 48,000 students and a strong medical presence in the community. According to the most recent statistics, the University of Florida is the largest employer in the region, with almost 12,000 employees, followed by Shands Hospital with over 8,000 employees. Other large employers include the Alachua County School Board, Florida Department of Children and Families, and other service related businesses. The large government and educational employers in the region tend to promote a very stable employment base.

2.2.5 Per Capita Personal Income

Per Capita Personal Income is another important metric in the development of aviation demand, as it has been shown that higher income individuals have a much greater likelihood for air travel. Table 2-2 presents comparative historical and projected data for personal income per capita for GNV Air Service Area and the State of Florida. The historical total income per capita growth rate from 1985 – 2000 has been 2.9 percent average annual growth compared to 3.0 percent for the State of Florida for the same time period. The projected average annual growth rate for the years 2000 – 2015 is expected to be 2.5 percent for GNV service area, as compared to 2.4 percent for the State of Florida.

Table 2-1
POPULATION FORECASTS FOR STUDY AREA

County	1985[1]	1990[1]	1995[1]	2000[1]	2005[2]	2010[2]	2015[2]	2020[2]	Avg Annual Growth	
									1985 - 2000	2000 - 2020
Alachua	168,495	181,596	196,172	217,995	233,005	249,283	265,656	278,281	1.7%	1.0%
Bradford	22,631	22,515	24,299	26,088	27,578	28,871	30,162	31,480	1.0%	0.7%
Clay	85,912	105,986	120,813	140,814	155,119	171,037	187,180	203,755	3.3%	1.4%
Columbia	39,181	42,613	49,492	56,513	60,932	67,259	72,349	77,551	2.5%	1.2%
Dixie	8,893	10,585	12,293	13,827	15,503	16,996	18,510	20,071	3.0%	1.5%
Gilchrist	7,771	9,667	12,048	14,437	16,444	18,548	20,693	22,914	4.2%	1.8%
Marion	157,330	194,835	225,032	258,916	287,106	316,662	346,645	377,698	3.4%	1.5%
Putnam	58,071	65,070	68,065	70,844	72,611	74,929	77,276	79,698	1.3%	0.4%
Union	10,707	10,252	12,536	13,844	14,605	15,284	15,973	16,678	1.7%	0.7%
Airport Service Area	**558,991**	**643,119**	**720,750**	**813,278**	**882,903**	**958,869**	**1,034,444**	**1,108,126**	**2.5%**	**1.2%**
Florida	**11,272,332**	**12,938,007**	**14,335,992**	**15,982,378**	**17,436,441**	**18,866,703**	**20,314,499**	**21,792,601**	**2.4%**	**1.2%**

[1] U.S. Census Bureau
[2] University of Florida BEBR Projections

Source: GNV Records; RS&H Analysis, 2003

Table 2-2
PER CAPITA PERSONAL INCOME FORECASTS FOR STUDY AREA

County	1985	% [1]	1990	% [1]	1995	% [1]	2000	% [1]	2005	% [1]	2010	% [1]	2015	% [1]	Avg. Annual Growth 1985-2000	Avg. Annual Growth 2000-2015
Alachua	$12,294	83.6%	$17,294	87.2%	$20,114	87.7%	$23,075	88.3%	$26,743	90.2%	$29,707	89.1%	$33,507	89.4%	3.3%	2.5%
Bradford	$8,809	59.9%	$11,834	59.7%	$14,088	61.4%	$16,606	63.5%	$18,876	63.7%	$21,254	63.7%	$24,138	64.4%	3.2%	2.5%
Clay	$14,013	95.3%	$18,376	92.7%	$20,752	90.5%	$23,921	91.5%	$27,290	92.1%	$30,405	91.1%	$34,105	91.0%	2.7%	2.4%
Columbia	$10,410	70.8%	$13,572	68.4%	$16,264	70.9%	$18,017	68.9%	$20,411	68.9%	$22,612	67.8%	$24,499	65.4%	3.0%	2.1%
Dixie	$8,425	57.3%	$11,281	56.9%	$12,730	55.5%	$13,851	53.0%	$16,162	54.5%	$18,462	55.3%	$21,370	57.0%	2.8%	2.9%
Gilchrist	$9,873	67.1%	$12,004	60.5%	$13,502	58.9%	$15,655	59.9%	$17,826	60.1%	$19,477	58.4%	$21,186	56.5%	2.1%	2.0%
Marion	$11,625	79.1%	$15,584	78.6%	$18,190	79.3%	$20,964	80.2%	$23,934	80.8%	$27,250	81.7%	$30,928	82.5%	3.0%	2.6%
Putnam	$9,721	66.1%	$12,169	61.4%	$15,722	68.5%	$17,531	67.1%	$20,502	69.2%	$23,017	69.0%	$26,242	70.0%	3.3%	2.7%
Union	$7,110	48.4%	$9,689	48.9%	$10,488	45.7%	$11,208	42.9%	$12,847	43.3%	$14,469	43.4%	$16,501	44.0%	2.6%	2.6%
Airport Service Area	**$10,253.33**		**$13,533.67**		**$15,761.11**		**$17,869.78**		**$20,510.11**		**$22,961.44**		**$25,830.67**		**2.9%**	**2.5%**
Florida	**$14,705**	-	**$19,832**	-	**$22,942**	-	**$26,146**	-	**$29,638**	-	**$33,359**	-	**$37,475**	-	**3.0%**	**2.4%**

[1] Percent of per capita personal income as compared to the State of Florida

Source: University of Florida BEBR Projections ; RS&H Analysis, 2003

2.2.6 National Economic Conditions

Since the conclusion of the Persian Gulf War in early 1992, the national economy has been in an expansion mode for a record number of quarters and has exceeded economist's expectations until 2000. The economy began to worsen during 2000 and since then economic growth has been flat. According to the FAA and other national forecasts, the national economy is expected to reverse its current trend and grow throughout the forecast period. National economic activity is expected to recover and grow rapidly beginning in 2003 until 2005 and then moderately during the remainder of the planning period. The State of Florida is expected to mirror the national trends. These forecasts could, however, be affected by the current events in the Persian Gulf, which could slow the anticipated recovery.

2.2.7 Airfares

Airfare levels will have an important affect on the demand for airline service nationally and at GNV. Airfares are influenced by airline operational costs such as fuel, aircraft maintenance, personnel costs and industry competition. Overall, aviation fuel has decreased in price since 1980. A slight increase in fuel prices was recorded in the early 1990's as a result of the Persian Gulf War. Aviation fuel prices increased again in 1996 and 1997, but stabilized in 1998 before beginning to increase through 2002. Aviation fuel prices are expected to remain volatile though 2003 but will stabilize long-term, with moderate fuel price increases of 3.5 percent to 5 percent per year. Jet fuel prices will add to the long-term stability of airfares nationally. Other factors that contribute to airfare costs, such as labor, are expected to increase nominally during the planning horizon.

2.2.8 Airline Competition and Service

Airline service was mentioned as an issue by the Technical Advisory Committee that may affect the long-term growth of GNV. Delta/Atlantic Southeast Airlines and US Airways currently provide service to Gainesville with seven (7) flights daily to Atlanta and four (4) flights daily to Charlotte, respectively. GNV has conducted a campaign with the local business community to establish a ticket trust for future airline travel. GNV has attracted Continental Airlines with service to Miami and Tampa Bay. Markets that are anticipated to be served include New York metropolitan area and Houston.

The introduction of an additional carrier would add a significant amount to the number of available seats in the market and could considerably increase the number of enplanements during the initial year or two of service. In addition, Delta/Atlantic Southeast Airlines announced on February 1, 2003 the introduction of larger 66-seat ATR aircraft on two flights per day.

2.2.9 Effects of September 11, 2001

The impacts of September 11, 2001 have had a significant impact on the aviation community. The results of the terrorist attacks, along with a downturn in the national economy, have caused several major airlines to either reorganize or declare bankruptcy. As a result, many communities have seen their air service levels reduced dramatically as airlines focus only on profitable routes.

Fortunately, GNV has weathered the storm and has actually seen increases in levels of service and enplanement figures since September 11, 2001. As a result, GNV is well positioned to continue the growth when the economy improves.

2.2.10 Socioeconomic Summary

In summary, the North-Central Florida region and GNV airport service area has experienced steady population and economic growth from 1985 through 2000. In addition, the Airport Service Area is expected to mirror the economic growth of the State of Florida. This continued socioeconomic growth along with additional air service planned and anticipated at GNV would be considered in the development of the forecasts.

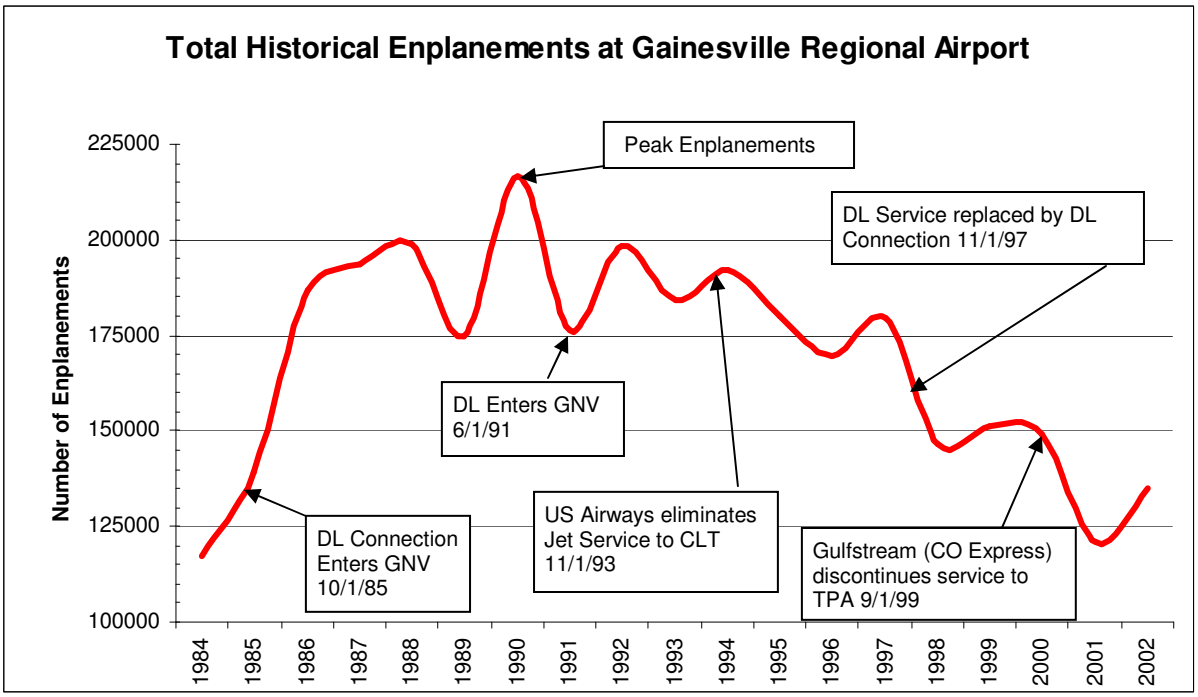
2.3 Scheduled Service Forecasts

This section presents the scheduled service enplanement and operational forecasts for GNV. A review of historical aviation activity will be prepared and reviewed against forecasts established in the 1987 Airport Master Plan Update, the FAA TAFs and the FASP. These forecasts will be tempered with socioeconomic trends presented previously, to arrive at recommended forecasts of aviation activity. Forecasting aviation activity at an airport is more of an art than a science. Experience in preparing forecasts at other similar sized facilities and having an understanding of the unique complexities of the airline industry should aid in preparing forecasts that are realistic. However, forecasts prepared as part of this master plan are not guaranteed to occur. Therefore, all future development predicated as part of this master plan update should be driven by reaching certain activity levels and not actual years, as activity levels can and do vary due to economic conditions, levels of service and facilities available from year to year.

2.3.1 Historical Enplanements at GNV

Historical passenger enplanements for GNV from 1984 to 2002 are presented in Figure 2-2. Historical activity levels can be a very good predictor of future activity, particularly if events that triggered certain increases or decreases of activity are known. Known events have been placed on the graph charting historical enplanements at GNV. In most cases, the reversal of either increasing or decreasing service levels at GNV has been the result of either airlines eliminating or initiating service. As shown in Figure 2-2, enplanements for the airport peaked at 216,000 in 1990 and have shown a steady decreasing trend until 2001, at which time they have shown a significant increase in activity.

Figure 2-2
HISTORICAL ENPLANEMENT EVENTS



Source: DOT Report T-100 and TAF
Compiled by Reynolds, Smith and Hills, Inc.

There are two carriers providing service at GNV: Delta/Atlantic Southeast Airlines d/b/a Delta Airlines and Piedmont Airlines d/b/a US Airways. Delta provides seven (7) flights daily to Atlanta Hartsfield International Airport and US Airways provides four (4) flights daily to Charlotte Douglas International Airport.

Historic enplanements are also presented in Figure 2-3, which separates total enplanements into Air Carrier and Commuter enplanements. The definition of these categories, as prepared by the FAA, is presented below:

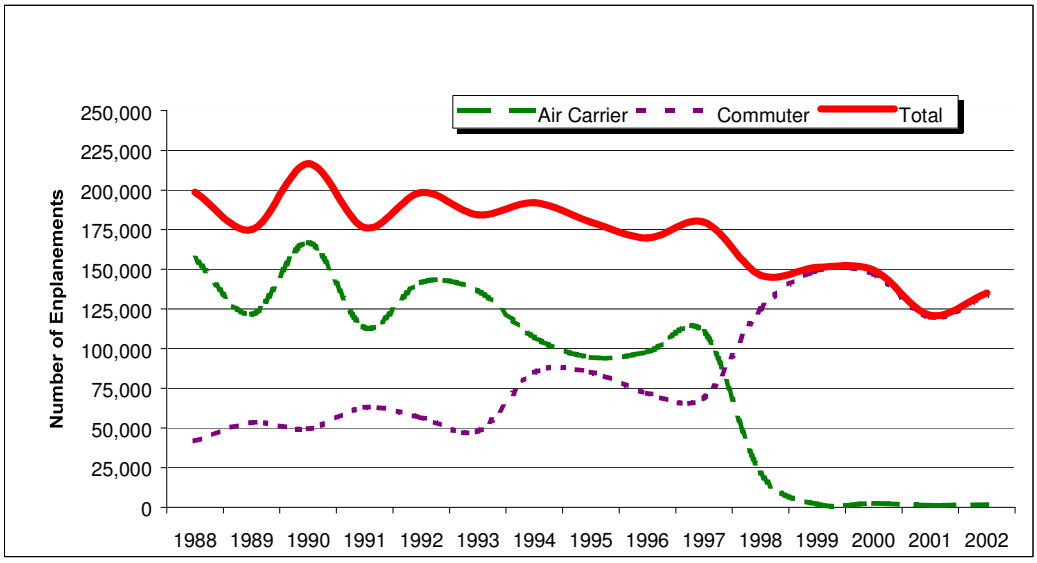
- **Air Carrier Enplanements** - Domestic enplaned passengers (originations and connections) of U.S. commercial air carriers and international enplanements for both U.S. and foreign flag carriers submitted to the U.S. Department of Transportation (DOT), Bureau of Transportation Statistics (BTS) on Form 41, T-100 reports. Estimates include both scheduled and non-scheduled enplaned passengers.
- **Commuter Enplanements** - Enplanements on scheduled commuter or regional carriers as reported on DOT Form 298-C. Carriers reporting on Form 298-C operate at least five scheduled round trips per week and its fleet consists primarily of aircraft with 60 or fewer seats.

This division was much simpler a few years ago when the major air carriers operated jet aircraft and their feeder airlines operated commuter-type or mainly turboprop aircraft that fed into their system. Today, many airlines operate regional jet aircraft that offer 50 seats, which blurs the lines of these two categories. The usage of these regional jet aircraft has allowed a much higher level of frequency of service to many communities. As shown in Figure 2-3, the

percentage of air carrier enplanements has shown a steady decrease since 1988. Commuter enplanements have shown just the opposite trend.

Discussions with airport management and a review of equipment used at GNV for the past several years indicate that the data reported to the FAA may be flawed. In many cases, carriers have been using greater than 60 seat aircraft, which is being reported as commuter enplanements versus air carrier enplanements and operations. This discrepancy does not affect the totals for both enplanements and operations.

Figure 2-3
HISTORICAL ENPLANEMENT



Year	Commercial Service		Total Enplanements	Annual Increase (Decrease)
	Air Carrier	Commuter		
1988	156,768	41,875	198,643	
1989	121,727	53,357	175,084	-11.9%
1990	166,876	49,587	216,463	23.6%
1991	113,290	62,916	176,206	-18.6%
1992	141,831	56,684	198,515	12.7%
1993	136,401	48,008	184,409	-7.1%
1994	107,023	84,925	191,948	4.1%
1995	94,586	85,233	179,819	-6.3%
1996	97,953	71,849	169,802	-5.6%
1997	110,665	69,088	179,753	5.9%
1998	21,407	124,983	146,390	-18.6%
1999	1,963	149,150	151,113	3.2%
2000	2,492	147,000	149,492	-1.1%
2001	1,358	119,794	121,152	-19.0%
2002	1,643	133,463	135,106	11.5%

Source: TAF and GNV Records; RS&H Analysis, 2003

2.3.2 Enplanement Projections

The projection of passenger enplanements at GNV is presented in this section of the report. We have utilized existing aviation forecasts for GNV prepared by the FAA, the FDOT and the previous Airport Master Plan along with socioeconomic data to arrive at a preferred forecast.

The remainder of this section of the report will review the following projection methodologies utilized and report and identify a preferred forecasting model as follows:

- TAFs (FAA)
- FASP (FDOT)
- 1987 Airport Master Plan Update
- Preferred Methodology

2.3.2.1 Terminal Area Forecasts

The TAF published by the FAA contains historical data for enplanements, airport operations and instrument operations for the majority of all public use airports in the United States. The most recent version of the TAF was prepared before the terrorist attack of September 11, 2001 and does not reflect the impacts of that event. The forecasts for the TAF are through year 2015 and this data was extrapolated to the year 2023 for this report. This report was used in the generation of several areas of forecasting analysis including enplanements, scheduled operations, GA based aircraft, GA operations, military operations and instrument approaches.

2.3.2.2 Florida Aviation System Plan

The FASP is a statewide aviation system planning document that presents historic and forecast aviation activity at the majority of the public use airports across the State of Florida. Forecasts were prepared for enplanements, scheduled operations, GA based aircraft and GA operations through the year 2021. This data was then extrapolated though the year 2023 for this report. The state system plan is updated on a regular basis. The most recent update was started in 1999 and is currently almost complete.

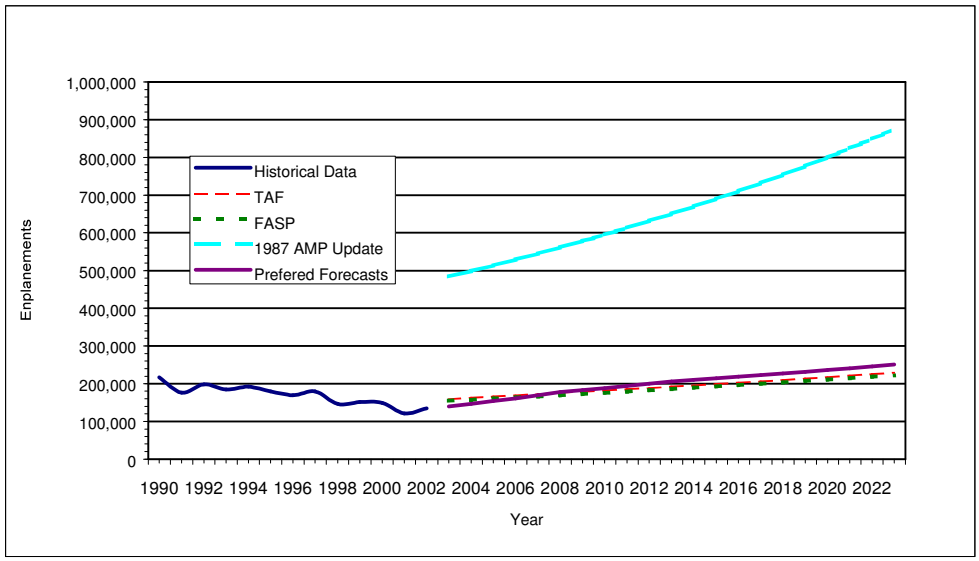
2.3.2.3 The 1987 Airport Master Plan Update

The previous airport master plan for GNV was completed in 1987. Since that time, many changes have occurred to the aviation industry. However, the forecasts produced for the document can also be a valuable tool in predicting updated forecasts. Forecasts for this document were prepared for the period of 1983 – 2003 and were extrapolated through the year 2023 for this report.

2.3.2.4 Enplanement Forecasts Analysis

Enplanement forecasts were prepared after reviewing the forecasts prepared by the studies mentioned previously. Figure 2-4 presents a graphical and numerical comparison of the enplanement projections of the TAF, FASP, 1987 Airport Master Plan Update and the historical enplanements since 1990. The following is a summary of each forecast and the key findings of the enplanement projections for GNV.

Figure 2-4
ENPLANEMENT FORECAST



Year	Total Enplanements	1987 Master Plan	FAA TAF	FASP	Preferred Forecasts
Historical					
1990	216,463				
1991	176,206				
1992	198,515				
1993	184,409				
1994	191,948				
1995	179,819				
1996	169,802				
1997	179,753				
1998	146,390				
1999	151,113				
2000	149,492				
2001	121,152				
2002	135,106				
Projected					
2003		484,000	159,128	155,017	139159
2008		561,088	175,496	169,692	177,606
2013		650,455	191,864	185,900	205,894
2018		754,056	209,758	207,266	227,323
2023		874,157	229,322	222,393	250,983
Average Annual Growth					
2003 - 2008		3.0%	2.0%	1.8%	5.0%
2009- 2013		3.0%	1.8%	1.8%	3.0%
2014 - 2023		3.0%	1.8%	1.8%	2.0%
2003 - 2023		3.0%	1.8%	1.8%	3.0%

Source: Airport Records
Compiled by Reynolds, Smith and Hills, Inc.

- The TAF predicts enplanements to grow at GNV at an average annual growth rate of 2 percent between the years 2003 to 2008 and then decreasing to a 1.8 percent average annual growth rate from 2008 to 2023. This translates into 229,322 annual enplanements by 2023, although it is important to recognize that the TAF is projecting 159,128 enplanements for the year 2003, which is significantly higher than the 135,106 annual enplanements for 2002.
- The FASP predicts enplanements will grow at an annual average rate of 1.8 percent per year though 2023, which translates into 222,393 enplanements by the end of the planning horizon. This number is slightly less than the TAF but is primarily the result of starting with a smaller base year. Again, similar to the TAF, the FASP suggests 155,017 enplanements in 2003, which is significantly higher than the actual 2002 enplanement figures.
- The 1987 Master Plan Update projected a 7.1 percent average annual growth rate, along with a predicted 484,000 annual enplanements by 2003, resulting in a forecast of 874,157 enplanements by the year 2023.

For the purposes of this study, a hybrid forecast for enplanements was chosen as the preferred enplanement forecast for GNV. The enplanement forecast predicts a 5 percent growth rate for the initial five-year period of 2003 to 2008. It goes on to predict that this growth rate will slow during the middle and long-range periods to 3 percent from 2009 to 2013 and to 2 percent from 2014 to 2023, which more closely mirrors the TAF and FASP forecast. This higher than average growth rate was selected for the following reasons:

- GNV experienced an 11.5 percent increase in the number of enplanements from 2001 to 2002. While this rate of growth may be difficult to maintain for a five year period, it is not unrealistic to expect a higher than average growth rate than the TAF and FASP projections. It is also expected that the forecasts will more closely mirror the TAF and FASP forecasts during the middle and long range planning periods.
- The higher growth rate during the short-term horizon anticipates success by the airport in attracting an additional carrier to the facility during this period. If this happens, it is anticipated that as many as two additional daily flights could be added to the schedule. Assuming a 50 seat aircraft, two daily flights and a load factor of 60 percent, this could add almost 22,000 annual enplanements to the total.
- The projected growth rate is less than the 1987 master plan update, as a 7.1 percent average annual growth rate appears to be unrealistic compared to historical enplanement data.
- The projected enplanement forecast is consistent with the 2002 GNV traffic leakage study, which found that the market for GNV could generate approximately 220,000 – 300,000 annual enplanements. The forecast assumes that with additional service available to the traveling public, there will be less leakage to nearby facilities.

2.3.2.5 Air Carrier and Commuter Enplanement Splits

Air carrier and commuter enplanement splits were prepared using historical activity. The distinction between the two classifications of enplanements was defined previously in Section 2.3.2. The percentage of air carrier enplanements has decreased steadily since 1990. In 1990, 77 percent of all enplanements were classified as air carrier enplanements, whereas by 2002,

air carrier enplanement has declined to 1 percent of the total, as shown in Table 2-3. This decrease of air carrier enplanements and resulting increase of commuter enplanements is typical in similar size facilities due to the greater use of smaller regional turboprop and jet aircraft, and the development of regional jet aircraft. This transition to smaller aircraft has allowed airlines to maintain higher levels of frequency of service as well as the necessary load factors to make the routes profitable. It is anticipated that total air carrier enplanements will grow slightly, to 3 percent of total enplanements, due to continued use of charter aircraft. It is also assumed that the regional aircraft operators will continue to report enplanements in the commuter enplanements category even if the aircraft are greater than 60 seats.

Table 2-3
AIR CARRIER VERSUS COMMUTERS ENPLANEMENT SPLITS

Year	Air Carrier	%	Commuter	%	Total Enpl.
Historical					
1990	166,876	77%	49,587	23%	216,463
1991	113,290	64%	62,916	36%	176,206
1992	141,831	71%	56,684	29%	198,515
1993	136,401	74%	48,008	26%	184,409
1994	107,023	56%	84,925	44%	191,948
1995	94,586	53%	85,233	47%	179,819
1996	97,953	58%	71,849	42%	169,802
1997	110,665	62%	69,088	38%	179,753
1998	21,407	15%	124,983	85%	146,390
1999	1,963	1%	149,150	99%	151,113
2000	2,492	2%	147,000	98%	149,492
2001	1,358	1%	119,794	99%	121,152
2002	1,643	1%	133,463	99%	135,106
Projected					
2003	2,783		136,376		139159
2008	5,328		172,278		177,606
2013	6,177		199,717		205,894
2018	6,820		220,503		227,323
2023	7,529		243,454		250,983
Average Annual Growth					
2003 - 2023					3.0%

Source: GNV Records; RS&H Analysis, 2003

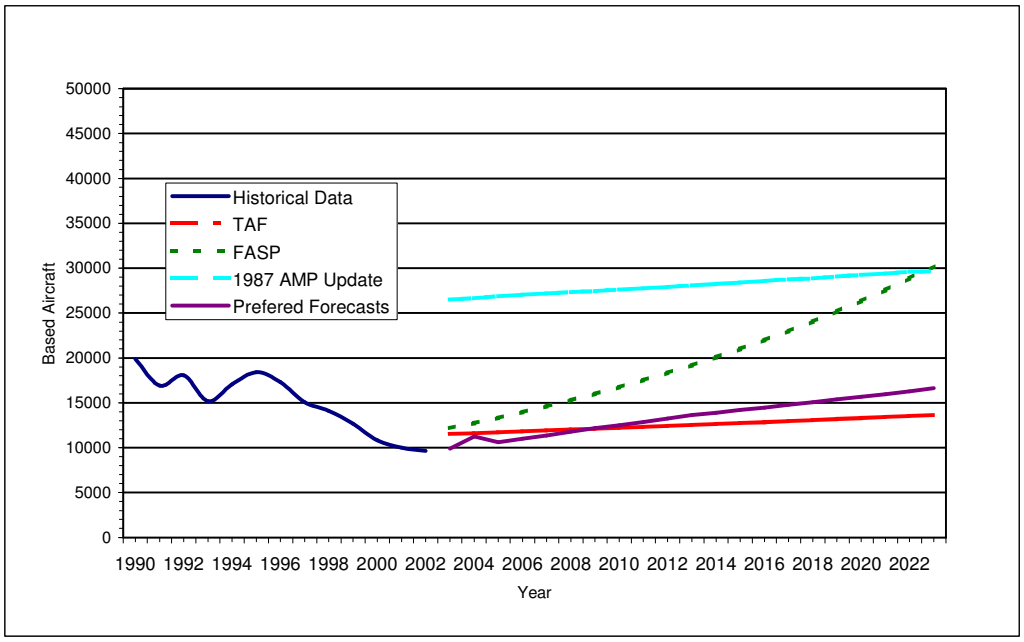
2.3.3 Scheduled Service Operations Analysis and Projections

Historical aircraft operations data for GNV are presented in Table 2-3. The number of annual commercial air carrier operations decreased from 9,816 in 1992 to 7,784 in 2001, which represents an average annual decrease of 2.5 percent for this time period. However, between 1998 and 2001, commercial operations experienced an average annual growth rate of 14.4 percent.

- The TAF predicts operations to grow at GNV at an average annual growth rate of 0.9 percent between the years 2003 to 2008 and then decreasing to a 0.8 percent average annual growth rate from 2008 to 2023. This translates into 13,532 annual operations by 2023, although it is important to recognize that the TAF is projecting 11,524 operations for the year 2003, which is significantly higher than the 9,520 annual operations for 2002.
- The FASP predicts operations to grow at an annual average rate of 4.6 percent per year though 2023 which translates into 30,192 annual operations by the end of the planning horizon.
- The 1987 Master Plan Update projected a 0.6 percent average annual growth rate along with a predicted 26,500 annual operations by 2003, resulting in a forecast of 29,650 operations by the year 2023.

After reviewing the various studies, a 2.6 percent average annual growth rate for scheduled operations was chosen for the 20-year planning horizon, which results in 16,626 commercial service operations by 2023. A 2.6 average annual growth rate was selected to mirror the growth rate of enplanements for the 20-year planning period and the equipment mix is expected to remain relatively constant for the planning horizon as shown in Figure 2-5.

Figure 2-5
COMMERCIAL SERVICE OPERATIONS FORECAST



Year	Total Operations	1987 Master Plan	FAA TAF	FASP	Preferred Forecasts
Historical					
1990	19,888				
1991	16,918				
1992	18,053				
1993	15,168				
1994	17,062				
1995	18,429				
1996	17,288				
1997	15,068				
1998	14,115				
1999	12,686				
2000	10,827				
2001	10,024				
2002	9,620				
Projected					
2003		26,500	11,524	12,177	9908
2008		27,331	12,029	15,280	11,767
2013		28,083	12,534	19,174	13,641
2018		28,855	13,071	24,060	15,061
2023		29,650	13,632	30,192	16,626
Average Annual Growth					
2003 - 2008		0.6%	0.9%	4.6%	3.5%
2009- 2013		0.5%	0.8%	4.6%	3.0%
2014 - 2023		0.5%	0.8%	4.6%	2.0%
2003 - 2023		0.6%	0.8%	4.6%	2.6%

Source: GNV Records; RS&H Analysis, 2003

2.3.3.1 Air Carrier and Commuter Operations Splits

The splits between Air Carrier and Commuter operations were also generated. The definitions for each specific type of operation were defined previously in the enplanement section. As shown in Table 2-4, air carrier operations have shown a steady decrease since 1990, decreasing from 6,464 operations annually to 1,626 operations annually in 2002. Commuter operations have increased since 1990 as a percent of total operations from 68 percent of total scheduled service operations to 83 percent of total scheduled service operations in 2002. This trend is similar nationally as many carriers have switched equipment to smaller regional aircraft to maintain a high level of service frequency and to maintain load factors necessary to make the service profitable. It is anticipated that commuter operations will maintain a high percentage of total scheduled service operations but will decrease slightly from 83 percent of total scheduled service operations in 2003 to 80 percent of total scheduled service operations. As discussed previously, the historical split data is somewhat suspect as it appears that all aircraft over 60 seats are being counted in the air carrier category. The total operational data appears to be accurate. For planning purposes, it is assumed that the splits will remain relatively constant for the planning period if the same report system is used.

Table 2-4
AIR CARRIER VERSUS COMMUTERS OPERATIONS SPLITS

Year	Air Carrier	%	Commuter	%	Total Operations
Historical					
1990	6,462	32%	13,426	68%	19,888
1991	3,874	23%	13,044	77%	16,918
1992	5,088	28%	12,965	72%	18,053
1993	4,703	31%	10,465	69%	15,168
1994	2,626	15%	14,436	85%	17,062
1995	2,643	14%	15,786	86%	18,429
1996	3,260	19%	14,028	81%	17,288
1997	3,069	20%	11,999	80%	15,068
1998	1,684	12%	12,431	88%	14,115
1999	1,664	13%	11,022	87%	12,686
2000	1,800	17%	9,027	83%	10,827
2001	1,447	14%	8,577	86%	10,024
2002	1,626	17%	7,994	83%	9,620
Projected					
2003	1,684	17%	8,224	83%	9908
2008	2,118	18%	9,649	82%	11,767
2013	2,455	18%	11,186	82%	13,641
2018	2,862	19%	12,199	81%	15,061
2023	3,325	20%	13,301	80%	16,626
Average Annual Growth					
2003 - 2023					2.6%

Source: GNV Records; RS&H Analysis, 2003

2.4 General Aviation Forecasts

The FAA defines GA as everything except commercial air carriers (including commuter/regional), cargo operators and the military. This includes business and corporate related flight training, in addition to personal aircraft use. Since GA activity represents a large percentage of total activity at GNV, this section has been prepared independently from the commercial service forecasts section. Forecasts to be prepared in this section include based aircraft, based aircraft by type and total GA operations.

2.4.1 National Trends

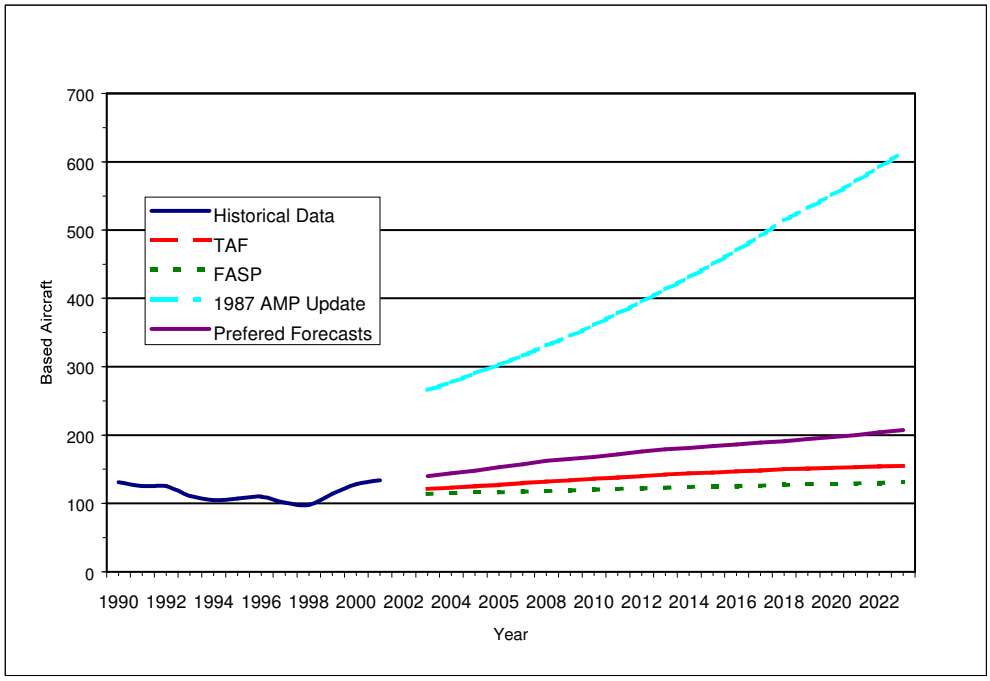
With regard to national GA trends, GA activity has experienced an overall decline nationally during the last 10 years and had only seen a modest rebound prior to the events of September 11, 2001. There are a number of reasons for this trend including the limited number of affordable aircraft sold over the last 10 years. This is primarily the result of product liability laws regarding GA aircraft. As a result of Congress passing liability limits for the manufacturers of GA aircraft, several manufacturers re-entered the GA market with the production of new aircraft including additional new Cessna and Piper aircraft. This resumed production of aircraft resulted in modest gains of GA nationwide. This resumed production and sales of small, single engine aircraft is critical to the overall health of GA as pilots are trained in these aircraft and then work their way up to more sophisticated and higher performance aircraft. Another trend that is affecting the opposite spectrum of the GA fleet is the fractional ownership of jet and turbine aircraft. Fractional ownership affords a business the opportunity to acquire the use of a jet/ turbine-engine aircraft without the full costs of ownership and it allows corporate executives the flexibility of using GA aircraft without the hassles and time issues of commercial service aircraft. Recently, the FAA has recognized a trend of decreasing new pilot starts due to the events of September 11, 2001 and the resulting slowdown in both commercial service and GA activity. Many of the major airlines have lain off or furloughed pilots, which resulted in less demand for new pilot starts. However, this downturn is expected to be temporary and GA demand is expected to increase by 2005.

2.4.2 Based Aircraft Forecast

The FAA TAFs, the FASP and the previous GNV 1987 Master Plan Update were reviewed for this study. Based aircraft at an airport represent the total number of active aircraft permanently located or projected to be located at an airport during a specific period. Based aircraft categories include single-engine, multiengine, turboprop, turbojet and rotorcraft.

A review of historical based aircraft at GNV indicates that the growth at the airport is much stronger than national and state trends with an average annual growth of 3.7 percent from 1994 to 2001. In 2001, there were 134 based aircraft located at GNV. It is expected that based aircraft growth will moderate during the initial five year (2003 – 2008) planning horizon and will grow at an average annual rate of 3 percent due to continuing concerns about the national economy and threat of terrorism. It is also expected that the interim and long-range forecasts for based aircraft will remain moderate, yet slightly exceed the national average during the interim-planning horizon and mimic the TAF forecasts during the long range-planning horizon. Figure 2-6 presents the recommended forecasts along with a comparison of the other forecasts reviewed for this study. Figure 2-6 also graphically presents the historical activity, the previous forecasts reviewed and the preferred forecasts of based aircraft for GNV.

Figure 2-6
GENERAL AVIATION BASED AIRCRAFT FORECAST



Year	BASED AIRCRAFT	1987 AMP	FAA TAF	FASP	Pref. Forecasts
Historical					
1990	131				
1991	125				
1992	125				
1993	111				
1994	105				
1995	107				
1996	110				
1997	101				
1998	98				
1999	114				
2000	128				
2001	134				
Projected					
2003		266	121	114	140
2008		331	132	118	162
2013		413	142	123	179
2018		514	150	127	191
2023		641	155	131	207
Average Annual Growth					
2003 - 2008		4.5%	1.8%	0.7%	3.0%
2009 - 2013		4.5%	1.5%	0.8%	2.0%
2014 - 2023		4.5%	0.9%	0.6%	1.5%
2003 - 2023		4.5%	1.2%	0.7%	2.0%

Source: GNV Records; RS&H Analysis, 2003

2.4.3 Based Aircraft Splits

Based aircraft splits of single-engine, multiengine, turboprop, turbojet and rotorcraft were also prepared for this study. Historical based aircraft splits were reviewed from the period of 1990 to 2001 and are presented in Table 2-5. The percentage of based aircraft by type has remained fairly constant over the previous ten years despite fluctuations in activity. For planning purposes, it is expected that future based aircraft growth will remain constant for the 20 year planning horizon and is shown also in Table 2-5.

Table 2-5
GENERAL AVIATION BASED AIRCRAFT SPLITS

Year	SINGLE ENGINE	MULTI ENGINE	JET	HELICOPTER	TOTAL
Historical					
1990	98	29	2	2	131
1991	94	27	2	2	125
1992	94	27	2	2	125
1993	83	25	2	1	111
1994	82	18	1	4	105
1995	77	24	2	4	107
1996	87	20	1	2	110
1997	80	16	2	3	101
1998	72	20	3	5	98
1999	86	20	3	5	114
2000	96	22	4	6	128
2001	106	19	5	4	134
Projected					
2003	105	25	6	4	140
2008	122	29	6	5	162
2013	134	32	7	5	179
2018	143	34	8	6	191
2023	155	37	8	6	207
Average Annual Growth					
2003 - 2023					2.0%

Source: GNV Records; RS&H Analysis, 2003

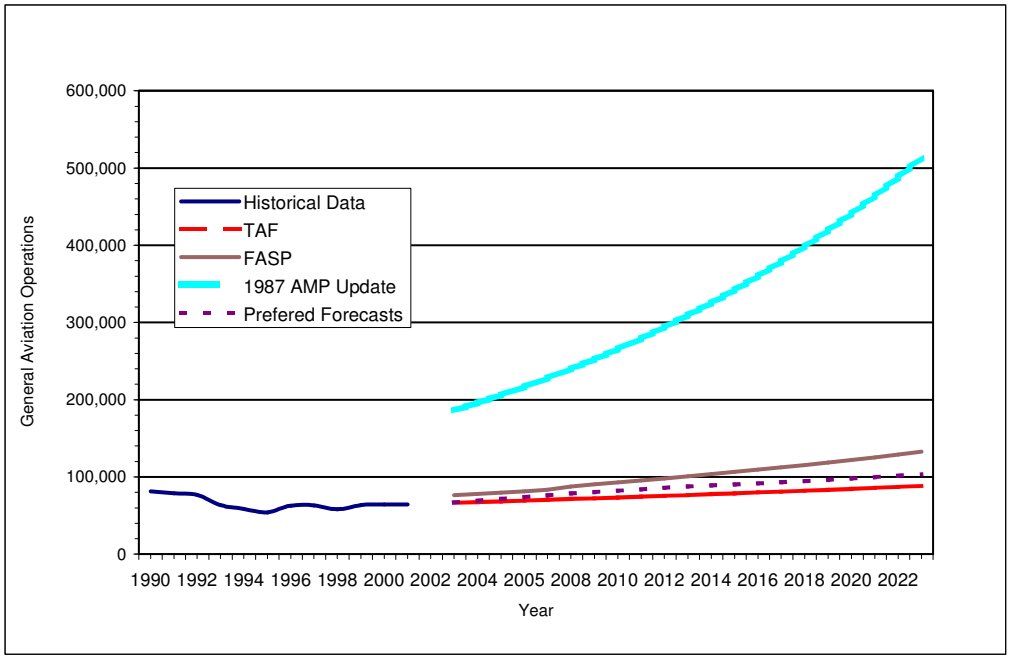
2.4.4 General Aviation Operations Forecast

A review of historic GA operations from the period of 1990 to 2001 indicated a general downward trend in GA operations from 1990 until 1998 and then a slight increase in the total number of annual GA operations. Utilizing the same time horizon as the based aircraft analysis, GNV has seen a 1.35 percent average annual increase in number of operations. Another measurement of activity is the calculation of operations per based aircraft (OPBA), which is derived by dividing the total number of GA operations by the number of based aircraft. Historically, GNV has seen an OPBA between 480 and 629.

Similar to the based aircraft forecasts, the FAA TAF, the Florida Aviation System and the 1987 Airport Master Plan was reviewed for this analysis. The TAF projected a total of 66,389 GA operations in 2003 increasing to 88,229 operations by 2023, which is a 1.4 percent average annual growth rate. The FASP projected a total of 76,544 operations in 2003, increasing to 132,542 operations by 2023, which results in a 2.8 percent average annual growth rate. The 1987 Master Plan update projected a 5.2 percent average annual growth rate, which when applied to the forecasts in that master plan, resulted in 186,200 operations in 2003, growing to 513,562 operations by 2023.

After reviewing the forecasts above and comparing them to actual historical activity, it is estimated that 57,200 GA operations will occur in 2003 increasing to 103,500 operations by 2023. This also equates to an average of 525 operations per based aircraft for the duration of the planning period and a 2.2 percent average annual growth rate. This growth rate is slightly more than the TAFs of 1.5 percent, but is less than the 2.9 percent recommended in the FASP and substantially less than the 5.2 percent listed in the 1987 Airport Master Plan Update. A graph depicting the recommended GA forecasts along with the other forecasts that were used for this analysis is shown in Figure 2-7.

Figure 2-7
GENERAL AVIATION OPERATIONS FORECAST



Year	OPERATIONS	OPBA	1987 AMP	FAA TAF	FASP	Pref. Forecasts
Historical						
1990	83,278	622				
1991	79,967	629				
1992	71,878	614				
1993	61,344	573				
1994	58,710	558				
1995	57,256	506				
1996	61,454	573				
1997	61,013	627				
1998	59,408	582				
1999	64,648	556				
2000	65,599	504				
2001	58,685	480				
2002	59,888	447				
Projected						
2003			186,200	66,389	76,544	67,200
2008			239,956	71,462	87,875	78,570
2013			309,233	76,534	100,777	87,710
2018			398,510	82,173	115,574	94,545
2023			513,562	88,229	132,542	103,500
Average Annual Growth						
2003 - 2023			5.2%	1.4%	2.8%	2.2%

Source: Airport Records
Compiled by Reynolds, Smith and Hills, Inc.

Source: GNV Records; RS&H Analysis, 2003

2.4.5 General Aviation Local/Itinerant Operational Splits

Local operations are defined by the FAA as operations which operate in the local traffic pattern or within sight of the airport or are known to be departing or arriving from flight schools in the local practice area within a 20 nautical mile radius of the airport, or execute simulated instrument approaches or low passes (touch and go) at the airport. Itinerant operations are all other operations not classified as local. These splits will be useful later in the report in the analysis of the available airside and airspace capacity of GNV. Historically, the local/itinerant splits for GA has averaged approximately 35 percent local and 65 percent itinerant. These same percentages have been used for the recommended forecasts and are shown in Table 2-6.

Table 2-6
GENERAL AVIATION LOCAL/ITINERANT SPLITS

Year	Local	%	Itinerant	%	Total Operations
Historical					
1990	33,235	41%	48,197	59%	81,432
1991	27,171	35%	51,490	65%	78,661
1992	28,313	37%	48,447	63%	76,760
1993	22,885	36%	40,697	64%	63,582
1994	20,000	34%	38,622	66%	58,622
1995	17,571	32%	36,553	68%	54,124
1996	20,704	33%	42,296	67%	63,000
1997	19,397	31%	43,964	69%	63,361
1998	18,184	31%	40,033	69%	58,217
1999	20,776	33%	42,632	67%	63,408
2000	23,012	36%	41,548	64%	64,560
2001	22,878	36%	41,483	64%	64,361
Projected					
2003	23,520	35%	43,680	65%	67,200
2008	27,500	35%	51,071	65%	78,570
2013	30,699	35%	57,012	65%	87,710
2018	33,091	35%	61,454	65%	94,545
2023	36,225	35%	67,275	65%	103,500

Source: GNV Records; RS&H Analysis, 2003

2.5 Military Forecasts

GNV is utilized in part for military flight training. Discussions with GNV's air traffic control tower chief indicate that GNV is used by P-3 (ORION) from NAS JAX in Jacksonville, G-5 and DC-10 aircraft from MacDill Air Force Base in Tampa, Coast Guard C-130, T-6 training aircraft from Moody Air Force Base, occasional helicopter traffic and C-17 aircraft.

A review of historical military operations from 1990 to 2001 indicate that GNV experienced a steady increase of military traffic from 1990 to 1996, when military traffic peaked and has experienced a steady decline since that period. The TAF is forecasting no additional growth of military operations for the planning period. In April 2002, the FBO established a contract for military fuel sales and, as a result, it is expected that military operations will begin to increase

once again and show a modest increase of 2 percent average annual growth over the planning period.

Historical local/itinerant splits of military traffic have averaged approximately 55 percent local/45 percent itinerant. It is expected that this split will remain constant for the planning period and is shown in Table 2-7.

Table 2-7
MILITARY OPERATIONS

Year	Local	%	Itinerant	%	Total Ops
Historical					
1990	1,862	50%	1,857	50%	3,719
1991	1,377	41%	1,988	59%	3,365
1992	1,866	47%	2,102	53%	3,968
1993	3,142	56%	2,462	44%	5,604
1994	3,250	58%	2,308	42%	5,558
1995	3,429	67%	1,702	33%	5,131
1996	3,871	68%	1,816	32%	5,687
1997	3,196	56%	2,471	44%	5,667
1998	2,881	59%	1,963	40%	4,884
1999	3,518	65%	1,860	35%	5,378
2000	3,034	64%	1,707	36%	4,741
2001	2,212	58%	1,583	42%	3,795
Projected					
2003	2,171		1,777		3,948
2008	2,397		1,962		4,359
2013	2,647		2,166		4,813
2018	2,922		2,391		5,313
2023	3,226		2,640		5,866
Average Annual Growth					
2003 - 2023					2.0%

Source: GNV Records; RS&H Analysis, 2003

2.6 Itinerant and Local Operations Totals for GNV

As described previously in specific sections for Commercial Service, GA, Air Cargo and Military Operations, local and itinerant operations for each classification have been established due to the unique operational issues for each category. The purpose of this section is to provide a summary of these operations. Local operations classified by the FAA are defined as aircraft operating in the traffic pattern or within sight of the tower, aircraft known to be departing or arriving from flight in local practice areas, or aircraft executing practice instrument approaches at the airport. Itinerant (or transient) operations are all other aircraft operations and represent takeoffs and landings from one airport to another. Historical GA local operations for the past five years have averaged between 31 percent and 36 percent, and itinerant operations have averaged between 64 percent and 69 percent for the same time period. Historical military local operations have averaged between 56 percent and 68 percent, and itinerant operations have

averaged between 32 percent and 44 percent for the same time period. Commercial service operations for the past five years have been 100 percent itinerant.

Local and itinerant operation projections have been forecasted previously in each respective commercial service, GA and military section. It is assumed all future commercial service operations will remain itinerant. Table 2-8 presents the forecasted local and itinerant operations for GNV.

Table 2-8
TOTAL LOCAL/ITINERANT SPLITS

		Projected			
Description	**2003**	**2008**	**2013**	**2018**	**2023**
OPERATIONS					
Itinerant					
Air Carrier	1,684	2,118	2,455	2,862	3,325
Commuter	8,224	9,649	11,186	12,199	13,301
TOTAL SCHEDULED SERVICE	9,908	11,767	13,641	15,061	16,626
General Aviation	43,680	51,071	57,012	61,454	67,275
Military	1,777	1,962	2,166	2,391	2,640
Local					
General Aviation	23,520	27,500	30,699	33,091	36,225
Military	2,171	2,397	2,647	2,922	3,226
TOTAL OPERATIONS	**81,056**	**94,696**	**106,164**	**114,919**	**125,992**

Source: Reynolds, Smith and Hills, Inc. Analysis

2.7 Design Day/Design Hour Activity Forecasts

Capacity analyses and determination of future facility requirements of various elements of airport facilities are often based on design day or design hour activity levels. Design day or design hour activity levels are not represented by the absolute busiest period at the airport, which would be comparable to designing the airport facility to accommodate the aviation related traffic on Wednesday before Thanksgiving which is typically the busiest travel day for the year. The design day and design hour activity levels are generally equivalent to the 85th percentile of activity for the design year. Facilities designed to accommodate this level of activity in the design year will provide a comfortable level of service for a majority of the time. During unusually high activity periods such as the one mentioned above, airport facilities can be expected to experience longer, but not unreasonable or intolerable, processing times.

The 85th percentile level of activity is often calculated in airport planning efforts using a peak month/average, day/peak hour definition. Figure 2-8 and Figure 2-9 present high, low and average monthly distributions of annual enplanements and total annual, total operations. As is common when evaluating such data at various airports, the calendar month that experienced the highest level of activity in a given year often varies. However, the annual activity in the peak month expressed as a percentage of annual activity is usually fairly constant from year to year. If annual activity were equally distributed among all twelve months in a year, monthly activity would be 8.3 percent. For the period of 2000 to 2002, the peak month of activity during all three time periods was March with between 10.1 percent and 10.8 percent of total annual enplanements. Peak period operations were more equally distributed during the previous three years with minor amounts of variation from month to month and year to year. Interesting enough, February was the peak month during 2000, August was the peak month during 2001

and March was the peak month during 2002, with peak month activity averaging between 9.6 percent and 9.8 percent.

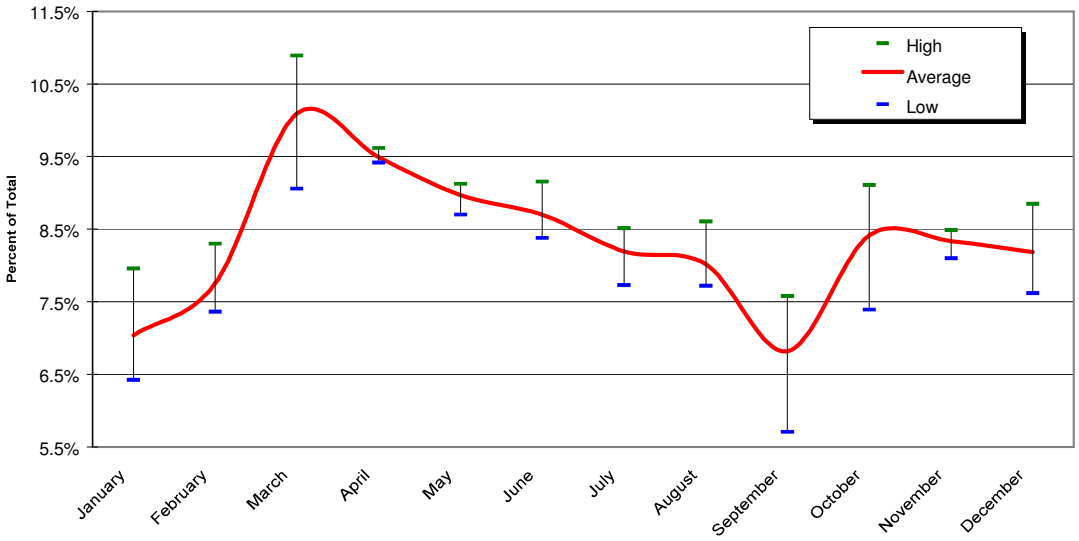
For the purposes of this forecast element, the peak month for enplanements was assumed to average 10.5 percent of total annual enplanements. Peak month activity for operations is assumed to average 9.8 percent of total annual operations. The average day activity is expressed as the peak month activity divided by 30. The peak hour is expressed as a percentage of the average day activity. For passenger enplanements, the peak hour is projected to be 20 percent of the average day activity. For total operations, the peak hour is projected to be 10 percent of the average day activity. The design day and design hour activity levels that result from the application of these factors to annual forecasts of the respective demand elements are presented on Table 2-9.

Table 2-9
DESIGN DAY/DESIGN HOUR ACTIVITY FORECASTS

	Projected				
Description	**2003**	**2008**	**2013**	**2018**	**2023**
ENPLANEMENTS					
Annual Enplanements	139,159	177,606	205,894	227,323	227,323
Peak Month (10.5% of Annual)	14,612	18,649	21,619	23,869	23,869
Average Day (30 days)	487	622	721	796	796
Peak Hour (20.0%)	97	124	144	159	159
TOTAL OPERATIONS					
Annual Operations	81,056	94,696	106,164	114,919	125,992
Peak Month (11.0% of Annual)	7,943	9,280	10,404	11,262	12,347
Average Day (30 days)	265	309	347	375	412
Peak Hour (12.0%)	32	37	42	45	49

Source: Reynolds, Smith and Hills, Inc. Analysis

Figure 2-8
MONTHLY DISTRIBUTION OF ANNUAL ENPLANEMENTS

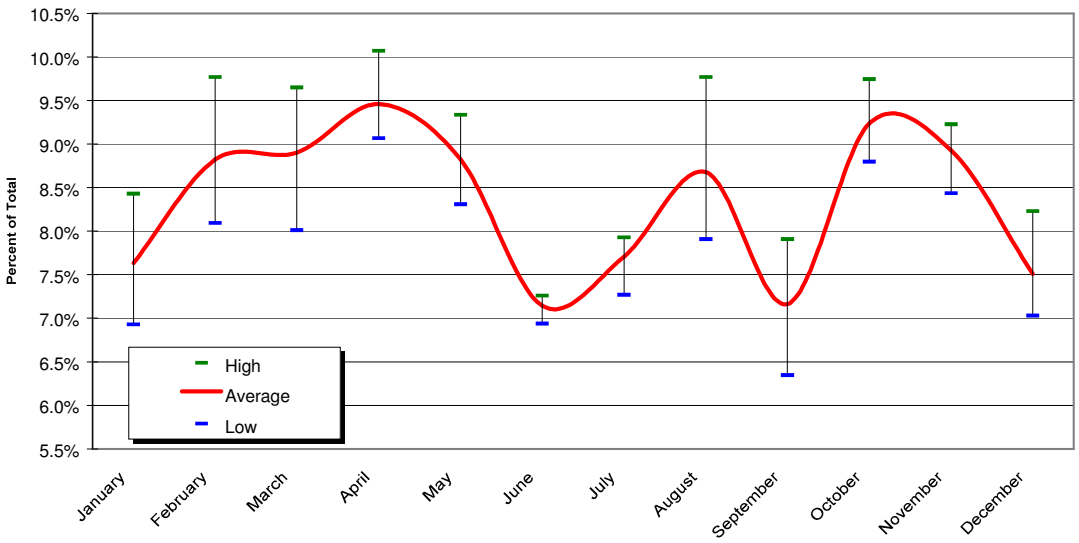


Monthly Enplanements

Month	2000	Percent of Total	2001	Percent of Total	2002	Percent of Total	Average	Max	Min
January	9,755	6.7%	9,642	8.0%	8,674	6.4%	7.0%	8.0%	6.4%
February	12,033	8.3%	9,207	7.6%	9,948	7.4%	7.8%	8.3%	7.4%
March	15,790	10.9%	12,501	10.3%	12,237	9.1%	10.1%	10.9%	9.1%
April	13,648	9.4%	11,450	9.5%	12,992	9.6%	9.5%	9.6%	9.4%
May	12,613	8.7%	11,049	9.1%	12,274	9.1%	9.0%	9.1%	8.7%
June	12,424	8.6%	11,091	9.2%	11,319	8.4%	8.7%	9.2%	8.4%
July	11,205	7.7%	10,310	8.5%	11,271	8.3%	8.2%	8.5%	7.7%
August	11,199	7.7%	10,424	8.6%	10,429	7.7%	8.0%	8.6%	7.7%
September	10,406	7.2%	6,912	5.7%	10,241	7.6%	6.8%	7.6%	5.7%
October	12,672	8.7%	8,952	7.4%	12,306	9.1%	8.4%	9.1%	7.4%
November	12,206	8.4%	9,813	8.1%	11,464	8.5%	8.3%	8.5%	8.1%
December	11,045	7.6%	9,801	8.1%	11,951	8.8%	8.2%	8.8%	7.6%
Total	144,996	100.0%	121,152	100.0%	135,106	100%	100.0%	106.2%	93.6%

Source: GNV Records; RS&H Analysis, 2003

Figure 2-9
MONTHLY DISTRIBUTION OF ANNUAL OPERATIONS



Monthly Operations

Month	2000	Percent of Total	2001	Percent of Total	2002	Percent of Total	Average	Max	Min
January	6,108	7.5%	6,110	8.4%	5,164	6.9%	7.6%	8.4%	6.9%
February	7,908	9.8%	5,868	8.1%	6,414	8.6%	8.8%	9.8%	8.1%
March	7,324	9.0%	5,806	8.0%	7,191	9.6%	8.9%	9.6%	8.0%
April	7,341	9.1%	6,701	9.2%	7,505	10.1%	9.5%	10.1%	9.1%
May	7,557	9.3%	6,023	8.3%	6,577	8.8%	8.8%	9.3%	8.3%
June	5,617	6.9%	5,264	7.3%	5,395	7.2%	7.1%	7.3%	6.9%
July	5,885	7.3%	5,748	7.9%	5,908	7.9%	7.7%	7.9%	7.3%
August	6,402	7.9%	7,082	9.8%	6,233	8.4%	8.7%	9.8%	7.9%
September	5,861	7.2%	4,601	6.3%	5,894	7.9%	7.2%	7.9%	6.3%
October	7,890	9.7%	6,646	9.2%	6,555	8.8%	9.2%	9.7%	8.8%
November	7,383	9.1%	6,689	9.2%	6,286	8.4%	8.9%	9.2%	8.4%
December	5,691	7.0%	5,966	8.2%	5,418	7.3%	7.5%	8.2%	7.0%
Total	80,967	100.0%	72,504	100.0%	74,540	100%	100.0%	107.3%	93.1%

Source: GNV Records; RS&H Analysis, 2003

2.8 Annual Instrument Approaches

Instrument approaches are conducted by an FAA approach control facility for aircraft with an Instrument Flight Rule (IFR) flight plan or a special Visual Flight Rule (VFR) procedure. These approaches are conducted by an instrument-rated pilot in an instrument-equipped aircraft. Instrument approach operations require the use of a published instrument approach procedure and the installation of electronic navigational equipment at an airport.

Historical instrument approach data from the FAA TAF forecasts for GNV is presented in Table 2-10. Annual instrument approaches have averaged 32 percent of total annual operations from 1990 to 2000 and have remained relatively constant as a percentage of annual operations from year to year. The number of annual instrument approaches performed ranged from a high of 30,500 in 1990 to a low of 24,825 in 1994.

The projected total annual operations from the previous commercial service, GA and military sections were summarized and totaled in Table 2-10. It is projected that the percent of total annual instrument approaches at GNV will remain relatively constant for the 20-year planning period and are calculated at 32 percent of total operations. As a result, total annual approaches will grow from 26,242 in 2003 to 40,791 by 2023.

Table 2-10
INSTRUMENT APPROACHES

Year	Total Operations	Instrument Approaches	% of Total Ops
Historical			
1990	105,148	30,500	29%
1991	99,263	29,184	29%
1992	99,371	28,838	29%
1993	84,586	26,586	31%
1994	78,884	24,825	31%
1995	75,841	27,341	36%
1996	87,524	28,809	33%
1997	84,897	30,463	36%
1998	77,750	28,934	37%
1999	81,638	26,754	33%
2000	80,349	24,884	31%
Average Percent 1990 - 2000			32%
Projected			
2003	81,056	26,242	32%
2008	94,696	30,658	32%
2013	106,164	34,371	32%
2018	114,919	37,206	32%
2023	125,992	40,791	32%

Source: FAA TAFs; RS&H Analysis, 2003

2.9 Air Cargo Forecasts

Air cargo amounts at an airport include the total annual weight of express packages; mail and other airfreight that is shipped into or from an airport loaded on commercial passenger or dedicated air cargo aircraft. Air cargo is further segregated by enplaned cargo (loaded onto aircraft at the airport) and deplaned air cargo (unloaded from aircraft at the airport). Unlike passenger enplanements and deplanements at origin and destination (O&D) airports similar to GNV where enplanements approximately equal deplanements, enplaned and deplaned cargo can vary widely. The majority of airfreight is either sent out in the belly of scheduled commercial service aircraft or in dedicated freighters. Both Delta and US Airways handle a limited amount of freight and there is a dedicated air cargo operation, FedEx, which has been operating at GNV since 1999. Conversations with FedEx indicate that the company currently operates two daily flights (three flights during peak periods) with Cessna Caravan C-208 aircraft from GNV to JAX where the freight is consolidated and forward to FedEx's Memphis hub operation. Some FedEx packages, such as their two-day service, are trucked rather than flown to Jacksonville.

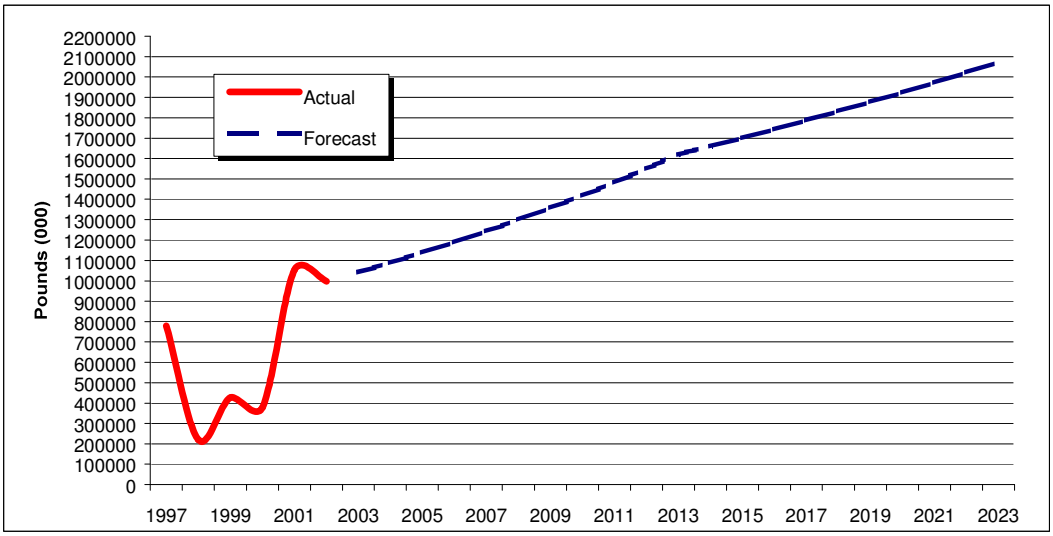
Figure 2-10 presents annual enplaned and deplaned air cargo volumes recorded at GNV since 1997, which includes both belly cargo and dedicated freighters. It is important to understand some of the recent changes in the air cargo industry and how they might affect the forecasted demand. The recent switch by airlines to regional jet service, including service at GNV, has reduced the amount of lift available to carry air cargo as these regional jets have very limited air cargo capacity. In addition, since the September 11, 2001 terrorist attacks, the use of available belly space in commercial service aircraft has been reduced due to increased security requirements imposed by the Transportation Security Administration (TSA) and the airlines moving away from accepting belly cargo. This decrease in belly cargo capacity has been further accelerated by a new contract between the US Postal Service and FedEx to carry first class mail, which historically made up a large percentage of belly cargo. This volume has now been shifted to dedicated freighters in the FedEx fleet.

GNV has experienced a dramatic increase in air cargo activity since the year 2000 due to the initiation of service by FedEx. After a review of the FASP Air Cargo forecasts, discussions with FedEx officials and a review of state and National trends, it is projected that air cargo will continue to grow at a rapid pace, but not as rapid as the last two years since many of the businesses within the airport service area will continue to utilize overnight package delivery services. It is expected that the air cargo volume will grow at an annual average rate of 4.5 percent from 2003 to 2013 and then a more moderate average annual rate of 2.5 percent from 2014 to 2023. It is also expected that the split of enplaned and deplaned air cargo will shift slightly and will begin moving towards a more balanced split versus the heavy percentage of deplaned or arriving freight. This shift reflects the desire of most carriers' attempt to balance inflows and outflows of cargo, thus to better utilize their equipment.

2.10 Comparison with Other Forecast Efforts

Forecasts prepared in a master plan are reviewed by the FAA and compared to the TAF projections. FAA Order 5090.3C provides guidance on the FAA review process and states that the FAA will find an airport planning forecast acceptable if the five-year, ten-year and 15-year forecasts contained in the planning document (master plan) are within 10 percent of the TAF projections. It should be noted that if the proposed airport forecast in the master plan exceed the TAF by more than 10 percent but considered valid by the FAA, the new forecast will be incorporated into the TAF and replace the existing TAF projections.

Figure 2-10
FORECAST OF ENPLANED CARGO



Year	Enplaned Cargo	%	Deplaned Cargo	%	Total Cargo
Historical					
1997	486,812	63%	291,533	37%	778,345
1998	112,392	51%	108,771	49%	221,163
1999	267,848	63%	159,203	37%	427,051
2000	209,322	55%	169,238	45%	378,560
2001	376,439	36%	676,925	64%	1,053,364
2002	275,070	28%	722,677	72%	997,747
Projected					
2003	291,941	28%	750,704	72%	1,042,645
2008	389,798	30%	909,528	70%	1,299,326
2013	518,143	32%	1,101,053	68%	1,619,196
2018	641,190	35%	1,190,782	65%	1,831,972
2023	787,629	38%	1,285,079	62%	2,072,708
Average Annual Growth Rates					
1997-2002					4.2%
2003 - 2013					4.5%
2014-2023					2.5%

Source: Gainesville Regional Airport; RS&H Analysis, 2003

A comparison between the projections in this master plan and the current TAF are presented in Table 2-11. As shown, the enplanement projections in the master plan are within 10 percent of those contained in the TAF within the base year +15 year period (2018). However, total

operations and commercial service operations projected for this master plan update are expected to be 15.4 percent and 15.2 percent higher, respectively, by 2018. This increase is due to a projected additional carrier providing service at GNV and the anticipated continued use of regional jet aircraft and higher levels of frequency of service versus the use of larger aircraft. Total operations are also expected to grow faster than the rate of growth projected in the TAF. GNV has achieved more based GA aircraft than what is reflected in the current TAF, which shows a projected 117 aircraft in 2001 versus 134 actual. As the result of these differences, operational figures in the TAF should be revised to match the operation levels contained in the master plan.

It is believed that the aviation activity levels are realistic and defensible and therefore the FAA TAF forecasts should be revised to reflect this forecast.

Table 2-11
TAF COMPARISON

Description	Year	Master Plan Forecast	TAF	Percent Higher (Lower)
ENPLANEMENTS				
Base Year	2003	139,159	159,128	-12.5%
Base Year + 5 years	2008	177,606	175,496	1.2%
Base Year + 10 years	2013	205,894	191,864	7.3%
Base Year + 15 years	2018	227,323	209,758	8.4%
TOTAL OPERATIONS				
Base Year	2003	81,056	82,481	-1.7%
Base Year + 5 years	2008	94,696	88,059	7.5%
Base Year + 10 years	2013	106,164	93,636	13.4%
Base Year + 15 years	2018	114,919	99,566	15.4%
COMMERCIAL OPERATIONS				
Base Year	2003	9,908	11,524	-14.0%
Base Year + 5 years	2008	11,767	12,029	-2.2%
Base Year + 10 years	2013	13,641	12,534	8.8%
Base Year + 15 years	2018	15,061	13,071	15.2%

Source: FAA TAFs; RS&H Analysis, 2003

2.11 Summary of Forecasts

Table 2-12 presents a summary listing of the aviation demand forecasts at GNV. These projections will be used in the next chapter of the master plan to assess the capacity of existing facilities and determine facility expansions or improvements needed to satisfy future activity levels.

Table 2-12
FORECAST SUMMARY

Description	Projected					Average Annual Growth Rate			
	2003	2008	2013	2018	2023	2003 - 2008	2003 - 2013	2003 - 2018	2003 - 2023
PASSENGER ENPLANEMENTS									
Air Carrier	2,783	5,328	6,177	6,820	7,529	13.9%	8.3%	6.2%	5.1%
Commuter	136,376	172,278	199,717	220,503	243,454	4.8%	3.9%	3.3%	2.9%
TOTAL	139,159	177,606	205,894	227,323	250,983	5.0%	4.0%	3.3%	3.0%
OPERATIONS									
Itinerant									
Air Carrier	1,684	2,118	2,455	2,862	3,325	4.7%	3.8%	3.6%	3.5%
Commuter	8,224	9,649	11,186	12,199	13,301	3.2%	3.1%	2.7%	2.4%
TOTAL SCHEDULED SERVICE				15,061	16,626	3.5%	3.2%	2.8%	2.6%
General Aviation	43,680	51,071	57,012	61,454	67,275	3.2%	2.7%	2.3%	2.2%
Military	1,777	1,962	2,166	2,391	2,640	2.0%	2.0%	2.0%	2.0%
Local									
General Aviation	23,520	27,500	30,699	33,091	36,225	3.2%	2.7%	2.3%	2.2%
Military	2,171	2,397	2,647	2,922	3,226	2.0%	2.0%	2.0%	2.0%
TOTAL OPERATIONS	81,056	94,696	106,164	114,919	125,992	3.2%	2.7%	2.4%	2.2%
INSTRUMENT OPERATIONS	25,242	30,658	34,371	37,206	40,791	3.2%	2.7%	2.4%	2.2%
PEAK HOUR OPERATIONS	32	37	42	45	49	3.2%	2.7%	2.4%	2.2%
TOTAL AIR CARGO (lbs)	1,042,645	1,299,326	1,619,196	1,831,972	2,072,708	4.5%	4.5%	3.8%	3.5%
BASED AIRCRAFT									
Single Engine	105	122	134	143	155	3.0%	2.5%	2.1%	2.0%
Multi Engine	25	29	32	34	37	3.0%	2.5%	2.1%	2.0%
Jet	6	6	7	8	8	0.0%	1.6%	1.9%	1.4%
Helicopter	4	5	5	6	6	4.6%	2.3%	2.7%	2.0%
TOTAL BASED AIRCRAFT	140	162	179	191	207	3.0%	2.5%	2.1%	2.0%

Source: Reynolds, Smith and Hills, Inc. Analysis

CHAPTER 3
DEMAND/CAPACITY ANALYSIS AND FACILITY REQUIREMENTS

3.1 Introduction

This section analyzes the ability of the current facilities at Gainesville Regional Airport (GNV), as documented in Chapter 1, to accommodate the aviation demand forecasts developed in Chapter 2. The Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT) have approved forecasts generated in Chapter 2 of the study. These forecasts will be utilized in this chapter to establish the specific facility requirements necessary to accommodate the forecasted demand.

GNV's major component areas, which include airspace, airside and landside facilities, have been analyzed to determine the necessary facility requirements. Typical industry requirements for commercial aviation and general aviation demand have been identified for various activity levels to indicate required facilities. It is important to note that major components must be in balance with each other to achieve system optimization. Specific facility expansion and airport development alternatives to adequately meet the projected demand will be addressed in Chapter 4, Alternative Analysis.

3.2 Airspace

The airspace elements evaluated for GNV include the following: surrounding airspace and obstructions. The airspace within a 30-nautical-mile (N.M.) radius of GNV was examined to identify factors which may impact aircraft operations of the forecasted activity.

3.2.1 Surrounding Airspace

Airspace immediately surrounding GNV is Class D Airspace, which extends from the surface to 2,700 feet MSL before converging with Class E Airspace. The nearest airspace designated as Class C is the outer perimeter of the Jacksonville International Airport airspace, which is located approximately 50 N.M. northeast of Gainesville. The outer perimeter of Class C Airspace associated with Daytona Beach International Airport is positioned approximately 60 N.M. southeast of Gainesville. The nearest airspace designated as Class B is the outer perimeter of the Orlando International Airport airspace, which is located approximately 60 N.M. south-southeast of Gainesville. The outer perimeter of Class B Airspace associated with Tampa International Airport is positioned approximately 100 N.M. southwest of Gainesville.

The aeronautical environment immediately adjacent to GNV's Class D Airspace includes several areas designated as Special Use Airspace. Areas of Special Use Airspace located within a 30 N.M. radius of Gainesville are presented in Table 3.1. In addition to the areas of Special Use Airspace identified in Table 3.1, the southern boundary of a Special Military Activity Area is located near the northern perimeter of GNV's Class D Airspace. The area's northern boundary is located approximately 26 N.M. miles north of the northern boundary of GNV's Class D Airspace and spans the entire width of the State of Florida. Lateral limits of the Special Military Activity Area range from 500 feet AGL to 6,000 feet MSL. In addition to training exercises within the Special Military Activity Area, the Department of Defense conducts periodic operations involving unmanned aerospace vehicles. These vehicles are escorted by tactical

aircraft, which as necessary, exercise override flight control of the unmanned vehicles. Status of the activity within Special Military Activity Area may be obtained from a Flight Service Station (FSS) or Department of Defense (DOD) facility.

Table 3-1
SPECIAL USE AIRSPACE SURROUNDING GNV

Area Identification	Location	Altitude of Use (Feet)	Time of Use
MOA			
Live Oak	Live Oak, Florida	8,000 MSL	6:00 AM-2:00 AM Mon-Fri
Palatka 1	Palatka, Florida	3,000 AGL	Intermittent 5:00 AM-1:00 AM
Palatka 2	Palatka, Florida	3,000 AGL	Intermittent 5:00 AM-1:00 AM
Restricted			
R-2903A	Stevens Lake, Florida	Up to but not including FL230	Intermittent 7:00 AM-7:00 PM Tue-Sun
R-2903C	Stevens Lake, Florida	Up to 7,000 MSL	Intermittent 7:00 AM-7:00 PM Tue-Sun
R-2903D	Stevens Lake, Florida	Up to 5,000 MSL	Intermittent 7:00 AM-7:00 PM Tue-Sun
R-2904A	Starke, Florida	Up to but not including 1,800 MSL	Apr-Aug 8:00 AM-5:00 PM Daily Sep-Mar 8:00 AM-5:00 PM Sat-Sun
R-2906	Rodman, Florida	Up to 14,000 MSL	Intermittent 5:00 AM-1:00 AM Daily
R-2907A	Lake George, Florida	Up to FL 230	Intermittent 5:00 AM-1:00 AM Daily
R-2907B	Lake George, Florida	Up to 9,000 MSL from a line Longitude 81°40' 00" W to Longitude 81°42' 55" W Up to 6,000 MSL from a line Longitude 81° 42' 55" W to Longitude 81°51' 50" W	Intermittent 5:00 AM-1:00 AM Daily
R-2910	Pinecastle, Florida	Up to FL 230 within 5 N.M. Radius Up to 9,000 MSL within NW Extension Up to 9,000 MSL within SE Extension Up to 6,000 MSL within SSE Extension	Intermittent 5:00 AM-1:00 AM Daily

FL – Flight Level
Source: Jacksonville Section Aeronautical Chart (September 2003)

While operating an aircraft in IFR conditions, navigation is conducted using an IFR Enroute Low Altitude Chart. As documented in Section 1 – Inventory and Existing Conditions, GNV is included on IFR Enroute Low Altitude Chart L-19. In addition to navigational aids (NAVAIDs) and airspace designations, IFR Enroute Low Altitude Charts display victor airways, and associated altitude and heading information. Victor airways, which either penetrate or come within close proximity of penetrating GNV's Class D Airspace include, Victor (V) 157, V441, V537 and V579.

- **V157** - V157 passes approximately five miles west of GNV and is defined by the 346-degree radial off of the Ocala VOR and 173-degree radial off of the Taylor VOR. The Minimum En-Route Altitude (MEA) for this portion of V157 is 2,000 MSL.
- **V441** – V441, which passes directly over GNV, is defined to the northeast by the 18-degree radial off of Gator VOR, and to the south by the 179-degree radial off of Gator VOR. The portion of V441 nearest to GNV maintains an MEA of 2,000 MSL.
- **V537** – Similar to V441, V537 passes directly over GNV and is defined to the south by the 179-degree radial off of the Gator VOR. From the Gator VOR V537 extends to northwest on the 308-degree radial while the MEA for the portion of V537 extending to the south is 2,000 MSL. The MEA for the portion of V537 extending to the northwest is 3,000 MSL. Additionally, V537 extending to the northwest of Gator VOR is also governed by a Minimum Obstruction Clearance Altitude (MOCA) of 2,000 MSL.

- **V579** – V579 passes directly over GNV and is defined to the southwest by the 196-degree radial off of Gator VOR, and to the west by the 266-degree radial off of Gator VOR. From Gator VOR, V579 extends southwest to St. Petersburg VOR and west to Cross City VOR. From St. Petersburg VOR, V579 assumes a southeasterly outbound heading of 166 degrees. From Cross City VOR, V579 assumes a northwesterly heading of 352 degrees. The section of V579 extending west of GNV maintains an MEA of 2,000 MSL while the section of V579 extending southwest of GNV maintains an MEA of 3,000 MSL. A MOCA of 2,000 MSL is also in place.

FAA defines airspace surrounding an airport by applying criteria relative to the number of IFR operations and annual enplanements accommodated by an airport and respective airspace. At GNV enplanements are projected to increase from 139,159 in 2003 to 250,983 in 2023. IFR operations are projected to increase from 25,242 in 2003 to 40,791 in 2023. Using this information and other applicable criteria, FAA will modify the airspace associated with GNV as required. Although the existing infrastructure of airspace and victor airways serving GNV provides an aeronautical environment conducive to continued operational growth, improvements relative to the need for an additional Terminal Radar Approach Control (TRACON) facility has been indicated by the FAA. Currently, TRACON facilities associated with Jacksonville, Miami and Tampa Bay share a common airspace boundary located south of GNV. The shared boundary provides the potential for conflict among the TRACON facilities. An additional TRACON facility providing air traffic services for north central Florida would alleviate much of this potential. Presently studies are being conducted to determine the specific need for an additional TRACON facility and possible location by the FAA.

3.2.2 Obstructions

An Obstruction Chart (OC) and an Obstruction Data Sheet (ODS) has been previously prepared for GNV by the U.S. Department of Commerce's National Oceanic and Atmospheric Administration (NOAA). These documents provide data on obstructions and other objects located within GNV's immediate airspace.

The OC for GNV, which was published in October 1996, indicates that there are several objects located within GNV's FAR Part 77 Imaginary Airspace Surfaces. These objects include trees, transmission towers, aeronautical navigational facilities and airport buildings. There are 22 trees and a transmission tower located either underneath or adjacent to GNV's runway approaches and are identified as obstructions. Any objects identified as obstructions should be lighted, marked or removed if not already eliminated.

A more detailed obstruction analysis will be conducted for each specific runway as part of the Airport Layout Plan Set development and will be discussed in that chapter.

3.2.3 Airfield Layout

The airfield layout refers to the location and orientation of the runways, taxiways and apron areas. Runway 10/28, the primary runway for GNV, has an east to west orientation and Runway 6/24, the crosswind runway, has a northeast to southwest orientation. The total pavement length for Runway 10/28 is 7,501 feet long by 150 feet wide. Runway 6/24 has a total pavement length of 4,158 feet long by 100 feet wide. Runway 10/28 is served by a parallel taxiway, Taxiway E, located on the South side of the runway and provides access to the commercial service area. Taxiway E has a runway to taxiway separation of 400 feet and has a

total of five connector taxiways. Runway 6/24 is also served by a parallel taxiway, Taxiway A, located on the northwest side of the runway and provides access to the general aviation and air cargo areas of GNV. Taxiway A has a runway to taxiway separation of 525 feet and has a total of three connector taxiways.

Because of the close proximity of the thresholds of Runway 10 and 6, the airfield is restricted to dependent approaches which affects the overall capacity analysis of the runway system. This will be discussed in greater detail later in this report.

3.3 Demand Capacity Analysis

The purpose of this section is to identify the existing annual capacity and hourly capacity of GNV based on the current operational characteristics. Airfield capacity is an estimate of the number of aircraft that can be processed through the airfield system during a specific period of time with acceptable levels of delay. An airport's hourly capacity is an estimate of the maximum number of aircraft that can be accommodated within a one-hour period. Similarly, the Annual Service Volume (ASV) is a reasonable estimate of GNV's annual capacity, accounting for the various conditions encountered over the course of a year. The level of delay that is acceptable to a particular airport may differ from the level deemed acceptable at a similar airport. As a result, the level of delay can influence the estimated capacity for a given airfield. Other major factors that affect airfield capacity include the runway configuration, ATC operating procedures, weather conditions and aircraft fleet mix. For instance, the number of aircraft that can operate out of an airport under IFR conditions will be much less than VFR conditions. This is due to the fact that separation distances and aircraft movement are reduced during IFR conditions for safety concerns. Similarly, the other factors mentioned above would each have an effect on overall airfield capacity.

Estimates of existing airfield capacity at GNV were developed in accordance with the methods presented in *FAA's Advisory Circular 150/5060-5 Airport Capacity and Delay*.

3.3.1 Factors Affecting Airfield Capacity

To accurately estimate the capacity of the existing airfield at GNV, several types of information must be gathered and analyzed. The existing runway and taxiway layout must be examined along with historical weather data, aircraft types and schedules.

3.3.1.1 Existing Airfield Configuration

The airfield at GNV consists of two runways in an "open V" configuration. The primary runway is Runway 10/28, measuring 7,501 feet in length. Runway 28 is equipped with an Instrument Landing System (ILS) with a minimum visibility of 1/2 mile, a Non Directional Beacon Approach (NDB) with a minimum visibility of 3/4 mile, a GPS approach with a minimum visibility of 1/2 mile and a VOR approach with a minimum visibility of 1/2 mile. Runway 10 was equipped with a Localizer Back Course approach (minimum visibility of one mile) but this was discontinued in 2002. Runway 10 also has a GPS approach (minimum visibility of one mile) and a VOR/DME approach with a minimum visibility of one mile. The alternate runway is Runway 6/24, which measures 4,158 feet in length. Both ends of Runway 6/24 are equipped with a non-precision GPS approach (minimum visibility of one mile). In addition, Runway 6 has a VOR/DME with a minimum visibility of one mile.

3.3.1.2 Navigational Aids

During periods of Instrument Meteorological Conditions (IMC), the availability or absence of navigational landing aids can drastically affect the capacity of an airport by limiting the runways available to aircraft. For the worst weather conditions (Low IFR), even standard Category I ILS approaches may not be adequate. For low IFR, only Category II or Category III ILS approaches may be adequate for instrument landings. At GNV, there are no Category II or Category III approaches available. The landing aids available on the existing airfield are shown in Table 3-2. Weather conditions and their impacts on airfield capacity are discussed further in this chapter.

Table 3-2
APPROACH AIDS ASSUMED FOR CAPACITY CALCULATIONS

Airfield Configuration	Runway	Existing Approach
Existing Airfield	Runway 28	CAT I ILS (1/2 mile)
	Runway 10	Non-precision (1 mile)
	Runway 6	Non-precision (1 mile)
	Runway 24	Non-precision (1 mile)

Source: U.S. Terminal Procedures, U.S. Department of Transportation

3.3.1.3 Simultaneous Operations

Two “open V” runways are available at GNV, and as a result, Air Traffic Control (ATC) may coordinate some degree of simultaneous operations. Smaller aircraft request Runway 6/24 if crosswind conditions exceed the capability of the aircraft on the primary runway (Runway 10/28). Depending on the runway configuration, the frequency of crosswind runway operations can significantly affect the total capacity of GNV. Aircraft using the crosswind runway must be sequenced into the traffic flow of the larger and faster aircraft using the primary runway. Departures from the crosswind runway in a direction away from the primary runway can actually improve the capacity of GNV by removing departures of smaller aircraft from the traffic flow of the primary runway. Conversely, all arrivals to the crosswind runway or departures from the crosswind runway towards the primary runway must be sequenced into the traffic flow on the primary runway and can decrease the total capacity of GNV. With its “open V” configuration, GNV experiences both of the above situations depending upon whether traffic flow is to the east or west.

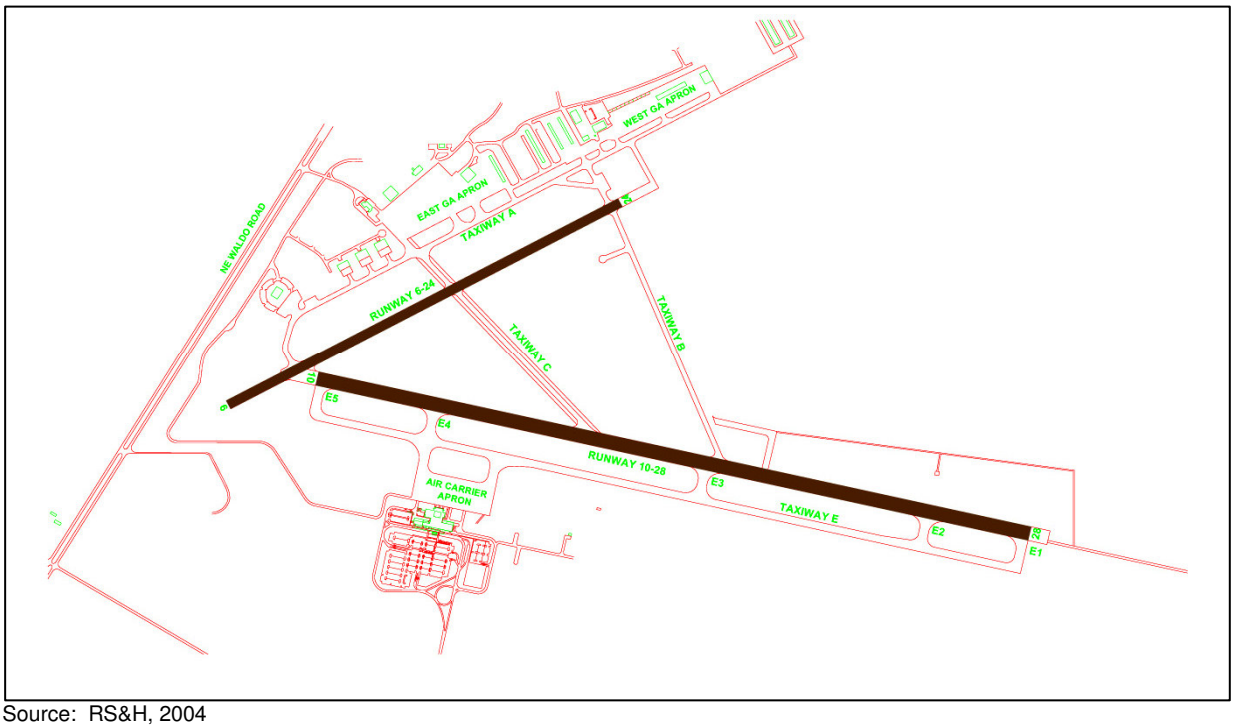
One method used by some airports to reduce the impact of crosswind operations on the traffic flow of the primary runway is the implementation of Land and Hold Short Operations (LAHSO). Because the two existing runways at GNV do not physically intersect, aircraft arriving on the crosswind runway are required to hold short of any active runways or taxiways during normal operations. However, the flight paths of the two runways do cross, making the runways operationally dependent.

Because of this operational dependence, procedures similar to LAHSO may be used at GNV for certain operations in order to increase the capacity and to lessen the impact of crosswind operations on the primary runway. Pilots may be asked to forego touch-and-go operations on the crosswind runway or to use certain taxiways to exit the crosswind runway. Because of the minor effect of these operations on airport capacity and the variable nature of these operations, LAHSO-type operations are not considered in this analysis but could result in a slight operational benefit to GNV when applied.

3.3.1.4 Taxiways

Taxiway accessibility plays an important role in the capacity of an airfield by influencing the amount of time that an aircraft utilizes a runway. The minimal time spent on the runway allows for more operations to take place. The airfield at GNV features an abundance of taxiways leading to the two existing runways. Runway 10/28 is served by a full-length parallel taxiway, Taxiway E, as shown in Figure 3-1. Additionally, there are four exit taxiway intersections to Taxiway E that serve as access points that run the length of the runway. Taxiways B and C connect both Runways. Runway 6/24 is served by Taxiway A, which has three exit taxiway intersections. Two of these intersections comprise Taxiway B and Taxiway C. Taxiway B and Taxiway C connect Taxiway A with Runway 10/28. These taxiways are also shown in Figure 3-1. The existings taxiways for Runway 10/28 and 6/24 are shown in Table 3-3 and 3-4.

Figure 3-1
TAXIWAY LAYOUT



Source: RS&H, 2004

Table 3-3
EXISTING TAXIWAYS – RUNWAY 10/28

Taxiway Name	Taxiway Type	Approx. Distance from Threshold of Runway 10	Approx. Distance from Threshold of Runway 28
Taxiway B	High Speed Exit	4,250	3,251
Taxiway E1	Right Angle	7,501	0
Taxiway E2	Right Angle	6,450	1,051
Taxiway E3	Right Angle	4,100	3,401
Taxiway E4	Right Angle	1,250	6,251
Taxiway E5	Right Angle	0	7,501
Taxiway C	High Speed Exit	2,800	4,701

Source: AVCON, Inc. Analysis

Table 3-4
EXISTING TAXIWAYS – RUNWAY 6/24

Taxiway Name	Taxiway Type	Approx. Distance from Threshold of Runway 6	Approx. Distance from Threshold of Runway 24
Taxiway A	Right Angle	800	3,358
Taxiway B	Right Angle	4,000	158
Taxiway C	Right Angle	2,600	1,558

Source: AVCON, Inc. Analysis

3.3.1.5 Aircraft Parking Areas

Commercial service airlines currently represent approximately 12 percent of the operations at GNV. Commercial service airlines serving GNV generally utilize a variety of turboprop aircraft such as the ATR-72 as well as the increasingly popular regional commuter jets with 50 to 70 seats. Although these turbo-prop aircraft may utilize both runways, a majority of the operations (approximately 96 percent) are conducted on Runway 10/28 due to limitations of Runway 6/24 and turbo-jet aircraft utilize Runway 10/28 exclusively. Upon landing, these aircraft taxi to the Air Carrier Apron where the passenger loading and unloading occurs.

Dedicated air cargo aircraft generally access the General Aviation (GA) Apron. These operations in general occur in conjunction with Air Carrier Operations. The one dedicated air cargo operation, FedEx, operates an average of two flights per day at GNV. The aircraft most commonly utilized is the Cessna Caravan C-208.

Military operations at GNV make up approximately 5 percent of the total operations. These operations are generally training exercises conducted by a variety of military installations. The main installations are Jacksonville Naval Air Station (Jacksonville, FL), McDill Air Force Base (Tampa, FL), and Moody Air Force Base, (Valdosta, GA). The military aircraft that have transited to GNV are C-5's, C-130's, T-6's, P-3's and a variety of helicopter with occasional F-18, T-95 and B-737 operations. During the week it is not uncommon for approximately 50 military operations to occur in one day. The P-3 is the most common military aircraft that conducts operations at GNV. This number may increase in the future due to an increase in training operations from Moody Air Force Base. Similar operations may also occur in the future from Embry Riddle University where training will be their primary operation.

General aviation operations, representing approximately 83 percent of GNV's annual operations, generally include a range of smaller piston and turbine-powered aircraft. GNV's general aviation areas are concentrated on the northwest side of the airfield and are served by Taxiways A, B and C. Due to the proximity of Runway 6/24, a large percentage of the general aviation aircraft operate on that runway, particularly during off-peak hours. However, because many of the general aviation aircraft are more susceptible to wind conditions, the use of the Runway 10/28 becomes more frequent when prevailing winds dictate its use.

3.3.1.6 Historical Weather

Weather conditions have a great affect on the capacity of an airport. Winds will generally dictate which runway ends are utilized for landings and departures, particularly for smaller aircraft, which are more susceptible to crosswinds. Likewise, low visibility conditions and low cloud ceilings will increase aircraft spacing and in turn limit operations to runways that are equipped with specific navigational aids required for such conditions.

Visibility and cloud ceilings govern whether aircraft operations are conducted under Visual Flight Rules (VFR), Marginal VFR (MVFR), Instrument Flight Rules (IFR), or Low IFR conditions. The criteria for these conditions are shown in Table 3-5.

Table 3-5
CLASSIFICATION OF WEATHER CONDITIONS

Condition	Visibility		Cloud Ceilings
VFR	> 5 statute miles	and	> 3,000 ft AGL
MVFR	≤ 5 statute miles, but ≥ 3 statute mile	and/or	≤ 3,000 ft AGL, but ≥ 1,000 ft AGL
IFR	< 3 statute miles, but ≥ 1 statute mile	and/or	< 1,000 ft AGL, but ≥ 500 ft AGL
Low IFR	< 1 statute mile	and/or	< 500 ft AGL

ft AGL = feet above ground level
Source: Federal Aviation Regulations and Aeronautical Information Manual

Gainesville has a very moderate climate and relatively good weather conducive to year-round operations. Poor weather conditions are primarily the result of passing fronts and summer thunderstorms. However, the months from June to November present a greater potential for a tropical storm or hurricane system. There is a high frequency of ground fog during the winter months in the early morning and evening hours which has, at times, affected operations at the airport.

The distribution of weather conditions and winds at GNV was estimated based on hourly observations over the most recent ten-year period (1992-2001) as provided by the National Climatic Data Center, NOAA (Asheville, NC). The wind data indicates that VFR conditions occur approximately 91 percent of the time, with IFR conditions occurring approximately 9 percent of the time as shown in Table 3-6.

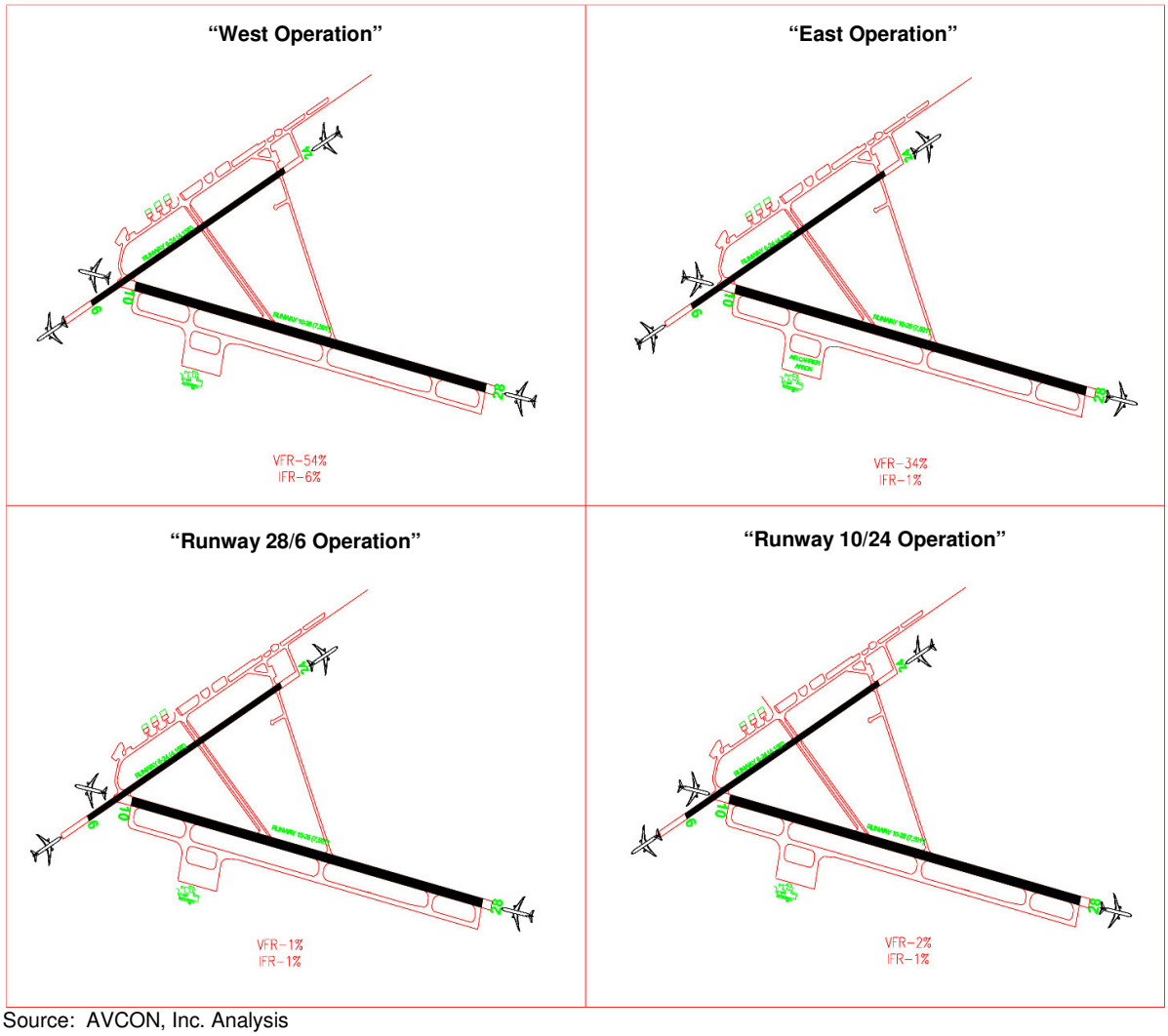
Table 3-6
OCCURENCE OF VFR AND IFR WEATHER CONDITIONS

Condition	Visibility		Cloud Ceilings	Occurrence
VFR and MVFR	≥ 3 statute mile	and	≥ 1,000 ft AGL	91%
IFR*	< 3 statute miles	and/or	< 1,000 ft AGL	9%

* Figures represent “Low” conditions as well as IFR
Sources: National Climatic Data Center, NOAA, 1991-2000; U.S. Terminal Procedures SE, March 22, 2001

The predominant wind directions are approximately 70 degrees and 260 degrees, which will vary depending on the time of year. Based on specific wind conditions, ATC sequences aircraft into GNV in four different configurations. The “west operation” utilizes Runway 24 and/or Runway 28 and represents approximately 60 percent of the runway utilization. The “east operation” includes takeoffs and landings on Runway 10 and/or Runway 6 and makes up approximately 36 percent of the runway utilization. Two unique sequences are the Runway 28/Runway 6 configuration and a Runway 10/Runway 24 configuration. These make up approximately 1 percent and 3 percent of the runway utilization, respectively. These flow configurations are shown in Figure 3-2.

Figure 3-2
RUNWAY USE CONFIGURATION



Source: AVCON, Inc. Analysis

3.3.1.7 Aircraft Fleet Mix

Another significant factor that affects the capacity of the airfield is the aircraft fleet mix. For a uniform fleet mix and with aircraft of similar approach speeds, the sequencing of arrival aircraft can be performed relatively efficiently. The reverse situation, where there is diversity in the range of aircraft speeds, will generally decrease the hourly capacity of an airfield. Similarly, the hourly capacity of an airfield generally decreases as the average aircraft size of the fleet mix increases. During flight, "wake turbulence" is created behind an aircraft and can represent a significant safety hazard for trailing aircraft or other aircraft operating in the vicinity by disrupting the normal airflow. Heavier aircraft typically generate more severe wake turbulence thereby requiring greater separation between aircraft during departure or arrival operations. As a result, aircraft arrivals and departures must be properly sequenced to allow for spacing between consecutive aircraft. This spacing is dictated by their respective speeds and weights. Because smaller aircraft are more susceptible to wake turbulence, spacing between aircraft is greatest when smaller aircraft are sequenced behind large aircraft. This increased separation between successive arrivals or departures can significantly decrease the capacity of the airfield.

In order to account for the uniformity or diversity of an airport's fleet mix and the impact that the fleet mix has on the airfield capacity, an aircraft "mix index" is calculated based on the distribution of aircraft weights and sizes operating at the airport. The mix index is a mathematical expression representing the portion of large aircraft in the fleet. The mix index for a particular fleet is calculated by adding the percentage of Class C aircraft to three times the percentage of Class D aircraft (C+3*D) using the aircraft classes defined in Table 3-7.

Table 3-7
AIRCRAFT CLASSIFICATIONS FOR DETERMINING THE FLEET MIX INDEX

Aircraft Class	Maximum Takeoff Weight	No. of Engines	Wake Turbulence Classification
A	12,500 lbs or less	Single-engine	Small
B	12,500 lbs or less	Multi-engine	Small
C	12,500 lbs to 300,000 lbs	Multi-engine	Large
D	over 300,000 lbs	Multi-engine	Heavy

Source: FAA Advisory Circular 150/5060-5 Airport Capacity and Delay

It was assumed in this calculation that aircraft weighing over 12,500 pounds conduct nearly 100 percent of the air carrier and regional/commuter operations, nearly 90 percent of the military operations and approximately 10 percent of the general aviation operations. Although there may be some transiting aircraft from the military which could potentially weigh more than this, the occurrences would be so small (if any) that it would not significantly affect the mix index. As a result, the number of aircraft over 300,000 pounds is assumed to be zero.

Class C operations by aircraft with maximum takeoff weights from 12,500 pounds to 300,000 pounds constitute 25 percent of aircraft operations at GNV. The Beechcraft King Air, with a maximum takeoff weight of 12,500 pounds, represents the largest general aviation aircraft included in Class B. For this analysis, approximately 10 percent of the general aviation operations are assumed to represent Class C operations. Current data suggests that this class includes nearly all air carrier and regional/commuter operations, as well as 90 percent of the military operations and 10 percent of the general aviation operations at GNV.

Approximately 25 percent of the total aircraft operations at GNV are assumed to be Class C. Therefore, the mix index for GNV is calculated to be 25 percent as well (assuming limited operations over 300,000 pounds). Table 3-8 below shows the current Class C breakdown of operations.

Table 3-8
PERCENT BREAKDOWN OF CLASS C AIRCRAFT

Description	Forecast Operations	Total Operations	Percent of Class C	Percentage of Total
Air Carrier	1,684	81,056	100%	2
Commuter	8,224	81,056	100%	10
General Aviation	67,200	81,056	10%	8
Military	3,948	81,056	90%	4
			Total:	25

Source: AVCON, Inc. Analysis

It should be noted that the assumptions used in determining the mix index will vary slightly from actual operational statistics. Minor variations in these assumptions or in the mix index should

have minimal affect on the airfield capacity analysis. The FAA methodology indicates that a mix index between 21 percent and 50 percent yields the same results for airfield capacity.

3.3.1.8 Touch-and-Go Operations

For purposes of this study, the percentage of touch-and-go operations is assumed from the number of local GA and military operations. Because a fairly high percentage of local GA and military operations are for training purposes, it is assumed that 50 percent of local GA operations and 90 percent of local military operations are touch-and-go operations. These assumptions result in an overall percentage of touch-and-go operations equal to 45 percent of total operations. Although the exact percentage of touch-and-go operations may change slightly over the planning period, 45 percent touch-and-go operations is used for the capacity calculations in this analysis.

3.3.2 Airfield Capacity Estimates

Following the method outlined in FAA Advisory Circular 150/5060-5, the capacity of the airfield at GNV was determined. This capacity was based on the existing airfield with the existing navigational and approach aids. The primary measure of airfield capacity utilized in this analysis is the Annual Service Volume (ASV). The ASV is an estimate of total annual airfield capacity based on the runway layout, aircraft fleet mix, historical weather and operational characteristics of an airport. Two procedures for calculating the ASV are provided in AC 150/5060-5. Chapter 2 of AC 150/5060-5 provides a simple method for estimating airfield capacity and is generally used for long-range planning purposes. Chapter 3 of AC 150/5060-5 provides a more detailed methodology for estimating airfield capacity. Both methods are considered in the following sections.

3.3.2.1 Estimates of Annual Service Volume for Long-Range Planning

The long-range planning method for estimating the ASV was utilized to provide capacity estimates for comparison to the more detailed method outlined in Chapter 2 of AC 150/5060-5. Air Traffic Control representatives have stated that four different configurations are utilized at various times, depending on weather conditions or other factors. Therefore, an estimate was developed for each traffic flow direction. The traffic at GNV typically moves either east or west depending on prevailing wind conditions. In rare instances, traffic may flow in both directions, as previously shown in Figure 3-2.

Based on the mix index and the runway configurations utilized, estimates of the current airfield capacity at GNV range from 200,000 to 225,000 operations, as shown in Table 3-9.

Table 3-9
ANNUAL SERVICE VOLUME – LONG-RANGE PLANNING METHOD

Runway Use Configuration	% Touch & Go	Mix Index	Figure Referenced	Hourly Capacity		ASV
				VFR	IFR	
Runway 24 and 28	45%	25%	14	99	57	220,000
Runway 10 and 6	45%	25%	14	108	57	225,000
Runway 6 and 28	45%	25%	9	77	57	200,000
Runway 10 and 24	45%	25%	9	77	57	200,000

Sources: Chapter 2, FAA Advisory Circular 150/5060-5; AVCON, Inc. Analysis

3.3.2.2 Detailed Method for Estimating Annual Service Volume

To further refine the ASV estimates developed above from long-range planning methods, the detailed method from Chapter 3 of AC 150/5060-5 was applied. This detailed method utilized many of the same assumptions as the long-range planning method. Among these common assumptions were the mix index (25%), the percentage of touch-and-go operations (45%), and aircraft traffic flows.

Based on the mix index of 25 percent and an arrival percentage of 50 percent, the Hourly Capacity Base (C*) for each runway use configuration and weather condition was determined from Figures 3-6, 3-8, 3,27, 3-44, and 3-59. These figures are located in AC 150/5060-5, Chapter 3.

From these same figures, the Touch-and-Go Factor (T) was estimated for each VFR airfield configuration. For IFR operations, no touch-and-go operations were assumed and a Touch-and-Go Factor of 1.00 was assumed. In situations where the Touch-and-Go Factor is other than 1.00, it was calculated from the charts in AC 150/5060-5, Chapter 3.

For each runway, an optimal exit taxiway zone was determined based on the mix index. This optimal zone was 3,000-5,500 feet. The number of exit taxiways occurring in this exit zone was then used to determine an Exit Factor (E). Each of the runway use configurations have either two or more exit taxiways available in the optimal exit zone of interest. Consequently, most of the exit factors were one.

The hourly capacity of each runway use configuration and weather condition was then determined by multiplying the Hourly Capacity Base (C*), the Touch-and-Go Factor (T), and the Exit Factor (E). These individual capacities were next combined into a weighted airfield capacity by considering the percentage of time that each runway configuration is used and by applying an ASV Weighting Factor (Wn) from Table 3-1 of AC 150/5060-5. According to the detailed method for estimating ASV, the Weighted Hourly Capacity (Cw) of the existing airfield at GNV is approximately 97 operations per hour. Other methods of estimating airfield capacity may provide a slightly different estimate of capacity.

When Cw is multiplied by the Daily Demand Ratio and the Hour Demand Ratio, the ASV is obtained. The Daily Demand Ratio, representing the annual demand-to-average daily demand during peak month at GNV, is approximately 306. Based on the estimated peak hourly demand from the approved forecasts, the average daily demand-to-average peak hour demand during the peak month or Hourly Demand Ratio is estimated at eight.

The current ASV for the existing airfield at GNV according to the detailed method for estimating airport capacity in AC 150/5060-5 is approximately 255,000 operations per year. These values and their respective derivations are shown in Table 3-10.

Table 3-10
ANNUAL SERVICE VOLUME – DETAILED METHOD

Runway Use Configuration	Weather	Diagram #	Mix Index	Hourly Capacity Base (C*)	% Touch and Go's	Touch and Go Factor (T)	Exit Factor (E)	Hourly Capacity of Runway (Cn)	% of Occurrence (Pn)	% of Maximum	ASV Weighting Factor (Wn)	P*C*W	P*W	Weighted Hourly Capacity (Cw)	Daily Demand Ratio	Hourly Demand Ratio	ASV
Runway 28 and 24	VFR	91	24	139	45%	1	1	139	54%	1.00	1	75.06	0.54				
	IFR	91	24	57	0%	1	1	57	6%	0.41	16	54.72	0.96				
Runway 10 and 6	VFR	90	24	103	45%	1.17	1	121	34%	0.87	5	204.9	1.7				
	IFR	90	24	58	0%	1	1	57	1%	0.41	16	9.094	0.16				
Runway 6 and 28	VFR	49	24	102	45%	1.33	0.9	125	1%	0.90	25	31.2	0.25				
	IFR	49	24	58	0%	1	1	58	1%	0.42	16	9.28	0.16				
Runway 10 and 24	VFR	49	24	99	45%	1.33	0.9	121	2%	0.87	5	12.11	0.1				
	IFR	49	24	59	0%	1	1	59	1%	0.42	16	9.44	0.16				
											Sum	405.8	4.03	101	306	8	255,045

Source: AVCON, Inc. Analysis

3.3.2.3 Estimated Delay

Many diverse factors combine to create or influence the amount of delay at any given airport. These factors include airfield layout, operational policies of Air Traffic Control, airline scheduling, weather and delays at destination airports. Although the airfield layout is only one factor among many, the ASV and total annual operations can be combined to provide a rough estimate of delay. Frequently, airport planners and the FAA will use the ratio of operations to ASV as a guide for planning future runway expansion projects. Typically, when an airport reaches 60 percent of its ASV, then planning is commenced for capacity enhancements. When an airport reaches 80 percent of its ASV, then construction and permitting are typically initiated for these enhancements per FAA guidelines.

As calculated above, the current ASV for GNV is approximately 255,000 operations. During the current year 2003, GNV is projected to experience approximately 81,000 operations, equaling 32 percent of the current ASV. Although it is always prudent to plan for future capacity, the ASV analysis suggests that airfield planning of capacity enhancements may not be required within the 20-year planning period. If aircraft operations grow at the rate projected in the forecast, GNV will experience approximately 126,000 operations in 2023, equaling 49 percent of the existing ASV.

3.3.3 Capacity Enhancement Alternatives, Summary and Conclusions

With a relatively small annual operations-to-ASV ratio, aircraft delay is not expected to have a significant impact on the operations through the forecasted period. As a result, the long-range planning method in Chapter 2 of AC 150/5060-5 was used to calculate the average delay. Using the ratio of the annual operations-to-current ASV and the chart on Figure 2-2 of AC 150/5060-5, the average delay is currently estimated to be 0-15 seconds per aircraft operation and 0-45 seconds per aircraft operation in the year 2023.

Based on the methods described in AC 150/5060-5, the ASV of the existing airfield at GNV is 255,000 operations per year. The current ASV ratio is 32 percent and the projected 2023 ASV ratio is 49 percent. These figures show us that GNV is configured to meet the present and 20-year future operations at the airfield. No additional runway or taxiway enhancements are

required to meet capacity issues during the planning period. The proposed extension to runway 6/24 and the installation of an ILS for this runway will not have an appreciable effect on the calculated service volume.

Table 3-11 shows the ASV ratio at five-year intervals from 2003-2023. This table shows us that assuming the annual operations are comparable to the forecasted operations, GNV is currently configured to meet operational demands through the year 2023.

The 1987 Master Plan Update initially proposed a parallel runway, Runway 10L/28R, to accommodate projected increases in aircraft operations. It was ultimately recommended that this configuration be removed from the Airport Layout Plan sheet due to insufficient justification. The current forecast does not support the inclusion of a parallel runway at this time but this issue should be reevaluated in five to eight years during the preparation of the next master plan update.

Table 3-11
COMPARISON OF FORECAST OPERATIONS AND AIRFIELD CAPACITY

Year	Forecast Operations	Existing ASV	ASV Ratio
2003	81,056	255,045	0.32
2008	94,696	255,045	0.37
2013	106,164	255,045	0.42
2018	114,919	255,045	0.45
2023	125,992	255,045	0.49

Source: AVCON, Inc. Analysis

3.4 Design Aircraft and Airport Reference Code

The FAA refers to the Aircraft Approach Category and the Airplane Design Group of the design aircraft at an airport as an Airport Reference Code (ARC). The ARC is a coding system used to relate airport design criteria to the operational and physical characteristics of the aircraft intended to operate at an airport. The FAA's Aircraft Approach Categories and Airplane Design Groups are listed in Table 3.12. Examples of aircraft classified by the Airplane Design Group are listed in Table 3.13.

To determine airfield facility requirements, FAA planning guidelines recommend the identification of an existing and future design aircraft. The design aircraft is typically defined as the most demanding aircraft that performs or is projected to perform at least 250 annual departures (or 500 annual operations) at the facility. Some airport facilities may have an ARC for each runway if the runway is designed to accommodate various types of traffic such as an airport that may have a runway that accommodates commercial service traffic on one runway and general aviation traffic on another. The *1987 GNV Master Plan* identified the Boeing 727-200 as the design aircraft for GNV, which has a corresponding ARC of C-III. The Gates Learjet 24 was identified as the critical aircraft for Runway 6/24 which has a corresponding ARC of C-I. However, the majority of Runway 6/24 and associated development has been designed to C-II standards.

The fleet of aircraft currently operating out of GNV includes ATR-72, Dash 8 and CRJ200 series aircraft serving the scheduled service needs of the community. In addition, GNV has several Boeing 737 and 757 charter aircraft that utilize the facility on a regular basis for athletic events at the University of Florida. The air cargo operator currently operates Cessna Caravan aircraft

on a regular basis. The current general aviation fleet operating at GNV consists of families from Cessna Citation, Gates Learjet, Dassault Falcons and Grumman Gulfstream aircraft.

Table 3-12
AIRCRAFT APPROACH CATEGORY AND AIRPLANE DESIGN GROUP

Aircraft Approach Category	Approach Speed
Category A	Speed less than 91 knots
Category B	Speed 91 knots to less than 121 knots
Category C	Speed 121 knots to less than 141 knots
Category D	Speed 141 knots to less than 166 knots
Category E	Speed 166 knots or more
Airplane Design Group	**Wingspan**
Category I	Less than 49 feet
Category II	49 feet to less than 79 feet
Category III	79 feet to less than 118 feet
Category IV	118 feet to less than 171 feet
Category V	171 feet to less than 214 feet
Category VI	214 feet to less than 262 feet

Source: FAA Advisory Circular 150/5300-13

Table 3-13
AIRPLANE DESIGN GROUP AIRCRAFT

Airplane Design Group	Representative Aircraft
I	Beech Baron 58A, Cessna 150, Gates Learjet 35A, Piper Navajo, McDonnell Douglas F-18, General Dynamics F-16
II	Beech King Air C90, Canadair Regional Jet, Cessna Citation III, Gulfstream IV, Grumman F-14, Saab 340
III	Airbus A-320, Boeing 727, Boeing 737, Douglas DC-9, Fokker 100, Gulfstream V, McDonnell-Douglas MD-80
IV	Boeing 757, Boeing 767, Airbus A-300, Douglas, DC-10, Lockheed C-141, Boeing MD-17, Boeing MD-11
V	Airbus 340, Boeing 747, Boeing 777
VI	Antonow AN-124, Lockheed C-5B

Source: Jane's All The World's Aircraft

The fleet of aircraft at GNV is not anticipated to change substantially during the planning period. It is anticipated that the airlines serving GNV will continue to predominantly use regional jets and an occasional narrowbody jet, such as the Boeing 737 and MD 80 aircraft, as enplanement levels increase. The forecasts of aviation activity anticipate a higher frequency of service (i.e. more operations) as opposed to larger aircraft to meet the increasing enplanement levels. In addition, charter aircraft use at GNV is anticipated to continue to grow over time with the use of Boeing 737 and 757 aircraft as the most predominant charter aircraft. Air Cargo aircraft may slowly switch over to jet aircraft in order to consolidate the existing use of 2 to 3 daily Cessna Caravan aircraft to one larger jet aircraft within the next five to ten year planning horizon. As mentioned earlier, the ARC for Runway 10/28 is C-III. This ARC for Runway 10/28 is sufficient to accommodate the existing and future critical aircraft operating at GNV for the 20-year planning period.

One of the main objectives of this report is to analyze the possibility of relocating the threshold and extending Runway 6/24 to serve as a back up runway in the event that Runway 10/28 is unavailable due to maintenance or an incident. As a result, it is recommended that the ARC of Runway 6/24 be upgraded from C-II to C-III, which will accommodate similar aircraft as Runway 10/28 in order to meet the same design standards. After a review of existing and projected fleet

mix at GNV, it is recommended that both runways be designed to accommodate Boeing 737 aircraft and Canadair Regional Jet aircraft and the resulting ARC C-III standards. The ability of Runway 6/24 to meet these new standards will be more thoroughly analyzed in the alternative analysis chapter of this report.

In Advisory Circular (AC) 150/5300-13, the FAA has established airfield dimensional standards pertaining to runway and taxiway widths, separations and building setbacks based on the design aircraft and corresponding ARC. Table 3-14 compares the existing airfield conditions at GNV with the FAA airfield geometry standards.

Table 3-14
AIRFIELD GEOMETRY

Runway Airport Reference Code	Existing Conditions 10/28 C-III	 6/24 C-II	Future Conditions 10/28 C-III	 6/24 C-III
R/W Width	150'	100'	150'	100'*
R/W Shoulder Width	25'	10'	25'	20'
R/W Blast Pad Width	200'	120'	200'	140'
R/W Blast Pad Length	200'	150'	200'	200'
R/W Safety Area Width	500'	500'	500'	500'
R/W Safety Area Length (beyond runway end)	1,000'	1,000'	1,000'	1,000
R/W OFA Width	800'	800'	800'	800'
R/W OFA Length (beyond runway end)	1,000'	1,000'	1,000'	1,000
T/W Width	50'	35'	50'	50'
T/W Shoulder Width	20'	10'	20'	20'
T/W Safety Area Width	118'	79'	118'	118'
T/W OFA Width	186'	131'	186'	186'
T/L OFA Width	162'	115'	162'	162'
R/W Centerline to Parallel T/W Centerline	400'	300'	400'	400'
R/W Centerline to Aircraft Parking Area	500'	400'	500'	500'
T/W Centerline to Parallel T/W / T/L Centerline	152'	105'	152'	152'
T/W Centerline to Fixed or Moveable Object	93'	65.5'	93'	93'
T/L Centerline to Parallel T/L Centerline	140'	97'	140'	190'
T/L Centerline to Fixed or Moveable Object	81'	57.5'	81'	81'

R/W – Runway T/L – Taxilane
T/W – Taxiway OFA – Object Free Area
* Runway width to be 100' for runways serving aircraft less than 150,000 lbs take-off weight.
Source: FAA Advisory Circular 150/5300-13; RS&H Analysis, 2003

3.5 Runway Analysis

This section addresses specific requirements relative to the ability of the existing runways at GNV to facilitate the projected demand. At a minimum, runways must have the proper length, width, strength, and prescribed FAA and FDOT design standards to safely accommodate the design aircraft for each runway. This next section will discuss each of these areas in detail.

3.5.1 Runway Designation

A runway designation identifies a runway according to the facility's magnetic azimuth. Runway designation markings are provided on each end of a runway and are used by pilots to identify landing facilities. A runway designation consists of a number and, on parallel runways, is supplemented with a letter. The designation number represents the whole number nearest the magnetic azimuth when viewed from the direction of approach. For example, where the magnetic azimuth is 183 degrees, the runway designation would be 18, and for a magnetic azimuth of 87 degrees, the runway designation would be 9.

The magnetic azimuth is determined by correcting the 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. At GNV the current magnetic declination is 4.2 degrees west or 4 degrees 12 minutes west. Since the magnetic declination is westerly, the magnetic azimuths associated with the runways at GNV are determined by adding the declination value to the true bearing values.

Runway 10/28 serves as the primary air carrier runway at GNV. The true bearing of Runway 10 is 102 degrees 15 minutes 58 seconds, while the true bearing of Runway 28 is 282 degrees 16 minutes 40 seconds. Applying the magnetic declination value of 4 degrees 12 minutes west, the magnetic azimuth of Runway 10 was determined to be 106 degrees 27 minutes 5 seconds and the magnetic azimuth of Runway 28 was determined to be 286 degrees 28 minutes 40 seconds. As a result of the analysis, Runway 10/28 should be designated as Runway 11/29.

Runway 6/24 serves as the primary runway for serving GA aircraft at GNV. The true bearing of Runway 6 is 61 degrees 1 minute 32 seconds, while the true bearing of Runway 24 is 241 degrees 1 minute 53 seconds. Applying the magnetic declination value of 4 degrees 12 minutes west, the magnetic azimuth of Runway 6 was determined to be 65 degrees 13 minutes 32 seconds and the magnetic azimuth of Runway 24 was determined to be 245 degrees 13 minutes 53 seconds. As a result of this analysis, Runway 6/24 should be designated as Runway 7/25.

The analysis conducted to determine the designations of runways located at GNV was predicated on information obtained from the National Oceanic and Atmospheric Administration (NOAA) and the GNV Airport Layout Plan (ALP) Update completed in 1999. The true bearing information for Runway 10/28 was obtained from actual survey data while the true bearing for Runway 6/24 was obtained from the previous ALP sheet. Before modifying the existing runway designations, it is recommended that a more recent survey be accomplished for Runway 6/24 to confirm the true bearing of that runway.

For ease of readership of this master plan document, the existing runway designations will continue to be used for the remainder of this document to minimize confusion.

3.5.2 Runway Wind Coverage

The prevailing winds generally determine runway orientation and the need for a crosswind runway. FAA planning standards state that a runway system should provide a minimum of 95 percent of wind coverage. If a single runway direction cannot provide this level of coverage, then an additional crosswind runway(s) may be needed.

A runway wind coverage analysis was conducted using the FAA's Airport Design Microcomputer Program Version 4.2D with data supplied by National Climatic Data Center for the weather reporting station at Gainesville for the period of 1991-2002. Runway windroses were developed for Instrument Flight Rules (IFR) and All-Weather conditions and were presented previously in the Inventory chapter of this report.

As shown, the existing primary runway (Runway 10/28) provides 95 percent or more wind coverage for all crosswind components during All-Weather and IFR conditions. The crosswind runway (Runway 6/24) also provides 95 percent or better wind coverage during all weather and IFR wind conditions. The combined runway system at GNV provides more than 95 percent wind coverage for all crosswind components during All-Weather and IFR conditions. Therefore, the current runway configuration at GNV is adequate with respect to providing sufficient wind coverage, and no additional crosswind runways are needed.

Wind coverage by an individual runway end was evaluated to determine which runway end offers the greatest wind coverage. The importance of analyzing wind coverage relative to individual runway ends is that the evaluation provides the airport with information which is helpful in making a decision regarding the placement of future NAVAIDs or the implementation of an additional instrument approach. Results of the individual runway end analysis are presented in Table 3-15.

Table 3-15
WIND COVERAGE FOR INDIVIDUAL RUNWAY ENDS

Runway	13 kt. Crosswind Component	
	All-Weather Conditions	IFR Conditions
6	81.51%	83.88%
24	80.31%	75.89%
10	79.68%	83.61%
28	82.16%	84.14%

Source: NOAA

3.5.3 Runway Length Requirements

Runway length planning analysis was conducted to determine recommended runway length requirements for various categories of aircraft, as well as for specific aircraft. The physical layout of GNV and the operating requirements of the design (or critical) aircraft typically dictate runway length requirements. The FAA's Airport Design Microcomputer Program was used as an initial screening tool to determine general runway length requirements for GNV. The results of this runway length analysis are listed in Table 3-16.

As shown, the existing runway system at GNV can generally accommodate 100 percent of small airplanes, 75 percent of large airplanes less than 60,000 pounds at 90 percent useful load and large airplanes (greater than 60,000 pounds) with a stage length up to 1,000 miles.

Table 3-16
AIRCRAFT RUNWAY LENGTH REQUIREMENTS

Aircraft Category	Recommended Runway Length
Small airplanes (Less than 12,500 lbs.)	
100% of fleet (Less than 10 seats)	3,680 feet
Small airplanes (Less than 12,500 lbs.)	
100% of fleet (10 or more seats)	4,280 feet
Large airplanes (Between 12,501 lbs.-60,000 lbs.)	
75% of fleet @ 60% Useful Load	5,370 feet
75% of fleet @ 90% Useful Load	7,000 feet
100% of fleet @ 60% Useful Load	5,630 feet
100% of fleet @ 90% Useful Load	8,520 feet
Large Airplanes (Greater than 60,000 lbs.)	
500 Mile Stage Length	5,050 feet
1,000 Mile Stage Length	6,000 feet
2,000 Mile Stage Length	7,660 feet
3,000 Mile Stage Length	9,030 feet
Specific Aircraft	
Bombardier Aerospace (Canadair)	
Bombardier CRJ 200 Series	5,010 feet
Bombardier CRJ 200 Series (ER)	5,800 feet
Bombardier CRJ 200 Series (LR)	6,290 feet
Bombardier CRJ 700 Series	5,130 feet
Bombardier CRJ 700 Series (ER)	5,500 feet
Bombardier CRJ 900 Series	6,160 feet
Bombardier CRJ 900 Series (ER)	6,462 feet

Continued next page…

Aircraft Category	Recommended Runway Length
Embraer	
ERJ 135 ER	5,052 feet
ERJ 135 LR	5,577 feet
ERJ 140 ER	5,643 feet
ERJ 140 LR	6,463 feet
ERJ 145 ER	5,839 feet
ERJ 145 LR	7,447 feet
ERJ 145 XR	6,975 feet
ERJ 170 LR	5,541 feet
ERJ 170 STD	5,134 feet
ERJ 175 LR	6,365 feet
ERJ 175 STD	5,676 feet
ERJ 190 LR	6,194 feet
ERJ 190 STD	5,384 feet
ERJ 195 LR	6,814 feet
ERJ 195 STD	6,070 feet
Airbus	
A318	4,800 feet
A319-100	5,900 feet
A320-200	6,300 feet
Boeing	
717-200	5,750 feet
727-100	10,000 feet
737-300	6,660 feet
737-400	7,730 feet
737-500	6,130 feet
737-600	5,900 feet
737-700	5,500 feet
737-800	7,350 feet
757-300	8,650 feet

Source: FAA Airport Design Microcomputer Program AD 4.2D; Aircraft Manufacturer's Airport Planning Manuals; RS&H Analysis, 2003

Additional analyses were conducted to identify runway length requirements for the existing and future design aircraft at GNV utilizing specific aircraft performance data in lieu of the general FAA aircraft performance curves. Runway length requirements were determined for both existing air carrier aircraft operating at GNV, as well as the likely next generation of air carrier aircraft that is expected to regularly operate at GNV. Specific aircraft manufacturer's airport planning manuals were utilized to calculate aircraft takeoff runway length requirements for the Embarer and Canadair Regional Jet Aircraft, the Boeing and Airbus family of aircraft that either currently or potentially could operate at GNV. The results of these analyses are also listed in Table 3-16.

As shown in Table 3-16, required runway lengths range from 4,800 feet for the Airbus 318 to 10,000 for the Boeing 727-100. More specifically, the existing design aircraft (MD-83) requires a runway length between 6,600 feet and 8,600 feet on a "hot" day. The ultimate design aircraft (Boeing 757-300) requires a runway length between 6,900 feet and 8,700 feet on a "hot" day. For planning purposes, it is recommended to show on the Airport Layout Plan an ultimate (outside the 20-year planning period) runway length of approximately 9,000 feet to protect this area from future encroachment in the event that larger, more demanding aircraft begin to utilize GNV in the future, which will require this additional runway length. This additional runway length would dictate a 1,500-foot extension to the East as the West end of Runway 10/28 is prohibited from future expansion by the location of Waldo Road.

FAA AC 150/5325-4A, Runway Length Requirements for Airport Design recommends that the crosswind runway length should be at least 80 percent of the primary runway length. A typical crosswind runway serves as a backup runway in the event of an emergency, or when the

primary runway is closed due to maintenance. Runway 6/24 is the current crosswind runway and, because of its length, serves general aviation aircraft only. Runway 6/24 also has noise abatement procedures that were addressed during the previous FAR Part 150 Noise Study. As discussed earlier in the goals and objectives of this master plan update, one of the primary focuses is the evaluation of a possible extension to Runway 6/24. During the recently completed analysis of reconstructing Runway 10/28, the potential use of Runway 6/24 was evaluated to accommodate commercial aircraft traffic. This analysis highlighted the lack of runway flexibility at GNV to accommodate commercial aircraft traffic during times of rehabilitation or incidents that would close the primary runway. According to FAA guidelines, the crosswind runway should be at least 80 percent of the primary runway or in the case of Runway 6/24, 6,000 feet. Discussion with the current regional jet operator at the GNV indicated that 6,500 feet would be the preferred runway length given the current equipment being operated at GNV. While 6,500 feet is slightly greater than the 80 percent threshold listed by the FAA, the greater runway length will supply the GNV with the necessary operational flexibility to accommodate the existing and projected fleet mix at GNV. It is recommended that the runway extension be implemented during the first phase of the planning period. The alternative analysis will evaluate several alternatives for accommodating the recommended runway length of 6,500 feet and will also briefly determine the ultimate runway length for Runway 6/24 given the existing site constraints. In addition, similar to the ultimate configuration of Runway 10/28, an ultimate length of 7,200 feet should be planned for Runway 6/24. Table 3-17 presents the recommended runway lengths by phase for the planning period.

Table 3-17
FACILITY REQUIREMENTS: RUNWAY LENGTH

	Existing	2008	2013	2023	Ultimate
Runway 10/28	7,501'	7,501'	7,501'	7,501'	9,000'
Runway 6/24	4,158'	6,500'	6,500'	6,500'	7,200'

Source: RS&H Analysis, 2003

3.5.4 Runway Navigational Aids

NAVAIDS and landing aids are generally grouped into airport facility equipment that helps pilots locate the airport, provide horizontal guidance information for a non-precision approach, provide horizontal and vertical guidance information for a precision instrument approach, or provide visual cues to assist pilots in locating the airport and making final landing corrections.

Both runways at GNV offer various precision and/or non-precision approaches that allow the runway to be used during periods of inclement weather. Runway 10/28, the primary runway offers an ILS, RNAV (GPS), VOR and NDB for Runway 28 and RNAV (GPS) and VOR/DME for Runway 10. Runway 6/24, the crosswind runway, offers RNAV (GPS) and VOR approaches to Runway 24 and RNAV (GPS) and VOR/DME approaches to Runway 6.

Several users have suggested the evaluation of a second ILS approach to Runway 10 to allow greater runway usage flexibility. It appears that the current threshold location of Runway 10 will allow the installation of a second ILS and this approach is recommended during Phase 2 of the planning period.

Additional instrument approaches are recommended for Runway 6/24. The passenger service and air cargo aircraft which could potentially utilize Runway 6/24 typically desire the reliability and additional safety that an ILS precision approach offers for all-weather usage. Individual runway end wind coverage was analyzed for the end with the highest wind coverage which suggest that Runway 6 has slightly higher wind coverage (81.51 percent versus 80.31 percent,

during all-weather conditions, and 83.88 percent versus 75.89 percent during IFR conditions). The installation of the ILS is initially recommended for Runway 6 but will be evaluated on either end as part of the alternatives chapter.

Table 3-18
NAVAID FACILITY REQUIREMENTS

	Existing	2008	2013	2023
Runway 10				
Instrument Approach	Non-Precision	Non-Precision	Precision	Precision
Approach Type	RNAV (GPS), VOR/DME	RNAV (GPS), VOR/DME	RNAV (GPS), VOR/DME, ILS	RNAV (GPS), VOR/DME, ILS
Approach Slope	34:1	34:1	50:1	50:1
Runway 28				
Instrument Approach	Precision	Precision	Precision	Precision
Approach Type	RNAV (GPS), VOR, NDB, ILS	RNAV (GPS), VOR, NDB, ILS	RNAV (GPS), VOR, NDB, ILS	RNAV (GPS), VOR, NDB, ILS
Approach Slope	50:1	50:1	50:1	50:1
Runway 6				
Instrument Approach	Non-Precision	Precision	Precision	Precision
Approach Type	RNAV (GPS), VOR	RNAV (GPS), VOR, ILS*	RNAV (GPS), VOR, ILS*	RNAV (GPS), VOR, ILS*
Approach Slope	34:1	50:1	50:1	50:1
Runway 24				
Instrument Approach	Non-Precision	Non-Precision	Non-Precision	Non-Precision
Approach Type	RNAV (GPS),VOR	RNAV (GPS),VOR	RNAV (GPS),VOR	RNAV (GPS),VOR
Approach Slope	34:1	34:1	34:1	34:1

* ILS installation is shown for Runway 6 but will be evaluated for either end.
Source: RS&H Analysis, 2003

3.5.5 Runway Visual Aids

Runway visual aids include runway lighting, approach lighting systems and visual approach aids.

Runway 10/28 is currently equipped with high intensity runway lights (HIRLs). The HIRLs are in good condition and should be rehabilitated during Phase 2 of the planning period. In addition, centerline runway lights should be considered during the next rehabilitation of Runway 10/28 to possibly reduce visibility minimums and enhance safety during periods of ground fog which occurs frequently during the winter months. Runway 6/24 is currently equipped with medium intensity runway lights (MIRLs) and these should be upgraded to HIRLs in preparation for the ILS to be installed for Runway 6/24. Existing lights and cabling are in need of replacement. The lights and cabling are in fair to poor condition and do not meet FAA design standards in some areas.

To provide visual descent guidance to general aviation aircraft, Runway 10 is equipped with a visual approach slope indicator system (VASI) which is in good but weathered condition. It is recommended that the VASI be replaced with a precision approach path indicator (PAPI) during Phase 1 of the planning period. Runway 6 and 24 are both equipped with PAPIs. The PAPIs are out of service and obsolete for Runway 6 and are in poor condition for Runway 24. PAPIs for both runway ends should be replaced during Phase 1 of the planning period.

Runway 28 is equipped with a medium intensity approach lighting system (MALSR) which extends 2,400 feet into the approach area. If an ILS is installed for either Runway 10 and/or 24, it is recommended that a MALSR also be installed at the same time to allow better visibility during periods of inclement weather. In addition, a MALSR would also be required for Runway 10 if an ILS were installed. The installation of a MALSR for Runway 6 and/or Runway 10 will

require the MALSR to extend over Waldo Road which may require special design considerations.

The FAA recommends that all airports install a system of runway/taxiway guidance signs in accordance with the standards found in FAA AC 150/5340-18C, Standards For Airport Signage Systems. Guidance signs include mandatory instruction holding position signs for runway/runway intersections, runway/taxiway intersections, ILS Critical Areas, and Runway Approach Areas. Additional taxiway guidance signs include runway/taxiway location, runway exit and taxiway direction, inbound/outbound destination, and information signage. Airports installing the components of the taxiway guidance sign system outlined in this Advisory Circular would then be in compliance with the airport certification requirements of FAR Part 139. This Advisory Circular also indicates that runway distance remaining signage should be installed on all runways used by turbojet aircraft. All airport signage must be updated when the designations for Runway 10/28 and 6/24 are changed.

3.5.6 Airfield Pavement Conditions

The condition of pavement associated with the runways, taxiways and aprons located at GNV were evaluated to determine the future need for rehabilitation or reconstruction. The existing conditions of the airside-paved surfaces and recommendations for maintaining these surfaces are presented in Table 3-19.

Table 3-19
PAVEMENT CONDITION AND REHABILITATION RECOMMENDATIONS

Pavement Surface	Composition	Existing Condition	2008	2013	2023
Runway 10/28	Asphalt (grooved)	Fair*	Yearly Maintenance	Yearly Maintenance	Rehabilitate
Runway 6/24	Asphalt (grooved)	Fair	Rehabilitate & Extend	Yearly Maintenance	Rehabilitate

* To be rehabilitated in the Spring of 2004.
Source: RS&H Analysis, 2003

Runway 10/28 is GNV's primary runway and measures 7,501 feet in length and 150 feet in width. Located at the approach end of Runway 28 is a blast pad, which measures 200 feet in length and 150 feet in width. A blast pad measuring 200 feet in length and 150 feet in width is also available at the approach end of Runway 10. Runway 10/28 is composed of asphalt, grooved and presently in fair condition. Runway 10/28 provides estimated pavement strength of 75,000 pounds Single-Wheel Gear (SWG), 260,000 pounds Dual-Wheel Gear (DWG) and 320,000 pounds Dual-Tandem Gear (DTG). Current and projected operations associated with Runway 10/28 indicate the existing pavement strength is adequate for meeting GNV's needs throughout the planning period.

In the spring of 2004 Runway 10/28 will undergo rehabilitation. The rehabilitation project will include milling and removal of the existing asphalt followed by the application of new asphalt pavement. After completing the rehabilitation project associated with Runway 10/28, yearly maintenance should prevent the need for another overall rehabilitation until approximately 2023.

Runway 6/24 at GNV is the secondary runway and measures 4,158 feet in length and 100 feet in width. Runway 6/24 is composed of asphalt, is grooved and in fair condition. Blast pads composed of asphalt are located at each end of Runway 6/24. The blast pad located at the approach end of Runway 6 measures 150 feet in width and 431 feet in length, while the blast pad at the approach end of Runway 24 measures 150 feet in width and 451 feet in length.

Pavement strength of Runway 6/24 is 75,000 pounds SWG, 150,000 pounds DWG, 210,000-pound DTG, which is adequate for existing and projected operations.

Within the first phase of the planning period (prior to 2008), it is anticipated that Runway 6/24 will be extended to approximately 6,500 feet. As part of the extension project the entire length of Runway 6/24 will undergo rehabilitation, which will include milling and replacement of the existing pavement with asphalt. After completing the extension and rehabilitation project, the condition of Runway 6/24 should remain adequate for facilitating projected operations throughout the remainder of the planning period, and should not require rehabilitation or reconstruction until approximately 2023.

3.5.7 Runway Protection Zones

For the protection of people and property on the ground, the FAA has identified an area of land off each runway end as the Runway Protection Zone (RPZ). This area was formerly known as the Clear Zone. For paved runways, the trapezoidal-shaped RPZ is centered on the extended runway centerline starting 200 feet from the paved runway end. The RPZ varies in width and length based on runway instrument approach classification. An airport through property deeds and/or avigation easements should control the land located within the RPZ. The runway's aircraft approach category and the lowest visibility minimums associated with the instrument approaches provided by the respective runway dictate the dimensions of the RPZ associated with a runway. Dimensions of the existing and projected runway RPZs located at GNV are presented in Table 3-20.

The existing and projected ARC of Runway 10/28 is C-III. The lowest approach visibility minimum associated with Runway 10 is one mile, which is provided by a Very-High Frequency Omni Directional Range/Distance Measuring Equipment (VOR/DME) approach. Therefore, the existing RPZ provided for Runway 10 measures 1,700 feet in length, while the inner width measures 500 feet and the outer width measures 1,010 feet. The location of the approach end of Runway 10 requires that the respective RPZ extend west beyond Waldo Road. Since GNV owns the property positioned on both the east and west sides of Waldo Road. GNV maintains control of all activity underlying the Runway 10 RPZ with the exception of the Waldo Road Right-of-Way. An ILS for Runway 10 is recommended during Phase 2 of the planning period which will increase the size of the RPZ.

Runway 28 at GNV is equipped with an Instrument Landing System (ILS) approach, which provides a visibility minimum of one-half mile. The precision approach also requires a much larger RPZ.

Table 3-20
EXISTING AND PROJECTED RPZ DIMENSIONS

	Existing	2008	2013	2023
Runway 10				
Length	1,700'	1,700'	2,500'	2,500'
Inner Width	500'	500'	1,000'	1,000'
Outer Width	1,010'	1,010'	1,750'	1,750'
Runway 28				
Length	2,500'	2,500'	2,500'	2,500'
Inner Width	1,000'	1,000'	1,000'	1,000'
Outer Width	1,750'	1,750'	1,750'	1,750'
Runway 6				
Length	1,700'	*2,500'	2,500'	2,500'
Inner Width	500'	1,000'	1,000'	1,000'
Outer Width	1,010'	1,750'	1,750'	1,750'
Runway 24				
Length	1,700'	1,700'	1,700'	1,700'
Inner Width	500'	500'	500'	500'
Outer Width	1,010'	1,010'	1,010'	1,010'

* ILS installation is shown for Runway 6 but will be evaluated for either end.
Source: FAA Advisory Circular 150/5300-13; RS&H Analysis, 2003

Runway 6 and 24 both offer non-precision instrument approaches. It is recommended that an ILS be installed for the approach to Runway 6 as part of the Runway Extension Project. However, both ends of Runway 6/24 will be evaluated for the suitability of the potential installation of an ILS.

3.5.8 Runway Safety Area

A Runway Safety Area (RSA) is an area centered on the runway centerline and is designed to enhance the safety of aircraft that undershoot, overrun or veer off the runway. The RSA should also support and provide greater accessibility for firefighting and rescue equipment during aircraft accidents and incidents. The design of the RSA must conform to the following:

- Cleared and graded, and have no potentially hazardous ruts, humps, depressions or other surface variations;
- Drained by grading or storm sewers to prevent water accumulation;
- Capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damages to the aircraft; and
- Be free of objects, except for objects that need to be located in the RSA because of their function.

It is expected that the drainage ditch between Runway 10/28 and Taxiway E will be enclosed during Phase 1 of the planning period. The design is currently underway and it is expected that the project will be completed by 2005. Once this project is complete, GNV will comply with FAA design standards. Table 3-21 provides the Runway Safety Area requirements.

3.5.9 Runway Object Free Areas

The Runway Object Free Area (OFA) is an area on the ground centered on the runway centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for aircraft navigation or ground maneuvering purposes. The Runway OFA is a two-dimensional surface comprising both the

Runway OFA and the Precision Object Free Area (POFA). It is expected that the drainage ditch between Runway 10/28 and Taxiway E will be enclosed shortly. GNV will comply with runway object free criteria. Table 3-21 provides the Runway OFA requirements through the end of the planning period for each runway at GNV.

Table 3-21
RUNWAY SAFETY AND OBJECT FREE AREA STANDARDS

Runway Airport Reference Code	Existing Conditions 10/28 C-III	Existing Conditions 6/24 C-II	Future Conditions 10/28 C-III	Future Conditions 6/24 C-III
R/W Safety Area Width	500'	500'	500'	500'
R/W Safety Area Length (beyond runway end)	1,000'	1,000'	1,000'	1,000
R/W OFA Width	800'	800'	800'	800'
R/W OFA Length (beyond runway end)	1,000'	1,000'	1,000'	1,000

Source: FAA Advisory Circular 150/5300-13; RS&H Analysis, 2003

3.6 Taxiway Analysis

This section addresses specific requirements relative to the ability of the existing taxiways at GNV to facilitate the projected demand. At a minimum, taxiways must provide efficient circulation, and must have the proper width, strength and prescribed FAA and FDOT design standards to safely accommodate the design aircraft for each system. This next section will discuss each of these areas in detail.

3.6.1 Taxiway Design Standards

GNV has two full-length parallel taxiways (A and E) which are 50 feet and 75 feet in width respectively, as well as a system of connector taxiways to provide access to and from the runways and the various aircraft parking aprons. According to FAA AC 150/5300-13, Airport Design, the standard taxiway width for Group III aircraft is 50 feet. The current 50- and 75-foot widths for the taxiways at GNV meet the design standards for Group III aircraft. A portion of Taxiway A from the west GA apron to T-hangar Buildings I and J is 35 feet wide and should be increased to 50 feet as part of the Runway Extension Project. Therefore, the current width of these taxiways will be sufficient to meet future demand. Taxiways A and E have a centerline-to-centerline runway separation of 525 feet and 400 feet, respectively. Taxiway A exceeds the standard for Group III aircraft and will actually accommodate up to Group V aircraft. The alternative analysis chapter will evaluate the possibility of relocating Taxiway A closer to Runway 6/24 to allow for additional development.

3.6.2 Taxiway Pavements

Taxiway A is a full-length parallel taxiway primarily used by GA aircraft to access Runway 6/24. Taxiway A measures 50 feet in width heading eastward past the intersection with Taxiway B. At the next intersection to the south (an unused asphalt pavement that connects to the extended Runway 6/24 pavement beyond the Runway 24 threshold) Taxiway A narrows to a width of 40 feet. From there, Taxiway A runs along the GA Apron until it reaches the eastern edge of the apron. At that point, Taxiway A narrows to 35 feet as it leads to the T-hangar area to the east.

Condition of the pavement associated with Taxiway A is fair. However, the Airport Facilities Directory indicates “irregular pavement strengths” along Taxiway A, requiring aircraft over 12,500 pounds to coordinate with the FBO to receive parking instructions. Presently the western portion of Taxiway A provides pavement strength similar to Runway 6/24. However, irregular weight bearing capacities begin at the Taxiway A/Taxiway C intersection and continue northeast

for the remaining length of Taxiway A. Beyond the first intersection northeast of the Taxiway C and Taxiway A intersection, aircraft operations on Taxiway A are limited to 12,500 pounds.

During the extension and rehabilitation project associated with Runway 6/24, it is recommended that Taxiway A be widened and that weight bearing capacity modifications are made. The width of Taxiway A ranges from 50 feet in some areas to 35 feet in other areas, and it is recommended that the width of Taxiway A be increased to 50 feet to provide a consistent width throughout the entire length of the taxiway. Additionally, a formal pavement evaluation of Taxiway A is recommended to determine the actual weight bearing capacity and if the overall strength should match Runway 6/24. Pavement rehabilitation of Taxiway A is recommended in conjunction with the Runway 6/24 extension.

Taxiways B and C are provided at GNV to facilitate the movement of aircraft between Runway 10/28 and the GA apron, and the movement of aircraft between Runway 6/24 and the air carrier apron. Taxiway B extends from the approximate midpoint of Runway 10/28 to the threshold associated with the approach end of Runway 24. From the Runway 24 threshold Taxiway B continues across Taxiway A to the GA area, located on the northeast side of the airfield. Taxiway B measures 50 feet in width and is composed of asphalt. The pavement associated with Taxiway B is in fair to poor condition. It is recommended that Taxiway B undergo rehabilitation in the first phase of the planning period or prior to 2008. After completing rehabilitation, the condition of Taxiway B should be adequate for facilitating aircraft operations until the latter years of the planning period.

Taxiway C measures 50 feet in width with paved shoulders. Pavement associated with Taxiway C is in fair to poor condition. Taxiway C begins at Runway 10/28 west of Taxiway B and extends to the approximate midpoint of Runway 6/24. From the approximate midpoint of Runway 6/24 Taxiway C continues until intersecting with Taxiway A where access to the east GA apron may be gained. It is recommended Taxiway C undergo rehabilitation. Assuming rehabilitation of Taxiway B is completed in the initial phase of the planning period, rehabilitation of Taxiway C can be postponed until the second phase of the planning period. Rehabilitation of Taxiway C should include removal of the existing pavement followed by a reapplication of asphalt 50 feet in width. After completing rehabilitation, the condition of Taxiway C should remain adequate for facilitating aircraft operations beyond the final phase of the planning period.

Taxiway E, which measures 75 feet in width, serves as the primary avenue used by air carrier aircraft to access the passenger terminal apron and Runway 10/28. Taxiway E is composed of asphalt and in good condition. Yearly maintenance of Taxiway E should prevent the need for rehabilitation until Phase 2 of the planning period. Table 3-22 presents a summary of taxiway improvements for the planning period.

Table 3-22
TAXIWAY PAVEMENT CONDITION AND REHABILITATION RECOMMENDATIONS

Pavement Surface	Composition	Existing Condition	2008	2013	2023
Taxiway A system	Asphalt	Fair	Improvements	Yearly Maintenance	Rehabilitate
Taxiway B system	Asphalt	Poor	Rehabilitate	Yearly Maintenance	Rehabilitate
Taxiway C system	Asphalt	Poor	Yearly Maintenance	Rehabilitate	Yearly Maintenance
Taxiway E system	Asphalt	Good	Yearly Maintenance	Rehabilitate	Yearly Maintenance

Source: RS&H Analysis, 2003

3.6.3 Taxiway Exits

Exit taxiways provide a means of entering and exiting the runway system. Exit taxiways should permit free flow to the parallel taxiway when the aircraft is clear of the runway. Runway 10/28 currently has four exit taxiways available to Taxiway E. Runway 6/24 currently has two exit taxiways available to Taxiway A. An additional taxiway exit is recommended to allow those aircraft utilizing Taxiway C to access Taxiway E without taxiing on an active runway to access the commercial service terminal area. Additional taxiway exits are also recommended as part of the extension to Runway 6/24.

3.6.4 Taxiway Fillets

The existing taxiway fillets were evaluated according to the standards listed in FAA AC 150/5300-13 for proper taxiway fillet criteria and it appears that all taxiway fillets meet standards.

3.6.5 Taxiway Hold Aprons/Bypass Taxiways

Air traffic control personnel occasionally encounter bottlenecks when moving aircraft ready for departure to the desired takeoff runway. Bottlenecks occur when a preceding aircraft is not ready for takeoff due to IFR departure clearances and similar circumstances, and blocks the access taxiway. The FAA recommends that taxiway hold aprons and bypass taxiways be constructed when the runway operations reach a level of 30 operations per hour. GNV currently meets this requirement and a hold apron or bypass taxiway is recommended for each runway end to improve the efficiency of aircraft circulation. Bypass taxiways/hold aprons are recommended for Taxiway A as part of the extension project and during Phase 2 for Taxiway E as part of the rehabilitation project.

3.6.6 Taxiway Lighting and Visual Aids

All taxiways at GNV are equipped with Medium Intensity Taxiway Lights (MITLs). The taxiway lighting conditions range from excellent to poor. The following recommendations are made in regards to rehabilitating the existing lighting system.

It is recommended that the MITLs for Taxiway A be rehabilitated during Phase 1 of the planning period. It is also recommended that Taxiway B MITLs be rehabilitated during Phase 2 of the planning period.

The existing taxiway signage is in poor to fair condition. However, it is recommended that all sign faces be replaced due to the changing of the runway designation for both Runways 10/28 and 6/24. Many of the existing signs are no longer in production and should be replaced.

3.7 Air Carrier Terminal Area Requirements

Passenger terminal facilities at GNV include the main terminal building, air carrier ramp apron and surface parking lots. This section will address the existing and future space requirements for each of these three primary areas.

3.7.1 Air Carrier Terminal Building

A conceptual terminal study is currently underway and will evaluate specific space needs for GNV. The terminal building facility requirements, which are presented in Table 3-23, outline general planning space requirements that are calculated from the projected future activity levels. This section will be updated at the conclusion of the terminal conceptual space requirements phase of that project.

Table 3-23
AIR CARRIER TERMINAL FACILITY REQUIREMENTS

	2003/Existing	2008	2013	2023
Annual Enplanements	139,159	177,606	205,894	250,983
Annual Passengers	278,318	355,212	411,788	501,966
Total Peak Hour Passengers	195	249	288	351
SF/Total Peak Hour Passengers	250	250	250	250
Total Terminal Area (SF)	51,746	40,011	47,691	52,041
Number of Gates	3	5	7	7
Ramp Apron (SY)	85,000	125,000	135,000	165,000
Ticket Center Length (LF)	72	91	106	129
Baggage Claim Length (LF)	65	83	96	117
Curb Front	108	137	159	194

Source: RS&H Analysis, 2003

3.7.2 Air Carrier Terminal Apron

The existing air carrier terminal apron is approximately 30,800 square yards and is comprised of both concrete and asphalt pavement sections. The 17,600-square-yard section of concrete is in fair to good condition although some stormwater drainage inlets and surrounding panels are in need of rehabilitation and the 13,200-square-yard asphalt section is in fair to poor condition. There is a 25-foot by 50-foot section of apron that is unusable for aircraft operations due to a failed storm sewer inlet as mentioned earlier. There are no passenger loading bridges at GNV and the aircraft use a power-in/power-out taxiing operation. There are currently two airlines that serve GNV and three aircraft parking positions appear to be adequate for existing conditions. In addition, charter aircraft utilize the air carrier terminal ramp. Table 3-24 presents a summary of apron improvements for the planning period.

Table 3-24
AIR CARRIER APRON PAVEMENT CONDITION AND REHABILITATION RECOMMENDATIONS

Pavement Surface	Composition	Existing Condition	2008	2013	2023
Air Carrier Apron	Concrete/Asphalt	Fair/Poor	Rehabilitate (partial)	Rehabilitate (partial)	Yearly Maintenance

Source: RS&H Analysis, 2003

GNV has expressed a desire to investigate the installation of passenger loading bridges as part of the upcoming terminal design. The installation of passenger loading bridges will ultimately change the configuration of the apron, as the aircraft will most likely use a power-in/push-out operation versus the current power-in/power-out operation. Apron design criteria calls for a recommended clearance of 25 feet from the nose of the aircraft to the face of the building. Clearance between wingtips of aircraft or other fixed or immovable objects is 0.1 times the wingspan of the aircraft. Other design criteria that must be investigated include taxilane object free area criteria and FAR Part 77 criteria to ensure the tail of the parked aircraft does not violate airspace surfaces.

Discussions are underway with three additional airlines that could potentially serve the Gainesville market in the future. In addition, charter aircraft such as the University of Florida athletics department uses the air carrier terminal building on a regular basis. It is recommended

that the apron be initially configured to accommodate a minimum of three passenger-loading bridges with the ability to accommodate future expansion of two additional bridges. An ultimate configuration should anticipate a total of eight passenger-loading bridges to protect this area for future expansion. The bridges should be either designed to accommodate both regional jet/commuter aircraft and narrow body aircraft, or allowances should be made to have both types of bridges available. The exact preferred configuration will be determined as part of the terminal study.

In addition, portions of the air carrier apron should be rehabilitated during Phase 1 of the planning period along with replacement of the storm sewer system adjacent to the apron. During the design of the apron rehabilitation project, consideration should be given to replacing all asphalt sections of the apron with concrete due to its longer life cycle and suitability for parked aircraft.

3.7.3 Auto Parking

Immediate access to GNV is provided via a one-way "return loop" roadway system and is accessed from NE 39th Avenue. GNV is in the process of receiving funding to construct a new primary access road to the passenger terminal from Waldo Road. Once this road is constructed, the existing road will become a secondary entrance. The construction of the new access roadway system will require the reconfiguration of the "return loop" road around the auto parking areas and may require the relocation of several of the access and exit roads and ticket dispensers. Taxicab stands are provided to the east of the "return loop" road that allows taxicabs to queue in this area while waiting for passengers. An employee parking area is also located to the east of the "return loop" road. Rental car ready/return spaces are located west of the terminal building with a total of 84 spaces. The existing passenger terminal auto parking lot consists of 665 parking spaces which is divided into 134 short-term and 531 long-term spaces.

Discussions with airport management staff and a review of historical auto parking usage indicated that the existing parking lot is currently adequately sized, reaching capacity during peak Thanksgiving and Christmas holiday travel periods. With additional growth in enplanements being forecasted during the planning period and the potential to attract several new airlines to the Gainesville market in the short term, it is recommended that additional auto parking spaces be considered during all three phases of the planning period. In addition, the ratio between short-term and long-term parking, currently 20 percent short-term and 80 percent long-term, should be adjusted to include a greater percentage of short-term parking. This adjustment is due to the possibility of attracting additional business travelers who currently use other facilities but may begin to utilize GNV once additional airlines begin service. It is recommended that short-term/long-term percentages be closer to 25 percent/75 percent by the end of the planning period. This may require some additional analysis prior to implementation of the project to ensue the proper number of spaces and allocations are being made. Another factor that may increase the number of auto parking spaces required are charter operations. Currently passengers utilizing charter aircraft do not park in the revenue lot, but utilize a turf area west of the "return loop" road. Future expansion plans for GNV may use this area for airport development, thus requiring charter passengers to utilize the revenue lots. This would also increase the number of auto spaces required. Assuming the current number of auto parking spaces is adequate for the current level of enplanements, a ratio of one parking space for every 209 annual enplanements was established. It is assumed that this number should increase to one space for every 200 annual enplanements to accommodate the charter aircraft passengers. Using this ratio, Table 3-25 presents the required number of parking spaces for the planning period. Plans should be made to construct each specific level of auto parking

spaces when the identified enplanement level is reached versus a specific year. In addition, both parking tollbooths should be renovated during Phase 1 of the planning period. Allowances should also be made to include a third exit lane that would allow the self-payment of parking receipts using a credit card. Consideration should also be given to the construction of covered parking spaces. Many car owners may be willing to pay a premium rate for sheltered parking to minimize exposure of their vehicle to the elements. This can be implemented during any phase of the planning period.

Allowances should also be made to expand the rental car ready/return lots to accommodate the growth in enplanements. A consolidated rental car facility is being planned during the initial phase of the planning period near the terminal facility. The ready/return parking spaces are estimated for the planning period and should be confirmed with each operator prior to implementation.

The taxicab stand will require additional parking spaces throughout the planning period along with a small shelter/restroom facility which could be used by the taxicab operators. This facility should be screened as much as possible from the "return loop" roadway system.

Table 3-25
AUTO PARKING REQUIREMENTS

Item	Existing	2003	2008	2013	2023
Short-Term	134	134	222	257	314
Long-Term	531	531	666	772	941
Total	**665**	**665**	**888**	**1,029**	**1,255**
(Deficiencies)	(0)	(0)	(223)	(364)	(590)
Ready/Return	84	84	110	125	150

Source: RS&H Analysis, 2003

3.8 Aviation Support Facilities

This section discusses the facility needs of several aviation support facilities such the Airport Rescue and Firefighting requirements and the airport fuel farm.

3.8.1 Airport Rescue and Firefighting Facilities

Airports that serve scheduled and unscheduled air carrier flights are required to provide firefighting facilities and equipment. The existing Aircraft Rescue and Firefighting Facility (ARFF) is located along Runway 6/24 within the general aviation area and is operated and staffed by the City of Gainesville (City) fire and rescue department. For FAR Part 139 certified airports, ARFF equipment requirements are identified by an airport's "Index" ranking (A, B, C, D or E). This Index is determined by the length of the largest air carrier aircraft operating at the airport and the average number of daily departures conducted by this aircraft.

Table 3-26 lists the minimum ARFF equipment requirements for FAA certified airports. GNV is currently listed as an ARFF Index A but has the necessary equipment to be classified as an ARFF Index B facility. It has been estimated that GNV may reach ARFF Index B during Phase 2 of the planning horizon. The index should be increased to an Index B when five or more aircraft with an overall length of between 90 feet and 126 feet are regularly scheduled. The current ARFF equipment is in fair to good condition. It is recommended that the primary ARFF vehicle be replaced during Phase 1 of the planning period since the vehicle is over ten years old and the existing ARFF vehicle can remain as the secondary back up response unit. The ARFF

building is in fair to good condition, and renovation, maintenance and rehabilitation should be anticipated during Phase 2 of the planning period.

Table 3-26
FAR PART 139 ARFF EQUIPMENT REQUIREMENTS

Airport Index	Number of Vehicles	Aircraft Length	Scheduled Departures	Agent and Water Foam Requirements
A	1	Less than 90 ft	1 or more	500 lbs DC/HALON 1211 or 450 lbs DC and 100 g water
B	1	Equal or greater than 90 ft and less than 126 ft	5 or more	Index A equipment and 1,500 g water
	2	Equal or greater than 126 ft or less than 159 ft	Less than 5	Index A equipment and 1,500 g water
C	2	Equal or greater than 126 ft or less than 159 ft	5 or more	Index A and 3,000 g water
	3	Equal or greater than 159 ft and less than 200 ft	Less than 5	Index A and 3,000 g water
D	3	Equal or greater than 159 ft and less than 200 ft	5 or more	Index A and 4,000 g water
		Greater than 200 ft	Less than 5	Index A and 4,000 g water
E	3	Equal or greater than 200 ft	5 or more	Index A equipment and 6,000 g water

DC – Dry Chemicals
g – gallons
Source: FAR Part 139

3.8.2 Fuel Farm

The main aviation fuel farm at GNV is located near the northeastern perimeter of the airfield along NE 49th Street. GNV owns the fueling facility and charges University Air Center (UAC) and other fuel owners a storage fee. The majority of the fuel is trucked from Jacksonville with approximately five to six deliveries per week.

The fuel farm consists of three 15,000-gallon Jet A tanks, one 15,000-gallon Avgas tank, two 600-gallon Mogas (auto gas) tank and two 600-gallon diesel fuel tanks. Planning for the storage of fuel requires not only future operational demand but also fuel settling requirements, how fuel is transported to GNV, the reliability of the fuel supply both nationally and internationally, and major changes in aircraft types, increased stage lengths or new operators at GNV. Historical fuel amounts delivered to GNV is shown in Table 3-27.

Table 3-27
AVIATION FUEL DELIVERED BY FLIGHTLINE AVIATION (1989-2001)

Year	Jet A (Gal.)		Avgas (Gal.)	Total (Gal.)
	Air Carrier	GA and Military		
1989	1,992,537	516,318	288,584	2,797,439
1990	1,571,996	567,629	303,949	2,443,574
1991	1,201,974	516,630	289,703	2,005,307
1992	992,853	450.532	280,331	1,723,716
1993	690,910	445,942	248,442	1,385,294
1994	908,109	395,809	233,383	1,537,301
1995	1,014,107	417,213	220,118	1,651,438
1996	1,235,089	343,580	185,710	1,764,379
1997	1,424,821	344,728	202,414	1,971,963
1998	1,256,651	418,898	201,987	1,877,536
1999	1,026,110	474,816	248,652	1,749,578
2000	1,189,040	454,954	241,300	1,885,294
2001	1,405,585	448,873	240,604	2,096,063
2001	1,255,212	513,426	227,463	1,996,101

Source: Airport Records

Typical planning guidelines for fuel storage units recommend a two- to seven-day storage capacity depending on the factors listed above. It is recommended that the fuel storage capacity for Gainesville be between five to seven days and no less than two to three days at any given time. Given a seven-day storage capacity at the current fuel flowage volumes, a total of 5,000 gallons of storage capacity of 100LL and 36,000 gallons of Jet A is required. The current

storage capacity meets this requirement. Assuming the rate of fuel sales mirror the projected growth of aviation activity, an additional 15,000-gallon Jet A tank is required during Phase 2 of the planning period.

It is recommended that a second fueling area be installed in conjunction with the consolidated rental car maintenance facility to refuel rental cars. When this facility is constructed, the MOGAS tank that is being installed in the fuel farm may be relocated to this area to be closer to the ramp equipment.

3.8.3 Air Traffic Control Tower

The existing GNV Air Traffic Control Tower (ATCT) was constructed in the late 1960s and is located south of Runway 10/28 approximately 1,500 feet to the east of the air carrier terminal building. The ATCT has a cab height of 164 feet MSL and total height of 203 MSL, which includes the antenna towers on the roof. The ATCT facilities have exceeded their useful life and do not meet current Americans with Disabilities Act accessibility requirements. The elevation of the cab floor, which is approximately 164 feet MSL, presents significant line-of-sight issues for current operations and future airport development. Current line-of-sight deficiencies exist for viewing the north side of the field, which is blocked by the VORTAC building located in the midfield area. As a result, a small portion of Runway 6/24 and Taxiway A is blocked from view from the ATCT by the VORTAC building. In addition, approximately 1,000 feet of the northeastern portion of Taxiway A near the T-hangars is also restricted from view. The proposed extension to Runway 6/24 may also have some line of sight issues, which must be addressed. The alternatives chapter will evaluate several options to solve this line of sight issue.

3.8.4 Airport Maintenance Building

The operation and maintenance of airport facilities often requires the storage and sheltering of equipment for the efficient operation of an Airport. GNV does not currently have an appropriate airport maintenance building available for airport maintenance staff. This badly needed facility is programmed during the initial phase of the planning period.

Each airport is unique in their overall needs for an airport maintenance building, with those airports within the snowbelt requiring slightly larger facilities to shelter more equipment out of the weather. Discussions with Airport management staff indicate a need to have, at a minimum, a building large enough to accommodate one vehicle bay for maintenance, a small office, room for small airport maintenance equipment such as mowers and ATVs, and a workshop for terminal and building maintenance repair and equipment.

It is recommended, that for planning purposes, a building site to accommodate a 6,000- to 8,000-square-foot building and parking for 20 vehicles be reserved on the Airport Layout Plan. The actual location for this facility will be evaluated during the alternative analysis.

3.8.5 Consolidated Rental Car Maintenance Facility

A consolidated rental car maintenance facility is recommended during Phase 1 of the planning horizon. The current rental car maintenance facility located at GNV is owned solely by National rental car and is currently closed. The Airport Authority has expressed a desire to construct and operate the facility with a usage fee imposed to each airport rental car company. Many airports are currently constructing and operating similar facilities which helps minimize environmental

impacts due to several individual units being constructed versus one joint unit and consolidation of this operation into one location. The facility should be designed to accommodate either one or two manual/automated wash bays and two or three service islands which offer fueling and vacuuming/air fixtures. The building should contain at least one bay per rental car company for auto detailing, a break room, restrooms and the necessary electrical and mechanical rooms. The fueling stations would also be owned and operated by GNV. Due to the climate at GNV, the building could be left primarily open due to the lack of snow and freezing weather conditions. For planning purposes, it is assumed that each rental car company should be allocated approximately 25 auto parking spaces for a total of 125 spaces. For planning purposes, a building of approximately 9,000 square feet and auto parking spaces for 125 cars should be reserved on the ALP with room for future expansion as necessary. The building should be located adjacent to the commercial service terminal but should be somewhat screened and hidden from view by arriving and departing passengers if possible.

3.8.6 Aircraft Wash Rack

Environmental and water quality standards established by the Federal Water Pollution Control Act require companies and municipalities to control discharges into surface and subsurface waters. Additionally, federal regulations established for the National Pollutant Discharge Elimination System (NPDES) Storm Water Permit Program require local governments to develop programs to prevent pollutants from entering municipal storm sewer systems. Primary impacts potentially associated with aircraft washing include the discharge of solvents, detergents and petroleum products in the local storm sewer system.

To maintain compliance with state and federal water quality standards, GNV has plans to design and construct an environmentally appropriate aircraft wash rack. Construction of the wash rack is expected in 2004 or 2005.

3.9 Air Cargo Facilities

Intermodal transportation facilities, such as airports, interface with one or more other transportation modes. With its prime aviation component and proximity to surface transportation corridors, GNV can become a significant intermodal transportation center with the development of airfield, air cargo and ground access facilities.

Air cargo facility needs vary among individual air cargo operators. Some air cargo carriers are ramp intensive requiring only an apron area for parking of aircraft and trucks, storage of loading/unloading equipment, and for the processing of packages and shipments. Office space for this type of operation is typically provided by an adjacent portable trailer. Other air cargo operators require apron space as well as a flightline warehouse/storage building with truck and aircraft docks, additional paved areas for the maneuvering of trailer trucks and parking for delivery trucks.

The current air cargo area at GNV is located within the general aviation area with sufficient apron area to accommodate up to three Cessna Caravans during peak periods. The air cargo is sorted off-site and trucked to and from GNV.

Air cargo operations at GNV currently include Cessna Caravan aircraft which requires approximately 500 square yards of parking apron per aircraft. The operator currently uses up to three Cessna Caravans during peak periods. It is anticipated that as demand grows, air cargo currently carried on three Cessna Caravans could be consolidated into a larger, narrow-body jet

aircraft such as a Boeing 727, which is the mainstay of the carrier's fleet of aircraft, or an AF-27. A narrow-body aircraft of this type requires approximately 1,500 square yards of parking apron. It is also likely that as air cargo demand from the region grows, another operator may approach GNV to serve the community. For planning purposes, the air cargo ramp should be sufficient to accommodate three Cessna Caravan aircraft and two narrow-body jets. Construction should be phased throughout the 20-year planning period with the initial apron layout sized to accommodate two Cessna Caravans and one narrow-body jet.

A 1995 Airports Council International-North America (ACI-NA) survey of 75 domestic airports indicated an average warehouse utilization rate of 1.5 square feet for each annual ton of air cargo processed. These airports ranged between 1.0 to 2.6 square feet of air cargo space for each annual ton of air cargo handled. A higher than average utilization rate for space allocation was used to determine air cargo building space requirements at GNV due to the modest amount of air cargo currently being processed. The allocation can also vary depending on the amount of off-airport storage space used by each tenant. The ACI-NA survey recommended planning factors of 0.6 truck docks and one employee parking space per 1,000 square feet of cargo building space to determine required air cargo facility components. Both of these factors were adjusted upward for this analysis.

The alternative analysis section of this report will evaluate several potential new locations to accommodate air cargo operations. It is important during this analysis to evaluate potential new sites for good airside access, truck access and future expansion potential. The footprint generated by this section will be used in the alternative analysis, but it is important to realize that prior to design, a more detailed analysis should be undertaken allowing the actual user to provide input on specific needs for their operation. Table 3-28 lists the projected air cargo facility requirements.

Table 3-28
FACILITY REQUIREMENTS: AIR CARGO

	Existing	2005	2010	2020
Building Space (SF)	N/A	3,000	5,000	10,000
Apron Space (SY)	1,500	5,000	7,500	10,000
Truck Docks	12	15	20	25
Employee Parking	N/A	28	45	70

Source: RS&H Analysis, 2003

3.10 General Aviation Facilities

The General Aviation (GA) area associated with GNV is located on the northwest side of the airfield and is accessed from Waldo Road, which extends northeast and southwest along the northwestern perimeter of the Airport. The GA area encompasses approximately 65 acres or 4 percent of the total 1,870 acres encompassing GNV. GA areas at GNV consist of airside and landside facilities that include the Fixed Base Operator (FBO), hangar facilities, aircraft apron, aircraft tiedown, GA terminal building and ancillary facilities. Generally, services provided by the FBO should occur within the operator's leased premises, including employee and customer parking. With the exception of corporate hangars, GNV owns all structures and facilities associated with GA activity at the Airport. The remainder of this section discusses in detail the specific general aviation facilities provided at GNV, and presents future requirements to meet forecasted demand.

3.10.1 Aircraft Aprons and Tiedowns

The existing apron facilities at GNV consist of various areas for parking, tiedown, circulation and general aircraft movement to and from parking and storage hangars. Two general aviation aprons are available at GNV for the purpose of serving GA aircraft. The primary apron (south GA apron) serves based and transient aircraft, and is located immediately adjacent to Taxiway A and southeast of the GA terminal building. Approximately 25 transient GA aircraft utilize the east GA apron daily and on average approximately seven transient aircraft remain overnight. The south GA apron is accessed using Taxiway A and Taxiway C. The area of this apron measures approximately 40,000 square yards and is in excellent condition. Approximately 31,500 square yards of the apron is composed of asphalt and was recently rehabilitated. The remaining 8,500 square yards is composed of concrete. Included within this area are 44 tiedowns (anchor type and marked) and three helicopter parking positions. For transient purposes, the apron can accommodate an additional 15 to 18 corporate aircraft. Preventative maintenance and continued upkeep of the pavement associated with the south GA apron should prolong the need for rehabilitation until the end of the planning period.

The secondary apron (north GA apron) is utilized by a variety of tenants and is positioned immediately adjacent to Taxiway A. This apron, which is used primarily by based aircraft, is in good condition, composed of a seal-coated asphalt pavement and encompasses an area of approximately 30,000 square yards. This apron provides 41 tiedowns and two helicopter parking positions, in addition to parking space for aircraft associated with the maintenance facility and charter service. Preventative maintenance and continued upkeep of the pavement associated with the north GA apron should prolong the need for rehabilitation until Phase 2 of the planning period. Table 3-29 presents a summary of apron improvements for the planning period

Table 3-29
GA APRON PAVEMENT CONDITION AND REHABILITATION RECOMMENDATIONS

Pavement Surface	Composition	Existing Condition	2008	2013	2023
South GA Apron	Concrete/Asphalt	Excellent	Yearly Maintenance	Yearly Maintenance	Rehabilitate
North GA Apron	Asphalt	Good	Yearly Maintenance	Rehabilitate	Yearly Maintenance

Source: RS&H Analysis, 2003

3.10.2 Transient Apron Parking Requirements

Areas designated for the parking of transient aircraft accommodate aircraft not based at the airport. In order to develop projections for the amount of apron space required to accommodate itinerant parking demand through the end of the planning period, GA aircraft fleet mix (by size of aircraft), daily aircraft parking demand and space planning considerations must be analyzed.

Analysis conducted to determine parking requirements for itinerant aircraft assumed the ratio of single-engine aircraft, multi-engine aircraft, turbojet aircraft and helicopters making up the itinerant fleet mix would remain consistent with the based aircraft fleet mix. Based on the 20-year forecasts for aircraft activity, the itinerant GA aircraft fleet mix was estimated to be 75 percent single-engine, 18 percent multi-engine, 4 percent turbojet and 3 percent helicopters. By year 2008, 53,032 itinerant general aviation operations are projected, with 59,177 itinerant operations by year 2013, and 69,915 by 2023. Daily parking demand is calculated by spreading the annual demand evenly throughout the year and applying a peaking factor to determine daily demand. After establishing the daily demand for itinerant parking, planning allocations based on aircraft size must be applied to the demand to determine overall space requirements. Planning allocations for itinerant aircraft parking space assumes 400 square yards for single-engine aircraft, 600 square yards for multi-engine aircraft, 800 square yards for turbojet aircraft and 890

square yards for helicopters. The analysis also assumed a maximum of 50 percent of the total daily itinerant aircraft would be on the apron at any given time. Table 3-30 represents the forecasted GA itinerant apron requirements through the year 2023.

In order to accommodate the current demand for itinerant parking, 19,490 square yards of apron or a total of 42 aircraft parking spaces including helicopter pads are required. Although the existing helicopter parking facilities will meet GNV's needs throughout the planning period, space to accommodate an additional 23 to 26 transient fixed-wing aircraft is needed to facilitate existing demand. By year 2008, 47 fixed-wing aircraft parking spaces or 18,600 square yards of apron will be needed to accommodate the projected itinerant demand. In year 2013, 52 fixed-wing aircraft parking spaces or 21,400 square yards of apron will be needed. By the end of the planning period, a total of 62 fixed-wing aircraft parking spaces or 28,000 square yards of apron will be needed to meet the need for transient aircraft.

Table 3-30
TRANSIENT AIRCRAFT APRON PARKING DEMAND (2003-2023)

Planning Period	Design Day Itinerant Operations	Itinerant Aircraft On Apron At One Time	Aircraft Type	Aircraft Parking Spaces	Area (sy)
Existing (2003)	167	42	Fixed-Wing		
			Single-Engine	32	12,800
			Multi-Engine	7	4,200
			Turbojet	2	1,600
			Total Fixed-Wing	41	18,600
			Rotor Wing		
			Helicopter	1	890
			Total Rotor Wing	1	890
			Total Space	**42**	**19,490**
2008	194	49	Fixed-Wing		
			Single-Engine	36	14,400
			Multi-Engine	9	5,400
			Turbojet	2	1,600
			Total Fixed-Wing	47	21,400
			Rotor Wing		
			Helicopter	2	1,780
			Total Rotor Wing	2	1,780
			Total Space	**49**	**23,180**
2013	217	54	Fixed-Wing		
			Single-Engine	40	16,000
			Multi-Engine	10	6,000
			Turbojet	2	1,600
			Total Fixed-Wing	52	23,600
			Rotor Wing		
			Helicopter	2	1,780
			Total Rotor Wing	2	1,780
			Total Space	**54**	**25,380**
2023	256	64	Fixed-Wing		
			Single-Engine	48	19,200
			Multi-Engine	12	7,200
			Turbojet	2	1,600
			Total Fixed-Wing	62	28,000
			Rotor Wing		
			Helicopter	2	1,780
			Total Rotor Wing	2	1,780
			Total Space	**64**	**29,780**

Source: RS&H Analysis, 2003

3.10.3 Based Aircraft Parking Apron/Tiedown Requirements

Based aircraft parking is planned to ensure adequate tiedown space for those aircraft not requiring hangar storage or the unavailiability of hangar spaces. Presently the GA facilities at GNV provide a total of 85 tiedowns, which include 44 tiedowns on the East GA apron and 41 tiedowns on the West GA apron. Total area encompassing the tiedown area is approximately 55,300 square yards. Aircraft currently occupying tiedown positions at GNV include 13 single-engine aircraft and two multi-engine aircraft.

The sizing for tiedown positions varies according to aircraft size, and includes space for taxilanes, circulation and fueling. The required space per based aircraft is similar to the itinerant aircraft formula.

Analysis conducted to determine tiedown space for based aircraft at GNV is presented in Table 3-31. The analysis assumed the projected mix of aircraft throughout the planning period would remain consistent with the mix of aircraft currently occupying the tiedowns. By applying these standard planning criteria to the based aircraft forecast, approximately 7,200 square yards of apron or a total of 17 tiedown spaces will be required for parking by based aircraft in year 2008. In year 2013, approximately 8,600 square yards of apron or 20 tiedown spaces will be required for based aircraft. In year 2023, approximately 10,200 square yards of apron or 24 tiedown spaces will be required for based aircraft.

Table 3-31
BASED GA AIRCRAFT TIEDOWN/PARKING APRON REQUIREMENTS (2003-2023)

Planning Period	Total Based Aircraft	Based Aircraft Requiring Tiedown	Aircraft Type	Number of Aircraft	Area (sy)
Existing (2003)	140	15	Single-Engine	13	5,200
			Multi-Engine	2	1,200
			Total Tiedown Space	15	6,400
2008	162	17	Single-Engine	15	6,000
			Multi-Engine	2	1,200
			Total Tiedown Space	17	7,200
2013	178	20	Single-Engine	17	6,800
			Multi-Engine	3	1,800
			Total Tiedown Space	20	8,600
2023	206	24	Single-Engine	21	8,400
			Multi-Engine	3	1,800
			Total Tiedown Space	24	10,200

Source: RS&H Analysis, 2003

The existing facilities at GNV provide approximately 55,300 square yards of apron space for based and transient aircraft parking, which includes 85 tiedowns. A summary of transient and based aircraft tiedowns is included in Table 3-32 along with the associated surplus or deficit of apron tiedowns and area. The existing aircraft parking apron and tiedown space currently provided is more than adequate to meet GNV's needs until the end of the planning period.

Table 3-32
AIRCRAFT APRON DEMAND SUMMARY (2003-2023)

Planning Period	Transient Tiedown Required (Apron Space)	Based Tiedowns Required (Apron Space)	Total	Existing Tiedowns (Apron Space)	Surplus/Deficit Tiedowns (Apron Space)
Existing (2003)	42	15	57	85	<28>
	(19,490 sq yds)	(6,400 sq yds)	(25,890 sq yds)	(55,300 sq yds)	<29,410 sq yds>
2008	49	17	66	85	<19>
	(23,180 sq yds)	(7,200 sq yds)	(30,380 sq yds)	(55,300 sq yds)	<24,920 sq yds>
2013	54	20	74	85	<11>
	(25,380 sq yds)	(8,600 sq yds)	(33,980 sq yds)	(55,300 sq yds)	<21,320 sq yds>
2023	64	24	88	85	<3>
	(29,780 sq yds)	(10,200 sq yds)	(39,980 sq yds)	(55,300 sq yds)	<15,320 sq yds>

Source: RS&H Analysis, 2003

3.10.4 Aircraft Hangars

Approximately 89 percent of all based aircraft at GNV are stored in covered facilities, which include six conventional/multi-use hangars and 91 single-unit aircraft storage facilities consisting of 59 T-hangars, 18 port-a-port hangars and 14 sunshades. While conventional hangars are primarily used to store corporate aircraft, T-hangars, sunshades and port-a-port type hangars are primarily used to provide covered storage for single-engine and light twin-engine aircraft. Aircraft storage facilities available for lease or rental in the GA area are owned and maintained by GNV with the exception of the corporate hangars, which are privately owned. Presently there is a waiting list consisting of approximately 12 aircraft owners waiting for an existing single-unit storage facility to become vacant or completion of a newly constructed single-unit storage development. Table 3-33 presents a listing of aircraft storage hangars at the GNV.

Table 3-33
AIRCRAFT HANGAR SUMMARY

Type	Tenant	Use	Ownership	Size	Condition
Conventional	University Air Center	Storage	GACRAA	12,000 sq. ft.	Excellent
Conventional	Aeroflight	Maintenance	GACRAA	12,000 sq. ft.	Fair
Conventional[1]	University Air Center	Maintenance	GACRAA	10,000 sq. ft.	Good
Conventional	University Air Center	Storage	GACRAA	8,500 sq. ft.	Good
Conventional	Joint Aviation Unit	Storage	GACRAA	8,500 sq. ft.	Fair
Conventional	Ali Air	Storage	Private	12,000 sq. ft.	Excellent
Conventional	Ken Air	Storage	Private	12,000 sq. ft.	Excellent
Conventional	University of Florida	Storage	Private	12,000 sq. ft.	Excellent
T-hangar	Building A	Storage	GACRAA	10 units	Good
T-hangar	Building D	Storage	GACRAA	17 units	Good
T-hangar	Building F	Storage	GACRAA	10 units	Good
T-hangar	Building I	Storage	GACRAA	11 units	Excellent
T-hangar	Building J	Storage	GACRAA	11 units	Excellent
Sunshades		Storage	GACRAA	14 units	Good
Port-A-Ports[2]		Storage	GACRAA	18 units	Fair

[1] Includes lobby and flight instruction space.
[2] Port-A-Ports are in two separate locations, comprising eight total units. Seven units owned, six – GACRAA, one privately owned.
GACRAA – Gainesville Alachua County Regional Airport Authority
Source: Airports Records; RS&H Analysis, 2003

Of the six conventional/multi-use hangars dedicated to aircraft storage at GNV, UAC leases two, which provide 12,000 square feet and 8,500 square feet of storage space respectively. In addition to these two hangars, UAC leases a third conventional hangar, which is used as an aircraft maintenance facility. Within the next 18 months UAC is planning to construct an additional 12,000-square-foot conventional hangar to be used for additional aircraft storage. Aeroflight occupies a 12,000-square-foot World War II style hangar that is used for aircraft maintenance. The Joint Aviation Unit (JAU) has a 8,500-square-foot hangar for the City and

Alachua County aviation police personnel with three rotorcraft that are used for search and rescue and law enforcement activities. The University of Florida, Ken Air and Ali Air each own 12,000-square-foot conventional hangars to accommodate their respective corporate flight departments. Table 3-34 presents a breakdown of the covered aircraft storage facilities provided at GNV.

Single-unit aircraft storage facilities including T-hangars, port-a-ports and sunshades currently accommodate approximately 65 percent of all based aircraft at GNV, and conventional/multi-use hangars accommodate approximately 24 percent of all based aircraft. To determine the number of projected covered storage facilities, consideration must be given to the current demand for single-unit aircraft storage facilities not being accommodated, which is represented by the waiting list of 12-aircraft owners awaiting facility availability. Taking into consideration the existing surplus in demand, 68 percent of all based aircraft at GNV will require a single unit aircraft storage facility, while the ratio of based aircraft requiring storage in a conventional/multi-use hangar is projected to remain constant at 24 percent. By maintaining these percentages to determine future hangar requirements, 19 additional single-unit aircraft storage facilities and conventional/multi-use hangar spaces to accommodate an additional five aircraft will be required by 2008. By year 2013, a total of 121 single-unit aircraft storage facilities and space to accommodate 43 aircraft in conventional/multi-use hangars will be required. By year 2023, a total of 140 single-unit aircraft storage facilities and space to accommodate 49 aircraft in conventional/multi use hangars will be required. Table 3-34 below illustrates a summary of the requirements for covered aircraft storage facilities at GNV throughout the planning period.

Table 3-34
PROJECTED COVERED AIRCRAFT STORAGE FACILITIES REQUIREMENTS

Planning Period	Total Based Aircraft	Based Aircraft Requiring Covered Storage	Based Aircraft Requiring Single-Unit Storage Facility	Based Aircraft Requiring Conventional/Multi-Use Storage Facility
Existing (2003)	140	125	91	34
2008	162	144	110	39
2013	178	158	121	43
2023	206	183	140	49

Source: RS&H Analysis, 2003

To meet the demand for single-unit storage facilities identified for existing and 2008 conditions at GNV, initiation of the planning, design and construction of 20 T-hangars are recommended to begin in the near future. Additionally, consideration should be given to the design and construction of a few oversized T-hangars which can accommodate a cabin class light twin aircraft. These larger T-hangars would allow greater flexibility with regard to aircraft size. Also, the cost of constructing larger T-hangars as compared to standard size T-hangars is incremental compared to larger rent amounts generated by these larger units. It is recommended that 20 additional T-hangars be constructed during Phase 1, ten T-hangars for Phase 2 and 20 more T-hangars for Phase 3 of the planning period.

To meet the demand for conventional/multi-use hangar space for 2008, UAC is presently in the design process of a 12,000-square-foot hangar. Construction projections indicate the facility will be completed within the following 18 months.

Of the construction elements associated with aircraft hangars, fire protection and suppression devices serve as one of the more expensive items to address. All future hangars should be constructed in accordance with the NFPA 409 specifications outlined for Group III Type II aircraft hangars.

It is assumed that two aircraft will occupy each 10,000-square-foot hangar. Three 100-foot by 100-foot conventional hangar locations should be reserved for Phase 1, two additional units for Phase 2 and three more units for Phase 3 of the planning period as depicted in Table 3-35.

Table 3-35
PROJECTED COVERED AIRCRAFT STORAGE FACILITIES

GA Element	Planning Period			
	Existing (2003)	2008	2013	2023
Single-Unit Storage	91	110	121	140
Conventional/Multi-Use Storage Spaces	34	39	43	49
Conventional/Multi-Use Storage Hangars*	8	11	13	16

* Assumes two aircraft per hangar.
Source: RS&H Analysis, 2003

3.11 Non-Aviation Support and Miscellaneous Recommendations

3.11.1 Rifle Range

GNV has been approached by North Central Florida Sportsman Association to establish and construct a gun firing range at the former police academy site. This site is outside any planned expansion within the 20-year planning horizon and it is recommended that GNV extend a lease for this property. Plans and specifications should be coordinated with the FAA prior to construction.

3.11.2 Archery Range

The Gator Bowmen currently lease a site on airport property for archery target practice. This lease has been extended and will expire on March 31, 2004. The current tenant is planning to vacate this parcel for a new location owned by the City.

3.11.3 Former Police Academy Driving Range

This site is currently used by various driving clubs as well as the Gainesville Regional Transit Authority for driver training classes. It is recommended that a long-term lease be investigated to maximize the potential revenue from this site.

3.11.4 Cell Tower

Many airports in Florida have located cell tower farms on airport property for additional revenue for the airport. Considerations for locating a cell tower farm include: the height of the tower to ensure that the proposed tower does not penetrate FAR Part 77 surfaces, locating in such a manner as to not impede future expansion potential of the airport and local zoning, and land use restrictions governing cell tower uses. Many cell towers can be as high as 150 feet, which can conflict with FAR Part 77 surfaces around the airport.

3.11.5 Commercial/Industrial Development

GNV currently has approximately 285 acres of property that has been formally released by the FAA for industrial and commercial development. The majority of the land has been sold in fee simple title and the proceeds have been used for airport development. The industrial park is approximately 50 percent occupied and should be sufficient for the planning period.

3.11.6 Hotel/Business Park Development

Alachua County currently owns the Fairground property between GNV and N.E. 39th Avenue. The County is considering relocation of the fairground property to a new location and redevelopment of this parcel for a business and office park as shown in Figure 3-3. In addition to this development, GNV has expressed a desire to develop their property along the new access road from Waldo Road to the terminal complex with a possible hotel complex and a small concentration of office and business uses. It is recommended that GNV continue to explore development of this area with sensitivity to architectural and land use since this will be the primary gateway to GNV.

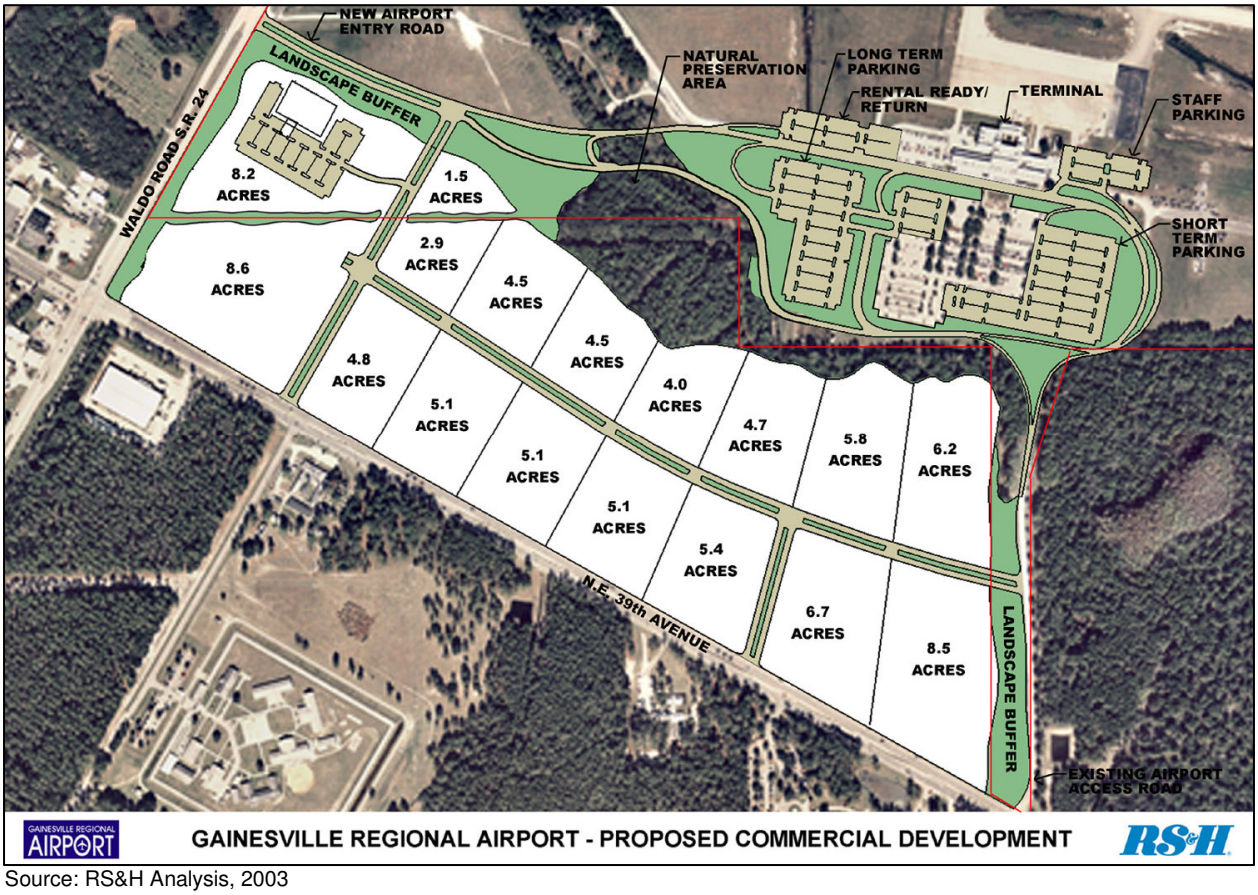
3.11.7 Stormwater Management

The stormwater management systems are permitted and regulated by the St. Johns River Water Management District (SJRWMD). Subsequent development at GNV has been handled through separate water detention/retention basins rather than a consolidated facility designed to accommodate future expansion. In addition, many of the drainage structures at GNV are in average to poor condition due to the age and obsolete construction techniques. It is recommended that GNV prepare a stormwater master plan that conducts a detailed analysis of the existing infrastructure, prepare an implementation strategy to enhance the existing drainage infrastructure and evaluate the possibility of creating a regional pond system to collect future stormwater. In addition, an updated stormwater master plan will greatly assist the permitting process by establishing locations of collective ponds and the overall stormwater management for GNV.

3.11.8 SWPPP and SPCC Plans

GNV provides services to both public and private sectors. GNV and its tenants perform services which have the potential to pollute the environment both at the Airport and downstream. GNV and its tenants are required to conform to State of Florida and Federal environmental rules and regulations to prevent any potential pollution from occurring.

Figure 3-3
AIRPORT BUSINESS PARK DEVELOPMENT



Source: RS&H Analysis, 2003

GNV currently has a NPDES permit that must be updated and expanded to include all airport-related activities, as well as tenant activities that have the potential to pollute the environment. A NPDES permit must be obtained for all construction projects that exceed the threshold established by the U.S. Environmental Protection Agency (EPA). GNV also has an NPDES Stormwater Pollution Prevention Plan (SWPPP), which identifies all of the potential sources of pollution and the best management practices that will prevent any of the potential sources from violating any of the state or federal environmental laws. In addition, GNV has a Spill Prevention Control and Countermeasure (SPCC) plan for all petroleum storage facilities. These plans should cover GNV, the Fixed Base Operator (FBO) and the all rental car companies that have on-site petroleum storage facilities.

The documents described above have been prepared for GNV but are in need of updating to reflect current regulations and an updated tenant list. Since the majority of the information required for the update of these plans are typically done during a stormwater master plan, it is recommended that the SWPPP and SPCC plans be updated and coordinated with the appropriate agencies during the preparation of the stormwater master plan.

3.11.9 Environmental Mitigation

Environmental mitigation is an important consideration for any future airport expansion and development project. GNV is currently working on a project to relocate an existing conservation easement that was proposed between Runways 10/28 and 6/24, and to move the conservation

easement to Airport-owned land East of Runway 10/28. This parcel, called the Gum Root Swamp, was purchased approximately eight to ten years ago and is well suited for environmental mitigation versus the current mitigation site which could be impacted by future development. The 350-acre site will be partially used for the conservation easement transfer and other future mitigation activities. It is recommended that GNV investigate additional adjacent land to the Gum Root Swamp that could be purchased and used for future mitigation activities for upcoming development projects.

3.11.10 Security Concerns

Airport security has become much greater since the terrorist attacks of September 11, 2001. Airport security as it relates to the commercial service terminal building will be discussed in a terminal study being prepared concurrently with this master plan update. A blast analysis is also being conducted concurrently, which will evaluate the terminal building in regard to the 300-foot perimeter blast rule established by the FAA after September 11, 2001. This blast analysis will determine how close the auto parking spots can be to the terminal building. The TSA also has provided no formal direction for security improvements and enhancements for either general aviation or air cargo, but is currently discussing both areas with airports and users. Future modifications should be anticipated but are unknown at this time.

3.11.11 Fencing

There is currently fencing around the perimeter of GNV with numerous access control gates. The fencing has three strands of barbed wire for additional security and needs to be replaced in several sections. The fiber optic cable that was installed in 1994 from the T-hangars to the security office needs to be replaced, as well as having security cameras installed at the T-hangar site. Components to the general aviation access control system will require replacement during the short-term planning horizon. Contemplation of the new FAA fencing design specification should be installed in future fencing projects.

3.11.12 Part 150 Study

A FAR Part 150 Noise Compatibility Study was prepared and completed for the GNV in 1986. The study prepared noise contours for the current year (1985) and fifth year (1990) to determine land use compatibility measures. On June 6, 1982, an informal noise abatement procedure was established by FAA Order GNV 7110.4A. This order described Runway 10/28 as the preferential runway for all multi-engine and jet aircraft. In addition, it is recommended that multi-engine and jet aircraft not use Runway 6/24 unless operations dictate this usage.

The Report recommended GNV pursue additional land acquisition along the southern East-West boundary to ensure land use compatibility.

It is recommended that a Part 150 update be completed to update GNV's land use compatibility program with the selected new runway configuration and operational levels. This update will help ensure land use compatibility and provide additional funding level support for noise compatibility programs that include land acquisition through the FAA for airports with approved Part 150 programs.

3.11.13 Local Comprehensive Plans

The Local Comprehensive Plan for both the City and Alachua County address the Airport and land use compatibility around GNV. The information contained in both documents is slightly outdated and should be updated as part of the Master Planning process. GNV is currently working with both municipalities to update this important element and ensure land use compatibility around the airport.

3.12 Airport Access

GNV access is currently from N.E. 39th Avenue to the commercial service terminal complex. This roadway system is currently two lanes but sufficient land was acquired to expand this entryway into a four-lane divided roadway system if needed. As discussed earlier, the Gainesville Metropolitan Transportation Planning Organization (MTPO) has endorsed a project to construct a new access roadway from Waldo Road. This will be the primary entryway into GNV with the current access roadway being used as a secondary access. Careful architectural controls should be established for the roadway since this will be one of the "gateways" into the community. It is expected that this roadway will be constructed during the first phase of the planning period. Once the road has been constructed, airport "trailblazing" signs should be modified to reflect the new access point.

3.13 Airport Lands

GNV occupies approximately 1,642 acres of land that is currently controlled in fee simple by the City. Of the 1,642 acres of land, approximately 1,357 acres are designated for aeronautical activities and approximately 285 acres are designated as an adjacent airport business park. Revenue from the land that is sold or leased from GNV's business park is transferred to the GACRAA for airport operations. GACRAA is currently in discussions with the City to transfer the ownership of the dedicated airport property. Under this scenario, GACRAA will obtain ownership of the dedicated airport property and the City will retain ownership of the adjacent industrial park.

Recommended land acquisition for the 20-year development plan includes the following areas:

(1) 11-29 RPZ, (2) Fairgrounds, (3) Air Cargo, (4) Compatible Land Use, (5) Ryder Truck Commercial Site

3.14 Summary

The following is a summary of the recommended improvements by phase to accommodate the anticipated growth at GNV. This information will be used for both the preparation of the Airport Layout Plan Set and the development of the financial feasibility of recommended improvements.

Table 3-36
GNV FACILITY REQUIREMENTS SUMMARY

AIRSIDE REQUIREMENTS

Runway Length

Runway	Existing	2008	2013	2023	Ultimate
10/28	7,501'	7,501'	7,501'	7,501'	9,000'
6/24	4,158'	6,500'	6,500'	6,500'	7,200'

Navaid Facility Requirements

	Existing	2008	2013	2023
Runway 10				
Instrument Approach	Non-Precision	Non-Precision	Precision	Precision
Approach Type	RNAV (GPS), VOR/DME	RNAV (GPS), VOR/DME	RNAV (GPS), VOR/DME, ILS	RNAV (GPS), VOR/DME, ILS
Approach Slope	34:1	34:1	50:1	50:1
Runway 28				
Instrument Approach	Precision	Precision	Precision	Precision
Approach Type	RNAV (GPS), VOR, NDB, ILS	RNAV (GPS), VOR, NDB, ILS	RNAV (GPS), VOR, NDB, ILS	RNAV (GPS), VOR, NDB, ILS
Approach Slope	50:1	50:1	50:1	50:1
Runway 6				
Instrument Approach	Non-Precision	Precision	Precision	Precision
Approach Type	RNAV (GPS), VOR	RNAV (GPS), VOR, ILS*	RNAV (GPS), VOR, ILS*	RNAV (GPS), VOR, ILS*
Approach Slope	34:1	50:1	50:1	50:1
Runway 24				
Instrument Approach	Non-Precision	Non-Precision	Non-Precision	Non-Precision
Approach Type	RNAV (GPS),VOR	RNAV (GPS),VOR	RNAV (GPS),VOR	RNAV (GPS),VOR
Approach Slope	34:1	34:1	34:1	34:1

* ILS installation is shown for Runway 6 but will be evaluated for either end.

Pavement Condition and Rehabilitation Recommendations

Pavement Surface	Composition	Existing Condition	2008	2013	2023
Runway 10/28	Asphalt (grooved)	Fair*	Yearly Maintenance	Yearly Maintenance	Rehabilitate
Runway 6/24	Asphalt (grooved)	Fair	Rehabilitate & Extend	Yearly Maintenance	Rehabilitate

* To be rehabilitated in the summer of 2004.

Taxiway Pavement Condition and Rehabilitation Recommendations

Pavement Surface	Composition	Existing Condition	2008	2013	2023
Taxiway A system	Asphalt	Fair	Improvements	Yearly Maintenance	Rehabilitate
Taxiway B system	Asphalt	Poor	Rehabilitate	Yearly Maintenance	Rehabilitate
Taxiway C system	Asphalt	Poor	Yearly Maintenance	Rehabilitate	Yearly Maintenance
Taxiway E system	Asphalt	Good	Yearly Maintenance	Rehabilitate	Yearly Maintenance

AIR CARRIER REQUIREMENTS

Air Carrier Terminal Facility Requirements

	2003	2008	2013	2023
Annual Enplanements	139,159	177,606	205,894	250,983
Annual Passengers	278,318	355,212	411,788	501,966
Total Peak Hour Passengers	195	249	288	351
SF/Total Peak Hour Passengers	250	250	250	250
Total Terminal Area (SF)	51,746	40,011	47,691	52,041
Number of Gates	3	5	7	7
Ramp Apron (SY)	85,000	125,000	135,000	165,000
Ticket Center Length (LF)	72	91	106	129
Baggage Claim Length (LF)	65	83	96	117
Curb Front	108	137	159	194

Air Carrier Apron Pavement Condition and Rehabilitation Recommendations

Pavement Surface	Composition	Existing Condition	2008	2013	2023
Air Carrier Apron	Concrete/Asphalt	Fair/Poor	Rehabilitate (partial)	Rehabilitate (partial)	Yearly Maintenance

Table 3-36 (Continued)
GNV FACILITY REQUIREMENTS SUMMARY

Auto Parking Requirements

Item	Existing	2003	2008	2013	2023
Short-Term	134	134	222	257	314
Long-Term	531	531	666	772	941
Total	**665**	**665**	**888**	**1,029**	**1,255**
(Deficiencies)	(0)	(0)	(223)	(364)	(590)
Ready/Return	84	84	110	125	150

GENERAL AVIATION

GA Apron Pavement Condition and Rehabilitation Recommendations

Pavement Surface	Composition	Existing Condition	2008	2013	2023
East GA Apron	Concrete/Asphalt	Excellent	Yearly Maintenance	Yearly Maintenance	Rehabilitate
West GA Apron	Asphalt	Good	Yearly Maintenance	Rehabilitate	Yearly Maintenance

Aircraft Apron Demand Summary (2003-2023)

Planning Period	Transient Tiedown Required (Apron Space)	Based Tiedowns Required (Apron Space)	Total	Existing Tiedowns (Apron Space)	Surplus/Deficit Tiedowns (Apron Space)
Existing (2003)	42	15	57	85	<28>
	(19,490 sq yds)	(6,400 sq yds)	(25,890 sq yds)	(55,300 sq yds)	<29,410 sq yds>
2008	49	17	66	85	<19>
	(23,180 sq yds)	(7,200 sq yds)	(30,380 sq yds)	(55,300 sq yds)	<24,920 sq yds>
2013	54	20	74	85	<11>
	(25,380 sq yds)	(8,600 sq yds)	(33,980 sq yds)	(55,300 sq yds)	<21,320 sq yds>
2023	64	24	88	85	<3>
	(29,780 sq yds)	(10,200 sq yds)	(39,980 sq yds)	(55,300 sq yds)	<15,320 sq yds>

Projected Covered Aircraft Storage Facilities

GA Element	Planning Period			
	Existing (2003)	2008	2013	2023
Single-Unit Storage	91	110	121	140
Conventional/Multi-Use Storage Spaces	34	39	43	49
Conventional/Multi-Use Storage Hangars*	8	11	13	16

* Assumes two aircraft per hangar.

MISCELLANEOUS DEVELOPMENT

Air Cargo

	Existing	2005	2010	2020
Building Space (SF)	N/A	3,000	5,000	10,000
Apron Space (SY)	1,500	5,000	7,500	10,000
Truck Docks	12	15	20	25
Employee Parking	N/A	28	45	70

Table 3-36 (Continued)
GNV FACILITY REQUIREMENTS SUMMARY

Other

	Development	Phase
Fuel Farm	Install 15,000 Gallon Jet A tank	2
Air Traffic Control Tower	Raise and relocate ATCT	1
Airport Maintenance Building	Construct 8,000-sq-ft Airport Building with 20 parking spaces	1
Consolidated Rental Car Maintenance Facility	Construct 9,000-sq-ft consolidated rental car facility with 125 parking spaces	1
Aircraft Wash Rack	Construct	1
Stormwater Master Plan and SWPPP/SPCC Plans	Prepare Plans	1
Fencing	Replace fiber optic line to T-hangars Replace GA access control system	1 1
Part 150 Study	Prepare Study	1
Airport Access Road	Construct new airport access road from Waldo Road	1

CHAPTER 4
IDENTIFICATION AND EVALUATION OF ALTERNATIVES

4.1 Introduction

The purpose of this section of the Airport Master Plan Update is to identify facility development alternatives for Gainesville Regional Airport (GNV) that will satisfy the facility requirements outlined in Chapter 3. The primary focus of the alternative analysis is to evaluate three primary areas of development as outlined in the Goals and Objectives of this report. These three areas include the proposed extension of Runway 6/24, the possible relocation of the Air Traffic Control Tower (ATCT) and the future expansion of air cargo operations at the Gainesville Regional Airport. These requirements were determined through Airport demand, as well as the Strategic Planning Activity Levels (SPALs) that were developed from the aviation demand forecasts in Chapter 3. Airport alternative analysis have been developed for the following areas:

- Runway 6/24 extension
- Air Cargo development
- ATCT location
- General Aviation Development
- Miscellaneous Development

Preliminary development alternatives have been prepared for each of these areas and were presented and evaluated in order to determine the interface with the preferred components of the overall development plan for GNV. The "No Build" alternative is also presented in several instances where appropriate. This alternative simply serves as a comparison for development in each alternative area. Each section outlines and describes the various alternatives without a final recommendation until after the information has been presented to the Technical and Policy Advisory Committees.

4.1.1 Evaluation Criteria

Alternative development concepts that have been developed to meet the long-term facility needs of GNV, and that have been examined as part of the alternative analysis, include the following factors:

- **Operational Factors** – Each alternative is evaluated to determine its ability to safely accommodate future demand of aircraft, vehicles, passengers and other relative factors based on the facility that is being evaluated. This criterion evaluates development concepts based on anticipated improvements to airfield safety, operational capacity, aircraft delay, airfield circulation, tenant and user convenience, and other relevant planning considerations.
- **Meeting Design Standards Factors** – Each alternative is evaluated with its ability to meet the necessary FAA and FDOT design standards that were outlined in the facility requirements chapter. The ability to meet the necessary design criteria will carry a significant weight during the selection process.

- **Environmental Factors** – Environmental factors such as wetlands, streams and other potential environmental factors is used to compare each alternative relative to potential environmental impacts.
- **Expansion Factors** – The ability of each alternative to accommodate the desired facility requirement without unduly impacting other adjacent existing or proposed development, along with the ability to realize potential in the future, if appropriate, will be evaluated in this category.
- **Implementation and Phasing Factors** – There are often factors, both tangible and intangible, that can impact an airport's ability to implement certain development schemes. Community acceptance is an example of implementation feasibility that is taken into consideration in this analysis. Alternative facility development concepts identified for the Gainesville Regional Airport are evaluated relative to each other based on their anticipated feasibility of implementation.

4.2 Runway 6/24 Extension Alternatives

Several alternatives and sub-alternatives were developed for the improvement and expansion of Runway 6/24. The facility requirements section recommends extending Runway 6/24 to 6,500 feet by 100 feet to allow the runway to be used by commercial service aircraft when the primary runway is unavailable. The proposed extension will also evaluate moving the threshold of Runway 6 to minimize the conflict with the threshold of Runway 10. The use of Runway 6/24 by commercial service aircraft also dictates the installation of an Instrument Landing System (ILS) to allow aircraft to land during periods of inclement weather. Therefore, the two primary issues to be resolved during the alternatives analysis is which end of the runway should be extended to meet the recommended facility requirements, along with the possible relocation of the threshold of Runway 6 and a determination regarding the preferred placement of the ILS for Runway 6/24.

As mentioned above, the extension of Runway 6/24 to an ultimate length of 6,500 feet will be evaluated in several alternatives that depict the threshold of Runway 6. This extension is being moved northeastward, to allow a greater separation of distance between the threshold of Runway 6 and Runway 10, along with additional new pavement at the end of Runway 6 to meet the desired runway length. This relocation of the threshold of Runway 6 will be shown in conjunction with any additional new pavement added to Runway 6/24 necessary to meet the desired length of 6,500 feet.

The installation of an ILS will also be evaluated in conjunction with the extension of Runway 6/24. As noted in the facility requirements, the installation of an ILS requires a much larger Runway Protection Zone (RPZ) as defined by the Federal Aviation Administration (FAA) and also requires a much flatter approach (50:1) as opposed to the existing non-precision approaches. In both cases, the implementation of an ILS could require significant land acquisition if the RPZ falls outside of the current airport boundary, since the FAA strongly encourages airports to own all land within their RPZ. In addition, the close proximity of Waldo Road and the proposed new access road into GNV from Waldo Road could prohibit the installation of an ILS for Runway 6 due to the inability to obtain the necessary clearances over each road.

Wind coverage is a significant factor in the determination of the appropriate end to locate additional runway instrumentation. A wind analysis was therefore conducted prior to the alternative analysis to determine which individual runway end offers the best wind coverage for

the installation of an ILS. During Instrument Meteorological Conditions (IMC), the wind coverage on the Runway 24 end is approximately 75 percent. The wind coverage on the Runway 6 end is approximately 83 percent. Due to the relatively modest difference between the two runway ends regarding wind coverage, it was determined that the implementation of an ILS approach should be evaluated for the end of Runways 6 and 24, and if all things are equal, the ILS should be placed on Runway 6. However, as mentioned earlier, other factors such as adjacent roadways which could prohibit the implementation of the flatter approach surface, the necessary land acquisition for the larger RPZs and other operational issues may dictate the installation of an ILS on the runway end that may not offer the optimum wind coverage. Each individual runway end will be discussed in greater detail later in this chapter.

Because of the additional analysis needed for the installation of the ILS, the potential installation of an ILS was depicted for each runway end to assist in the analysis and final determination. As such, each ILS alternative has been developed and depicted as "A" and "B" sub-alternative for each runway extension alternative.

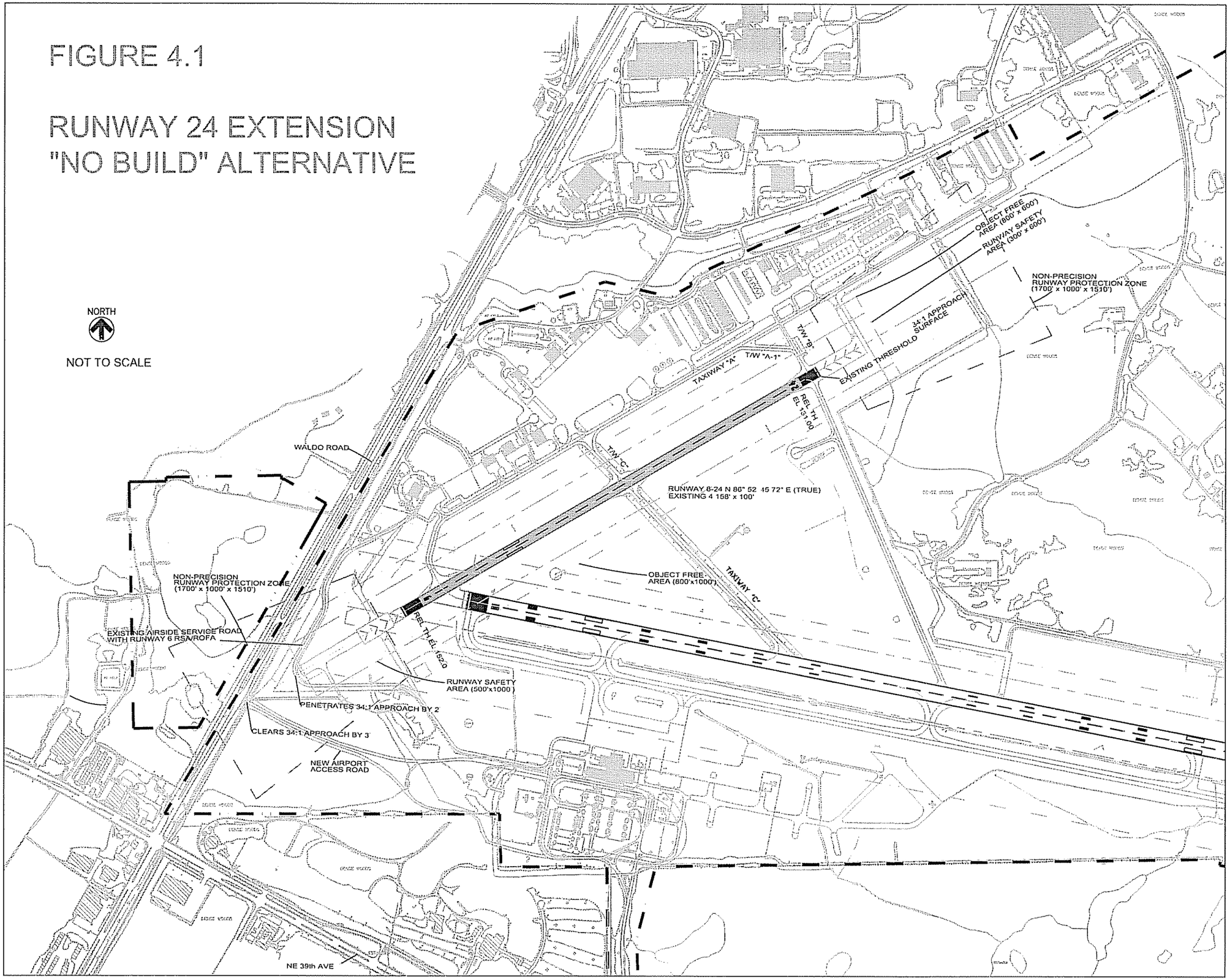
Four selection criteria were used to evaluate each of the runway extension alternatives. These criteria include whether the alternative meets desired facility requirements, the amount of land acquisition needed, environmental impacts such as wetlands and if the relocation/piping of the Little Hatchet Creek is necessary, and overall aircraft circulation. The selection criteria used for the installation of the ILS include wind coverage, the ability to meet the desired approach surfaces and land acquisition required.

4.2.1 "No-Build" Alternative

Simply maintaining the existing runway length of Runway 6/24 serves as the basis for the first alternative (see Figure 4-1). Runway 6/24 is currently 4,158 feet long. Taxiway A runs parallel to Runway 6/24 providing access to the general aviation and air cargo areas. At its current length, this alternative fails to meet facility requirements by not meeting the suggested 6,500 feet runway length requirement. GNV currently owns all property in fee simple title for both RPZs. However, Waldo Road traverses through the RPZ for Runway 6, which is allowed by the FAA, as long as the road does not penetrate the existing approach slope for the runway. Approximately ten additional acres of land are recommended for acquisition with the approach to Runway 6 obstructions within the approach surface. Aircraft circulation will continue to use the intersection of Runways 6/24 and 10/28 to traverse between the general aviation area and the air carrier terminal area. The full length of Runway 6/24 is not available for aircraft departing on Runway 6 due to the location of the parallel taxiway without aircraft back-taxiing on the runway. Both runway ends offer non-precision approaches. The current airport reference code for Runway 6/24 is a C-II that requires a 1,000-foot-long by 500-foot-wide runway safety area and a 1,000-foot-long by 800-foot-wide runway object free area. As such, the existing airside access road is located within the runway object free area that will require either the relocation of the threshold of Runway 6 or the relocation of portions of the airside access road to eliminate this conflict.

FIGURE 4.1

RUNWAY 24 EXTENSION
"NO BUILD" ALTERNATIVE



4.2.2 Alternative A-1-A: Extend Runway 6/24 2,820 Feet, Relocate Runway 6 Threshold 500 Feet and Install ILS for Runway 6

This alternative extends Runway 6/24 by 2,820 feet, relocates the threshold for Runway 6 by 500 feet and installs an ILS for Runway 6 as shown on Figure 4-2. The relocation of the threshold of Runway 6 allows the existing airside access road to be outside the future runway safety area and runway object free areas as required by FAA standards. The thresholds for both Runway 6 and 10 remain in close proximity to each other and the runway safety area and object free areas overlap, which is allowed by the FAA. The 2,820-foot extension will require the crossing of Little Hatchet Creek that will be piped under the runway. The extension will also require the relocation of approximately 3,000 linear feet of the existing airport service road off the end of Runway 6/24.

This alternative will require the construction of a parallel taxiway to the east end of Runway 6/24. The new parallel taxiway can be constructed as close as 400 feet from centerline of runway to centerline of taxiway as required by FAA standards and is shown in this location. The remaining portions of Taxiway A could be relocated from its present location of 525 feet from the runway centerline to 400 feet incrementally as a phased approach to allow additional developable area along the taxiway system. Aircraft circulation with this alternative is improved with the construction of a new taxiway connecting Taxiway A to the threshold of Runway 6 allowing the full use of the runway for aircraft departing on Runway 6. The majority of runway construction would be on previously disturbed ground, which are primarily upland areas. The Little Hatchet Creek would require piping but could be engineered in such a manner as to minimize any significant environmental impacts. The project would, however, impact approximately 15 acres of wetlands that would be impacted due to the construction of the runway and relocated airport service road. In addition, the project area also includes several Gopher Tortoise burrows that would require relocation. This particular alternative also proposes an ILS to be installed on Runway 6. The required approach surface clearance over Waldo Road is very close to meeting standards and will require some additional analysis to confirm that sufficient approach surface clearance is available over the road if this alternative is selected. This is due to the clearance required over Waldo Road for a precision instrument approach by Federal Aviation Regulations (FAR) Part 77 standards which requires protection for a 15 foot object. A runway approach lighting system used as part of the ILS system must also be installed over Waldo Road and traverse through the intersection of the new airport access road and Waldo Road. In addition, due to location of the RPZ over the proposed airport access road, a large portion of the area surrounding the new access road would not be available for development as it would fall within the RPZ which is discouraged by the FAA. The purchase of approximately one acre of land would be required to allow GNV to own all the areas within the proposed RPZs.

4.2.2.1 Alternative A-1-B: Install ILS Approach to Runway 24

This alternative is identical to the alternative mentioned above with the exception of installing an ILS for the approach end of Runway 24. This alternative would require the acquisition of approximately four acres of land in fee simple title as shown on Figure 4-3. There are no known obstructions that would prohibit the installation of an ILS on this end and this end of the runway could easily accommodate the runway approach lighting system. This Alternative would impact approximately two additional acres of wetlands.

FIGURE 4.2

EXTEND RUNWAY 6/24 2,820' RELOCATE RUNWAY 6 THRESHOLD 500' AND INSTALL ILS FOR RUNWAY 6

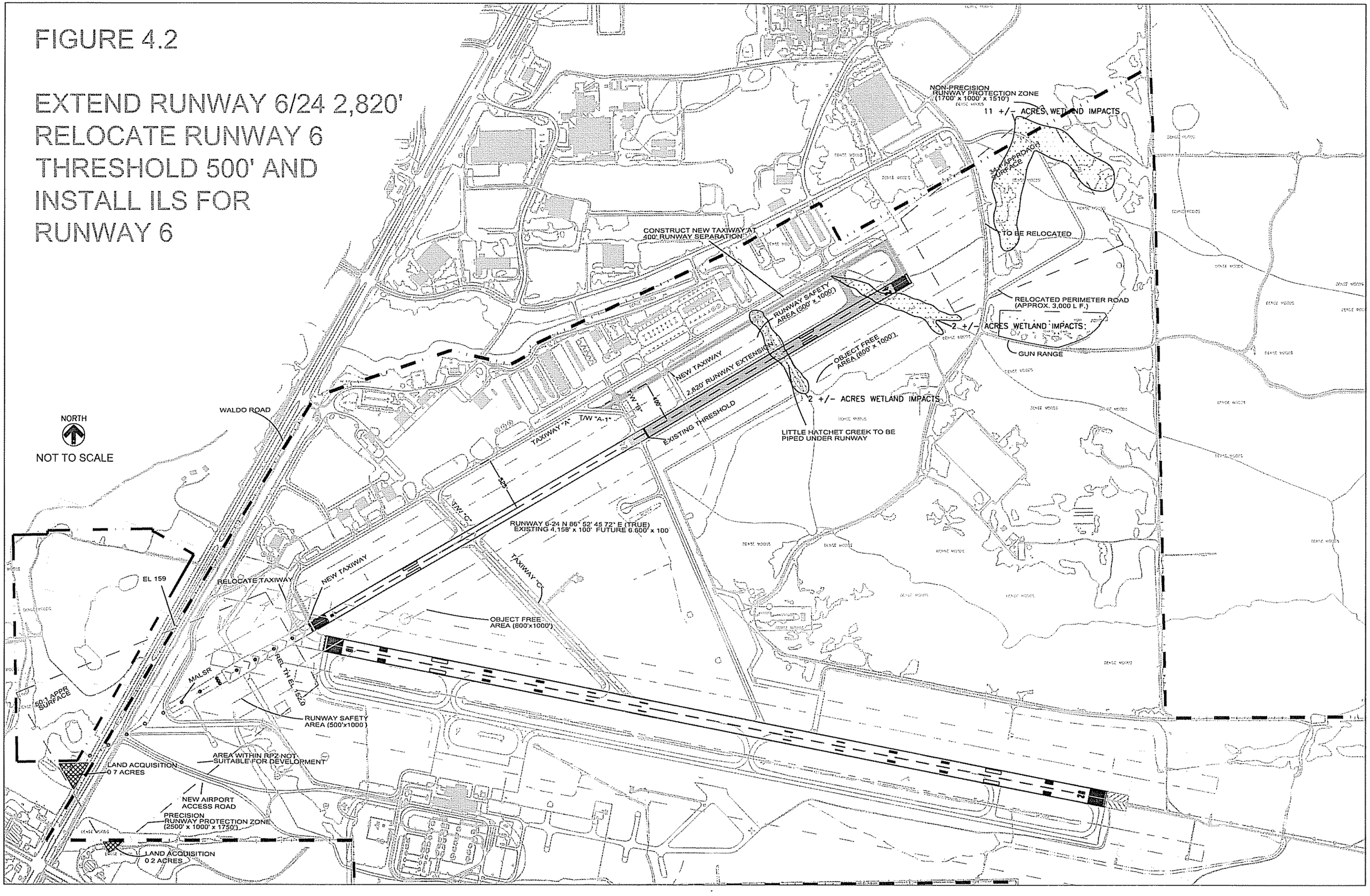
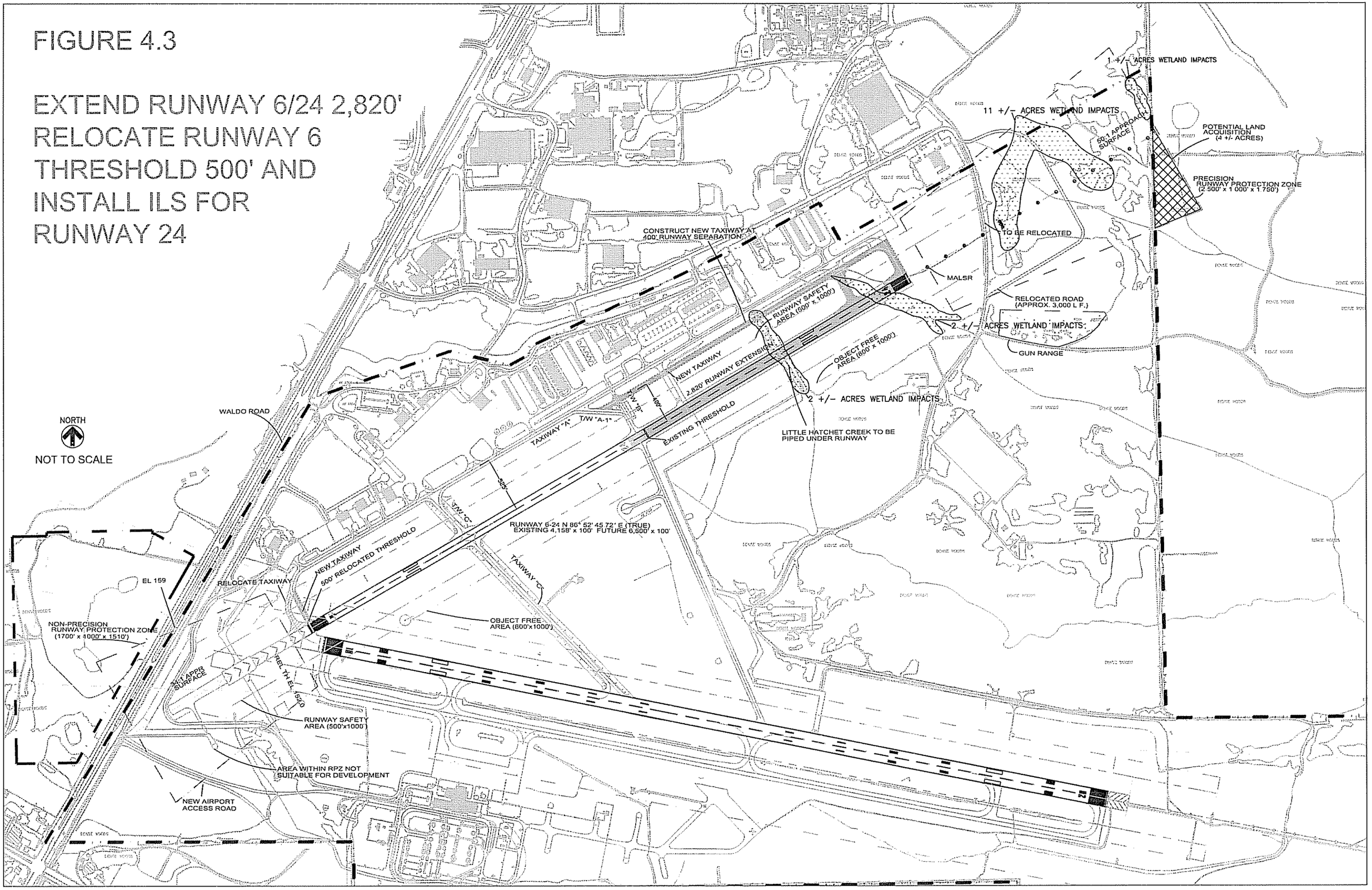


FIGURE 4.3

EXTEND RUNWAY 6/24 2,820' RELOCATE RUNWAY 6 THRESHOLD 500' AND INSTALL ILS FOR RUNWAY 24



4.2.3 Alternative A-2-A: Extend Runway 6/24 3,320 Feet, Relocate Runway 6 Threshold 1,000 Feet and Install ILS for Runway 6

Similar to Alternative A-1-A, this alternative increases the length of Runway 6/24 to 6,500 feet, but also relocates the Runway 6 threshold 1,000 feet northeast of its existing threshold to avoid the ROFA and RSA of Runway 10/28 (see Figure 4-4). With this alternative, aircraft circulation would be enhanced and potential pilot confusion eliminated between Runways 6/24 and 10/28 by the greater separation of the Runway 6 and 10 thresholds. As a result of the relocated threshold of Runway 6, the ROFA and RSA associated with Runway 6/24 are no longer affected by the GNV perimeter road, eliminating the need for it to be relocated. Runway 6/24 and Taxiway A are extended 3,320 feet to the northeast. The extension will also require the relocation of approximately 3,000 linear feet of the existing airport service road off the end of Runway 6/24. Similar to the previous alternative, the Little Hatchet Creek would be piped under the runway extension.

Similar to the last alternatives, the parallel taxiway system will also require reconfiguration. All new parallel taxiway construction will be shown at 400-foot separation, which was discussed in detail in the previous alternative. A new taxiway is shown connecting Taxiways A and E to the threshold of Runway 6. This will allow for the full utilization of the runway.

The majority of runway construction would be on previously disturbed ground which is primarily uplands. The project would, however, impact approximately 15 acres of wetlands that would be impacted due to the construction of the runway and relocated airport service road. In addition, the project area also includes several gopher tortoise burrows that would require relocation

The installation of the ILS to Runway 6 would have similar impacts discussed in Alternative A-1. The approach surface clearances over Waldo Road would not be as critical with this alternative as compared to the previous alternative, due to the threshold of Runway 6 being relocated an additional 500 feet. The RPZ still encompasses a large portion of the area on both sides of the proposed Airport access road eliminating any future development within the RPZ areas. The runway approach lighting system required by the ILS would also intersect Waldo Road and the proposed airport access road.

4.2.3.1 Alternative A-2-B: Install ILS Approach to Runway 24

This alternative is identical to the alternative mentioned above with the exception of installing an ILS for the approach end of Runway 24. This alternative would require the acquisition of approximately 19 acres of land in fee simple title as shown on Figure 4-5. There are no known obstructions that would prohibit the installation of an ILS on this end and this end of the runway could easily accommodate the runway approach lighting system. This alternative would impact an additional two acres of wetlands.

FIGURE 4.4

EXTEND RUNWAY 6/24 3,320'
RELOCATE RUNWAY 6 THRESHOLD
1,000' AND INSTALL ILS FOR RUNWAY 6

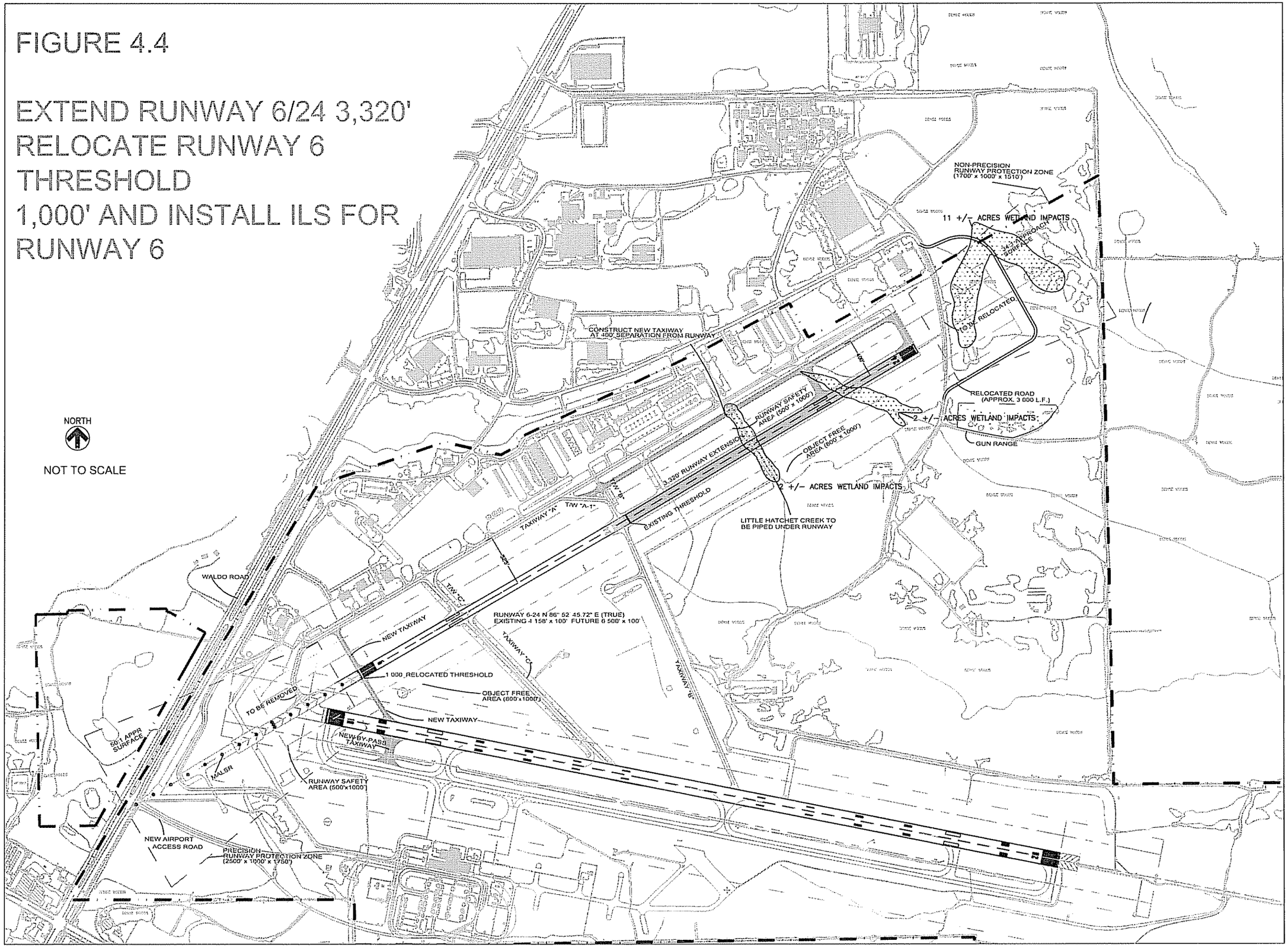
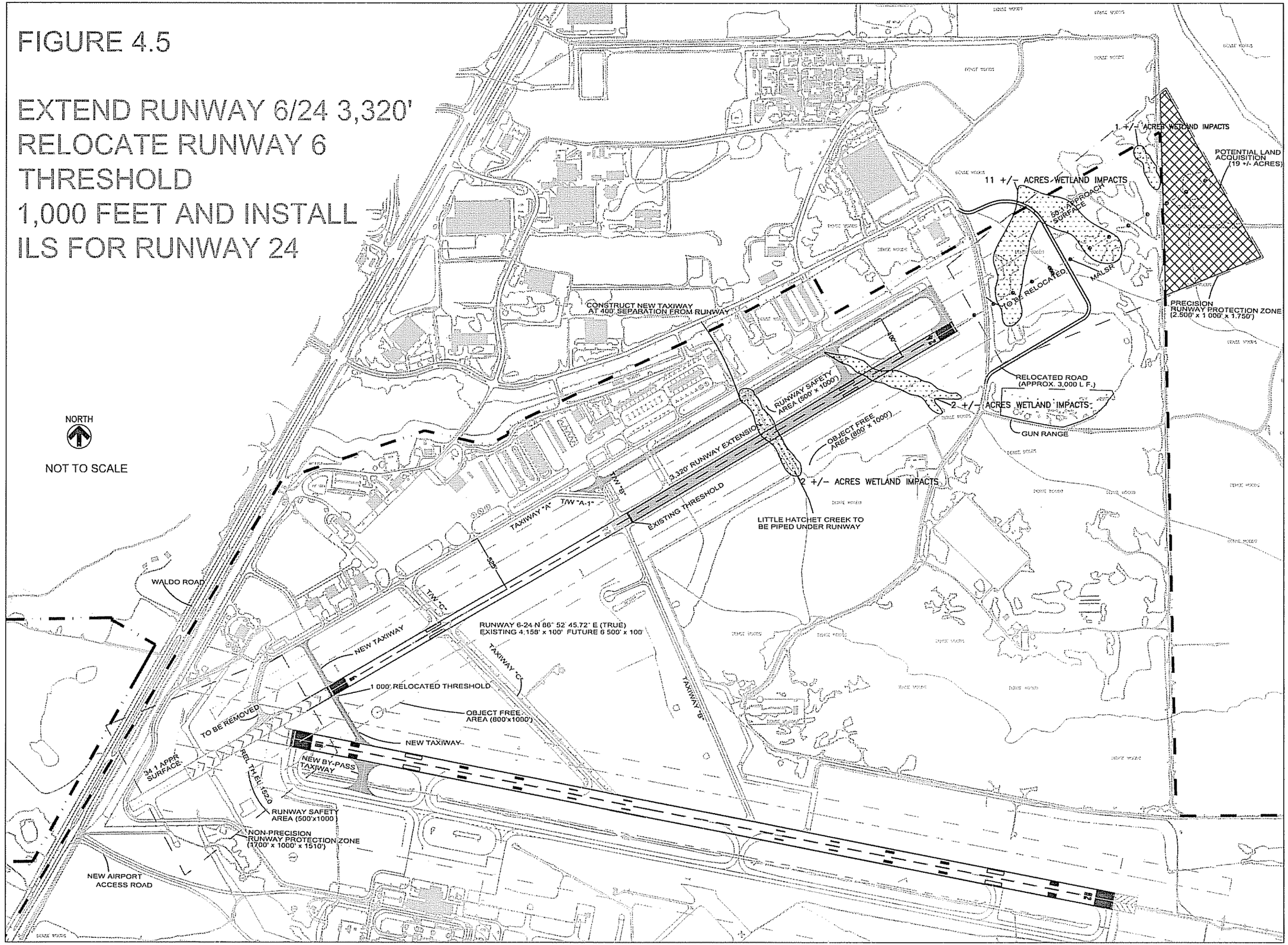


FIGURE 4.5

EXTEND RUNWAY 6/24 3,320'
RELOCATE RUNWAY 6 THRESHOLD
1,000 FEET AND INSTALL ILS FOR RUNWAY 24



4.2.4 Alternative A-3-A: Extend Runway 6/24 4,800 Feet, Relocate Runway 6 Threshold 2,500 Feet and Install ILS for Runway 6

This alternative also increases the overall length of Runway 6/24 to 6,500 feet, by extending the 24 end of the runway and Taxiway A by 4,800 feet (see Figure 4-6). The end of Runway 6 has also been relocated 2,500 feet from the existing threshold to allow the complete separation of the runway safety area and runway object free area for both Runway 6/24 and 10/28. The threshold relocation distance of 2,500 feet was chosen in reference to Runway Separation Standards outlined in Advisory Circular AC 150/5300-13 Airport Design. Since the current runway configuration is an "Open-V" configuration, the distance of 2,500 feet meets the tail height requirements for transitional surfaces as outlined in FAR Part 77. Technically, departures and approaches to either Runway 6 or Runway 10 would need to be sequenced regardless of the distance between each threshold. However, with the separations explained above, it is likely that an aircraft could independently approach Runway 6 while another aircraft is beginning its take-off roll on Runway 10 and vise-versa. Aircraft simultaneously departing on both Runways 6 and 10 should not be affected by jet-blast due to the greater separation distances. In essence, this alternative would allow greater runway capacity for GNV.

As a result of the relocated threshold of Runway 6, the ROFA and RSA associated with Runway 6/24 is no longer affected by the GNV perimeter road, eliminating the need for it to be removed or relocated. An existing airport access road on the east end of the runway must be relocated as part of this alternative to remain outside of the RSA and ROFA. All new parallel taxiway construction is shown at 400 feet as previously discussed. A new taxiway is also necessary to connect Taxiways A and C to the threshold of Runway 6. Environmental impacts are anticipated to me minimal as the majority of new construction will be on previously cleared land and similar to the other alternatives, the Little Hatchet Creek would be piped under the runway. The project would, however, impact approximately 17 acres of wetlands due to the construction of the runway and relocated airport service road. In addition, the project area includes several Gopher Tortoise burrows that would require relocation. This alternative would require the relocation of approximately 6,000 linear feet of the existing airport access road.

The installation of the ILS to Runway 6 would have less impact as discussed in the previous alternatives. The approach surface clearances for the ILS could be easily met and the RPZ would stay on existing airport property. The RPZ would also not impact any future development along the proposed airport access road. The runway approach lighting system required by the ILS would also stay on existing airport property.

4.2.4.1 Alternative A-3-B: Install ILS Approach to Runway 24

This alternative is identical to the alternative mentioned above with the exception of installing an ILS for the approach end of Runway 24. This alternative would require the acquisition of approximately 65 acres of land in fee simple title as shown on Figure 4-7. There are no known obstructions that would prohibit the installation of an ILS on this end and this end of the runway could easily accommodate the runway approach lighting system.

FIGURE 4.6

EXTEND RUNWAY 6/24 4,800'
RELOCATE RUNWAY 6
THRESHOLD 2,500' AND
INSTALL ILS
FOR RUNWAY 6

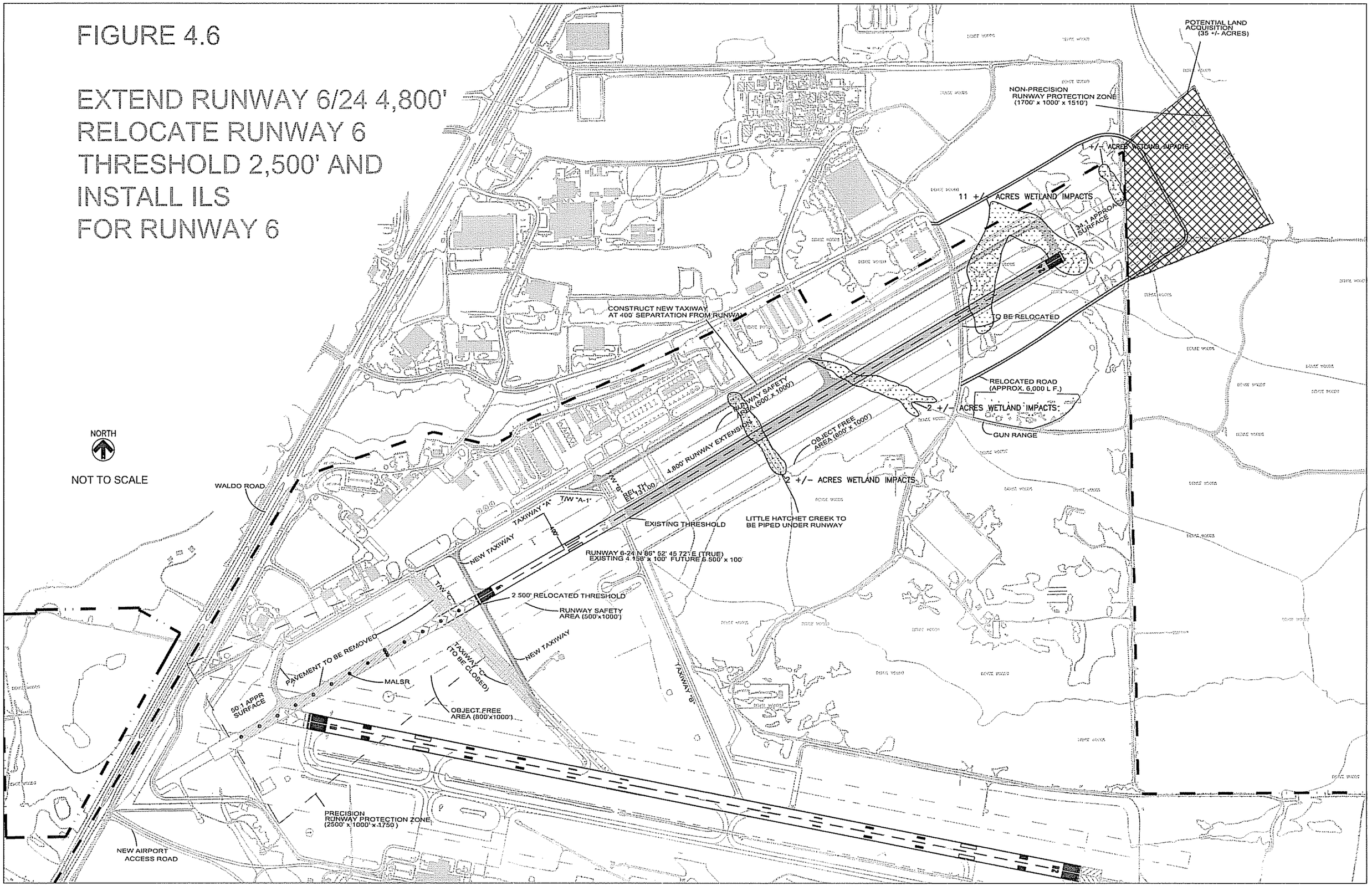
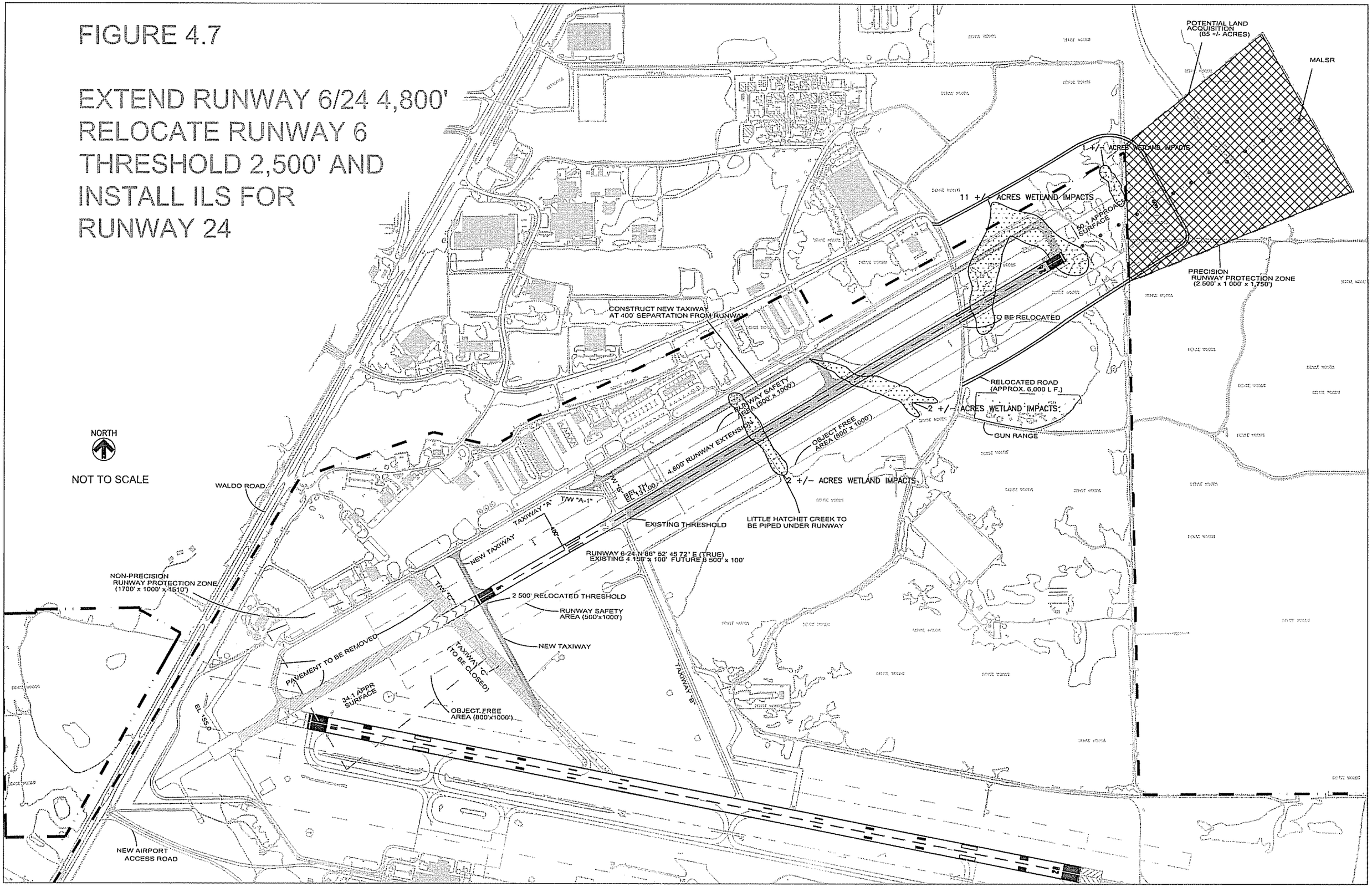


FIGURE 4.7

EXTEND RUNWAY 6/24 4,800' RELOCATE RUNWAY 6 THRESHOLD 2,500' AND INSTALL ILS FOR RUNWAY 24



4.2.5 Runway 6/24 Extension Alternatives Comparison

An evaluation table has been developed which depicts the advantages and disadvantages of each alternative based on the major evaluation criteria outlined in the beginning of this section, and is shown in Table 4-1.

Table 4-1
RUNWAY DEVELOPMENT CONCEPT

	EVALUATION CONSIDERATIONS
No Build Alternative	**Operational Factors** Does not meet operational requirements **Ability to Meet FAA/FDOT Design Standards** Does not meet FAA/FDOT Design Standards Airside access road within RSA and ROFA does not meet standards **Environmental Factors** No environmental impacts **Implementation and Phasing** N/A **Comparison of installation of ILS on either Rwy end** ILS could not be installed on Rwy 6 due to the location of Waldo Road. ILS could be installed on Rwy 24 with minimal impact.
Alt A-1-A/B Extend Rwy 2,820 ft and relocate Rwy 6 threshold 500 ft	**Operational Factors** Meets operational requirements. Location of thresholds of Rwy 6 and 10 could be confusing to pilots. **Ability to Meet FAA/FDOT Design Standards** Meets FAA/FDOT design standards **Environmental Factors** Little Hatchet Creek must be piped under the runway. Majority of extension on previously cleared area. Project would impact 15 acres of wetlands and existing Gopher Tortoise burrows. **Implementation and Phasing** Project could be implemented with minimal impact on existing airport operations. **Comparison of installation of ILS on either Rwy end** ILS on Rwy 6 would prohibit development along new proposed airport access road to airline terminal. Approach lighting system would cross Waldo Road. ILS could be easily installed on Rwy 24 but offers slightly less wind coverage than Rwy 6.
Alt A-2-A/B Extend Rwy 3,320 ft and relocate Rwy 6 threshold 1,000 ft	**Operational Factors** Meets operational requirements. Requires additional taxiway from Txwy E to threshold of Rwy 6. **Ability to Meet FAA/FDOT Design Standards** Runway 6 outside of Rwy 10/28 ROFA. Sufficient distance between thresholds of Rwy 6 and 10 to minimize pilot confusion. **Environmental Factors** Little Hatchet Creek must be piped under the runway. Majority of extension on previously cleared area. Project would impact 15 acres of wetlands and existing Gopher Tortoise burrows. **Implementation and Phasing** Project could be implemented with minimal impact on existing airport operations. **Comparison of installation of ILS on either Rwy end** ILS on Rwy 6 would prohibit development along new proposed airport access road to airline terminal. Approach lighting system would end at the center of Waldo Road. ILS could be easily installed on Rwy 24 but offers slightly less wind coverage than Rwy 6.

Continued next page…

	EVALUATION CONSIDERATIONS
Alt A-3-A/B Extend Rwy 4,820' and relocate Rwy 6 threshold 2500'	**Operational Factors** Meets operational requirements. Requires relocation of Txwy C to meet new Rwy 6 threshold. Taxiing distance from GA area to Rwy 10 increases significantly. **Ability to Meet FAA/FDOT Design Standards** Runway 6 outside of Rwy 10/28 ROFA. Sufficient distance between thresholds of Rwy 6 and 10 to maximize runway capacity. **Environmental Factors** Little Hatchet Creek must be piped under the runway. A large portion of the extension is on previously cleared area. Project would impact 17 acres of wetlands and existing Gopher Tortoise burrows. **Implementation and Phasing** Project could be implemented with minimal impact on existing airport operations**.** **Comparison of installation of ILS on either Rwy end.** ILS on Rwy 6 could be easily installed and would not cross Waldo Road. ILS for Rwy 24 would require a significant amount of land acquisition and offer slightly less wind coverage than Rwy 6.

Source: RS&H Analysis, 2004

4.3 Air Cargo Development Alternatives

Alternatives for fulfilling the long-term air cargo requirements at GNV have also been developed. These alternatives were evaluated for the following considerations: Landside and airside access, potential environmental impacts, project phasing and expansion potential. Short-term air cargo improvements currently being developed at GNV were not taken into account for this alternative analysis.

4.3.1 "No-Build" Alternative

Maintaining the current air cargo facilities serves as the base alternative for air cargo development. The existing air cargo area comprises approximately 10,000 square feet, and is located on the eastern side of GNV approximately 600 feet southeast of the GA terminal building as shown in Figure 4-8. The designated area is accessed by aircraft using Taxiway A and a connector taxiway linking the GA apron to the primary taxiway system. The designated area is currently used by Federal Express, which operates an open air sorting facility on a daily basis. The current location provides adequate and convenient access from State Road 24 (Waldo Road) and Northeast 49th Street. This alternative will not satisfy long-range program and expansion requirements due to its inability to provide additional area for expanded cargo operations and additional aircraft types. However, environmental impacts are minimal under this alternative. The Gainesville-Alachua County Regional Airport Authority is currently investigating two short-term improvement alternatives that proposes to expand the existing FedEx operation in either its current location, or through rehabilitation of the former Gator Air Site. Either location will accommodate the short-term (0-5 years) air cargo requirements, but will not accommodate long-term air cargo needs identified in the facility requirements section of this Master Plan Update.

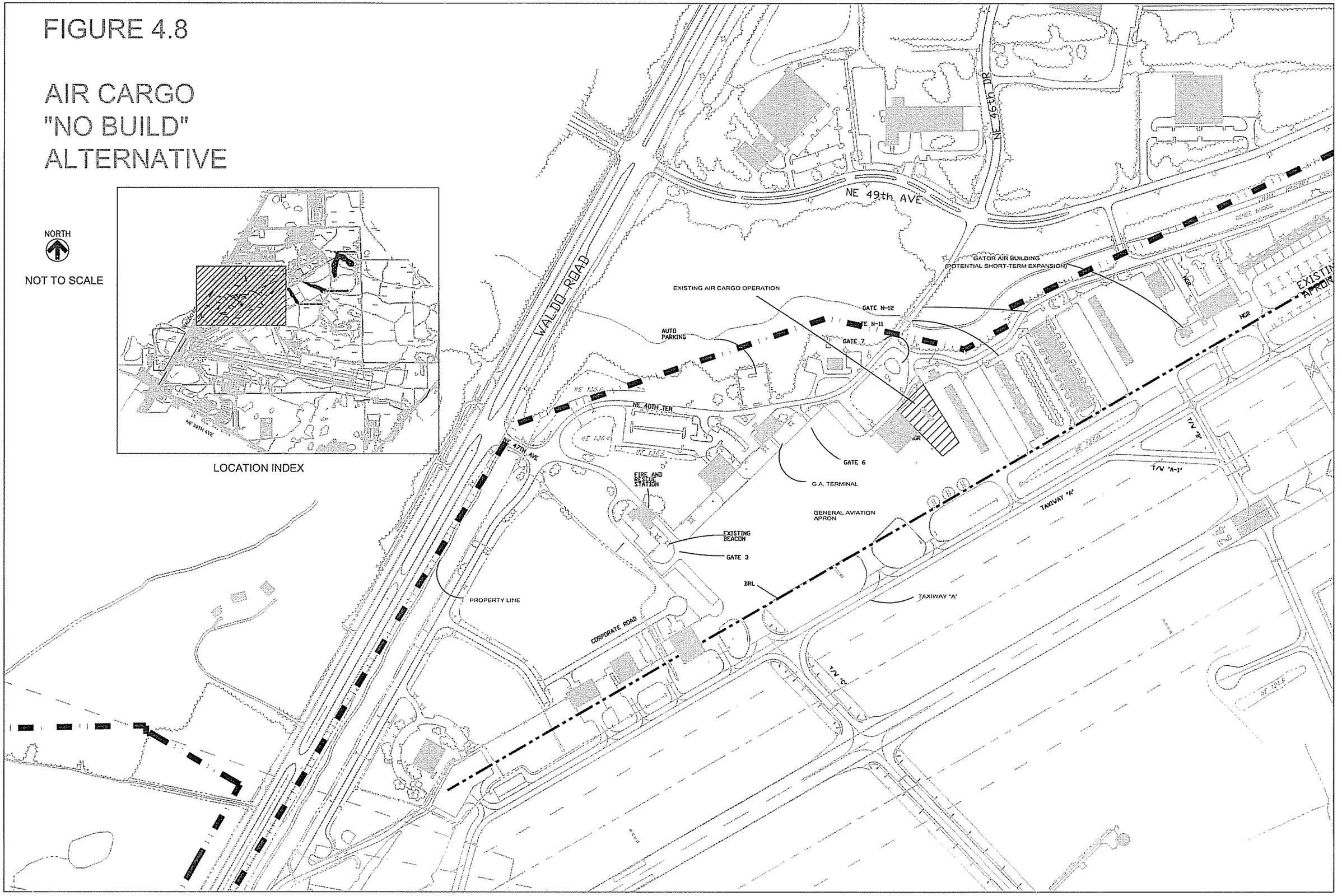
FIGURE 4.8

AIR CARGO "NO BUILD" ALTERNATIVE

NORTH

NOT TO SCALE

LOCATION INDEX



4.3.2 Alternative AC-1: Northeast Cargo Development

This alternative consists of the relocation of the air cargo area to the northeast quadrant of the airfield (see Figure 4-9). This site is located northeast of T-Hangars I and J, and Gate 26. The project consists of approximately 50,000 sq. ft of air cargo building space, adequate apron space to accommodate two Fokker F-27 and three Boeing 727 aircraft and associated truck parking space. This alternative provides direct roadway access to NE 49th Avenue and adequate roadway access to State Road 24 (Waldo Road). Acquisition of the Ryder Truck Facility may be necessary to fully implement this option due to proposed T-hangar development by GNV. Environmental impacts include the removal of approximately ½ acre of wooded area but the majority of the project site is on uplands and is within the current perimeter fence line. Aircraft would access this site via an extension of Taxiway A and associated connector taxiways and it is assumed this facility would be constructed after the extension of Runway 6/24 which provide the necessary extension of Taxiway 'A". This alternative would require the mixing of larger air cargo aircraft with smaller general aviation aircraft and would place the air cargo complex some distance away from the primary and longest runway. A potential requirement of this alternative option is the acquisition of the Ryder Truck Facility, converting it to an air cargo facility, and relocating the existing businesses to a nearby location within the Industrial Park.

4.3.3 Alternative AC-2: Southeast Air Cargo Development

This alternative consists of the relocation of the air cargo area to the southeast quadrant of the airfield. This site is located south of Runway 10/28 at Taxiway E-3 and is approximately 2,300 feet east of the airline passenger terminal as shown on Figure 4-10. This alternative provides a larger potential development area and includes associated air cargo facilities and apron. This alternative lacks existing adequate roadway infrastructure but could be constructed easily on existing abandoned airfield pavement. The site would necessitate the mixing of commercial traffic with passengers arriving and departing the terminal complex until the new access road is constructed from Waldo Road. No land acquisition is required due to the site remaining on airport property. Environmental impacts are minimal since all construction would occur in an area on the airfield that has been previously cleared due to normal airport operations, and as long as the development stays clear of wetlands southeast of the proposed site. Aircraft would traverse this alternative via Taxiway E and associated connector taxiways, and the location would provide good access to the primary and longest runway, along with little mixing of dissimilar size aircraft. The site also offers significant expansion potential.

Table 4-2
AIR CARGO DEVELOPMENT CONCEPT

AIR CARGO DEVELOPMENT CONCEPT	EVALUATION CONSIDERATIONS
No Build Alternative	**Operational Factors** Does not meet operational requirements **Landside Access** Fair to poor landside access **Airside Access** Mixing of air cargo and general aviation aircraft **Environmental Impacts** No environmental impacts **Expansion Potential** Very limited expansion potential. Cannot accommodate an additional air cargo operator or larger jet aircraft.
Alt AC-1 Northeast Air Cargo Development	**Operational Factors** Meets operational requirements **Landside Access** Good landside access and similar adjacent land uses. Depth of truck parking area and employee parking can be accommodated but not ideal. **Airside Access** Mixing of air cargo and general aviation aircraft. Long distance from primary and longest runway. Project site necessitates the construction/extension of Taxiway A, which should be part of the Runway 6/24 extension project. **Environnemental Impacts** Minor environmental impacts **Expansion Potential** Very limited expansion potential and placement of the air cargo complex would prevent future general aviation T-hangar development.
Alt AC-2 Southeast Air Cargo Development	**Operational Factors** Meets operational requirements **Landside Access** Would require new access service road. Initial phase may require mixing of commercial traffic with passengers departing terminal until new access road is constructed from Waldo Road. Sufficient depth for truck and employee parking **Airside Access** Excellent access to primary runway and limited mixing of air cargo and general aviation aircraft **Environmental Impacts** Minor environmental impacts **Expansion Potential** Significant expansion potential. Could accommodate several air cargo operators.

Source: RS&H Analysis, 2004

FIGURE 4.9

AIR CARGO DEVELOPMENT ALTERNATIVE 1

NE SITE - NORTH OF RUNWAY 24 EXTENSION

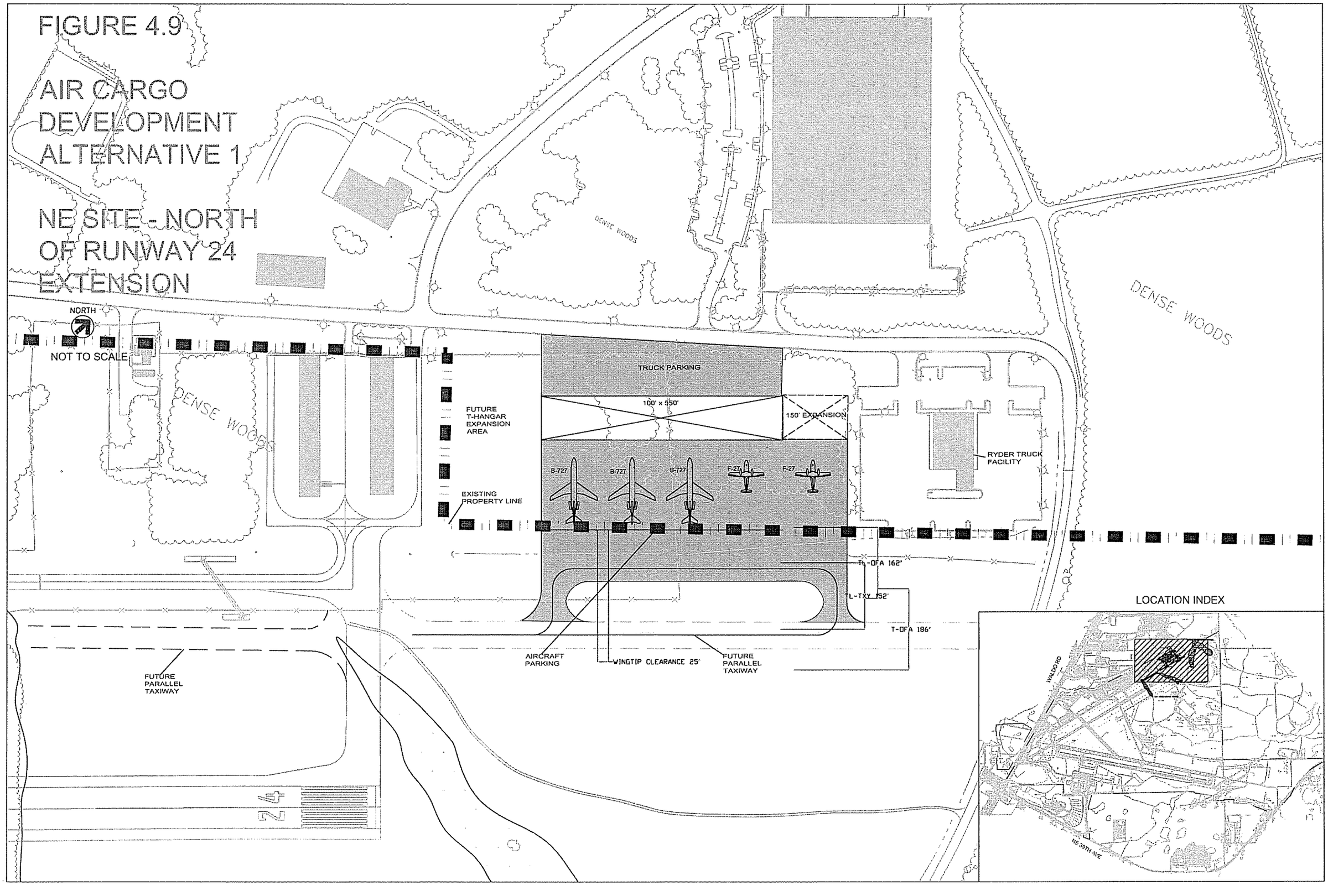
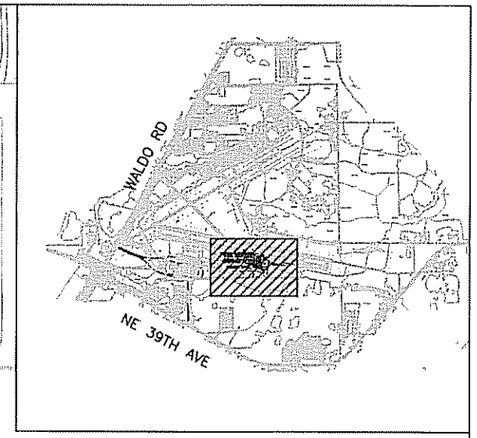


FIGURE 4.10

AIR CARGO DEVELOPMENT ALTERNATIVE 2

SE SITE - SOUTH OF RUNWAY 10/28



LOCATION INDEX

NORTH

NOT TO SCALE

TAXIWAY "E-3"

TAXIWAY "E"

TL-TXY 152'

TL-DFA 152'

AIRCRAFT PARKING AREA

F-27 F-27 B-727 B-727 B-727

CARGO BUILDING 625'x100'

TRUCK & EMPLOYEE PARKING 300' x 625'

ELECTRICAL VAULT

ATCT

NEW ACCESS ROAD

WETLANDS

4.4 Air Traffic Control Tower Location Alternatives

As the runway extension alternatives are developed, line-of-sight issues arise as the view between the potential end of Runway 24 and the ATCT is obstructed by trees and vegetation located in the middle of the airfield. Currently, the ATCT does not have a line-of-sight view of the northeastern end of Taxiway A leading to T-Hangars I and J on the northeastern portion of the airfield, and a portion of Runway 6/24 and Taxiway A is obstructed by the VORTAC station located in the middle of the airfield. As a result, a cursory shadow study has been conducted to determine the feasibility of the following alternatives. The following alternatives address this line-of-sight issue and are depicted in Figure 4-11. The evaluation criteria that will be examined for each ATCT alternative include the ability of the tower to meet facility requirements including line of site requirements, environmental impacts, vehicle access and impacts to any future airport expansion.

4.4.1 "No-Build" Alternative

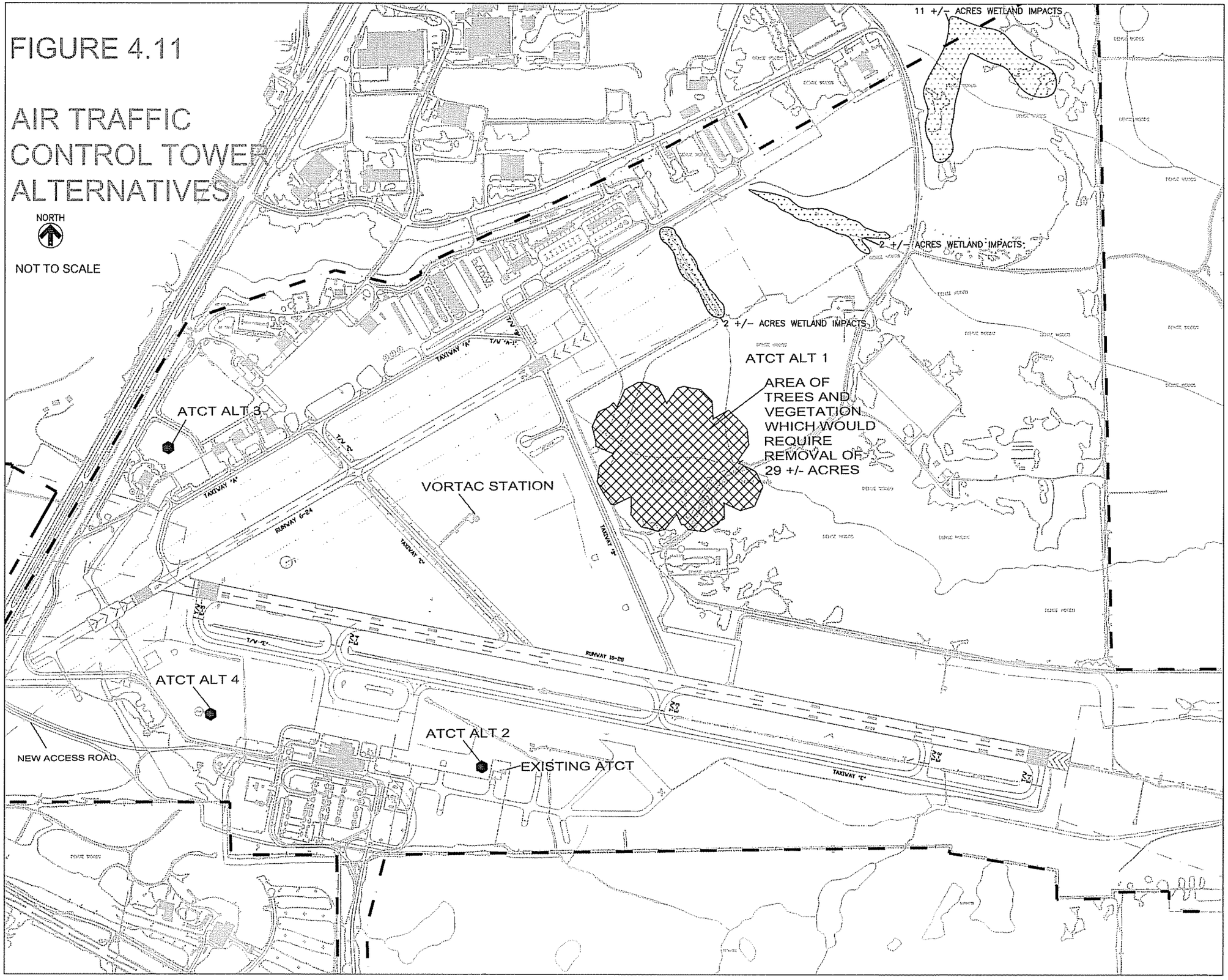
Maintaining the current ATCT facilities serves as the base alternative. The current ATCT cab floor elevation is 164 feet Mean Sea Level (MSL) or 37 feet Above Ground Level (AGL). The ground elevation is 127 feet MSL. In this alternative, once the planned runway extensions to Runway 6/24 are implemented, the line-of-sight between the ATCT and the approach area to Runway 24 will be obstructed by a wooded area that runs parallel to Taxiway B on the eastern section of GNV. This alternative does not meet current facility requirements due to line-of-sight restrictions between the ATCT and the VORTAC station, which obstructs portions of Runway 6/24 and Taxiway A. Currently, there are no environmental impacts associated with this alternative. Access to the ATCT is fair and is provided by an access road from the airline passenger terminal area.

4.4.2 Alternative ATC-1: Trim and/or Remove Trees and Vegetation Obstructing Line-of-Sight Between Runway 24 and ATCT

This alternative consists of trimming the tops of or removing approximately 29 acres of trees from the wooded area located between the ATCT and the approach area off the end of Runway 24. Currently, the tallest obstruction elevation between the ATCT and the Runway 24 end is a tree at 190 feet MSL. Environmental permits will be required for this alternative in order to remove the trees obstructing the line-of-sight. If the treetops were trimmed, this would require airport personnel to periodically trim the affected site as needed or required by ATC personnel. However, the removal of trees would still not mitigate the line of sight issues associated with the location of the VORTAC station. Once ongoing conservation easement discussions are concluded with the St. Johns River Water Management District, permitting land clearing of the trees should be pursued as a partial remediation of this issue.

FIGURE 4.11

AIR TRAFFIC CONTROL TOWER ALTERNATIVES



4.4.3 Alternative ATC-2: Increase Tower Height/Build New Tower in Proximity

This alternative consists of increasing the tower height at the same location or constructing a taller tower in the general proximity of the existing tower site. A preliminary shadow study has been conducted to determine the increase of the tower height to meet facility requirements. The line-of-sight analysis assumes that ATCT personnel eye level is approximately 5 feet above the ATCT cab floor. To meet line-of-site requirements to clear the VORTAC station at the midfield location, the tower cab floor elevation must be increased to 190 feet MSL or 63 feet AGL. To meet line-of-sight requirements to clear the tallest tree at the midfield location potentially obstructing the approach area of an extended Runway 24 end, the tower cab floor elevation must be increased to 290 feet MSL or 163 feet AGL. A combination of clearing the tallest trees obstructing line-of-site and increasing the ATCT height may be the most feasible and cost effective option under this alternative. The environmental impact will be minimal in this alternative since the tower would be constructed in generally the same location. Also, as with the previous ATCT alternatives, access will continue to be provided by an access road from the terminal area.

4.4.4 Alternative ATC-3: Relocate ATCT to Flight Service Station Location on the West Portion of the Airfield

This alternative involves the relocation of the ATCT to the west side of the airfield to allow an unobstructed view of both Runways 6/24 and 10/28 with a tower cab floor height of 60 feet AGL. However, some areas within the General Aviation area will be obstructed due to the associated buildings and facilities. In this alternative, the tower will be located north of the Flight Service Station and will have direct roadway access at NE 40th Terrace and Waldo Road. As in the previous alternative, environmental impact would be minimal since the site is located on cleared uplands. This location would also provide potential greater interaction between tower and flight service personnel.

4.4.5 Alternative ATC-4: Relocate ATCT to West of the Passenger Terminal

This alternative involves the relocation of the ATCT to the west side of the airfield to allow an unobstructed view of both Runways 6/24, 10/28, and all of the General Aviation area, with a tower cab floor height of 60 feet AGL. In this alternative, the tower will be located west of the Passenger Terminal and will have direct roadway access via the proposed passenger terminal access road. As in the previous alternative, environmental impact would be minimal since the site is located on cleared uplands.

Table 4-3
ATCT DEVELOPMENT CONCEPT

ATCT DEVELOPMENT CONCEPT	EVALUATION CONSIDERATIONS
No Build Alternative	**Meets Facility Requirements** Does not solve line of sight issues **Environmental Impacts** No environmental impacts **Vehicle Access** Good vehicle access **Impact to Future Development** Could potentially have minor impact on future aviation development expansion along Taxiway E.
Alt ATC-1 Trim / remove trees obstructing line of sight	**Meets Facility Requirements** Does not solve line of sight issue with VORTAC **Environmental Impacts** Minor impact from tree removal **Vehicle Access** Good vehicle access **Impact to Future Development** Could potentially have minor impact on future aviation development expansion along Taxiway E.
Alt ATC-2 Increase tower height/construct new tower in present location	**Meets Facility Requirements** Solves line of sight issue with trees and VORTAC **Environmental Impacts** Minor impact from tree removal **Vehicle Access** Good vehicle access **Impact to Future Development** Could potentially have minor impact on future aviation development expansion along Taxiway E.
Alt ATC-3 Relocate ATCT to Flight Service Station Location West on the West Portion of the Airfield	**Meets Facility Requirements** Solves line of sight issue with trees and VORTAC. Some areas within general aviation hangar development will not be visible. **Environmental Impacts** Minor construction related impacts **Vehicle Access** Good vehicle access from Waldo Road **Impact to Future Development** Minimal impact.
Alt ATC-4 Relocate ATCT Along New Access Road West of the Terminal	**Meets Facility Requirements** Solves line of sight issue with trees and VORTAC **Environmental Impacts** Minor construction related impacts **Vehicle Access** Good vehicle access from new airline passenger terminal access road **Impact to Future Development** Could be considered a visual impact on the terminal renovations due to its location along the new access road. Could potentially have minor impact on future non-aeronautical development along new airline terminal access road.

Source: RS&H Analysis, 2004

4.5 General Aviation (GA) Area

The development plan within the general aviation area is based on the expansion of GA facilities in the northwest and northeast quadrants of the airfield and is shown in Figures 4-12, 4-13 and 4-14. Consideration of fully relocating the GA facilities from their present location was discarded because the facilities that currently exist will not reach the end of their useful life until well after the planning period. Prudent land use planning suggests that it is more efficient to maintain and expand current GA facilities in one general location versus having a split operation. The general aviation development has been divided into three primary areas including apron/tie-down expansion, T-Hangar development and corporate hangar development, illustrated in Figure 4-12.

4.5.1 Apron Expansion

As previously discussed in Chapter 1 of this Master Plan Update, two general aviation aprons are available at the Gainesville Regional Airport for the purpose of serving GA aircraft. The primary apron (west GA apron) serves both based and transient aircraft and is located immediately adjacent to Taxiway A, southeast of the GA terminal building. The apron is accessed using Taxiway A and Taxiway C. The area of this apron measures approximately 40,000 square yards and is in excellent condition. Approximately 31,500 square yards of the apron is composed of asphalt and was recently rehabilitated. The remaining 8,500 square yards is composed of concrete. Included within this area are 44 tie-downs (anchor type and marked) and three helicopter parking positions. For transient purposes, the apron can accommodate an additional 15 to 18 corporate aircraft. The secondary apron (east GA Apron) is also utilized by University Air Center and is positioned immediately adjacent to Taxiway A. The 30,000-square-foot asphalt apron provides 41 aircraft tie-downs and two helicopter parking positions. Facility requirements indicate that there is sufficient ramp space for the 20 year planning horizon. If additional apron space is needed during the 20-year planning period, land between T-Hangar Row A and T-hangar Row D can be developed as additional apron space. Also, as discussed previously in the Runway 6/24 analyses, Taxiway A can be relocated from 525 feet from runway centerline to 400 feet. This would allow for more apron expansion and allow for more Tie-down parking locations. No land acquisition is required for additional apron expansion within airport property. Environmental impacts associated with this site are minimal and occur on uplands. Taxiway and Taxilane access within the current general aviation area is good.

FIGURE 4.12

GENERAL AVIATION DEVELOPMENT

NORTH

NOT TO SCALE

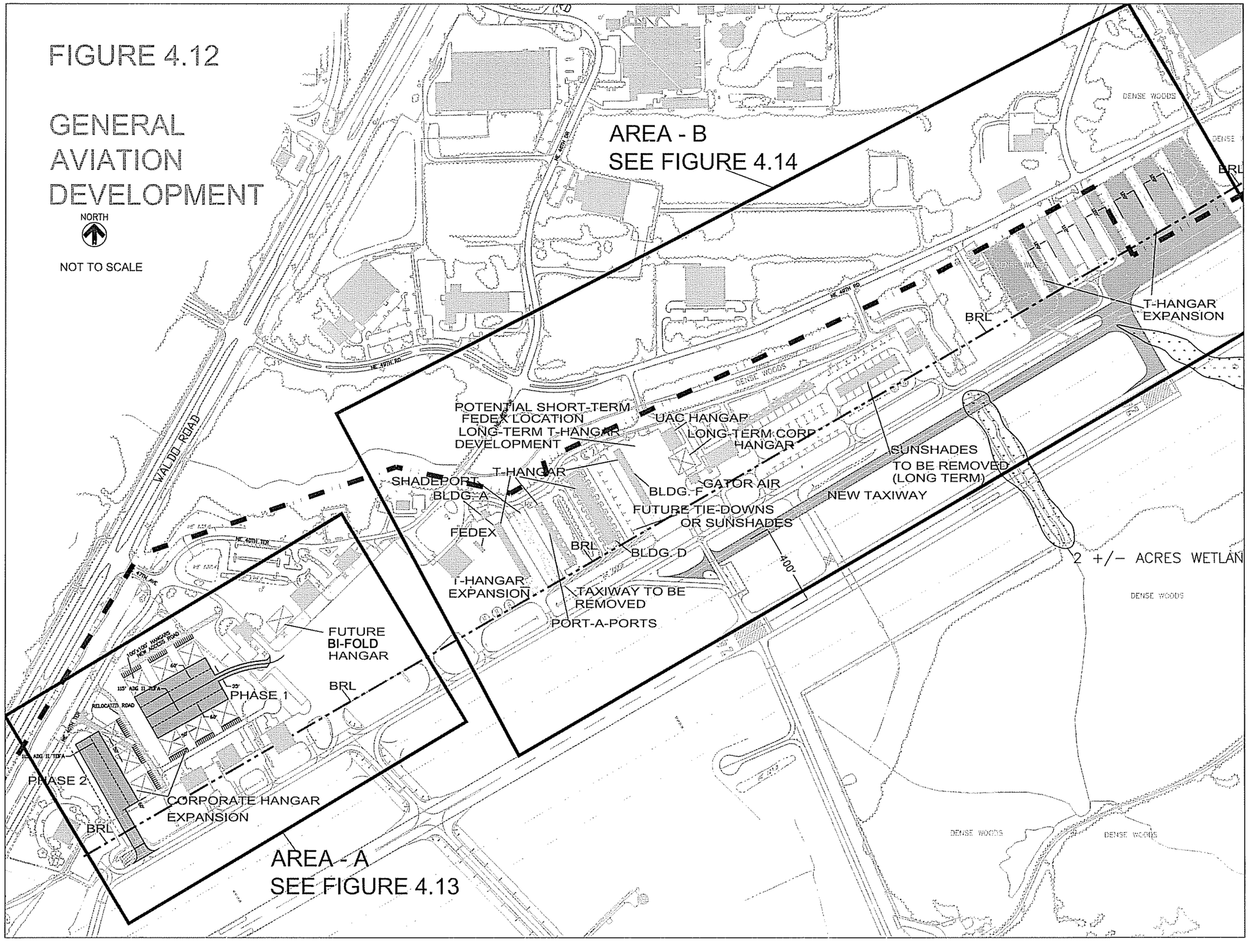


FIGURE 4.13

GENERAL AVIATION DEVELOPMENT AREA - A

NORTH

SCALE: 1"=50'

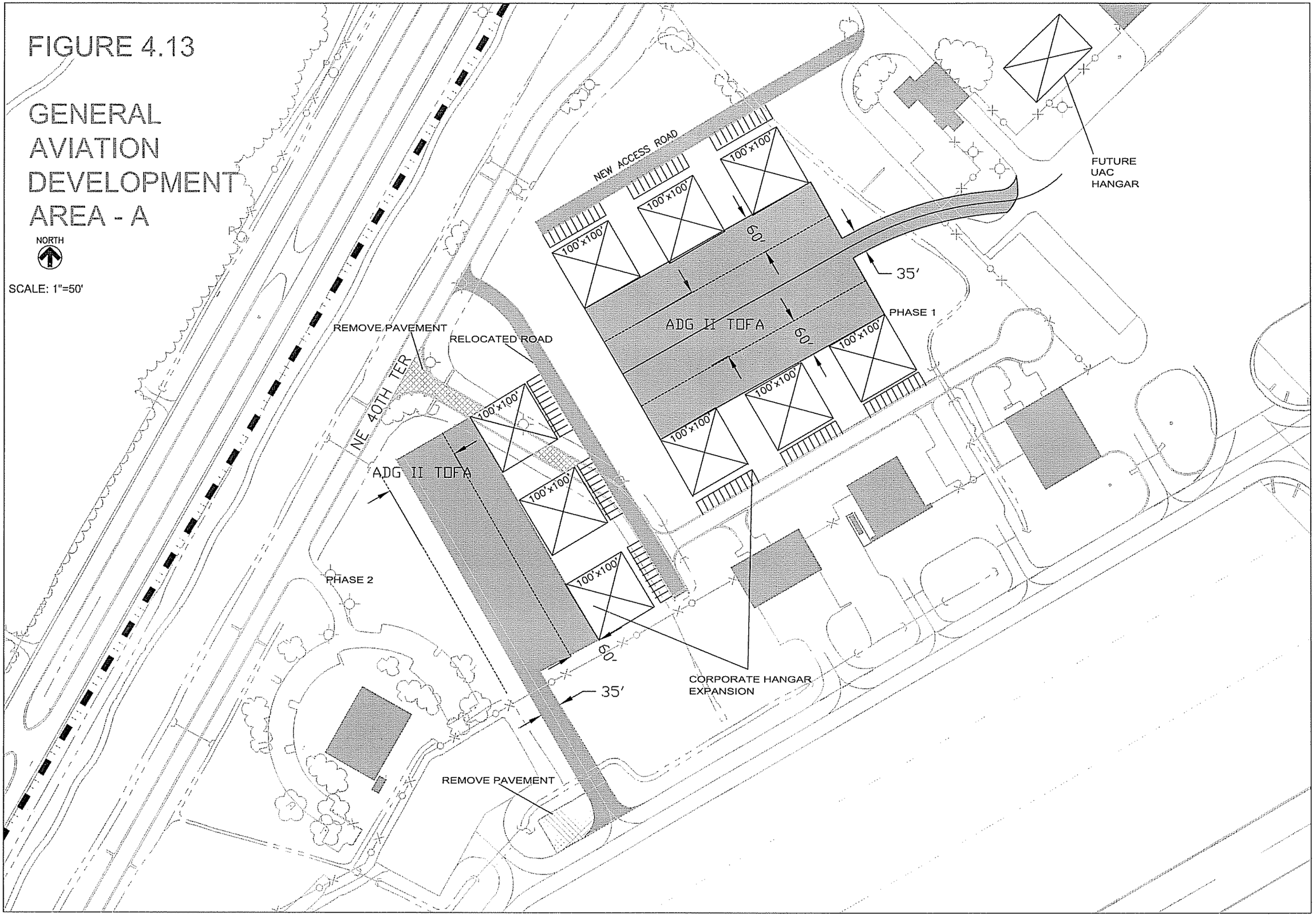


FIGURE 4.14

GENERAL AVIATION DEVELOPMENT AREA - B

NORTH

SCALE: 1"=100'

NE 49TH DR

NE 49TH RD

DENSE WOODS

BRL

BLDG J

BLDG I

120'

112'

60'

FUEL FARM

T-HANGAR EXPANSION

TAXIWAY TO BE REMOVED

525'

UAG HANGAR

POTENTIAL SHORT-TERM FEDEX LOCATION
LONG-TERM T-HANGAR DEVELOPMENT

LONG-TERM CORP HANGAR

PROPERTY BOUNDARY

T-HANGAR

BLDG F

GATOR AIR

SUNSHADES TO BE REMOVED (LONG TERM)

NEW TAXIWAY

BLDG A

FUTURE TIE-DOWNS OR SUNSHADES

FEDEX

BRL

BLDG D

400'

T-HANGAR EXPANSION

TAXIWAY TO BE REMOVED

PORT-A-PORTS

2 +/- ACRES WETLAND IMP

DENSE WOODS

4.5.2 T-Hangar Expansion

Additional T-Hangar sites are shown northeast of and adjacent to T-Hangars I and J. Approximately three T-Hangars can be constructed in the site northeast of T-Hangars I and J and one T-Hangar can also be constructed southwest of T-Hangars I and J. The T-hangars are shown with 120 feet of separation that exceeds FAA taxilane separation standards but allows for adjustments for grading and stormwater design if necessary. In addition, if parallel Taxiway A is relocated to 400 feet from runway centerline, T-Hangars I and J can be extended to accommodate an additional one or two T-hangars. No land acquisition is required due to the alternative site remaining on airport property. Environmental impacts include the removal of approximately ½ acre of woods and uplands, however this would occur within the current perimeter fence line. Aircraft would traverse this alternative site via an extension of Taxiway A and associated connector taxiways. In the existing T-Hangar locations consisting of T-Hangars A, D, F and the Port-A-Ports, additional construction of new T-Hangars cannot be supported due to minimum separation standards that cannot be obtained as well as flood plan issues.

4.5.3 Corporate Hangar Expansion

Corporate Hangars are currently located on the southwest quadrant of GNV along Taxiway A and on the west GA ramp. Currently, University Air Center is constructing a new 12,000-square-foot hangar east of the ARFF facility. In order to maintain similar general aviation land usage, an additional corporate hangar development site is proposed north of the existing corporate hangar site that is located adjacent to Taxiway A. The proposed site will allow approximately six 10,000-square-foot hangars (100-foot by 100-foot hangars, with associated apron and parking areas). This site will require the construction of a new entrance/exit taxilane in front of the existing ARFF facility. Long-term expansion is possible between the proposed site and the Flight Service Station facility located on the southwest quadrant of GNV. This site will allow for approximately three additional 10,000-square-foot hangars with associated apron and parking, and will require the current corporate hangar access road to be realigned. Aircraft access will be provided by a connector taxiway from Taxiway A.

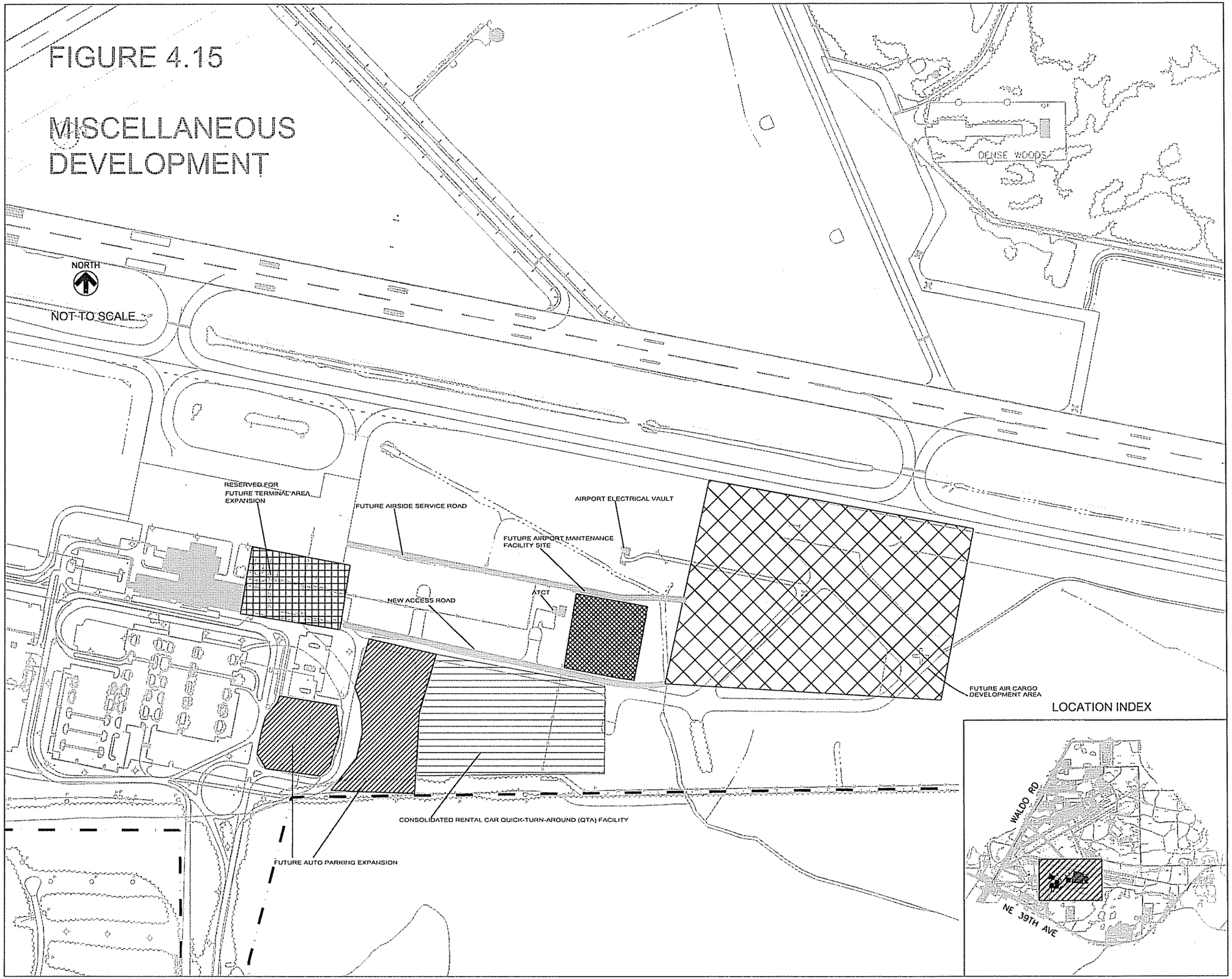
4.6 Miscellaneous Development

Potential locations for the consolidated rental car Quick Turn-Around (QTA) facility and airport maintenance building is shown on Figure 4-15.

After reviewing potential sites surrounding the airline passenger terminal, a site for the consolidated rental car QTA cleaning and maintenance facility was selected East of the existing airline passenger terminal complex. The site is accessed via the existing road connecting the current ATCT. This location provides good access to the rental car ready/return lot as well as a potential for future expansion. Utilities to the site should be readily obtainable and environmental impacts should be minimal as the proposed site is on previously disturbed ground.

FIGURE 4.15

MISCELLANEOUS DEVELOPMENT



The proposed site for the airport maintenance facility is also located east of the airline passenger terminal apron and is near the consolidated rental car QTA facility to minimize infrastructure costs. The proposed site is on the north side of the access road to allow direct access to the airfield, and includes the related building infrastructure, maintenance vehicle parking and facilities for equipment storage. A new airside service road is also proposed that would allow airside access between the terminal aircraft apron, the GNV maintenance facility and the proposed air cargo complex. The proposed new service road would allow direct airside access for those vehicles requiring access to this area without having to enter/exit several access control gates.

4.7 Alternatives Summary

GNV development alternatives were presented and discussed with both the Technical Advisory Committee and Policy Advisory Committee. The committees recommended that the following alternatives be further refined in this Airport Master Plan Update:

- **Runway**
- **Air Cargo**
- **ATCT**
- **General Aviation**
- **Misc. Development**

CHAPTER 5
ENVIRONMENTAL OVERVIEW

5.1 Introduction

An airport is an important transportation resource that provides both metropolitan and rural areas with access to the national transportation system, as well as being a direct stimulator to local and regional economies. Because of the size and nature of an airport, it may generate impacts to the natural, social and economic systems in the area. Through careful planning and implementation of mitigation measures, an airport can provide valuable transportation services, economic development and be compatible with the surrounding environment.

As part of this Airport Master Plan Update for the Gainesville Regional Airport (GNV), an overview of environmental conditions at the facility has been prepared to examine the potential impacts of the proposed airport development alternatives. The primary emphasis of this section is to present the general environmental conditions at GNV, and use this information to determine what specific projects and environmental concerns may require further study in federal-level Environmental Asessments, Environmental Impact Statement or other specialized environmental study. In order to accomplish this objective and present this information in a concise working document, each environmental impact category described in Federal Aviation Administration (FAA) Order 5050.4A *Airport Environmental Handbook* was analyzed and the results presented in this section

The major airport development projects recommended in this Master Plan Update include the following:

- Runway 6-24 Extension to 6500 feet.
- Air Cargo Complex Development.
- Rental Car Quick Turn Around Facility.
- Terminal and Auto Parking Expansion.
- New Airport Entrance From Waldo Road.
- General Aviation Development.

The primary emphasis of this environmental overview is to present the general environmental conditions at GNV and to provide information on potential environmental impacts related to airport development. This information will be used to determine what specific projects and environmental concerns may require further study in a federal-level Environmental Assessment (EA), Environmental Impact Statement (EIS) or other specialized environmental study in the future.

This environmental overview has been developed using information supplied through coordination with local, regional, state and federal governmental personnel and other offices involved with environmental planning in the vicinity of GNV. A list of these agencies is presented in Appendix B.

5.2 Federal Environmental Requirements

The National Environmental Policy Act (NEPA) of 1969 provides for the study and documentation of the impacts of any proposed federal action. NEPA, legislative mandates and Presidential Executive Orders outline specific federal agency environmental review requirements. The Federal Aviation Administration (FAA) is typically the lead governmental agency that is obligated to review major airport development and improvement actions proposed by an airport sponsor, as most major projects involve some form of funding. Grant requests are made by the airport sponsor to the FAA. As a result, the FAA must review the project for impacts prior to providing funding. It is mandated by Congress, and implemented through NEPA, that adverse environmental impacts be avoided or minimized to the greatest possible extent when federal dollars are being used. NEPA requires that alternatives be considered to avoid or reduce potential adverse affects, to identify necessary mitigation measures and to document public participation in the decision-making process. The guiding document in airport environmental matters is FAA Order 5050.4A, *Airport Environmental Handbook*.

Three levels of FAA environmental review of development projects are outlined in Order 5050.4A. Each review is dependent upon the level of development being proposed. The three levels of FAA environmental review are:

- Those development projects that are normally categorically excluded (CE) from further environmental analysis.
- Those development projects normally requiring an Environmental Analysis (EA).
- Those development projects normally requiring an Environmental Impact Statement (EIS).

5.2.1 Categorical Exclusions

FAA Order 5050.4A defines certain airport development projects as being categorically excluded from formal environmental study. When a project is identified as a Categorical Exclusion (CE), the proposed airport development project is allowed to proceed without further environmental studies. In 5050.4A, airport development actions normally categorically excluded from environmental review (EA or EIS) include:

- Runway, taxiway, apron or loading ramp construction or repair work including extension, strengthening, reconstruction, resurfacing, marking, grooving, fillets and jet blast facilities and new heliports on existing airports (except where such action would create environmental impacts off airport property).
- Installation or upgrading of airfield lighting systems, including runway end identifier lights, visual approach aids, beacons and electrical distribution systems.
- Installation of miscellaneous items including segmented circles, wind or landing direction indicators, measuring devices or fencing.
- Construction or expansion of passenger handling facilities.
- Construction, relocation or repair of entrance and service roads.
- Grading or removal of obstructions on airport property and erosion control actions with no off-airport impacts.

- Landscaping generally, and landscaping or construction of physical barriers to diminish impact of airport blast and noise.
- Projects to carry out noise compatibility programs.
- Land acquisition and relocation associated with any of the above items.
- Federal release of airport land.
- Removal of displaced thresholds.

5.2.2 Environmental Assessment

An Environmental Assessment (EA) examines potential impacts to determine whether the impacts exceed a predefined threshold of significance or create sufficient controversy to require the FAA to prepare a full EIS, or if the FAA can provide a Finding of No Significant Impact (FONSI). The FAA will either issue a FONSI as a result of the EA review process and the proposed airport development can proceed, or it will determine that an EIS must be prepared. Actions normally requiring an EA include the following:

- A new airport location.
- A new runway.
- A major runway extension.
- Runway strengthening that would result in a 1.5 DNL (the average day-night sound level) increase in noise impacting a sensitive area within the 65 DNL contour.
- Construction or relocation of entrance or service road connections to public roads which adversely affect the capacity of such public roads.
- Land acquisition associated with any of the above items including land acquisition that would result in the relocation of residential units when there is evidence of insufficient compatible replacement dwellings, major disruption of business activities, or acquisition which involves land covered under Section 4(f) of the DOT Act.
- Establishment or relocation of an ILS or an approach lighting system.
- An airport development action which involves extraordinary circumstances or involves Section 4(f) lands; land areas or structures eligible for or designated as significant, historical, archeological, architectural or cultural significance; land acquisition for conversion of farmland; impacts to wetlands, coastal areas, or floodplains; or endangered or threatened species.

5.2.3 Environmental Impact Statement

If proposed development will likely result in a significant environmental impact, an Environmental Impact Statement (EIS) may be required. An EIS is a thorough review process that provides federal, state, regional, local and other agencies an opportunity to be a participant in the project as a coordinating or commenting agency. The detail of the EIS is determined either by the EA, or during the FAA environmental scoping process. Full evaluation of the proposed project or action, as well as all reasonable and prudent alternatives, must be undertaken. Actions normally requiring an EIS include:

- The development of a first-time airport layout plan, or airport location approval for a commercial service airport in a Standard Metropolitan Statistical Area (SMSA).
- Financial participation in, or airport layout plan approval of, a new runway capable of handling air carrier aircraft at a commercial service airport in an SMSA.

5.3 Federal, State, Regional and Local Environmental Coordination

In addition to satisfying FAA regulations, proposed airport development also needs to comply with federal, state, regional and local environmental and permitting requirements, and will require approval by those agencies. Potential federal, state, regional and local agencies, other than the FAA and FDOT, that would be involved in the review process for GNV include:

- City of Gainesville
- Alachua County
- City of Gainesville Engineering Department
- City of Gainesville Planning Department
- Florida Department of Environmental Protection
- St Johns River Water Management District
- United States Fish and Wildlife Service
- United States Army Corps of Engineers - Jacksonville District
- United States Department of the Interior, Bureau of Land Management - Eastern States Office
- United States Department of Agriculture - Forest Service
- National Park Service Southeast Support Office
- Florida Department of State, Division of Historical Resources
- National Marine Fisheries Service, Southeast Regional Office (SERO), Protected Resources Division
- Public Affairs Office, United States Environmental Protection Agency
- Federal Emergency Management Agency
- Florida Department of Community Affairs, Florida Coastal Zone Management Program
- City of Gainesville Department of Growth Management
- Florida Department of Community Affairs, Florida Coastal Zone Management Program
- North Central Florida Regional Planning Council
- North Central Florida Transportation Metropolitan Planning Organization

5.4 Airport Master Plan Environmental Overview

The environmental overview prepared for this Master Plan Update is neither intended nor required to be prepared at the level of detail required for an EA or EIS. Its intended purpose is to provide a review of the environmental issues that may need to be considered in a future formal environmental study.

A preliminary analysis of environmental conditions related to the Airport's recommended development alternatives was evaluated in relation to the 21 impact categories outlined in FAA Order 5050.4A. These impact categories include:

- Noise
- Compatible Land Use
- Social Impacts
- Induced Socioeconomic Impacts
- Air Quality
- Water Quality
- DOT Section 4(f) Lands
- Historic, Architectural, Archaeological and Cultural Resources
- Biotic Communities
- Endangered and Threatened Species of Flora and Fauna
- Wetlands
- Floodplains
- Coastal Zone Management Program
- Coastal Barriers
- Wild and Scenic Rivers
- Prime and Unique Farmland
- Energy Supply and Natural Resources
- Light Emissions
- Solid Waste Impacts
- Construction Impacts
- Other Considerations

Discussion is provided below on the potential impacts to these environmental categories resulting from the proposed Airport master plan development.

5.4.1 Noise

Noise is defined as "undesirable sound" and is one of the major concerns of both airport owners and airport neighbors. Various measurement methods (known as noise metrics) have been developed to measure sound. Aircraft sound levels are also measured using the A-weighted decibel scale (dBA). This noise metric was developed because it approximates how the human ear hears sound.

Aircraft noise, while measured in dBA, is a cumulative measurement over a 24-hour period, based on annual traffic activity which is referred to as the average day-night sound level (or

DNL). The EPA has identified DNL as the most appropriate means of evaluating airport noise. Most public agencies addressing noise exposure, including FAA, the Department of Defense (DOD) and the Department of Housing and Urban Development (HUD), have formally adopted DNL as the most appropriate measure to determine noise impacts. FAA requires that DNL be used in describing cumulative noise exposure and in identifying aircraft noise/land use compatibility issues.

DNL sound levels can be measured through noise monitoring or can be calculated through computer noise modeling. Most airport noise studies utilize computer-generated DNL estimates depicted in terms of equal-exposure noise contours (similar to contour lines of equal elevation on a topographic map). The computer program used to develop average annual day-night aircraft noise contours is the FAA's Integrated Noise Model (INM). These noise contours depict noise impact areas based on input of an airport's activity levels, fleet mix, day-night operations percentage, approach and takeoff profiles and flight tracks. The purpose of an airport noise analysis is to examine existing and future noise impacts on the nearby land uses and surrounding community.

Noise control plans have been successfully implemented at both the national and local levels. The FAA has reduced aircraft noise by mandating retirement of aircraft that do not meet established noise reduction standards. At the local level, cities and counties have successfully formulated and implemented land use controls that have reduced the number of incompatible land uses in the vicinity of airports. However, there remains a need for a standardized method of determining the impact of noise on airports. In response to this need, the FAA established a program to produce noise compatibility studies. This program is implemented through FAR Part 150.

FAR Part 150 includes the following elements:

- Provision for the development and submission to the FAA of Noise Exposure Maps (NEM) and Noise Compatibility Programs (NCP) by airport owners;
- Use of standard noise units, methods and analytical techniques;
- Identification of land uses that are normally compatible or incompatible with various noise levels in the vicinity of an airport; and
- Procedures and criteria for approval or disapproval of noise compatibility programs by the FAA.

The FAA requires that the NEM show the 65, 70 and 75 DNL contours. Of these three categories, the 75 DNL noise contour reflects the most severe impact, while the 65 DNL noise contour reflects the least severe impact. Human tolerance to noise has been determined to be below 65 DNL, and land areas outside the 65 DNL noise contour are considered to be non-noise-impacted, compatible land uses. At or above 65 DNL, measures should be taken to mitigate sound to limit or eliminate interference with human activities. Residential, and some business and commercial, development is not normally compatible within the 65 to 75 DNL noise contour unless sound insulation or other mitigating actions are taken. It is recommended that the Airport own all land above 75 DNL to ensure compatible land uses are maintained.

Table 5.1 provides a detailed listing of normally compatible land uses based on FAR Part 150. However, the responsibility for determining the acceptable and permissible land uses remains with the local authorities (i.e., City of Gainesville and Alachua County). As the airport owner

and sponsor, Gainesville-Alachua County Regional Airport Authority is charged by FAA grant assurances to ensure that local ordinances provide the necessary protection for airport property. Section 5.4.2 further examines off-airport land use compatibility.

Table 5-1
LAND USE COMPATIBILITY GUIDELINES WITH YEARLY DAY-NIGHT AVERAGE SOUND LEVELS
GAINESVILLE REGIONAL AIRPORT - MASTER PLAN UPDATE

	Yearly Day-Night Average Sound Level (DNL) in Decibels					
Land Use	**Below 65**	**65-70**	**70-75**	**75-80**	**80-85**	**Over 85**
Residential						
Residential, Other than Mobile Homes and Transient Lodgings	Y	N(1)	N(1)	N	N	N
Mobile Home Parks	Y	N	N	N	N	N
Transient Lodging	Y	N(1)	N(1)	N(1)	N	N
Public Use						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and Nursing Homes	Y	25	30	N	N	N
Churches, Auditoriums and Concert Halls	Y	25	30	N	N	N
Governmental Services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
Commercial Use						
Offices, Business and Professional	Y	Y	25	30	N	N
Wholesale and Retail-Building Materials, Hardware and Farm Equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail Trade-General	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
Manufacturing and Production						
Manufacturing, General	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and Optical	Y	Y	25	30	N	N
Agriculture (Except Livestock) and Forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock Farming and Breeding	Y	Y(6)	Y(7)	N	N	N
Mining and Fishing, Resource Production and Extraction	Y	Y	Y	Y	Y	Y
Recreation						
Outdoor Sports Arenas and Spectator Sports	Y	Y(5)	Y(5)	N	N	N
Outdoor Music Shells, Amphitheaters	Y	N	N	N	N	N
Nature Exhibits and Zoos	Y	Y	N	N	N	N
Amusements Parks, Resorts and Camps	Y	Y	Y	N	N	N
Golf Courses, Riding Stables and Water Recreation	Y	Y	25	30	N	N

Source: FAR Part 150

Key: SLUCM: Standard Land Use Coding Manual.
- Y (Yes): Land use and related structures compatible without restrictions.
- N (No): Land use and related structures are not compatible and should be prohibited.
- NLR: Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.
- 25, 30 or 35: Land use and related structures generally compatible; measures to achieve NLR of 25, 30 or 35 dB must be incorporated into design and construction of structure.

Notes:
(1) Where the community determines that residential or school use must be allowed, measures to achieve outdoor to indoor NLR of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as five, ten or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year-round. However, the use of NLR criteria will not estimate outdoor noise problems.
(2) Measure to achieve NLR 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.
(3) Measures to achieve NLR 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.
(4) Measures to achieve NLR 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise sensitive areas or where the normal level is low.
(5) Land use compatible provided special sound reinforcement systems are installed.
(6) Residential buildings require a NLR of 25.
(7) Residential buildings require a NLR of 30.
(8) Residential buildings not permitted.

Updated aircraft noise contours were developed for GNV following the methodology outlined in the FAA's INM version 6.0. The following assumptions were made in preparing the noise contours:

Existing (2003) noise exposure contours:

- Existing runway configuration (Runways 10-28 and 6-24).
- Runway utilization percentages - 2003 (10-28 vs. 6-24)

Air Carrier	100% /0%
Business Jet	90% / 10%
Turboprop	20% / 80%
Light Twin	20% / 80%
Single Engine	20% / 80%
Military	90% / 10%

- Aviation Activity - 81,056 annual total aircraft operations.
- Air Carrier Fleet Mix – 75 percent Stage 3 aircraft.

Year 2023 noise exposure contours**:**

- Existing runway configuration with Runway 6-24 extended to 6500 feet.
- Runway utilization percentages - 2023 (10-28 vs. 6-24)

Air Carrier	80% / 20%
Business Jet	50% / 50%
Turboprop	20% / 80%
Light Twin	20% / 80%
Single Engine	20% / 80%
Military	80% / 20%

- Aviation Activity - 125,992 annual total aircraft operations.
- Air Carrier Fleet Mix – 100 percent Stage 3 aircraft.

Existing (2003) Noise Contours

Figure 5-1 depicts the existing INM-generated airport noise contours for the Gainesville Regional Airport. Portions of the Airport's 65 DNL extend off airport property. The 65 DNL is 557± acres in size. A total of 404± acres are located on airport property (72%) with 153± acres located off airport property (28%).
The 70 DNL is 211± acres in size and is located entirely on airport property. The 75 DNL is 234± acres in size and is located entirely on airport property.

Future (2023) Noise Contours

Figure 5-2 depicts the INM-generated airport noise contours for the Year 2023. Portions of the Airport's 65 DNL extend off airport property. The 65 DNL is 768± acres in size. A total of 500± acres are located on airport property (65%) with 268± acres located off airport property (35%). The 70 DNL is 302± acres in size. A total of 299± acres are located on airport property (99%) and 3± acres are located off airport property (1%). The 75 DNL is 337± acres in size and is located entirely on airport property.

The existing land-use surrounding GNV is considered compatible according to the standards outlined in FAR part 150. The FAA encourages Airport's to acquire land within the 65 DNL to discourage incompatible development. The following are land acquisition recommendations due to noise for the Gainesville Regional Airport:

- 139± acres within the approach to Runway 10
- 11± acres along the southwest quadrant as shown in Figure 5-2
- 4± acres along the western runway as shown in Figure 5-2

5.4.2 Compatible Land Use Analysis

The regulation of land uses surrounding a public-use airport is critical to the long-term ability of the airport to serve the local community and the air transportation system. Local government land use regulations are the primary method of protecting airports from incompatible development in areas surrounding airports. In Florida, it is recognized that development constituting a hazard to air navigation and land uses sensitive to airport operations are contrary to public interest.

Figure 5-1
2003 NOI5SE CONTOURS

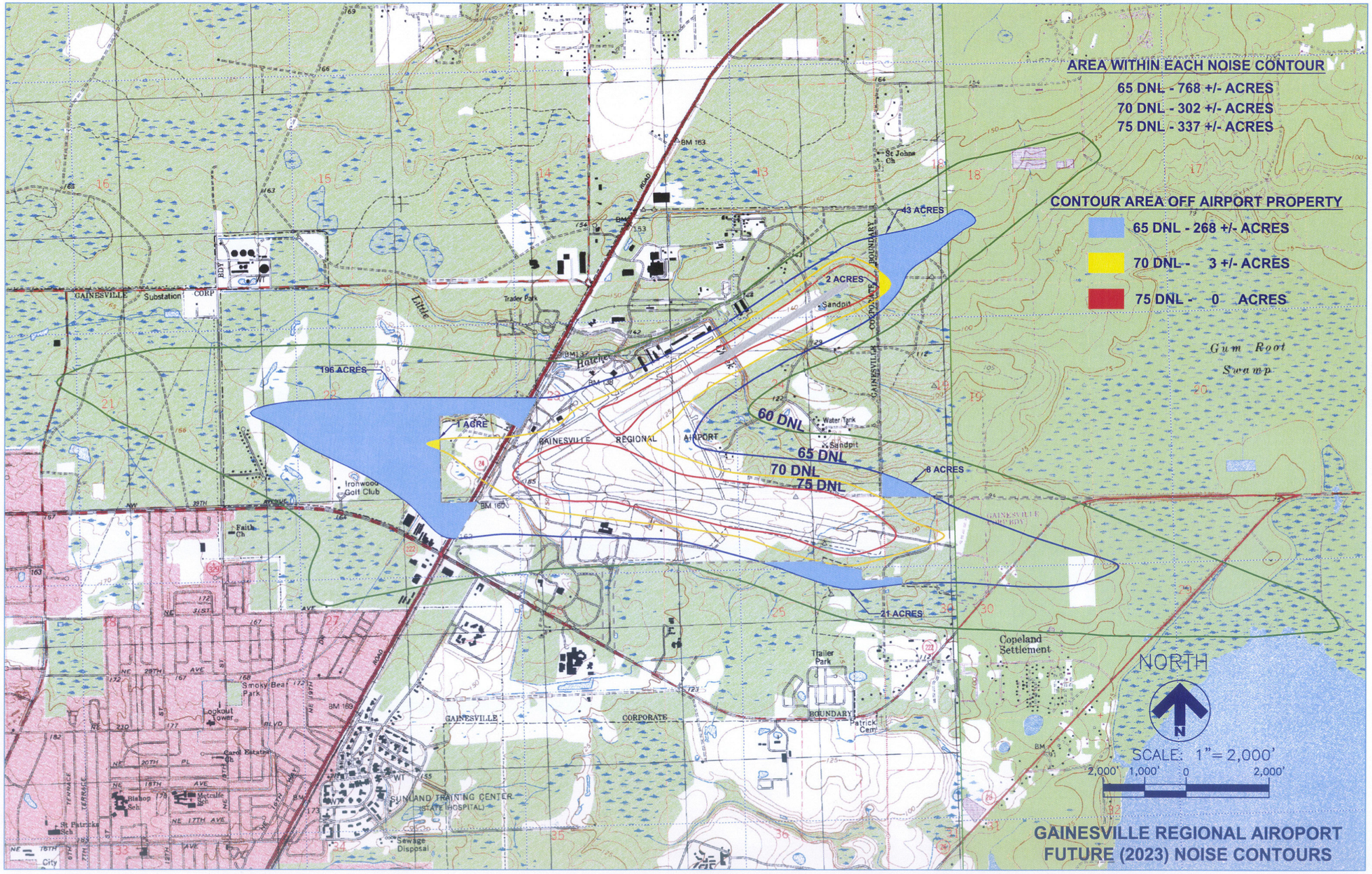
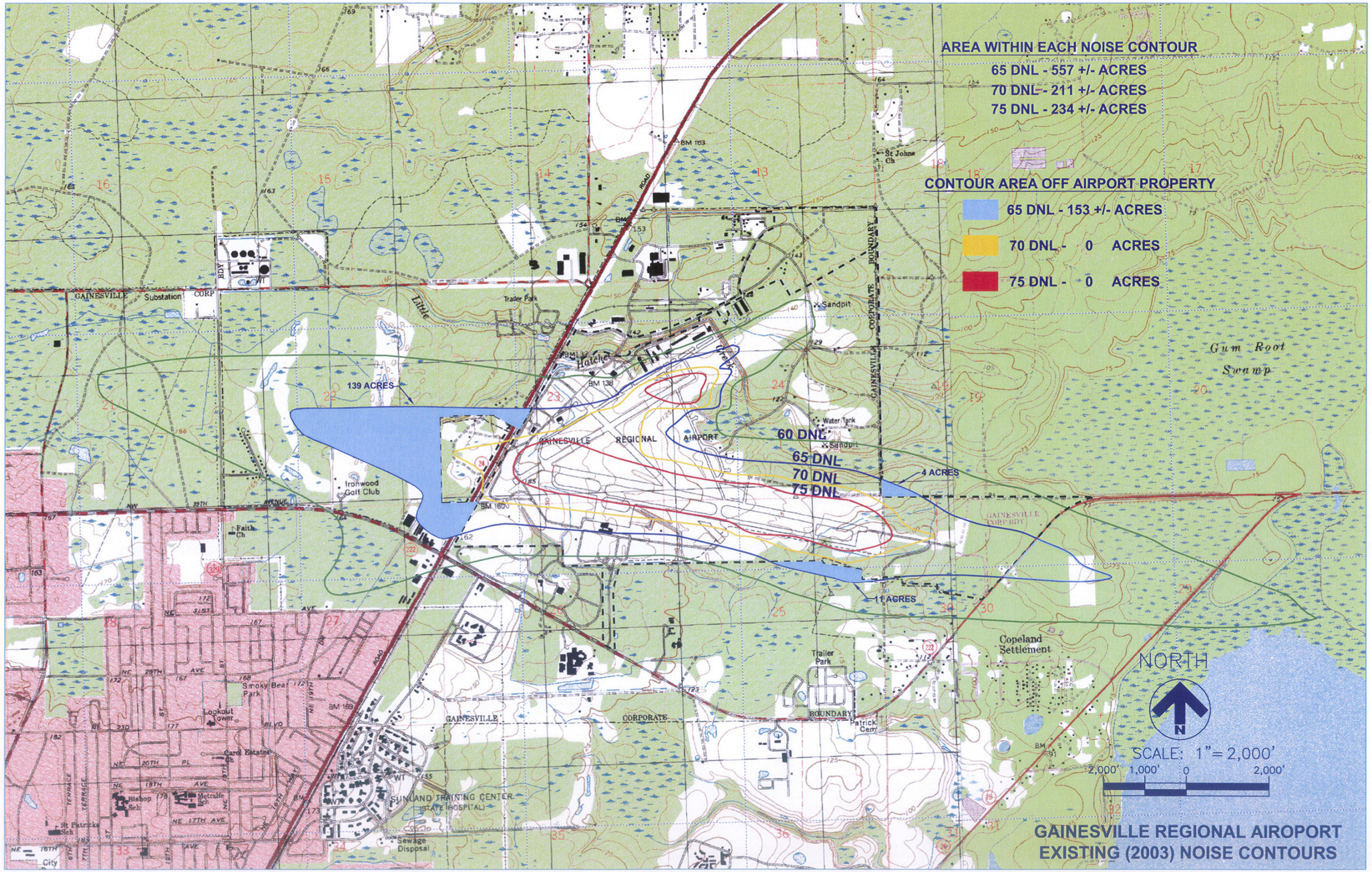


Figure 5-2
2023 NOISE CONTOURS



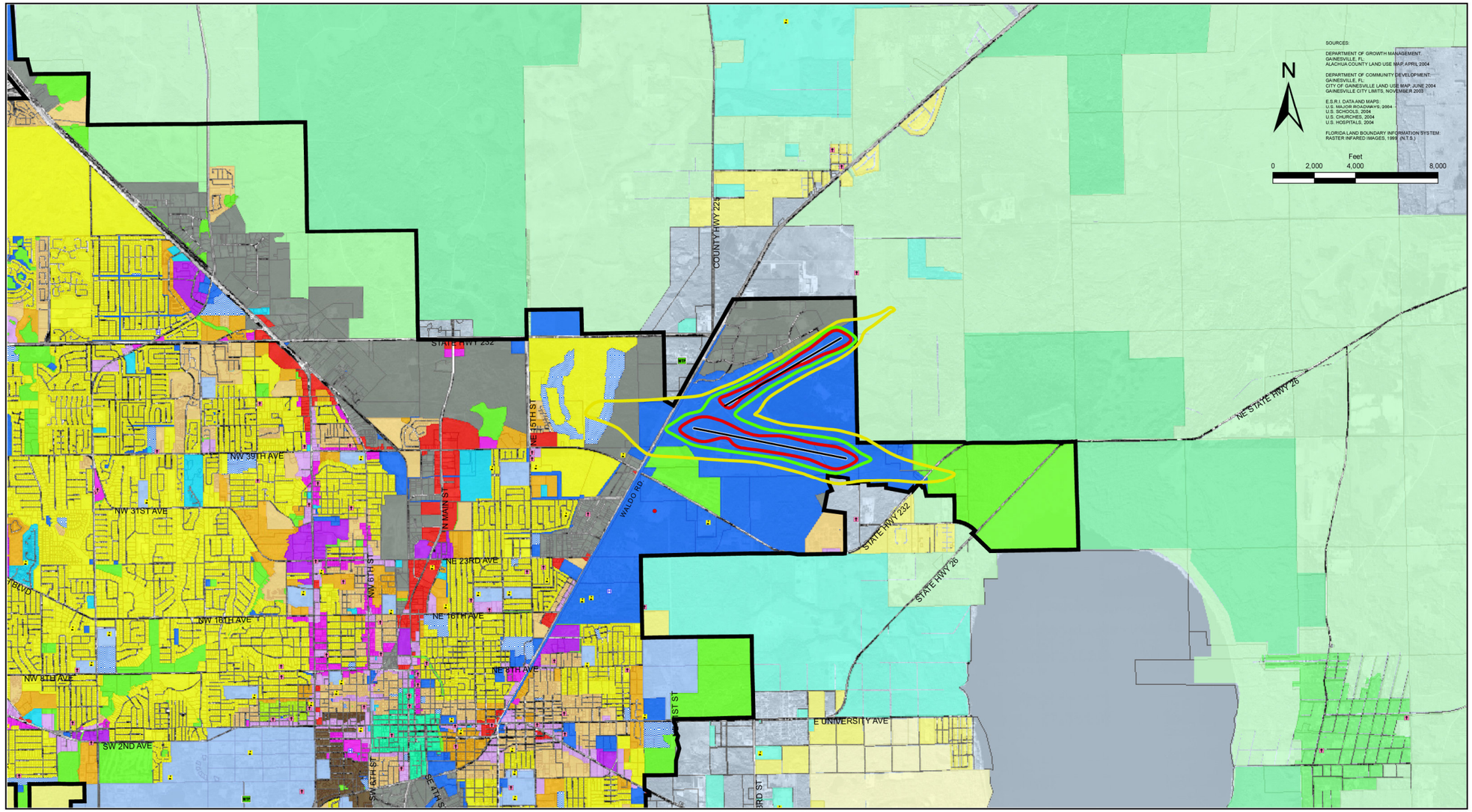
In general, land use regulations are necessary to control objects that may constitute a hazard to airport operations due to height, to control land uses that may be incompatible with airport noise, and to enhance public safety.

5.4.2.1 Local Land Use Regulations

Chapter 333, Florida Statutes provides local governments in Florida the authority as well as an obligation to exercise their authority to plan and adopt land use regulations that protect airports from incompatible development and loss of navigable airspace.

Because the Gainesville Regional Airport is located within the incorporated limits of the City of Gainesville and borders portions of unincorporated Alachua County along its northeastern boundary, the regulation of surrounding land uses by both the City and the County to ensure compatibility with projected airport operations is essential. A "blended" Land Use and Zoning Map was prepared reflecting future land use and zoning in both the limits of the City of Gainesville and Alachua County. These are shown in Figures 5-3 and 5-4.

Figure 5-3
FUTURE LAND USE MAP



March 2005

GAINESVILLE REGIONAL AIRPORT LAND USE MAP

CITY OF GAINESVILLE LAND USE

- Single Family
- Residential Low Density
- Residential Medium Density
- Residential High Density
- Mixed Use Residential
- Mixed Use Low
- Mixed Use Medium
- Mixed Use High
- Office
- Commercial
- Industrial
- Education
- Recreation
- Public Facilities
- Agriculture
- Conservation
- Planned Unit Development

ALACHUA COUNTY LAND USE

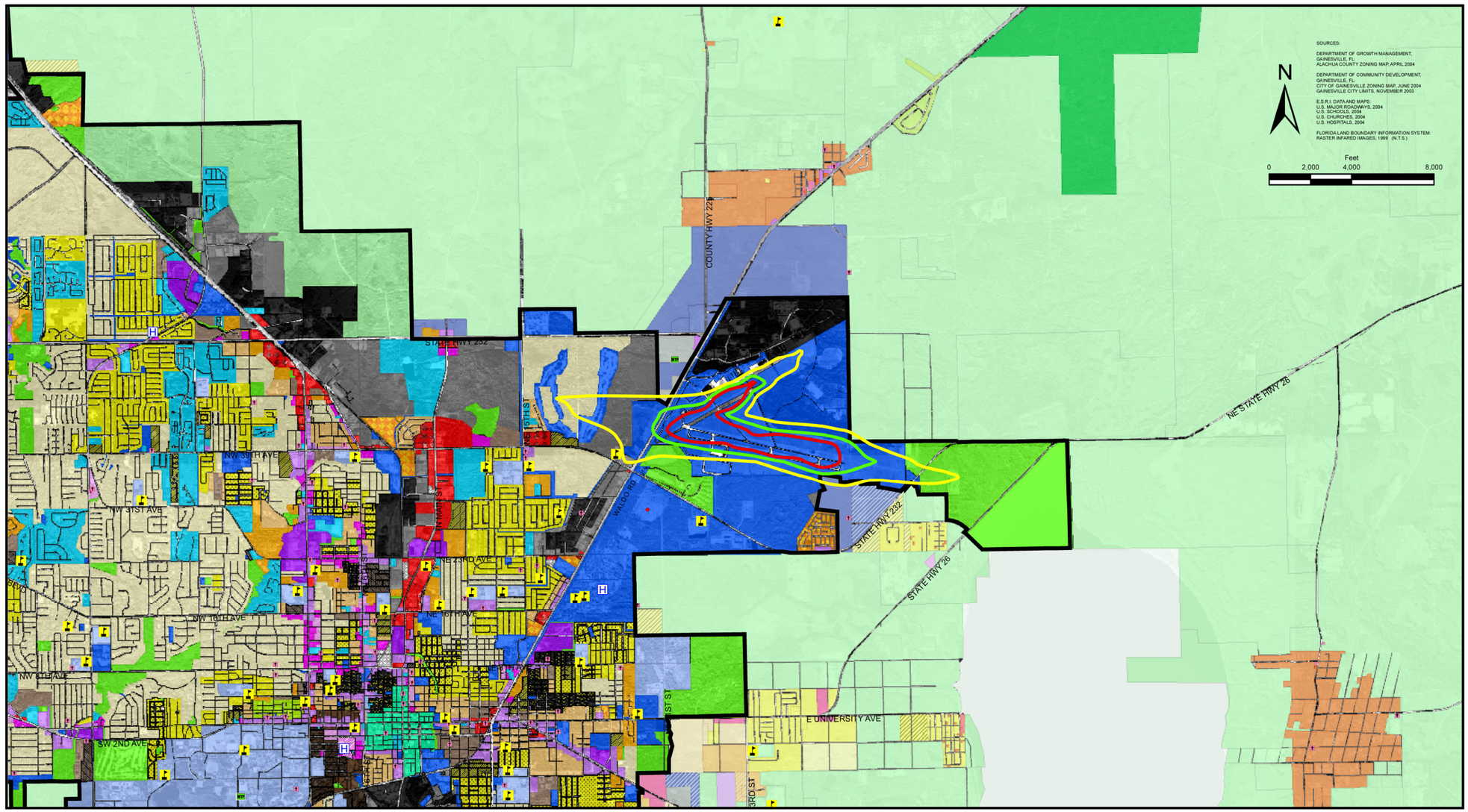
- (Alachua County) Estate Residential
- (Alachua County) Institutional
- (Alachua County) Low Density Residential
- (Alachua County) Preservation
- (Alachua County) Rural Cluster
- (Alachua County) Rural Employment Center
- (Alachua County) Rural/Agriculture
- (High Springs) Residential
- (High Springs) Commercial
- Agriculture
- Commercial
- Conservation
- High Density Residential
- Industrial
- Low Density Residential
- Medium Density Residential
- Moderate Density Residential
- Public
- Recreation
- School
- Hospital
- Church
- City Limits
- Waste Water Treatment
- Correctional Facility

NOISE CONTOURS

- 75 LDN
- 70 LDN
- 65 LDN

RS&H
AVCON

Figure 5-4
EXISTING ZONING MAP



The following sections summarize the existing land use regulations established by the City of Gainesville and Alachua County to ensure compatibility between the Gainesville Regional Airport and the areas surrounding the airport.

5.4.2.2 City of Gainesville

The City of Gainesville primarily addresses the protection of aviation facilities and operations in "Appendix F: Airport Hazard Zoning Regulations" contained in the current Code of Ordinances, Chapter 30: Land Development Code, City of Gainesville, Florida. This section of the Land Development Code formally identifies and adopts three "airport zones of influence" to regulate land development around the Gainesville Regional Airport. These zones include:

- The Airport Height Notification Zone;
- The Airport Runway Clear Zone; and
- The Airport Noise Zone.

The Airport Height Notification Zone establishes two subzones, Subzone 1 and Subzone 2, which encompass the entire area within the city limits. These subzones require review of proposed development within each subzone to determine whether the proposed development constitutes a "potential airport obstruction" per the federal standards established in Federal Aviation Regulations (FAR) Part 77. Objects exceeding the federal obstruction standards defined in FAR Part 77 shall not be permitted unless approved through an Airport Obstruction Variance granted by the City.

The Airport Runway Clear Zone identifies areas underlying runway approach and departure paths and regulates land uses in these areas to minimize further death, injury, or property damage in the event of an aircraft accident. These areas are those in which aircraft operate at altitudes of 50 ft or less and are statistically more likely to be exposed to aircraft accidents due to their proximity to the runway. Land uses specifically prohibited from the Airport Runway Clear Zone include:

- Educational facilities.
- Hospitals and health facilities.
- Places of religious assembly.
- Hotels and motels.
- RV and mobile home parks.
- Other land uses resulting in a congregation of people.

The Airport Noise Zone identifies subzones around the airport based on noise contours developed in the 1986 FAR Part 150 Study for the Gainesville Regional Airport. These subzones—A, B, and C—include all of the area contained within the 75, 70 and 65 DNL contour. Permitted uses in these areas are limited to land uses that are generally compatible with airport activities, including transportation facilities, business offices, utilities, manufacturing, golf facilities, agricultural operations and other similar uses. Other uses may be permitted within the Airport Noise Zone on a conditional basis to ensure compatibility where compatibility issues

may normally exist. Conditions may include the incorporation of sound level reduction characteristics in the proposed construction or the execution of a formal avigation easement.

In addition to the three airport zones discussed above, "Appendix F: Airport Hazard Zoning Regulations" of the current Land Development Code also contains "special requirements" that regulate and restrict the following:

- Land uses that create bird attractants within 10,000 ft of the airport;
- Smoke, steam, glare, or other obscuration that could mislead or impair a pilot's vision within three statute miles of the airport;
- Electronic interference with navigational signals or radio communications;
- High-energy beam devices.

In accordance with the requirements of Chapter 333, F.S., the "special requirements" section of Appendix F also restrict public and private schools, with the exception of aviation school facilities, from an area at either end of an existing or planned runway within an area which extends five miles from each runway end in a direct line along the centerline of the runway, and which has a width which measures one-half the length of the runway and is centered on the extended runway centerline. An overlay map reflecting the school restriction zone is included in the code.

5.4.2.3 Alachua County

The Alachua County Comprehensive Plan addresses the protection of airport facilities in the Aviation element. Objective 1.1 of this element is "to coordinate improvements or expansions of aviation facilities with the Future Land Use Element and Conservation Element; and to prevent obstructions to airport operations." Airport land use policies adopted under this objective generally include the following:

- Updating the County zoning and other land development regulations based on the 1986 FAR Part 150 Study and updates of the airport master plan;
- Limiting the expansion of airport facilities to areas that are away from existing or planned residential areas;
- Notifying the Gainesville Regional Airport Authority of proposed changes in land use in Runway Protection Zones or any applications for structures greater than 500 ft MSL.

Section 329.91 of Article IX: Overlay Districts of the Alachua County Land Development Code establishes airport impact zones and regulations to:

(1) Regulate and restrict the height of structures and regulate the use of property in the vicinity of public airports;

(2) Prevent airport hazards and provide for the elimination, alteration, mitigation, or marking/lighting of existing airport hazards or obstructions;

(3) Regulate or restrict certain uses in the vicinity of the airport by the creation of appropriate noise zones; and

(4) Provide for attenuation of noise within certain structures and the disclosure to purchasers and lessees when these structures are within airport noise zones.

Similar to the regulations of the City of Gainesville, the airport hazard zones adopted by Alachua County limit the height of objects and structures from the imaginary surfaces associated with Gainesville Regional Airport as defined in FAR Part 77. General restrictions within the County include restrictions on

- Smoke, steam, glare, or other obscuration that could mislead or impair a pilot's vision within three statute miles of the airport; and
- Electronic interference with navigational signals or radio communications.

The County regulations also establish land use regulations for unincorporated portions of the County to ensure compatibility with airport noise. Residential structures are prohibited within the 70 DNL contour. Commercial, manufacturing, and recreation uses are permitted within the 70 DNL contour provided that noise level reductions of 25 decibels are incorporated into the construction of enclosed structures. Similarly, institutional uses may be permitted within the 70 DNL contour provided that noise level reductions of 30 decibels are incorporated into the construction of enclosed structures. Residential structures and institutional uses within the 65 DNL contour shall incorporate noise level reductions of 25 decibels for enclosed structures.

The County has also adopted an Airport Overlay Disclosure Ordinance that requires any person selling, leasing, assigning, or otherwise conveying any interest in any real property located within the noise contour lines described above provide a disclosure statement. The disclosure statement is intended to inform any prospective purchaser or lessee that the property is located in an area affected by noise from operations of the Gainesville Regional Airport.

Although the County has adopted land use controls that protect the airport from incompatible development, additional measures may be necessary to provide the airport additional protection. Additional recommended measures will be discussed later in this report.

5.4.2.4 Development of Regional Impact (DRI) Conditions

Florida is unique because of a very diverse, transient population, and over the last 30 years has experienced tremendous growth. In 1975 the total population was approximately seven million. At the time the 1990 Census was published, total population had nearly doubled to 13 million. In the 1970s the legislature began to recognize these growth trends and set out to establish a regulatory framework for managing the process of growth within the state. This process began with the enactment of the Florida Environmental Land and Water Management Act of 1972 (Title XXVIII, Chapter 380, Part I, F.S.) This act established the State's Development of Regional Impact (DRI) and Area of Critical State Concern Program. Then in 1975 the Legislature enacted the Local Government Comprehensive Planning Act (i.e. the "Act"). This Act not only required local units of government to adopt comprehensive plans, but also directed that certain planning elements must be considered in every comprehensive plan. Those specific planning elements include land use, traffic circulation, housing, public facilities and intergovernmental coordination. Responding to continuing growth pressures, in 1985 the legislature enacted the Government Comprehensive Planning and Land Development Regulation Act (Chapter 163, Part II, Florida Statutes). This legislation focused on issues of consistency, concurrency and compactness of comprehensive plans. It also required that local comprehensive plans be consistent with state comprehensive plans.

As a result of the enactment of this growth management legislation, when a development is expected to have a "regional impact," the proposed developer must satisfy certain requirements of the DRI review process before being granted development rights. A development has a "regional impact" when, because of its character, magnitude or location, it has a substantial effect upon the health, safety or welfare of citizens of more than one county. The purpose of the DRI process, as outlined in Section 380.06 of the Florida Statutes, is "to provide information to local governments to assist them in making decisions concerning developments having a greater than local [i.e. regional] impact." The DRI process is intended to supplement, not replace, other state, local and federal requirements.

In order to initiate the DRI process and subsequently receive the required development rights, a developer must complete a Development of Regional Impact Application for Development Approval ("DRI ADA"). A DRI ADA is a questionnaire that must be completed by the developer when the Regional Council believes the developer's project may trigger certain "thresholds" used to determine if regional impacts are likely, and therefore make the DRI review process mandatory. Airport related projects that may trip DRI review include new runways, runway extensions greater than 25%, and additional gates for scheduled service. The additional gate criteria does not apply to non-hub commercial service airports like Gainesville. As a result of these criteria, the majority of all commercial service airports are currently operating under DRI regulations. As a result of changes to DRI regulations that affect airports, Chapter 2002-20, Laws of Florida (HB 261), revising FS Chapters 163 and 380, became effective on July 1, 2002. This legislation provides development or expansion of an airport, consistent with an adopted master plan that has been incorporated into the local comprehensive plan, will not be considered a development of regional impact.

The Florida Legislature adopted Chapter 2002-20, Laws of Florida, which amends FS 163.3177(6) to create a new subsection (k) specifically allowing incorporation of an Airport Master Plan into the comprehensive plan as part of the transportation element. This portion of the Florida Statutes reads as follows:

> *(k) An airport master plan, and any subsequent amendments to the airport master plan, prepared by a licensed publicly owned and operated airport under s. 333.06 may be incorporated into local government comprehensive plan by the local government having jurisdiction under this act for the area in which the airport or projected airport development is located by the adoption of a comprehensive plan amendment. In the amendment to the local comprehensive plan that integrates the airport master plan, the comprehensive plan amendment shall address land use compatibility consistent with chapter 333 regarding airport zoning; the provision of regional transportation facilities for the efficient use and operation of the transportation system and airport; consistency with the local government transportation circulation element and applicable metropolitan planning organization long-range transportation plans; and the execution of any necessary interlocal agreements for the purposes of the provision of public facilities and services to maintain the adopted level of service standards for facilities subject to concurrency; and may address airport-related or aviation-related development. Development or expansion of an airport consistent with the adopted airport master plan that has been incorporated into the local comprehensive plan in compliance with this part, and airport-related or aviation-related development that has been addressed in the comprehensive plan*

> *amendment that incorporates the airport master plan, shall not be a development of regional impact. Notwithstanding any other general law, an airport that has received a development-of-regional-impact development order pursuant to s. 380.06, but which is no longer required to undergo development-of-regional-impact review pursuant to this subsection, may abandon its development-of-regional-impact order upon written notification to the applicable local government. Upon receipt by the local government, the development-of-regional-impact development order is void.*

The Gainesville Regional Airport currently does not operate under DRI requirements. However, the planned future extension of Runway 6/24 will trigger potential DRI-level review. The planned expansion of the terminal building and increased number of gates will not trigger DRI-level review as the airport is classified as a non-hub facility which are exempt from review. FS 163.3177(6)(k) allows local jurisdictions, like the City of Gainesville, to incorporate an airport master plan for a licensed publicly owned and operated airport, like the Gainesville Regional Airport, into the local comprehensive plan. The Gainesville Regional Airport is licensed by the Florida Department of Transportation as a publicly owned and operated airport per FS 333.06. FS 163.3177(6)(k) also provides that any subsequent amendments to the airport master plan can also be incorporated into the local comprehensive plan. In addition, FS 163.3177(6)(k) provides that development or expansion of an airport consistent with the adopted airport master plan as incorporated into the local comprehensive plan "shall not be a development of regional impact."

It is recommended that the Airport begin the process of incorporating the airport master plan into the local comprehensive plan for several reasons. The City of Gainesville's Comprehensive Plan requires updating to reflect the changes in the vision of the master plan since 1987. The annual DRI monitoring report requirements can be quite comprehensive and are effective indefinitely once DRI regulations are in place. The only project that may trigger DRI level review will be the planned extension to Runway 6/24. And lastly, good planning practices dictate that the local goals of the airport should be reflected in the local government comprehensive plan to help ensure consistency between the airport and local government. Once the airport master plan is incorporated into the local comprehensive plan, regular updates to the Airport Layout Plan and Airport Master Plan should be incorporated into the update process.

5.4.2.5 FAR Part 150 Study (1986)

Federal Aviation Regulation (FAR) Part 150, "Airport Noise Compatibility Planning" (14 CFR Part 150) was promulgated by the Federal Aviation Administration (FAA) in response to the Aviation Safety and Noise Abatement Act of 1979. FAR Part 150 sets forth the methodology and procedures to be used when preparing aircraft noise exposure maps and developing airport land use compatibility programs. The development of noise exposure maps and a Part 150 Noise Program are voluntary. However, conducting a Part 150 Study qualifies airport operators for federal grant funds to implement mitigation measures adopted by the study and approved by the FAA.

Part 150 of the Federal Aviation Regulations (FAR), Airport Noise Compatibility Planning, sets forth standards for airport operators to use in documenting noise exposure in the airport environs and establishing programs to minimize noise-related land use incompatibilities. Part 150 prescribes specific standards and systems for:

- Measuring noise
- Estimating cumulative noise exposure
- Describing noise exposure (including instantaneous, single event and cumulative levels)
- Coordinating NCP development with local land use officials and other interested parties
- Documenting the analytical process and development of the compatibility program
- Submitting documentation to the FAA
- FAA and public review processes
- FAA approval or disapproval of the submission

The Noise Exposure Map (NEM) describes the airport layout and operation, aircraft-related noise exposure, land uses in the airport environs and the resulting noise/land use compatibility situation. The NEM must address two time frames: (1) data representing the year of submission (the "existing conditions") and (2) the fifth calendar year following the year of submission (the "forecast conditions"). Part 150 requires more than a simple "map" to provide all the necessary information in an NEM. In addition to the graphics, requirements include extensive tabulated information and text discussion. At most airports, even the necessary graphical information is too extensive to present in a single figure. Therefore, the NEM documentation includes graphic depiction of existing and future noise exposure resulting from aircraft operations and of land uses in the airport environs. The NEM documentation must describe the data collection and analysis undertaken in its development.

The Gainesville Regional Airport prepared a FAR Part 150 study that was adopted in March of 1986. FAA Order GNV 7110.4A dated June 1, 1983 established an informal runway use program that was voluntary, to help minimize off-airport noise impacts. The following land use strategies were approved by the Gainesville-Alachua County Regional Airport Authority and subsequently by the FAA:

Noise Abatement Program Measure No. 1	Acquire land East and South of the Airport as shown in the approved FAR Part 150 Study.
Noise Abatement Program Measure No. 2	Revise the City of Gainesville Code Of Ordinances to update and incorporate the land use strategies identified in the Part 150 Study.
Noise Abatement Program Measure No. 3	Revise Section 13 of the Zoning regulations of Alachua County to address the recommendations in the Part 150 Study
Noise Abatement Program Measure No. 4	Update the City of Gainesville Comprehensive Plan to address the recommendations in the Part 150 Study.

Noise Abatement Program Measure No. 5	Hold a public hearing to entertain public comments and questions regarding the Airport's Part 150 Study.

The Part 150 study established Noise Exposure Maps (NEM) that were adopted by the City of Gainesville and Alachua County. The FAR Part 150 study also recommended that the Noise Exposure Maps be updated every 5 years. The fleet of aircraft regularly using the airport has changed significantly since the adoption of the noise exposure maps and therefore it is recommended that an update to the FAR Part 150 study be undertaken during the initial phases of the planning period.

5.4.2.6 Recommended Land Use Measures

The land uses in the vicinity of the Gainesville Regional Airport include a mixture of residential, industrial, and agricultural uses in addition to various conservation, recreation, and vacant areas. The existing land use for the areas surrounding the airport is shown on the Land Use Map included in the ALP set.

The land use regulations administered and enforced by the City of Gainesville and by Alachua County appear to provide appropriate regulations for regulating the height of development that could adversely impact current airport operations. However, both sets of regulations should be reviewed with consideration of the recommended land use measures cited below to reflect the changes in the airport's planned improvements, and to incorporate additional land use controls where lacking.

It is noted that the runway configurations and planned approach types associated with the two existing runways as shown in the accompanying Airport Layout Plan (ALP) set have been revised from the previous study. Specifically, the ALP that accompanies this report proposes an extension to Runway 6-24, and revisions in the planned approach type. The future implementation of this runway relocation and approach type will change the limits of the zones and boundaries currently identified in the City and County regulations to control non-compatible uses. As a result, it is strongly recommended that the existing land use regulations administered and enforced by the City and by the County be updated to reflect these revisions to the planned airport.

Upon review and concurrence by the regulatory agencies administering the airport and the areas surrounding the airport, it is recommended that the Airport Layout Plan (ALP) set and this narrative be coordinated with the City of Gainesville Community Development Department, the Alachua County Department of Growth Management, and the North Central Florida Regional Planning Organization to ensure that existing and planned airport facilities are considered in local planning documents and that airport operational capabilities are preserved through local land use controls. Of particular importance is the preservation of the imaginary three-dimensional surfaces defined in FAR Part 77, section 77.25, as well as the Runway Protection Zones located at each of the existing and planned runway ends.

With the close proximity of unincorporated portions of Alachua County to the airport, the City and County should also consider establishing an interlocal agreement between agencies to ensure that future land uses around the airport are compatible with airport activities.

Additional recommended measures for the City and for the County are individually provided in the following sections.

5.4.2.7 City of Gainesville

Although the City of Gainesville has adopted a very effective airport zoning ordinance and regulates of properties against non-compatible uses, a few additional land uses should be considered.

The Airport Hazard Zoning Regulations contained in Appendix F of the Land Development Code include references to three airport impact zones:

- The Airport Height Notification Zone;
- The Airport Runway Clear Zone; and
- The Airport Noise Zone.

In addition, the City regulations cite a fourth zone referred to as "Restrictions on the Educational Facilities of Public and Private Schools."

Based on the changes in the planned airport facilities, it is recommended that these four maps maintained by the City of Gainesville Department of Community Development be updated to reflect the existing and planned airfield configuration and approach types as presented in the updated Airport Layout Plan (ALP). Examples of the updated impact zones are shown in Figures 5-5, 5-6, 5-7 and 5-8.

Figure 5-5
AIRPORT HEIGHT NOTIFICATION ZONE

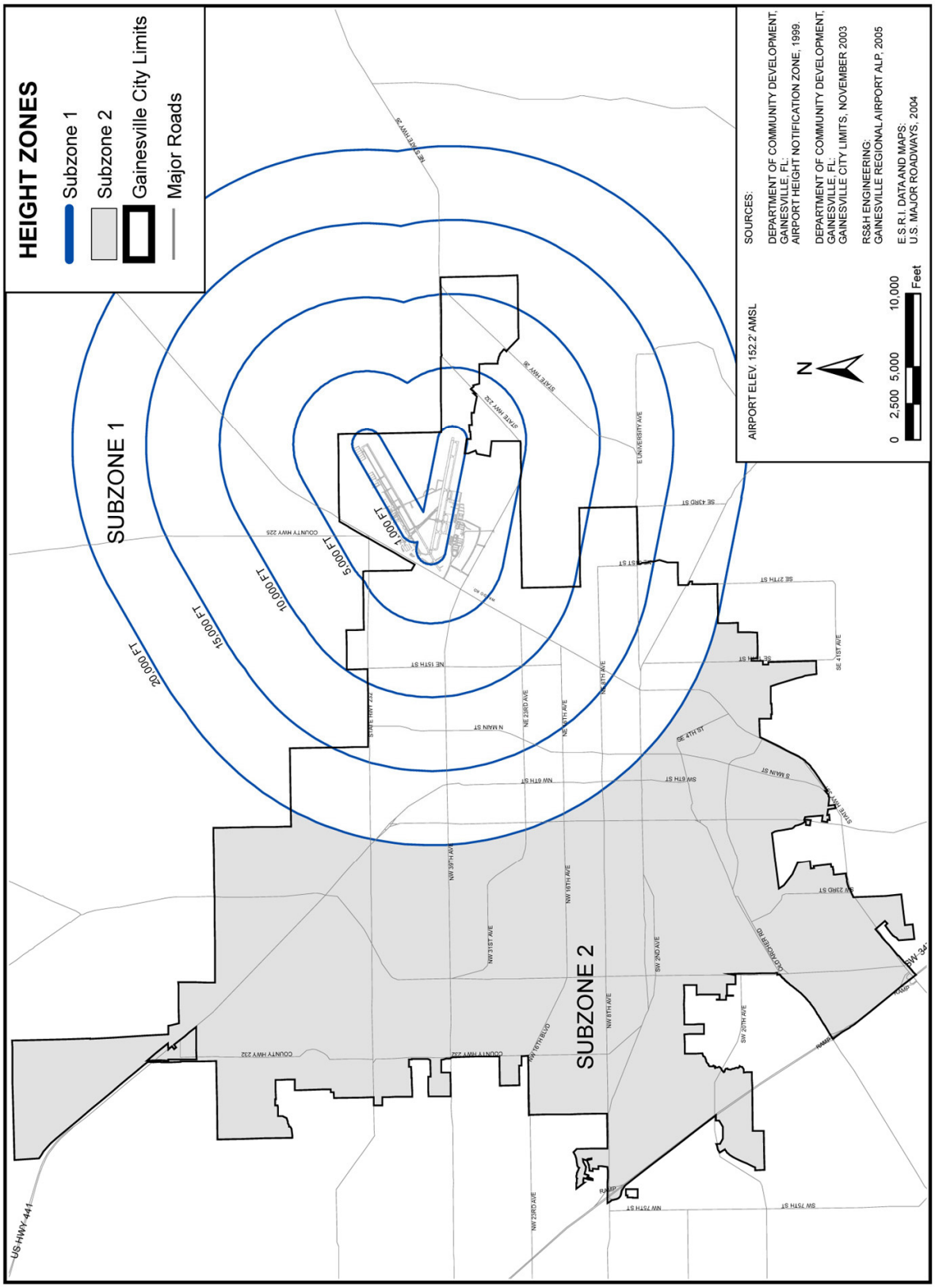


Figure 5-6
AIRPORT RUNWAY CLEAR ZONE

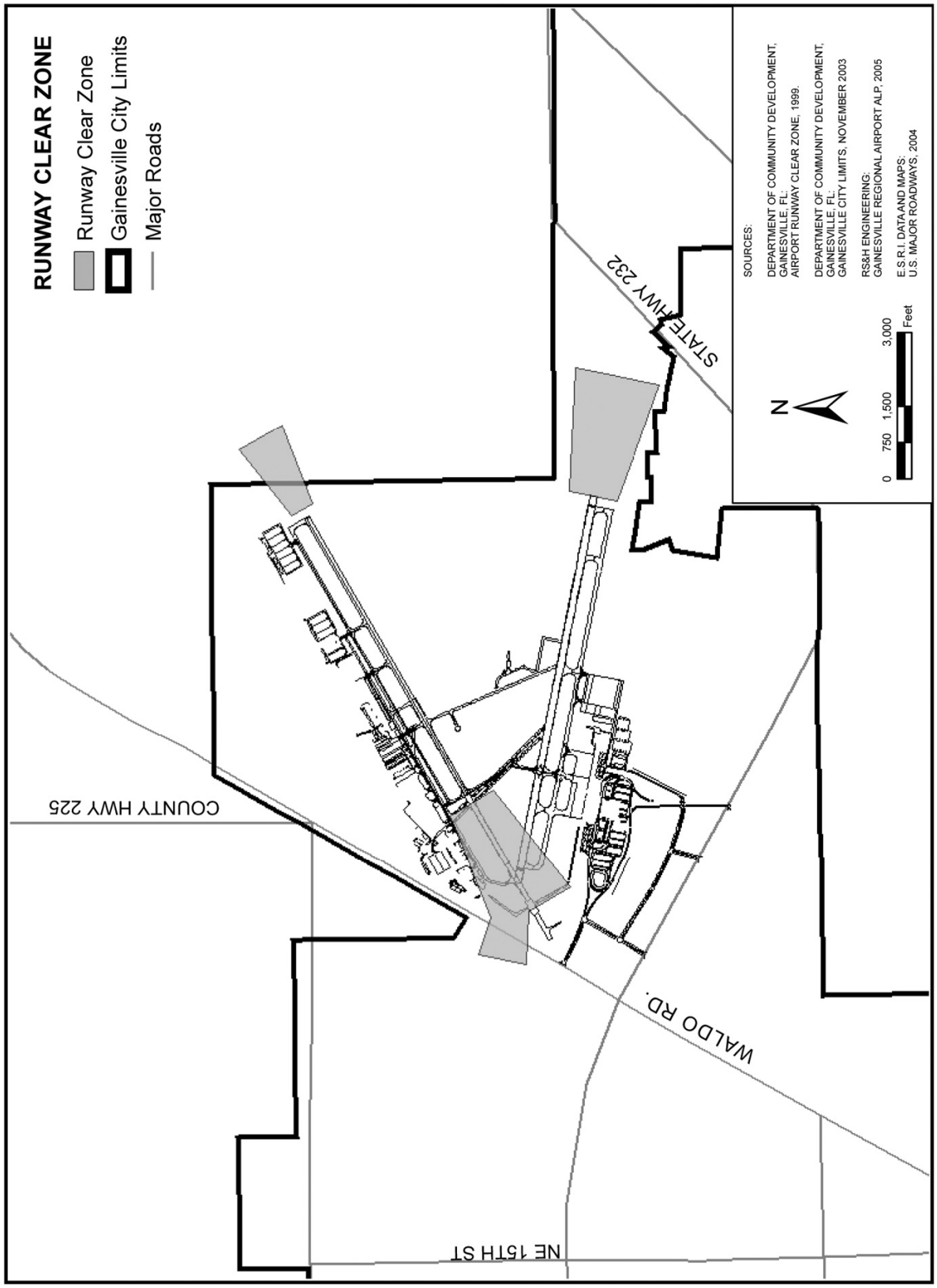


Figure 5-7
AIRPORT NOISE ZONE

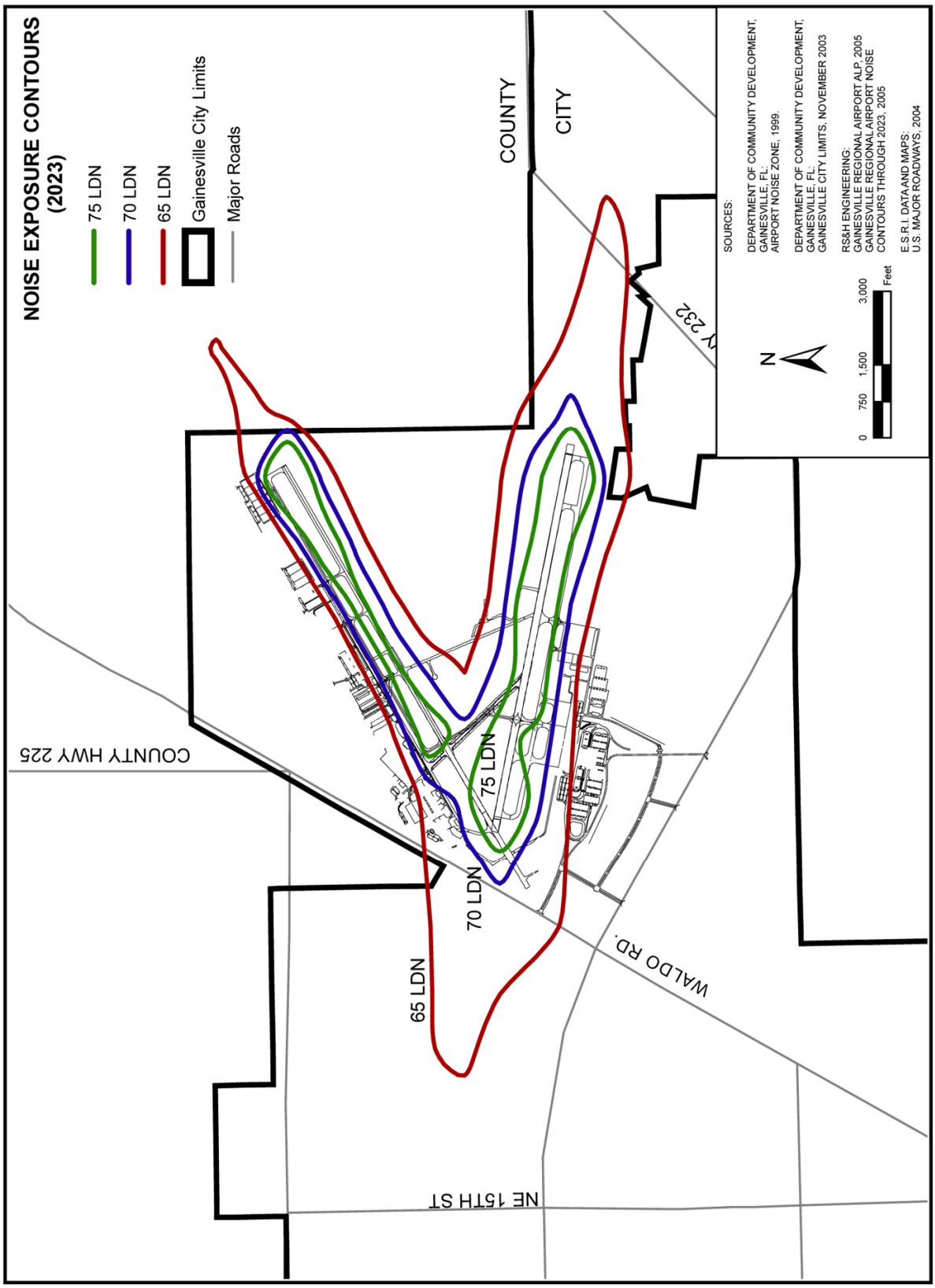
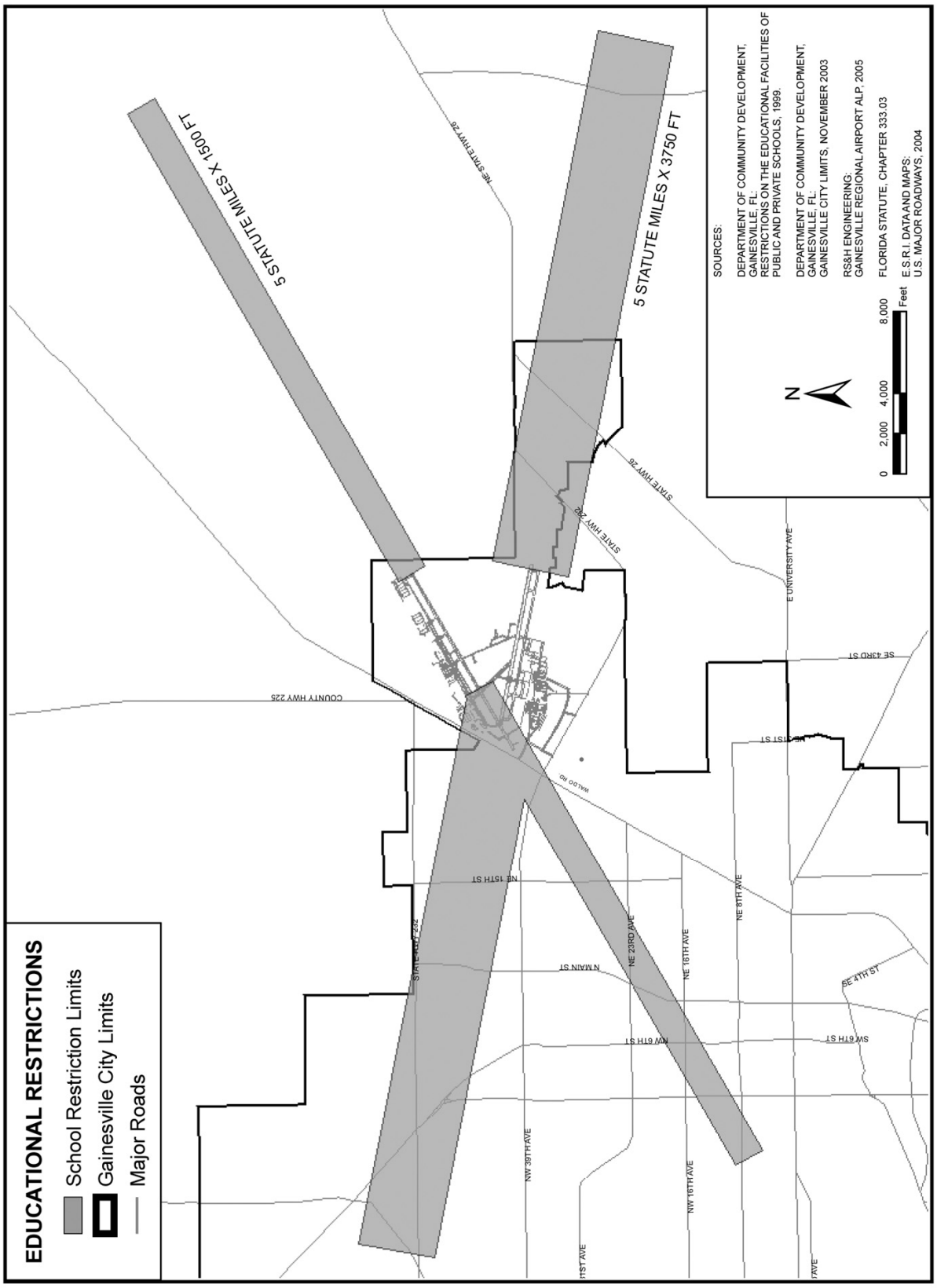


Figure 5-8
EDUCATIONAL FACILITIES OVERLAY ZONE



Another recommended measure for the City regulations includes a clarification to the prohibited uses associated with the Airport Runway Clear Zone. Although the regulations prohibit schools, churches, hospitals, hotels, motels, mobile home parks, and other uses resulting in a congregation of people, the regulations do not appear to specifically prohibit residential (i.e. single family home) development within the Airport Runway Clear Zone. An additional regulation that addresses residential development should be considered.

The Special Requirements section of the Airport Hazard Zoning Regulations includes prohibitions on development that could result in an attractant for birds. It is recommended that:

- The Bird Strike Hazard policy be expanded to include similar language that prevents the establishment of land uses that would result in a wildlife attractant in accordance with FAA AC 150/5200-33.

- The airport coordinate with the Gainesville Regional Utilities (GRU), operator of the local water treatment plant in the vicinity of the airport to ensure that the facilities and processes comply with the language in the Special Requirements section and with FAA AC 150/5200-33.

The Special Requirements section also prohibits any land uses that produce smoke within three miles of any runway. It should be noted that most undeveloped wooded areas are subject to periodic controlled burns to manage them. Although the Florida Administrative Code specifically prohibits controlled burns that would affect visibility minimums at airports, it should be noted that the possibility exists for prescribed burns in the vicinity of the airport. As a result, the City and the County may wish to consider a notification and coordination requirement prior to a proposed burn to allow for coordination of such activities.

5.4.2.8 Alachua County

The land use regulations administered and adopted by Alachua County appear to provide specific height and noise compatibility land use controls to provide protection to the existing airport. However, several additional regulations are recommended to address specific concerns related to non-compatible land uses and to meet the obligations of Chapter 333, Florida Statutes.

Based on the changes in the planned airport facilities, it is recommended that the Overlay Districts in the current Land Development Code, specifically the airport impact zones, be updated to reflect the planned airfield configuration and approach types as presented in the updated Airport Layout Plan (ALP). Specifically, for Runways 10, 6, and 24 the primary zone and approach zone standards need to be updated. It is also recommended that the horizontal zone explanation be further defined to reflect an elevation equal to 150 feet above the established airport elevation.

The Alachua County regulations appear to omit two important land use controls that are vital to protecting public safety. First, Chapter 333, Florida Statutes requires that local governments adopt land use controls that restrict public and private schools, with the exception of aviation school facilities, from an area that extends five miles from the end of each runway, along the extended centerline, and with a width of one-half the length of the longest runway at the airport.

These areas extending beyond the ends of Runway 24 and Runway 28 extend well into portions of unincorporated Alachua County.

Second, it is recommended that the County adopt specific land use controls that prohibit the development of wildlife attractants within 10,000 ft of the runways at Gainesville Regional Airport per the standards established in FAA AC 150/5200-33. Such prohibition is necessary to minimize risk to public safety.

5.4.2.9 On-Airport Land Use Measures

To ensure compatible and optimal land uses on airport property and to address the uses cited in Sec. 30-76, Airport facility district (AF) of the Land Development Code, an airport layout zoning map was prepared as part of this study. The proposed map encompasses the land within airport property and is recommended for adoption into the current code per Sec. 30-76, Part (c). The following categories and their corresponding permitted uses are delineated on the proposed map:

- **Airfield Infrastructure (AF-AI)**
  This land use shall include the development of runways, taxiways, aprons, navigational aids, lighting and signage systems, airfield service roads, stormwater management facilities (per FAA AC 150/5200-33 standards), equipment shelters, buildings and other uses which support airfield facilities identified above.

- **Aviation Related Uses (AF-AR)**
  This land use shall include facilities accommodating business or activities dependent on aviation services and/or requiring airfield access such as general aviation development, air cargo, air traffic control services, airfield service roads, storm water management facilities (per FAA AC 150/5200-33 standards), equipment shelters, buildings and other uses which support airfield facilities identified above.

- **Runway Protection Zones (AF-RPZ)**
  For the portions of the Runway Protection Zone (RPZ), outside of the Runway Object Free Area (ROFA), land uses that are approved include vehicular parking, aviation and non-aviation related access roads, and associated lighting. This designation includes specific prohibitions for land uses resulting in the congregation of people, fuel storage, and wildlife attractants.

- **Terminal Related Facilities (AF-TR)**
  This land use shall include the existing and planned airport terminal and associated facilities. These include but are not limited to the terminal, terminal parking areas, and other uses required to support the functions of the passenger terminal facility.

- **Non-Aviation Related Uses (AF-NAR)**
  This land use includes developments, which do not require direct airside access. These uses will provide additional revenue support to sustain the operation of the airport.

The Airport Facility District map shown as Figure 5-9 should be refined as part of the master planning process and should be coordinated with the City of Gainesville for final adoption to be used for future development submissions. In addition to the Airport Facility District, a table

should be developed that depicts existing and future allowable land uses for the Gainesville Regional Airport.

5.4.2.10 Land Use Summary

GENERAL LAND USE MEASURES

1. Provide regular updates to the Airport Layout Plan and Airport Master Plan.

2. Prepare an update to the 1986 FAR Part 150 study.

3. Update the existing land use regulations administered and enforced by the City and by the County to reflect revisions to the planned airport.

4. Coordinate the Airport Layout Plan (ALP) set and this narrative with the City of Gainesville Community Development Department, the Alachua County Department of Growth Management, and the Gainesville-Alachua County Metropolitan Transportation Planning Organization.

5. Consider land acquisition of properties within the 65 L_{dn} contour as they become available for purchase.

CITY OF GAINESVILLE

6. Facilitate an interlocal agreement between agencies to ensure that future land uses around the airport remain compatible with airport activities.

7. Process the integration of the airport master plan into the City's comprehensive plan.

8. Update the Airport Hazard Zone maps contained in Appendix F of the City of Gainesville Land Development Code to reflect the existing and planned airfield configuration and approach types as presented in the updated Airport Layout Plan (ALP).

9. Clarify the Airport Runway Clear Zone to include specific prohibitions against residential developments.

10. Adopt minimum Noise Level Reduction (NLR) regulations for the future construction of noise sensitive development with the 65 L_{dn} contour.

11. Expand the Bird Strike Hazard Policy to limit land uses that are wildlife attractants hazardous to aircraft operations.

12. Coordinate with the local water treatment plant for compliance with FAA AC 150/5200-33.

13. Consider developing notification requirements for controlled burns in the vicinity of the airport.

14. Adopt the recommended Airport Facilities Zoning Map to regulate on-airport development.

ALACHUA COUNTY

15. Process the integration of the airport master plan into the County's comprehensive plan.

16. Update the Overlay Districts in the current Land Development Code, specifically the airport impact zones, to reflect the planned airfield configuration and approach types as presented in the updated Airport Layout Plan (ALP).

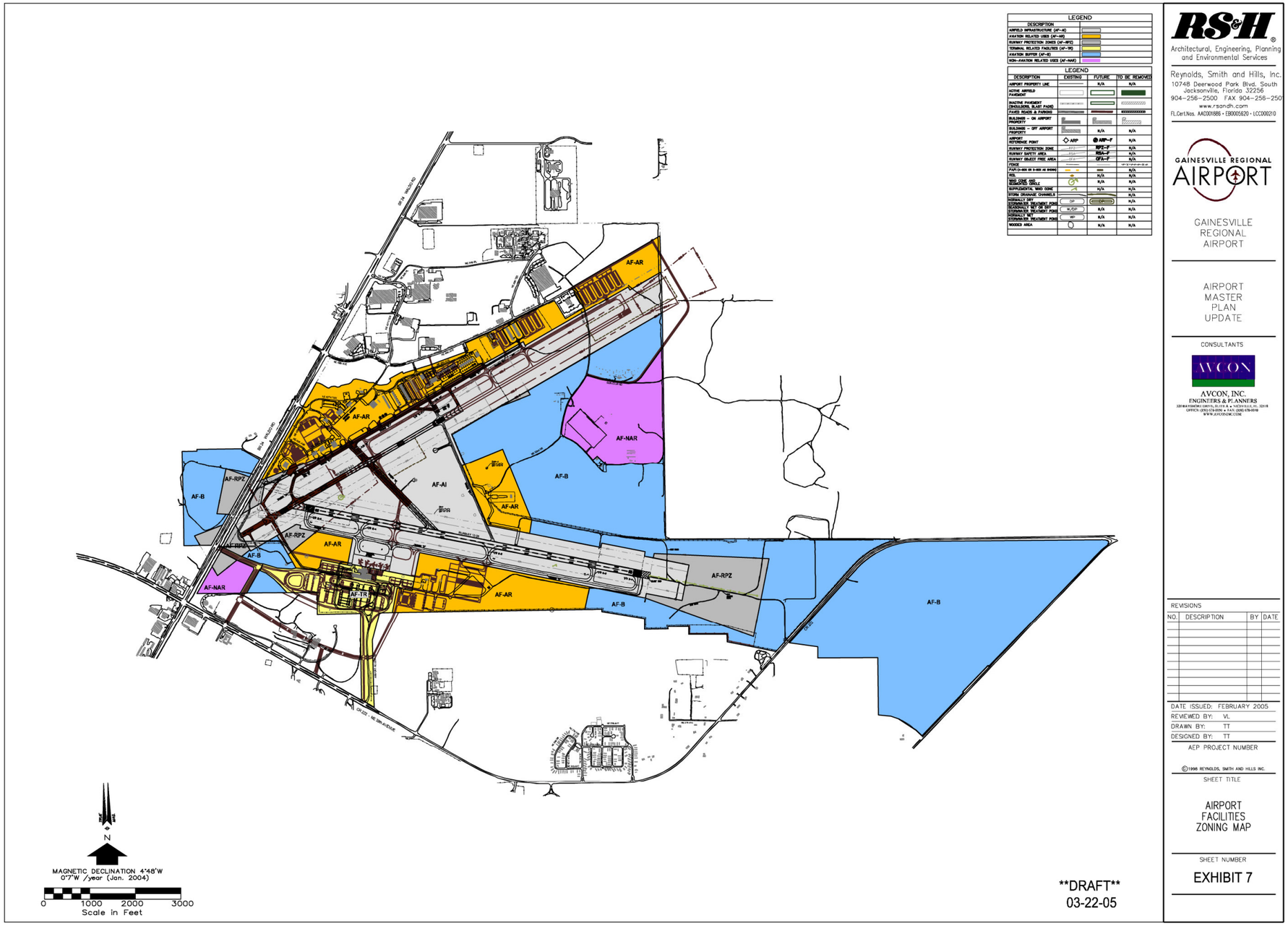
17. Further define the horizontal zone definition to reflect an elevation equal to 150 feet above the established airport elevation.

18. Adopt land use controls into the Alachua County regulations that restrict schools in areas beyond each runway end per Chapter 333, Florida Statutes.

19. Adopt land use controls that prohibit the development or introduction of wildlife attractants hazardous to aircraft operations.

Establishing the recommended land use controls identified above should be considered a high priority for both the City of Gainesville and Alachua County in order to adequately comply with the requirements of Chapter 333, Florida Statutes. The primary recommendations are associated with the proposed changes in the runway configuration and approach types resulting from this study. These and the other specific recommendations are necessary to ensure that the airport can continue to serve the community's aviation related needs.

Figure 5-9
AIRPORT FACILITIES ZONING MAP



5.4.3 Social Impacts

The purpose of a social impact analysis is to determine the effect of airport development on the human environment. The types of social impacts that can result from airport development include:

- Relocation of residences and/or businesses;
- Disruption of communities;
- Division or disruption of established communities;
- Disruption of orderly, planned development; and
- Alterations in traffic patterns that may permanently or temporarily restrict traditional community access.

The development projected in the Airport Master Plan would have minor impacts on the population and demographics of the City of Gainesville and Alachua County as a whole. While land acquisition is recommended during the master planning period, there will be no relocation of homes and subsequent disruption in the community development patterns. Any future land acquisition would be conducted in accordance with local laws and with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. Alterations in traffic patterns are not expected.

The proposed development of GNV would not require the relocation of residences or would not result in the disruption of communities. As a result, this impact category would be excluded from review in a formal EA.

5.4.4 Induced Socioeconomic Impacts

For major airport development proposals, there is a potential for induced or secondary impacts on surrounding communities. These potential airport development impacts include the following:

- Shifts in population movement and growth;
- Changes in public service demands; and
- Changes in business or economic activities.

The Airport Master Plan of GNV is projected to have a positive economic impact on the City of Gainesville and its surrounding communities. An economic impact analysis for Florida airports, and specifically the Gainesville Regional Airport, was prepared as part of the 2000 Florida Aviation System Plan. The study concluded that aviation related activity at airports within Florida contributed 4.7% to the state's domestic product. In addition, the largest driver in the state's economy is international trade, with aviation being associated with over 1/3 of all national trade dollars. The second largest driver is travel and tourism in the state's economy, with over ½ of the states annual visitors arriving by air.

Passenger surveys were conducted at the Gainesville Regional Airport as part of this study and it was determined that 73% of those persons utilizing the airport were visitors. These visitors

stayed an average of 4.8 days and spent on average $111.00 per day. The study also determined that the Gainesville Regional Airport had almost 21 million dollars in direct economic annual impact, 61 million dollars in indirect annual impact for a total annual economic impact to the Gainesville – Alachua County region of over 81 million dollars.

The construction of the proposed runway 6/24 extension, air carrier terminal area expansion and air cargo area development among others would require additional investment and have additional positive long-term effects to the local economy.

Overall airport development will enhance transportation safety and stimulate the economy of the local community and North-Central Florida. For this reason, it is expected that the proposed projects would result in positive long-term socioeconomic impacts.

5.4.5 Air Quality

Section 176(c) of the Clean Air Act (CAA) amendments of 1977, the amendments of 1990, and the General Conformity Rule of 1993, require federally-funded projects to demonstrate that a proposed project will not degrade air quality in non-attainment areas. A non-attainment area is an area that does not meet EPA's established air quality standards. An attainment area is an area where air quality standards are met, but controlled to prevent further deterioration beyond acceptable limits. The USEPA monitors the following six air pollutants:

- Carbon Monoxide (CO)
- Nitrogen Dioxide (NO2)
- Sulfur Dioxide (SO2)
- Ozone (O3)
- Lead (Pb) and
- 10-micron particulate matter (PM10)

According to the Florida DEP website, Alachua County is in attainment for all air pollutants monitored by USEPA.

FAA Advisory Circular 150/5370-10A, Standards for Specifying Construction of Airports, provides guidance in the avoidance of adverse construction impacts. Construction impacts include increased CO emissions and PM10.

A temporary increase in CO emissions could occur due to the presence of construction vehicles on site. Mitigation measures for CO emissions include improving traffic flow or applying traffic demand measures to reduce CO emissions. Individual developers would work with local governmental agencies to determine the need for mitigation and selection of specific mitigation measures.

Temporary increases in PM10 emissions could occur as a result of construction activities recommended in the Airport Master Plan. These emissions would cease upon completion of construction projects. Mitigation measures for PM10 emissions occurring during construction activities include applying water or another wetting agent to prevent dust production during

these activities. Individual developers would be required by local agencies to evaluate the need for mitigation following submission of individual project plans.

GNV is located in an air quality attainment area. Therefore, there would be no significant impacts to future air quality as a result of development at GNV, and this impact category would be excluded from further review in a formal EA.

5.4.6 Water Quality

The Federal Water Pollution Control Act, more widely known as the "Clean Water Act," provides the authority to establish water quality standards, control discharges into surface and subsurface waters, develop wastewater treatment management plans and practices, and issue permits for discharge (Section 402) and permits for dredge and fill material issued by the United States Corps of Engineers (section 404), and Environmental Resource Permits (ERP) issued by the St Johns River Water Management District. All wetlands and creeks are also protected by the City of Gainesville Comprehensive Plan and Chapter 30 of the Gainesville Code of Ordinances. All development is subject to the criteria and requirements listed for the City's surface waters as listed in Sections 30-300 – 30-304 in the Gainesville Code of Ordinances. Little Hatchett Creek is a regulated creek under the City of Gainesville Code of Ordinances and any development along the creek will have to comply with Sec. 30-301 of the Ordinances.

The Gainesville Regional Airport property is located at the north end of the Orange Creek Basin. The surface water in the basin predominantly flows in a southerly direction towards Orange Creek. Orange Creek flows east into the Ocklawaha River, which feeds Ocklawaha Lake. The Florida Barge Canal connects Ocklawaha Lake to the St. Johns River. Once in the St. Johns River, the water flows northeast into the Atlantic Ocean.

The flow of stormwater runoff from GNV property is collected through a system of inlets, pipes and ditches that convey the runoff to Little Hatchet Creek. Little Hatchet Creek flows in an easterly direction across the GRA property. With the construction of an access road to the industrial area on the north side of the property, the creek was channeled through an approximately 25' corrugated metal pipe culvert. There are several subbasins on the GRA property that discharge into the creek. The southern subbasin, number 2, covers the terminal side of the property including Runway 10-28. The terminal building, commercial service apron and Runway 10-28 are drained through drop inlets and open cut ditches that form a branch of Little Hatchet Creek. The Northern subbasin, number 3, collects runoff from the undeveloped area on the northeast corner of airport property. The main subbasin, number 1, covers the remainder of airport property. This includes all of the general aviation buildings, hangars and taxiway along Runway 6-24. The branches for subbasins 2 and 3 connect to Little Hatchet approximately 2000' before it enters the Gum Root Swamp. The flow from Gum Root Swamp goes into Newnans Lake and eventually into Orange Lake, which feeds Orange Creek.

Discharge of stormwater runoff is regulated by the St. Johns River Water Management District (SJRWMD). SJRWMD requires that the post construction discharge from a 25 year, 24 hour event be held to pre-development levels. The City of Gainesville additionally requires that all systems must meet the 25-year critical duration event. Stormwater discharges to waters of the state are required to be treated by one of six approved methods, including retention, wet detention, dry detention, underdrains, exfiltration, and swales. In addition, SJRWMD has criteria prohibiting net loss of volume within the 10-year floodplain of creeks and rivers with a

drainage basin area exceeding 5 square miles. This criteria will apply to the Little Hatchet Creek basin whose area is approximately 50 square miles.

The Environmental Protection Agency (EPA) enforces non-point discharge of stormwater through the National Pollutant Discharge Elimination system (NPDES) permitting program. Construction projects disturbing more than one acre of land are required to secure a Nationwide Permit from EPA. Permit conditions consist of certifying that an approved Surface Water Pollution Prevention Plan (SWPPP) will be employed. The airport currently has a SWPPP that was approved in 1997 but should be updated within the first phase of the master planning period to also bring the plan into compliance with new regulations being considered for mobile fuel tenders at airports. In addition, fuel sump basins should be positioned around all general aviation aprons to allow aircraft fuel being sumped for a visual inspection to be collected in an acceptable manner instead of being disposed of on the aircraft apron. In addition, an aircraft wash rack is planned for construction during Phase 1 to allow aircraft wash detergents to be collected prior to being discharged into the stormwater system.

The plan for future surface water runoff from GNV is to maintain the current drainage patterns. The stormwater facilities should be upgraded in order to adequately collect and convey runoff from a future fully built-out airport to treatment and attenuation facilities prior to discharge to Little Hatchet Creek and Gum Root Swamp. Flood elevations throughout the airport will be determined for the design storm events and any areas of flooding will be addressed. Stormwater treatment facilities are likely to be either retention areas, dry detention areas, or swales. The Federal Aviation Administration (FAA) discourages the use of wet detention facilities within airfields, since they are considered to be bird attractants. Eclipse Aviation will use the wet pond by necessity. While underdrains and exfiltration systems are an option, they are associated with high maintenance costs and may not be suitable for this operating environment..

Stormwater design is determined, to a large extent, by the soils at GNV. The Soil Survey of Alachua County, Florida (Thomas, Cummings and Wittstruck 1985) was utilized to identify “map units” areas within the property boundaries that have distinctive patterns of soil, relief, and drainage. These classifications are based on a taxonomic classification system of the dominant soil or soils, but additionally contain some minor soils inclusions. Soil map units are named based on the taxonomic classification of the major soils present. Soil assessment is therefore based on the type of soils present as well as the inherent soil properties including slope, drainage, depth and typical vegetative communities supported. A Geographic Information System (GIS) digital file was obtained for Alachua County soils. The soil dataset is a digital representation of the County Soil Survey maps published by the USDA NRCS as the Soil Survey Geographic (SSURGO) data set (St. John’s River Water Management District 1990). Soil series mapped on the site are summarized in Table 5-2, soil series mapped on the Gainesville Regional Airport study site.

Soil types on the site include Newnan Sand, Pelham, Pompano Sand, Pomona Sand, Pomona Sand – depressional, Millhopper Sand, Pits and Dumps, and Wauchula-Urban Land complex. The Pomona Sand, Millhopper Sand, and Newnan Sand soil classes support primarily upland habitat and wildlife use; Pomona Sand – depressional, Pelham, and Pompano Sand soils support wetland habitat and associated wildlife, and the Wauchula-Urban Land complex occurs on the developed airport property. Pits and Dumps series support upland and wetland habitat depending on existing topography and associated wildlife.

The Newnan Sand series is poorly drained soils occurring in flatwood habitats. The Newnan Sand soils are approximately level with a slope of 0 to 2 percent. The Newnan series soils are nearly level, poorly drained soils that formed in sandy and loamy marine deposit beds. Newnan Sand has a fair potential for woodland habitat and very poor for wetland habitat and associated wildlife.

The Pelham series soils are poorly drained. These soils include flatwoods vegetation intermixed with small cypress ponds and herbaceous depressions. Slopes are nearly smooth and range between 0 to 2 percent. Wetness is the limiting factor for urban utilization for Pelham series soils.

Pompano Sand consists of nearly level, poorly drained soils found in broad flatwood areas and shallow depressions. Slopes range from 0 to 2 percent. Pompano Sand contains a high water table that is at or near the soil surface; therefore, limiting the land use potential.

The Pomona series includes Pomona Sand and Pomona Sand-depressional soils. These consist of nearly level, poorly drained soils that formed in beds of sandy and loamy marine deposits. These soils are in broad flatwood areas. Slopes range from 0 to 2 percent. Depressional areas have water standing on the surface for about 4 months or more. These soils are sandy, siliceous, hyperthermic Ultic Haplaquods.

The Pomona Sand – depressional and Pompano Sand soil groups identified on the subject area are considered hydric soils (Thomas, Cummings and Witstruck 1989). Hydric soils are defined as soils that occupy specific landform positions and have features and properties unique to wetlands Criteria for hydric soil classification include 1) all Histels except Folistels and all Histosols except Folists; or 2) soils in Aquic suborders, great groups, or subgroups, Histoturbels great group, Albolls suborder, Pachic subgroups, or Cumulic subgroups; 3) soils that are frequently ponded for long or very long duration during the growing season; or 4) soils that are frequently flooded for long or very long duration during the growing season. Hydric soils are typically associated with wetlands as their predominant soil type. However, the presence of hydric soils alone is not a sole indicator of wetlands (Hurt, Whited and Pringle 1998, Thomas, Cummings and Wittstruck 1985, USDA 1992, USDA 1995).

The Milhopper series consists of nearly level to sloping, moderately well-drained soils that formed in thick beds of sandy and loamy marine sediment. These soils are in broad areas of the gently rolling uplands and in slightly convex areas of the flatwoods. Slopes range from 0 to 8 percent. These soils are loamy, siliceous, hyperthermic, Grossarenic Paleudults.

Pits and Dumps series consists of substrate derived from limestone mining operations. Pits and Dumps substrate include excavation areas or excavated overburden adjacent to the mining pits. The heterogeneous soils contain a combination of mixed soils, limestone fragments, and limestone boulders. The Pits and Dumps series have a fair to good potential for most wildlife habitat.

The Wauchula series consists of nearly level, poorly drained soils that formed in beds of sandy and loamy marine deposits. These nearly level soils are in broad areas of the flatwoods. Slopes range from 0 to 2 percent. Depressional areas have water standing on the surface for about 4 months or more. These soils are sandy, siliceous, hyperthermic Ultic Haplaquods.

Table 5-2
SOIL SERIES MAPPED ON THE GAINESVILLE REGIONAL AIRPORT STUDY SITE.

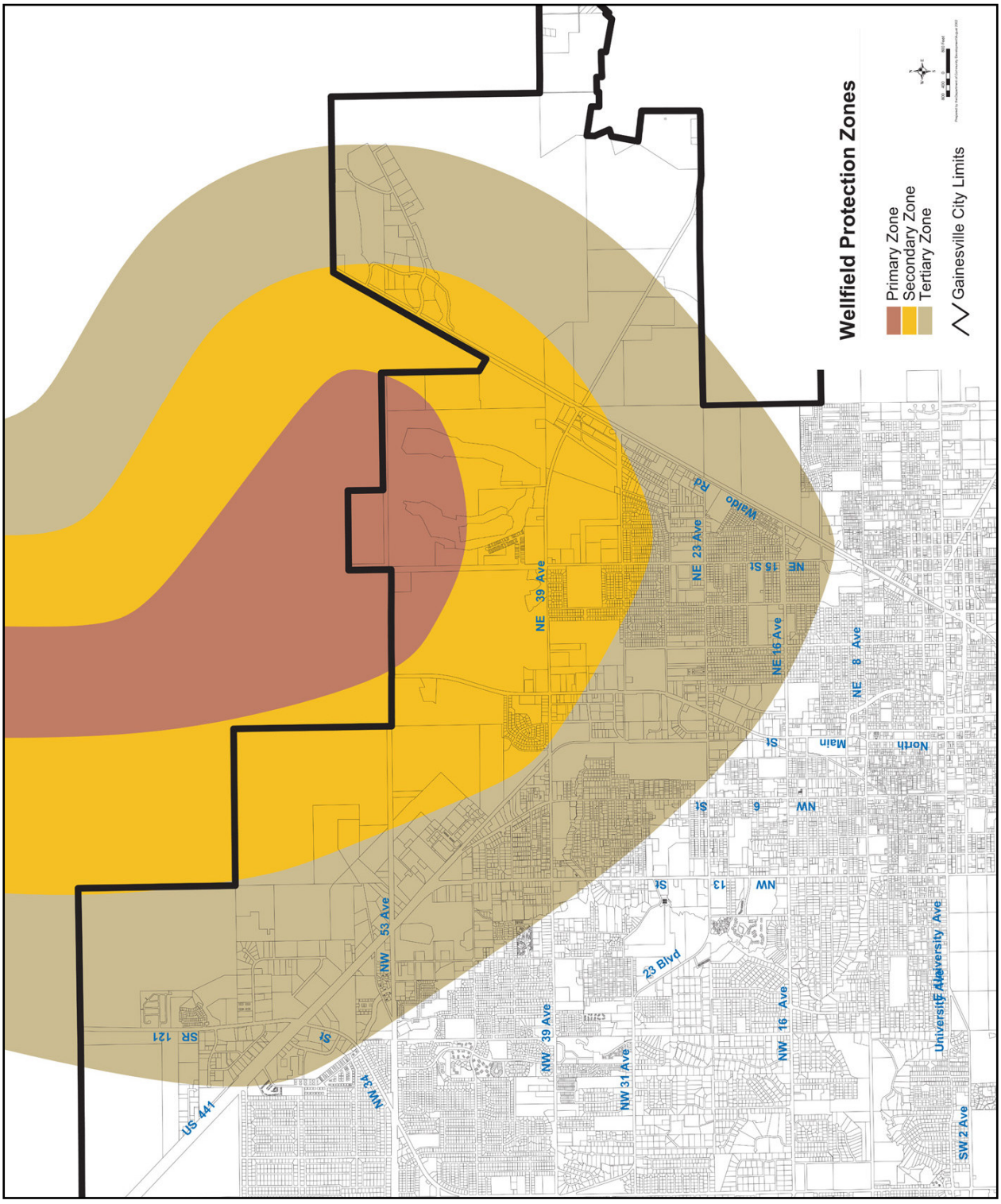
Soil Series	Ecological Community	Hydric Soil
Millhopper Sand	Flatwoods	
Newnan Sand	Flatwoods	
Pelham	Flatwoods	
Pomona Sand	Flatwoods	
Pomona Sand – depressional	Swamp Hardwoods	X
Pompano Sand	Flatwoods	X
Pits and Dumps	Mixed habitats	
Wauchula-Urban Land complex	Developed	

Source: Birkitt Environmental Services

A stormwater master plan is recommended to be conducted during phase 1 to investigate the existing drainage system and provide for a master stormwater system that is in conformance with FAA regulations for wildlife attractants. This master stormwater system will also greatly aid future project designers to accommodate future stormwater systems.

The Airport also lies within the wellfield protection zone for the region as shown in Figure 5-10. The eastern boundary of the property lies within the secondary and tertiary zones, and any future development is regulated by the City of Gainesville. Development within the wellfield protection zone will require a special use permit or exemption (depending upon the nature of the development) issued by the City of Gainesville.

Figure 5-10
WELLFIELD PROTECTION MAP



The following are potential impacts for this category. As a result, further review of this impact category should be included in any future environmental analysis necessary for future projects.

5.4.7 Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation (DOT) Act provides that the DOT shall not approve any program or project which requires the use of any of the following categories that have national, state or local significance:

- Publicly owned parks or recreation areas
- Wildlife or waterfowl refuges
- Historic sites

The Master Plan identifies no impacts on any programs or projects which require the use of any publicly owned land from a public park, recreation area, or wildlife and water fowl refuge of national, state or local significance. There are no Section 4(f) properties located on or near the Gainesville Regional Airport.

5.4.8 Historic, Architectural, Archaeological and Cultural Resources

Two federal laws apply to this category: 1) The National Historic Preservation Act of 1966 and 2) The Archaeological and Historic Preservation Act of 1974. The National Historic Preservation Act of 1966 requires an initial review to determine whether properties contained within the National Register of Historic Places or properties eligible for inclusion in the register are located in the vicinity of the project site. The Archeological and Historic Preservation Act of 1974 requires a survey, recovery and preservation of significant and pre-historical data that may be destroyed or irreparably lost due to a federal, federally licensed or federally funded project.

Correspondence with the Florida Division of Historical Resources indicated that there were no known historical resources within the vicinity of the Gainesville Regional Airport.

5.4.9 Biotic Communities (including both Flora and Fauna)

Biotic communities are defined as areas where plants (flora) and animals (fauna) share a mutual habitat necessary for sustenance and propagation. The level of anticipated impacts determines the level of biotic assessment needed. Several (marginal) factors are examined to determine the anticipated impacts to biotic communities:

- If there is any taking or impact to public-owned wildlife or waterfowl refuge areas with federal, state, regional or local significance;
- If there are threatened or endangered species in the area of immediate impact; and
- Would the proposed development affect water resources (i.e., wetlands, groundwater, impoundment, diversion, deepening, controlling, modifying, polluting, dredging or filling of any stream or body of water).

The following is a summary of the analysis that was conducted for the Gainesville Regional Airport for this particular impact category. Biotic communities, including uplands and wetlands, were characterized on the site using published data and observations recorded during the preliminary and detailed site investigations (Cowardin et al. 1979, Myers and Ewel 1999). Community types included the maintained airport field, mesic flatwoods, forested wetlands, scrub-shrub wetland, emergent wetlands, and riverine communities.

Upland Systems are characterized by the absence of hydric soils, predominant hydrophytic macrophytes, or adequate hydrology to support vegetative species indicative of upland communities. Upland habitat types on the site include the majority of the maintained airport field, silvicultural stands of planted pine forests and mixed mesic flatwoods, characterized by cabbage palms (Sabal palmetto), palmetto (Sabal minor), oak trees (Quercus spp.) and other species.

Wetland systems identified on the GNV site included palustrine forested, palustrine scrub-shrub, palustrine emergent and riverine systems. Pine species are often found in upland inclusion areas within the wetland limits of the Palustrine Forested systems.

Mesic flatwoods are characterized as having a relatively open pine canopy, sparse understory and dense ground cover. Two common forms of this community are the longleaf pine/wiregrass/runner oak association and the slash pine/gallberry/saw palmetto association. Soils are moderately to poorly drained. Periodic fire (every 1-8 years) restricts the encroachment of hardwoods and provides a suitable substrate for the regeneration of pines. The habitat type is associated with and often grades into wet flatwoods, dry prairie, or scrubby flatwoods. Mesic flatwoods, once a dominant community throughout Alachua County, have been converted to pine plantations in many areas of the county (http://environment.alachua-county.org/ Natural_Resources/ index.htm). Wildlife species typically supported by mesic flatwoods include black bear (Ursus americanus), white-tailed deer (Odocoileus virginianus), cottontail rabbit (Sylvilagus floridanus), cotton rat (Sigmodon hispidus), eastern towhee (Pipilo erythrophthalmus), common yellowthroat (Geothlypis trichas), pine warbler (Dendroica pinus), brown-headed nuthatch (Sitta pusilla), black racer (Coluber constrictor), eastern diamondback rattlesnake (Crotalus adamanteus), and pinewoods tree frog (Hyla femoralis) (http://southeast.fws.gov/vbpdfs/commun/mpf.pdf).

Forested wetlands on-site approximate bottomland forests and floodplain swamps. These communities are characterized by closed canopies, with either dense shrubby understories and little ground cover or sparse understories and ground cover of ferns, herbs and grasses. The canopy typically is composed of a mixture of evergreen and deciduous species that can tolerate various periods of inundation. These forests usually occur on low flatlands that border streams. Soils are generally a mixture of clay and organic materials or sand, organic and alluvial material. The community types are associated closely with, and often grade into, hydric hammock, mesic flatwoods, mesic hammock, slope forest, baygall or wet flatwoods (Meyers and Ewel, 1990). Characteristic plant species include water oak (Quercus nigra), swamp laurel oak (Quercus laurifolia), spruce pine (Pinus glabra), loblolly pine (Pinus taeda), red maple (Acer rubrum), sweetgum (Liquidambar styraciflua), sweetbay (Magnolia virginiana), swamp tupelo (Nyssa sylvatica var. biflora), water tupelo (Nyssa aquatica), Florida elm (Ulmus americana var. floridana), bald-cypress (Taxodium distichum), pumpkin ash (Fraxinus profunda), green ash (Fraxinus pennsylvanica) and cabbage palm (Sabal palmetto). Characteristic fauna of forested wetlands include beaver (Castor canadensis), wood duck (Aix sponsa), barred owl (Strix varia), red-shouldered hawk (Buteo lineatus) and cottonmouth snake (Agkistrodon piscivorus).

Scrub-shrub wetlands are typically dominated by woody vegetation less than six (6) meters in height. These wetlands may represent a successional stage for developing forested wetlands or may be relatively stable communities. Characteristic plant species include elderberry (Sambucus canadensis), common buttonbush (Cephalanthus occidentalis), and Carolina willow (Salix caroliniana).

Emergent wetlands, also termed marshes or prairies, are characterized as herbaceous wetlands located in depressions. Emergent wetlands are usually inundated for 200 or more days per year; the vegetation is usually dominated by floating and emergent macrophytes including maidencane (Panicum hemitomon), pickerel-weed (Pontederia cordata), saw-grass (Cladium jamaicense), cattail (Typha spp.), rush (Juncus spp.), lotus (Nelumbo sp.), water-lily (Nymphaea spp.) and spatter-dock (Nuphar spp.). Emergent wetlands associate with and often grade into wet prairie or lake communities. Fauna of emergent wetlands is abundant and includes river otter (Lontra canadensis), raccoon (Procyon lotor), round tailed muskrat (Neofiber alleni), wood stork (Mycteria Americana), sandhill crane (Grus canadensis), white ibis (Eudocimus albus), herons and egrets (Ardeadae), rails (Rallidae), mottled duck (Anas fulvigula), blue-winged teal (Anas discors), harrier (marsh hawk Circus cyaneus), snipe (Gallinago gallinago), moorhen (Gallinula chloropus), purple gallinule (Porphyrula martinica), red-winged blackbird (Agelaius phoeniceus), boat-tailed grackle (Quiscalus major), alligator (Alligator mississippiensis), stripped mud turtle (Kinosternon baurii), stinkpot (Sternotherus odoratus), chicken turtle (Deirochelys reticularia), green water snake (Nerodia cyclopion), mud snake (Farancia abacura), stripped swamp snake (Seminatrix pygaea), pig frog (Rana grylio), Florida cricket frog (Acris gryllus dorsalis), and various small fish species such as the mosquito fish (Gambusia holbrooki), golden top minnow (Fundulus chrysotus) and pirate perch (Aphredoderus sayanus).

Riverine systems in Alachua County include both large rivers and small creek tributaries of variable size. The riverine communities on the airport site consist of small ditches and a perennial stream approximately 20 feet wide, which enters the site through a forty foot culvert on the northwest side of the Runway 6-24, traverses the northern margin of the runway and discharges to the forested area on the east side of the runway. These streams have a generally sandy substrate with some accumulated detritus, and are shaded by native trees, shrubs and forb plant species. In addition to vegetation, plankton, mollusks, aquatic insects, crayfish and fish are commonly found in riverine systems.

5.4.10 Habitat Assessment

Natural communities constitute habitat for a large number of wildlife species in Alachua County. Among vertebrate species (mammals, birds, reptiles, amphibians and fish), there are 417 species native to the area and 21 species that were introduced. Representing over 60% of the species of vertebrates identified in the entire state of Florida, the presence of 438 different species in Alachua County represents a high level of diversity reflecting a wide variety of habitat and climatic types in this area.

Field biologists surveyed the airport property on May 16-17 of 2003, traversing the property via pedestrian transects, to identify and ground-truth wetlands, biotic communities, and to identify the presence of threatened, endangered and sensitive species. Physical sightings, vocalizations and observations of tracks, nests, burrows, scat, etc. of state and federally listed wildlife species were recorded, as were physical sightings of state and federally listed plant species. In addition, any observations of non-listed wildlife species were recorded. Wildlife

species observed on or flying over the site were recorded during the field survey as shown in Table 5-3 (Behler and King 1979, National Audubon Society, 1994).

Table 5-3
WILDLIFE SPECIES OBSERVED
GAINESVILLE REGIONAL AIRPORT

Wildlife Species	Scientific Name	Observation Location	Observed on Site
Birds			
American kestrel	*Falco sparverius*	Runway expansion zone	X
common crow	*Corvus brachyrnchos*	Runway expansion zone	X
bluejay	*Cyanocitta cristata*	Flatwoods	X
barred owl	*Strix varia*	Flatwoods	X
pileated woodpecker	*Dryocopus pileatus*	Flatwoods	X
Mammals			
coyote	Canis latrans	Runway expansion zone	X
gray fox	Urocyon cinereoargentatus	Runway expansion zone	X
Herptiles			
gopher tortoise	Gopherus polyphemus	Runway expansion zone, airport airfield	X

Source: Birkitt Environmental Services, Inc.

Alachua County is included in the Florida Bird Atlas project and a list of the non-listed bird species known to occur in the county is summarized in the appendix.

5.4.11 Threatened, Endangered, and Sensitive Species

The following resources were utilized to determine the potential occurrence of state and federally listed species: the Florida Fish and Wildlife Conservation Commission (FWC) state lists of protected animals as defined in the Florida Administrative Code (F.A.C.) 39-27.003, 39-27.004, and 39-27.005, the state list of protected plants, administered and maintained by the Florida Department of Agriculture and Consumer Services as defined in F.A.C. 5B-40, and the Florida Natural Areas Inventory (FNAI). The federal lists of protected plants and animals are published in 50 Code of Federal Regulations (CFR) 17 (for animals) and 50 CFR 23 (for plants) and are administered by the United States Fish and Wildlife Service (USFWS). Refer to Attachment 2 for the list of Alachua County Federally Listed Species and Attachment 3 for the list of Florida's Endangered Species, Threatened Species, and Species of Special Concern.

The FNAI database maintains and distributes information regarding natural communities, rare and endangered species (plants and animals), bird rookeries, and geological and other natural features. According to the FNAI, "the database is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources (FNAI, April 25, 2003)." However, FNAI information should always be accompanied by a site-specific field survey to verify the occurrence of potentially occurring species.

An FNAI standard survey was obtained to determine the possible presence of rare, threatened or endangered species, and natural communities (termed 'Element Occurrences') on the airport property and environs. The Element Occurrences generally indicate a viable population of a species rather than a sighting of an individual. Also examined was information regarding

conservation lands, land acquisition projects and non-managed natural areas (FNAI potential habitat for rare species and FNAI potential natural areas).

The airport property is located on and adjacent to Potential Natural Areas (PNA). According to the FNAI, these areas are of priority 4 and 5. Priority designations are based on the size and perceived quality and type of the natural, relatively intact vegetative community, as determined by aerial photo-interpretation by FNAI scientists. The PNA located on and adjacent to the site are lower priority than PNA designations 1-3, but are believed to be ecologically viable tracts of land representative of Florida's natural ecosystems. These areas include some of the following habitat types: wet flatwoods, baygall, dome swamp, basin swamp, swamp lake, upland mixed forest, pine flatwoods and sandhill.

Table 5-4 shows the federal, state, and county regulatory status of species known to occur in Alachua County Findings from the FNAI standard survey suggest three Element Occurrences that potentially occur near, or on, the airport conservation area. These include the Sherman's fox squirrel (Sciurus niger shermani), red-cockaded woodpecker (Picoides borealis) and variable-leaf crownbeard (Verbesina heterophylla). Nine federally or state-listed species are known to occur in the vicinity of the airport site based on the FNAI survey information (Table 5-4). Evidence of only one of these species, the gopher tortoise (Gopherus polyphemus), was observed on site during field investigations.

Table 5-4
THREATENED AND ENDANGERED SPECIES IN ALACHUA COUNTY

Common name	Scientific name	FNAI Element Occurrence	Federal	State of Florida
Sherman's fox squirrel	*Sciurus niger shermani*	Rare and local		SSC
red-cockaded woodpecker	Picoides borealis	Imperiled	E	T
variable-leaf crownbeard	Verbesina heterophylla	Imperiled	Species of management concern	
Bald eagle	Haliaeetus leucocephalus		T	T
Florida scrub-jay	Aphelocoma coeruluscens		T	T
wood stork	Mycteria americana		E	E
Oval (Santa Fe River) pigtoe mollusk	Pleurobema pyriforme		E	
squirrel chimney cave (or Florida cave) shrimp	Palaemonetes cummingi			T
gopher tortoise	Gopherus polyphemus			SSC

Source: Birkitt Environmental Services, Inc.

Sherman's fox squirrel is a Florida Species of Special Concern and is considered by the FNAI to be either very rare and local throughout its range or found locally in a restricted range or vulnerable to extinction from other factors. A few individual Sherman's fox squirrels were reported observed to the south of the airport conservation area in 1987, and have been intermittently reported since then. Fox squirrels typically use sandhill (high pine), pine flatwoods, pastures, and other open, ruderal habitats with scattered pines and oaks, and may possibly occur in the new conservation easement area.

The red-cockaded woodpecker is a state-listed threatened species, federally listed endangered species, and considered by the FNAI as an imperiled species because of rarity or because of vulnerability to extinction due to some natural or man-made factor. The species habitat preference is the longleaf pine ecosystem, and it particularly selects mature pines in which to

excavate cavities. Two active red-cockaded woodpecker colonies have been reported near the airport new conservation area, one to the north and one to the south of the new conservation area.

The variable-leaf crown beard is listed as a species of management concern by the U. S. Fish and Wildlife Service, but is not listed as state or federally threatened or endangered. The species is considered by the FNAI to be imperiled because of rarity or because of vulnerability to extinction due to some natural or man-made factor. Variable leaf crown beard is a component of sandhill communities, and was observed in a mowed area (part of the airport clear zone) west of the airport new conservation area in 1996.

The bald eagle (Haliaeetus leucocephalus) is a federally and state listed threatened species. The Florida Fish and Wildlife Conservation Commission's Eagle Nest Locator website (http://www.wildflorida.org/eagle/eaglenests/Default.asp) was consulted to identify the nearest documented bald eagle nest in relation to the site. According to this source, the closest reported eagle nest to the Gainesville Regional Airport is located approximately 2.5 miles to the southeast.

Other threatened or endangered species documented to occur in Alachua County include the Florida scrub-jay (Aphelocoma coeruluscens), wood stork (Mycteria americana), oval (Santa Fe River) pigtoe mollusk (Pleurobema pyriforme) and squirrel chimney cave (or Florida cave) shrimp (Palaemonetes cummingi).

The scrub-jay is not expected to exist onsite because the species relies on scrub, sandhill, and scrubby flatwood communities; these community types are not present on the airport property.

The wood stork utilizes freshwater and brackish wetlands, primarily nesting in cypress or mangrove swamps. It feeds in freshwater marshes, narrow tidal creeks or flooded tidal pools. Particularly attractive feeding sites are depressions in marshes or swamps, where fish become concentrated during periods of falling water levels. Wood storks (Mycteria americana) would be unlikely to occur on the site due to the absence of preferred habitat.

The oval (Santa Fe River) pigtoe mollusk is usually found to inhabit stream channels with moderate currents and silty sand or gravel substrates (http://ecos.fws.gov/ docs/recovery_plans/ 2003/030930.pdf). According to the U.S. Fish and Wildlife Service Recovery Plan for the oval pigtoe, the last occurrence of an oval pigtoe population in Alachua County was in the Santa Fe River in 2001. The absence of preferred habitat on the airport property suggests that it is unlikely that the oval pigtoe would occur on this site.

The squirrel chimney cave (or Florida cave) shrimp is only known from a single sinkhole in Alachua County within a privately owned property (http://endangered.fws.gov/ i/k/sak0a.html). This sinkhole is not on airport property, and there are no other known sinkholes on airport property, so chimney cave shrimp are not anticipated to occur on the site.

Numerous gopher tortoise burrows were observed (Behler and King 1979) onsite. Gopher tortoises, a Florida Species of Special Concern, are typically found in longleaf pine sandhills, xeric oak hammocks, scrub, pine flatwoods, dry prairies and coastal dunes. Tortoises can also live in anthropogenically-affected environments such as pastures, old fields and grassy roadsides. To be suitable for gopher tortoises, the habitat must have well-drained sandy soils for digging burrows, herbaceous food plants and open sunny areas for nesting and basking.

A total of 53 gopher tortoise burrows, one tortoise shell and no live individual gopher tortoises were recorded during the survey of the airport site as shown in Table 5-5 and Figure 5-11. Of these burrows, 40 were active burrows that appeared to be used by adult individuals, and 13 appeared to be used by sub-adult/juvenile gopher tortoises (based on the size of the burrow entrance). The designations "active" and "old" were applied in accordance with the Guidelines for Gopher Tortoise Relocation - Criteria for Determining the Status of Gopher Tortoise Burrows (Florida Fish and Wildlife Conservation Commission 1991).

Table 5-5
GOPHER TORTOISE OBSERVATIONS

Gopher Tortoises (# live individuals observed)	**Surrounding Airport Property (# burrows)**
0	53

Source; Birkitt Environmental Services, Inc.

The gopher tortoise population supported on site occurs broadly distributed on the open field airport habitats and adjacent forested hardwood/pine habitats, particularly on the planned northeast runway extension and runway protection zone of Runway 6-24, on portions of the adjacent flatwoods, and along the northeastern and southeastern fence lines. Numerous burrows were also identified along Runway 10-28 and its Runway Protection Zone, and adequate foraging and burrow habitat existed in these areas. Gopher tortoises will probably continue to use these areas since the cover is maintained at a suitable height as a result of airport mowing and maintenance operations. Open fields with suitable forage species are noted throughout Florida to provide suitable habitat for the species (FWC 2002, Gopher Tortoise Council 2001).

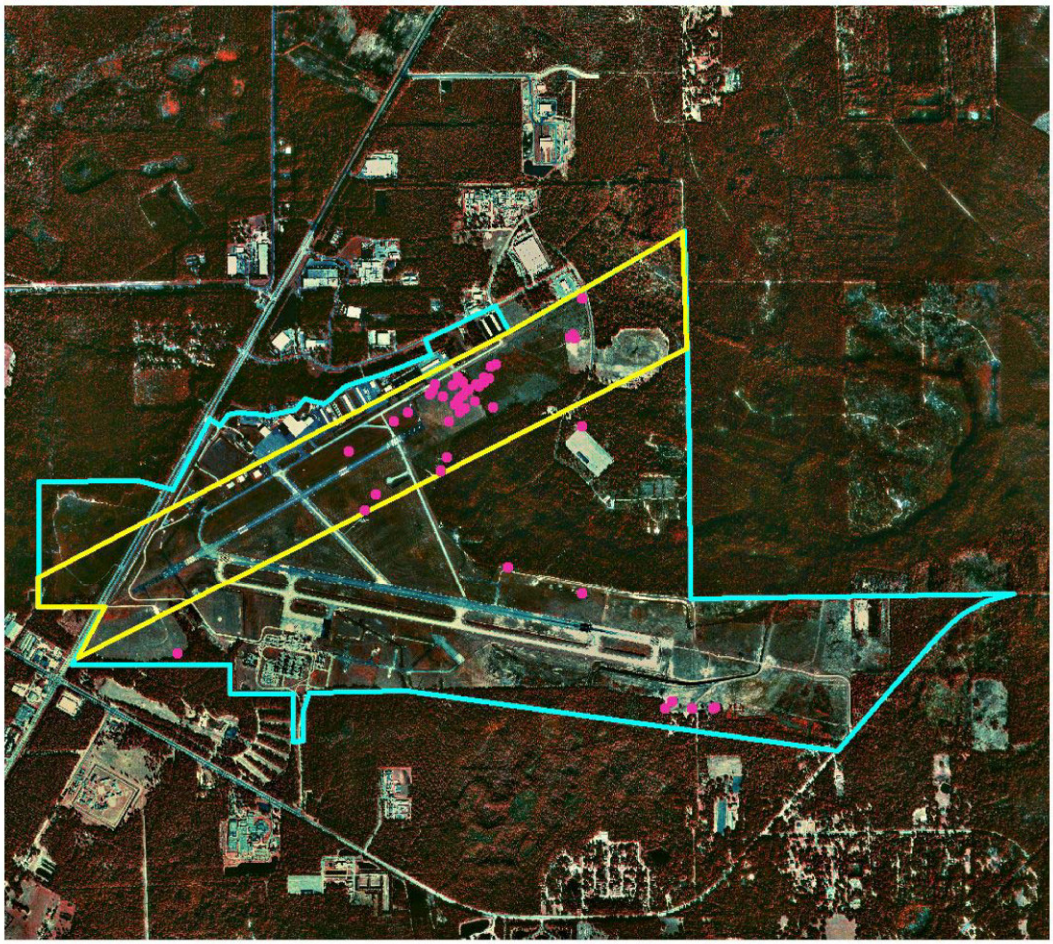
There are several commensal species associated with gopher tortoises, and the species' burrows, including the gopher frog (Rana capito), eastern indigo snake (Drymarchon couperi), Florida mouse (Podomys floridanus) and Florida pine snake (Pituophis melanoleucus). While these species were not observed during the on site field visit, it is anticipated that the presence of some or all of these species is likely.

Protection for the gopher tortoise is afforded under Rules 68A-25.002 and 68A-27.005 of the Florida Administrative Code. Given the proposed site development plans for the Airport, it is possible that the gopher tortoise burrows can either be avoided or individuals relocated elsewhere on the property as provided by the Florida Fish and Wildlife Conservation Commission's "Available options to address the presence of gopher tortoises on lands slated for development". Site-specific, options to conserve these species should be identified when the extent of impacts that will occur from the runway expansion project has been determined.

It is recommended that a site-specific survey be conducted prior to the onset of construction to avoid affecting the gopher tortoises on-site. If avoidance is not possible, qualified wildlife biologists would capture and relocate the affected gopher tortoises (on airport property to the extent feasible) in compliance with FWC regulations and guidelines.

Potential impacts exist for this category. As a result, further review of this impact category should be included in any future environmental analysis necessary for future projects.

Figure 5-11
THREATENED AND ENDANGERED SPECIES



LEGEND

N

- Gopher Tortoise Burrow Locations
- Runway Extension Project Limits
- Airport Property Boundary

5.4.12 Wetlands

FAA Advisory Circular 150/5200-23, *Hazardous Wildlife Attractants On or Near Airports*, recommends against land use practices that attract or sustain populations of hazardous wildlife within 10,000 feet of the Airport's movement areas, loading ramps or aircraft parking areas and within five statute miles of approach or departure airspace, where practicable. These land use practices include recommending new designs for wetland mitigation projects that remove or reduce the impacts from retention ponds on or near airport property.

Wetland areas provide several functions: 1) as a wildlife habitat to a variety of wildlife; 2) as important water quality functions in an agricultural area; and 3) provide flood retention benefits during high runoff events. Wetlands are defined as those areas that are inundated by surface or ground water with a frequency sufficient to support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, natural ponds, estuarine areas, tidal overflows and shallow lakes and ponds with emergent vegetation.

The regulatory definition of wetlands varies by federal, state or local jurisdiction in the United States, and these definitions diverge from accepted definitions internationally. "Wetlands" is the collective term for swamps, marshes, bogs, wet meadows, and similar areas that are often located between open water and dry land. Wetlands are a valuable natural resource that help to improve water quality, reduce flood and storm damage, provide important fish and wildlife habitat, and support outdoor recreational activities such as hunting and fishing.

Under Section 404 of the Clean Water Act "jurisdictional waters of the United States, including wetlands" are protected. The term "Waters of the United States" is used to refer to open water or watercourses that are un-vegetated. Regulatory jurisdiction over wetlands that occur as isolated wetland systems, not contiguous with riverine systems, has been in litigation in the United States for the past thirty years. Recent legal decisions have reduced federal regulatory authority over isolated wetlands; however, these recent legal decisions are in appeal and continue to be litigated. A recent U.S. Supreme Court decision commonly referred to as the SWANCC (Solid Waste of Northern Cook County) decision (as it is currently interpreted) has been determined to exempt certain isolated wetlands from Federal jurisdiction. The status of isolated wetlands should be reviewed prior to any permitting necessary to achieve airport planning objectives.

The United States Army Corps of Engineers (USACE) defines wetlands as: An area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

The state of Florida defines "wetlands," in Chapter 373, F.S. as those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to

grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas.

The Florida wetland delineation methodology, pursuant to Rule 62-340, F.A.C., states that an area must be examined for, and exhibit, the following characteristics in order to be considered a wetland:

1. Dominance of appropriate vegetative stratum as discussed in Chapter 62-340 F.A.C. section 62-340.450. Facultative plants shall not be considered in determining dominance.

2. Presence of hydrologic indicators, including, but not limited to, the following: algae mats, aquatic mosses or liverworts on trees or substrates, aquatic plants, aufwuchs, drift lines and rafted debris, elevated lichen lines, evidence of aquatic fauna, existing hydrologic data, morphological plant adaptations, secondary flow channels, sediment deposition, vegetated tussocks or hummocks, and water marks.

3. Appropriate hydrologic data. Data must indicate that inundation for at least seven consecutive days, or saturation for at least twenty consecutive days occurs during conditions that represent long-term hydrologic conditions.

According to the 1987 USACE Wetland Delineation Manual, areas must exhibit three distinct characteristics to be considered wetlands:

1. The prevalent vegetation must consist of plants adapted to life in hydric soil conditions. These species, due to morphological, physiological, and/or reproductive adaptations, can and do persist in anaerobic soil conditions.

2. Soils in wetlands must be classified as hydric or they must possess characteristics that are associated with reducing soil conditions.

3. The area must be inundated either permanently or periodically at mean water depths less than 6.5 inches or that the soil is saturated at the surface for some time during the growing season of the prevalent vegetation.

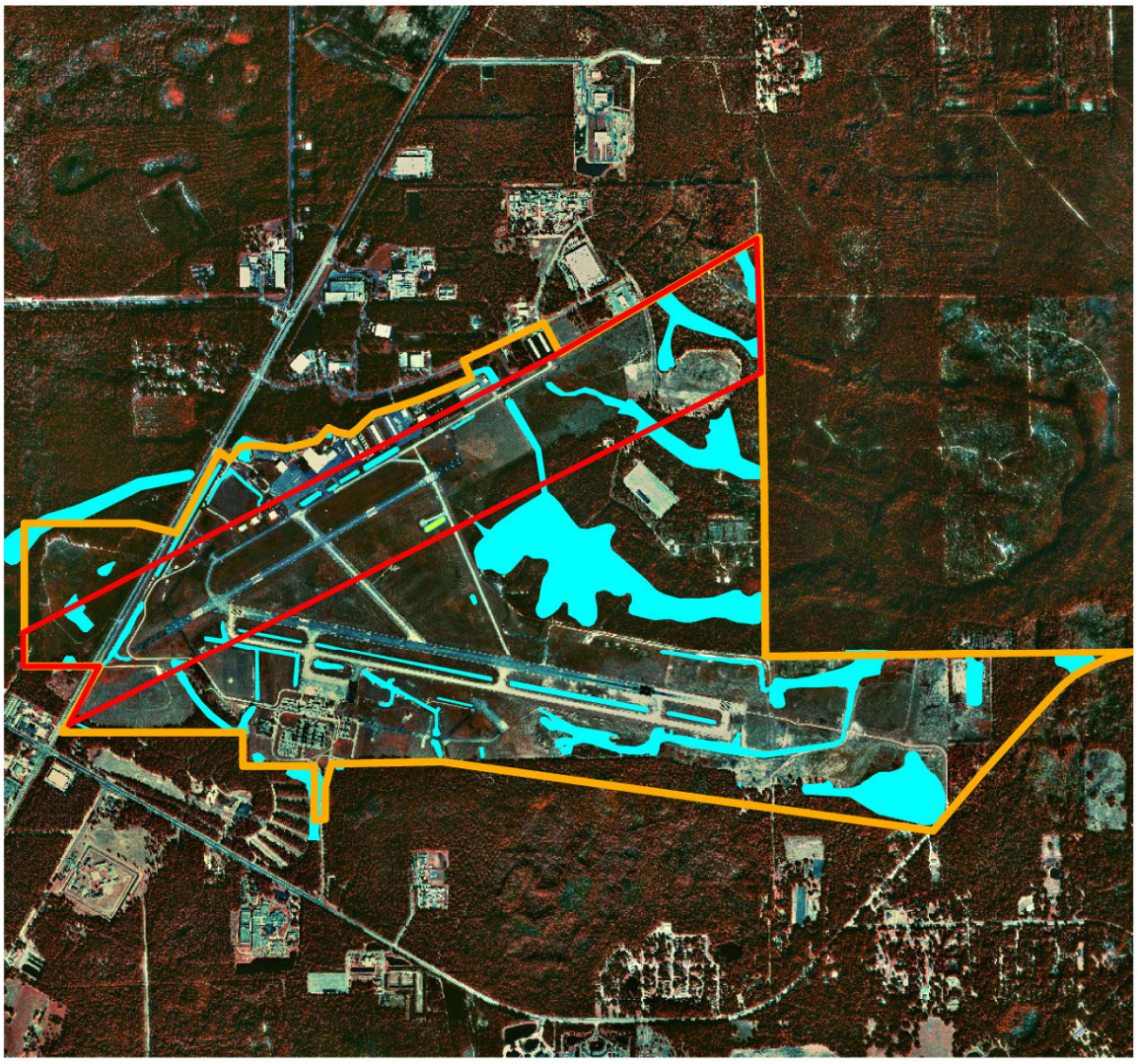
The basis for wetland delineations for the project site was obtained from the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and the Florida Department of Environmental Protection Rule 62-340, F.A.C. Due to variations in the definition of jurisdictional wetlands pursuant to State and Federal regulations, two different wetlands delineation lines may be defined. However, on the project site, conditions are such that one line reasonably approximates both jurisdictions.

A preliminary wetlands jurisdictional delineation was conducted within the boundaries of the project site during the May 2003 site investigation based on photointerpretation, ground-truthing and detailed site review of the Gainesville Regional Airport property. Wetlands were delineated on current rectified color infrared digital aerial photography and a wetlands delineation map for the airport property was prepared. Wetlands were classified according the standard delineation and classification methods used in the United States (Cowardin et al 1979, U. S. Army Corps of Engineers 1987). Wetlands delineation was based on relevant wetland jurisdictional

regulations (Florida Department of Environmental Protection (FDEP), St. Johns River Water Management District (SJWMD), and the U. S. Army Corps of Engineers (USACE). A map of the wetlands areas overlaid on the aerial photography of the project area is shown in Figure 5-6.

Wetlands were assessed using United States Fish and Wildlife Service - National Wetland Inventory (NWI) data, field investigations, and a GIS digital file (State Plane North, NAD 83 (feet) projection) of wetlands in Alachua County, Florida obtained online from the Alachua County website (http://environment.Alachua-county.org/Natural_Resources). This file includes a combination of land use, soils, and hydrographic datasets: the St. John's River Water Management District 1995 land use, the Suwannee River Water Management District 1995 land use, the United States Geological Survey (USGS) 1:24,000 hydrography, the SSURGO Specific Soils, and the NWI. Wetlands were attributed with land use type, soil type and wetland class. In addition, a second GIS digital file for wetlands coverage of Alachua County was obtained from the Florida Geographic Data Library website, sourced from the NWI.

Figure 5-12
WETLAND MAP



5.4.13 Wetlands Classification

The NWI system was used to generally classify wetland systems (Cowardin et al 1979). Palustrine forested, palustrine scrub-shrub, palustrine emergent and riverine systems were identified on the site. Palustrine systems include all nontidal wetlands dominated by persistent vegetation, and in tidal areas where salinity due to ocean-derived salts is less that 0.5 ppt. Riverine systems include rivers and streams. The following NWI wetland community descriptions (NWI) detail the communities verified on-site and include the dominant vegetation observed (Cowardin et al, 1979, Reed 1998).

Palustrine Emergent (PEM): Palustrine Emergent Systems are 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 and may occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts-per-thousand (ppt).

Palustrine Scrub-Shrub (PSS): Palustrine Scrub-Shrub Systems includes areas dominated by woody vegetation less than six meters in height (20 feet). The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.

Palustrine Forested (PFO): Palustrine Forested Systems are characterized by woody vegetation that equals or exceeds six meters in height (20 feet).

Riverine (R): Riverine Systems include permanent and intermittent rivers and streams.

The majority of wetlands on the airport property consist of palustrine emergent wetlands including herbaceous swales, channelized ditches, and creeks as listed in Table 1-5. Peripheral to the airport, forested wetlands on the site support natural forested communities and silvicultural operations. The dominant forested wetland vegetation canopy cover consisted of sweet gum (Liquidambar styraciflua) red maple (Acer rubrum), black gum (Nyssa bifolia), and bays (Persea spp.), intermingled with slash pine (Pinus elliotti), a common silvicultural species.

Table 5-6
WETLANDS CLASSIFICATION AND ACREAGES
GAINESVILLE REGIONAL AIRPORT

Wetlands Classification	Total Wetlands (acres)
Palustrine Forested - PFO1	133.263
Palustrine Emergent - PEM1	80.848
Palustrine Scrub-Shrub - PSS1	4.599
Palustrine Unconsolidate Shore – PUS	3.080
Riverine Permanent - R4SB	0.381
Total	222.171

Source: Birkitt Environmental Services, Inc.

A detailed list of the wetland plant species observed on site during the field survey is included in Table 5-7.

Table 5-7
DOMINANT WETLAND SPECIES
GAINESVILLE REGIONAL AIRPORT

Scientific Name	Common Name	USFWS NWI Southeast Region (Cruz 1996)*	FDEP (FDEP 1994)
OVERSTORY			
Acer rubrum	red maple	OBL	FACW
Carpinus caroliniana	blue beech	FAC	FACW
Celtis laevigata	hackberry	FACW	FACW
Diospyros virginiana	persimmon	FAC	FAC
Liquidambar styraciflua	sweetgum	FAC+	FACW
Magnolia virginiana	sweetbay magnolia	FACW+	OBL
Nyssa biflora	blackgum	OBL	OBL
Persea palustris	swamp bay	FACW	OBL
Pinus elliottii	slash pine	FACW	NL**
Quercus laurifolia	laurel oak	FACW	FACW
Quercus nigra	water oak	FAC	FACW
Quercus virginiana	live oak	FACU+	NL**
Sabal palmetto	cabbage palm	FAC+	FAC
Salix caroliniana	Carolina willow	OBL	OBL
Sapium sebiferum	Chinese tallow	FAC	FAC
Taxodium ascendens	pond cypress	OBL	OBL
Ulmus americana	American elm	FACW	FACW
UNDERSTORY/VINES			
Ampelopsis arborea	**peppervine**	**FAC+**	**NL****
Baccharis halimifolia	sea myrtle	FAC	FAC
Callicarpa americana	American beautyberry	FACU-	NL**
Cephalanthus occidentalis	buttonbush	OBL	OBL
Dioscorea sp.	wild yam	N/A	N/A
Ilex cassine	dahoon holly	FACW	OBL
Ludwigia peruviana	primrose willow	OBL	OBL
Lyonia lucida	fetterbush	FACW	FACW
Mikania scandens	hempvine	FACW+	NL**
Myrica cerifera	wax myrtle	FAC+	FAC
Parthenocissus quinquefolia	Virginia creeper	FAC	NL**
Sambucus canadensis	elderberry	FACW-	FAC
Serenoa repens	saw palmetto	FACU	NL**
Sesbania punicea	**rattlebox**	**FAC+**	**FAC**
Toxicodendron radicans	**poison ivy**	**FAC**	**FACW**
Vaccinium corymbosum	high bush blueberry	FACW	FACW
Viburnum sp.	viburnum	N/A	N/A
Vitis rotundifolia	wild muscadine	FAC	NL**
GROUND COVER			
Alternanthera sp.	joyweed	N/A	N/A
Amphicarpum muhlenbergianum	blue maidencane	FACW	FACW
Andropogon virginicus	broomsedge	FAC-	FAC
Bacopa caroliniana	lemon bacopa	OBL	OBL
Bacopa monnieri	herb of grace	OBL	OBL
Boehmeria cylindrica	false nettle	FACW+	NL**
Carex spp.	sedge (various)	OBL	OBL
Centella asiatica	coinwort	NL	NL**
Chasmanthium spp.	woodoats	N/A	N/A
Cladium jamaicense	swamp sawgrass	OBL	OBL
Colocasia esculenta	wild taro	FACW+	OBL
Commelina sp.	dayflower	N/A	N/A
Coreopsis floridana	tickseed	OBL	OBL
Cyperus spp.	flatsedge	N/A	N/A
Dichanthelium scoparium	velvet panicum	FACW	FACW
Dichanthelium spp.	witchgrass	N/A	N/A
Drosera capillaris	pink sundew	OBL	FACW

Scientific Name	Common Name	USFWS NWI Southeast Region (Cruz 1996)*	FDEP (FDEP 1994)
Eleocharis baldwinii	spike rush	FACW+	OBL
Eriocaulon decangulare	tenangle pipewort	OBL	OBL
Eupatorium sp.	dog fennel	FACU	FAC
Euthamia minor	bushy goldenrod	FAC	FAC
Fuirena scirpoidea	umbrella sedge	OBL	OBL
Gaylussacia sp.	huckleberry	N/A	N/A
Gelsemium sempervirens	**Carolina jessamine**	**FAC**	**NL****
Gratiola sp.	hedge hyssop	N/A	FACW
Hyptis alata	**clustered bushmint**	**OBL**	**FACW**
Ilex glabra	gallberry	FACW	UPL
Juncus effusus	soft rush	FACW+	OBL
Juncus marginatus	shoe rush	FACW	FACW
Juncus polycephalos	manyhead rush	OBL	OBL
Lachnocaulon sp.	bogbutton	N/A	N/A
Lysimachia sp.	loosestrife	N/A	N/A
Mecardonia acuminata	axilflower	NL	FACW
Micranthemum umbrosum	shade mudflower	OBL	OBL
Myriophyllum brasiliense	parrotfeather	OBL	NL**
Osmunda cinnamomea	cinnamon fern	FACW+	FACW
Panicum hemitomon	maidencane	OBL	OBL
Peltandra virginica	arrow arum	OBL	OBL
Polygala cymosa	tall pinebarren milkwort	OBL	OBL
Polygala lutea	orange milkwort	FACW+	FACW
Polygala nana	candyroot	FAC+	FACW
Pontederia cordata	pickerel weed	OBL	OBL
Rhexia mariana	pale meadowbeauty	FACW+	FACW
Rhynchospora miliacea	millet beaksedge	OBL	OBL
Rhynchospora spp.	beaksedge	N/A	N/A
Rubus argutus	sawtooth blackberry	FAC	FAC
Sarracenia minor	hooded pitcherplant	OBL	FACW
Saururus cernuus	lizards-tail	OBL	OBL
Scleria triglomerata	tall nutgrass	FAC	FACW
Setaria glauca	foxtail	FAC	FAC
Smilax bona-nox	green briar	FAC	NL**
Solidago elliottii	goldenrod	OBL	OBL
Sphagnum spp.	sphagnum moss	N/A	N/A
Spiranthes sp.	ladiestresses	N/A	N/A
Syngonanthus flavidulus	yellow hatpins	FACW+	FACW
Thelypteris spp.	maiden fern	N/A	FACW
Typha latifolia	cattail	OBL	OBL
Utricularia sp.	bladderworts	OBL	OBL
Vaccinium myrsinites	shiny blueberry	FACU	NL**
Woodwardia areolata	netted chainfern	OBL	OBL
Woodwardia virginica	Virginia chainfern	OBL	FACW
Xyris elliottii	Elliott's yellow-eyed grass	OBL	OBL

Source: Birkitt Environmental Services, May 2003
* USACE Wetland Delineation Method
** Not listed as an obligate, facultative wet, or facultative plant species on Florida Department of Environmental Protection classification lists and not used in state wetlands jurisdictional delineation determination.
N/A Not Applicable
NL Not Listed

It is expected that the initial land uses and capital development projects proposed in the Airport Master Plan would impact wetlands as identified on the wetland maps. In particular, the planned extension to Runway 6-24 will impact wetlands in the Northeast corner of airport property. Other projects that may have wetland impacts include the planned widening of the airport access road to 39th avenue, The access road to Waldo Road, Expansion of the Airport Loop Access Road, The Air Cargo Complex, Obstruction removal for all four runway ends, the FBO site along taxiway "B", The runway safety area for Runway 10-28 and the perimeter road along the East and Southeast Quadrant of airport property. In addition, the wetland map depicts numerous open ditches along Taxiway "E" and "A" that are recommended to be piped to

remove the open ditch as a safety hazard and wildlife attractant. Wetland areas also existing within the approaches to most runway ends. The area within the approach to Runway 28 has been permitted by the St Johns River Water Management District to allow continuous clearing of the area within this approach. Any future tree clearing or obstruction removal outside of this area which falls within any of the wetland areas shown on the map should be coordinated with the SJRWMD.

Field surveys must be conducted in accordance with applicable federal, state and local regulations after site-specific development plans are formed to determine the extent of wetland impacts. An EA will be required to examine wetland impacts for the future Runway 6/24 extension. As specific development plans are proposed near known wetland areas, wetland delineation studies would need to be conducted to determine specific wetland boundaries in relation to proposed developments and to ensure that wetland areas will be avoided and maintained to the extent possible. The cost of design and construction of the runway extensions, access roadways, general aviation development and other projects referenced earlier must include stormwater and wetland mitigation requirements of the St Johns River Water management District (SJRWMD), U.S. Army Corps of Engineers (USACOE), Florida Department of Environmental Protection (FDEP), the City of Gainesville and FAA.

If wetlands are impacted, Federal, State and local governments will require mitigation based on the quality and quantity of wetlands impacted. FAA AC 150/5200-33A "Hazardous Wildlife Attractants On or Near Airports" should be consulted prior to the establishment of mitigation areas that could become a wildlife attractant. In general, the FAA strongly encourages airports to mitigate off-site either through additional land acquisition and the establishment of mitigation parks or purchasing mitigation credits in wetland banks. In addition, a wildlife management plan is recommended to be conducted during Phase 1 to help the Airport better manage potential wildlife hazards.

Potential impacts exist for this review category. As a result, further review of this impact category should be included in a formal environmental analysis.

5.4.14 Floodplains

Floodplains are defined as lowland and relatively flat areas adjoining inland and coastal waters and is shown in Figure 5-13. At a minimum, floodplains include areas that are subject to a one percent or greater chance of flooding in any given year (i.e., the area that would be inundated by a 100-year flood).

The area surrounding GNV ranges in elevation from 120 feet above Mean Sea Level (MSL) to 160 feet above MSL. The majority of current airport property is located in Zone C, which encompasses areas determined to be within an area for minimal flooding (see Figure 5-13). In addition, some areas of airport property which includes a portion of the general aviation area surrounding Port-A-Ports and T Hangar "D" and "F" and portions adjacent to the commercial service terminal area fall within flood zone A. The exact location of flood zone is difficult to determine due to the age of the flood map which does not depict the current configuration of the airfield and was last revised in 1983. Zone A is defined as areas within the 100 year flood plain. Flood Zone A1 also exists on airport property and is located East of Taxiway "B". Floodplains are also regulated by the city for developments that fall within Floodplain A and AI as defined in section 30-280 of the City of Gainesville Code of Ordinances.

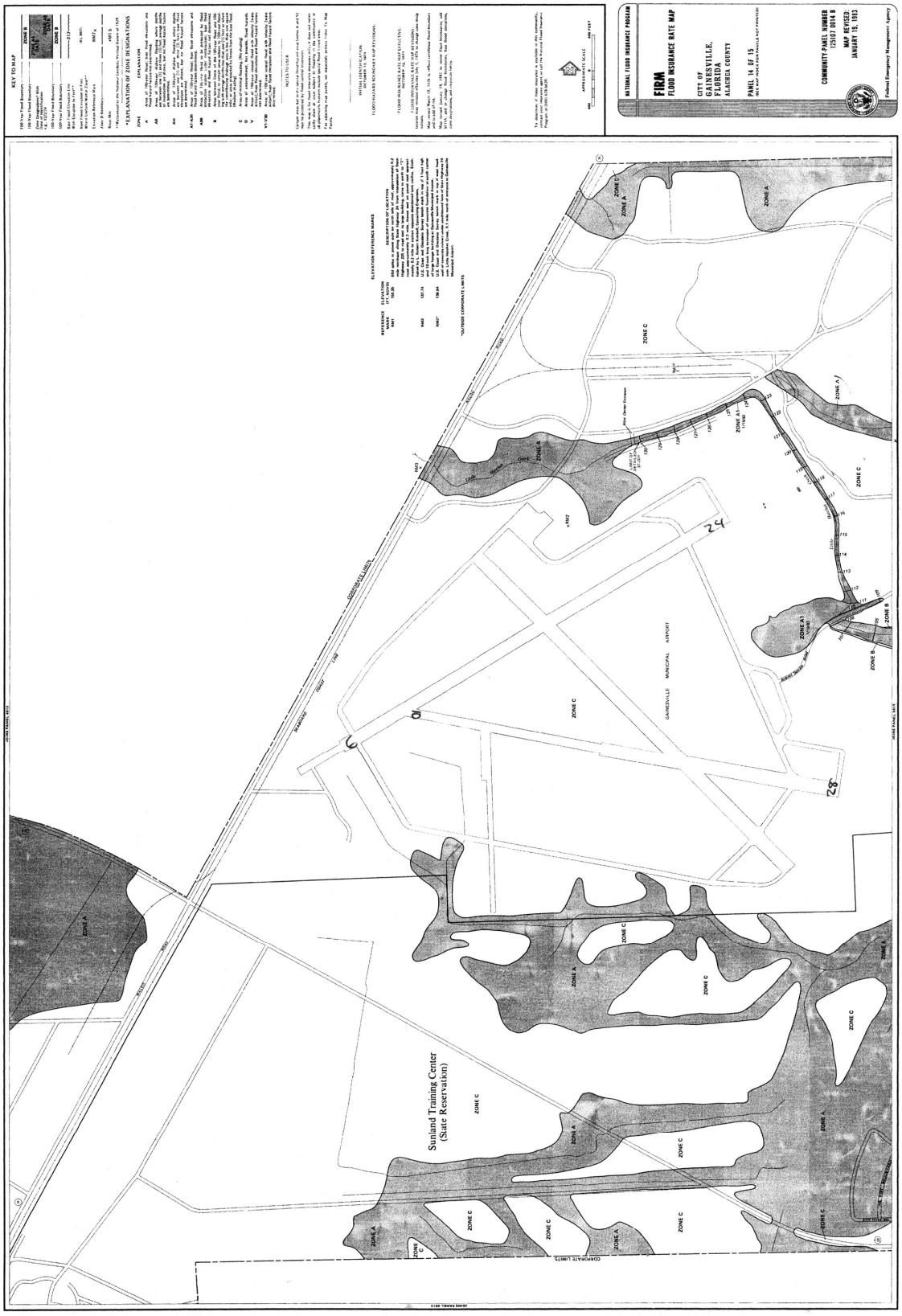
Development that may impact floodplain areas include general aviation development adjacent to T-Hangars "D" and "F", the consolidated rental car facilities adjacent to and East of the Terminal building, the air cargo complex and the future general aviation FBO site adjacent to taxiway "B".

For this reason, there is a potential for impacts to floodplains, and to update the current floodplain maps, and this impact category should be included for further review in a formal environmental analysis for future development.

5.4.15 Coastal Zone Management Program

The Coastal Zone Management Program Act of 1977 requires federal agencies to review activities with regard to direct effects to coastal zones. Any activities which directly effect the state coastline are subject to a determination of consistency with Florida's Coastal Zone Management Program. Activities which are likely to require consistency determinations include:

Figure 5-13
FLOOD PLAIN MAP



- Any project subject to state or federal dredge and fill permitting review;
- Any point or non-point source discharge to surface waters, and;
- Major industrial expansion or development projects.

Review of consistency with the Coastal Zone Management Program is coordinated through the Florida Intergovernmental Coordination and Review Process. GNV would not need intergovernmental coordination and review since it does not require any state or federal dredge and fill permitting review, is not a point or non-point source discharge and is not considered a major industrial expansion.

GNV is not located in areas designated for coastal zone management review. Therefore, there would be no impacts to coastal barriers, and this impact category would be excluded from further review in a formal EA.

5.4.16 Coastal Barriers

The Coastal Barriers Resource Act of 1982, PL 97-348 (CBRA) prohibits, with some exception, federal financial assistance for the development within the Coastal Barrier Resources System. CBRA maps were reviewed to determine potential impacts to coastal barriers due to the proposed Airport development. This system includes undeveloped coastal barriers along the Atlantic and Gulf Coast.

GNV is not located in areas designated for coastal barrier review. Therefore, there would be no impacts to coastal barriers, and this impact category would be excluded from further review in a formal EA.

5.4.17 Wild and Scenic Rivers

The Wild and Scenic Rivers Act protects rivers that are described as free-flowing and possessing "outstandingly remarkable scenic, recreational, geological, fish and wildlife, historic, cultural, and other similar values."

No rivers, as defined above, appear to be located within the vicinity of the Airport. Therefore, there would be no impacts to wild and scenic rivers, and this impact category would be excluded from further review in a formal EA.

5.4.18 Prime and Unique Farmland

Prime and unique farmland is considered to be available land that is best suited for producing food, feed, forage and other types of crops. In addition, prime and unique farmland has the soil quality and moisture supply needed to produce and sustain high yields of crops when treated and managed according to modern farming methods.

GNV is located in an urban area known as East Gainesville. Existing and future land uses in the vicinity of the airport are rural residential, commercial and industrial in nature. Therefore, there would be no impacts to prime and unique farmland and this impact category would be excluded from further review in a formal EA.

5.4.19 Energy Supply and Natural Resources

In terms of airport development, there are typically two areas of concern with regard to energy supply and natural resources:

- Stationary sources (i.e., terminal building, other facilities, airfield lighting).
- Mobile sources (i.e., aircraft and automobiles).

Development of airport facilities, including the development of extensions to Runways 6/24, general aviation development, commercial service terminal area development, and air cargo development would be the primary sources of increased stationary energy consumption. Runway, taxiway and approach lighting are the primary airside energy sources. The construction and operation of these new facilities would have only a modest increase in the consumption of additional electrical demand.

Mobile energy consumption is primarily from the consumption of aircraft fuel. Because the operation forecasts indicate an increase in activity from the current operations, an increase in consumption of fuel should be expected.

GNV will not have a significant adverse impact on local or regional carbon fuel production. Therefore, there would be no impacts to energy supply and natural resources, and this impact category would be excluded from further review in a formal EA.

5.4.20 Light Emissions

Airport lighting systems are generally located in the airfield, apron, terminal, parking lots and access roadways. FAA Order 5050.4A states that the airport sponsor shall consider the extent to which any lighting associated with an airport action will create an annoyance among people in the vicinity of an installation. Several factors are considered to determine if an annoyance may exist:

- Site location of lights or lighting systems.
- Purpose of the light system, either pole or ground mounted, beam angle, intensity, color, flashing frequency and other pertinent characteristics.
- Possible measures, including shielding or angular adjustments, available to lessen any annoyances.

Light emissions which may create an annoyance to residents in the vicinity of the airport must be taken into account. Possible lighting projects to occur at the Airport include the following:

- The construction of runway 6-24 extension and the associated runway lighting;
- The relocation or addition of MALSR, REILS or PAPIS /VASIS;
- The construction of the new air cargo facility.
- The construction of a consolidated rental car facility
- The construction and/or expansion of access and loop roads

Currently, the existing land-use surrounding the Airport is primarily conserving commercial and industrial, with some scattered residential along with a mobile home park along 39th avenue. The impacts from the installation of future airfield lighting equipment would be minimized through design, shielding and property acquisition. This is also important where any approach lighting systems cross Waldo Road, which could cause distractions to drivers in the area.

Due to proposed shielding of lighting systems, the approach lighting systems and additional airfield lighting at GNV would not generate any adverse impacts. Therefore, there would be no impacts to surrounding property owners, and this impact category would be excluded from further review in a formal EA.

5.4.21 Solid Waste Impact

Solid waste is typically affected by commercial, industrial and terminal development rather than airfield development. Projects which relate only to airfield development (runways, taxiways, etc.) do not normally result in any direct impact to solid waste collection, control, or disposal other than that associated with the construction itself. The impact of the construction of new facilities at GNV will result in a minimal increase in solid waste.

Landfills near airports are considered to be a potential impact due to a landfill's tendency to attract birds, possibly creating strike hazards with approaching and departing aircraft. FAA Order 5200.5A, Waste Disposal On or Near Airports, provides guidance regarding the location of sanitary landfills on or near airports. Landfills located within the distance outlined in 5200.5A are considered as incompatible land uses. There are several active and closed landfill sites on and around the Gainesville Regional Airport. Solid Waste Landfill (DEP # 29698) currently exists on airport property adjacent to the large pavement, previously used for driver training. This landfill is closed and is monitored annually. A solid waste transfer facility (DEP # 30487) operated by Alachua County is North – Northeast of the airport, but should not pose a hazard to air navigation as long as best practices are followed. In addition, a closed landfill operated by Alachua County (DEP # 29655) exists about 2 miles Northeast of the Airport, and a second closed landfill (DEP # 29651) operated by Alachua County is located approximately 2 miles North – Northeast of the airport. A privately owned construction debris landfill operated by W.G. Buck Johnson (DEP # 29950 and #86459) is currently active and is located approximately 3 miles Northeast of the Airport. The proposed projects at GNV will not generate impacts to solid waste for the City of Gainesville or Alachua County. Additionally, the Alachua County transfer facility located within 10,000 feet of an active runway used by turbine-powered aircraft is not considered a bird attractor. Therefore, there would be no solid waste impacts and this impact category would be excluded from further review in a formal environmental analysis. Any future proposals to locate landfills within 10,000 feet of the airport should be monitored closely by airport officials. The existing closed landfill located on airport property should be evaluated further to determined if the site could be completely sealed and used for other aviation or non-aviation uses.

5.4.22 Construction Impacts

Potential construction impacts include the following items:

- Noise--Heavy construction equipment will generate noise. However, it is expected that this noise will occur only during daylight hours. During construction of new facilities, it is

expected that temporary noise impacts could occur near the existing residential areas. However, the impact will not be permanent in nature.

- Dust--Potential impacts of dust during construction include reduced visibility, unsightly coatings on buildings and discomfort for dust-sensitive individuals. Methods for dust control can be implemented to minimize dust generation and transport. Dust generation and transport is expected to be a temporary impact.

- Air Emissions--Air emission impacts from construction activity would occur. Construction activity would produce emissions from vehicular, equipment and other construction activities associated with the projects. A temporary increase in emissions would occur due to the presence of constantly running internal combustion engines. While these activities would produce a temporary increase of emissions, they are typical of large construction projects and would not pose any lasting negative impacts.

- Erosion--Some erosion and subsequent sedimentation in the vicinity of the proposed projects may occur. Erosion control measures required by the FAA, FDEP, SJRWMD and other agencies would be incorporated into project design plans and specifications. The potential amount of erosion is determined by the volume of work, the duration of the operations and the time of exposure. FAA Advisory Circular 150/5370-10A, Standards for Specifying Construction on Airports provides guidance in the avoidance of adverse construction impacts.

Potential impacts are associated with this impact category. The impacts of noise, dust and erosion would be quantified in a detailed EA for a runway extension or other major projects.

5.4.23 Other Considerations

No other environmental impacts or other considerations are presented in this environmental overview.

5.5 Environmental Processing

The National Environmental Policy Act (NEPA) of 1969 is our basic national charter for protecting the environment. The Federal Aviation Administration is the responsible federal agency in carrying out the implementation of NEPA requirements for the Airport Improvement Program (AIP), and for approving requests for AIP funding and approving new or revised Airport Layout Plans (ALPs) that receive funding. The FAA utilizes two documents, FAA Order 1050.1E and FAA Order 5050.4B, to provide guidance regarding how to implement NEPA requirements for airport related projects.

Each specific project will be determined to be either categorically excluded from further environmental review, or as requiring further review either through an environmental assessment process and/an environmental impact statement. The environmental assessment and environmental impact statement process, and types of projects requiring this type of review, was presented at the beginning of this chapter.

Each year, during the funding request process, the FAA requests environmental information for each project to determine if additional environmental processing is necessary. It is important that each airport sponsor work closely with the FAA and state personnel to identify any potential

issues early in the process to eliminate potential delays in the implementation of the desired project.

This environmental overview chapter should be used to help begin the process of screening each project for potential environmental impacts, and to begin to address them early.

5.6 ENVIRONMENTAL OVERVIEW—SUMMARY

Future airport development may require further study and/or coordination in a formal environmental study during preliminary design development. No environmental impacts are anticipated in the following categories:

- DOT Section 4(f) Lands
- Historic, Archaeological and Cultural Resources
- Floodplains
- Coastal Barriers
- Wild and Scenic Rivers
- Prime and Unique Farmland
- Energy Supply and Natural Resources
- Air Quality
- Coastal Zone Management
- Light Emissions
- Solid Waste Impacts
- Other Considerations

Potential environmental impacts are anticipated in the following categories:

- Compatible Land Use
- Social Impacts
- Induced Social Impacts
- Water Quality
- Endangered and Threatened Species

Likely environmental impacts are anticipated in the following categories:

- Noise
- Biotic communities
- Wetlands
- Construction

Current FAA environmental requirements would require an Environmental Assessment (EA) for the development of the extension of Runway 6-24, and this effort is currently underway.

Landside projects include the overall improvement of existing facilities or development of new landside facilities for general aviation and commercial interests. Generally, landside projects are categorically excluded from FAA environmental review. However, additional environmental studies and/or permits may be necessary to meet other federal, state, regional and local environmental and permitting requirements.

CHAPTER 6
AIRPORT PLANS

6.1 Introduction

Airport plans graphically illustrate the development of an airport over a 20-year development program. This section describes the Airport Layout Plan (ALP) Set for Gainesville Regional Airport (GNV) from 2003 to 2023. A complete set of ALPs is required by the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT) for consideration of future funding, as programming of FAA and FDOT funds are based on development projects depicted on the ALP. However, projects depicted on other plan sheets are also reviewed for programming of funds by the FAA and FDOT. The plans have been developed in accordance with the following:

- FAA Advisory Circular 150/5070-6A: Airport Layout Plans
- FAA Advisory Circular 150/5300-13: Airport Design
- Airport Layout Plan Checklist – Orlando Airport Districts Office (revised 9/95)
- Florida Department of Transportation Guidebook for Airport Master Planning

The complete ALP set consists of the following drawings:

1. Cover Sheet
2. Facilities Layout Plan
3. Airport Layout Plan
4. Terminal Area Plan
5. General Aviation Building Area Plan (Sheet 1)
6. Inner Portion of Approach Surface Plan – Runway 10
7. Inner Portion of Approach Surface Plan – Runway 28
8. Inner Portion of Approach Surface Plan – Runway 6
9. Inner Portion of Approach Surface Plan – Runway 24
10. FAR Part 77 Surfaces (Future)
11. 2003 Noise Contours and Off-Airport Land Use
12. 2023 Noise Contours and Off Airport Land Use
13. Exhibit “A”

The ALP drawings are produced on 30-inch by 40-inch sheets and submitted by the Gainesville Alachua County Regional Airport Authority (GACRAA) to FDOT and FAA for review and approval. Reduced reproductions of the ALP are included in this report for illustration purposes. All ALP drawings were created using AutoCAD version 2005.

6.2 Cover Sheet – Sheet 1 of 13

The cover sheet of the ALP provides basic airport data that is not found elsewhere on the ALP. The cover sheet includes project name, FAA and FDOT grant numbers and sponsor name. The cover sheet also displays a location map and vicinity map. The location map indicates major roads and other features in the vicinity of the airport while the location map shows the location of major cities in Florida, including Gainesville, Florida.

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE, FLORIDA

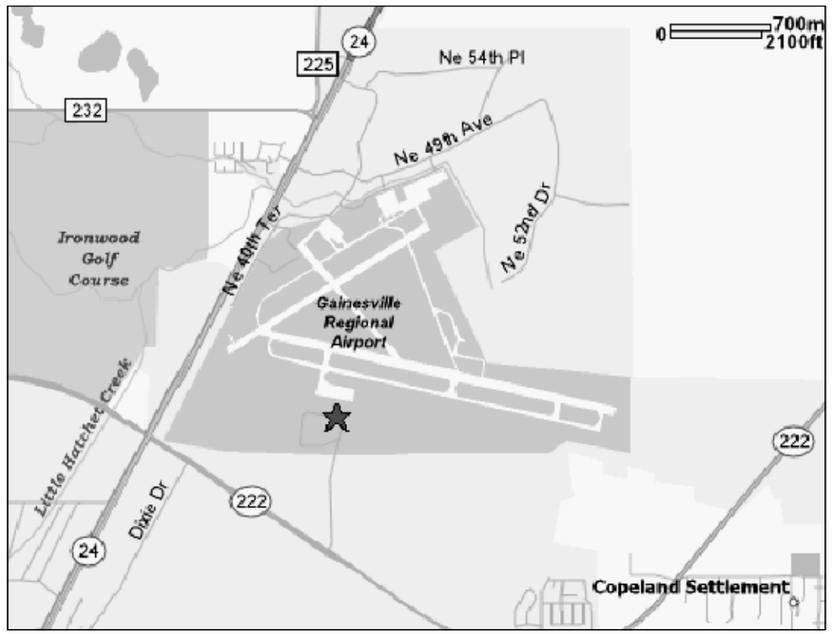
AIRPORT LAYOUT PLANS

PREPARED FOR

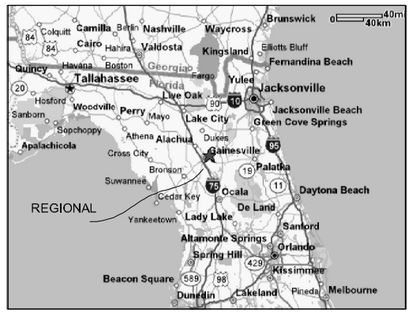
ALACHUA COUNTY, FLORIDA

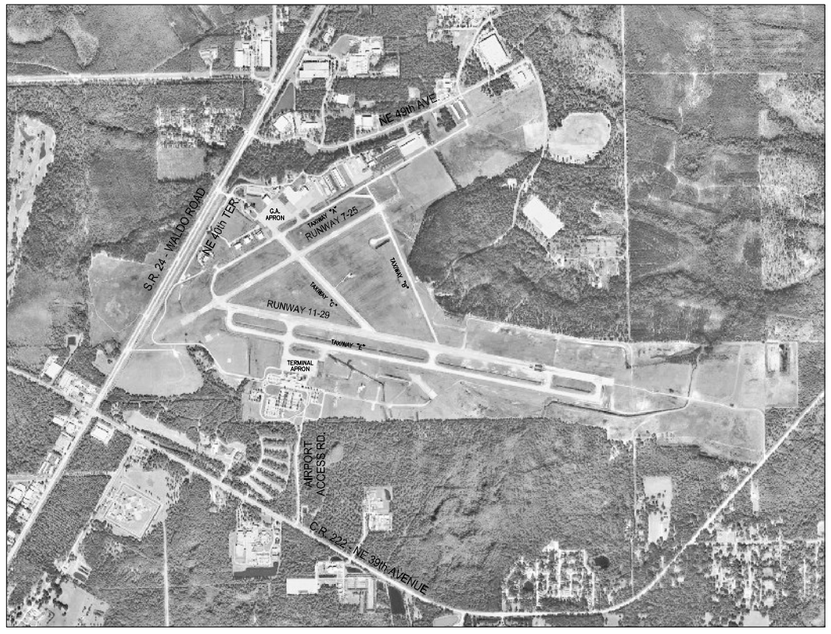
FAA AIP NO.: 3-12-0028-019-2002
FDOT PROJECT NO.: FP21674719401
RS&H PROJECT NO.: 201-3363-001

AUGUST 2006









RS&H®

Architectural, Engineering, Planning and Environmental Services

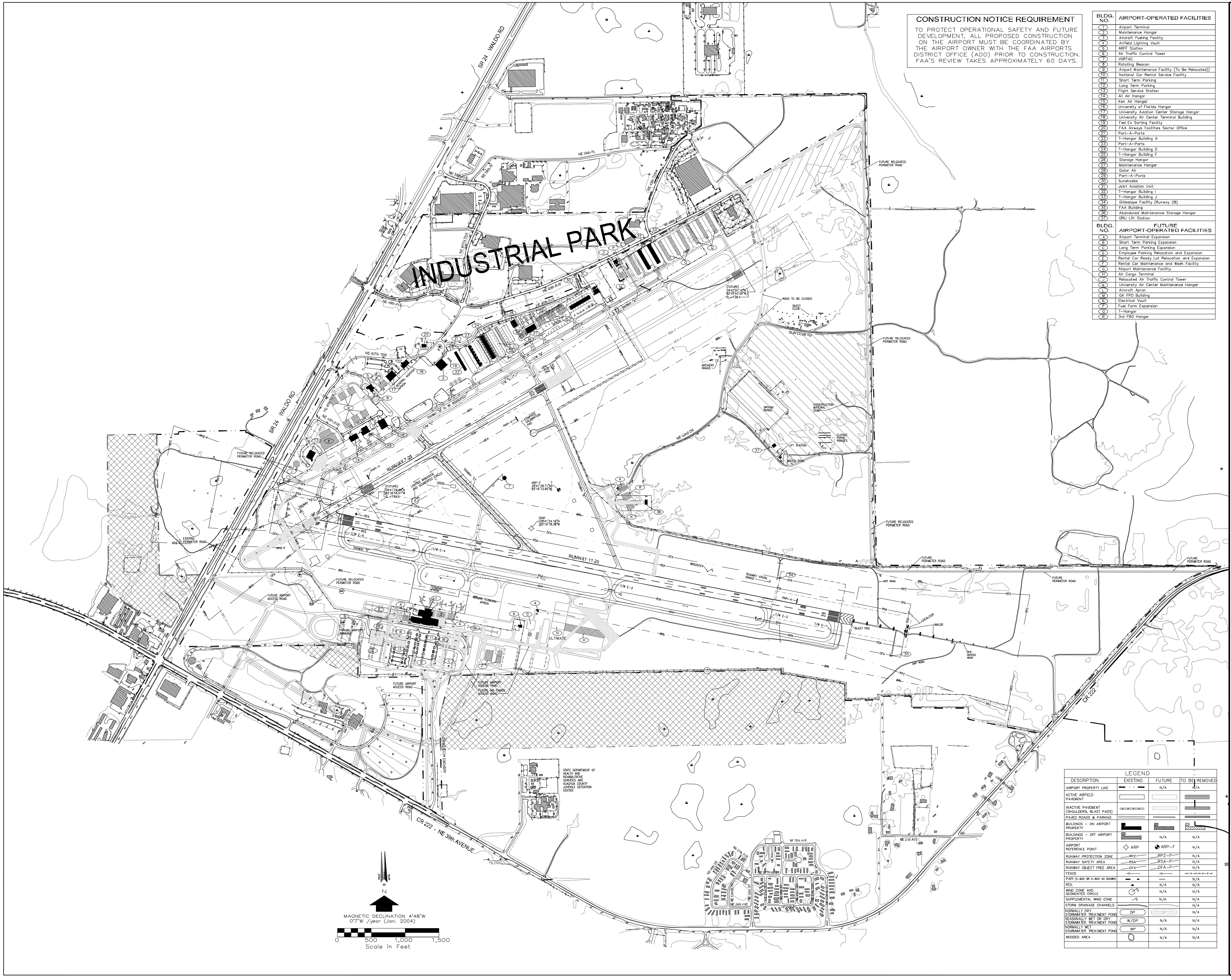
INDEX OF DRAWINGS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	FACILITY LAYOUT PLAN
3	AIRPORT LAYOUT PLAN
4	TERMINAL BUILDING AREA PLAN
5	GENERAL AVIATION BUILDING AREA PLAN
6	RUNWAY APPROACH PROFILE and RUNWAY PROTECTION ZONE - RUNWAY 11
7	RUNWAY APPROACH PROFILE and RUNWAY PROTECTION ZONE - RUNWAY 29
8	RUNWAY APPROACH PROFILE and RUNWAY PROTECTION ZONE - RUNWAY 07
9	RUNWAY APPROACH PROFILE and RUNWAY PROTECTION ZONE - RUNWAY 25
10	PART 77 IMAGINARY SURFACE PLAN
11	PART 77 IMAGINARY SURFACE PLAN
12	LAND USE COMPATIBILITY
13	AIRPORT PROPERTY MAP

GAINESVILLE REGIONAL AIRPORT

6.3 Facilities Layout Plan – Sheet 2 of 13

This plan sheet provides a graphic depiction of all proposed development in a simplified format for easier understanding by the viewer.



CONSTRUCTION NOTICE REQUIREMENT

TO PROTECT OPERATIONAL SAFETY AND FUTURE DEVELOPMENT, ALL PROPOSED CONSTRUCTION ON THE AIRPORT MUST BE COORDINATED BY THE AIRPORT OWNER WITH THE FAA AIRPORTS DISTRICT OFFICE (ADO) PRIOR TO CONSTRUCTION. FAA'S REVIEW TAKES APPROXIMATELY 60 DAYS.

BLDG. NO.	AIRPORT-OPERATED FACILITIES
1	Airport Terminal
2	Maintenance Hangar
3	Aircraft Fueling Facility
4	Airfield Lighting Vault
5	ARFF Station
6	Air Traffic Control Tower
7	VORTAC
8	Rotating Beacon
9	Airport Maintenance Facility (To Be Relocated))
10	National Car Rental Service Facility
11	Short Term Parking
12	Long Term Parking
13	Flight Service Station
14	Ali Air Hangar
15	Ken Air Hangar
16	University of Florida Hangar
17	University Aviation Center Storage Hangar
18	University Air Center Terminal Building
19	Fed Ex Sorting Facility
20	FAA Airways Facilities Sector Office
21	Port-A-Ports
22	T-Hangar Building A
23	Port-A-Ports
24	T-Hangar Building D
25	T-Hangar Building F
26	Storage Hangar
27	Maintenance Hangar
28	Gator Air
29	Port-A-Ports
30	Sunshades
31	Joint Aviation Unit
32	T-Hangar Building I
33	T-Hangar Building J
34	Glideslope Facility (Runway 28)
35	FAA Building
36	Abandoned Maintenance Storage Hangar
37	GRU Lift Station

BLDG. NO.	FUTURE AIRPORT-OPERATED FACILITIES
A	Airport Terminal Expansion
B	Short Term Parking Expansion
C	Long Term Parking Expansion
D	Employee Parking Relocation and Expansion
E	Rental Car Ready Lot Relocation and Expansion
F	Rental Car Maintenance and Wash Facility
G	Airport Maintenance Facility
H	Air Cargo Terminal
J	Relocated Air Traffic Control Tower
K	University Air Center Maintenance Hangar
L	Aircraft Apron
M	GA FPO Building
N	Electrical Vault
P	Fuel Farm Expansion
Q	T-Hangar
R	3rd FBO Hangar

LEGEND

DESCRIPTION	EXISTING	FUTURE	TO BE REMOVED
AIRPORT PROPERTY LINE	— · · —	N/A	N/A
ACTIVE AIRFIELD PAVEMENT	▭	▭	▨
INACTIVE PAVEMENT (SHOULDERS, BLAST PADS)	▭	▭	▨
PAVED ROADS & PARKING	═	▬	▬
BUILDINGS – ON AIRPORT PROPERTY	■	▩	▨
BUILDINGS – OFF AIRPORT PROPERTY	▨	N/A	N/A
AIRPORT REFERENCE POINT	ARP	ARP–F	N/A
RUNWAY PROTECTION ZONE	RPZ	RPZ–F	N/A
RUNWAY SAFETY AREA	RSA	RSA–F	N/A
RUNWAY OBJECT FREE AREA	OFA	OFA–F	N/A
FENCE	–o–	–o–	–x–x–
PAPI (4–BOX OR 2–BOX AS SHOWN)	■■■■ ■■	▫▫▫▫	N/A
REIL	●	N/A	N/A
WIND CONE AND SEGMENTED CIRCLE	○	N/A	N/A
SUPPLEMENTAL WIND CONE	◁	N/A	N/A
STORM DRAINAGE CHANNELS	═	═	N/A
NORMALLY DRY STORMWATER TREATMENT POND	DP	DP	N/A
SEASONALLY WET OR DRY STORMWATER TREATMENT POND	W/DP	N/A	N/A
NORMALLY WET STORMWATER TREATMENT POND	WP	N/A	N/A
WOODED AREA	○	N/A	N/A

RS&H®

Architectural, Engineering, Planning and Environmental Services

Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001886 · EB0005620 · LCC000210

GAINESVILLE REGIONAL
AIRPORT

GAINESVILLE
REGIONAL
AIRPORT

AIRPORT
MASTER
PLAN
UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO

AEP PROJECT NUMBER

© 1998 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

FACILITIES
LAYOUT
PLAN

SHEET NUMBER

ALP-2

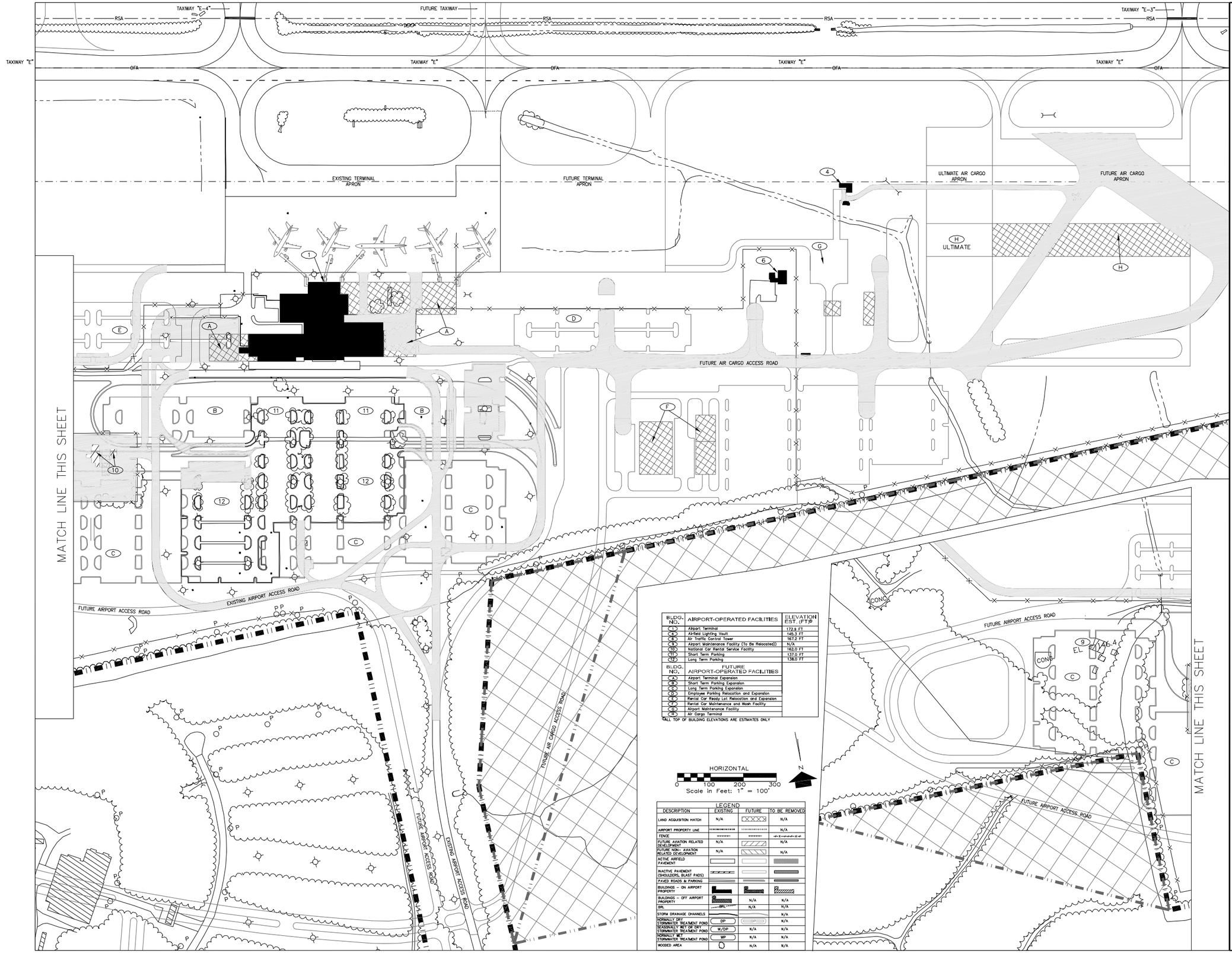
6.4 Airport Layout Plan – Sheet 3 of 13

The ALP is the graphic representation of existing and ultimate airport facilities. The ALP is the key document which reflects changes in physical features on the airport, and in the vicinity of the airport, which may affect navigable airspace or the ability of the airport to operate. The ALP includes dimensional information in order for recommended development to be in accordance with FAA planning and design recommendations outlined in FAA Advisory Circular 150/5300-13 Airport Design and 150/5070-6A Airport Master Plans. The Florida Department of Transportation's Guidebook for Airport Master Planning was also referenced in the development if this sheet.

Development shown on the ALP corresponds to the airport's Capital Improvement Plan (CIP) for the 20-year period, with emphasis on the first five-year period. At the conclusion of this study, the FAA CIP and the Joint Automated Capital Improvement Plan (JACIP) managed by FDOT should be updated accordingly. The following sheets present a description of other specific airport areas consistent with the ALP.

6.5 Terminal Area Plan – Sheet 4 of 13

This plan sheet shows commercial service passenger terminal area and other development adjacent to Runway 10-28. Major projects on this sheet include auto parking expansion, loop road improvements, terminal building expansion, aircraft apron expansion and the rental car quick turn around facility.



BLDG. NO.	AIRPORT-OPERATED FACILITIES	ELEVATION EST. (FT)*
(1)	Airport Terminal	172.9 FT
(4)	Airfield Lighting Vault	145.3 FT
(6)	Air Traffic Control Tower	167.2 FT
(9)	Airport Maintenance Facility (To Be Relocated)	N/A
(10)	National Car Rental Service Facility	162.0 FT
(11)	Short Term Parking	137.0 FT
(12)	Long Term Parking	138.0 FT

BLDG. NO.	FUTURE AIRPORT-OPERATED FACILITIES
(A)	Airport Terminal Expansion
(B)	Short Term Parking Expansion
(C)	Long Term Parking Expansion
(D)	Employee Parking Relocation and Expansion
(E)	Rental Car Ready Lot Relocation and Expansion
(F)	Rental Car Maintenance and Wash Facility
(G)	Airport Maintenance Facility
(H)	Air Cargo Terminal

*ALL TOP OF BUILDING ELEVATIONS ARE ESTIMATES ONLY

LEGEND

DESCRIPTION	EXISTING	FUTURE	TO BE REMOVED
LAND ACQUISITION MATCH	N/A		N/A
AIRPORT PROPERTY LINE			N/A
FENCE			
FUTURE AVIATION RELATED DEVELOPMENT	N/A		N/A
FUTURE NON- AVIATION RELATED DEVELOPMENT	N/A		N/A
ACTIVE AIRFIELD PAVEMENT			
INACTIVE PAVEMENT (SHOULDERS, BLAST PADS)			
PAVED ROADS & PARKING			
BUILDINGS - ON AIRPORT PROPERTY			
BUILDINGS - OFF AIRPORT PROPERTY		N/A	N/A
BRL	BRL	N/A	N/A
STORM DRAINAGE CHANNELS			N/A
NORMALLY DRY STORMWATER TREATMENT POND	DP		N/A
STORMWATER REC OR DRY STORMWATER TREATMENT POND	W/DP	N/A	N/A
NORMALLY WET STORMWATER TREATMENT POND	WP	N/A	N/A
WOODED AREA		N/A	N/A

RS&H
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001585 · EB0005620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO
AEP PROJECT NUMBER

© 1998 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

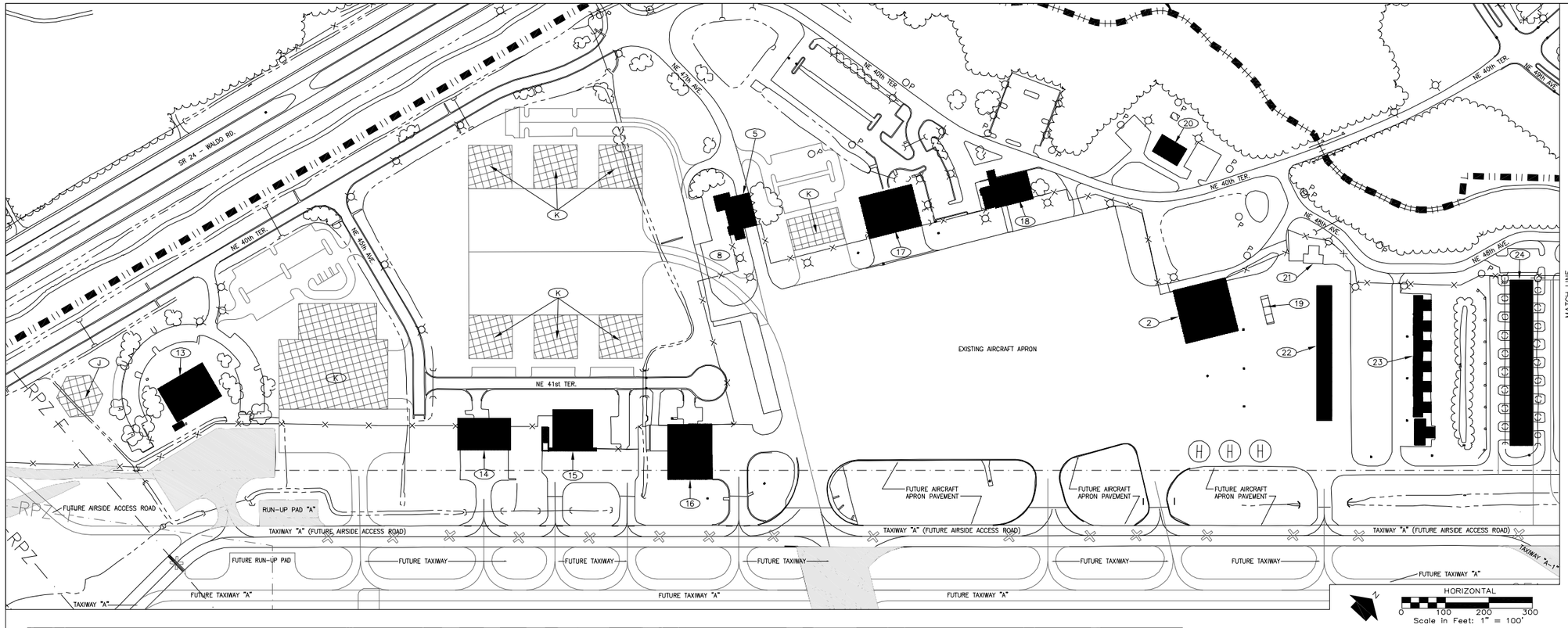
TERMINAL AREA PLAN

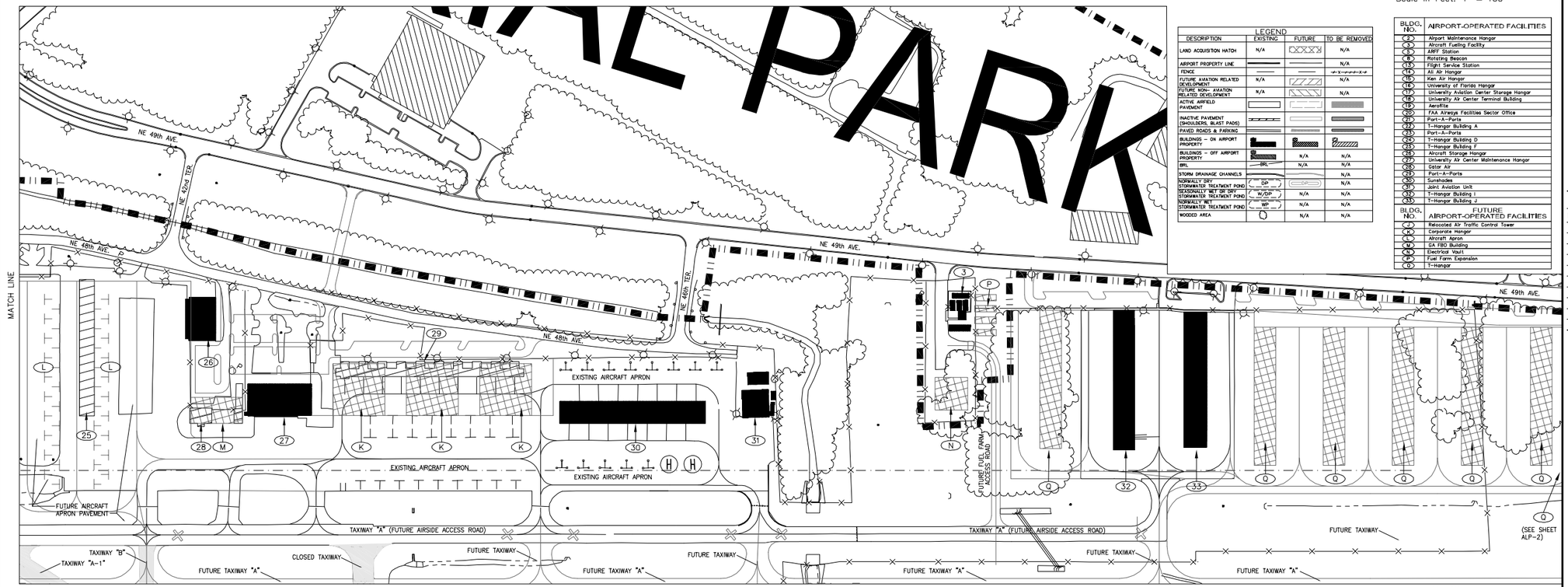
SHEET NUMBER

ALP-4

6.6 General Aviation Building Area Plan – Sheet 5 of 13

This plan sheet shows proposed general aviation area development along the Northwest side of Runway 6-24. Major projects on this sheet include a new corporate hangar area, aircraft maintenance facility, and general aviation hangar development.





GAINESVILLE REGIONAL AIRPORT

LEGEND			
DESCRIPTION	EXISTING	FUTURE	TO BE REMOVED
LAND ACQUISITION HATCH	N/A		N/A
AIRPORT PROPERTY LINE			N/A
FENCE			
FUTURE AVIATION RELATED DEVELOPMENT	N/A		N/A
FUTURE NON- AVIATION RELATED DEVELOPMENT	N/A		N/A
ACTIVE AIRFIELD PAVEMENT			
INACTIVE PAVEMENT (SHOULDERS, BLAST PADS)			
PAVED ROADS & PARKING			
BUILDINGS – ON AIRPORT PROPERTY			
BUILDINGS – OFF AIRPORT PROPERTY		N/A	N/A
BRL	BRL	N/A	N/A
STORM DRAINAGE CHANNELS			N/A
NORMALLY DRY STORMWATER TREATMENT POND	DP		N/A
SEASONALLY WET OR DRY STORMWATER TREATMENT POND	W/DP	N/A	N/A
NORMALLY WET STORMWATER TREATMENT POND	WP	N/A	N/A
WOODED AREA		N/A	N/A

BLDG. NO.	AIRPORT-OPERATED FACILITIES
2	Airport Maintenance Hangar
3	Aircraft Fueling Facility
5	ARFF Station
8	Rotating Beacon
13	Flight Service Station
14	Ali Air Hangar
15	Ken Air Hangar
16	University of Florida Hangar
17	University Aviation Center Storage Hangar
18	University Air Center Terminal Building
19	Aeroflite
20	FAA Airways Facilities Sector Office
21	Port-A-Ports
22	T-Hangar Building A
23	Port-A-Ports
24	T-Hangar Building D
25	T-Hangar Building F
26	Aircraft Storage Hangar
27	University Air Center Maintenance Hangar
28	Gator Air
29	Port-A-Ports
30	Sunshades
31	Joint Aviation Unit
32	T-Hangar Building I
33	T-Hangar Building J

BLDG. NO.	FUTURE AIRPORT-OPERATED FACILITIES
J	Relocated Air Traffic Control Tower
K	Corporate Hangar
L	Aircraft Apron
M	GA FBO Building
N	Electrical Vault
P	Fuel Farm Expansion
Q	T-Hangar

RS&H
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL Cert.Nos. AAC001285 · EB0005620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO

AEP PROJECT NUMBER

©2006 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

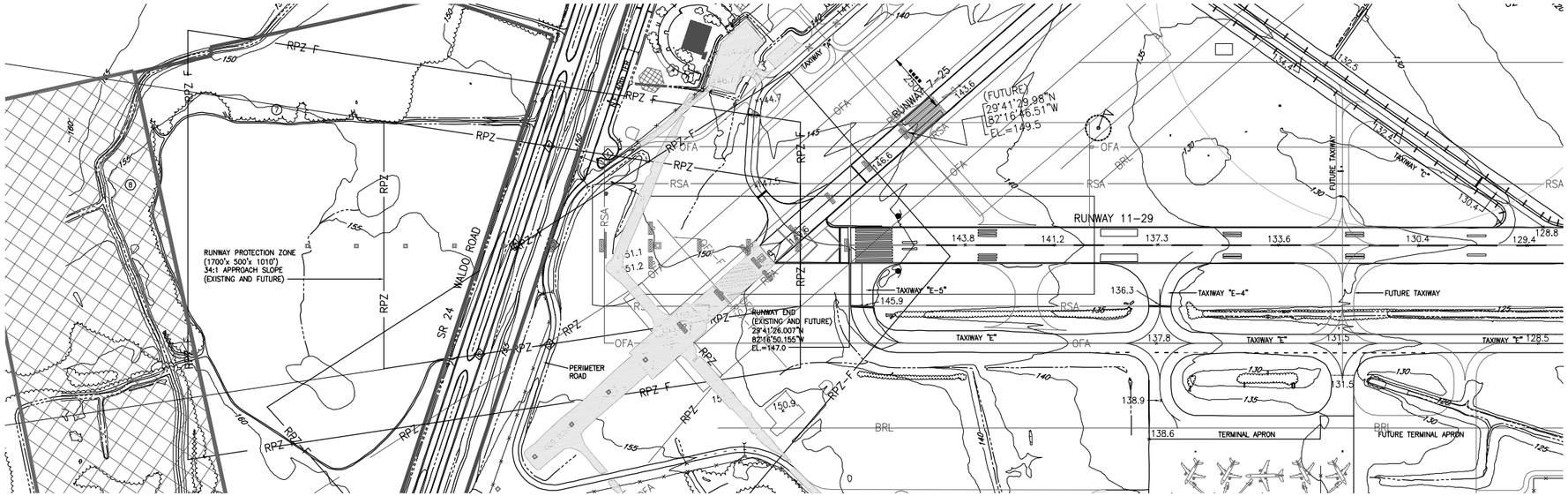
GENERAL AVIATION AREA PLAN

SHEET NUMBER

ALP-5

6.7 Inner Portion of Approach Surface Plan – Runway 10 – Sheet 6 of 13

This plan sheet shows a plan and profile view of Runway 10 at Gainesville Regional Airport. A plan view is an "overhead view" of the end of Runway 10 and the approach surface for the runway. The profile view is a horizontal view of the end of Runway 10 and the approach surface for the runway. Additionally, the plan and profile sheet identifies obstructions to the Part 77 imaginary surfaces, as well as recommended actions for each obstruction.

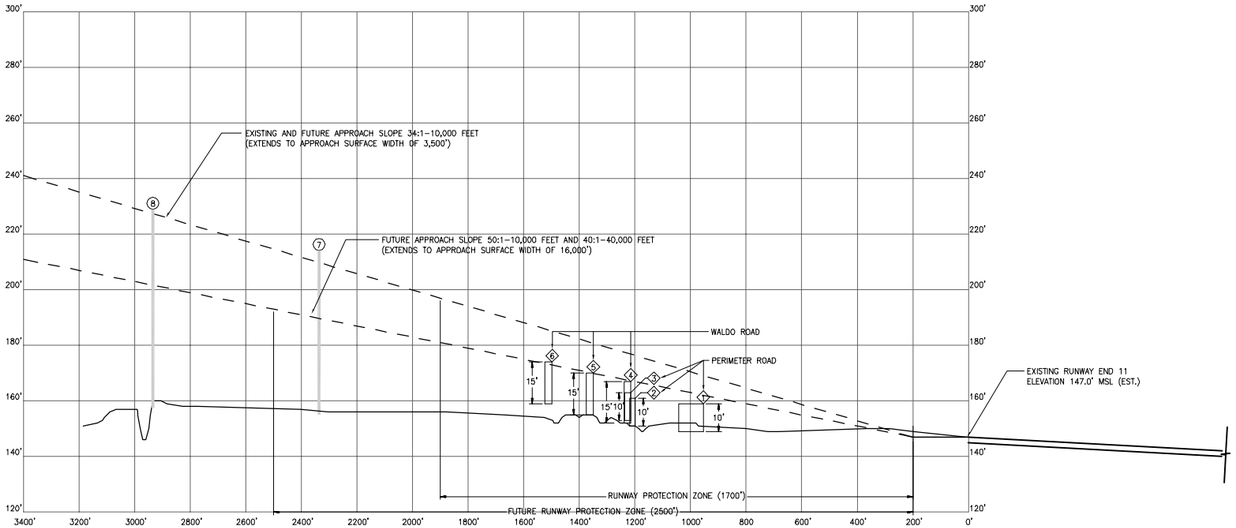


RUNWAY 11 INNER PLAN VIEW

LEGEND

○ OBSTRUCTION TO FAR PART 77 SURFACE(S).

◇ TRAVERSE WAY BENEATH APPROACH SURFACE.



RUNWAY 11 INNER PROFILE VIEW

OBSTRUCTION CHART

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road	1	159'	NP1	None	169'	None	None
Perimeter Road	2	161'	NP1	None	176'	None	None
Perimeter Road	3	163'	NP1	None	177'	None	None
Waldo Road	4	167'	NP1	None	177'	None	None
Waldo Road	5	170'	NP1	None	181'	None	None
Waldo Road	6	174'	NP1	None	185'	None	None
Tree	7	214'	NP1	34:1 Approach	210'	4'	Remove
Tree	8	229'	NP1	34:1 Approach	227'	2'	Purchase/Remove

OBSTRUCTION CHART(FUTURE 50:1)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road	1	159'	NP1	None	169'	None	None
Perimeter Road	2	161'	NP1	None	176'	None	None
Perimeter Road	3	163'	NP1	None	177'	None	None
Waldo Road	4	167'	NP1	None	177'	None	None
Waldo Road	5	170'	NP1	None	181'	None	None
Waldo Road	6	174'	NP1	50:1 Approach	180'	1'	Remove/Relocate
Tree	7	214'	NP1	50:1 Approach	210'	4'	Remove
Tree	8	229'	NP1	50:1 Approach	227'	2'	Purchase/Remove

HORIZONTAL
0 200 400 600
Scale in Feet: 1" = 200'

VERTICAL
0 20 40 60
Scale in Feet: 1" = 20'

RS&H
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001285 · EB0005620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO
AEP PROJECT NUMBER

©2006 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

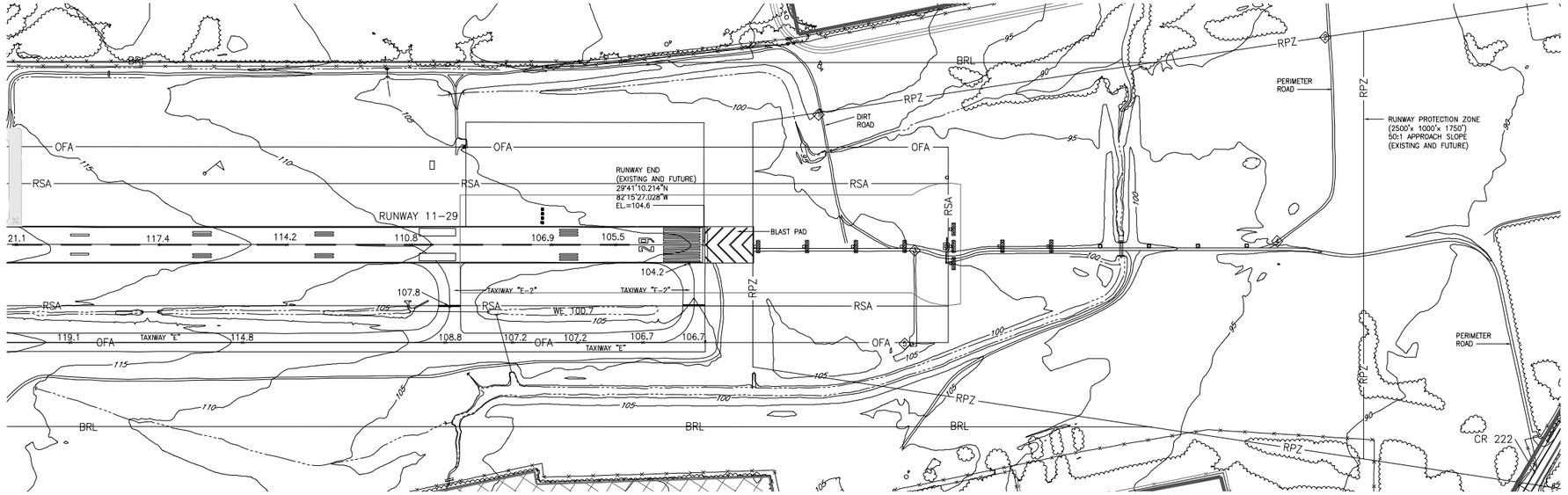
RUNWAY APPROACH PROFILE and RUNWAY PROTECTON ZONE RUNWAY 11

SHEET NUMBER

ALP-6

6.8 Inner Portion of Approach Surface Plan – Runway 28 – Sheet 7 of 13

This plan sheet shows a plan and profile view of Runway 28 at Gainesville Regional Airport. A plan view is an "overhead view" of the end of Runway 28 and the approach surface for the runway. The profile view is a horizontal view of the end of Runway 28 and the approach surface for the runway. Additionally, the plan and profile sheet identifies obstructions to the Part 77 imaginary surfaces, as well as recommended actions for each obstruction.



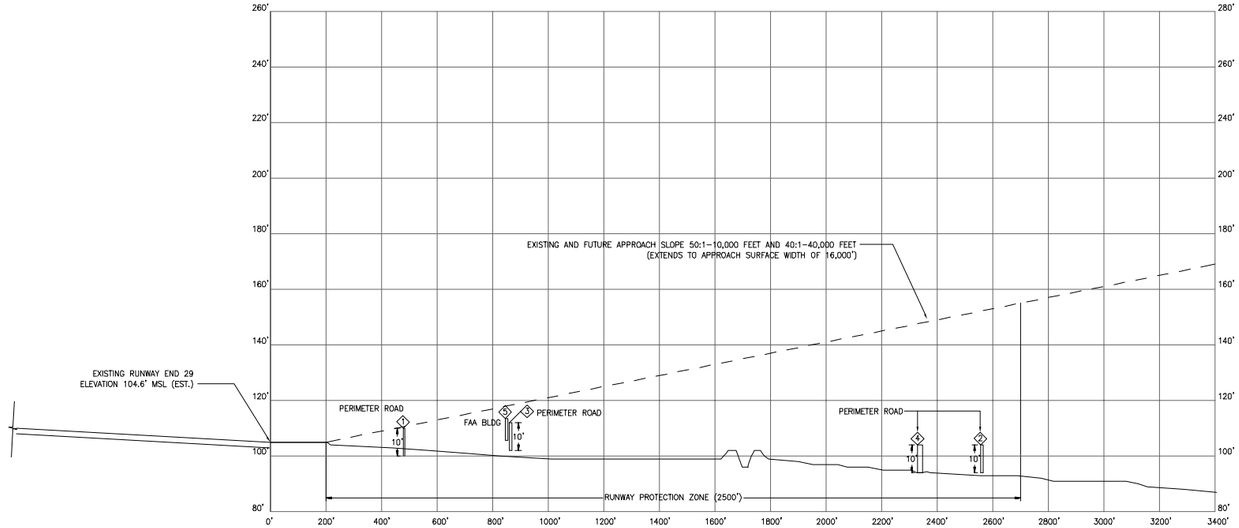
Scale in Feet: 1" = 200'

RUNWAY 29 INNER PLAN VIEW

LEGEND

○ OBSTRUCTION TO FAR PART 77 SURFACE(S).

◇ TRAVERSE WAY BENEATH APPROACH SURFACE.



RUNWAY 29 INNER PROFILE VIEW

OBSTRUCTION CHART							
OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road	1	110'	PIR	None	111'	None	None
Perimeter Road	2	104'	PIR	None	153'	None	None
Perimeter Road	3	112'	PIR	None	119'	None	None
Perimeter Road	4	104'	PIR	None	148'	None	None
FAA Building	5	113'	PIR	None	119'	None	None

N

HORIZONTAL
Scale in Feet: 1" = 200'

VERTICAL
Scale in Feet: 1" = 20'

RS&H
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001585 · EB0005620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO

AEP PROJECT NUMBER

©1998 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

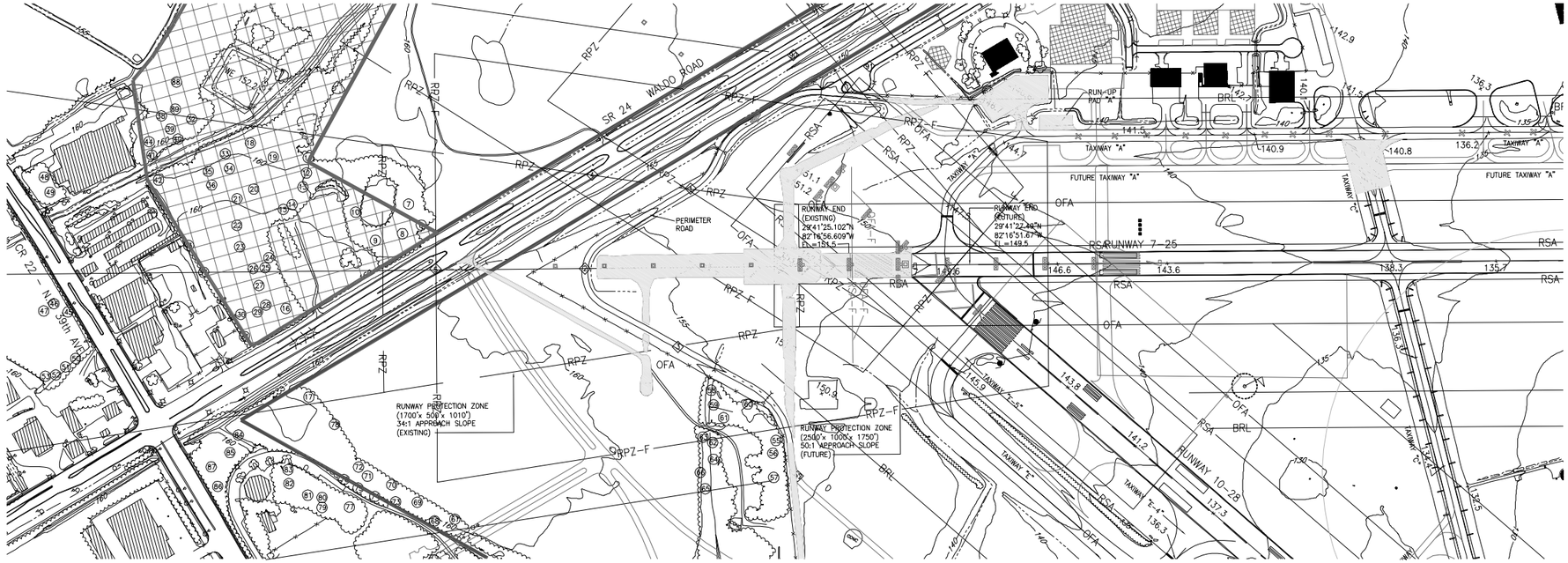
RUNWAY APPROACH PROFILE and RUNWAY PROTECTON ZONE RUNWAY 29

SHEET NUMBER

ALP-7

6.9 Inner Portion of Approach Surface Plan – Runway 6 – Sheet 8 of 13

This plan sheet shows a plan and profile view of Runway 6 at Gainesville Regional Airport. A plan view is an "overhead view" of the end of Runway 6 and the approach surface for the runway. The profile view is a horizontal view of the end of Runway 6 and the approach surface for the runway. Additionally, the plan and profile sheet identifies obstructions to the Part 77 imaginary surfaces, as well as recommended actions for each obstruction.



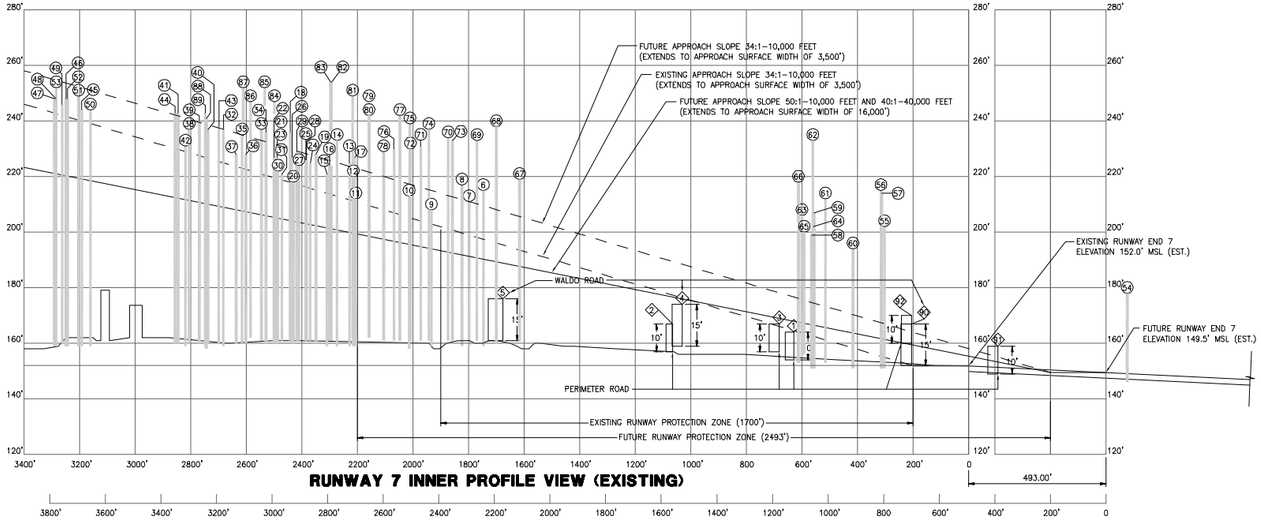
RUNWAY 7 INNER PLAN VIEW

LEGEND

○ OBSTRUCTION TO FAR PART 77 SURFACE(S).

◇ TRAVERSE WAY BENEATH APPROACH SURFACE.

Scale in Feet: 1" = 200'



RUNWAY 7 INNER PROFILE VIEW (EXISTING)

RUNWAY 7 INNER PROFILE VIEW (FUTURE)

OBSTRUCTION CHART (EXISTING)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road	1	164'	NP1	None	165	None	None
Perimeter Road	2	167'	NP1	None	177'	None	None
Perimeter Road	3	167'	NP1	34:1 Approach	166'	1'	None
Waldo Road	4	174'	NP1	None	176'	None	None
Waldo Road	5	176'	NP1	None	195'	None	None
Tree	6	215'	NP1	34:1 Approach	197'	18'	Purchase/Remove
Tree	7	211'	NP1	34:1 Approach	199'	12'	Remove
Tree	8	217'	NP1	34:1 Approach	200'	17'	Purchase/Remove
Tree	9	208'	NP1	34:1 Approach	203'	5'	Purchase/Remove
Tree	10	214'	NP1	34:1 Approach	205'	9'	Purchase/Remove
Tree	11	212'	NP1	34:1 Approach	210'	2'	Purchase/Remove
Tree	12	220'	NP1	34:1 Approach	211'	9'	Purchase/Remove
Tree	13	225'	NP1	34:1 Approach	212'	13'	Purchase/Remove
Tree	14	233'	NP1	34:1 Approach	213'	20'	Purchase/Remove
Tree	15	221'	NP1	34:1 Approach	214'	7'	Purchase/Remove
Tree	16	224'	NP1	34:1 Approach	214'	10'	Purchase/Remove
Tree	17	227'	NP1	34:1 Approach	211'	16'	Remove
Tree	18	236'	NP1	34:1 Approach	218'	18'	Purchase/Remove
Tree	19	228'	NP1	34:1 Approach	215'	13'	Purchase/Remove
Tree	20	218'	NP1	34:1 Approach	217'	1'	Purchase/Remove
Tree	21	227'	NP1	34:1 Approach	220'	7'	Purchase/Remove
Tree	22	227'	NP1	34:1 Approach	220'	7'	Purchase/Remove
Tree	23	227'	NP1	34:1 Approach	219'	6'	Purchase/Remove
Tree	24	225'	NP1	34:1 Approach	216'	9'	Purchase/Remove
Tree	25	224'	NP1	34:1 Approach	216'	8'	Purchase/Remove
Tree	26	227'	NP1	34:1 Approach	218'	9'	Purchase/Remove
Tree	27	224'	NP1	34:1 Approach	217'	7'	Purchase/Remove
Tree	28	226'	NP1	34:1 Approach	216'	10'	Purchase/Remove
Tree	29	229'	NP1	34:1 Approach	217'	12'	Purchase/Remove
Tree	30	222'	NP1	34:1 Approach	219'	3'	Purchase/Remove

OBSTRUCTION CHART (EXISTING)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Tree	31	221'	NP1	34:1 Approach	219'	2'	Purchase/Remove
Tree	32	237'	NP1	34:1 Approach	224'	13'	Purchase/Remove
Tree	33	237'	NP1	34:1 Approach	221'	16'	Purchase/Remove
Tree	34	236'	NP1	34:1 Approach	220'	16'	Purchase/Remove
Tree	35	235'	NP1	34:1 Approach	223'	12'	Purchase/Remove
Tree	36	226'	NP1	34:1 Approach	223'	3'	Purchase/Remove
Tree	37	228'	NP1	34:1 Approach	224'	4'	Purchase/Remove
Tree	38	237'	NP1	34:1 Approach	229'	8'	Purchase/Remove
Tree	39	240'	NP1	34:1 Approach	228'	12'	Purchase/Remove
Tree	40	237'	NP1	34:1 Approach	227'	10'	Purchase/Remove
Tree	41	243'	NP1	34:1 Approach	230'	13'	Purchase/Remove
Tree	42	231'	NP1	34:1 Approach	229'	2'	Purchase/Remove
Tree	43	238'	NP1	34:1 Approach	225'	13'	Purchase/Remove
Tree	44	243'	NP1	34:1 Approach	230'	13'	Purchase/Remove
Tree	45	244'	NP1	34:1 Approach	240'	4'	Purchase/Remove
Tree	46	248'	NP1	34:1 Approach	242'	6'	Purchase/Remove
Tree	47	248'	NP1	34:1 Approach	243'	5'	Purchase/Remove
Tree	48	248'	NP1	34:1 Approach	243'	5'	Purchase/Remove
Tree	49	248'	NP1	34:1 Approach	242'	6'	Purchase/Remove
Tree	50	244'	NP1	34:1 Approach	239'	5'	Purchase/Remove
Tree	51	249'	NP1	34:1 Approach	240'	9'	Purchase/Remove
Tree	52	248'	NP1	34:1 Approach	241'	7'	Purchase/Remove
Tree	53	252'	NP1	34:1 Approach	242'	10'	Purchase/Remove

OBSTRUCTION CHART (FUTURE 50:1)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road	2	167'	NP1	None	205'	None	None
Waldo Road	5	176'	NP1	None	217'	None	None
Tree	14	233'	NP1	50:1 Approach	229'	4'	Purchase/Remove
Tree	18	236'	NP1	50:1 Approach	232'	4'	Purchase/Remove
Tree	33	237'	NP1	50:1 Approach	230'	7'	Purchase/Remove
Tree	34	236'	NP1	50:1 Approach	234'	2'	Purchase/Remove
Tree	39	240'	NP1	50:1 Approach	239'	1'	Purchase/Remove
Tree	41	243'	NP1	50:1 Approach	240'	3'	Purchase/Remove
Tree	44	243'	NP1	50:1 Approach	241'	2'	Purchase/Remove
Tree	51	249'	NP1	50:1 Approach	246'	3'	Purchase/Remove
Tree	53	252'	NP1	50:1 Approach	249'	3'	Purchase/Remove
Light Pole	54	178'	NP1	50:1 Approach	173'	5'	Remove
Tree	55	205'	NP1	50:1 Approach	190'	13'	Remove
Tree	56	215'	NP1	50:1 Approach	190'	25'	Remove
Tree	57	214'	NP1	50:1 Approach	190'	24'	Remove
Tree	58	199'	NP1	50:1 Approach	195'	4'	Remove
Tree	59	207'	NP1	50:1 Approach	195'	12'	Remove
Tree	60	194'	NP1	50:1 Approach	193'	1'	Remove
Tree	61	212'	NP1	50:1 Approach	194'	18'	Remove
Tree	62	233'	NP1	50:1 Approach	195'	38'	Remove
Tree	63	206'	NP1	50:1 Approach	196'	10'	Remove
Tree	64	202'	NP1	50:1 Approach	195'	7'	Remove
Tree	65	200'	NP1	50:1 Approach	196'	4'	Remove
Tree	66	218'	NP1	50:1 Approach	196'	22'	Remove
Tree	67	219'	NP1	50:1 Approach	216'	3'	Remove
Tree	68	238'	NP1	50:1 Approach	218'	20'	Remove
Tree	69	233'	NP1	50:1 Approach	219'	14'	Remove
Tree	70	234'	NP1	50:1 Approach	221'	13'	Remove
Tree	71	230'	NP1	50:1 Approach	222'	8'	Remove
Tree	72	230'	NP1	50:1 Approach	224'	6'	Remove

OBSTRUCTION CHART (FUTURE 50:1)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Tree	73	233'	NP1	50:1 Approach	221'	12'	Remove
Tree	74	237'	NP1	50:1 Approach	223'	14'	Remove
Tree	75	239'	NP1	50:1 Approach	224'	15'	Remove
Tree	76	230'	NP1	50:1 Approach	225'	5'	Remove
Tree	77	242'	NP1	50:1 Approach	225'	17'	Purchase/Remove
Tree	78	239'	NP1	50:1 Approach	226'	3'	Purchase/Remove
Tree	79	247'	NP1	50:1 Approach	227'	20'	Purchase/Remove
Tree	80	242'	NP1	50:1 Approach	227'	15'	Purchase/Remove
Tree	81	248'	NP1	50:1 Approach	228'	21'	Purchase/Remove
Tree	82	254'	NP1	50:1 Approach	230'	24'	Purchase/Remove
Tree	83	254'	NP1	50:1 Approach	230'	24'	Purchase/Remove
Tree	84	247'	NP1	50:1 Approach	234'	13'	Purchase/Remove
Tree	85	252'	NP1	50:1 Approach	234'	18'	Purchase/Remove
Tree	86	247'	NP1	50:1 Approach	235'	12'	Purchase/Remove
Tree	87	252'	NP1	50:1 Approach	236'	16'	Purchase/Remove
Tree	88	241'	NP1	50:1 Approach	238'	3'	Purchase/Remove
Tree	89	243'	NP1	50:1 Approach	238'	5'	Purchase/Remove
Tree	90	187'	NP1	None	188'	None	None
Tree	91	159'	NP1	None	182'	None	None
Tree	92	160'	NP1	None	180'	None	None

VERTICAL
Scale in Feet: 1" = 20'

HORIZONTAL
Scale in Feet: 1" = 200'

RS&H
Architectural, Engineering, Planning and Environmental Services

Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001285 · EB0008620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO

AEP PROJECT NUMBER

© 2006 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

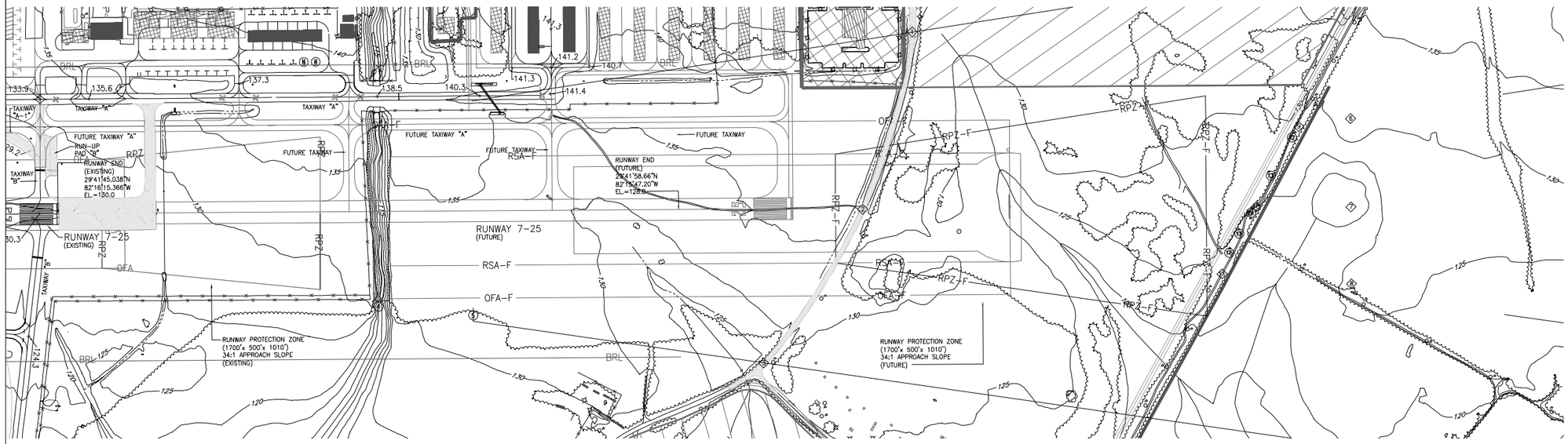
RUNWAY APPROACH PROFILE and RUNWAY PROTECTON ZONE RUNWAY 07

SHEET NUMBER

ALP-8

6.10 Inner Portion of Approach Surface Plan – Runway 24 – Sheet 9 of 13

This plan sheet shows a plan and profile view of Runway 24 at Gainesville Regional Airport. A plan view is an "overhead view" of the end of Runway 24 and the approach surface for the runway. The profile view is a horizontal view of the end of Runway 24 and the approach surface for the runway. Additionally, the plan and profile sheet identifies obstructions to the Part 77 imaginary surfaces, as well as recommended actions for each obstruction.



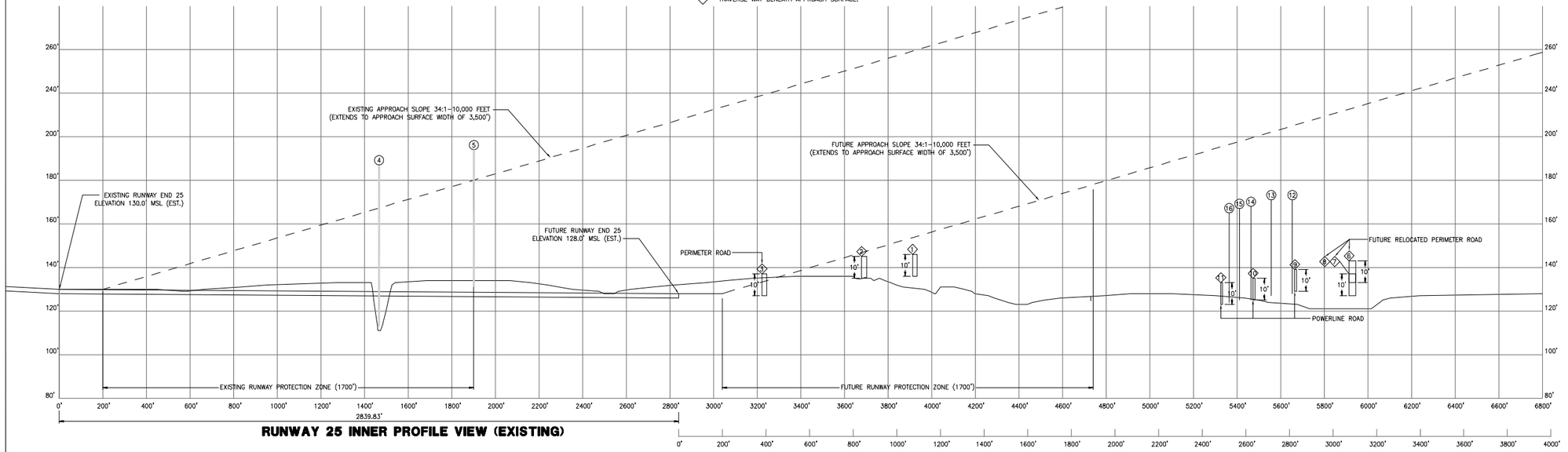
RUNWAY 25 INNER PLAN VIEW

LEGEND

○ OBSTRUCTION TO FAR PART 77 SURFACE(S).

◇ TRAVERSE WAY BENEATH APPROACH SURFACE.

Scale in Feet: 1" = 200'



RUNWAY 25 INNER PROFILE VIEW (EXISTING)

RUNWAY 25 INNER PROFILE VIEW (FUTURE)

OBSTRUCTION CHART (EXISTING)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road	1	146'	NPI	None	259'	None	None
Perimeter Road	2	145'	NPI	None	252'	None	None
Perimeter Road	3	137'	NPI	None	219'	None	None
Tree	4	187'	NPI	34:1 Approach	187'	20'	Remove
Tree	5	194'	NPI	34:1 Approach	180'	14'	Remove

OBSTRUCTION CHART (FUTURE)

OBJECT DESCRIPTION	OBJECT IDENTIFIER	OBJECT ELEVATION	TYPE OF APPROACH	OBSTRUCTED PART 77 SURFACE	SURFACE ELEVATION	OBJECT PENETRATION	PROPOSED OBJECT DISPOSITION
Perimeter Road (Future)	6	143'±	NPI	None	158'	None	None
Perimeter Road (Future)	7	137'±	NPI	None	156'	None	None
Perimeter Road (Future)	8	137'±	NPI	None	156'	None	None
Powerline Road	9	139'	NPI	None	148'	None	None
Powerline Road	10	135'	NPI	None	143'	None	None
Powerline Road	11	133'	NPI	None	138'	None	None
Power Pole	12	171'	NPI	34:1 Approach	148'	23'	Relocate
Power Pole	13	171'	NPI	34:1 Approach	145'	26'	Relocate
Power Pole	14	168'	NPI	34:1 Approach	142'	26'	Relocate
Power Pole	15	167'	NPI	34:1 Approach	140'	27'	Relocate
Power Pole	16	165'	NPI	34:1 Approach	139'	26'	Relocate

Remove all trees within the Future Object Free Area and Future Runway Protection Zone.
Relocate Existing Perimeter Road and Power lines within the Future Object Free Area and Future Runway Protection Zone. Purchase and Remove any trees beyond the Future Runway Protection Zone that penetrate the Future Part 77 Surface.

HORIZONTAL
Scale in Feet: 1" = 200'

VERTICAL
Scale in Feet: 1" = 20'

RS&H
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001585 · EB0008620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO
AEP PROJECT NUMBER

© 2006 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

RUNWAY APPROACH PROFILE and RUNWAY PROTECTON ZONE RUNWAY 25

SHEET NUMBER

ALP-9

6.11 FAR Part 77 Airspace Surfaces – Sheet 10 of 13

The purpose of this plan is to depict the FAR Part 77 "imaginary surfaces" that surround the airport. The imaginary surfaces surrounding an airport are outlined in Federal Aviation Regulation (FAR) Part 77 and consist of the following surfaces:

- Primary Surface
- Approach Surface
- Transitional Surface
- Horizontal Surface
- Conical Surface

The drawing is based on the ultimate runway configuration for both runways that are planned within the twenty-year planning period. The drawing does not identify obstructions penetrating the Part 77 surfaces as this information was not readily available. Detailed obstructions within the inner approach surfaces are shown on the inner approach Plan and Profile sheets.



NOTE:
REFER TO THE INNER PORTION OF THE APPROACH SURFACE PLAN VIEW DETAILS FOR CLOSE-IN OBSTRUCTIONS (SHEETS 6-9).

NOTE:
CITY OF GAINESVILLE AND ALACHUA COUNTY HAS ADOPTED HEIGHT RESTRICTION ZONING. SEE LOCAL LAND DEVELOPMENT CODE FOR ADDITIONAL DETAILS

NORTH

SCALE: 1"=2,000'
2,000' 1,000' 0 2,000'

RS&H®
Architectural, Engineering, Planning and Environmental Services

Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001886 · EB0005620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO
AEP PROJECT NUMBER

© 1998 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

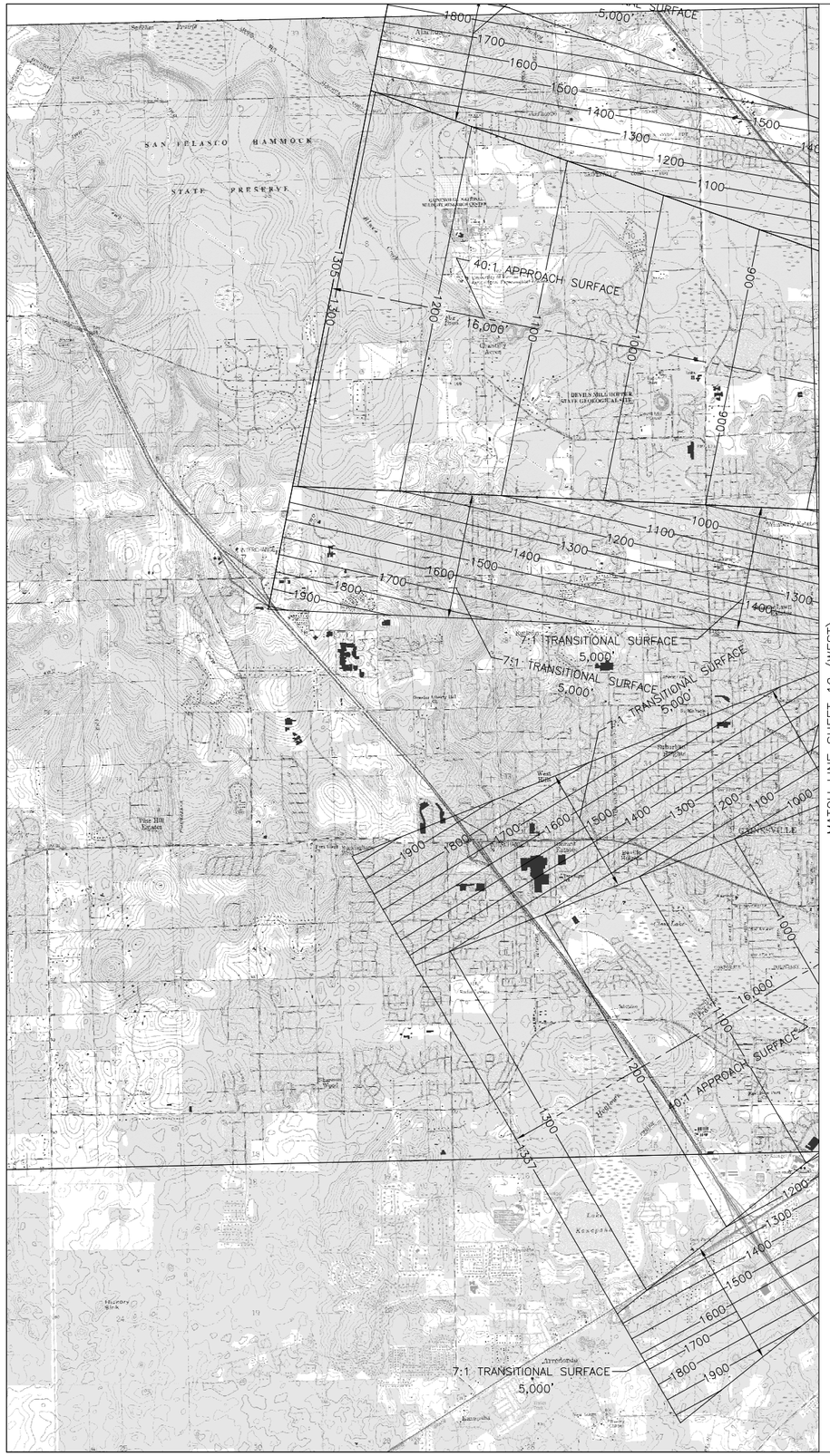
PART 77 IMAGINARY SURFACE PLAN (FUTURE)

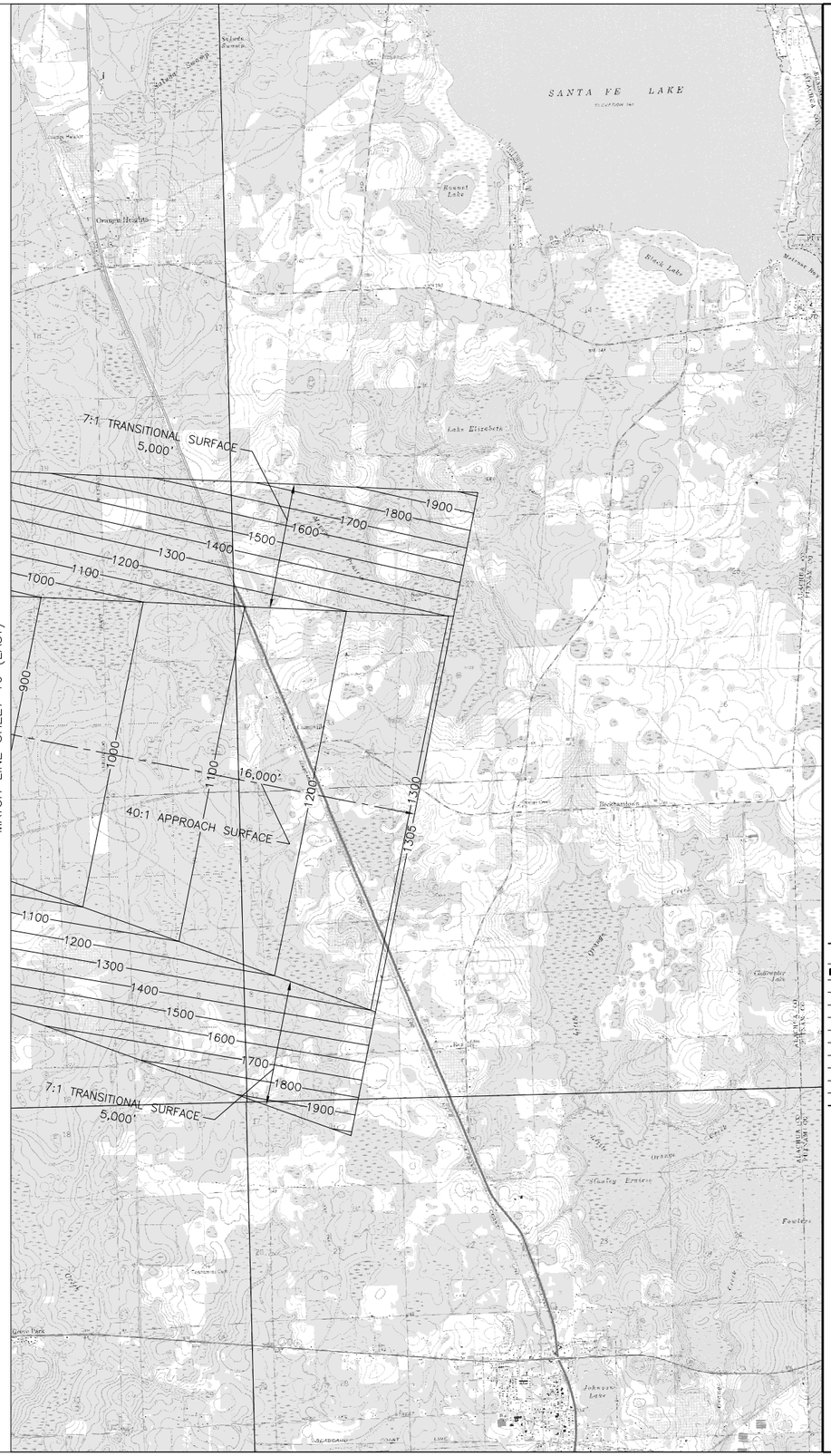
SHEET NUMBER

ALP-10

6.12 Existing (2003) Land Use Plan and Noise Contours – Sheet 11 of 13

This plan depicts the noise contours that were prepared as part of the master planning process and superimposed on a USGS Quad sheet along with the existing property boundaries. The plan sheet depicts the 65, 70 and 75 DNL sound contour levels.





NOTE:
CITY OF GAINESVILLE AND ALACHUA COUNTY HAS ADOPTED HEIGHT RESTRICTION ZONING. SEE LOCAL LAND DEVELOPMENT CODE FOR ADDITIONAL DETAILS

NORTH

SCALE: 1"= 2,000'
2,000' 1,000' 0 2,000'

RS&H
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001985 · EB0005620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO
AEP PROJECT NUMBER

©2006 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

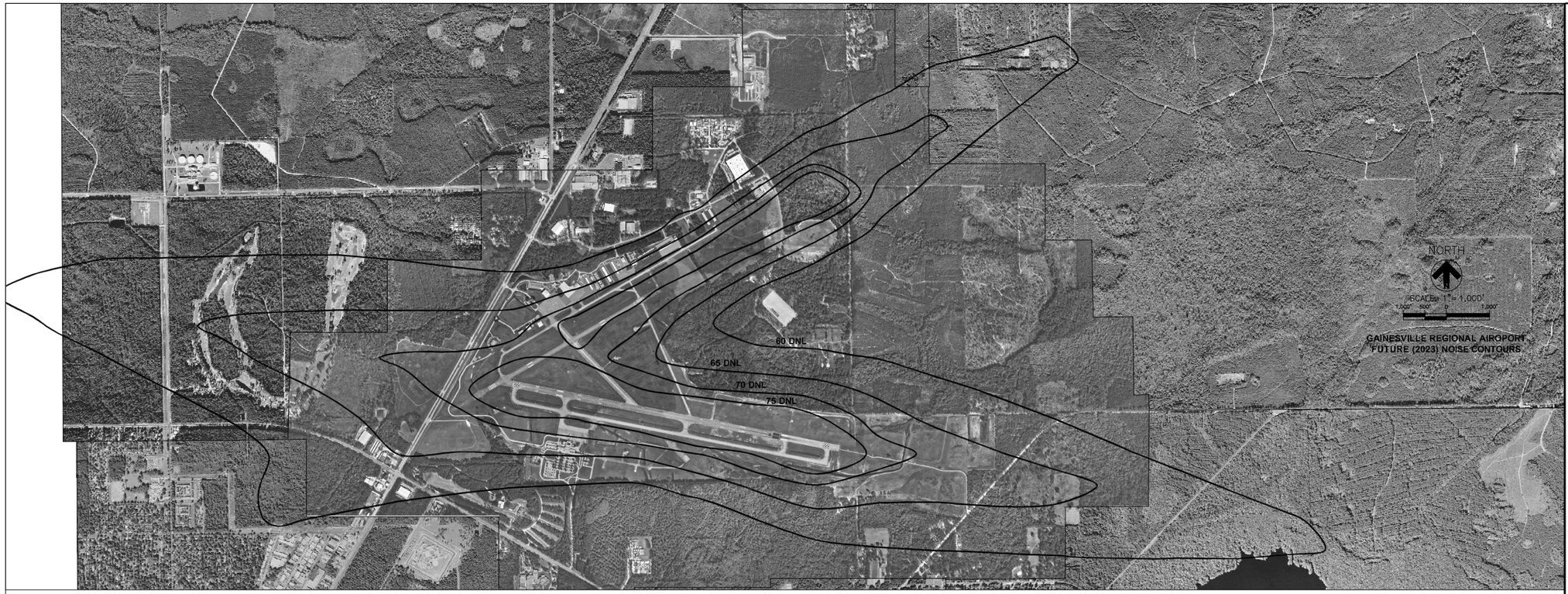
PART 77 IMAGINARY SURFACE PLAN (FUTURE)

SHEET NUMBER

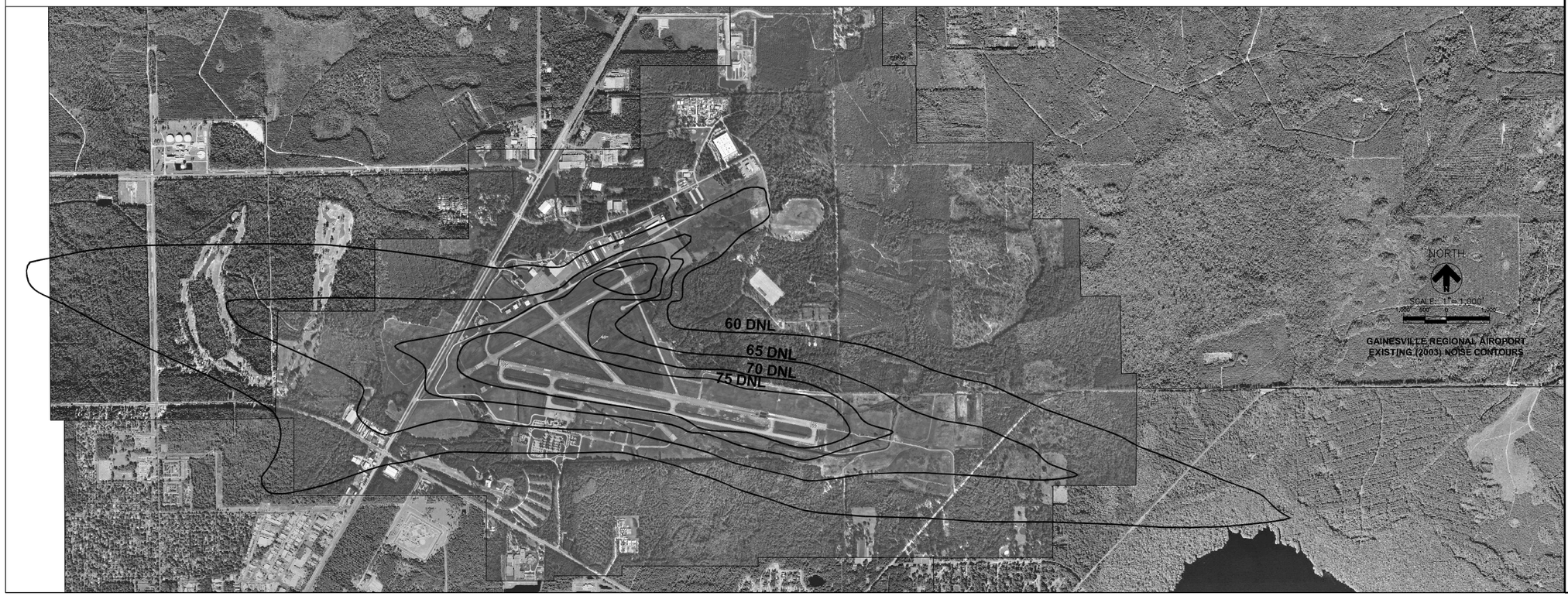
ALP-11

6.13 Future (2023) Land Use Plan and Noise Contours – Sheet 12 of 13

This plan depicts the noise contours that were prepared as part of the master planning process and superimposed on a USGS Quad sheet along with the existing property boundaries. The plan sheet depicts the 65, 70 and 75 DNL sound contour levels.



GAINESVILLE REGIONAL AIROPORT
FUTURE (2023) NOISE CONTOURS



GAINESVILLE REGIONAL AIROPORT
EXISTING (2003) NOISE CONTOURS

RS&H

Architectural, Engineering, Planning and Environmental Services

Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL.Cert.Nos. AAC001886 · EB0008620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: TL

AEP PROJECT NUMBER

©2006 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

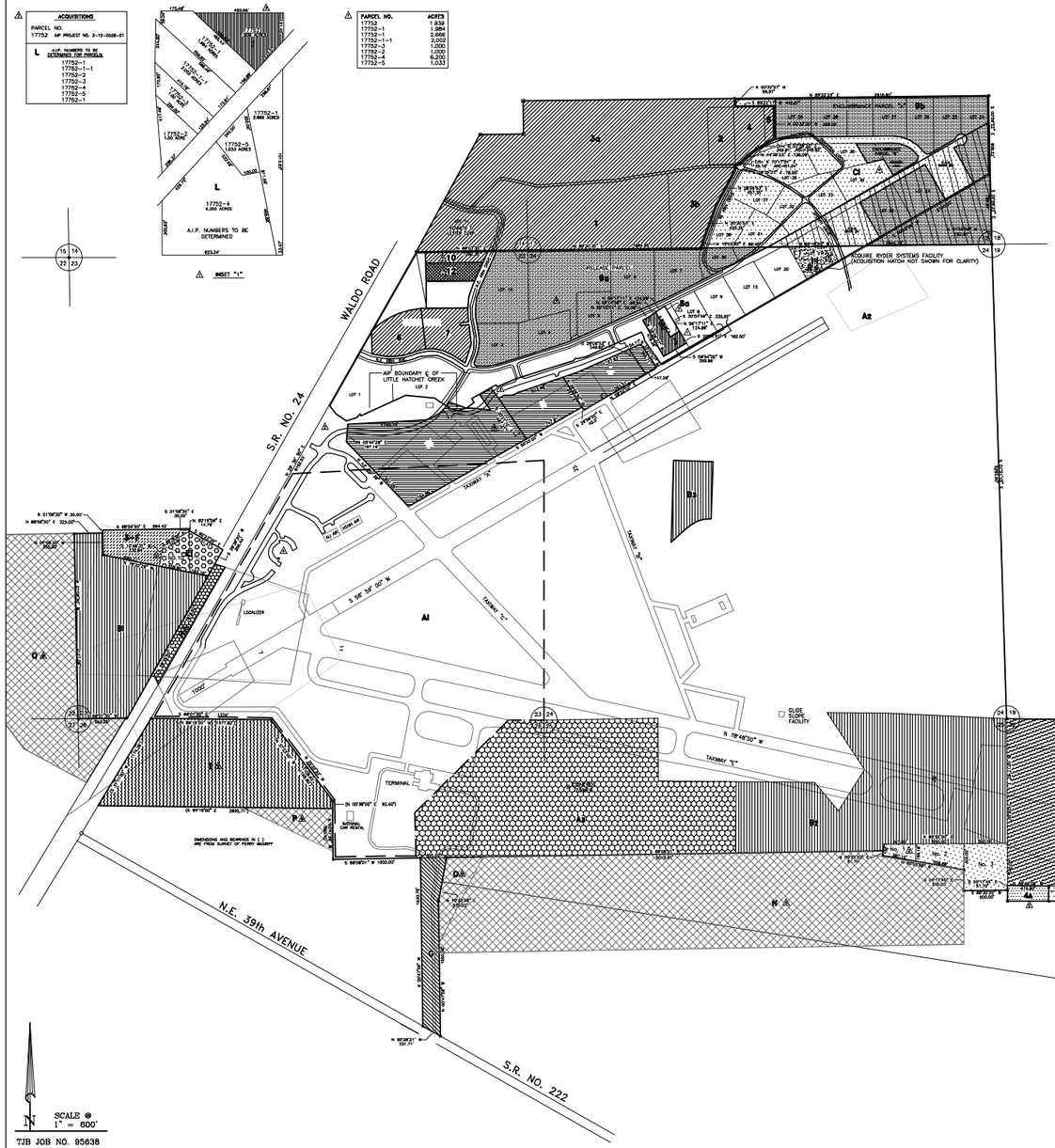
LAND USE COMPATIBILITY

SHEET NUMBER

ALP-12

6.14 Airport Property Map – Sheets 13 of 13

The purpose of the Airport Property Map is to identify all airport properties currently owned in fee-simple title or controlled by easements. This plan is also referred to as an "Exhibit A, Property Map", a required attachment to FAA application forms requested on federal grants for airport-related improvement projects. This plan must be updated when the airport changes any property boundary, acquires new property or acquires new easements.



ACQUISITIONS

AREA

- A1 ORIGINAL CITY OWNED AIRPORT LEASED TO U.S. DURING WW II.
- A2 PROPERTY ADDED TO A1 BY U.S. DURING WW II. A1 AND A2 DEMISED TO CITY UNDER SURPLUS PROPERTY INSTRUMENT ACT OCT. 16, 1948.
- A3 CITY ACQUIRED FROM STATE SHORTLY AFTER U.S. CANCELLED LEASE OCT. 1948.
- B1 49.07 ACRES ACQUIRED AND REIMBURSED UNDER FEDERAL AID AIRPORT PROJECT 9-08-021-02.
- B2 82.22 ACRES ACQUIRED AND REIMBURSED UNDER FEDERAL AID AIRPORT PROJECT 9-08-021-02.
- B3 9.9 ACRES ACQUIRED UNDER FEDERAL AID PROJECT 9-08-021-02.
- C 66.2 ACRES ACQUIRED UNDER FEDERAL AID AIRPORT PROJECT 9-08-021-04. ONLY 41.6 ACRES OF THIS LAND WERE SUBJECT TO REIMBURSEMENT UNDER FAAP 04. REIMBURSEMENT OF THE REMAINDER RECEIVED UNDER SUBSEQUENT PROJECT ADAP 04.
- C1 114.64 ACRES ACQUIRED 7-26-43 MIZE TO CITY, D.B. 202, PG. 31, AND 2-16-43 MERCER TO CITY, D.B. 200, PG. 303
- D 5 ACRES OF LAND ACQUIRED AND REIMBURSED UNDER ADAP 8-12-0028-03.
- E1 5.4 ACRES OF LAND REIMBURSED UNDER ADAP 8-12-0028-03.
- E2 PARCELS 1,2,3,4,4A,5,6,7,8,8A,8Bb 9 ACQUIRED AND REIMBURSED UNDER ADAP 8-12-0028-03
- F1 3.087 ACRES ACQUIRED UNDER ADAP 05.
- F-F ACQUISITION UNDER ADAP 05.
- G RIGHT-OF-WAY ACQUIRED 6-21-77 ADAP 06 EASEMENT FROM STATE.
- H ⚠ AVIGATION EASEMENTS FROM STATE OF FLORIDA FDOT MAY 10, 1977.
- I ⚠ TOTAL ACREAGE = 48.04 ACRES, 10.32 ACRES ACQUIRED UNDER ADAP 6-12-0028-10. 20.60 ACRES ACQUIRED UNDER AIP 3-12-0028-01. 17.12 ACRES ACQUIRED UNDER AIP 3-12-0028-06.
- J ⚠⚠⚠ PROPERTY ACQUIRED UNDER AIP PROJECT #3-12-0028-01, PART 2
- K PROPERTY ACQUIRED UNDER F.D.O.T. GRANT W.P.I. #2820773 (FY 91/92)

NOTE: ALL ACQUISITIONS IN FEE SIMPLE WITH EXCEPTION OF AVIGATION EASEMENT (H)

- ⚠ LIMITS OF AIRPORT INDUSTRIAL PARK 2-27-90, 238.06 ACRES
- L ⚠ 1994 FOSTER ET AL PROPERTIES ACQUIRED UNDER AIP PROJECT #3-12-0028-16
- M NOT APPLICABLE
- 8a ⚠ ABOVE GROUND FUEL FARM PURCHASED FROM REGIONAL PETROLEUM CORP. ON MAY 16, 1996 (EFFECTIVE APRIL 8, 1997)

FUTURE ACQUISITIONS

- N FUTURE PROPERTY ACQUISITION, 126.72 ACRES
- O FUTURE PROPERTY ACQUISITION, 5.28 ACRES
- P FUTURE PROPERTY ACQUISITION, 5.72 ACRES
- Q FUTURE PROPERTY ACQUISITION, 53.50 ACRES
- R ACQUIRE RYDER SYSTEMS FACILITY, 4.72 ACRES

PARCELS RELEASED FROM WAA INSTRUMENT OCT. 15, 1948

- 1 AGREEMENT 4 JUNE 1964 – SOLD 43.52 ACRES TO SPERRY RAND CORP.
- 2 RELEASE 23 OCTOBER 1957 – SOLD 5+ ACRES TO PENINSULAR CHEMICAL RESEARCH, INC.
- 3a 3b RELEASE II AUGUST 1958 – SOLD TO SPERRY RAND CORP. TOTAL 65.59 ACRES
- 4 RELEASE 20 NOVEMBER 1969 – SOLD 5± ACRES (4 AC. PENINSULAR CHEMICAL RESEARCH, INC. AND 1AC. SPERRY RAND CORP.)
- 5 RELEASE 24 NOVEMBER 1967 – SOLD 0.75 ACRES PENINSULAR CHEMICAL RESEARCH, INC.
- 6 RELEASE 30 APRIL 1970 – SOLD 5.98 ACRES FABCO-AIR, INC.
- 7 RELEASE 24 AUGUST 1970 – SOLD 6.09 ACRES MARS DISTRIBUTING COMPANY
- 8 RELEASE 7 JUNE 1971 – SOLD 3.34 ACRES HUNTER & ADAMS
- 8a OUT PARCEL (0.95) OWNED BY REGIONAL PETROLEUM. RELEASED AS PART OF "8" ABOVE.
- 9a RELEASE PARCEL APRIL 14, 1995 – TO CITY OF GAINESVILLE
- 9b ENCUMBRANCE PARCEL APRIL 14, 1995 – TO CITY OF GAINESVILLE
- ⚠ 10 RELEASE PARCEL MAY 5, 1998 – SOLD 2.01 ACRES KENNETH G. LESTER CO.
- ⚠ 11 RYDER SYSTEMS INC.
- ⚠ 12 RELEASE PARCEL – TO CITY OF GAINESVILLE

LEGEND

- LAND ACQUISITION
- EXISTING RPZ AREA
- FUTURE RPZ AREA
- RUNWAY EXTENSION
- AIRPORT PROPERTY

⚠ REVISED 07-01-06 (GACRAA)
⚠ REVISED 11-14-00 (GACRAA-CRH)
⚠ REVISED 9-29-1998 (TJB)
⚠ REVISED 1-7-1998 (TJB)
⚠ REVISED 05-1-1995 (TJB) – FAA APPROVED (MOORE/OLERKIN LETTER DATED 4/22/96)
⚠ REVISED 08-01-1990 (TJB)
⚠ REVISED 6-23-1987
⚠ REVISED 5-14-1987

GAINESVILLE REGIONAL AIRPORT
PROPERTY MAP – EXHIBIT A

TERRENCE BRANNAN LAND SURVEYOR INC.

RS&H®
Architectural, Engineering, Planning and Environmental Services
Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Blvd. South
Jacksonville, Florida 32256
904-256-2500 FAX 904-256-2501
www.rsandh.com
FL Cert.Nos. AAC001886 · EB0006620 · LCC000210

GAINESVILLE REGIONAL AIRPORT

GAINESVILLE REGIONAL AIRPORT

AIRPORT MASTER PLAN UPDATE

CONSULTANTS

REVISIONS

NO.	DESCRIPTION	BY	DATE

DATE ISSUED: AUGUST 2006
REVIEWED BY: JB
DRAWN BY: DB
DESIGNED BY: RO
AEP PROJECT NUMBER

© 1998 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

AIRPORT PROPERTY MAP

SHEET NUMBER

ALP-13

6.16 Summary

Airport plans were presented to the Technical Advisory Committee (TAC) and Policy Advisory Committee (PAC) for discussion and review. The drawings that follow represent the direction established by the committees, airport staff and GACRAA.

CHAPTER 7
PLAN IMPLEMENTATION

7.1 Introduction

This section of the Airport Master Plan Update presents the Capital Improvement Plan (CIP) and Development Phasing Plan for development recommended at the Gainesville Regional Airport (GNV). Each plan will consider the demand-driven need for facilities identified in Section 3, as well as the financial feasibility of projects so that a viable CIP may be developed.

7.2 Development Phasing

Although the Airport Master Plan Update charts a course for planned development, it must be emphasized that the planning and development of an airport is a continuous process. The rehabilitation of existing facilities and the development of new facilities must be predicated on sustained demand which justify the costs of improvements. Therefore, periodic reviews of the CIP (or individual projects in any planning stage) must be undertaken to determine airport needs, project costs and financial viability. This will ensure that any change in aviation demand or the local area will be fully considered as the development of GNV continues.

Based on the facility requirements and alternatives developed in previous sections of this Airport Master Plan Update, a CIP and Development Phasing Plan have been recommended that incorporate the facility requirements during the 20-year planning period. Each project has been assigned to a particular planning period (i.e., short-term, intermediate-term or long-term). The short-term time period extends from 2003 to 2008. Each project in the short-term time period has been individually described in sufficient detail to identify the general nature and purpose of the project. The intermediate time frame extends from 2009 to 2013. The long-term time frame extends from 2014 to 2023. For both the intermediate and long-term time frames, a list of required projects and projected costs have been developed, but without the level of implementation detail provided for short-term projects.

The Project number at the end of each project in this Chapter is coordinated with the projects in this Financial Implementation (Chapter 8). This was done for ease of understanding and consistency purposes between this Chapter and the Financial Implementation spreadsheets. In addition, a more detailed cost estimate was prepared for each project and a copy of each spreadsheet is included in the Appendix of this report.

The list of projects described in this Chapter is grouped in logical pieces (ie, runways, taxiways, commercial service, etc.). The project list in Chapter 8 is comprised of Phasing of such projects. After discussions with the Airport, projects were placed in order of the implementation process and the designation of each project is shown in the project title. During the course of the Financial Chapter and after discussion with the Airport staff, the projects are the following:

7.2.1 Short-Term (2003-2008) Airport Development

The initial period of development focuses upon improving the existing airside and landside conditions. Recommended development projects in the short-term time frame include runway pavement rehabilitations, taxiway pavement rehabilitations, airfield lighting rehabilitations, air

cargo development, environmental assessment for the Runway 6-24 extension, and construction of corporate hangars and T-hangars. A brief description of each project follows

Phase I

RUNWAY 6/24 IMPROVEMENTS

Runway 6/24 Extension - This project includes: (Project 1-27)

A-1) Construct 4,150 L.f. Runway Extension – This project will consist of the construction of 4,150 l.f. of new pavement and the rehabilitation of 2,350 of existing runway pavement for a total length of 6500 feet. This project will also consist of the installation of 4,150 l.f. of new Medium Intensity Runway Lights (MITLs) and the rehabilitation of 2,350 l.f. of existing MIRLs. This project will also include the installation / rehabilitation of PAPIs and Runway End Identify Lights (REILs) for both runway ends.

A-2) Construct 4,150 L.F. Parallel Taxiway "A" – This project will consist of the construction / extension of taxiway "A" for 4,150 l.f feet at a separation of 400 feet from the runway. The taxiway will be constructed at 50 feet wide and will include the installation of 4,150 l.f. of Medium Intensity Taxiway Lights (MITLs). The remaining portions of Taxiway currently constructed at 525 feet from the runway centerline will be relocated to 400 feet from the runway centerline in a phased approach later in Phase 1 and are described as a separate project. (Project 1-28 and 1-48)

A-3) Installation of a Non-Precision Instrument Approach – This project will include the installation of a localizer approach to Runway 6 which will also as the first step of an ultimate precision approach to this runway end.

A-4) Relocation of existing Airport Landside Perimeter Road – This project will include the relocation of approximately 8,700 l.f. of the existing Airport Perimeter Road from the Ryder Truck facility outside of the Runway 6/24 approach surfaces and finally connecting the existing road adjacent to the Gainesville Gun Range. The two-lane road should be constructed to light duty pavement and to FDOT standards. This road will also assist the Airport Security personnel in maintaining the perimeter of the Airport and will serve as the first link of ultimately provide a perimeter road around the Eastern quadrant of airport property. (Project 1-47)

RUNWAY 10/28 IMPROVEMENTS

A-5) Install ILS Approach for Runway 10 – This project will include installing a localizer and glide slope for the approach for Runway 10 to serve as a secondary approach to Runway 10/28. This additional approach will allow for lower visibility minimums during periods of low visibility and allow greater runway flexibility. This will require the acquisition of approximately 30 acres of land to meet the enlarged RPZ requirements.

A-6) Runway 10/28 Crack Sealing and Re-Painting – Runway 10/28 was recently overlayed and this project will consist of crack sealing of the pavement surfaces during the later part of Phase 1 to ensure cracks are sealed to help maintain the pavement surfaces. (Project 1-64)

A-7) Runway 10/28 Marking – Runways are typically remarked every 5 years as pavement markings fade quickly in the Florida environment to ensure the pavement marking remains visible to pilots.

A-8) Runway 10/28 Safety Area Improvements – The approach to Runway 28 contains some wetland areas within the runway safety area, which should be evaluated to ensure that this area is capable of supporting aircraft per the FAA Advisory Circular 150/5300-13 during periods of wet weather. This project should include an evaluation and construction of improvements to the area within the approach surface to Runway 28 to ensure this area, which consists of some wetlands, can be maintained to be free of tall vegetation.

TAXIWAY "A" IMPROVEMENTS

A-9) Taxiway "A" Improvements – This project includes another phase of the Taxiway "A" relocation at 400 feet from runway centerline from the intersection of Taxiway "B" to the Intersection with Taxiway "C" or approximately 2,000 l.f. The project will consist of constructing new pavement to the same strength as Runway 6/24 and the pavement width will be 50 feet. The project will also include the installation of new MITLs. (Project 1-15)

TAXIWAY "B" IMPROVEMENTS

A-10) Taxiway "B" Improvements – This project includes the rehabilitation of Twy "B" 50x2,800 Ft., pavement strength of 210,000 lbs and the rehabilitation of the MITL's. This project includes the removal aircraft run-up Area on Twy "B", once runway 6/24 has been extended, widen fillet at connection with Runway 10/28. (Project 1-32)

TAXIWAY "C" IMPROVEMENTS

A-11) Taxiway "C" Improvements – This project includes the rehabilitation of Twy "C" 50'x2000' l.f., pavement strength of 210,000 lbs and the rehabilitation of the MITL's. (Project 1-38)

TAXIWAY "E" IMPROVEMENTS

A-12) Taxiway "E" Improvements – This project includes the rehabilitation of Twy "E" 50'x75000' l.f. plus connector taxiways. The pavement strength should be similar to Runway 10/28. The project also includes the rehabilitation of the MITL's. (Project 1-49)

GENERAL AVIATION IMPROVEMENTS

A-13) Eclipse Aircraft Hangar and Site Improvements – This project includes building a 15,000 Sq. Ft. Office for Eclipse, as well as a 40,000 Sq. Ft. Hangar and a 3,350 Sq. Yd Apron. And a 75 space auto parking area. This development is shown as Site K on the ALP. (Project 1-03)

A-14) Corporate Hangar Site Prep and Apron – This project will involve the site work and construction of an apron for six (6) future corporate hangars located West of University Air Center. The apron will be designed for Group II standards and will consists of

13,000 s.y. of pavement. The Corporate hangars will be phased to construct three hangars in Phase 1 and three hangars in Phase 2 and are listed as separate projects.

A-15) Construct (3) 80x80 Corporate Hangars – These hangars are buildings K1, K 2 and K 3 on the ALP. These hangars are recommended to be constructed adjacent to University Air Center. These hangars will be used for Corporate aircraft and possible aircraft storage and will utilize the apron described to be constructed earlier in this section. There will be 24 auto parking spaces (eight) per hangar along with the associated auto access road. (Project 1-56 and 1-57)

A-16) Construct three 10 Unit T-hangars – This project will consist of (3) ten unit T-hangars located as Q1, Q2, and Q3 on the ALP. Also, this project will consist of constructing 60 parking spaces (2 parking spaces per each unit) for the hangars and associated auto access road. (Project 1-58)

A-17) New Access Rd. Across Little Hatchet Creek – This project will consist of a new road that will bridge over Little Hatchet Creek to serve the general aviation area as a result of NE 42nd Terrace being washed out by a hurricane. In addition NE 46th Terrace will also be removed to provide a single and more central access point to the general aviation area. This new access road will entail a length of 350 l.f. (This project is Currently Funded).

A-18) Aircraft Wash Rack – This project will consist of a 50'x50' aircraft wash rack. An aircraft wash rack should be constructed to help enhance water quality around the airport and meet EPA standards. (Project 1-11)

A-19) Sealcoat GA Apron and "T" Hangar Areas – This project consists of sealcoating the existing general aviation aircraft apron and "T Hangar pavements to extend the life of the pavement. (Project 1-39)

A-20) Rehabilitate Pavement and Apron for "T" Hangar Bldgs. "I" and "J" – This project consists of rehabilitating the pavement and apron area of "T" Hangar buildings "I" and "J" which are in poor condition. (Project 1-50)

A-21) Rehabilitate Existing Flight Service Station Building – The FAA recently announced the FSS located at the Gainesville Regional Airport will be relocated to another Florida location. This project will renovate the space for use by another aviation related tenant. (Project 1-04)

COMMERCIAL SERVICE AREA IMPROVEMENTS

A-22) Terminal Renovations – The existing Terminal is under a significant renovation project that will essential completely renovate the entire structure over a multi-year period. Phase 1 of the terminal renovations are currently under construction which consists of the installation of three passenger boarding bridged and the vestibules to connect the passenger boarding bridges. Phase 2 of the terminal renovation is currently under design which will consist of the renovation of the lobby, meter / greeter area, the gate are, administration space, airport security and electrical and mechanical upgrades for the entire terminal. Phase 3 of the renovation will include the renovation of the airline ticketing area, Phase 4 will include the renovation of the baggage claim area and Phase

5 will include the installation of an exterior canopy and exterior renovations of the building. (Projects 1-01, 1-16, 1-36, 1-43 and 1-59)

A-23) Construct Airport New Access Rd. to Waldo Rd – This project will consist of a new 4 lane divided access road from the terminal loop road to Waldo Rd. This project will also expand the loop road around the terminal to allow for additional future auto parking expansion. This road will become the main access road to the Gainesville Regional Airport when constructed. The estimated length of the road will be 4,300 Ft. This project will also require additional land acquisition that is defined under the land acquisition requirement section. (Projects 1-24 and 1-37)

A-24) Consolidated Rental Car Facility – This project will consist of a Rental car quick turn around facility that will be located east of the terminal and south of the ATC tower. This will include a 4,000 Sq. Ft. wash facility, two wash bays, storage for 150 vehicles. This project will also include fueling facilities for the rental cars. The project will also include Phase I of the new access road system to east side of Runway 10/28 for rental car/air cargo and airport maintenance facility and security control. (Projects 1-05 and 1-17)

A-25) Rental Car Ready Return Lot Expansion – The expand ready return spaces include renovating existing lot, adding 5th parking lane for each of the five rental car companies and 75 new auto parking spaces, relocate two access control gates, rental car signage and rehab/new lighting for the area. ALP Building E and F. (Project 1-18)

A-26) Auto Parking Lot Expansion for Terminal – This project will consist of developing 200 new Auto Parking spaces as well as installing 2 new revenue control booths and 1 credit card lane. This project can be accomplished prior to the relocation of the new access loop road that is part of the New 4 land Access road to Waldo Road. This project will also include a minor reconfiguration of short-term versus long-term separation of the existing auto parking lot. (Project 1-10 and 1-21)

A-27) Auto Parking Lot Rehabilitation – This project includes the rehabilitation of the existing 665 space auto parking lot with an overlay and new striping. The project also includes some additional landscaping. (Project 1-22)

A-28) Covered Parking – This project will consists of the installation of covered parking for the long-term lot for approximately 100 vehicles to help generate additional revenue for the airport and the abilty to offer covered parking for passengers desiring this alternative. (Project 1-23)

A-29) Employee Parking Relocation – An Airport Blast analysis was recently prepared and one of the recommendations of the report was to relocate the existing employee parking lot on the East side of the terminal building. This project will consist of relocating the lot a minimum of 300 feet away from the terminal building. (Project 1-51)

A-30) Taxistand Ready Lot – This area will be to ensure enough room for 15 vehicles, a call button to terminal restroom facilities for taxi operators, and the roof structure similar to Terminal building canopy. (Project 1-30)

A-31) Air Traffic Control Tower Relocation – This project will consist of relocating the Air Traffic Control Tower to the west side of the airport, adjacent to the existing Flight

Service Station building, as well as expanding the FSS auto parking lot by 15 spaces. (ALP Building J). (Project 1-60)

A-32) Install new airport landside signage – This project will consist of installing new airport signage (directions) and information signs near the airport and the city. This will include both the access road from 39th Avenue and the new access road form Waldo Road. (Project 1-55)

A-33) Phase 2 Air Cargo / Rental Car Quick Turn Around Facility Access Road – This project will consist of the construction of a new two lane 1,400, l.f. access road to the future air cargo complex and rental quick turn around facility that will allow easy access / egress from this area to 39th avenue without having to use the terminal loop road. This project will require some land acquisition to complete the project.

A-34) Airport Signage Rehabilitation – This project will include the rehabilitation of any airport signage that has not been recently replaced. (Project 1-29)

AIR CARGO AREA IMPROVEMENTS

A-35) Integrated Air Cargo Facility – This facility will require a building of 3,000 sq. Ft., 3,500 SY of apron space, 3 truck docks, and 30 employee parking spaces. (ALP Building H). (Project 1-34,. 1-35, 1-44, 1-45 and 1-46)

MISCELLANEOUS IMPROVEMENTS

A-36) Upgrade Airport Security Fencing – This project consists of upgrading the fencing for security purposes. (Project 1-40)

A-37) Remote Airport Security Cameras and Surveillance – This project will consist of the installation of additional remote cameras around the perimeter of the airport along with additional video screens within the operations area. (Project 1-52)

A-38) Upgrading the Fiber Optics – This project consists of rehabilitating the existing fiber optic line that runs from the south side of the airport to the north side of the airport. (Project 1-53)

A-39) Stormwater Master Plan – A stormwater master plan is recommended to be conducted to evaluate the existing drainage infrastructure at the airport. These plans are required by the EPA and will help the airport monitor and control hazardous materials. Also, This project will begin the process of updating the Storm Water Sewer System along with showing potential improvements to the system. Actual rehabilitation items will be the subject to the conclusion and of the Master Plan. (Project 1-25)

A-40) Phase 1 Airport Drainage Improvements – This will be the Phase 1 drainage improvements which will be recommended by the stormwater master plan. Some of the anticipated improvements will be the piping of existing drainage areas adjacent to Taxiway "E" and the commercial service apron and the creation of a regional pond to serve the airport. Other potential projects include the replacement of the existing stormwater system that lies under the existing airfield pavement. The estimate used for

this project is merely a placeholder and will require updating at the conclusion of the stormwater master plan. (Project 1-67)

A-41) Construct an Airport Maintenance Building – This building will consist of 4,850 Sq. Ft. Maintenance Building, this project will construct 15 parking spaces, a 1,275 linear foot access road and the construction of approximately 400 l.f of additional airside access road connecting the existing commercial service apron to the electrical vault. (Project 1-06)

A-42) Airport Maintenance Equipment – The following equipment is recommended to be included in the capital improvement lists: (Projects 1-65, 1-66 and 1-12)

4X4 Crew Cab Maintenance Truck
(2) Air Conditioned Tractors with six foot bush hog / fifteen foot bat-wing mower
Medium Duty Backhoe
Tracked Skid-Steer Equipment with brush/tree cutting attachments
Aerial Lift Truck
Flat-bed equipment trailer
Medium Size Dump Truck
Crew / Airport Supervisor Equipment

A-43) ARFF Vehicle – This project consists of the Acquisition/replacement of a Category "B" ARFF vehicle. (Project 1-02)

A-44) Construct Airport Perimeter Road around Southeast side of airport – This project entails the construction of a new 8,000 l.f. light duty pavement perimeter road that will be on the southeast side of the airport and will connect to CR 222. This project will assist with safety to help secure the perimeter of the airport. (Project 1-61)

A-45) Obstruction Removal – Each runway approach has several obstructions to the existing approach surfaces. This project will survey, identify and remove all existing obstructions within each approach to enhance safety. (Project 1-33)

A-46) Fuel Truck Access Rd. Segment – This segment of access road will connect to Twy "A" from the fuel farm and will consist of 500 Lf of pavement. (Project 1-61)

A-47) FAR Part 150 Study – An update of the 1989 FAR Part 150 Study is recommended to analyze current and future noise contours and will help the airport evaluate adjacent land uses with proposed noise contours generated by potential future activity. (Project 1-26)

A-48) Wildlife Management Plan – This project will include the preparation of a wildlife management plan to prepare an active wildlife mitigation strategy for the airport. (Project 1-31)

A-49) Second Electrical Vault Installation – This project consists of a second electrical vault to be installed adjacent to the existing fuel farm and will provide the necessary electrical capacity for the improvements to the airport. (Project 1-62)

A-50) Fuel Farm Expansion – This project consists of expanding the fuel farm on the north end of the airport by adding another 15,000 gallon Jet A above ground tank. (Project 1-63)

A-51) Airport Rezoning Assistance – This project will prepare and coordinate a zoning map for the airport to assist the City of Gainesville in their review of future project. (Project 1-08)

A-52) Airport Comprehensive Plan Amendment – The extension to runway 6/24 will trigger Development of Regional Impact (DRI) review. This process can either be accomplished by submitted a DRI and falling under these requirements are by submitting a local government comprehensive plan amendment.

A-53) Relocate Portion of Airside Access Road – This project will include the relocation of 800 l.f. portion of the airside access road to make room for the future expansion of the rental car ready return lot. (Project 1-19)

LAND ACQUISITION

This land acquisition is for many projects identified as part of Phase 1 Capital Improvements:

A-54) Runway 6/24 Extension – Land acquisition is part of the 6/24 Extension. The land acquisition is approximately 1 acres.

A-55) Air Cargo Access Road – Land acquisition to construct the air cargo road on the south end of the runway. The land acquisition is approximately 6 acres and is located adjacent to the access road from 39th Avenue. The land required will also be used to construct a stormwater detention pond to help serve the commercial service side of the airport facility.

A-56) Airport Loop Road – Land acquisition is required to construct the new access road from Waldo Road on the west end of the airport that is currently part of the Alachua County Fairgrounds. The land acquisition is approximately 4 acres.

A-57) Runway 6 RPZ – Land acquisition required for the installation of a precision approach to Runway 6 will consist of approximately 1 acre.

A-58) Runway 11 – Land acquisition for Runway 11, this will consist of approximately 5 acres.

A-59) Comprehensive Plan Amendment – This project consists of approving and adopting the Airport Master Plan into the City of Gainesville's Comprehensive Plan.

7.2.2 Phase 2 (2009 – 2013) Airport Capital Development

The Phase 2 portion of airport development program focuses on general aviation area development and continued pavement maintenance for the airport. A brief description of each project follows

RUNWAY 6/24 AND 10/28 IMPROVEMENTS

B-1) Crack Sealing for Runway 10/28 – This project will consist of crack sealing to help maintain the pavement surfaces. (Project 2-1)

B-2) Crack Sealing for Runway 6/24 – This project will consist of crack sealing to help maintain the pavement surfaces. (Project 2-37)

B-3) Runway 6/24 Re-Marking – Runways are typically remarked every 5 years as pavement markings fade quickly in the Florida environment to ensure the pavement marking is remains visible to pilots. (Project 2-38)

B-4) Runway 10/28 Re-Marking – Runways are typically remarked every 5 years as pavement markings fade quickly in the Florida environment to ensure the pavement marking is remains visible to pilots. (Project 2-9)

TAXIWAY IMPROVEMENTS

B-5) Construct Connector to Taxiway "C" – This project includes the construction of an additional exit taxiway to allow aircraft utilizing taxiway "C" the cross Runway 10-28 without having to taxi on the runway. (Project 2-17)

B-6) Rehabilitate Taxiway E – This project will include the rehabilitation of Taxiway E along with the entrance / exit taxiways for Runway 10/28 and the rehabilitation of the taxiway lighting system. (Project 2-24)

B-7) Rehabilitate Taxiway C – This project include the rehabilitation of Taxiway C in addition to the rehabilitation of the taxiway lighting system. (Project 2-30)

B-8) Taxiway "A" Improvements – This project includes another phase of the Taxiway "A" relocation at 400 feet from runway centerline from the intersection of Taxiway "C" to the Threshold of Runway 6 or approximately 2,000 l.f. The project will consist of constructing new pavement to the same strength as Runway 6/24 and the pavement width will be 50 feet. The project will also include the installation of new MITLs. Also remove abandoned taxiway connecting to Threshold of Runway 24 that is marked unusable. (Projects 2-5, 2-6)

B-9) Taxiway Hold Aprons – This project will include the installation of taxiway hold aprons for either end of Taxiway "A" to improve aircraft circulation and allow those aircraft waiting for departure clearances of performing engine run-ups to not interfere with aircraft ready for departure. (Projects 2-7)

GENERAL AVIATION IMPROVEMENTS

B-10) Rehabilitate East . GA Apron – This project will include the rehabilitation of the East general aviation apron in front of University Air Center wrapping around the Aeroflite Hangar and ending in front of "T" hangar building "A". This will also include the existing Fed Ex loading area that is assumed to have been relocated to the consolidated air cargo complex adjacent to Runway 10-28. The rehabilitation will rehabilitate approximately 15,000 sq. yds. of pavement. (Project 2-18)

B-11) T-Hangar Taxiway to Serve Northeast "T" Hangar Area – The project will consist of constructing a Group II (35 foot) taxilane from the existing location of Taxiway "A" (525 feet from the runway centerline) that will provide access to this new "T" hangar area Northeast of the Ryder Truck facility. (Project 2-19)

B-12) Construct 3 (10) Unit T-Hangars – This project will consist of (3) ten unit T-hangars located as Q5, Q6, and Q7 on the ALP. Also, this project will consist of constructing 60 parking spaces (2 parking spaces per each unit) for the hangars. (Project 2-26)

B-13) Construction of Midfield FBO facility – This project will include the construction of a new fixed based operator along Taxiway "B" and will include the construction of a 3 hangars that are 100x100. Also, this will include 15 auto parking spaces and an apron that is 16,500 sq. yd. Apron and associated taxiway. Finally, this project will include 3,000 linear feet of access road. (Project 2-32)

B-14) Construct (3) 80x80 Corporate Hangars – These hangars are buildings K4, K5 and K6 on the ALP. These hangars will be constructed adjacent to University Air Center and will utilize the apron corporate apron constructed in Phase 1 of the planning period. These hangars will be used for Corporate aircraft and/or possible storage. The associated 24 auto parking spaces (eight) per hangar that will be constructed at this time. (Project 2-33)

B-15) Construct New FBO Hangar and Terminal Space – This project will consist of several sub-elements to construct a viable second FBO site at the Airport. The site is the former Gator Air Building which will be demolished to provide space for this project. The major elements are as follows: the construction of a 60 x 60 hangar and 1500 sq ft of terminal space for a new FBO. (Project 2-39)

B-16) Construct New Auto parking – This project includes the construction of a new 40 vehicle parking lot for the FBO (Project 2-40)

B-17) Remove / Relocate "T" Hangar Building "F" – This project includes the removal / relocation of "T" Hangar Building "F" to make room for the expanded aircraft apron for the new FBO site. (Project 2-12)

B-18) Rehabilitate / Construct Aircraft Apron – This project includes the construction and/or rehabilitation of approximately 16,000 sq yds of pavement for a new FBO. (Project 2-13)

B-19) Renovate Existing Sunshades – This project includes the renovation of the existing sunshades and 8,000 sq ft Gulf Atlantic Hangar to provide FBO services.

COMMERCIAL SERVICE AREA IMPROVEMENTS

B-20) Terminal Area Study – This study is recommended during the later stages of Phase 2 to evaluate and prepare a detailed study for the next phase of expansion for the terminal building and terminal area. (Project 2-20)

B-21) Increased Auto Parking Spaces – This project consists of expansion of the auto parking lot by 200 additional auto parking spaces after the airport loop road has been expanded. (Project 2-14)

B-22) Construct Cell Phone Lot – This project will consist of the construction of 50 auto parking spaces to allow persons desiring to pick up their passengers a place to park and wait for a phone call instead of cluttering the drop off and pick up lane in front of the terminal. (Project 2-27)

B-23) Construct Two-Lane Outbound Roadway – This project will include the addition of an (Airport Access Rd) (2,500 LF) to 39th Ave. (Projects 2-2, 2-3 and 2-28)

AIR CARGO IMPROVEMENTS

MISCELLANEOUS IMPROVEMENTS

B-24) Renovate and rehabilitate ARFF building – This project will consist of rehabilitating the existing 5,600 sq ft ARFF building and a possible modest expansion for additional equipment storage and auto parking spaces. (Project 2-34)

B-25) Obstruction Removal – This project will consist of the on-going process of the removal of future obstructions within the approach surfaces of each of the four runway ends due to vegetation growth. (Project 2-21)

B-26) Install a Differential GPS System – This will entail the airport to improve their approaches and increases operations in inclimate weather along with increasing safety. (This project assumes no cost to the owner)

B-27) Non-Aviation Land Use Study – This project will look at various opportunities to create revenue for the airport using the driving range, skeet club and other land located on the east side of the airport for non-aviation development. (Project 2-15)

B-28) Rehabilitate / Install Security Fencing – This project consists of upgrading the fencing for security purposes as well as possibly adding some security cameras. (Project 2-29)

B-29) Stormwater Management – This is a land use compatibility buffer, south of the airport and possible location of the regional pond. This will require land acquisition. (Project 2-16 and 2-22)

B-30) Security Road – This project will consist of constructing a security road along the south perimeter of the airport along the fence for easier access and security patrols for security personnel. The road will be an estimated 6,900 Lf. (Project 2-35)

B-31) Phase 2 Airport Drainage Improvements – This will be the Phase 2 drainage improvements which will be recommended by the stormwater master plan. Some of the anticipated improvements will be the piping of existing drainage areas adjacent to Taxiway "E" and the commercial service apron and the creation of a regional pond to serve the airport. Other potential projects include the replacement of the existing stormwater system that lies under the existing airfield pavement. The estimate used for

this project is merely a placeholder and will require updating at the conclusion of the stormwater master plan. (Project 2-36)

B-32) Airport Master Plan Update – This project is to prepare an Airport Master Plan Update, which will help the airport meet and exceed its needs for the next twenty years and are prepared about 7 to 10 years. (Project 2-23)

B-33) Construction Dump Testing and Closing – This project will include preliminary sampling around the construction debris landfill located on Airport property and closing / sealing the landfill. (Project 2-41)

LAND ACQUISITION

B-34) Land Acquisition – Land acquisition for the stormwater management pond that will serve the Gainesville Regional Airport and located along the existing Southern perimeter of the airport will be approximately 140 acres. The acquisition of this land will also enhance the land use and noise compatibility buffer and help ensure compatible land use surrounding the airport.

7.2.3 Phase 3 (2014 – 2023) Airport Capital Development

The Phase 3 portion of airport development program focuses on commercial service area development and expansion and continued general aviation area development for the airport. A brief description of each project follows

RUNWAY 6/24 and 10/28 IMPROVEMENTS

C-1) Crack Sealing for Runway 6/24 – This project will consist of crack sealing to help maintain the pavement surfaces. (Project 3-10)

C-2) Runway 6/24 Re-Marking – Runways are typically remarked every 5 years as pavement markings fade quickly in the Florida environment to ensure the pavement marking is remains visible to pilots. (Project 3-11)

C-3) Rehabilitate 10/28 – This project will include the rehabilitation of Runway 10/28 which will be reaching the end of its useful pavement life. At this time, consideration should be given for a concrete overlay of the runway surface. This project will also include the rehabilitation of the HIRLs. (Project 3-1)

C-4) Install Runway 10-28 Centerline Lights – This project will install centerline lights for Runway 10-28 to enhance operational safety of the runway during periods of low visibility such as early morning periods of fog due to the close proximity of the runway to Newnans Lake. (Project 3-2)

TAXIWAY A,B,C,E IMPROVEMENTS

C-5) Install Taxiway "E" Guard Lights and Stop Bars – This project will install taxiway edge guards and stop bars to help prevent runway incursions onto Runway 10/28 during periods of low visibility. (Project 3-5)

GENERAL AVIATION IMPROVEMENTS

C-6) Rehabilitate University Air Center Auto Parking Lots – This project will consist of rehabilitating approximately 3,800 sq yds of existing auto parking spaces for the University Air Center. (Project 3-26)

C-7) Rehabilitate West GA Apron – This project will consist of relocating the 10 unit Port-A-Ports and rehabilitating this apron for additional aircraft tiedowns. The apron will consist of approximately 9,000 s.y. of pavement. (Project 3-6)

C-8) Construct three 10 Unit T-Hangars – This project will consist of (3) ten unit T-hangars located as Q8, Q9, and Q10 on the ALP. Also, this project will consist of constructing 60 parking spaces (2 parking spaces per each unit) for the hangars. Access to this site will be provided by the taxilane constructed in Phase 2. (Project 3-7)

C-9) Construct (3) 80x80 Corporate Hangars – These hangars are buildings K8, K9 and K 10 on the ALP. These hangars are recommended to be constructed adjacent to Joint Aviation Unit. These hangars will be used for Corporate aircraft and possible storage. The associated 24 auto parking spaces (eight) per hangar that will be constructed at this time. The construction of these hangars will also require the relocation / removal of the 14 unit sunshade hangar. (Project 3-27)

C-10) Convert Existing Taxiway A into Airside Access Road – This project will convert the existing Taxiway "A" into an airside access road once Taxiway "A" has been relocated to 400 feet from the Runway 6/24 centerline. This will allow greater flexibility of fuel trucks to maneuver around the airside portions of the airport. (Project 3-8)

C-11) Construct Paved Auto Parking for Aeroflite Hangar – This project will include the construction of 15 paved parking spaces for the Aeroflite Hangar. (Project 3-9)

C-12) Rehabilitate Aircraft pavement for GA Aprons and "T Hangar Taxilanes – This project will include the rehabilitation of the existing pavement for the GA apron and "T" hangar taxilanes. (Project 3-13)

C-13) Rehabilitate Existing GA Access Roads – This project will include the rehabilitaion of the existing general aviation auto access roads. (Project 3-12 and 3-14)

C-14) Rehabilitate / Replace Existing WWII Hangar – This project will include the rehabilitation of the existing of the existing WWII hangar located adjacent to the University Air Center. (Project 3-15)

COMMERCIAL SERVICE AREA IMPROVEMENTS

C-15) Terminal Building Expansion – This project will include the expansion of the terminal building to meet the continued future growth of airline service. Each of the individual expansion elements will require further study and analysis prior to implementation so

this is only an approximation and is subject to further refinement: The expansion will expand the terminal building to the East to allow additional airline ticketing space. This will allow the addition of three additional passenger loading bridges and associated gate space for passengers. This project will expand the existing baggage claim area and rental car counter area. This project consists of expansion of the auto parking lot by 200 additional auto parking spaces after the airport loop road has been expanded. (Projects 3-18, 3-21, 3-30 and 3-33)

C-16) Rental Car Ready Return Lot Expansion – This project will include the construction of an additional 100 ready return spaces for the rental car customers. (Projects 3-19)

C-17) Auto Parking Lot Rehabilitation – This project includes the rehabilitation of the existing 665 space auto parking lot with an overlay and new striping. The project also includes some additional landscaping. (Projects 3-20)

C-18) Consolidated Rental Car QTA Expansion – This project will rehabilitate and expand the existing facility and add 100 additional auto parking spaces. (Projects 3-16)

AIR CARGO IMPROVEMENTS

C-19) Air Cargo Facility Expansion – This project will consists of expanding the existing air cargo complex building by 15,000 sq. ft., approximately 10,000 sq yds. of additional aircraft apron, and approximately 7500 sq yds of truck and employee parking. (Projects 3-24, 3-25, 3-28 and 3-29)

MISCELLANEOUS IMPROVEMENTS

C-20) Upgrade Fencing – This project consists of upgrading the fencing for security purposes that will consist of approximately (TBD) Ft of fencing as well as adding some security cameras. (Projects 3-31)

C-21) Stormwater Management – This is a land use compatibility buffer, south of the airport and possible location of the regional pond. This will require land acquisition. (Projects 3-32 and 3-34)

C-22) Phase 3 Airport Drainage Improvements – This will be the Phase 3 drainage improvement which will be recommended by the stormwater master plan. Some of the anticipated improvements will be the piping of existing drainage areas adjacent to Taxiway "E" and the commercial service apron and the creation of a regional pond to serve the airport. Other potential projects include the replacement of the existing stormwater system that lies under the existing airfield pavement. The estimate used for this project is merely a placeholder and will require updating at the conclusion of the stormwater master plan. (Projects 3-35)

LAND ACQUISITION

There is no land acquisition that will be needed during this Phase of the Master Plan.

CHAPTER 8
FINANCIAL IMPLEMENTATION ANALYSIS

8.1 Financial Analysis Objectives

The purpose of this analysis is to evaluate Gainesville Regional Airport's capability to fund the Master Plan Capital Improvement Program (CIP) and finance operations during three phases of capital development. These phases include a five-year period from 2006 to 2010 (Phase I), a five-year period from 2011 to 2015 (Phase II) and a ten-year period from 2016 to 2025 (Phase III).

The analysis includes development of a detailed Financial Implementation Plan prepared annually for the Phase I period and in summary for the Phase II and Phase III planning periods. Objectives for developing the Plan include presenting the results of the implementation evaluation and providing practical guidelines for matching an appropriate amount and timing of financial resources with the planned use of capital funds. Detailed tables of projections for the capital program, operating expenses, operating revenues and cash flow are provided at the end of Chapter 8. These tables support the Financial Plan Summary which presents the overall results of this evaluation.

8.2 Overall Approach

Our overall approach for conducting the Financial Implementation Analysis included the following steps:

- Gathering and reviewing key Airport documents related to historical financial results, capital improvement plans, operating budgets, regulatory requirements and Airport policies

- Interviewing key Airport management personnel to gain an understanding of the existing operating and financial environment and overall financial management philosophy

- Reviewing the aviation traffic forecast previously developed in the Master Plan

- Reviewing the Master Plan CIP, cost estimates and development schedule anticipated for the planning period and projecting the overall financial requirements for the program

- Determining and analyzing the sources and timing of capital funds available to meet the financial requirements for funding the capital program

- Analyzing historical and budgeted operating expenses, developing operations and maintenance expense assumptions, reviewing assumptions with Airport management and projecting future operating costs for the planning period

- Analyzing historical and budgeted revenue sources, developing revenue growth assumptions, reviewing assumptions with Airport management and projecting future revenues for the planning period

- Completing results of the analysis and evaluation in a Financial Plan Summary that provides conclusions regarding the Airport's capability to finance the planned capital improvement program.

8.3 Capital Funding Sources

The development of the Master Plan CIP is anticipated to be funded from several sources. These sources include FAA entitlement and discretionary grants, FAA facilities & equipment funds, Florida DOT grants, passenger facility charges, FTA grants, rental car customer facility charges, private third party financing, cash reserves/net operating revenues and other funds. Each of these sources of funds is described in the following paragraphs.

8.3.1 FAA Airport Improvement Program Grants

The Airport receives grants from the Federal Aviation Administration (FAA) to finance the eligible costs of certain capital improvements. These federal grants are allocated to commercial passenger service airports through the Airport Improvement Program (AIP). AIP grants include passenger entitlement grants, which are allocated among airports by a formula that is based on passenger enplanements and discretionary grants which are awarded in accordance with FAA guidelines. Eligible projects are funded on a 95% AIP grant/5% local match basis. Under the AIP reauthorization legislation enacted in 2002 and 2004, the Airport is projected to receive current year entitlements of about $1.6 million in 2007 and future grants which grow to $2.1 million by 2025 based on Master Plan forecast enplanements. Non-Hub airports (those with annual enplanements up to about 330,000) can accumulate up to four years of unspent entitlements before the award is revoked. In 2006, Gainesville had about $520,000 in unspent AIP entitlement grants carried over from prior years. The Financial Implementation Analysis assumes the application of AIP passenger entitlement funds will be $8.8 million during Phase I, $9.0 million during Phase II and $19.8 million during Phase III.

The approval of AIP discretionary funding is based on a project eligibility ranking method the FAA uses to award grants, at their discretion, based on a project's priority and importance to the national air transportation system. In the past, Gainesville has received discretionary funding support for various eligible capital projects and the FAA has indicated its continued support on selected high priority projects planned in the near term. It is reasonable to assume that the Airport will receive additional discretionary funding during the planning period for higher priority, eligible projects, such as ARFF equipment, airfield lighting, airfield pavement rehabilitation/reconstruction, runway safety area improvements and other projects. The Financial Implementation Analysis assumes that about $8.5 million in discretionary grants will be provided during the Phase I planning period, $7.0 million during the Phase II period and $9.8 million during the Phase III period. These funding levels are aggressive, but reasonable, considering the Airport's past history of discretionary grant awards. However, since the future availability of AIP discretionary grants is not certain until an actual grant is awarded, it should be noted that any CIP projects which have discretionary funds indicated as a funding source in the implementation plan may need to be delayed or cancelled unless such funds actually become available.

8.3.2 FAA Facilities & Equipment Funds

Within the FAA's budget appropriation, money is available in the Facilities and Equipment (F&E) Fund to purchase navigational aids and air safety-related technical equipment for use at commercial service airports in the national airport system. The analysis assumes such funding will be available at Gainesville to relocate the air traffic control tower (ATCT) planned during Phase II at a cost of approximately $6.1 million. If F&E funds are not provided by the FAA, implementation of this projects may need to be delayed.

8.3.3 Florida Department of Transportation Grants

The Florida Department of Transportation (FDOT) funds airport projects from the State Transportation Trust Fund which receives significant contributions from Florida's aviation fuel tax. In general, Florida law allows FDOT to fund any capital project on airport property and any services that lead to capital projects, such as planning and design services. For commercial service airports, FDOT provides up to 50% of the local match for federally funded projects which, under current law, usually results in funding that is 95% federal, 2.5% local and 2.5% FDOT. For projects not eligible for federal grants, FDOT provides up to 50% of the project cost for commercial service airports. This analysis includes several projects during the review period that are assumed to be partially funded from FDOT grants.

8.3.4 Passenger Facility Charges

The Aviation Safety and Capacity Expansion Act of 1990 established the authority for

commercial service airports to apply to the FAA for imposing and using a Passenger Facility Charge (PFC) of up to $3.00 per enplaned passenger. With the passage of AIR-21 in June 2000, airports can apply for an increase in the PFC collection amount from $3.00 per eligible enplaned passenger to $4.50. The proceeds from PFCs are eligible to be used for AIP eligible projects and for certain additional projects that preserve or enhance capacity, safety or security; mitigate the effects of aircraft noise; or enhance airline competition. PFCs may also be used to pay debt service on bonds (including principal, interest and issue costs) and other indebtedness incurred to carry out eligible projects. In addition to funding future planned projects, the legislation permits airports to collect PFCs to reimburse the eligible costs of projects that began on or after November 5, 1990.

In 2002, Gainesville submitted its second application for the authority to impose and use PFC revenues at a collection level of $4.50 per eligible enplanement. This application was approved by the FAA in August 2002. The collection authority for this application was $4,637,954 with a projected expiration date of February 1, 2011. All the approved projects were completed prior to 2006 and none are included in the current Master Plan CIP. The implementation analysis assumes that the Airport will submit additional PFC applications (including PFC #3 which is currently in the preparation process) and amendments, as required, to ensure that the collection of PFC revenues continues beyond the authorized expiration date throughout the planning period. PFC revenues are assumed to be used throughout the planning period for numerous eligible projects identified in the Master Plan CIP.

8.3.5 Federal Transit Authority Highway/Intermodal Funding

The U.S. Department of Transportation, Federal Transit Authority (FTA) provides discretionary grants for public projects that support interfaces between different modes of transportation such as between mass ground transportation modes and the national air transportation system. The Financial Implementation Analysis assumes that about $4.1 million in FTA grants will be provided during the Phase I planning period, $670,000 during the Phase II period and none during the Phase III period. However, since the future availability of FTA discretionary grants is not certain, implementation of the associated projects may need to be delayed if such funding does not become available as planned.

8.3.6 Rental Car Company Customer Facilities Charges

The Airport plans to charge its rental car tenants a fee per rental car transaction day (customer facility charge - CFC) to support operating expenses and capital expenditures for improving/expanding rental car facilities when the need arises. Construction of a $3 million consolidated rental car facility is planned during Phase I with a $5 million expansion of the facility and parking lots planned during Phase III. CFC revenues are assumed to be collected and used throughout the planning period for rental car projects identified in the Master Plan CIP.

8.3.7 Other Funding

The traditional funding sources described in previous paragraphs of this section are significantly insufficient to finance numerous projects programmed for development during all three phases of the planning period. Consequently, non-traditional funding sources will be needed to implement project costs of about $36.6 million in Phase I, $11.8 million in Phase II and $32.8 million in Phase III. This non-traditional funding need has not been specified and represents a total capital shortfall of $81.2 million throughout the twenty year planning period. If other funding sources cannot be identified and obtained in the time frames needed, the associated projects will have to be delayed until such funding can be identified. This source has been referenced in the Financial Plan as "Other Funding".

8.3.8 Private Third Party Financing

Many airports use private third party financing when the planned improvements will be primarily used by a private business or other organization and the airport does not want to make such an investment. Projects of this kind typically include hangars, FBO facilities, cargo facilities, exclusive aircraft parking aprons, industrial development areas, non-aviation commercial areas and various other projects. Such projects are not eligible for federal funding. The Financial Implementation Plan assumes that private third parties will provide financing for FBO facility and hangar construction projects totaling about $12,000 during Phase I, about $14.9 million during Phase II and about $4.0 million during Phase III. If market demand does not attract these levels of private investment, development of the related projects will be delayed until demand warrants their construction.

8.3.9 Cash Reserves/Airport Net Revenues

The implementation analysis indicates that annual net operating revenues averaging about $260,000 during Phase I, $600,000 during Phase II and $1.2 million during Phase III are projected for the planning period. Beginning cash reserves ($400,000 in 2006) are expected to supplement this cash flow. In most years throughout the planning period, these funding sources are sufficient to meet the cash flow needs of the overall capital development plan. However, during Phase I of the planning period, these cash flows are not sufficient. Consequently, a temporary cash flow loan of $4 million is needed to support capital expenditures in 2007. The projection analysis indicates that this short financing can be paid off by 2010. Net of temporary financing, the projection assumes that $25 million in cash reserves and net operating revenues will be used to fund portions of various CIP projects not eligible for federal funding throughout the twenty year planning period.

8.4 Financial Analysis and Implementation Plan for the Master Plan Capital Improvement Program

This analysis, along with the tables presented at the end of Chapter 8, provides the results of evaluating the financial reasonableness of implementing the Master Plan Capital Improvement Program during the planning period from 2006 through 2025.

8.4.1 Estimated Project Costs and Development Schedule

The estimated project costs and development schedule is derived from previous results of the Master Plan development analysis. The program for capital expansion and improvement projects is projected for the Phase I planning period for years 2006 through 2010, for the Phase II period for years 2011 through 2015 and for the Phase III period for years 2016 through 2025. For each of these planning periods, Table 8-1 at the end of Chapter 8 presents the capital program for the identified projects. The estimated timing and costs are presented in this table along with the amounts and timing of the projected funding sources. As shown in Table 8-1, the total estimated cost of capital projects is $199,864,000 in 2006 dollars. The estimated costs for projects scheduled during the period 2007 through 2025 are adjusted by an assumed 3.0% rate of annual inflation. The resulting total escalated costs are $248,772,048. Figure 8-1 below presents a summary of Table 8-1 and provides a comparison of 2006 base year costs with escalated costs adjusted for inflation for each of the planning periods.

Figure 8-1
SUMMARY OF BASE YEAR AND ESCALATED COSTS FOR THE CAPITAL PROGRAM

Planning Periods	2006 Base Year Costs	Total Escalated Costs
Phase I Projects (2006 to 2010)	$ 84,290,000	$ 88,993,652
Phase II Projects (2011 to 2015)	49,999,000	60,590,325
Phase III Projects (2016 to 2025)	65,575,000	99,188,071
Total Project Costs	$ 199,864,000	$ 248,772,048

Note: Addition errors are due to rounding of calculated amounts.
Source: Leibowitz & Horton AMC Analysis

8.4.2 Sources and Uses of Capital Funding

As discussed in previous sections of this analysis, a variety of sources are available for funding capital improvements at the Airport. The funding structure of the capital program depends on many factors, including project eligibility for the various funding sources, the ultimate type and use of facilities to be developed, the amounts and timing of funds available and the priorities for scheduling project completion. For planning purposes, assumptions were made related to the funding source of each capital improvement. The

detailed capital funding analysis is provided in Table 8-2 at the end of Chapter 8. A summary of the capital plan with escalated project cost estimates and funding sources is presented as follows in Figure 8-2.

Figure 8-2
SUMMARY OF SOURCES AND USES OF CAPITAL FUNDING

Sources of Capital Funding (2006 to 2025):		
	AIP Entitlement Grants	$ 37,571,973
	AIP Discretionary Grants	25,297,562
	FAA Facilities & Equipment Funds	6,115,429
	FDOT Grants	31,412,404
	Passenger Facility Charges	9,555,959
	FTA Highway/Intermodal Funding	4,761,982
	Rental Car Company Customer Facility Charges	8,922,913
	Other Funding	81,193,200
	Private Third Party Financing	18,956,676
	Cash Reserves/Airport Net Revenues	24,983,949
	Total Sources of Capital Funding	$ 248,772,048
Uses of Capital Funding:		
	Phase I Projects (2006 to 2010)	$ 88,993,652
	Phase II Projects (2011 to 2015)	60,590,325
	Phase III Projects (2016 to 2025)	99,188,071
	Total Project Costs	$ 248,772,048

Note: Addition errors are due to rounding of calculated amounts.
Source: Leibowitz & Horton AMC Analysis

As shown in Figure 8-2, a substantial amount of funding will be needed from federal sources including $1.6 to $2.1 million per year throughout the planning period from AIP entitlement grants and $25.3 million in AIP discretionary grants. Thus, $62.9 million, or 25.4%, of total funding for the twenty year Master Plan CIP is projected to come from AIP grants. FAA Facilities & Equipment Funds are expected to provide $6.1 million, or 2.4%, of the total funding. Florida DOT grants are expected to provide $31.4 million, or 12.6%, of the funding. Passenger Facility Charges are expected to provide $9.6 million, or 3.8%, of the funding. FTA grants are expected to provide $4.8 million, or 1.9%, of the funding. Rental car CFCs are expected to provide $8.9 million, or 3.6%, of the funding. Private third party financing is expected to provide $18.9 million, or 7.6%, of the total funding and cash reserves/Airport net revenues are anticipated to provide $25.0 million, or 10.0%, of the total. As has been previously noted, the availability of some of the listed funding sources, particularly AIP discretionary grants, FTA grants, Facilities & Equipment Funds and private third party financing is not certain. If the level of uncertain funding is not available in the time frames indicated in the CIP project schedule, then specific projects to which the funding is applied may need to be delayed or cancelled. Additionally, the analysis indicated that the largest source of funding ("Other Funding") is currently not

specified and represents a funding shortfall of $81.2 million, or 32.7% of the total funding sources throughout the planning period.

8.4.3 Projected Operations and Maintenance Expenses

Operations and maintenance expense projections for the Phase I (2006 to 2010), the Phase II (2011 to 2015) and the Phase III (2016 to 2025) planning periods are based on the Airport's current budget, the anticipated impacts of inflation, aviation traffic increases, facility improvements and the recent experience of other similarly-sized airports.

8.4.3.1 Operations and Maintenance Expense Projection Assumptions

Operations and maintenance expense growth assumptions, as reflected in Table 8-3, were developed to project the Airport's operating expenses during the planning period. Actual and estimated amounts for 2003 through 2005 provide a comparison with expenses that are budgeted for 2006 and projected for the period 2007 through 2025. For the departments/cost centers listed below, expense projections are based on 2006 budgeted amounts with an annual growth assumption beginning in 2007. For personal services, the assumed annual growth rate is 4% beginning in 2007. For operating expenses and capital equipment, the assumed annual growth rate is 4% beginning in 2007.

- Administration
- Operations
- Lounge Operations
- Parking Lot
- Facilities & Maintenance
- FAA Facilities
- General Aviation/FBO Operations
- Fuel Farm.

8.4.3.2 Projection of Operations & Maintenance Expenses and Operating Expenses Per Enplaned Passenger

The projection of operations and maintenance expenses is provided in Table 8-3 at the end of Chapter 8. As shown in the table, total expenses are expected to grow from $3,504,367 budgeted for 2006 to $4,013,763 projected for 2010 with a total of $18,773,292 during the five-year Phase I period. During the five-year Phase II period, expenses are projected to total $22,250,886 and during the ten-year Phase III period, expenses are projected to total $57,700,509. The overall growth rate of expenditures during the twenty year projection period is 4.0% per year.

Table 8-3 also provides a comparison of Gainesville's total operating expenses per enplaned passenger versus the industry average for non-hub airports. Gainesville's operating expenses per enplaned passenger are projected to grow from $20.08 budgeted for 2006 to an average of $24.12 during the Phase III planning period. Over the same

period of time, the industry average for non-hub airports grows from $23.47 in 2006 to an average of $36.16 during Phase III (Source: AAAE 2002-2003 Survey of Airport Rates and Charges with inflation adjustments after 2003). This comparison shows that current and projected operating expenses at Gainesville are 17% to 50% more cost efficient than other airports of similar size and operation throughout the twenty year planning period.

8.4.4 Projected Operating Revenues

Table 8-4 presents actual, estimated, budgeted and projected operating revenues for the Airport from year 2003 through 2025. Actual and estimated amounts for 2003 through 2005 and budgeted amounts for 2006 provide a comparison with revenues that are projected for the period 2007 through 2025. Assumptions for all revenue categories are presented in the following section.

8.4.4.1 Operating Revenue Projection Assumptions

Operating revenue projections for the Phase I (2006 to 2010), the Phase II (2011 to 2015) and the Phase III (2016 to 2025) planning periods are based on the Airport's current 2006 budget, current leasing practices, the anticipated impacts of inflation, aviation traffic increases, facility expansions and the recent experience of other similarly-sized airports. Annual revenue growth assumptions for the period 2007 through 2025 are provided below.

Airline Revenues

- Projections for the following airline revenues are based on the 2006 budget with growth thereafter at a 3% annual rate of inflation plus increases in aircraft landed weight assuming one half the annual growth rate of the Master Plan forecast of passenger enplanements:

  - Landing fees
  - Terminal ramp charge
  - Fuel storage facility fees

- Projections for the following airline revenues are based on the 2006 budget with growth thereafter at a 3% annual rate of inflation plus the annual growth rate of the Master Plan forecast of passenger enplanements:

  - Terminal passenger charge

- Projections for the following airline revenues are based on the 2006 budget with growth thereafter at a 3% annual rate of inflation:

  - Terminal rent
  - Boarding bridge
  - Airport security charges

Non-Airline Revenues

- Projections for the following non-airline revenues are based on the 2006 budget with growth thereafter at a 3% annual rate of inflation plus increases in aircraft landed weight assuming one half the annual growth rate of the Master Plan forecast of passenger enplanements:

  - Non-Scheduled landing fees
  - GA landing fees
  - Fuel flowage fees
  - Tie-Downs fees
  - FBO gross receipts %
  - FBO ramp parking fees

- Projections for the following non-airline revenues are based on the 2006 budget with growth thereafter at a 3% annual rate of inflation plus the annual growth rate of the Master Plan forecast of passenger enplanements:

  - FBO charter passenger fees
  - Pay phone commissions
  - Ground transportation fees
  - Rental car rent/concessions fees
  - ATM fees
  - Parking revenue
  - Restaurant/Lounge/Gift shop sales
  - Vending machine commissions
  - Food concession rent

- Projections for the following non-airline revenues are based on the 2006 budget with growth thereafter at a 3% annual rate of inflation:

  - T-Hangar rent
  - Sunshade rent
  - Ground support equipment rental
  - Port-O-Port rental
  - GA storage fees
  - FBO rent
  - Gator Aviation rent
  - Bi-Fold door hangar rent
  - Gulf Atlantic office and maintenance hangar rent
  - FedEx facility rent and cost recovery
  - Corporate aviation
  - Joint Aviation unit rent
    - Banner towing fees

- Blimp tie-down fees
- GSE and vehicle fuel fees
- Other GA income
- Display advertising
- Cell phone tower rent
- Other terminal income
- TSA office rent
- TSA security reimbursement
- Other exclusive rent
- Non-Aeronautical rent
- Access badge fees
- FAA AFSS rent
- Other income

- Projections for interest income remain constant at the 2006 budgeted amount throughout the planning period.

8.4.4.2 *Projection of Operating Revenues, Airline Cost Per Enplaned Passenger and Operating Revenues Per Enplaned Passenger*

The projection of operating revenues is provided in Table 8-4 at the end of Chapter 8. As shown in the table, airline revenues are expected to grow from $1,041,662 budgeted for 2006 to $1,198,658 projected for 2010 with a total of $5,593,714 during the five-year Phase I planning period. During the five-year Phase II period, airline revenues are projected to total $6,665,812 and during the ten-year Phase III period, revenues are projected to total $17,335,748. The overall annual growth rate for airline revenues is 3.8% during the twenty year planning period. Non-Airline revenues are expected to grow from $2,784,437 budgeted for 2006 to $3,235,557 projected for 2010 with a total of $14,850,209 during the Phase I period. During the Phase II period, non-airline revenues are projected to total $18,688,290 and during the Phase III period, non-airline revenues are projected to total $52,935,261. The overall annual growth rate for non-airline revenues is 4.5%. Total Airport revenues are expected to grow from $3,826,099 budgeted for 2006 to $4,434,216 projected for 2010 with a total of $20,443,923 during the Phase I period. During the Phase II period, revenues are projected to total $25,354,103 and during the Phase III period, revenues are projected to total $70,271,009. The overall annual growth rate for total revenues is 4.3%.

Table 8-4 also provides a comparison of the Airport's airline cost per enplaned passenger versus the industry average for non-hub airports. The airline cost per enplaned passenger (airline fees and rentals divided by enplaned passengers) is a measure airlines use to compare their cost of operations among the airports they serve. Gainesville's airline cost per enplaned passenger is projected to grow from $5.97 budgeted for 2006 to an average of $7.25 during the Phase III planning period. Over the same period, the industry average for non-hub airports grows from $6.21 in 2006 to an average of $9.56 during Phase III (Source: AAAE 2002-2003 Survey of Airport Rates and Charges with inflation adjustments after 2003). This result shows that airline rates & charges at Gainesville are currently in line with industry averages but are projected to fall below those of other similarly-sized airports by about 23% by the end of the planning period. If the current method for establishing airline rates is adjusted so that rates stay in line with the future costs of providing Airport facilities and services, additional revenues for operations and capital funding would be generated. The Airport is currently in the process of conducting a Rates & Charges Study that will result in providing guidance for accomplishing this objective.

Table 8-4 also provides a comparison of Gainesville's total operating revenue per enplaned passenger versus the industry average for non-hub airports. Gainesville's operating revenue per enplaned passenger is projected to grow from $21.93 budgeted for 2006 to an average of $29.37 during the Phase III planning period. Over the same period, the industry average for non-hub airports grows from $17.82 in 2006 to an average of $27.46 during Phase III (Source: AAAE 2002-2003 Survey of Airport Rates

and Charges with adjustments for inflation after 2003). This comparison shows that total Airport revenues at Gainesville are currently about 18% higher than industry averages and but are projected to be only about 7% higher than those of other similarly-sized airports by the end the of planning period. This result shows the Airport's current and past success in generating non-airline revenues but indicates a trend of revenues that do not stay in line with industry averages. A review and update of the Airport's non-airline rate and rental structure is a subject of the Rates & Charges Study that is currently in process.

8.4.5 Financial Plan Summary

The Financial Plan Summary presented in Table 8-5 at the end of Chapter 8 includes a Capital Cash Flow section that presents a summary of projected capital funding (from Table 8-2) and capital expenditures (from Table 8-1) with the cash flow that results from implementing the Master Plan CIP. Table 8-5 also includes an Operating Cash Flow projection that summarizes totals for operating revenues (from Table 8-4) and operating expenses (from Table 8-3) with the addition existing debt service to provide the cash flow that results from these activities.

In Table 8-1 of the Financial Implementation Analysis, practical approaches were provided for scheduling capital expenditures to match the availability of capital funding. Table 8-2 provided practical approaches for matching specific capital funding sources with each of the identified projects. Based on the assumptions underlying the Financial Implementation Plan summarized in the Capital Cash Flow section of Table 8-5, implementation of the Master Plan CIP is financially possible, subject to the availability of AIP discretionary grant awards, FTA grants, FAA F&E funding for the ATCT relocation and acquisition of the currently unidentified Other Funding described in the analysis. The reasonableness of funding the capital program can be characterized by the level of identified funding (not from Other Funds) indicated in each phase of the program as shown in Table 8.2. In Phase I, 59% of the funding sources are identified. In Phase II, 80% of the funding is identified. In Phase III, 46% is identified.

Several key assumptions supporting the financial plan relate to the availability and timeliness of the funding sources that have been identified. Receiving awards for AIP discretionary grants ($25.3 million) indicated in Table 8-2 is essential for the related projects scheduled for implementation throughout the planning period. AIP discretionary funding is not certain or guaranteed and represents 10% of the total capital funding sources. If this level of discretionary funding is not available in the time frames indicated, then specific projects to which the funding is applied may need to be delayed or cancelled. The availability of $18.9 million in private third party financing is key for funding several projects related to the development of additional FBO and aircraft hangars planned for all three phases of the CIP. If market demand is not available to drive the needed private investment during the planned time frames, the associated projects may need to be delayed or cancelled. In general, any of the projects that have associated uncertain or unidentified funding will need to be delayed if funding is not available when planned.

In 2005, the FAA submitted a budget to the Administration that specified a $600 million cut in AIP funds from $3.6 billion in 2005 down to $3.0 billion in 2006. This event could have the following critical impacts on funding for implementation of Gainesville's capital program:

AIP Entitlement Funding - Since the AIP re-authorization was enacted in 2000, the formula for AIP passenger entitlement grants was doubled and the minimum entitlement was increased from $650,000 to $1 million per year, as long as, the AIP appropriation was $3.2 billion or more in future budget years. If the $3 billion 2006 budget is passed by Congress under the submitted language, AIP passenger entitlements for Gainesville will be substantially reduced. Since submission of the budget, the FAA has indicated that it intends to facilitate language modifications in the budget legislation so that AIP entitlement and minimum formulas remain intact (at the doubling levels) even though the total AIP budget falls below $3.2 billion. Whether the language modifications will be accomplished or not, is uncertain, but the FAA has indicated it is likely. Consequently, the Financial Implementation Analysis assumes entitlement funding levels for Gainesville will not change from those that are projected in Tables 8.1 and 8.2. If the language modifications which retain the doubled entitlement formulas are not implemented in the budget legislation, the Master Plan CIP will not be financially feasible if AIP budget appropriations remain below $3.2 billion for several years into the future.

AIP Discretionary Funding - A climate of federal budget reduction pressure is likely to persist for several years and is likely to limit the availability of AIP discretionary grants. In the past, the Airport has been very successful in justifying the need for AIP discretionary funding. If the past level of discretionary funding is not available to the Airport in the future, the planned CIP will not be financially feasible - some projects may need to be delayed or cancelled. The current federal budget climate will not preclude the award of discretionary grants, but it may affect the Airport's success in achieving the levels that are indicated in the Financial Implementation Plan. This anticipated limitation emphasizes the Airport's need to supplement its potential capital funding sources.

Additionally, the Financial Implementation Analysis relies on achievement of the Master Plan forecast of aviation activity. Actual aviation traffic may temporarily vary from the projected levels of activity without a significant adverse impact on the capital program. If decreased traffic levels occur and persist, implementation of all the proposed projects may not be financially feasible. It should also be noted, however, that if the forecast activity levels are not met, then a number of the planned capital improvements may not be necessary.

8.5 Financial Analysis Tables

Tables 8-1 through 8-5 provide the detailed financial analysis for implementation of the Master Plan CIP. These tables are provided on the following pages.

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

GNVMP.123

Table 8-1

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

Capital Project Descriptions		2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Phase 1 Projects (2006-2010)											
1-01	Terminal Expansion - Phase 2 Construction	$6,650,000	$6,650,000					$6,650,000			$6,650,000
1-02	ARFF Vehicle	650,000	650,000					650,000			650,000
1-03	Eclipse Hangar and Site Improvements	11,150,000	4,645,833	6,504,167				11,150,000			11,150,000
1-04	Renovate Existing FSSS Building	500,000		515,000				515,000			515,000
1-05	Rental Car QTA and Landscaping Design	230,000	230,000					230,000			230,000
1-06	Airport Maintenance Bldg Design	75,000	75,000					75,000			75,000
1-07	Intermodal Facilities Design	375,000	375,000					375,000			375,000
1-08	Rezoning Amendment	25,000	25,000					25,000			25,000
1-09	Land Transfer Survey	50,000	50,000					50,000			50,000
1-10	Auto Parking Expansion - Design	100,000	100,000					100,000			100,000
1-11	Aircraft Wash Rack - Design and Construct	125,000	125,000					125,000			125,000
1-12	Runway Sweeper	180,000		185,400				185,400			185,400
1-13	Joint Aviation Leasehold Improvements	200,000	200,000					200,000			200,000
1-14	Renovate Bulk Storage Hangar/Office Complex	250,000	250,000					250,000			250,000

GNVMP.123

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Table 8-1

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

	Capital Project Descriptions	2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
1-15	Taxiway A Lighting Improvements	1,200,000		1,236,000				1,236,000			1,236,000
1-16	Terminal Renovation - Phase 3 Design	100,000		103,000				103,000			103,000
1-17	Rental Car QTA Facility Construction	3,000,000		3,090,000				3,090,000			3,090,000
1-18	Ready Return Lot Expansion	400,000		412,000				412,000			412,000
1-19	Relocate Portion of Airside Access Road	365,000		375,950				375,950			375,950
1-20	Airport Maintenance Bldg - Construction	1,250,000		1,287,500				1,287,500			1,287,500
1-21	Auto Parking Expansion - Construction	1,875,000		1,931,250				1,931,250			1,931,250
1-22	Auto Parking Rehabilitation	1,200,000		1,236,000				1,236,000			1,236,000
1-23	Auto Covered Parking	475,000		489,250				489,250			489,250
1-24	Waldo Access Road Land Acquisition & Design	550,000	550,000					550,000			550,000
1-25	Stormwater Master Plan/SWPPP/SPC	335,000		345,050				345,050			345,050
1-26	FAR Part 150 Study	300,000		309,000				309,000			309,000
1-27	Runway 6/24 Extension Preliminary Permitting	225,000		231,750				231,750			231,750
1-28	Runway 6/24 and Taxiway "A" Extension Design	600,000		618,000				618,000			618,000
1-29	Airport Signage Study and Preliminary Design	75,000		77,250				77,250			77,250
1-30	Taxistand Ready Lot	350,000		360,500				360,500			360,500
1-31	Wildlife Management Plan	150,000		154,500				154,500			154,500
1-32	Taxiway "B" Improvements	1,275,000		1,313,250				1,313,250			1,313,250
1-33	Obstruction Removal	500,000		515,000				515,000			515,000

GNVMP.123

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Table 8-1

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

	Capital Project Descriptions	2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
1-34	Cargo Multi-Tenant Bldg Complex - Study Design	350,000			371,315			371,315			371,315
1-35	Cargo Multi-Tenant Apron - Study Design	350,000			371,315			371,315			371,315
1-36	Terminal Renovation Phase 3 - Construction	1,250,000			1,326,125			1,326,125			1,326,125
1-37	Waldo Access Road Construction - USDOT Demo	3,000,000	1,450,000	1,596,500				3,046,500			3,046,500
1-38	Taxiway "C" Improvements	900,000			954,810			954,810			954,810
1-39	Sealcoat GA Apron and T-Hangar Apron Pavement	775,000			822,198			822,198			822,198
1-40	Upgrade Airport Security Fencing	1,845,000			1,957,361			1,957,361			1,957,361
1-41	Land Acquisition for Runway 6/24 Extension	725,000			769,153			769,153			769,153
1-42	Land Acquisition for Approach to Runway 11	2,000,000			2,121,800			2,121,800			2,121,800

GNVMP.123

Table 8-1

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

Capital Project Descriptions		2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
I-43	Terminal Renovation Phase 4 - Design	35,000				38,245		38,245			38,245
I-44	Air Cargo Bldg Complex - Site Prep	3,250,000				3,551,363		3,551,363			3,551,363
I-45	Air Cargo Apron - Construction	3,250,000				3,551,363		3,551,363			3,551,363
I-46	Air Cargo Bldg Construction	6,500,000				7,102,726		7,102,726			7,102,726
I-47	Runway 6/24 Landside Access Road Relocation	1,600,000				1,748,363		1,748,363			1,748,363
I-48	Runway 6/24 and Taxiway "A" Extension	6,500,000				7,102,726		7,102,726			7,102,726
I-49	Taxiway "E" Improvements	3,250,000				3,551,363		3,551,363			3,551,363
I-50	Rehab Pavements for T-Hangars I and J	620,000				677,491		677,491			677,491
I-51	Employee Parking Lot Relocation	500,000				546,364		546,364			546,364
I-52	Remote Security Cameras and Surveillance	1,240,000				1,354,981		1,354,981			1,354,981
I-53	Upgrade Airport Fiber Optic (Security Comm)	750,000				819,545		819,545			819,545
I-54	Land Acquisition for Access Road to Cargo Area	250,000				273,182		273,182			273,182
I-55	Airport Landside Signage - Construction	500,000				546,364		546,364			546,364
I-56	Corporate Hangar Site Prep for 3 Hangars	1,250,000				1,365,909		1,365,909			1,365,909
I-57	Corporate Hangar Site Prep for Apron	1,250,000				1,365,909		1,365,909			1,365,909
I-58	Construct Three 80 x 80 Corporate Hangars	2,225,000				2,431,318		2,431,318			2,431,318

GNVMP.123

Table 8-1

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

	Capital Project Descriptions	2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
1-59	Terminal Renovation Phase 4 - Construction	1,000,000					1,125,509	1,125,509			1,125,509
1-60	ATCT Relocation Feasibility Study	50,000					56,275	56,275			56,275
1-61	Perimeter Road Segment	240,000					270,122	270,122			270,122
1-62	Install Second Electrical Vault	1,100,000					1,238,060	1,238,060			1,238,060
1-63	Fuel Farm Expansion	500,000					562,754	562,754			562,754
1-64	Runway 11/29 Crack Sealing	400,000					450,204	450,204			450,204
1-65	Airport Maintenance Equipment-Eligible	650,000					731,581	731,581			731,581
1-66	Airport Maintenance Equipment-Ineligible	650,000					731,581	731,581			731,581
1-67	Airport Drainage Improvements	750,000					844,132	844,132			844,132
	Total Phase 1 Projects	$84,290,000	$15,375,833	$22,886,317	$8,694,076	$36,027,209	$6,010,217	$88,993,652	$0	$0	$88,993,652

GNVMP.123

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Table 8-1

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated Costs
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

Capital Project Descriptions		2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated Costs
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	
Phase 2 Projects (2011-2015)											
2-01	Crack Sealing for Runway 10/28	$203,000						$0	$246,002		$246,002
2-02	Terminal Loop Road Relocation - Design	250,000						0	302,958		302,958
2-03	Terminal Loop Road Relocation - Construction	1,500,000						0	1,817,746		1,817,746
2-04	ARFF Vehicle Acquisition	775,000						0	939,169		939,169
2-05	Taxiway "A" (T/W "B" to T/W "C") Improvements	1,625,000						0	1,969,225		1,969,225
2-06	Taxiway "A" (T/W "C" to Thrshld R/W 6) Imprvemnts	1,700,000						0	2,060,112		2,060,112
2-07	Taxiway "A" Hold Aprons	1,300,000						0	1,575,380		1,575,380
2-08	Relocate ATCT	5,000,000						0	6,059,154		6,059,154
2-09	Runway 10/28 Remarking	209,000						0	253,273		253,273
2-10	Crack Seal/Seal Coat GA Apron Taxways	1,062,000						0	1,286,964		1,286,964
2-11	Rehab GA Side Apron Flood Lighting	500,000						0	605,915		605,915
2-12	Remove/Relocate T-Hangar "F"	50,000						0	60,592		60,592
2-13	Rehabilitate/Construct Aircraft Apron	2,581,000						0	3,127,735		3,127,735
2-14	Terminal Auto Parking Lot Expansion	1,620,000						0	1,963,166		1,963,166
2-15	Non-Aviation Land Use Study	100,000						0	121,183		121,183
2-16	Land Acquisition for Stormwater Pond	1,000,000						0	1,211,831		1,211,831
2-17	Construct Connector to Taxiway "C"	1,039,000						0	1,259,092		1,259,092
2-18	Rehab East GA Apron	2,615,000						0	3,168,937		3,168,937
2-19	T-Hangar Taxiway to Serve Northeast Area	210,000						0	254,484		254,484
2-20	Terminal Area Study	150,000						0	181,775		181,775
2-21	Obstruction Removal	500,000						0	605,915		605,915

GNVMP.123

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Table 8-1

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,066	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

Capital Project Descriptions		2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
2-22	Stormwater Management	1,000,000						0	1,211,831		1,211,831
2-23	Master Plan Update	500,000						0	605,915		605,915
2-24	Rehabilitate Taxiway "E"	580,000						0	702,862		702,862
2-25	Rehab Existing T-Hangars	2,000,000						0	2,423,661		2,423,661
2-26	Construct Three 10 Unit T-Hangars	2,560,000						0	3,102,287		3,102,287
2-27	Construct Cell Phone Lot	304,000						0	368,397		368,397
2-28	Construct Two-Lane Outbound Roadway	687,000						0	832,528		832,528
2-29	Security Fencing	620,000						0	751,335		751,335
2-30	Rehabilitate Taxiway "C"	2,225,000						0	2,696,323		2,696,323
2-31	Rehab Sunshades	300,000						0	363,549		363,549
2-32	Construct Mid Field FBO Facility	7,000,000						0	8,482,815		8,482,815
2-33	Construct Three 80 x 80 Corporate Hangars	2,750,000						0	3,332,535		3,332,535
2-34	Renovate ARFF Building	500,000						0	605,915		605,915
2-35	Perimeter Security Road	569,000						0	689,532		689,532
2-36	Phase 2 Drainage Improvements	1,000,000						0	1,211,831		1,211,831
2-37	Crack Sealing Runway 6/24	200,000						0	242,366		242,366
2-38	Runway 6/24 Remarking	140,000						0	169,656		169,656
2-39	Construct New FBO Hangar and Terminal	2,200,000						0	2,666,028		2,666,028
2-40	Construct New Auto Parking	375,000						0	454,437		454,437
2-41	Construction Dump Testing and Closing	500,000						0	605,915		605,915
	Total Phase 2 Projects	$49,999,000	$0	$0	$0	$0	$0	$0	$60,590,325	$0	$60,590,325

GNVMP.123

Table 8-1

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

Capital Project Descriptions		2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Phase 3 Projects (2016-2025)											
3-01	Rehabilitate Runway 10/28	$4,500,000						$0		$6,806,654	$6,806,654
3-02	Install Runway 10/28 Centerline Lights	1,500,000						0		2,268,885	2,268,885
3-03	Obstruction Removal	300,000						0		453,777	453,777
3-04	Land Acqusition	2,000,000						0		3,025,179	3,025,179
3-05	Install Taxiway "E" Guard Lights and Stop Bars	1,400,000						0		2,117,626	2,117,626
3-06	Rehab West GA Apron	750,000						0		1,134,442	1,134,442
3-07	Construct Three 10 Unit T-Hangars	2,560,000						0		3,872,230	3,872,230
3-08	Convert Taxiway "A" into Airside Access Road	100,000						0		151,259	151,259
3-09	Construct Auto Parking Lot - Aeroflight	200,000						0		302,518	302,518
3-10	Crack Sealing for Runway 6/24	250,000						0		378,147	378,147
3-11	Runway 6/24 Remarking	140,000						0		211,763	211,763
3-12	Rehab Existing GA Access Roads (Ph -1)	2,000,000						0		3,025,179	3,025,179
3-13	Crack Seal Coat GA Apron and Taxiways	1,300,000						0		1,966,367	1,966,367
3-14	Rehab Existing GA Access Roads (Ph - 2)	1,500,000						0		2,268,885	2,268,885
3-15	Rehab WW II Hangar	300,000						0		453,777	453,777
3-16	Expand Consolidated Rental Car Center	2,000,000						0		3,025,179	3,025,179
3-17	Terminal Auto Parking Expansion	1,650,000						0		2,495,773	2,495,773

GNVMP.123

Table 8-1

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Estimated Project Costs and Development Schedule

04-May-06

Capital Improvement Program	Funding Schedule								
	Phase 1						Phase 2	Phase 3	Total Escalated
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
Capital Funds Used									
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746	$37,571,973
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787	25,297,562
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0	6,115,429
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640	31,412,404
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889	9,555,959
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0	4,761,982
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323	8,922,913
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)	(7,644,596)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050	8,689,422
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0	8,760,560
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)	(11,350,792)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811	12,713,787
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329	81,193,200
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363	18,956,676
Cash Reserves/Airport Net Revenues	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500	16,858,290
Funds Available Current Year	18,385,321	19,594,689	8,899,749	35,924,777	7,614,642	90,419,179	60,859,993	100,535,599	251,814,770
Beginning Cash Balance/Funds Carried Over from Prior Year	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196	400,000
Funds Used Current Year	(15,375,833)	(22,886,317)	(8,694,076)	(36,027,209)	(6,010,217)	(88,993,652)	(60,590,325)	(99,188,071)	(248,772,048)
Funds Carried Over to Next Year	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723	$3,442,723

Capital Project Descriptions		2006 Base Year Costs	Estimated Project Costs and Development Schedule								
			Phase 1						Phase 2	Phase 3	Total Escalated
			2006	2007	2008	2009	2010	Total	2011-2015	2016-2025	Costs
3-18	Terminal Expansion Design	1,000,000						0		1,512,590	1,512,590
3-19	Ready Car Ready Return Lot Expansion	1,600,000						0		2,420,144	2,420,144
3-20	Terminal Auto Parking Rehab	2,575,000						0		3,894,919	3,894,919
3-21	Terminal Expansion Phase 1	5,000,000						0		7,562,949	7,562,949
3-22	Obstruction Removal	300,000						0		453,777	453,777
3-23	Land Acquisition	2,000,000						0		3,025,179	3,025,179
3-24	Air Cargo Complex Apron Expansion - Phase I	1,000,000						0		1,512,590	1,512,590
3-25	Air Cargo Complex Bldg Expansion - Phase 1	1,000,000						0		1,512,590	1,512,590
3-26	Rehab University Air Center Parking Lot	350,000						0		529,406	529,406
3-27	Construct Three 80 x 80 Corporate Hangars	2,650,000						0		4,008,363	4,008,363
3-28	Air Cargo Complex Apron Expansion - Phase 2	1,250,000						0		1,890,737	1,890,737
3-29	Air Cargo Complex Bldg Expansion - Phase 2	1,250,000						0		1,890,737	1,890,737
3-30	Terminal Expansion Phase 2	10,000,000						0		15,125,897	15,125,897
3-31	Fencing and Security Improvements	650,000						0		983,183	983,183
3-32	Stormwater Management Improvements	750,000						0		1,134,442	1,134,442
3-33	Terminal Expansion Phase 3	10,000,000						0		15,125,897	15,125,897
3-34	Stormwater Management Improvements	750,000						0		1,134,442	1,134,442
3-35	Drainage Improvements Phase 3	1,000,000						0		1,512,590	1,512,590
	Total Phase 3 Projects	$65,575,000	$0	$0	$0	$0	$0	$0	$0	$99,188,071	$99,188,071
	Total Project Costs	$199,864,000	$15,375,833	$22,886,317	$8,694,076	$36,027,209	$6,010,217	$88,993,652	$60,590,325	$99,188,071	$248,772,048

GNVMP.123

Table 8-2

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Projected Capital Funding Sources

04-May-06

	Capital Improvement Projects	Total Escalated Costs	AIP Entitlement Grants	AIP Discretionary Grants	Total AIP Funding	FAA F&E Funds	FDOT Grants	Passenger Facility Charges	FTA Highway/ Intermodal Funding	RAC Customer Facility Charges	Other Funding	Private Third Party Financing	Cash Reserves/ Airport Net Cash Revenues	Total Funding
Phase 1 Projects (2006-2010)														
1-01	Terminal Expansion - Phase 2 Construction	$6,650,000	$3,677,853		$3,677,853		$1,486,074	$1,486,074					$0	$6,650,000
1-02	ARFF Vehicle	650,000		617,500	617,500		0	32,500						650,000
1-03	Eclipse Hangar and Site Improvements	11,150,000			0		5,575,000						5,575,000	11,150,000
1-04	Renovate Existing FSSS Building	515,000			0		257,500						257,500	515,000
1-05	Rental Car QTA and Landscaping Design	230,000			0					230,000				230,000
1-06	Airport Maintenance Bldg Design	75,000			0		37,500						37,500	75,000
1-07	Intermodal Facilities Design	375,000			0		75,000		300,000				0	375,000
1-08	Rezoning Amendment	25,000			0								25,000	25,000
1-09	Land Transfer Survey	50,000			0								50,000	50,000
1-10	Auto Parking Expansion - Design	100,000			0								100,000	100,000
1-11	Aircraft Wash Rack - Design and Construct	125,000			0		56,250					12,500	56,250	125,000
1-12	Runway Sweeper	185,400			0			185,400						185,400
1-13	Joint Aviation Leasehold Improvements	200,000			0		100,000						100,000	200,000
1-14	Renovate Bulk Storage Hangar/Office Complex	250,000			0		125,000						125,000	250,000
1-15	Taxiway A Lighting Improvements	1,236,000		1,174,200	1,174,200			61,800						1,236,000
1-16	Terminal Renovation - Phase 3 Design	103,000			0			103,000						103,000
1-17	Rental Car QTA Facility Construction	3,090,000			0					3,090,000				3,090,000
1-18	Ready Return Lot Expansion	412,000			0				329,600	82,400				412,000
1-19	Relocate Portion of Airside Access Road	375,950			0				300,760	75,190				375,950
1-20	Airport Maintenance Bldg - Construction	1,287,500			0		643,750				643,750			1,287,500
1-21	Auto Parking Expansion - Construction	1,931,250			0						1,931,250			1,931,250
1-22	Auto Parking Rehabilitation	1,236,000			0						1,236,000			1,236,000
1-23	Auto Covered Parking	489,250			0						489,250			489,250
1-24	Waldo Access Road Land Acquisition & Design	550,000			0			110,000	440,000				0	550,000
1-25	Stormwater Master Plan/SWPPP/SPC	345,050			0			345,050					0	345,050
1-26	FAR Part 150 Study	309,000	293,550		293,550		7,725	7,725					0	309,000
1-27	Runway 6/24 Extension Preliminary Permitting	231,750			0						231,750		0	231,750
1-28	Runway 6/24 and Taxiway "A" Extension Design	618,000	587,100		587,100		15,450						15,450	618,000
1-29	Airport Signage Study and Preliminary Design	77,250	73,388		73,388		1,931	1,931					0	77,250
1-30	Taxistand Ready Lot	360,500			0				288,400				72,100	360,500
1-31	Wildlife Management Plan	154,500	146,775		146,775		3,863	3,863					0	154,500
1-32	Taxiway "B" Improvements	1,313,250		1,247,588	1,247,588		32,831						32,831	1,313,250
1-33	Obstruction Removal	515,000	489,250		489,250		12,875	12,875					0	515,000
1-34	Cargo Multi-Tenant Bldg Complex - Study Design	371,315			0		185,658				185,658		0	371,315
1-35	Cargo Multi-Tenant Apron - Study Design	371,315			0						371,315		0	371,315
1-36	Terminal Renovation Phase 3 - Construction	1,326,125	1,259,819		1,259,819		33,153	33,153					0	1,326,125
1-37	Waldo Access Road Construction - USDOT Demo	3,046,500			0			609,300	2,437,200				0	3,046,500
1-38	Taxiway "C" Improvements	954,810		907,070	907,070		23,870						23,870	954,810
1-39	Sealcoat GA Apron and T-Hangar Apron Pavement	822,198	781,088		781,088		20,555						20,555	822,198
1-40	Upgrade Airport Security Fencing	1,957,361			0		48,934	48,934			1,859,492		0	1,957,361
1-41	Land Acquisition for Runway 6/24 Extension	769,153			0						769,153			769,153
1-42	Land Acquisition for Approach to Runway 11	2,121,800			0						2,121,800		0	2,121,800

GNVMP.123

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Table 8-2

Master Plan Capital Improvement Program
Projected Capital Funding Sources

04-May-06

	Capital Improvement Projects	Total Escalated Costs	AIP Entitlement Grants	AIP Discretionary Grants	Total AIP Funding	FAA F&E Funds	FDOT Grants	Passenger Facility Charges	FTA Highway/ Intermodal Funding	RAC Customer Facility Charges	Other Funding	Private Third Party Financing	Cash Reserves/ Airport Net Cash Revenues	Total Funding
1-43	Terminal Renovation Phase 4 - Design	38,245			0		956	956			36,333		0	38,245
1-44	Air Cargo Bldg Complex - Site Prep	3,551,363			0		1,775,681				1,775,681		0	3,551,363
1-45	Air Cargo Apron - Construction	3,551,363			0		88,784				3,373,795		88,784	3,551,363
1-46	Air Cargo Bldg Construction	7,102,726			0		3,551,363				3,551,363		0	7,102,726
1-47	Runway 6/24 Landside Access Road Relocation	1,748,363			0						1,748,363		0	1,748,363
1-48	Runway 6/24 and Taxiway "A" Extension	7,102,726			0						7,102,726		0	7,102,726
1-49	Taxiway "E" Improvements	3,551,363		3,373,795	3,373,795		88,784	88,784					0	3,551,363
1-50	Rehab Pavements for T-Hangars I and J	677,491			0		16,937				660,553		0	677,491
1-51	Employee Parking Lot Relocation	546,364			0		273,182				273,182		0	546,364
1-52	Remote Security Cameras and Surveillance	1,354,981	1,287,232		1,287,232		33,875	33,875					0	1,354,981
1-53	Upgrade Airport Fiber Optic (Security Comm)	819,545			0		20,489	20,489			778,568		0	819,545
1-54	Land Acquisition for Access Road to Cargo Area	273,182			0		6,830				259,523		6,830	273,182
1-55	Airport Landside Signage - Construction	546,364	209,372		209,372		13,659	13,659			309,673		0	546,364
1-56	Corporate Hangar Site Prep for 3 Hangars	1,365,909			0		682,954				682,954		0	1,365,909
1-57	Corporate Hangar Site Prep for Apron	1,365,909			0		682,954				682,954		0	1,365,909
1-58	Construct Three 80 x 80 Corporate Hangars	2,431,318			0		1,215,659				1,215,659		0	2,431,318
1-59	Terminal Renovation Phase 4 - Construction	1,125,509			0		28,138	28,138			1,069,233		0	1,125,509
1-60	ATCT Relocation Feasibility Study	56,275			0	56,275								56,275
1-61	Perimeter Road Segment	270,122			0						270,122		0	270,122
1-62	Install Second Electrical Vault	1,238,060		1,176,157	1,176,157		30,951	30,951					0	1,238,060
1-63	Fuel Farm Expansion	562,754			0		281,377				281,377		0	562,754
1-64	Runway 11/29 Crack Sealing	450,204			0		11,255	11,255			427,693		(0)	450,204
1-65	Airport Maintenance Equipment-Eligible	731,581			0		18,290	18,290			695,002		0	731,581
1-66	Airport Maintenance Equipment-Ineligible	731,581			0						731,581			731,581
1-67	Airport Drainage Improvements	844,132			0		21,103	21,103			801,925		0	844,132
Total Phase 1 Projects		$88,993,652	$8,805,426	$8,496,308	$17,301,735	$56,275	$17,586,139	$3,309,104	$4,095,960	$3,477,590	$36,567,678	$12,500	$6,586,670	$88,993,652

GNVMP.123

Table 8-2

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Projected Capital Funding Sources

04-May-06

	Capital Improvement Projects	Total Escalated Costs	AIP Entitlement Grants	AIP Discretionary Grants	Total AIP Funding	FAA F&E Funds	FDOT Grants	Passenger Facility Charges	FTA Highway/ Intermodal Funding	RAC Customer Facility Charges	Other Funding	Private Third Party Financing	Cash Reserves/ Airport Net Cash Revenues	Total Funding
Phase 2 Projects (2011-2015)														
2-01	Crack Sealing for Runway 10/28	$246,002	$233,702		$233,702		$6,150	$6,150					$0	$246,002
2-02	Terminal Loop Road Relocation - Design	302,958	287,810		287,810		7,574	7,574					0	302,958
2-03	Terminal Loop Road Relocation - Construction	1,817,746	1,726,859		1,726,859		45,444	45,444					0	1,817,746
2-04	ARFF Vehicle Acquisition	939,169	892,210		892,210		23,479	23,479					0	939,169
2-05	Taxiway "A" (T/W "B" to T/W "C") Improvements	1,969,225	1,870,764		1,870,764		49,231	49,231					0	1,969,225
2-06	Taxiway "A" (T/W "C" to Thrshld R/W 6) Imprvemnts	2,060,112	1,957,107		1,957,107		51,503						51,503	2,060,112
2-07	Taxiway "A" Hold Aprons	1,575,380		1,496,611	1,496,611		39,384						39,384	1,575,380
2-08	Relocate ATCT	6,059,154			0	6,059,154								6,059,154
2-09	Runway 10/28 Remarking	253,273	240,609		240,609		6,332	6,332					0	253,273
2-10	Crack Seal/Seal Coat GA Apron Taxways	1,286,964	1,224,121		1,224,121		31,422						31,422	1,286,964
2-11	Rehab GA Side Apron Flood Lighting	605,915	575,620		575,620		15,148						15,148	605,915
2-12	Remove/Relocate T-Hangar "F"	60,592			0		30,296						30,296	60,592
2-13	Rehabilitate/Construct Aircraft Apron	3,127,735		2,971,348	2,971,348		78,193	78,193					(0)	3,127,735
2-14	Terminal Auto Parking Lot Expansion	1,963,166			0		981,583						981,583	1,963,166
2-15	Non-Aviation Land Use Study	121,183			0								121,183	121,183
2-16	Land Acquisition for Stormwater Pond	1,211,831			0		30,296	30,296			1,151,239		0	1,211,831
2-17	Construct Connector to Taxiway "C"	1,259,092			0		31,477	31,477			1,196,138		0	1,259,092
2-18	Rehab East GA Apron	3,168,937			0		79,223				3,010,490		79,223	3,168,937
2-19	T-Hangar Taxiway to Serve Northeast Area	254,484			0		6,362				241,760		6,362	254,484
2-20	Terminal Area Study	181,775			0		4,544	4,544			172,686		0	181,775
2-21	Obstruction Removal	605,915			0		15,148	15,148			575,620		0	605,915
2-22	Stormwater Management	1,211,831			0		30,296	30,296			1,151,239		0	1,211,831
2-23	Master Plan Update	605,915			0		15,148	15,148			575,620		0	605,915
2-24	Rehabilitate Taxiway "E"	702,862			0		17,572	17,572			667,719		0	702,862
2-25	Rehab Existing T-Hangars	2,423,661			0		1,211,831						1,211,831	2,423,661
2-26	Construct Three 10 Unit T-Hangars	3,102,287			0		1,551,143						1,551,143	3,102,287
2-27	Construct Cell Phone Lot	368,397			0		184,198						184,198	368,397
2-28	Construct Two-Lane Outbound Roadway	832,528			0				666,022				166,506	832,528
2-29	Security Fencing	751,335			0		18,783	18,783			713,768		0	751,335
2-30	Rehabilitate Taxiway "C"	2,696,323		2,561,507	2,561,507		67,408						67,408	2,696,323
2-31	Rehab Sunshades	363,549			0		181,775						181,775	363,549
2-32	Construct Mid Field FBO Facility	8,482,815			0							8,482,815		8,482,815
2-33	Construct Three 80 x 80 Corporate Hangars	3,332,535			0							3,332,535		3,332,535
2-34	Renovate ARFF Building	605,915			0		15,148	15,148			575,620		0	605,915
2-35	Perimeter Security Road	689,532			0		17,238	17,238			655,055		0	689,532
2-36	Phase 2 Drainage Improvements	1,211,831			0		30,296	30,296			1,151,239		0	1,211,831
2-37	Crack Sealing Runway 6/24	242,366			0								242,366	242,366
2-38	Runway 6/24 Remarking	169,656			0								169,656	169,656
2-39	Construct New FBO Hangar and Terminal	2,666,028			0							2,666,028		2,666,028
2-40	Construct New Auto Parking	454,437			0							454,437		454,437
2-41	Construction Dump Testing and Closing	605,915			0								605,915	605,915
Total Phase 2 Projects		$60,590,325	$9,008,800	$7,029,467	$16,038,267	$6,059,154	$4,873,625	$442,349	$666,022	$0	$11,838,193	$14,935,814	$5,736,903	$60,590,325

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

GNVMP.123

Table 8-2

Master Plan Capital Improvement Program
Projected Capital Funding Sources

04-May-06

	Capital Improvement Projects	Total Escalated Costs	AIP Entitlement Grants	AIP Discretionary Grants	Total AIP Funding	FAA F&E Funds	FDOT Grants	Passenger Facility Charges	FTA Highway/ Intermodal Funding	RAC Customer Facility Charges	Other Funding	Private Third Party Financing	Cash Reserves/ Airport Net Cash Revenues	Total Funding
Phase 3 Projects (2016-2025)														
3-01	Rehabilitate Runway 10/28	$6,806,654	$1,872,061	$4,594,260	$6,466,321		$170,166	$170,166					$0	$6,806,654
3-02	Install Runway 10/28 Centerline Lights	2,268,885	2,155,440		2,155,440		56,722	56,722					0	2,268,885
3-03	Obstruction Removal	453,777	431,088		431,088		11,344	11,344					0	453,777
3-04	Land Acqusition	3,025,179	2,873,920		2,873,920		75,629	75,629					0	3,025,179
3-05	Install Taxiway "E" Guard Lights and Stop Bars	2,117,626		2,011,744	2,011,744		52,941	52,941					0	2,117,626
3-06	Rehab West GA Apron	1,134,442	1,077,720		1,077,720		28,361	28,361					0	1,134,442
3-07	Construct Three 10 Unit T-Hangars	3,872,230			0		1,936,115						1,936,115	3,872,230
3-08	Convert Taxiway "A" into Airside Access Road	151,259	143,696		143,696		3,781	3,781					0	151,259
3-09	Construct Auto Parking Lot - Aeroflight	302,518			0		151,259						151,259	302,518
3-10	Crack Sealing for Runway 6/24	378,147			0								378,147	378,147
3-11	Runway 6/24 Remarking	211,763			0								211,763	211,763
3-12	Rehab Existing GA Access Roads (Ph -1)	3,025,179			0		1,512,590						1,512,590	3,025,179
3-13	Crack Seal Coat GA Apron and Taxiways	1,966,367	1,868,048		1,868,048		49,159	49,159					0	1,966,367
3-14	Rehab Existing GA Access Roads (Ph - 2)	2,268,885			0		1,134,442						1,134,442	2,268,885
3-15	Rehab WW II Hangar	453,777			0		226,888						226,888	453,777
3-16	Expand Consolidated Rental Car Center	3,025,179			0					3,025,179				3,025,179
3-17	Terminal Auto Parking Expansion	2,495,773			0		1,247,887						1,247,887	2,495,773
3-18	Terminal Expansion Design	1,512,590	1,436,960		1,436,960		37,815	37,815					0	1,512,590
3-19	Ready Car Ready Return Lot Expansion	2,420,144			0					2,420,144				2,420,144
3-20	Terminal Auto Parking Rehab	3,894,919			0								3,894,919	3,894,919
3-21	Terminal Expansion Phase 1	7,562,949			0			5,027,414			2,535,535			7,562,949
3-22	Obstruction Removal	453,777		431,088	431,088		11,344	11,344					0	453,777
3-23	Land Acquisition	3,025,179	2,873,920		2,873,920		75,629	75,629					0	3,025,179
3-24	Air Cargo Complex Apron Expansion - Phase 1	1,512,590	1,436,960		1,436,960		37,815	37,815					0	1,512,590
3-25	Air Cargo Complex Bldg Expansion - Phase 1	1,512,590			0		756,295						756,295	1,512,590
3-26	Rehab University Air Center Parking Lot	529,406			0		264,703						264,703	529,406
3-27	Construct Three 80 x 80 Corporate Hangars	4,008,363			0							4,008,363		4,008,363
3-28	Air Cargo Complex Apron Expansion - Phase 2	1,890,737	1,796,200		1,796,200		47,268	47,268					0	1,890,737
3-29	Air Cargo Complex Bldg Expansion - Phase 2	1,890,737			0		945,369						945,369	1,890,737
3-30	Terminal Expansion Phase 2	15,125,897			0						15,125,897			15,125,897
3-31	Fencing and Security Improvements	983,183		934,024	934,024		24,580	24,580					0	983,183
3-32	Stormwater Management Improvements	1,134,442	714,010	363,710	1,077,720		28,361	28,361					0	1,134,442
3-33	Terminal Expansion Phase 3	15,125,897			0						15,125,897			15,125,897
3-34	Stormwater Management Improvements	1,134,442	1,077,720		1,077,720		28,361	28,361					0	1,134,442
3-35	Drainage Improvements Phase 3	1,512,590		1,436,960	1,436,960		37,815	37,815					0	1,512,590
Total Phase 3 Projects		$99,188,071	$19,757,746	$9,771,787	$29,529,533	$0	$8,952,640	$5,804,507	$0	$5,445,323	$32,787,329	$4,008,363	$12,660,376	$99,188,071
Total Project Costs		$248,772,048	$37,571,973	$25,297,562	$62,869,534	$6,115,429	$31,412,404	$9,555,959	$4,761,982	$8,922,913	$81,193,200	$18,956,676	$24,983,949	$248,772,048

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

GNVMP.123

Table 8-3

Master Plan Capital Improvement Program
Actual, Estimated, Budgeted and Projected Operations & Maintenance Expenses

04-May-06

Operations & Maintenance Expenses	Actual 2003	Actual 2004	Estimated 2005	Phase I Budegted 2006	Phase I Projected 2007	Phase I Projected 2008	Phase I Projected 2009	Phase I Projected 2010	Phase I Total	Phase II Projected 2011-2015	Phase III Projected 2016-2025
Administration											
Personal Services	$482,641	$566,694	$571,919	$718,900	$747,656	$777,562	$808,665	$841,011	$3,893,794	$4,737,396	$12,776,270
Operating Expenses	535,697	493,420	558,556	568,160	585,205	602,761	620,844	639,469	3,016,439	3,496,879	8,753,354
Capital Equipment	45,144	8,989	0	2,500	2,575	2,652	2,732	2,814	13,273	15,387	38,516
Total Administration	$1,063,482	$1,069,103	$1,130,475	$1,289,560	$1,335,436	$1,382,975	$1,432,240	$1,483,294	$6,923,506	$8,249,662	$21,568,141
Annual Growth Rate	-	0.5%	5.7%	14.1%	3.6%	3.6%	3.6%	3.6%	5.6%	3.6%	3.6%
Operations											
Personal Services	$501,848	$66,576	$76,695	$92,727	$96,436	$100,294	$104,305	$108,477	$502,239	$611,051	$1,647,942
Operating Expenses	1,284,992	786,690	734,563	774,665	797,905	821,842	846,497	871,892	4,112,802	4,767,864	11,934,873
Capital Equipment	59,075	62,555	0	0	0	0	0	0	0	0	0
Total Operations	$1,845,915	$915,821	$811,258	$867,392	$894,341	$922,136	$950,803	$980,370	$4,615,041	$5,378,915	$13,582,814
Annual Growth Rate	-	-50.4%	-11.4%	6.9%	3.1%	3.1%	3.1%	3.1%	3.9%	3.1%	3.1%
Lounge Operations											
Personal Services	$44,600	$37,243	$30,127	$21,042	$21,884	$22,759	$23,669	$24,616	$113,970	$138,662	$373,958
Operating Expenses	35,761	23,782	26,312	16,492	16,987	17,496	18,021	18,562	87,558	101,504	254,084
Capital Equipment	492	0	0	0	0	0	0	0	0	0	0
Total Lounge Operations	$80,853	$61,025	$56,439	$37,534	$38,870	$40,255	$41,691	$43,178	$201,529	$240,166	$628,042
Annual Growth Rate	-	-24.5%	-7.5%	-33.5%	3.6%	3.6%	3.6%	3.6%	-5.2%	3.6%	3.6%
Parking Lot											
Personal Services	$0	$148,236	$155,910	$164,111	$170,675	$177,502	$184,603	$191,987	$888,878	$1,081,456	$2,916,576
Operating Expenses	0	21,002	23,702	28,125	28,969	29,838	30,733	31,655	149,319	173,102	433,308
Capital Equipment	0	0	0	0	0	0	0	0	0	0	0
Total Parking Lot	$0	$169,238	$179,612	$192,236	$199,644	$207,340	$215,336	$223,642	$1,038,198	$1,254,558	$3,349,884
Annual Growth Rate	-	-	6.1%	7.0%	3.9%	3.9%	3.9%	3.9%	4.5%	3.9%	3.9%
Facilities & Maintenance											
Personal Services	$0	$450,738	$438,801	$542,731	$564,440	$587,018	$610,499	$634,919	$2,939,606	$3,576,480	$9,645,400
Operating Expenses	0	279,306	288,987	335,355	345,416	355,778	366,451	377,445	1,780,445	2,064,024	5,166,645
Capital Equipment	0	0	0	54,800	56,444	58,137	59,881	61,678	290,941	337,280	844,276
Total Facilities & Maintenance	$0	$730,044	$727,788	$932,886	$966,300	$1,000,933	$1,036,831	$1,074,041	$5,010,992	$5,977,784	$15,656,321
Annual Growth Rate	-	-	-0.3%	28.2%	3.6%	3.6%	3.6%	3.6%	8.1%	3.6%	3.6%

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

GNVMP.123

Table 8-3

Master Plan Capital Improvement Program
Actual, Estimated, Budgeted and Projected Operations & Maintenance Expenses

04-May-06

Operations & Maintenance Expenses	Actual 2003	Actual 2004	Estimated 2005	Phase I Budegted 2006	Phase I Projected 2007	Phase I Projected 2008	Phase I Projected 2009	Phase I Projected 2010	Phase I Total	Phase II Projected 2011-2015	Phase III Projected 2016-2025
FAA Facilities											
Personal Services	$0	$29,418	$27,621	$29,096	$30,260	$31,470	$32,729	$34,038	$157,593	$191,736	$517,093
Operating Expenses	0	66,411	65,679	68,915	70,982	73,112	75,305	77,564	365,879	424,154	1,061,739
Capital Equipment	0	0	0	0	0	0	0	0	0	0	0
Total FAA Facilities	$0	$95,829	$93,300	$98,011	$101,242	$104,582	$108,034	$111,603	$523,472	$615,891	$1,578,832
Annual Growth Rate	-	-	-2.6%	5.0%	3.3%	3.3%	3.3%	3.3%	3.6%	3.3%	3.3%
General Aviation/FBO Operations											
Personal Services	$241,471	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Expenses	145,332	43,768	39,187	28,072	28,915	29,782	30,676	31,596	149,040	172,779	432,498
Cost of Sales	782,501	0	0	0	0	0	0	0	0	0	0
Management Fees	66,500	0	0	0	0	0	0	0	0	0	0
Capital Equipment	0	0	0	0	0	0	0	0	0	0	0
Total General Aviation/FBO Operations	$1,235,804	$43,768	$39,187	$28,072	$28,915	$29,782	$30,676	$31,596	$149,040	$172,779	$432,498
Annual Growth Rate	-	-96.5%	-10.5%	-28.4%	3.0%	3.0%	3.0%	3.0%	-4.2%	3.0%	3.0%
Fuel Farm											
Personal Services	$26,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Expenses	15,410	21,082	22,359	25,150	25,905	26,682	27,482	28,307	133,525	154,793	387,475
Capital Equipment	0	1,507	0	33,525	34,531	35,567	36,634	37,733	177,989	206,338	516,503
Total Fuel Farm	$42,050	$22,589	$22,359	$58,675	$60,435	$62,248	$64,116	$66,039	$311,514	$361,130	$903,978
Annual Growth Rate	-	-46.3%	-1.0%	162.4%	3.0%	3.0%	3.0%	3.0%	24.2%	3.0%	3.0%
Non-Operating Expenses											
Automated Flight Service Station	$55,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	0	0	0	0	0	0	0	0	0	0	0
Total Non-Operating Expenses	$55,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
-	-	-100.0%	-	-	-	-	-	-	-	-	-
Total Operations & Maintenance Expenses	$4,323,704	$3,107,417	$3,060,418	$3,504,367	$3,625,184	$3,750,253	$3,879,726	$4,013,763	$18,773,292	$22,250,886	$57,700,509
Annual Growth Rate	-	-28.1%	-1.5%	14.5%	3.4%	3.5%	3.5%	3.5%	5.6%	3.5%	3.5%
Operating Expenses Per Enplaned Pax											
Gainesville Regional Airport	$31.07	$22.65	$17.96	$20.08	$20.29	$20.50	$20.71	$20.93	$20.51	$21.65	$24.12
Non-Hub Industry Average	$21.48	$22.12	$22.79	$23.47	$24.17	$24.90	$25.65	$26.42	$24.92	$28.89	$36.16

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

GNVMP.123

Table 8-4

Master Plan Capital Improvement Program
Actual, Estimated, Budgeted and Projected Operating Revenues

04-May-06

Operating Revenues	Actual 2003	Actual 2004	Estimated 2005	Phase I Budgeted 2006	Phase I Projected 2007	Phase I Projected 2008	Phase I Projected 2009	Phase I Projected 2010	Phase I Total	Phase II Projected 2011-2015	Phase III Projected 2016-2025
Airline Revenues											
Landing Fees	$163,353	$173,717	$279,377	$334,072	$348,211	$362,949	$378,311	$394,322	$1,817,865	$2,233,749	$6,044,238
Terminal Rent	271,195	303,393	297,993	314,590	324,028	333,749	343,761	354,074	1,670,201	1,936,221	4,846,729
Terminal Passenger Charge	0	3,600	3,250	3,600	3,797	4,004	4,223	4,454	20,078	26,132	76,417
Terminal Ramp Charge	0	0	300	400	417	435	453	472	2,177	2,675	7,237
Boarding Bridge Revenue	0	0	0	37,000	38,566	40,198	41,900	43,673	201,337	247,398	669,427
Airport Security Charges	257,704	251,869	232,764	252,000	259,560	267,347	275,367	283,628	1,337,902	1,550,995	3,882,437
Fuel Storage Facility Fees	101,119	98,822	136,971	100,000	104,232	108,644	113,242	118,035	544,154	668,643	1,809,262
Total Airline Revenues	$793,371	$831,401	$950,655	$1,041,662	$1,078,811	$1,117,325	$1,157,257	$1,198,658	$5,593,714	$6,665,812	$17,335,748
Annual Growth Rate	-	4.8%	14.3%	9.6%	3.6%	3.6%	3.6%	3.6%	4.7%	3.5%	3.5%
Airline Cost Per Enplaned Passenger:											
Gainesville Regional Airport	$5.70	$6.06	$5.58	$5.97	$6.04	$6.11	$6.18	$6.25	$6.11	$6.49	$7.25
Non-Hub Industry Average	$5.68	$5.85	$6.02	$6.21	$6.39	$6.58	$6.78	$6.98	$6.59	$7.64	$9.56
Non-Airline Revenues											
Non-Scheduled Landing Fees	$4,757	$7,655	$4,843	$6,200	$6,462	$6,736	$7,021	$7,318	$33,738	$41,456	$112,174
GA Landing Fees	7,258	7,102	5,804	6,000	6,254	6,519	6,795	7,082	32,649	40,119	108,556
Aviation Fuel Sales	1,019,588	0	0	0	0	0	0	0	0	0	0
Fuel Flowage Fees	40,421	39,369	44,361	95,000	99,021	103,212	107,580	112,133	516,946	635,211	1,718,799
T-Hangar Rent	119,532	105,838	108,684	114,295	117,724	121,256	124,893	128,640	606,808	703,456	1,760,885
Sunshade Rent	11,280	11,148	12,607	14,571	15,008	15,458	15,922	16,400	77,359	89,681	224,488
Ground Support Equipment Rental	1,195	4,945	5,162	4,000	4,120	4,244	4,371	4,502	21,237	24,619	61,626
Tie-Down Fees	4,948	2,440	2,620	2,495	2,601	2,711	2,825	2,945	13,577	16,683	45,141
Port-O-Port Rental	9,448	9,472	9,636	9,761	10,054	10,355	10,666	10,986	51,822	60,076	150,383
GA Storage Fees	670	1,140	1,740	1,140	1,174	1,209	1,246	1,283	6,052	7,016	17,563
FBO Rent	144,378	165,042	165,042	165,042	169,993	175,093	180,346	185,756	876,230	1,015,791	2,542,719
FBO Gross Receipts %	9,775	18,730	13,780	15,000	15,635	16,297	16,986	17,705	81,623	100,296	271,389
FBO Charter Passenger Fees	2,106	7,434	8,172	7,000	7,383	7,786	8,211	8,660	39,040	50,811	148,589
FBO Ramp Parking Fees	803	1,552	1,085	1,200	1,251	1,304	1,359	1,416	6,530	8,024	21,711
FBO Other Income	91,357	481	0	0	0	0	0	0	0	0	0
Gator Aviation Rent	0	9,072	36,287	36,287	37,376	38,497	39,652	40,841	192,653	223,337	559,055
Aeroflite Hangar & Office Rent	0	21,163	0	0	0	0	0	0	0	0	0
Bi-Fold Door Hangar Rent	0	12,000	12,000	12,000	12,360	12,731	13,113	13,506	63,710	73,857	184,878
Gulf Atl Office & Maintenance Hangar Rent	0	23,162	10,298	8,000	8,240	8,487	8,742	9,004	42,473	49,238	123,252

GNVMP.123

Table 8-4

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

Master Plan Capital Improvement Program
Actual, Estimated, Budgeted and Projected Operating Revenues

04-May-06

Operating Revenues	Actual 2003	Actual 2004	Estimated 2005	Phase I Budgeted 2006	Phase I Projected 2007	Phase I Projected 2008	Phase I Projected 2009	Phase I Projected 2010	Phase I Total	Phase II Projected 2011-2015	Phase III Projected 2016-2025
FDX Facility Rent & Cost Recovery	4,843	7,303	4,739	2,722	2,804	2,888	2,974	3,064	14,451	16,753	41,936
Corporate Aviation	18,331	18,331	23,814	20,520	21,136	21,770	22,423	23,095	108,943	126,295	316,141
Joint Aviation Unit Rent	0	7,440	7,440	7,440	7,663	7,893	8,130	8,374	39,500	45,791	114,624
Banner Towing Fees	0	0	125	150	155	159	164	169	796	923	2,311
Blimp Tie-Down Fees	0	0	100	100	103	106	109	113	531	615	1,541
GSE & Vehicle Fuel Sales	0	5,052	7,581	3,500	3,605	3,713	3,825	3,939	18,582	21,542	53,923
Other GA Income	3,166	90	34	50	52	53	55	56	265	308	770
Display Advertising	11,174	14,450	13,927	13,000	13,390	13,792	14,205	14,632	69,019	80,012	200,284
Pay Phone Commissions	15	371	706	750	791	834	880	928	4,183	5,444	15,920
Ground Transportation Fees	3,838	3,450	3,759	4,600	4,851	5,117	5,396	5,691	25,655	33,390	97,644
Rental Car Rent/Concession Fees	629,772	646,766	749,807	727,200	766,940	808,852	853,055	899,673	4,055,721	5,278,569	15,436,305
ATM Fees	1,265	1,285	1,358	2,400	2,531	2,669	2,815	2,969	13,385	17,421	50,945
Parking Revenue	775,099	801,165	1,038,017	1,182,801	1,247,439	1,315,610	1,387,506	1,463,331	6,596,687	8,585,667	25,107,366
Restaurant/Lounge/Gift Shop Sales	56,439	41,217	47,564	19,500	20,566	21,690	22,875	24,125	108,755	141,546	413,927
Vending Machine Commissions	12,984	13,575	13,462	12,000	12,656	13,347	14,077	14,846	66,926	87,105	254,724
Food Concession Rent	0	0	481	2,400	2,531	2,669	2,815	2,969	13,385	17,421	50,945
Cell Phone Tower Rent	0	0	0	3,600	3,708	3,819	3,934	4,052	19,113	22,157	55,463
Other Terminal Income	4,779	2,498	558	450	464	477	492	506	2,389	2,770	6,933
TSA Office Rent	24,550	29,422	28,645	29,000	29,870	30,766	31,689	32,640	153,965	178,488	446,788
TSA Security Reimbursement	118,098	0	8,177	5,772	5,945	6,124	6,307	6,496	30,644	35,525	88,926
Other Exclusive Rent	540	540	1,720	2,200	2,266	2,334	2,404	2,476	11,680	13,540	33,894
Non-Aeronautical Rent	0	9,632	5,163	7,000	7,210	7,426	7,649	7,879	37,164	43,083	107,845
Access badge Fees	0	1,155	595	1,500	1,545	1,591	1,639	1,688	7,964	9,232	23,110
FAA AFSS Rent	77,785	77,785	82,099	82,491	84,966	87,515	90,140	92,844	437,956	507,711	1,270,897
Industrial Park Rent	11,960	0	0	0	0	0	0	0	0	0	0
Industrial Park Land Sales	123,640	38,594	140,112	110,000	0	0	0	0	110,000	0	0
Interest Income	2,932	2,368	1,103	1,300	1,300	1,300	1,300	1,300	6,500	6,500	13,000
Other Income	133,752	17,236	45,463	44,000	45,320	46,680	48,080	49,522	233,602	270,809	677,886
Total Non-Airline Revenues	$3,482,478	$2,187,470	$2,668,670	$2,784,437	$2,804,460	$2,941,088	$3,084,666	$3,235,557	$14,850,209	$18,688,290	$52,935,261
Annual Growth Rate	-	-37.2%	22.0%	4.3%	0.7%	4.9%	4.9%	10.0%	3.9%	4.8%	4.7%
Total Revenues	$4,275,849	$3,018,871	$3,619,325	$3,826,099	$3,883,271	$4,058,414	$4,241,923	$4,434,216	$20,443,923	$25,354,103	$70,271,009
Annual Growth Rate	-	-29.4%	19.9%	5.7%	1.5%	4.5%	4.5%	9.3%	4.1%	4.5%	4.4%
Operating Revenue Per Enplaned Pax											
Gainesville Regional Airport	$23.40	$22.01	$21.24	$21.93	$21.74	$22.19	$22.65	$23.12	$22.34	$24.67	$29.37
Non-Hub Industry Average	$16.31	$16.80	$17.30	$17.82	$18.36	$18.91	$19.48	$20.06	$18.93	$21.94	$27.46

GAINESVILLE REGIONAL AIRPORT
Gainesville, Florida

GNVMP.123

Table 8-5

Master Plan Capital Improvement Program
Financial Plan Summary
Budgeted and Projected Net Revenues, Capital Funding, Capital Expenditures and Cash Flow

04-May-06

Operating/Capital Cash Flow	Phase I						Phase II	Phase III
	Budgeted	Projected					Projected	Projected
	2006	2007	2008	2009	2010	Total	2011-2015	2016-2025
Operating Cash Flow								
Airline Revenue	$1,041,662	$1,078,811	$1,117,325	$1,157,257	$1,198,658	$5,593,714	$6,665,812	$17,335,748
Non-Airline Revenue	2,784,437	2,804,460	2,941,088	3,084,666	3,235,557	14,850,209	18,688,290	52,935,261
Total Revenues	3,826,099	3,883,271	4,058,414	4,241,923	4,434,216	20,443,923	25,354,103	70,271,009
Operating Expenses	(3,504,367)	(3,625,184)	(3,750,253)	(3,879,726)	(4,013,763)	(18,773,292)	(22,250,886)	(57,700,509)
Net Revenue Excluding Interest on Debt	$321,732	$258,088	$308,161	$362,197	$420,453	$1,670,631	$3,103,217	$12,570,500
Less Existing Debt Service	(73,002)	(73,002)	(73,002)	(73,002)	(73,002)	(365,010)	(121,048)	0
Operating Net Cash Flow	248,730	185,086	235,159	289,195	347,451	1,305,621	2,982,169	12,570,500
Total Airport Operating Funds Available For Capital Expenditures	$248,730	$185,086	$235,159	$289,195	$347,451	$1,305,621	$2,982,169	$12,570,500
Capital Cash Flow								
Beginning Cash Balance	400,000	3,409,488	117,860	323,534	221,102	400,000	1,825,527	2,095,196
Other Capital Funding Sources:								
AIP Entitlement Grants	$2,011,752	$1,666,101	$1,687,306	$1,709,018	$1,731,250	$8,805,426	$9,008,800	$19,757,746
AIP Discretionary Grants	617,500	2,421,788	907,070	3,373,795	1,176,157	8,496,308	7,029,467	9,771,787
FAA Facilities & Equipment Funds	0	0	0	0	56,275	56,275	6,059,154	0
FDOT Grants	5,987,324	1,518,425	712,170	8,977,107	391,114	17,586,139	4,873,625	8,952,640
Passenger Facility Charges	0	0	0	0	0	0	2,429,070	7,126,889
FTA Highway/Intermodal Funding	300,000	1,358,760	2,437,200	0	0	4,095,960	666,022	0
RAC CFC Debt	0	3,477,590	0	0	0	3,477,590	0	5,445,323
Less RAC CFC Debt Service (5%, 20 yrs)	0	0	(279,051)	(279,051)	(279,051)	(837,152)	(1,395,254)	(5,412,189)
RAC Customer Facility Charges	422,496	370,805	379,679	388,765	398,068	1,959,812	2,111,560	4,618,050
Hangar Debt Financing	8,760,560	0	0	0	0	8,760,560	0	0
Less Debt Service (5%, 20 yrs)	(169,008)	(338,015)	(560,775)	(640,615)	(720,455)	(2,428,867)	(3,602,273)	(5,319,652)
Plus Hangar Facility Rent	193,467	402,150	573,575	655,237	736,899	2,561,328	3,923,647	6,228,811
Other Funding	0	4,532,000	5,307,417	22,451,327	4,276,933	36,567,678	11,838,193	32,787,329
Temporary Cash Flow Funding	0	4,000,000	(2,500,000)	(1,000,000)	(500,000)	0	0	0
Private Third Party Financing	12,500	0	0	0	0	12,500	14,935,814	4,008,363
Total Other Capital Funding Sources	18,136,591	19,409,603	8,664,590	35,635,582	7,267,191	89,113,558	57,877,824	87,965,098
Total Funds Available for Capital Expenditures	18,785,321	23,004,177	9,017,610	36,248,311	7,835,744	90,819,179	62,685,520	102,630,794
Capital Improvement Program Expenditures	15,375,833	22,886,317	8,694,076	36,027,209	6,010,217	88,993,652	60,590,325	99,188,071
Ending Cash Balance	$3,409,488	$117,860	$323,534	$221,102	$1,825,527	$1,825,527	$2,095,196	$3,442,723

APPENDIX A

RESOLUTION NO. 06-034
EFFECTIVE JUNE 22, 2006

RESOLUTION OF THE GAINESVILLE-ALACHUA COUNTY REGIONAL AIRPORT AUTHORITY ADOPTING THE AIRPORT MASTER PLAN UPDATE FOR GAINESVILLE REGIONAL AIRPORT

WHEREAS, the Gainesville - Alachua County Regional Airport Authority (GACRAA), a Special District of the State of Florida, maintains and operates an airport in Alachua County, Florida known as Gainesville Regional Airport (hereinafter referred to as "Airport"); and

WHEREAS, the Airport Master Plan provides guidance for future aviation infrastructure development and strategy for the Airport; and

WHEREAS, the draft Airport Master Plan Update has been assembled by Reynolds, Smith & Hills, Inc., Airport Planning Consultant, after significant review and input by the FAA Southern Districts Office, FDOT, the City of Gainesville, Alachua County, appointed committees and a public review process; and

WHEREAS, the draft Airport Master Plan Update complies with FAA Advisory Circular 105/5070-6A and FDOT Airport Master Plan requirements; and

WHEREAS, the Gainesville-Alachua County Regional Airport Authority has reviewed the content of the draft Airport Master Plan Update;

NOW, THEREFORE,

BE IT RESOLVED BY THE GAINESVILLE-ALACHUA COUNTY REGIONAL AIRPORT AUTHORITY, as follows:

Section 1. That the Gainesville-Alachua County Regional Airport Authority does hereby adopt the Airport Master Plan Update as presented by Reynolds, Smith & Hills, Inc.

Section 2. That the Airport Master Plan Update will be submitted to the City of Gainesville, owner of Airport property, for City Commission concurrence.

Section 3. That the Airport Master Plan Update will be submitted to the FAA and the FDOT.

EFFECTIVE this 22nd day of June, 2006.

GAINESVILLE-ALACHUA COUNTY
REGIONAL AIRPORT AUTHORITY

James L. Stringfellow, Sr.
Chair

ATTEST:

Kinnon Thomas
Secretary / Treasurer

APPROVED AS TO FORM AND LEGALITY

BY: _____
Donald W. Stanley, Jr.
Attorney for the Authority

City of Gainesville

City Hall
200 East University Avenue
Gainesville, Florida 32601

Meeting Minutes

Monday, June 26, 2006

1:00 PM

City Hall Auditorium

City Commission

Mayor Pegeen Hanrahan (At Large)
Mayor-Commissioner Pro Tem Craig Lowe (District 4)
Commissioner Rick Bryant (At Large)
Commissioner Jeanna Mastrodicasa (At Large)
Commissioner Scherwin Henry (District 1)
Commissioner Ed Braddy (District 2)
Commissioner Jack Donovan (District 3)

Persons with disabilities who require assistance to participate in this meeting are requested to notify the Office of Equal Opportunity at 334-5051 or call the TDD phone line at 334-2069 at least two business day

CALL TO ORDER - 1:04 PM

ROLL CALL

Present: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

INVOCATION

CONSENT AGENDA

MOTION: Commissioner Bryant moved and Commissioner Donovan seconded to adopt the Consent Agenda with the following modifications.
(VOTE: 6-0, Commissioner Braddy - Absent, MOTION CARRIED)

MODIFICATIONS:
1. File #060140 - Gainesville Regional Airport Master Plan Review Team - (Withdraw from the agenda).

2. File #060185 Edward Byrne Memorial Justice Assistance Grant Applications FY 2007 - Recommendation does not appear on the agenda (new text file provided).

3. File # 060163 - Eastside Gateway Feature (B) - Added to the Consent Agenda (CRA) after Agenda Review.

4. File #060130 - Fiscal Year 2006 Operating Funds Quarterly Monitoring Report - Quarter Ending March 31, 2006 - (Commissioner Bryant requested that this item be pulled from the Consent Agenda for discussion).

NOTE: Commissioner Braddy entered the meeting room after the Consent Agenda was adopted.

CITY MANAGER, CONSENT AGENDA ITEMS

060137 **Staffing for Adequate Fire and Emergency Response (SAFER) Firefighter Grant Program (NB)**

This item requests that the City Commission authorize an application for the 2006 Federal SAFER Grant Program for firefighter staffing funds.

RECOMMENDATION *The City Commission authorize the City Manager to: 1) apply to the US Department of Homeland Security for the SAFER Grant Program; and, if awarded: 2) accept the award; 3) approve the required payment process for expending the grant funds; and 4) allocate the required cash match.*

Alternative Recommendation A: The City not apply for the SAFER Grant Program. The fiscal impact would be that the City meet the full financial burden of any firefighter positions required for Station 8.

This Matter was Approved as Recommended on the Consent Agenda.

060140 **Gainesville Regional Airport Master Plan Review Team (B)**

This item reports the findings of the Gainesville Regional Airport Master Plan Review Team instituted at the direction of the City Manager several months ago.

RECOMMENDATION *Recommended Motion: The City Commission: 1) accept the report of the Gainesville Regional Airport Master Plan Team on the Airport Master Plan Update.*

Alternative Recommendation A: The City Commission takes no action.

Withdrawn

060140_200606261300 .pdf

060142 **Annual Services Contract for Professional Civil Engineering Services (B)**

This item involves a request for the City Commission to authorize contract negotiations with Volkert & Associates, Inc., Causseaux & Ellington, Inc., Comprehensive Engineering Services, Inc., and Dyer, Riddle, Mills & Precourt, Inc., for Annual Services Contracts for Professional Civil Engineering Services.

RECOMMENDATION *Recommended Motion: The City Commission: 1) accept the selection of the six most qualified civil engineering firms in the order of ranking; 2) authorize the City Manager to initiate contract negotiations with Volkert & Associates, Inc., Causseaux & Ellington, Inc., Comprehensive Engineering Services, Inc., and Dyer, Riddle, Mills & Precourt, Inc., for professional civil engineering services in accordance with the Consultants' Competitive Negotiations Act (CCNA); and 3) authorize the City Manager, upon successful contract negotiations, to execute the contracts and any related documents, including contract amendments and extensions.*

Alternative Recommendation A: The City Commission reject the recommended ranking and direct the City Manager to secure the services of individual civil engineering firms on a project-by-project basis in accordance with CCNA. This would result in project delays as an individual

qualification-based selection process would be required to meet State Statutes. This would also result in additional administrative costs for both projects and routine tasks that require the services of certified civil engineers.

This Matter was Approved as Recommended on the Consent Agenda.

060142_200606261300.PDF

060143 **First Extension to the Agreement between the City of Gainesville and Raney's Truck Parts, Inc. (B)**

This item involves a request for the first one-year extension to the Agreement with Raney's Truck Parts, Inc., for the Procurement of Heavy Duty Brake Parts.

RECOMMENDATION

Recommended Motion: The City Commission: 1) authorize the City Manager to execute the First Extension to the Agreement with Raney's Truck Parts, Inc., for the period of July 1, 2006 to June 30, 2007; and 2) authorize the City Manager to execute any and all related documents.

Alternative Recommendation A: The City Commission decline the authorization for the City Manager to execute the First Extension to the Agreement with Raney's Truck Parts, Inc., and provide staff with specific direction in securing these commodities. This would require issuance of a new Invitation to Bid and additional administrative costs.

This Matter was Approved as Recommended on the Consent Agenda.

060143c_200606261300.PDF
060143b_200606261300.PDF
060143a_200606261300.PDF

060151 **U.S. Department of Justice "Project Safe Neighborhoods Grant Program" Award Notification (NB)**

This item requests City Commission acceptance of a grant in the amount of $44,752 for the Project Safe Neighborhood "Preventing Youth Firearm Violence" Project.

RECOMMENDATION

Recommended Motion: The City Commission authorize the City Manager to: 1) accept the $44,572 in grant funds, and 2) execute any other necessary documents, pending review by the City Attorney as to form and legality.

This Matter was Approved as Recommended on the Consent Agenda.

060185 **Edward Byrne Memorial Justice Assistance Grant Applications FY 2007 (NB)**

This item requests City Commission authorization to apply for and accept Edward Byrne Memorial Justice Assistance Grant funds in the amount of $20,000 for the Tutorial Assistance for At-Risk Youth Program and $11,018 for the Sexual Predator and Offender Tracking Program.

RECOMMENDATION *The City Commission authorize the City Manager to: 1) Apply to the Edward Byrne Memorial Justice Assistance Grant program for $31,018 in grant funds; 2) appropriate $11,063 from the Federal Law Enforcement Contraband Fund Trust Fund for the match; and 3) execute the grant application, grant award, and any other necessary documents, pending review by the City Attorney as to form and legality.*

This Matter was Approved as Recommended on the Consent Agenda.

GENERAL MANAGER FOR UTILITIES, CONSENT AGENDA ITEMS

060179 **Annual Contract for Coating System for Sanitary Sewer Manholes and Lift Stations (B)**

Staff recommends establishing an annual contract for protective coating system installation for the rehabilitiation of sanitary sewer manholes and lift stations in the wastewater collection system.

RECOMMENDATION *The City Commission: 1) authorize the Interim General Manager, or her designee, to execute a three year contract with Dallas 1 Construction & Development, Inc. for protective coating system installation for the rehabilitation of sanitary sewer manholes and lift stations, subject to the approval of the City Attorney as to form and legality; and 2) approve the issuance of a purchase order in an amount not exceeding budgeted amounts for each year of the contract, subject to the appropriation of funds for these services in each fiscal year of the contract.*

This Matter was Approved as Recommended on the Consent Agenda.

060179_20060626.pdf

060180 **Reimbursement for Oversizing of Water and Wastewater Facilities at Hailey Forest Condominiums (B)**

Reimburse the developer of Hailey Forest Condominiums for the oversizing of

W/WW facilities.

RECOMMENDATION *The City Commission authorize reimbursement to the Developer of Hailey Forest Condominiums, Pleiman Homes, Home Technology Construction Inc., for the oversizing of the water and wastewater facilities in an amount not to exceed $32,153.*

This Matter was Approved as Recommended on the Consent Agenda.

060180_20060626.pdf

060181 **Mail Inserter Equipment Lease (NB)**

Staff recommends leasing a remanufactured mail inserter from Pitney Bowes Credit Corporation.

RECOMMENDATION *The City Commission authorize the Interim General Manager or her designee to execute a five (5) year lease for a mail inserter system with Pitney Bowes Credit Corporation in an amount not to exceed $195,779.*

This Matter was Approved as Recommended on the Consent Agenda.

060182 **Williams Release of Easement (B)**

Staff is requesting approval of a Release of Easement to Marie M. Williams and her successors and assigns.

RECOMMENDATION *The City Commission: 1) approve the release of a platted public utility easement located at 1806 NW 10th Terrace, Gainesville, Florida; and 2) authorize the Mayor and Clerk of the Commission to execute the Release of Easement, substantially in the form on file, subject to approval by the City Attorney as to form and legality.*

This Matter was Approved as Recommended on the Consent Agenda.

060182_20060626.pdf

CITY ATTORNEY, CONSENT AGENDA ITEMS

CLERK OF THE COMMISSION, CONSENT AGENDA ITEMS

060178 **City Commission Minutes (B)**

RECOMMENDATION *The City Commission approve the minutes of June 8, 2006 (Special Workshop); and June 12, 2006 (Regular Meeting); as circulated.*

This Matter was Approved as Recommended on the Consent Agenda.

EQUAL OPPORTUNITY DIRECTOR, CONSENT AGENDA ITEMS

COMMITTEE REPORTS, CONSENT AGENDA ITEMS

AUDIT, FINANCE and LEGISLATIVE COMMITTEE, CONSENT

060145 **First Extension/Amendment to the Agreement for Professional Auditing Services between the City of Gainesville and Davis, Monk & Company and Ernst & Young LLP (B)**

RECOMMENDATION *The City Commission: 1) Approve the first extension/amendment to the agreement for professional auditing services with Davis, Monk & Company and Ernst & Young LLP; and 2) authorize the City Auditor to execute the first extension/amendment subject to the review of the City Attorney as to form and legality.*

This Matter was Approved as Recommended on the Consent Agenda.

060145_20060614.pdf

060146 **Report on the Status of Outstanding Audit Recommendations for June 2006 (B)**

RECOMMENDATION *The City Commission accept the City Auditor's report.*

This Matter was Approved as Recommended on the Consent Agenda.

060146_20060614.pdf

060147 **Quarterly Financial Report - Gainesville Regional Utilities (B)**

RECOMMENDATION *The City Commission receive the GRU Quarterly Financial Report as of March 31, 2006.*

This Matter was Approved as Recommended on the Consent Agenda.

060147_20060614.pdf
060147a_20060614.pdf
060147b_20060614.pdf

COMMUNITY REDEVELOPMENT AGENCY, CONSENT

060163 **Eastside Gateway Feature (B)**

RECOMMENDATION *The City Commission send a letter to the Petroleum Cleanup Manager at the Alachua County Department of Environmental Protection, requesting that the site be rescored in order to be given priority for clean up and redevelopment of the site.*

This Matter was Approved as Recommended on the Consent Agenda.

060163_20060619CRA.pdf

Passed The Consent Agenda

A motion was made by Commissioner Bryant, seconded by Commissioner Braddy, including all the preceding items marked as having been adopted on the Consent Agenda. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

END OF CONSENT AGENDA

ADOPTION OF THE REGULAR AGENDA

MOTION: Commissioner Bryant moved and Commissioner Braddy seconded to adopt the Regular Agenda with the following modifications.
(VOTE: 7-0, MOTION CARRIED)

MODIFICATIONS:

1. File #060138 - Proposed First Amendment to Interlocal Agreement between the City of Gainesville and the Gainesville Alachua County Regional Airport Authority - (additional language in recommendation suggested by the City Attorney's Office - to include authorization for the Mayor to execute the Interlocal Agreement).

2. File #060141- Update on Teleworking Consortium Findings - (Back-up submitted).

3. File #051093 - Kennedy Homes Properties - (Add to the Regular Agenda Under City Attorney for a status report).

4. File #060100 - Public Hearing to Approve the Campus Development Agreement - (Revised back-up submitted).

5. File #060177 - Charter Review Committee Final Report - Additional back-up

submitted - (Power Point).

Chair Hanrahan recognized Mark Goldstein who spoke to the matter.

CHARTER OFFICER UPDATES

CLERK OF THE COMMISSION

CITY MANAGER

060138 **Proposed First Amendment to Interlocal Agreement between the City of Gainesville and Gainesville Alachua County Regional Airport Authority (GACRAA) (B)**

This item is a proposed First Amendment to an existing Interlocal Agreement entered into by the City of Gainesville and GACRAA in January, 2004. The proposed First Amendment is driven by language contained in recent State of Florida enabling legislation for GACRAA stipulating that the definition of Airport and Airport Facilities be described by Interlocal Agreement between the two parties.

City of Gainesville Economic Development Director Erik Bredfeldt gave a presentation.

FIRST MOTION: Commissioner Donovan moved and Commissioner Lowe seconded to approve the recommendation.
(NO VOTE)
(NOTE: MOTION LATER WITHDRAWN)

Chair Hanrahan recognized Mark Goldstein, Gainesville/Alachua County Regional Airport Director Rick Crider and GACRAA Chair Jim Stringfellow who spoke to the matter.

SECOND MOTION (AMENDMENT MOTION): Commissioner Braddy moved and Commissioner Donovan seconded that any action of eminent domain takings, be subject to final approval by the Gainesville City Commission.
(NO VOTE)
(NOTE: MOTION WAS LATER WITHDRAWN)

TABLE THE ITEM MOTION: Commissioner Lowe moved and Commissioner Donovan seconded to: 1) Table this item until later in the meeting; and 2) ask the City Attorney to modify the First Amendment to the Interlocal Agreement to incorporate that the City of Gainesville have approval powers for eminent domain.
(VOTE: 5-2, Mayor Hanrahan and Commissioner Bryant - No, MOTION CARRIED)

NOTE: THIS ITEM WAS TAKEN FROM THE TABLE DURING THE EVENING PORTION OF THE AGENDA.

WAIVER OF RULES: Commissioner Bryant moved Commissioner Lowe seconded to waive the rules to amend the agenda to hear the Airport Item before File #060177 - Charter Review Committee (Time Certain 7:00 PM).
(VOTE: 7-0, MOTION CARRIED)

Chair Hanrahan recognized Walter Willard who spoke to the matter.

TAKE ITEM FROM THE TABLE MOTION: Commissioner Bryant moved and Commissioner Lowe seconded to take this item from the table.
(VOTE: 7-0, MOTION CARRIED)

WITHDRAWAL OF PREVIOUS MOTIONS: Commissioner Donovan and Commissioner Braddy withdrew the previous motions (Original First and Second Motions).

MAIN MOTION: Commissioner Braddy moved and Commissioner Lowe seconded to move the adoption of the First Amendment to the existing Interlocal Agreement (Revised amendment with a new Section 11 regarding eminent domain).
(VOTE: 7-0, MOTION CARRIED)

CITIZEN COMMENT TO THE MOTION: Chair Hanrahan recognized Richard Selwach, Walter Willard and Penny Wheat who spoke to the matter.

Gainesville/Alachua County Regional Airport Director Rick Crider and GACRAA Chair Jim Stringfellow made comments.

RECOMMENDATION

Recommended Motion: The City Commission: 1) hear a presentation on the proposed First Amendment to the existing City of Gainesville and GACRAA Interlocal Agreement; 2) authorize the Mayor to execute the First Amendment; and 2) adopt the First Amendment to the existing Interlocal Agreement.

Alternative Recommendation A: The City Commission takes no action.

A motion was made by Commissioner Braddy, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Approved, as shown above (Main Motion). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060138A_200606261300.pdf
060138B_200606261300.pdf

060139 **Florida Food Service, Inc. - Proposed Amendment to Option Contract for Purchase and Sale of Land (B)**

This item is intended to amend an Option Contract for Purchase and Sale of

Land with Florida Food Service previously approved by the City Commission. The amendment seeks to address potential environmental mitigation issues that may arise regarding development of the subject property.

City of Gainesville Economic Development Director Erik Bredfeldt gave a presentation.

RECOMMENDATION

Recommended Motion: The City Commission: 1) approve the Amendment to Option Contract for Purchase and Sale of Land with Florida Food Service, Inc. provided that disbursements to GACRAA of sale proceeds associated with the subject property be designated for the potential mitigation associated with the pre-existing environmental condition; 2) authorize the City Manager to sign the contract following approval by the City Attorney as to form and legality; 3) authorize the City Manager to negotiate a reservation agreement with GACRAA; and 4) authorize the Mayor and Clerk of the Commission to execute the closing documents.

Alternative Recommendation A: The City Commission takes no action.

A motion was made by Commissioner Bryant, seconded by Commissioner Braddy, that this matter be Approved as Recommended. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060139_200606261300.pdf

050915 **Gainesville Regional Airport - Request for Recording of Conservation Easement (B)**

This item involves staff follow up on a request from the Gainesville Regional Airport regarding the proposed recording of a conservation easement in favor of the St. Johns River Water Management District on approximately 129 acres of the Gum Root Swamp property. In furtherance of this request, proposed conservation easement language and the supporting environmental report, have been provided to City staff for review.

City of Gainesville Economic Development Director Erik Bredfeldt and Senior Assistant City Attorney Charles Hauck gave presentations.

FIRST MOTION: Commissioner Bryant moved and Commissioner Braddy seconded to approve the recommendation.
(2-5, Commissioners Bryant and Braddy - Yes; and Commissioners Henry, Donovan, Lowe, Mastrodicasa and Mayor Hanrahan - No, MOTION FAILED)

Airport Consultant Jeff Breeden and Airport Director Rick Crider made comments.

SECOND MOTION (MAIN MOTION): Mayor-Commissioner Pro Tem Lowe moved

and Commissioner Mastrodicasa seconded to: 1) Approve Alternative Recommendation A; 2) authorize the City Manager to work out a payment schedule with the Airport Authority; and 3) if the Airport has another less expensive, more desirable alternative they would like to seek with the Water Management District, they can.
(VOTE: 6-1, Commissioner Bryant - No, MOTION CARRIED)

Chair Hanrahan recognized Mark Goldstein and GACRAA Member Jon Morris who spoke to the matter.

RECOMMENDATION

Recommended Motion: The City Commission: 1) hear a brief presentation on the proposed recording on the conservation easement; and 2) approve the proposed recording of the conservation easement in favor of the St. Johns River Water Management District subject to approval by the City Attorney and authorize the Mayor to execute and the City Clerk to attest the pertinent conservation easement documents.

Alternative Recommendation A: The City Commission 1) approve the proposed recording of the conservation easement in favor of the St. Johns River Water Management District subject to compensation provided to the City in the amount of $118,000 or the proportionate share (25%) of the current appraised value, whichever is less, subject to approval by the City Attorney and authorize the Mayor to execute and the City Clerk to attest the pertinent conservation easement documents.

Alternative Recommendation B: The City Commission takes no action.

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Mastrodicasa, that this matter be Approved, as shown above (Main Motion). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Nay: Rick Bryant

050915A_200606261300.pdf
050915B_200606261300.pdf

060186 **Gainesville Airport Authority (NB)**

Gainesville/Alachua County Regional Airport Authority Chair Jim Stringfellow gave a presentation.

RECOMMENDATION *The City Commission hear a presentation from Jim Stringfellow recognizing the outstanding services of Gainesville Fire/Rescue, Gainesville Police Department and the Regional Transit System.*

Heard

060141 **Update on Teleworking Consortium Findings by Rita Mace Walston, General Manager (B)**

The Teleworking Consortium staff performed an evaluation of the City of Gainesville's remote access needs, and is prepared to give the City Commission an update on their findings.

Telework Consortium General Manager Rita Mace Walston gave a presentation.

MOTION: 1) Direct the City Manager to create an internal Telework Task Force which includes representatives from the four stakeholders; IT, HR, Management, End-Users and others that he may deem necessary for the purpose of moving forward with a Telework Phase One program (both General Government and GRU); 2) identify department or group within the City of Gainesville government appropriate for a concurrent Distributed Work Phase One program; 3) select technology and collaboration tools that will meet Phase One needs; 4) conduct information-gathering sessions to understand mission, workflow, and culture requirements of the Phase One groups; 5) develop timeline, budget, objectives and measurements for Phase One; and 6) ask staff to bring back costs for a first phase study and bring that back to the City Commission in the context of the budget.

RECOMMENDATION *The City Commission receive a report and written evaluation from Rita Mace Walston, General Manager of the Teleworking Consortium.*

A motion was made by Commissioner Braddy, seconded by Commissioner Donovan, that this matter be Approved as shown above (See Motion). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060141_200606261300.pdf
060141a_200606261300.pdf

GENERAL MANAGER FOR UTILITIES

CITY ATTORNEY

051093 **Purchase of Kennedy Homes Property for the South East Gainesville Renaissance Initiative (SEGRI) (NB)**

City Attorney Marion Radson gave a presentation.

RECOMMENDATION *The City Commission hear status report from the City Attorney on the acquisition process.*

Heard

051093_20060410.pdf

CITY AUDITOR

EQUAL OPPORTUNITY DIRECTOR

COMMITTEE REPORTS (PULLED FROM CONSENT)

060130 **Fiscal Year 2006 Operating Funds Quarterly Monitoring Report - Quarter Ending March 31, 2006 (B)**

Ironwood Golf Course Deficit

Administrative Services Director Becky Rountree made comments.

MOTION: Commissioner Braddy moved and Commissioner Bryant seconded to refer the issue of the operation and financial outlook of Ironwood Golf Course to the Recreation, Cultural Affairs and Public Works Committee.

See following referral File #060203.

RECOMMENDATION *The City Commission receive the quarterly budget monitoring report for the quarter ended March 31, 2006.*

Discussed

060130_20060614.pdf

060203 **Ironwood Golf Course Issues (NB)**

Commissioner Bryant pulled this item from the Consent Agenda (File #060130 General Government's Quarterly Monitoring Report) to discuss the deficit at Ironwood.

RECOMMENDATION *The City Commission refer the issue of the operation and financial outlook of Ironwood Golf Course to the Recreation, Cultural Affairs and Public Works Committee and bring back a report to the City Commission.*

A motion was made by Commissioner Braddy, seconded by Commissioner Bryant, that this matter be Referred to the Recreation, Cultural Affairs and Public Works Committee, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jeanna Mastrodicasa and Scherwin Henry
Nay: Jack Donovan

PUBLIC WORKS COMMITTEE

PERSONNEL & ORGANIZATION STRUCTURE COMMITTEE

PUBLIC SAFETY COMMITTEE

REGIONAL UTILITIES COMMITTEE

ADVISORY BOARDS/COMMITTEES (APPOINTMENTS/REPORTS)

OUTSIDE AGENCIES

MEMBERS OF THE CITY COMMISSION

060187 **Mayor Pegeen Hanrahan - Charitable Landlords (B)**

RECOMMENDATION *The City Commission refer the issue of landlord licenses for charitable landlords to the Community Development Committee.*

A motion was made by Commissioner Bryant, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Referred to the Community Development Committee, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060187_20060626.pdf

COMMISSION COMMENTS (if time available)

Mayor Pegeen Hanrahan

FCAT Scores in Gainesville

060204 **FCAT Scores and Graduation Rates in Gainesville (NB)**

RECOMMENDATION *The City Commission invite the Alachua County School Board to give a presentation on school FCAT scores and graduation rates in Gainesville especially in comparison to other counties, and with race and gender information.*

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Bryant, that this matter be Referred to the City Manager, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

Commissioner Scherwin Henry

Young American Park - Appreciation to Recreation and Parks Director David Flaherty for his assistance in solving a problem during a picnic.

WAIVER OF RULES

Commissioner Lowe moved and Commissioner Bryant seconded to waive the rules to reconvene the meeting at 6:00 PM.
(VOTE: 7-0, MOTION CARRIED)

RECESS - 5:07 PM

RECONVENE - 6:04 PM

PLEDGE OF ALLEGIANCE (5:30pm)

PROCLAMATIONS/SPECIAL RECOGNITIONS

CITIZEN COMMENT

Nathan Skop

Repair work done by Joyner Construction - Monticello Homeowners Association vs. Joyner Construction.

See following File #060205.

060205 **Monticello Owners Association, Inc. vs. Joyner Construction Company (B)**

RECOMMENDATION *The City Commission hear a presentation from Nathan Skop*

and place back-up submitted on file.

A motion was made by Commissioner Donovan, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Referred to the City Manager, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Edward Braddy

Ruby Williams

Porter's Oaks Area Crime

See file following File #060206.

060206 **Porter's Oaks Area Crime (B)**

Ms. Ruby Williams brought this issue up during Citizen's Comment at the June 26, 2006 City Commission Meeting and referenced a letter provided to the City Commission by Janie Williams, President of the Porter's Neighborhood Crime Watch.

NOTE: Commissioner Scherwin Henry read the letter from Ms. Janie Williams into the record.

This issue was referred to the City Manager without objection.

RECOMMENDATION *The City Commission hear a presentation from Ms. Ruby Williams and place back-up submitted on file.*

Referred to City Manager

Michael Geison

GPD Complaint

Kent Sokmensuer

Historic District Issues

Walter Willard

Various Issues

Pat Fitzpatrick

Thanks to Commissioners for work on the Homeless issue.

Stephen Boyes

RTS Transfer Facility Site Plan

Hoch Shitama

RTS Transfer Facility Site Plan

Don Ahrens

RTS Transfer Facility Site Plan

Ruth Steiner

RTS Transfer Facility Site Plan

060207 **RTS Transfer Facility Site Plan at Depot Avenue and Main Street (B)**

Several Business owners in the area of the new RTS Transfer Facility site, came before the City Commission with concerns.

NOTE: This item was referred to the City Manager without objection.

RECOMMENDATION *The City Commission hear presentations from the business owners in the area of Depot Avenue and Main Street and take appropriate action.*

Referred to City Manager

WAIVER OF RULES

WAIVER OF RULES: Commissioner Bryant moved Commissioner Lowe seconded to waive the rules to amend the agenda to hear the Airport Item (File #060138) that was placed on the table during the afternoon portion of the agenda, before File #060177 - Charter Review Committee (Time Certain 7:00 PM).
(VOTE: 7-0, MOTION CARRIED)

FILE # 060138 - First Amendment to Interlocal Agreement between the City of Gainesville and Gainesville Alachua County Regional Airport Authority (GACRAA)

Note: Discussion of this item began in the afternoon and all action taken is listed in that agenda item.

060177 **CHARTER REVIEW COMMITTEE FINAL REPORT(B)**

Charter Review Committee Chair Penny Wheat gave a presentation.

FIRST MOTION: Mayor-Commissioner Pro Tem Lowe moved and Commissioner Bryant seconded to refer to the City Attorney and the Clerk of the Commission to provide a timeline and options for reducing the transition period between the election and "swearing-in" of City Commissioners.
(VOTE: 7-0, MOTION CARRIED)

See following referral File #060210.

SECOND MOTION: Mayor-Commissioner Pro Tem Lowe moved and Commissioner Bryant seconded to direct staff to work with the Supervisor of Elections to identify the potential for additional early voting locations including the UF campus.
(VOTE: 7-0, MOTION CARRIED)

See following referral File #060211.

Chair Hanrahan recognized Walter Willard who spoke to the matter.

THIRD MOTION: Mayor-Commissioner Pro Tem Lowe moved and Commissioner Braddy seconded to refer the issue of State authorization of instant run-off voting (IRV) and IRV certification to the Audit, Finance and Legislative Committee to consider as part of the legislative agenda.
(VOTE: 7-0, MOTION CARRIED)

See following referral File #060212.

Chair Hanrahan recognized Mark Goldstein and Charter Review Committee Charles Grapski and Dr. Michael Martinez who spoke to the matter.

NOTE: The Mayor requested that the Clerk of the Commission bring the Charter Review Committee Report back to the City Commission during the budget process and discuss with staff if there are other pieces that we might like to enter into, and if so, what it might cost in terms of staff time and resources. This item was referred to the Clerk without objection.

RECOMMENDATION *Hear from the Chair the final report of the Charter Review Committee.*

Approved, as shown above

060177a_0626061300.pdf
060177b_0626061300.pdf
060177c_0626061300.pdf
060177d_0626061300.pdf
060177e_0626061300.pdf
060177f_0626061300.pdf
060177g_0626061300.pdf
060177i_0626061300.pdf
060177h_0626061300.pdf
060177j_0626061300.pdf

060210 **Reduction of Transition Period Between Election and Swearing-In (NB)**

NOTE: This item was also referred to the City Attorney and was added to his referral list.

RECOMMENDATION *The City Commission direct the City Attorney and the Clerk of the Commission to provide a timeline and options to reduce transition period between the election and "swearing-in" of City Commissioners.*

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Bryant, that this matter be Referred to the Clerk of the Commission, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060211 **Additional Early Voting Locations (NB)**

RECOMMENDATION *The City Commission direct staff to work with the Supervisor of Elections to identify the potential for additional early voting locations including the UF campus.*

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Bryant, that this matter be Referred to the Clerk of the Commission, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060212 **Instant Run-Off Voting (IRV) (NB)**

RECOMMENDATION *The City Commission refer the issue of State authorization of*

instant run-off voting (IRV) and IRV certification to the Audit, Finance and Legislative Committee to consider as part of the legislative agenda.

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Braddy, that this matter be Referred to the Audit, Finance and Legislative Committee, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

PUBLIC HEARINGS

060100 **Public Hearing to Approve the Campus Development Agreement for the University of Florida Campus Master Plan, 2005 - 2015 (B)**

In accordance with Subsection 1013.30(15), Florida Statutes, the University of Florida must enter into an Agreement with their host local government(s) that addresses level-of-service requirements, deficiencies and campus impacts on public services and facilities. The host local government must adopt the Agreement in a manner consistent with the requirements of Chapter 163.3225.

NOTE: Modified back-up was submitted.

RECOMMENDATION

Recommended Motion: The City Commission: 1) review the proposed Campus Development Agreement; and 2) hold a public hearing; and 3) authorize the Mayor and the Clerk of the Commission to execute the Campus Development Agreement subject to the City Attorney's approval as to form and legality.

Alternative Recommendation A: The City Commission takes no action.

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Bryant, that this matter be Approved as Recommended with Modification(s). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060100_200607101300.PDF

ADOPTION READING-ROLL CALL REQUIRED

050913 **LAND USE - PHOENIX SUBDIVISION (B)**

Ordinance No. 0-06-49, Petition 16LUC-06PB
An ordinance amending the City of Gainesville 2000-2010 Comprehensive Plan, Future Land Use Map; by changing the land use category of certain property from "Residential Medium-Density (8-30 units per acre)" to "Recreation"; located in the vicinity of 2611 Southwest 31st Place; providing a severability clause; providing a repealing clause; and providing an effective date.

City of Gainesville Planning Manager Ralph Hilliard gave a presentation.

Chair Hanrahan recognized Walter Willard who spoke to the matter.

RECOMMENDATION *The City Commission: 1) approve Petition 16LUC-06PB; and 2) adopt the proposed ordinance.*

A motion was made by Commissioner Bryant, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Approved (Petition) and Adopted on Adoption Reading. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Edward Braddy

050913a_200606261300.pdf
050913_20060626.pdf
050913_20060626.pdf

050914 **REZONING - PHOENIX SUBDIVISION (B)**

Ordinance No. 0-06-50, Petition No. 17ZON-06PB
An ordinance of the City of Gainesville, Florida, amending the Zoning Map Atlas and rezoning certain property within the City from "Planned Development District" to "PS: Public services and operations district"; to allow a public park without approval of a preliminary development plan; located in the vicinity of 2611 Southwest 31st Place; providing a severability clause; providing a repealing clause; and providing an effective date.

RECOMMENDATION *The City Commission: 1) approve Petition No. 17ZON-06PB; and 2) adopt the proposed ordinance.*

A motion was made by Commissioner Henry, seconded by Commissioner Donovan, that this matter be Approved (Petition) and Adopted on Adoption Reading. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Edward Braddy

050914a_200606261300.pdf
050914_20060626.pdf
050914_20060626.pdf

ORDINANCES, 1ST READING- ROLL CALL REQUIRED

051162 **CODE ENFORCEMENT BOARD FINES (B)**

Ordinance No. 0-06-65
An ordinance of the City of Gainesville, Florida, relating to Code Enforcement Board fines; amending subsection (b) of section 30-388.1, of the City of Gainesville Code of Ordinances, providing for the maximum fines permitted by section 162.09(2)(d), Florida Statutes; providing directions to the codifier; providing a severability clause; providing a repealing clause; and providing an immediate effective date.

RECOMMENDATION *The City Commission adopt the proposed ordinance.*

A motion was made by Commissioner Donovan, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Adopted on First Reading (Ordinance). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Edward Braddy

051162_200605221300.pdf
051162a0710061300.pdf

060017 **LAND DEVELOPMENT CODE AMENDMENT ALLOWING COMPOUND USES BY RIGHT IN THE GENERAL OFFICE DISTRICT (B)**

Ordinance No. 0-06-55; Petition No. 43TCH-06 PB
An ordinance of the City of Gainesville, Florida, amending the Land Development Code, relating to compound uses in the OF (General office) district; amending section 30-23, adding to the definition of compound use as a use allowed by right in the OF (general office) zoning district; amending section 30-59, adding compound uses as a use by right and adding residential uses up to 20 units per acre in the Office (OR and OF) districts; providing directions to the codifier; providing a severability clause; providing a repealing clause; and providing an immediate effective date.

RECOMMENDATION *The City Commission (1) approve Petition No. 43TCH-06 PB and (2) adopt the proposed ordinance.*

A motion was made by Commissioner Donovan, seconded by Commissioner Henry, that this matter be Approved (Petition) and Adopted on First Reading (Ordinance). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Edward Braddy

060017a_0626061300.pdf
060017_200606261300.pdf

060058 **PROPOSED AMENDMENTS TO CHAPTER 8, CODE OF ORDINANCES (B)**

Ordinance No. 0-06-67
An ordinance of the City of Gainesville, Florida; amending Chapter 8 of the Code of Ordinances of the City of Gainesville relating to discrimination; amending Section 8-3 and Section 8-24 to include the Airport Authority as a person subject to the ordinance; providing directions to the codifier; providing a severability clause; providing a repealing clause; and providing an immediate effective date.

RECOMMENDATION *The City Commission adopt the proposed ordinance.*

A motion was made by Mayor-Commissioner Pro Tem Lowe, seconded by Commissioner Donovan, that this matter be Adopted on First Reading (Ordinance). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Edward Braddy

060058_0626061300.pdf

060080 **ALAMAR GARDENS, LLC ANNEXATION (B)**

Ordinance No. 0-06-61
An Ordinance of the City of Gainesville, Florida, annexing a portion of the City of Gainesville Reserve Area Pursuant to Chapter 90-496, Special Acts, Laws of Florida, as amended by Chapter 91-382 and Chapter 93-347, Special Acts, Laws of Florida, known as the Alachua County Boundary Adjustment Act; making certain findings; including within the corporate limits of the City of Gainesville, Florida, that certain compact and contiguous area comprised of Tax Parcels 06680-001-000, 06745-002-000, and 06745-002-001, and generally located south of the City limits and Tax Parcel 06745-000-000, west of the vicinity of SW 42nd Street, north of SW 20th Avenue, and east of the City limits; providing for inclusion of the area in Appendix I of the City Charter; providing for land use and zoning regulations; providing for persons engaged in any occupation, business, trade or profession within the area; providing directions to the City Manager and Clerk of the Commission; providing a severability clause; and providing an immediate effective date.

RECOMMENDATION *The City Commission adopt the proposed ordinance.*

A motion was made by Commissioner Donovan, seconded by Commissioner Braddy, that this matter be Adopted on First Reading (Ordinance). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Craig Lowe

060080_0626061300.pdf

060087 **SEXUAL OFFENDERS/PREDATORS (B)**

Ordinance 0-06-66
An ordinance of the City of Gainesville relating to sexual offenders and sexual predators; adding San Felasco County Park, located within the city limits, to the list of parks that prohibits child sexual offenders and predators from living within 2,500 feet of the park; correcting scrivener's errors; providing directions to the codifier; providing a severability clause; providing a repealing clause and providing an immediate effective date.

RECOMMENDATION *The City Commission adopt the proposed ordinance.*

A motion was made by Commissioner Braddy, seconded by Commissioner Bryant, that this matter be Adopted on First Reading (Ordinance). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Absent: Craig Lowe

060087a_0626061300.pdf
060087_200606121300.pdf

ORDINANCES, 2ND READING- ROLL CALL REQUIRED

RESOLUTIONS- ROLL CALL REQUIRED

060184 **Refunding of Utilities System Revenue Bonds, 1996 Series A; Financing for Construction; and Amendment of Certain Interest Rate Swap Transactions (B)**

Staff recommends the adoption the attached resolution (Authorizing Resolution).

GRU Chief Financial Officer Jennifer Hunt and GRU Attorney Skip Manasco gave presentations.

REVISION: Revised Exhibit B

Chair Hanrahan recognized Walter Willard and Mark Goldstein who spoke to the matter.

ADDITIONAL MOTION (REFERRAL): Commissioner Bryant moved and Mayor-Commissioner Pro Tem Lowe seconded to refer the GRU financial and debt service issues to the Audit, Finance and Legislative Committee.
(VOTE: 7-0, MOTION CARRIED)

See following referral File #060213.

(SECOND REFERRAL): Commissioner Bryant moved and Mayor-Commissioner Pro Tem Lowe seconded to refer the issues related to GRU position overfills to the Personnel and Organizational Structure Committee.
(VOTE: 7-0, MOTION CARRIED)

See following referral File #060214.

RECOMMENDATION

The City Commission: 1) Adopt the attached resolution (Authorizing Resolution), which: a) incorporates by reference and adopts, and authorizes the execution and delivery of, a Seventeenth Supplemental Utilities System Revenue Bond Resolution which authorizes the issuance, sale, execution and delivery of $53,305,000 in aggregate principal amount of the City's tax-exempt Variable Rate Utilities System Revenue Bonds, 2006 Series A (2006 Series A Bonds) in order to (i) current refund a portion of the City's Utilities System Revenue Bonds, 1996 Series A (1996 Series A Bonds) and (ii) provide monies needed for payment of Costs of Acquisition and Construction (capital projects);
b) approves the form, and authorizes the execution and delivery, of a contract of purchase between the City and Goldman, Sachs & Co., as sole underwriter; c) approves the form, and authorizes the execution and delivery, of a remarketing agreement between the City and Goldman, Sachs & Co., pursuant to which Goldman, Sachs & Co. will serve as the initial remarketing agent for the 2006 Series A Bonds; d) approves the form, and authorizes the execution and delivery, of a tender agency agreement between the City and U.S. Bank Trust National Association (who currently serves as Trustee for our Utilities System Revenue Bonds), pursuant to which U.S. Bank Trust will serve as the initial tender agent for the 2006 Series A Bonds; e) approves the form, and authorizes the execution and delivery, of a standby bond purchase agreement between the City and SunTrust Bank, pursuant to which SunTrust Bank initially will provide liquidity support for any 2006 Series A Bonds that are tendered for purchase and not remarketed;
f) approves the form, and authorizes the execution and delivery, of an escrow deposit agreement relating to the current refunding of a portion of the 1996 Series A Bonds, authorizes the deposit of bond proceeds and certain other amounts into the escrow account to be established pursuant to said escrow deposit agreement, authorizes the investment of such monies in United States Treasury Securities - State and Local Government Series and ratifies the subscription of such United States Treasury Securities; g) authorizes the authentication and delivery of the 2006 Series A Bonds; h) approves the form and use of the official statement relating to the 2006 Series A Bonds; i) authorizes the registration or qualification of the 2006 Series A Bonds under the blue sky laws of various states; j) in the event that the 2006 Series A

Bonds are converted to the auction mode, the term mode or the fixed mode, approves the form, and authorizes the execution and delivery, of a continuing disclosure certificate; k) authorizes certain City officials to take other actions in connection with the issuance, sale and delivery of the 2006 Series A Bonds; l) delegates the authority to extend the term of any facility providing liquidity support for the 2006 Series A Bonds or to procure another facility in substitution therefore; and m) delegates the authority to remove the remarketing agent and/or the tender agent for the 2006 Series A Bonds and to appoint successor(s) therefore. 2) Authorize an amendment of the interest rate swap transaction between the City and Bear Stearns Financial Products Inc. (BSFP) entered into on September 21, 2005 to allow for the index upon which the floating rate payable to the City thereunder is based (the floating rate option) to be changed if the financing team decides that it is beneficial to the Utility to do so, in order to lower the debt service expected to be paid on the City's Variable Rate Utilities System Revenue Bonds, 2005 Series C (2005 Series C Bonds); 3) Authorize an amendment of the interest rate swap transaction between the City and Goldman Sachs Mitsui Marine Derivative Products, L.P. (GSMMDP) entered into on September 21, 2005 to allow for the floating rate option thereunder to be changed if the financing team decides that it is beneficial to the Utility to do so, in order to lower the debt service expected to be paid on the 2006 Series A Bonds; and 4) Authorize the Clerk of the Commission, the General Manager and other Authorized Officers of the City (as defined in the City's Amended and Restated Utilities System Revenue Bond Resolution) to execute such documents as may be necessary to proceed with the transactions authorized above, and to take such other actions as may be necessary or advisable to proceed with such transactions in accordance with this City Commission authorization.

A motion was made by Commissioner Braddy, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Adopted (Resolution), as revised. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060184b_20060626.pdf
060184c_20060626.pdf
060184d_20060626.pdf
060184e_20060626.pdf
060184g_20060626.pdf
060184f_20060626.pdf
060184_20060626.pdf
060184_20060626.pdf

060213 **GRU Financial and Debt Service Issues (NB)**

RECOMMENDATION *The City Commission refer the issue of GRU financial and debt service issues to the Audit, Finance and Legislative Committee.*

A motion was made by Commissioner Bryant, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Referred to the Audit, Finance and Legislative Committee, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060214 **GRU Position Overfills and Personnel Issues (NB)**

RECOMMENDATION *The City Commission refer the issue of GRU position overfills and other personnel issues to the Personnel and Organizational Structure Committee.*

A motion was made by Commissioner Bryant, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Referred to the Personnel and Organizational Structure Committee, due back on December 26, 2006. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060131 **Second Amendment to the FY 2006 General Government Financial and Operating Plan (B)**

RECOMMENDATION *The City Commission adopt the resolution.*

A motion was made by Commissioner Braddy, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Adopted (Resolution). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060131_20060626.pdf

PLAN BOARD PETITIONS

060110 **Amend Future Land Use from MUL to PUD (B)**

Petition 36LUC-06PB. Causseaux & Ellington, Inc., agent for Gatorwood Apartments, LLC. Amend the City of Gainesville Future Land Use Map from MUL (Mixed-Use Low-Intensity: 8-30 units per acre) to PUD (Planned Use District). Located at 2337 Southwest Archer Road. Related to Petition 37PDV-06PB.

City of Gainesville Planner Bedez Massey and Agent for the Developer Gerry Dedenbach gave presentations.

RECOMMENDATION

City Plan Board to City Commission - The City Commission approve Petition 36LUC-06PB with staff conditions, and modify Condition 12 of the staff report to read as follows: A maximum of three driveway connections shall be allowed onto public right-of-way, one from Old Archer Road and two from Southwest 23rd Street, subject to approval by the relevant regulating authorities. Plan Board vote: 4-0.

Staff to Plan Board - Approve Petition 36LUC -06PB with staff conditions.

A motion was made by Commissioner Braddy, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Approved (Petition) with Staff Conditions. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060110a_200606261300.pdf
060110b_200606261300.pdf

060111 **Rezone Property from MU-1 to PD (B)**

Petition 37PDV-06PB. Causseaux & Ellington, Inc., agent for Gatorwood Apartments, LLC. Rezone property from MU-1 (Mixed use low intensity district) to PD (Planned development) for a residential, mixed use development. Located at 2337 Southwest Archer Road. Related to Petition 36LUC-06PB.

City of Gainesville Planner Bedez Massey and Agent for the Developer Gerry Dedenbach gave presentations.

RECOMMENDATION

City Plan Board to City Commission - The City Commission approve Petition 37PDV-06PB with staff conditions, and modify Condition 14 of the staff report to read as follows: The total number of vehicle parking spaces provided shall not exceed one per bedroom. Plan Board vote 4-0.

Staff to City Plan Board - Approve Petition 37PDV-06PB with staff conditions.

A motion was made by Commissioner Braddy, seconded by Mayor-Commissioner Pro Tem Lowe, that this matter be Approved (Petition) with Staff Conditions. The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Craig Lowe, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry

060111a_200606261300.pdf
060111b_200606261300.pdf

060144 **Extension of Time for Park Central Holdings (B)**

Petition 10PDV-04 PB. Quasi-Judicial. Gerry Dedenbach, AICP, agent for Park Central Holdings of Gainesville, LLC. Request for a one-year extension of time (to August 2007) for the final development plan to be completed. Located in the 700 block of Northwest 13th Street.

WAIVER OF RULES: Mayor-Commissioner Pro Tem Lowe moved and Commissioner Braddy seconded to waive the rules to extend the meeting to no later than 11:20 PM.
(VOTE: 6-0, Commissioner Bryant - Absent)

Agent for the Developer Gerry Dedenbach gave a presentation.

Chair Hanrahan recognized Mark Goldstein who spoke to the matter.

City of Gainesville Chief of Current Planning Lawrence Calderon and Planning Manager Ralph Hilliard made comments.

WAIVER OF RULES: Mayor-Commissioner Pro Tem Lowe moved and Commissioner Henry seconded to waive the rules to extend the meeting to 11:30 PM.

Chair Hanrahan recognized Developer John Fleming who spoke to the matter.

RECOMMENDATION *City Plan Board to City Commission - The City Commission approve the extension of time. Plan Board vote 4-0.*

Staff to Plan Board - Approve

Alternative Recommendation: Disapprove the requested extension of time.

A motion was made by Commissioner Braddy, seconded by Commissioner Henry, that this matter be Approved (Petition). The motion carried by the following vote:

Votes: Aye: Pegeen Hanrahan, Edward Braddy, Rick Bryant, Jack Donovan, Jeanna Mastrodicasa and Scherwin Henry
Nay: Craig Lowe

060144_200606261300.pdf
060144_200606261300.pdf
060144_20060626.pdf

DEVELOPMENT REVIEW BOARD PETITIONS

SCHEDULED EVENING AGENDA ITEMS

UNFINISHED BUSINESS

COMMISSION COMMENT

CITIZEN COMMENT

There were no citizens who wished to speak at this time.

ADJOURNMENT - 11:29 PM

Kurt M. Lannon, Clerk of the Commission

APPENDIX B

Gainesville Regional Airport
Alachua County, Florida

Environmental Assessment
Description of Affected Environment

February 6, 2004

Prepared for:

Reynolds, Smith and Hills, Inc.
10748 Deerwood Park Boulevard South
Jacksonville, Florida 32256

Submitted by:

BIRKITT ENVIRONMENTAL SERVICES, INC.

110 South Edison Ave.
Tampa, Florida 33606
(813) 259-1085
(813) 259-1086, fax

Gainesville Regional Airport
Alachua County, Florida
Environmental Assessment
Description of Affected Environment

Table of Contents

1.0 Introduction 1

2.0 Site Description 1

3.0 Geology and Soils 2

4.0 Biotic Communities 4
- 4.1 Biotic Communities On-site
- 4.2 Habitat Assessment

5.0 Threatened, Endangered, and Sensitive Species 7

6.0 Wetlands 11
- 6.1 Wetlands Classification
- 6.2 Wetlands Jurisdictional Delineation

7.0 Literature Cited 18

List of Figures

Figure 1. Location map of the Gainesville Regional Airport, Alachua County, Florida.
Figure 2. Aerial photograph (2003) of the Gainesville Regional Airport, Alachua County, Florida.
Figure 3. Historical aerial photograph (1949) of the Gainesville Regional Airport, Alachua County, Florida.
Figure 4. Historical aerial photograph (1971) of the Gainesville Regional Airport, and eastern environs, Alachua County, Florida.
Figure 5. Historical aerial photograph (1985) of the Gainesville Regional Airport, and eastern environs, Alachua County, Florida.
Figure 6. Historical aerial photograph (1991) of the Gainesville Regional Airport, and eastern environs, Alachua County, Florida.
Figure 7. Boundary of the runway expansion area and property boundary of the Gainesville Regional Airport, Alachua County, Florida.
Figure 8. Soil series occurring on the runway expansion area and on the Gainesville Regional Airport, Alachua County, Florida.

Figure 9. Florida Land Use, Cover and Forms Classification System (FLUCCS) types occurring on the Gainesville Regional Airport, Alachua County, Florida.
Figure 10. Alachua County wetlands types occurring in the runway expansion area and on the Gainesville Regional Airport, Alachua County, Florida.
Figure 11. Preliminary wetlands delineation in the runway expansion area and on the Gainesville Regional Airport, Alachua County, Florida.
Figure 12. Locations of gopher tortoise burrows in the runway expansion area and on the Gainesville Regional Airport, Alachua County, Florida.
Figure 13. Representative photographs of gopher tortoise burrows gopher tortoise burrows in the runway expansion area on the Gainesville Regional Airport, Alachua County, Florida.

List of Tables

Table 1-1. Soil series mapped on the Gainesville Regional Airport study site.
Table 1-2. Wildlife species observed on the Gainesville Regional Airport study site.
Table 1-3. Federal and state regulatory status of threatened, endangered and sensitive species observed in Alachua County, Florida.
Table 1-4. Gopher tortoise observations on the airport study site.
Table 1-5. Wetlands classification and acreages by National Wetlands Inventory mapping unit on the Gainesville Regional Airport property.
Table 1-6. Dominant wetland species observed on the Gainesville Airport site (May 2003), Alachua County, FL.

List of Attachments

Attachment 1 FNAI standard survey
Attachment 2 List of Alachua County Federally Listed Species
Attachment 3 List of Florida's Endangered Species, Threatened Species, and Species of Special Concern
Attachment 4 Alachua County Breeding Bird Atlas

This report should be cited as: Birkitt Environmental Services, Inc. 2004. Gainesville Regional Airport Environmental Assessment, Description of Affected Environment; prepared for Reynolds, Smith and Hills, Inc., Jacksonville, FL. Tampa, FL. 19 pages plus attachments.

1.0 Introduction

Birkitt Environmental Services, Inc. (BES) prepared the following sections of the Draft Environmental Assessment for the Gainesville Regional Airport Expansion Project: Affected Environment - Soils, Biotic Communities, Threatened, Endangered and Sensitive Species, and Wetlands to support the Environmental Assessment under preparation by Reynolds, Smith, and Hill.

The airport development area and surrounding property was evaluated using existing data sources, information obtained from published sources, and by conducting field inspections of the site on 16-17 May 2003 to identify and assess soils, biotic communities, threatened, endangered and sensitive species, and wetlands on the site. These site characteristics were assessed using literature surveys, aerial photographic interpretation and fieldwork on the airport property, particularly within the project limits of the proposed runway extension and identified safety area of the runway. The methods used to analyze these factors and the results of this assessment are described in the following sections.

2.0 Site Description

The Gainesville Regional Airport is located on the eastern edge of the City of Gainesville in Sections 23-26, Township 9 South, Range 20 East, Alachua County, Florida. Figure 1 is a general location map of the airport, and Figure 2 is an aerial photograph (source: Reynolds, Smith and Hills 2003) of the location of the airport. The site ranges in elevation from 150' NGVD to 180' NGVD, and drains to the northeast.

The airport was built in the mid – 1930's and has been expanded progressively during the past fifty years. Figures 3 – 6 show the airfield in 1949, 1971, 1985, and 1991. During the past fifty years, the airport has expanded its surface area of operations and the present airport property boundary includes approximately 800 acres (MOL). Two runways are present on the airfield: Runway 6-24 and Runway 10-28. This environmental assessment has been prepared to describe the existing conditions on the airport property, particularly within the proposed runway extension area to the northeast of Runway 6-24. The boundary of the airport property and the limits of the runway expansion study area that is the subject of this environmental assessment are shown in Figure 7.

Gainesville Regional Airport is surrounded by partially developed parcels that include suburban residential, low density commercial and industrial developments near the airport and extensive undeveloped lands particularly to the east – southeast of the airport property. Several conservation areas are situated within five miles of the property. These areas include Newnan's Lake Conservation Area to the east, Gum Root Park and Gum Root Swamp Conservation Area to the southeast, Morningside Nature Center to the south, Timber Company Conservation Easement to the northwest, and Austin Cary Memorial Forest to the northeast. Surrounding land use types are predominantly pine plantation, mesic flatwoods, forest regeneration, forested wetland, shrub-scrub wetland, residential, industrial, and agricultural.

3.0 Geology and Soils

The Soil Survey of Alachua County, Florida (Thomas, Cummings and Wittstruck 1985) was utilized to identify "map units", areas within the property boundaries that have distinctive patterns of soil, relief, and drainage. These classifications are based on a taxonomic classification system of the dominant soil or soils but additionally contain some minor soils inclusions. Soil map units are named based on the taxonomic classification of the major soils present. Soil assessment is therefore based on the type of soils present as well as the inherent soil properties including slope, drainage, depth, and typical vegetative communities supported. A Geographic Information System (GIS) digital file was obtained for Alachua County soils. The soil dataset is a digital representation of the County Soil Survey maps published by the USDA NRCS as the Soil Survey Geographic (SSURGO) data set (St. John's River Water Management District 1990). Soil series mapped on the site are summarized in Table 1-1 and map units are depicted on an aerial photograph of the project site (Figure 8).

Soil types on the site include Newnan Sand, Pelham, Pompano Sand, Pomona Sand, Pomona Sand – depressional, Millhopper Sand, Pits and Dumps, and Wauchula-Urban Land complex. The Pomona Sand, Millhopper Sand, and Newnan Sand soil classes support primarily upland habitat and wildlife use; Pomona Sand – depressional, Pelham, and Pompano Sand soils support wetland habitat and associated wildlife, and the Wauchula-Urban Land complex occurs on the developed airport property. Pits and Dumps series support upland and wetland habitat depending on existing topography and associated wildlife.

The Newnan Sand series is poorly drained soils occurring in flatwood habitats. The Newnan Sand soils are approximately level with a slope of 0 to 2 percent. The Newnan series soils are nearly level, poorly drained soils that formed in sandy and loamy marine deposit beds. Newnan Sand has a fair potential for woodland habitat and very poor for wetland habitat and associated wildlife.

The Pelham series soils are poorly drained. These soils include flatwoods vegetation intermixed with small cypress ponds and herbaceous depressions. Slopes are nearly smooth and range between 0 to 2 percent. Wetness is the limiting factor for urban utilization for Pelham series soils.

Pompano Sand consists of nearly level, poorly drained soils found in broad flatwood areas and shallow depressions. Slopes range from 0 to 2 percent. Pompano Sand contains a high water table that is at or near the soil surface; therefore, limiting the land use potential.

The Pomona series includes Pomona Sand and Pomona Sand-depressional soils. These consist of nearly level, poorly drained soils that formed in beds of sandy and loamy marine deposits. These soils are in broad flatwood areas. Slopes range from 0-2 percent. Depressional areas have water standing on the surface for about 4 months or more. These soils are sandy, siliceous, hyperthermic Ultic Haplaquods.

The Pomona Sand – depressional and Pompano Sand soil groups identified on the subject area are considered hydric soils (Thomas, Cummings and Witstruck 1989). Hydric soils are defined as soils that occupy specific landform positions and have features and properties unique to wetlands Criteria for hydric soil classification include 1) all Histels except Folistels and all Histosols except Folists; or 2) soils in Aquic suborders, great groups, or subgroups, Histoturbels great group, Albolls suborder, Pachic subgroups, or Cumulic subgroups; 3) soils that are frequently ponded for long or very long duration during the growing season; or 4) soils that are frequently flooded for long or very long duration during the growing season. Hydric soils are typically associated with wetlands as their predominant soil type. However, the presence of hydric soils alone is not a sole indicator of wetlands (Hurt, Whited and Pringle 1998, Thomas, Cummings and Wittstruck 1985, USDA 1992, USDA 1995).

The Milhopper series consists of nearly level to sloping, moderately well-drained soils that formed in thick beds of sandy and loamy marine sediment. These soils are in broad areas of the gently rolling uplands and in slightly convex areas of the flatwoods. Slopes range from 0 to 8 percent. These soils are loamy, siliceous, hyperthermic, Grossarenic Paleudults.

Pits and Dumps series consists of substrate derived from limestone mining operations. Pits and Dumps substrate include excavation areas or excavated overburden adjacent to the mining pits. The heterogeneous soils contain a combination of mixed soils, limestone fragments, and limestone boulders. The Pits and Dumps series have a fair to good potential for most wildlife habitat.

The Wauchula series consists of nearly level, poorly drained soils that formed in beds of sandy and loamy marine deposits. These nearly level soils are in broad areas of the flatwoods. Slopes range from 0-2 percent. Depressional areas have water standing on the surface for about 4 months or more. These soils are sandy, siliceous, hyperthermic Ultic Haplaquods.

Table 1-1. Soil series mapped on the Gainesville Regional Airport study site.

Soil Series	Ecological Community	Hydric Soil
Millhopper Sand	Flatwoods	
Newnan Sand	Flatwoods	
Pelham	Flatwoods	
Pomona Sand	Flatwoods	
Pomona Sand – depressional	Swamp Hardwoods	X
Pompano Sand	Flatwoods	X
Pits and Dumps	Mixed habitats	
Wauchula-Urban Land complex	Developed	

4.0 Biotic Communities

The Florida Land Use, Cover and Forms Classification System (FLUCCS) was utilized to classify land types within the airport property site. FLUCCS is a hierarchical arrangement of land type by increasing levels of specificity. The categories and subcategories reflect the levels of data and information that can be extracted from aerial photography and current airborne and satellite multi-spectral imaging systems (Florida Department of Transportation Surveying and Mapping Office Thematic Mapping Section 1999).

A GIS digital file was obtained for FLUCCS in Alachua County, Florida. The FLUCCS dataset is a digital representation of the St. John's River Water Management District land use classification 1995, level 3 classification (St. John's River Water Management District). The FLUCCS data were overlaid on the base aerial photograph and an evaluation of the habitats, landscape matrix and wetlands was conducted to assess the subject area (Figure 9). Field investigations were conducted of the airport property to provide site-specific data on biotic communities, wetlands, and protected species.

4.1 Biotic Communities Present On-site

Biotic communities, including uplands and wetlands, were characterized on the site using published data and observations recorded during the preliminary and detailed site investigations (Cowardin et al. 1979, Myers and Ewel 1999). Community types included the maintained airport field, mesic flatwoods, forested wetlands, scrub-shrub wetland, emergent wetlands, and riverine communities.

Upland Systems are characterized by the absence of hydric soils, predominant hydrophytic macrophytes, or adequate hydrology to support vegetative species indicative of upland communities. Upland habitat types on the site included the majority of the maintained airport field, silvicultural stands of planted pine forests, and mixed mesic flatwoods, characterized by cabbage palms (*Sabal palmetto*), palmetto (*Sabal minor*), oak trees (*Quercus* spp.), and other species.

Wetland systems identified on the site included palustrine forested, palustrine scrub-shrub, palustrine emergent and riverine systems (see Section 6.1 for detailed descriptions of these community types). Pine species are often found in upland inclusion areas within the wetland limits of the Palustrine Forested systems.

Mesic flatwoods are characterized as having a relatively open pine canopy, sparse understory, and dense ground cover. Two common forms of this community are the longleaf pine/wiregrass/runner oak association and the slash pine/gallberry/saw palmetto association. Soils are moderately to poorly drained. Periodic fire (every 1-8 years) restricts the encroachment of hardwoods and provides a suitable substrate for the regeneration of pines. The habitat type is associated with and often grades into wet flatwoods, dry prairie, or scrubby flatwoods. Mesic flatwoods, once a dominant community throughout Alachua County, have been converted to pine plantations in many areas of the county (http://environment.alachua-county.org/ Natural_Resources/ index.htm). Wildlife species

typically supported by mesic flatwoods include black bear (*Ursus americanus*), white-tailed deer (*Odocoileus virginianus*), cottontail rabbit (*Sylvilagus floridanus*), cotton rat (*Sigmodon hispidus*), eastern towhee (*Pipilo erythrophthalmus*), common yellowthroat (*Geothlypis trichas*), pine warbler (*Dendroica pinus*), brown-headed nuthatch (*Sitta pusilla*), black racer (*Coluber constrictor*), eastern diamondback rattlesnake (*Crotalus adamanteus*), and pinewoods tree frog (*Hyla femoralis*) (http://southeast.fws.gov/vbpdfs/commun/mpf.pdf).

Forested wetlands on-site approximate bottomland forests and floodplain swamps. These communities are characterized by closed canopies with either dense shrubby understories and little ground cover, or sparse understories and ground cover of ferns, herbs, and grasses. The canopy typically is composed of a mixture of evergreen and deciduous species that can tolerate various periods of inundation. These forests usually occur on low flatlands that border streams. Soils are generally a mixture of clay and organic materials or sand, organic, and alluvial material. The community types are associated closely with and often grade into hydric hammock, mesic flatwoods, mesic hammock, slope forest, baygall, or wet flatwoods (Meyers and Ewel, 1990). Characteristic plant species include water oak (*Quercus nigra*), swamp laurel oak (*Quercus laurifolia*), spruce pine (*Pinus glabra*), loblolly pine (*Pinus taeda*), red maple (*Acer rubrum*), sweetgum (*Liquidambar styraciflua*), sweetbay (*Magnolia virginiana*), swamp tupelo (*Nyssa sylvatica var. biflora*), water tupelo (*Nyssa aquatica*), Florida elm (*Ulmus americana* var. *floridana*), bald-cypress (*Taxodium distichum*), pumpkin ash (*Fraxinus profunda*), green ash (*Fraxinus pennsylvanica*), and cabbage palm (*Sabal palmetto*). Characteristic fauna of forested wetlands include beaver (*Castor canadensis*), wood duck (*Aix sponsa*), barred owl (*Strix varia*), red-shouldered hawk (*Buteo lineatus*), and cottonmouth snake (*Agkistrodon piscivorus*).

Scrub-shrub wetlands are typically dominated by woody vegetation less than six (6) meters in height. These wetlands may represent a successional stage for developing forested wetlands or may be relatively stable communities. Characteristic plant species include elderberry (*Sambucus canadensis*), common buttonbush (*Cephalanthus occidentalis*), and Carolina willow (*Salix caroliniana*).

Emergent wetlands, also termed marshes or prairies, are characterized as herbaceous wetlands located in depressions. Emergent wetlands are usually inundated for 200 or more days per year; the vegetation is usually dominated by floating and emergent macrophytes including maidencane (*Panicum hemitomon*), pickerel-weed (*Pontederia cordata*), saw-grass (*Cladium jamaicense*), cattail (*Typha* spp.), rush (*Juncus* spp.), lotus (*Nelumbo* sp.), water-lily (*Nymphaea* spp.), and spatter-dock (*Nuphar* spp.). Emergent wetlands associate with and often grade into wet prairie or lake communities. Fauna of emergent wetlands is abundant and includes river otter *(Lontra canadensis)*, raccoon (*Procyon lotor)*, round tailed muskrat (*Neofiber alleni*), wood stork (*Mycteria Americana*), sandhill crane *(Grus canadensis)*, white ibis *(Eudocimus albus),* herons and egrets *(Ardeadae)*, rails *(Rallidae)*, mottled duck *(Anas fulvigula)*, blue-winged teal *(Anas discors)*, harrier (marsh hawk) *(Circus cyaneus)*, snipe *(Gallinago gallinago)*, moorhen *(Gallinula chloropu*s), purple gallinule *(Porphyrula martinica)*, red-winged blackbird *(Agelaius phoeniceus)*, boat-tailed grackle *(Quiscalus major)*, alligator *(Alligator mississippiensis)*, stripped mud turtle *(Kinosternon baurii)*, stinkpot *(Sternotherus odoratus)*, chicken turtle *(Deirochelys reticularia)*, green water snake

(Nerodia cyclopion), mud snake *(Farancia abacura)*, stripped swamp snake *(Seminatrix pygaea)*, pig frog *(Rana grylio)*, Florida cricket frog *(Acris gryllus dorsalis)*, and various small fish species such as the mosquito fish *(Gambusia holbrooki),* golden top minnow *(Fundulus chrysotus)*, and pirate perch *(Aphredoderus sayanus).*

Riverine systems in Alachua County include both large rivers and small creek tributaries of variable size. The riverine communities on the airport site consist of small ditches, and a perennial stream approximately 20 feet wide, which enters the site through a forty foot culvert on the northwest side of the Runway 6-28, traverses the northern margin of the runway and discharges to the forested area on the east side of the runway. These streams have a generally sandy substrate with some accumulated detritus, and are shaded by native trees, shrubs and forb plant species. In addition to vegetation, plankton, mollusks, aquatic insects, crayfish, and fish are commonly found in riverine systems.

The runway expansion area is surrounded by approximately 60 acres of mesic flatwoods and mixed forested and scrub-shrub wetlands bordering and adjacent to a drainage extension of Little Hatchett Creek on the northeast, and a commercial-industrial complex on the northwest. According to the FLUCCS data, the dominant habitat present on the airport is industrial. Approximately 75% of the area is upland habitat including an upland shrub/brushland area within the clear zone.

4.2 Habitat Assessment

Natural communities constitute habitat for a large number of wildlife species in Alachua County. Among vertebrate species (mammals, birds, reptiles, amphibians, and fish), there are 417 species native to the area and 21 species that were introduced. Representing over 60% of the species of vertebrates identified in the entire state of Florida, the presence of 438 different species in Alachua County represents a high level of diversity reflecting a wide variety of habitat and climatic types in this area.

Field biologists surveyed the airport property on 16-17 May 2003, traversing the property via pedestrian transects, to identify and ground-truth wetlands, biotic communities, and identify the presence of threatened, endangered and sensitive species. Any physical sightings, vocalizations, and observations of tracks, nests, burrows, scat, etc. of state and federally listed wildlife species were recorded, as were physical sightings of state and federally listed plant species. In addition, any observations of non-listed wildlife species were recorded. Wildlife species observed on or flying over the site were recorded during the field survey (Table 1-2) (Behler and King 1979, National Audubon Society, 1994).

Table 1-2. Wildlife species observed on the Gainesville Regional Airport study site.

Wildlife Species	Scientific Name	Observation Location	Observed on Site
Birds			
American kestrel	*Falco sparverius*	Runway expansion zone	X
common crow	*Corvus brachyrnchos*	Runway expansion zone	X

Wildlife Species	Scientific Name	Observation Location	Observed on Site
bluejay	*Cyanocitta cristata*	Flatwoods	X
barred owl	*Strix varia*	Flatwoods	X
pileated woodpecker	*Dryocopus pileatus*	Flatwoods	X
Mammals			
coyote	*Canis latrans*	Runway expansion zone	X
gray fox	*Urocyon cinereoargentatus*	Runway expansion zone	X
Herptiles			
gopher tortoise	*Gopherus polyphemus*	Runway expansion zone, airport airfield	X

Alachua County is included in the Florida Bird Atlas project and a list of the non-listed bird species known to occur in the county is summarized in Attachment 4.

5.0 Threatened, Endangered, and Sensitive Species

The following resources were utilized to determine the potential occurrence of state and federal listed species: the Florida Fish and Wildlife Conservation Commission (FWC) state lists of protected animals as defined in the Florida Administrative Code (F.A.C.) 39-27.003, 39-27.004, and 39-27.005, the state list of protected plants, administered and maintained by the Florida Department of Agriculture and Consumer Services as defined in F.A.C. 5B-40, and the Florida Natural Areas Inventory (FNAI). The federal lists of protected plants and animals are published in 50 Code of Federal Regulations (CFR) 17 (for animals) and 50 CFR 23 (for plants) and are administered by the United States Fish and Wildlife Service (USFWS). Refer to Attachment 2 for the list of Alachua County Federally Listed Species and Attachment 3 for the list of Florida's Endangered Species, Threatened Species, and Species of Special Concern.

The FNAI database maintains and distributes information regarding natural communities, rare and endangered species (plants and animals), bird rookeries, and geological and other natural features. According to the FNAI, "the database is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources (FNAI, April 25, 2003)." However, FNAI information should always be accompanied by a site-specific field survey to verify the occurrence of potentially occurring species.

An FNAI standard survey was obtained to determine the possible presence of rare, threatened or endangered species, and natural communities (termed 'Element Occurrences') on the airport property and environs (Attachment 1). The Element Occurrences generally indicate a viable population of a species rather than a sighting of an individual. Also examined was information regarding conservation lands, land acquisition projects, and non-managed natural areas (FNAI potential habitat for rare species and FNAI potential natural areas).

The airport property is located on and adjacent to Potential Natural Areas (PNA). According to the FNAI, these areas are of priority 4 and 5. Priority designations are based on the size and perceived quality and type of the natural, relatively intact vegetative community, as determined by aerial photo-interpretation by FNAI scientists. The PNA located on and adjacent to the site are lower priority than PNA designations 1-3 but are believed to be ecologically viable tracts of land representative of Florida's natural ecosystems. These areas include some of the following habitat types: wet flatwoods, baygall, dome swamp, basin swamp, swamp lake, upland mixed forest, pine flatwoods, and sandhill.

Table 1-3 shows the federal, state, and county regulatory status of species known to occur in Alachua County Findings from the FNAI standard survey suggest three Element Occurrences that potentially occur near, or on, the airport conservation area. These include the Sherman's fox squirrel (*Sciurus niger shermani*), red-cockaded woodpecker (*Picoides borealis*), and variable-leaf crownbeard (*Verbesina heterophylla*). Nine federally or state-listed species are known to occur in the vicinity of the airport site based on the FNAI survey information (Table 1-3). Evidence of only one of these species, the gopher tortoise (*Gopherus polyphemus*), was observed on site during field investigations.

Table 1-3. Federal and state regulatory status of threatened, endangered and sensitive species observed in Alachua County, Florida.

Common name	Scientific name	FNAI Element Occurrence	Federal	State of Florida
Sherman's fox squirrel	*Sciurus niger shermani*	Rare and local		SSC
red-cockaded woodpecker	*Picoides borealis*	Imperiled	E	T
variable-leaf crownbeard	*Verbesina heterophylla*	Imperiled	Species of management concern	
Bald eagle	*Haliaeetus leucocephalus*		T	T
Florida scrub-jay	*Aphelocoma coeruluscens*		T	T
wood stork	*Mycteria americana*		E	E
Oval (Santa Fe River) pigtoe mollusk	*Pleurobema pyriforme*		E	
squirrel chimney cave (or Florida cave) shrimp	*Palaemonetes cummingi*			T
gopher tortoise	*Gopherus polyphemus*			SSC

Sherman's fox squirrel is a Florida Species of Special Concern and is considered by the FNAI to be either very rare and local throughout its range or found locally in a restricted range or vulnerable to extinction from other factors. A few individual Sherman's fox squirrels were reported observed to the south of the airport conservation area in 1987 and have been intermittently reported since then. Fox squirrels typically use sandhill (high pine),

pine flatwoods, pastures, and other open, ruderal habitats with scattered pines and oaks, and may possibly occur in the conservation easement area.

The red-cockaded woodpecker is a state-listed threatened species, federally listed endangered species, and considered by the FNAI as an imperiled species because of rarity or because of vulnerability to extinction due to some natural or man-made factor. The species habitat preference is the longleaf pine ecosystem, and it particularly selects mature pines in which to excavate cavities. Two active red-cockaded woodpecker colonies have been reported near the airport conservation area, one to the north and one to the south of the conservation area.

The variable-leaf crown beard is listed as a species of management concern by the U. S. Fish and Wildlife Service, but is not listed as state or federally threatened or endangered. The species is considered by the FNAI to be imperiled because of rarity or because of vulnerability to extinction due to some natural or man-made factor. Variable leaf crown beard is a component of sandhill communities, and was observed in a mowed area (part of the airport clear zone) west of the airport conservation area in 1996.

The bald eagle (*Haliaeetus leucocephalus*) is a federally and state listed threatened species. BES biologists consulted the Florida Fish and Wildlife Conservation Commission's Eagle Nest Locator website (http://www.wildflorida.org/eagle/eaglenests/Default.asp) to identify the nearest documented bald eagle nest in relation to the site. According to this source, the closest reported eagle nest to the Gainesville Regional Airport is located approximately 2.5 miles to the southeast.

Other threatened or endangered species documented to occur in Alachua County include the Florida scrub-jay (*Aphelocoma coeruluscens*), wood stork (*Mycteria americana*), oval (Santa Fe River) pigtoe mollusk (*Pleurobema pyriforme*), and squirrel chimney cave (or Florida cave) shrimp (*Palaemonetes cummingi*).

The scrub-jay is not expected to exist onsite because the species relies on scrub, sandhill, and scrubby flatwood communities; these community types are not present on the airport property.

The wood stork utilizes freshwater and brackish wetlands, primarily nesting in cypress or mangrove swamps. It feeds in freshwater marshes, narrow tidal creeks, or flooded tidal pools. Particularly attractive feeding sites are depressions in marshes or swamps where fish become concentrated during periods of falling water levels. Wood storks (*Mycteria americana)* would be unlikely to occur on the site due to the absence of preferred habitat.

The oval (Santa Fe River) pigtoe mollusk is usually found to inhabit stream channels with moderate currents and silty sand or gravel substrates (http://ecos.fws.gov/ docs/recovery_plans/ 2003/030930.pdf). According to the U.S. Fish and Wildlife Service Recovery Plan for the oval pigtoe, the last occurrence of an oval pigtoe population in Alachua County was in the Santa Fe River in 2001. The absence of preferred habitat on the airport property suggests that it is unlikely that the oval pigtoe would occur on this site.

The squirrel chimney cave (or Florida cave) shrimp is only known from a single sinkhole in Alachua County within a privately known property (http://endangered.fws.gov/i/k/sak0a.html). This sinkhole is not on airport property, and there are no other known sinkholes on airport property, so chimney cave shrimp are not anticipated to occur on the site.

Numerous gopher tortoise burrows were observed (Behler and King 1979) onsite. Gopher tortoises, a Florida Species of Special Concern, are typically found in longleaf pine sandhills, xeric oak hammocks, scrub, pine flatwoods, dry prairies, and coastal dunes. Tortoises can also live in anthropogenically-affected environments such as pastures, old fields, and grassy roadsides. To be suitable for gopher tortoises, the habitat must have well-drained sandy soils for digging burrows, herbaceous food plants, and open sunny areas for nesting and basking.

A total of 53 gopher tortoise burrows, one tortoise shell and no live individual gopher tortoises were recorded during the survey of the airport site (see Figure 12 for locations of burrows on site and Figure 13 for representative photographs of burrows). Of these burrows, 40 were active burrows that appeared to be used by adult individuals and 13 appeared to be used by sub-adult/juvenile gopher tortoises (based on the size of the burrow entrance). The designations "active" and "old" were applied in accordance with the Guidelines for Gopher Tortoise Relocation - Criteria for Determining the Status of Gopher Tortoise Burrows (Florida Fish and Wildlife Conservation Commission 1991)

Table 1-4. Gopher tortoise observations on the airport study site.

Gopher Tortoises (# live individuals observed)	Runway Expansion Area (# burrows)	Surrounding Airport Property (# burrows)
0	44	53

The gopher tortoise population supported on site occurs broadly distributed on the open field airport habitats and adjacent forested hardwood/pine habitats, particularly on the northeast runway extension and clear zone of runway 6-24, on portions of the adjacent flatwoods, and along the northeastern and southeastern fence lines. Numerous burrows were identified on both the airport expansion area and clear zone, and adequate foraging and burrow habitat existed in these areas. Gopher tortoises will probably continue to use these areas since the cover is maintained at a suitable height as a result of airport mowing and maintenance operations. Open fields with suitable forage species are noted throughout Florida to provide suitable habitat for the species (FWC 2002, Gopher Tortoise Council 2001).

There are several commensal species that are associated with gopher tortoises and the species' burrows including the gopher frog (*Rana capito*), eastern indigo snake *(Drymarchon couperi)*, Florida mouse *(Podomys floridanus)*, and Florida pine snake *(Pituophis melanoleucus)*. While these species were not observed during the on site field visit, BES biologists anticipate that the presence of some or all of these species is likely.

Protection for the gopher tortoise is afforded under Rules 68A-25.002 and 68A-27.005 of the Florida Administrative Code. Given the proposed site development plans to expand the

airport property, it is possible that the gopher tortoise burrows can either be avoided or individuals relocated elsewhere on the property as provided by the Florida Fish and Wildlife Conservation Commission's "Available options to address the presence of gopher tortoises on lands slated for development". Site-specific, options to conserve these species should be identified when the extent of impacts that will occur from the runway expansion project has been determined.

It is recommended that a site-specific survey be conducted prior to the onset of construction to avoid affecting the gopher tortoises on-site. If avoidance is not possible, qualified wildlife biologists would capture and relocate the affected gopher tortoises (on airport property to the extent feasible) in compliance with FWC regulations and guidelines.

6.0 Wetlands

A preliminary wetlands jurisdictional delineation was conducted within the boundaries of the project site during the May 2003 site investigation based on photointerpretation, ground-truthing and detailed site review of the airport expansion area. Wetlands were delineated on current rectified color infrared digital aerial photography and a wetlands delineation map for the airport property was prepared. Wetlands were classified according the standard delineation and classification methods used in the United States (Cowardin et al 1979, U. S. Army Corps of Engineers 1987). Wetlands delineation was based on relevant wetland jurisdictional regulations (Florida Department of Environmental Protection (FDEP), St. Johns River Water Management District (SJWMD), and the U. S. Army Corps of Engineers (USACE). A map of the wetlands areas overlaid on the aerial photography of the project area is shown in Figure 11.

Wetlands were assessed using United States Fish and Wildlife Service - National Wetland Inventory (NWI) data, field investigations, and a GIS digital file (State Plane North, NAD 83 (feet) projection) of wetlands in Alachua County, Florida obtained online from the Alachua County website (http://environment.Alachua-county.org/Natural_Resources). This file includes a combination of land use, soils, and hydrographic datasets: the St. John's River Water Management District 1995 land use, the Suwannee River Water Management District 1995 land use, the United States Geological Survey (USGS) 1:24,000 hydrography, the SSURGO Specific Soils, and the NWI. Wetlands were attributed with land use type, soil type and wetland class. In addition, a second GIS digital file for wetlands coverage of Alachua County was obtained from the Florida Geographic Data Library website, sourced from the NWI.

6.1 Wetlands Classification

The NWI system was used to generally classify wetland systems (Cowardin et al 1979). Palustrine forested, palustrine scrub-shrub, palustrine emergent and riverine systems were identified on the site. Palustrine systems include all nontidal wetlands dominated by persistent vegetation, and in tidal areas where salinity due to ocean-derived salts is less that 0.5 ppt. Riverine systems include rivers and streams. The following NWI wetland community descriptions (NWI) detail the communities verified on-site and include the dominant vegetation observed (Cowardin et al, 1979, Reed 1998).

Palustrine Emergent (PEM): Palustrine Emergent Systems are 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 and may occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts-per-thousand (ppt).

Palustrine Scrub-Shrub (PSS): Palustrine Scrub-Shrub Systems includes areas dominated by woody vegetation less than six meters in height (20 feet). The species include true shrubs, young trees (saplings), and trees or shrubs that are small or stunted because of environmental conditions.

Palustrine Forested (PFO): Palustrine Forested Systems are characterized by woody vegetation that equals or exceeds six meters in height (20 feet).

Riverine (R): Riverine Systems include permanent and intermittent rivers and streams.

The majority of wetlands on the airport property consist of palustrine emergent wetlands including herbaceous swales, channelized ditches, and creeks (Table 1-5). Peripheral to the airport, forested wetlands on the site support natural forested communities and silvicultural operations. The dominant forested wetland vegetation canopy cover consisted of sweet gum (*Liquidambar styraciflua*) red maple (*Acer rubrum*), black gum (*Nyssa bifolia*), and bays (*Persea* spp.), intermingled with slash pine (*Pinus elliotti)*, a common silvicultural species.

Table 1-5. Wetlands classification and acreages by National Wetlands Inventory mapping unit on the Gainesville Regional Airport property.

Wetlands Classification	Runway Expansion Area (acres)	Surrounding Airport Property (acres)	Total Wetlands (acres)
Palustrine Forested - PFO1	16.624	116.639	133.263
Palustrine Emergent - PEM1	10.721	70.127	80.848
Palustrine Scrub-Shrub - PSS1	0.505	4.094	4.599
Palustrine Unconsolidate Shore – PUS	0.693	2.387	3.080
Riverine Permanent - R4SB	0.016	0.365	0.381
Total	28.559	193.612	222.171

6.2 Wetlands Jurisdictional Delineation

The regulatory definition of wetlands varies by federal, state or local jurisdiction in the United States, and these definitions diverge from accepted definitions internationally. "Wetlands" is the collective term for swamps, marshes, bogs, wet meadows, and similar areas that are often located between open water and dry land. Wetlands are a valuable natural resource that help to improve water quality, reduce flood and storm damage, provide important fish and wildlife habitat, and support outdoor recreational activities such as hunting and fishing.

Under Section 404 of the Clean Water Act "jurisdictional waters of the United States, including wetlands" are protected. The term "Waters of the United States" is used to refer to open water or watercourses that are un-vegetated. Regulatory jurisdiction over wetlands that occur as isolated wetland systems, not contiguous with riverine systems, has been in litigation in the United States for the past thirty years. Recent legal decisions have reduced federal regulatory authority over isolated wetlands; however, these recent legal decisions are in appeal and continue to be litigated. A recent U.S. Supreme Court decision commonly referred to as the SWANCC (Solid Waste of Northern Cook County) decision (as it is currently interpreted) has been determined to exempt certain isolated wetlands from Federal jurisdiction. The status of isolated wetlands should be reviewed prior to any permitting necessary to achieve airport planning objectives.

The United States Army Corps of Engineers (USACE) defines wetlands as: An area that is inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly known as hydrophytic vegetation.

The state of Florida defines "wetlands," in Chapter 373, F.S. as those areas that are inundated or saturated by surface water or ground water at a frequency and a duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

The Florida wetland delineation methodology, pursuant to Rule 62-340, F.A.C., states that an area must be examined for, and exhibit, the following characteristics in order to be considered a wetland:

1. Dominance of appropriate vegetative stratum as discussed in Chapter 62-340 F.A.C. section 62-340.450. Facultative plants shall not be considered in determining dominance.

2. Presence of hydrologic indicators, including, but not limited to, the following: algae mats, aquatic mosses or liverworts on trees or substrates, aquatic plants, aufwuchs, drift lines and rafted debris, elevated lichen lines, evidence of aquatic fauna, existing hydrologic data, morphological plant adaptations, secondary flow channels, sediment deposition, vegetated tussocks or hummocks, and water marks.

3. Appropriate hydrologic data. Data must indicate that inundation for at least seven consecutive days, or saturation for at least twenty consecutive days occurs during conditions that represent long-term hydrologic conditions.

According to the 1987 USACE Wetland Delineation Manual, areas must exhibit three distinct characteristics to be considered wetlands:

1. The prevalent vegetation must consist of plants adapted to life in hydric soil conditions. These species, due to morphological, physiological, and/or reproductive adaptations, can and do persist in anaerobic soil conditions.

2. Soils in wetlands must be classified as hydric or they must possess characteristics that are associated with reducing soil conditions.

3. The area must be inundated either permanently or periodically at mean water depths less than 6.5 inches or that the soil is saturated at the surface for some time during the growing season of the prevalent vegetation.

The basis for wetland delineations for the project site was obtained from the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual and the Florida Department of Environmental Protection Rule 62-340, F.A.C. Due to variations in the definition of jurisdictional wetlands pursuant to State and Federal regulations, two different wetlands delineation lines may be defined. However, on the project site, conditions are such that one line reasonably approximates both jurisdictions.

A detailed survey was conducted to determine the occurrence and distribution of wetlands on the site on 16-17 May 2003. The site-specific wetlands jurisdictional delineation is shown in Figure 11. A detailed list of the wetland plant species observed on site during the field survey is included in Table 1-6.

Table 1-6. Dominant wetland species observed on the Gainesville Airport site (May 2003), Alachua County, FL.

Scientific Name	Common Name	USFWS NWI Southeast Region (Cruz 1996)*	FDEP (FDEP 1994)
OVERSTORY			
Acer rubrum	red maple	OBL	FACW
Carpinus caroliniana	blue beech	FAC	FACW
Celtis laevigata	hackberry	FACW	FACW
Diospyros virginiana	persimmon	FAC	FAC
Liquidambar styraciflua	sweetgum	FAC+	FACW
Magnolia virginiana	sweetbay magnolia	FACW+	OBL
Nyssa biflora	blackgum	OBL	OBL
Persea palustris	swamp bay	FACW	OBL
Pinus elliottii	slash pine	FACW	NL**
Quercus laurifolia	laurel oak	FACW	FACW
Quercus nigra	water oak	FAC	FACW
Quercus virginiana	live oak	FACU+	NL**
Sabal palmetto	cabbage palm	FAC+	FAC
Salix caroliniana	Carolina willow	OBL	OBL
Sapium sebiferum	Chinese tallow	FAC	FAC
Taxodium ascendens	pond cypress	OBL	OBL
Ulmus americana	American elm	FACW	FACW
UNDERSTORY/VINES			
Ampelopsis arborea	peppervine	FAC+	NL**
Baccharis halimifolia	sea myrtle	FAC	FAC
Callicarpa americana	American beautyberry	FACU-	NL**
Cephalanthus occidentalis	buttonbush	OBL	OBL
Dioscorea sp.	wild yam	N/A	N/A
Ilex cassine	dahoon holly	FACW	OBL
Ludwigia peruviana	primrose willow	OBL	OBL
Lyonia lucida	fetterbush	FACW	FACW
Mikania scandens	hempvine	FACW+	NL**
Myrica cerifera	wax myrtle	FAC+	FAC
Parthenocissus quinquefolia	Virginia creeper	FAC	NL**
Sambucus canadensis	elderberry	FACW-	FAC
Serenoa repens	saw palmetto	FACU	NL**
Sesbania punicea	rattlebox	FAC+	FAC
Toxicodendron radicans	poison ivy	FAC	FACW
Vaccinium corymbosum	high bush blueberry	FACW	FACW
Viburnum sp.	viburnum	N/A	N/A

Scientific Name	Common Name	USFWS NWI Southeast Region (Cruz 1996)*	FDEP (FDEP 1994)
Vitis rotundifolia	wild muscadine	FAC	NL**
GROUND COVER			
Alternanthera sp.	joyweed	N/A	N/A
Amphicarpum muhlenbergianum	blue maidencane	FACW	FACW
Andropogon virginicus	broomsedge	FAC-	FAC
Bacopa caroliniana	lemon bacopa	OBL	OBL
Bacopa monnieri	herb of grace	OBL	OBL
Boehmeria cylindrica	false nettle	FACW+	NL**
Carex spp.	sedge (various)	OBL	OBL
Centella asiatica	coinwort	NL	NL**
Chasmanthium spp.	woodoats	N/A	N/A
Cladium jamaicense	swamp sawgrass	OBL	OBL
Colocasia esculenta	wild taro	FACW+	OBL
Commelina sp.	dayflower	N/A	N/A
Coreopsis floridana	tickseed	OBL	OBL
Cyperus spp.	flatsedge	N/A	N/A
Dichanthelium scoparium	velvet panicum	FACW	FACW
Dichanthelium spp.	witchgrass	N/A	N/A
Drosera capillaris	pink sundew	OBL	FACW
Eleocharis baldwinii	spike rush	FACW+	OBL
Eriocaulon decangulare	tenangle pipewort	OBL	OBL
Eupatorium sp.	dog fennel	FACU	FAC
Euthamia minor	bushy goldenrod	FAC	FAC
Fuirena scirpoidea	umbrella sedge	OBL	OBL
Gaylussacia sp.	huckleberry	N/A	N/A
Gelsemium sempervirens	Carolina jessamine	FAC	NL**
Gratiola sp.	hedge hyssop	N/A	FACW
Hyptis alata	clustered bushmint	OBL	FACW
Ilex glabra	gallberry	FACW	UPL
Juncus effusus	soft rush	FACW+	OBL
Juncus marginatus	shoe rush	FACW	FACW
Juncus polycephalos	manyhead rush	OBL	OBL
Lachnocaulon sp.	bogbutton	N/A	N/A
Lysimachia sp.	loosestrife	N/A	N/A
Mecardonia acuminata	axilflower	NL	FACW
Micranthemum umbrosum	shade mudflower	OBL	OBL
Myriophyllum brasiliense	parrotfeather	OBL	NL**
Osmunda cinnamomea	cinnamon fern	FACW+	FACW
Panicum hemitomon	maidencane	OBL	OBL

Scientific Name	Common Name	USFWS NWI Southeast Region (Cruz 1996)*	FDEP (FDEP 1994)
Peltandra virginica	arrow arum	OBL	OBL
Polygala cymosa	tall pinebarren milkwort	OBL	OBL
Polygala lutea	orange milkwort	FACW+	FACW
Polygala nana	candyroot	FAC+	FACW
Pontederia cordata	pickerel weed	OBL	OBL
Rhexia mariana	pale meadowbeauty	FACW+	FACW
Rhynchospora miliacea	millet beaksedge	OBL	OBL
Rhynchospora spp.	beaksedge	N/A	N/A
Rubus argutus	sawtooth blackberry	FAC	FAC
Sarracenia minor	hooded pitcherplant	OBL	FACW
Saururus cernuus	lizards-tail	OBL	OBL
Scleria triglomerata	tall nutgrass	FAC	FACW
Setaria glauca	foxtail	FAC	FAC
Smilax bona-nox	green briar	FAC	NL**
Solidago elliottii	goldenrod	OBL	OBL
Sphagnum spp.	sphagnum moss	N/A	N/A
Spiranthes sp.	ladiestresses	N/A	N/A
Syngonanthus flavidulus	yellow hatpins	FACW+	FACW
Thelypteris spp.	maiden fern	N/A	FACW
Typha latifolia	cattail	OBL	OBL
Utricularia sp.	bladderworts	OBL	OBL
Vaccinium myrsinites	shiny blueberry	FACU	NL**
Woodwardia areolata	netted chainfern	OBL	OBL
Woodwardia virginica	Virginia chainfern	OBL	FACW
Xyris elliottii	Elliott's yellow-eyed grass	OBL	OBL

* USACE Wetland Delineation Method
** Not listed as an obligate, facultative wet, or facultative plant species on Florida Department of Environmental Protection classification lists and not used in state wetlands jurisdictional delineation determination.
N/A Not Applicable
NL Not Listed

7.0 Literature Cited

Alachua County Environmental Protection Department. Alachua County's Natural Resources.

Available online at http://environment.alachua-county.org/Natural_Resources/index.htm. Accessed 11 August 2003.

Behler, J. L., and King, F. W. 1979. National Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred A. Knopf Publishers, New York, NewYork.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Publication No. FWS/OBS-79/31. U.S. Fish and Wildlife Service, Office of Biological Services. Washington, D.C.

Florida Department of Environmental Protection. 1994. Florida Administrative Code, Chapter 62-340 Delineation of the landward extent of wetlands and surface waters

Florida Department of Environmental Protection. 1998. Florida Wetland Plants – An Identification Manual. Florida Department of Environmental Protection, Tallahassee, Florida.

Florida Department of Transportation. Various dates. Archival photographs. Tallahassee, Florida.

Florida Fish and Wildlife Conservation Commission. Eagle Population – Eagle Nest Locator. Available online at http://www.wildflorida.org/eagle/eaglenests/Default.asp. Accessed 25 July 2003.

Florida Fish and Wildlife Conservation Commission. Florida's Endangered Species, Threatened Species and Species of Special Concern - Official Lists Publication. Date: 1 August 1997. Available online at http://floridaconservation.org/ pubs/ endanger.html. Accessed 22 April 2003.

Florida Fish and Wildlife Conservation Commission. Guidelines for Gopher Tortoise Relocations. Date: 13 August 2001. Available online at http://wld.fwc.state.fl.us/ permits/policy/tortoise_relocation_guidelines.pdf. Accessed 22 April 2003.

Gopher Tortoise Council. 1991. Gopher Tortoise: A species in decline. Available online at http://edis.ifas.ufl.edu/scripts/htmlgen.exe?DOCUMENT UW048. Accessed 22 April 2003.

Hurt, G.W., P.M. Whited, and R.F. Pringle (eds.). 1998. Field indicators of hydric soils in the United States. U.S. Department of Agriculture, Natural Resources Conservation Service, Wetland Science Institute. Baton Rouge, LA.

MapQuest.com, Inc. 2002. Map of Gainesville Regional Airport Area.

Myers, R. L. and Ewel, J. J (Eds.). 1990. Ecosystems of Florida. University of Central Florida Press, Orlando, Florida.

National Audubon Society. 1994. National Audubon Society Field Guide to North American Birds – Eastern Region. Alfred A. Knopf, Inc., New York, New York.

Reed, P.B. 1988. National List of Plant Species that Occur in Wetlands: Florida (Region 3). Biological Report 88(26.10) May 1988. U.S. Fish and Wildlife Service, National Ecology Research Center. St. Petersburg, FL.

Thomas, B.P., E. Cummings and W.H. Wittstruck. 1985. Soil Survey of Alachua County, Florida. U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

U.S. Army Corps of Engineers (COE). 1987. Corps of Engineers Wetlands Delineation Manual. Wetlands Research Program Technical Report Y-87-1. U.S. Army Corps of Engineers, Waterways Experiment Station, Environmental Laboratory. Vicksburg, MS.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 1995. Hydric Soils of the United States.

U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS). 1992. Official List of Hydric Soil Map Units for Alachua County, Florida.

U.S. Fish and Wildlife Service. Division of Endangered Species. 1990. Endangered and Threatened Species of the Southeastern United State (the Red Book) FWS Region 4. Available online at http://endangered.fws.gov/i/k/sak0a.html. Accessed 10 October 2003.

U.S. Fish and Wildlife Service. North Florida Field Office, Alachua County Federally Listed Species. Available online at http://northflorida.fws.gov/ CountyList/ Alachua.htm. Accessed 25 July 2003.

U.S. Fish and Wildlife Service. 2003. Recovery Plan for Endangered Fat Threeridge (Amblema neislerii), Shinyrayed Pocketbook (Lampsilis subangulata), Gulf Moccasinshell (Medionidus penicillatus), Ochlockonee Moccasinshell (Medionidus simpsonianus), and Oval Pigtoe (Pleurobema pyriforme); and Threatened Chipola Slabshell (Elliptio chipolaensis), and Purple Bankclimber (Elliptoideus sloatianus). Atlanta, Georgia. 142 pp. http://ecos.fws.gov/docs/recovery_plans/2003/030930.pdf. Accessed 10 October 2003.

U.S. Fish and Wildlife Service. Southeast Florida Field Office. Mesic Pine Flatwoods Multi-Species Recovery Plan. Available online at http://southeast.fws.gov/vbpdfs/ commun/mpf.pdf.

University of Florida. Various dates. Archival photographs. Gainesville, FL.

FLORIDA Natural Areas INVENTORY
1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

April 25, 2003

Kristin Caruso
Birkitt Environmental Services, Inc.
110 S. Edison Ave.
Tampa, FL 33606

Dear Ms. Caruso:

Thank you for your request for information from the Florida Natural Areas Inventory (FNAI). We have compiled the following information for your project area.

Project:	Gainesville Airport
Date Received:	April 21, 2003
Location:	Township 9 S, Range 20 E, Sections 23-26 Alachua County

Element Occurrences

A search of our maps and database indicates that currently we have several Element Occurrences mapped within one mile of the study area (see enclosed map and table).

The Element Occurrences data layer includes occurrences of rare species and natural communities. The map legend indicates the precision of the element occurrence location, defined as second (within about 300 feet of the point), minute (within about one mile), or general (within about 5 miles). For animals and plants, Element Occurrences generally refer to more than a casual sighting; they usually indicate a viable population of the species. Note that some element occurrences represent historically documented observations that may no longer be extant.

Several of the species and natural communities tracked by the Inventory are considered **data sensitive**. Occurrence records for these elements contain information that we consider sensitive due to collection pressures, extreme rarity, or at the request of the source of the information. The Element Occurrence Record has been labeled "Data Sensitive." We request that you not publish or release specific locality data about these species or communities without consent from the Inventory. If you have any questions concerning this please do not hesitate to call.

Potential Natural Areas

Portions of the site appear to be located on or near Potential Natural Areas (PNA). These PNA are priority 4 & 5 and may include the following community types: wet flatwoods, baygall, dome swamp, wet flatwoods, basin swamp, swamp lake, upland mixed forest, pine flatwoods or sandhill.

Florida Resources and Environmental Analysis Center

Institute of Science and Public Affairs

The Florida State University

Potential Natural Areas are lands that appear to be relatively intact areas of natural vegetation based on aerial photography, as determined by FNAI scientists. Please see the enclosed explanation sheet for more information. PNAs are not a regulatory designation; they are intended for conservation planning purposes. The maps show a revised version of the PNAs, based on 1995 land use land cover data from the water management districts.

Potential Habitat for Rare Species

Portions of the site appear to be located on or near Potential Habitat for Rare Species. This potential habitat is associated with a known occurrence in the vicinity of: bald eagle (*Haliaeetus leucocephalus*), wood stork (*Mycteria americana*), flatwoods salamander (*Ambystoma cingulatum*) and variable-leaf crownbeard (*Verbesina heterophylla*),

FNAI Potential Habitat for Rare Species indicates areas, which based on landcover type, offer suitable habitat for one or more rare species that is known to occur in the vicinity. Potential habitat layers have been developed for approximately 250 of the most rare species tracked by the Inventory, including all federally listed species.

Potential Habitat is not a regulatory designation, and should not be confused with "critical habitat", which is an official designation made by the U.S. Fish and Wildlife Service. Information on critical habitats can be found in the Code of Federal Regulations, 50 CFR 17.95, which lists all critical habitats that have been designated. The Code of Federal Regulations can be accessed through the following website: "www.access.gpo.gov/nara/cfr/cfr-table-search.html".

The Inventory always recommends that a site-specific survey be conducted to determine the current presence or absence of rare, threatened, or endangered species. Surveys should be conducted by persons familiar with Florida's flora and fauna. For your convenience, a summary of the elements recorded for Alachua County is enclosed.

The database maintained by the Florida Natural Areas Inventory is the single most comprehensive source of information available on the locations of rare species and other significant ecological resources. However, the data are not always based on comprehensive or site-specific field surveys. Therefore, this information should not be regarded as a final statement on the biological resources of the site being considered, nor should it be substituted for on-site surveys. Inventory data are designed for the purposes of conservation planning and scientific research, and are not intended for use as the primary criteria for regulatory decisions.

Information provided by this database may not be published without prior written notification to the Florida Natural Areas Inventory, and the Inventory must be credited as an information source in these publications. FNAI data may not be resold for profit.

Thank you for your use of FNAI services. A copy of the invoice is enclosed for your information; the original will be mailed to your accounts payable department. If I can be of further assistance, please give me a call at (850) 224-8207.

Sincerely,

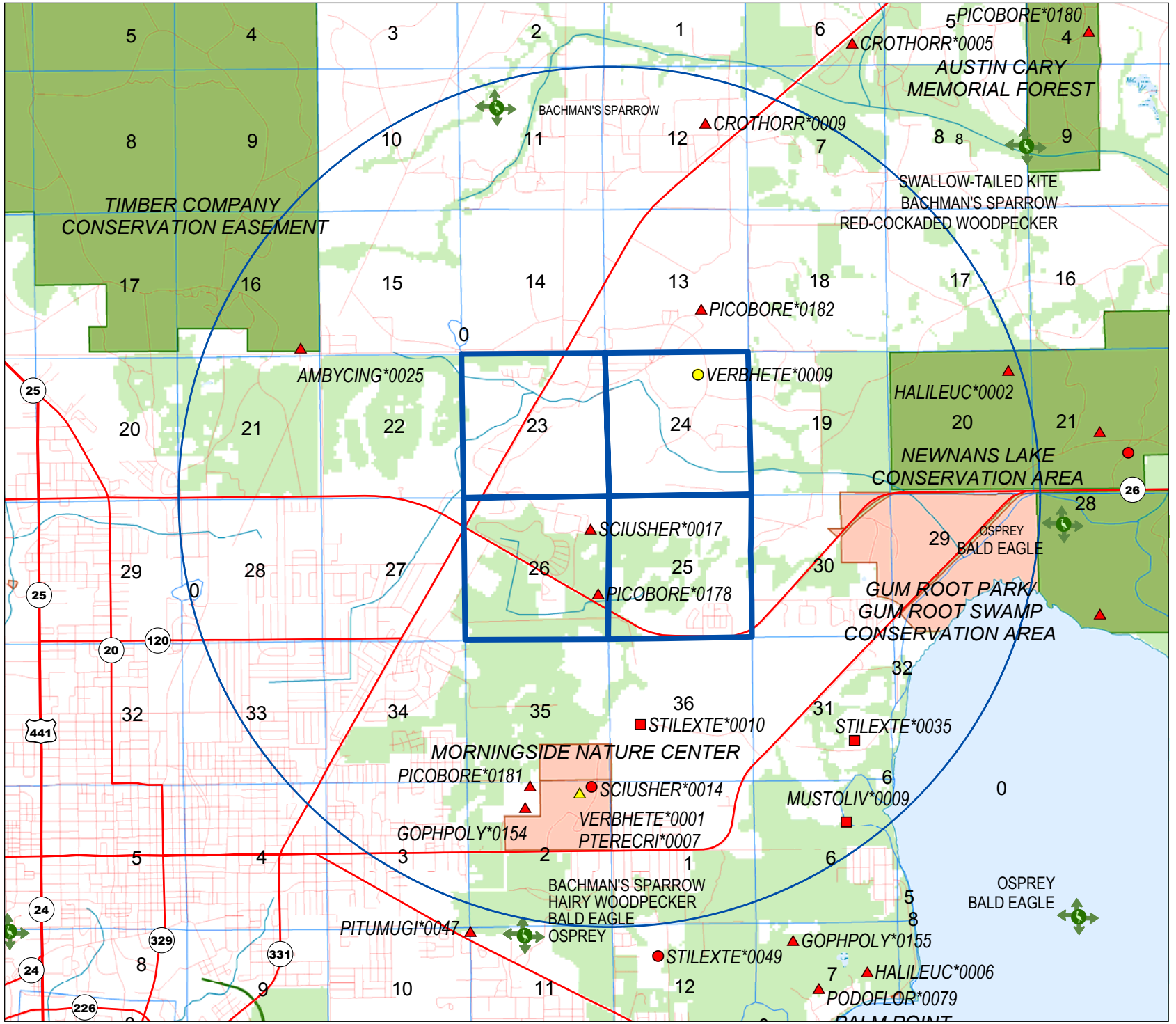
Edwin A. Abbey
Environmental Reviewer

encl

Florida Natural Areas Inventory
Element Occurrences on or near Site

Map Label	Scientific Name	Common Name	Global Rank	State Rank	Federal Status	State Listing	Observation Date	Description	EO Comments
AMBYCING*0025	AMBYSTOMA CINGULATUM	FLATWOODS SALAMANDER	G2G3	S2S3	LT	LS	1947-04-17	1947: FLATWOODS. 1993: BEDDED, UNBURNED PINUS ELLIOTTII PLANTATIONS.	ONE SPECIMEN (UI-25439) COLLECTED 17 APRIL 1947 BY W.M. BECK, JR.
CROTHORR*0009	CROTALUS HORRIDUS	TIMBER RATTLESNAKE	G4	S3	N	N	1976-08-16	NO GENERAL DESCRIPTION GIVEN	FSM SPECIMEN FOUND ON ROAD AT 1500 H, 16 AUGUST 1976, BY W. FLETCHER (S76FLESM). TWO KILLED ON PORCH [NO DATE OR PRECISE LOCATION] (PNDMOL01).
GOPHPOLY*0154	GOPHERUS POLYPHEMUS	GOPHER TORTOISE	G3	S3	N	LS	ZZ	NO GENERAL DESCRIPTION GIVEN	1 SPECIMEN (CARNEGIE MUSEUM NATURAL HISTORY - 27177) COLLECTOR AND DATE N/A (S??XXXCM).
HALILEUC*0002	HALIAEETUS LEUCOCEPHALUS	BALD EAGLE	G4	S3	LT	LT	1981	NO GENERAL DESCRIPTION GIVEN	ACTIVE NEST; 1 YOUNG IN 1981, 1979; UNKNOWN NUMBER OF YOUNG IN 1980, 1978, 1977; 2 YOUNG IN 1976.
MUSTOLIV*0009	MUSTELA FRENATA OLIVACEA	SOUTHEASTERN WEASEL	G5T4	S3?	N	N	1974-02-09	NO GENERAL DESCRIPTION GIVEN	MUSEUM SPECIMENS: COLLECTED BY D.J. FORRESTER 1974-02-09 NO FSM # GIVEN. FSM #13724 COLLECTED BY L. MILLER 1958; FSM #00827 COLLECTED BY J.C. MOORE, 1940-03-16; FSM #11048 COLLECTED BY H.B. SHERMAN, 1930-07-18; FSM #10934 COLLECTED BY H.B. SHERMAN, 1930-
PICOBORE*0178	PICOIDES BOREALIS	RED-COCKADED	G3	S2	LE	LT	ZZ	PINE.	ONE ACTIVE COLONY; 2 OTHER COLONIES IMMEDIATELY NW ARE NOW INACTIVE.
PICOBORE*0181	PICOIDES BOREALIS	RED-COCKADED	G3	S2	LE	LT	ZZ	PINE.	ONE ACTIVE COLONY.
PICOBORE*0182	PICOIDES BOREALIS	RED-COCKADED	G3	S2	LE	LT	ZZ	PINE.	ONE ACTIVE COLONY.
PTERECRI*0007	PTEROGLOSSASPIS ECRISTATA	GIANT ORCHID	G2	S2	MC	LT	1984-07-00	PINE FLATWOODS AND SANDHILLS INTERSPERSED WITH MARSHES, WET PRAIRIES AND CYPRESS SWAMPS.	NONE GIVEN
SCIUSHER*0014	SCIURUS NIGER SHERMANI	SHERMAN'S FOX SQUIRREL	G5T3	S3	N	LS	1986-12	SANDHILLS, DISTURBED AREAS	SMALL POP., FORMERLY LARGER BUY STEADILY DECLINING SINCE CA. 1970. SEVERAL SIGHTINGS IN LATE 1986 IN- CLUDING A JUVENILE SEEN DEC. 1986 BY LARRY JOHNSON.
SCIUSHER*0017	SCIURUS NIGER SHERMANI	SHERMAN'S FOX SQUIRREL	G5T3	S3	N	LS	1987-	FLATWOODS	1 OR 2 INDIVS. SEEN NEARLY EVERY MONTH FOR LAST FEW YEARS BY WAYNE MARION.
STILEXTE*0010	STILOSOMA EXTENUATUM	SHORT-TAILED SNAKE	G3	S3	N	LT	1957-04-29	NO GENERAL DESCRIPTION GIVEN	UF-9639, 29 APRIL 1957, H. DOWLING.
STILEXTE*0035	STILOSOMA EXTENUATUM	SHORT-TAILED SNAKE	G3	S3	N	LT	1934-04-14	NO GENERAL DESCRIPTION GIVEN	UF-396, 14 APRIL 1934, H.K. WALLACE.
VERBHETE*0001	VERBESINA HETEROPHYLLA	VARIABLE-LEAF	G2	S2	MC	N	1984-07	PINE FLATWOODS AND SANDHILLS INTERSPERSED WITH MARSHES, WET PRAIRIES AND CYPRESS SWAMPS.	NONE GIVEN.
VERBHETE*0009	VERBESINA HETEROPHYLLA	VARIABLE-LEAF	G2	S2	MC	N	1996-08-13	Mowed area (part of airport clear zone); original community of longleaf/slash pine flatwoods grading into sandhill-like vegetation; dominant ground cover = Pteridium aquilinum, Aristida stricta, Sporobolus junceus with scattered Quercus laevis and Q. inc	100+/- individuals over 15 acres. Flowering and fruiting.

Township 9 S, Range 20 E, Sections 23-26 - Alachua County



1018 Thomasville Road
Suite 200-C
Tallahassee, FL 32303
850-224-8207
fax 850-681-9364
www.fnai.org

FLORIDA Natural Areas INVENTORY

Element Occurrences

Precision: second minute general

- Animals
- Plants
- Communities
- Other

U.S. Fish & Wildlife Service Scrub Jay Survey 1992-96

FL Fish & Wildlife Cons. Comm. Breeding Bird Atlas Project 1986-91 center point of 10 sq mi survey block

Conservation Lands

- Federal
- State
- Local
- Private
- State Aquatic Preserves

Land Acquisition Projects

- Florida Forever Board of Trustees Projects

Non-Managed Natural Areas

- FNAI Potential Habitat for Rare Species
- FNAI Potential Natural Areas

- County Boundary
- Interstate
- Turnpike
- Major Highway
- Local Road
- Water

Map produced by EAA
Data Source: 01/03

NOTE
Map should not be interpreted without accompanying documents.

U.S. Fish & Wildlife Service

North Florida Field Office

Alachua County Federally Listed Species

The following table lists those federally-listed species known to be present in the county.
Code Key: E = Endangered, T = Threatened, P = Proposed, C = Candidate, CH = Critical Habitat

Category	Species Common Name	Species Scientific Name	Code
Mammals	None		
Birds	Bald Eagle	*Haliaeetus leucocephalus*	T
	Florida Scrub-jay	*Aphelocoma coeruluscens*	T
	Wood Stork	*Mycteria americana*	E
	Red-cockaded Woodpecker	*Picoides borealis*	E
Fish	None		
Reptiles	Eastern Indigo Snake	*Dymarchon corais couperi*	T
Amphibians	None		
Mollusks	Oval (Santa Fe River) Pigtoe	*Pleurobema pyriforme*	E
Crustaceans	Squirrel Chimney Cave (or Florida Cave) Shrimp	*Palaemonetes cummingi*	T
Plants	None		

▶County List ▶Home

Send comments on our web site or general questions to northflorida@fws.gov

If you need special assistance please contact the Public Affairs Officer at chuck_underwood@fws.gov

Last modified March 22, 2002

FLORIDA'S ENDANGERED SPECIES, THREATENED SPECIES AND SPECIES OF SPECIAL CONCERN

Official Lists

Publication Date: 1 August 1997



CONTENTS

PREFACE

NUMERICAL SUMMARY OF SPECIES LISTED BY STATE AND FEDERAL AGENCIES AS ENDANGERED, THREATENED OR OTHERWISE CATEGORIZED AS OF CONCERN

OFFICIAL LISTS

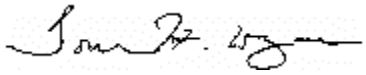
Fish | Amphibians | Reptiles | Birds | Mammals | Corals | Crustaceans
Insects | Molluscs | Plants

PREFACE

This document consolidates the state and federal official lists of endangered species, threatened species, and other species categorized in some way by the respective jurisdictional agencies as meriting special protection or consideration. The state lists of animals are maintained by the Florida Game and Fresh Water Fish Commission and categorized as endangered, threatened and of special concern, and constitute Rules 39-27.003, 39-27.004 and 39-27.005, respectively, Florida Administrative Code (F.A.C.). The state lists of plants are categorized into endangered, threatened and commercially exploited, and are administered and maintained by the Florida Department of Agriculture and Consumer Services via Chapter 5B-40, F.A.C. The federal lists of animals and plants are administered by the U.S. Fish and Wildlife Service and categorized into endangered and threatened, and are published in 50 CFR 17 (animals) and 50 CFR 23 (plants). The abbreviations used in part one are:

- GFC = Florida Fish and Wildlife Conservation Commission
- FDA = Florida Department of Agriculture and Consumer Services
- FWS = United States Fish and Wildlife Service
- E = Endangered

- T = Threatened
- T(S/A) = Threatened/Similarity of Appearance
- T(E/P) = Threatened/Experimental Population
- SSC = Species of Special Concern
- C = Commercially Exploited



Tom H. Logan
Endangered Species Coordinator

NUMERICAL SUMMARY OF SPECIES LISTED BY STATE AND FEDERAL AGENCIES AS ENDANGERED, THREATENED OR OTHERWISE CATEGORIZED AS OF CONCERN

Status Designation	Fish	Amphibians	Reptiles	Birds	Mammals	Invertebrates	Plants	Total
GFC								
E	3	0	6	8	20	3	--	40
T	2	0	10	11	4	0	--	27
SSC	11	5	7	17	6	4	--	50
TOTAL	**16**	**5**	**23**	**36**	**30**	**7**	**--**	**117**
FDA								
E	--	--	--	--	--	--	337	337
T	--	--	--	--	--	--	66	66
C	--	--	--	--	--	--	10	10
TOTAL							**413**	**413**
FWS								
E	2	0	5	7	18	1	44	77
T	1	0	5	6	1	2	10	25
T(S/A)	0	0	1	0	0	0	0	1
T(E/P)	0	0	0	1	0	0	0	1
TOTAL	**3**	**0**	**11**	**14**	**19**	**3**	**54**	**104**

Return to Table of Contents

OFFICIAL LISTS

		Designated Status	
Scientific Name	**Common Name(s)**	**GFC**	**FWS**
Fish			
Acipenser brevirostrum	Shortnose sturgeon	E	E
Acipenser oxyrhynchus	Atlantic sturgeon	SSC	T*
Ammocrypta asprella	Crystal darter	T	
Centropomus undecimalis	Common snook	SSC	
Cyprinodon variegatus hubbsi	Lake Eustis pupfish	SSC	
Etheostoma histrio	Harlequin darter	SSC	
Etheostoma okaloosae	Okaloosa darter	E	E
Etheostoma olmstedi maculaticeps	Southern tessellated darter; tesselated johnny darter	SSC	
Fundulus jenkinsi	Saltmarsh topminnow	SSC	
Menidia conchorum	Key silverside	T	
Micropterus notius	Suwannee bass	SSC	
Micropterus n. sp. cf *coosae*	Shoal bass; Chipola bass	SSC	
Notropis melanostomus	Blackmouth (=Pond Creek) shiner	E	
Pteronotropis welaka	Bluenose shiner	SSC	
Rivulus marmoratus	Mangrove rivulus; rivulus	SSC	
Starksia starcki	Key blenny	SSC	
* Applicable only to the subspecies *A.o. desotoi* (Gulf sturgeon)			
Amphibians			
Haideotriton wallacei	Georgia blind salamander	SSC	
Hyla andersonii	Pine Barrens treefrog	SSC	
Rana capito	Gopher (=crawfish) frog	SSC	
Rana okaloosae	Bog frog	SSC	
Reptiles			
Alligator mississippiensis	American alligator	SSC	T(S/A)
Caretta caretta	Atlantic loggerhead turtle	T	T

Chelonia mydas mydas	Atlantic green turtle	E	E
Crocodylus acutus	American crocodile	E	E
Dermochelys coriacea	Leatherback (=leathery) turtle	E	E
Diadophis punctatus acricus	Big Pine Key ringneck snake	T	
Drymarchon corais couperi	Eastern indigo snake	T	T
Elaphe guttata guttata	Red rat snake; corn snake	SSC*	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**GFC**	**FWS**
Eretmochelys imbriccata imbratica	Atlantic hawksbill turtle	E	E
Eumeces egregius egregius	Florida Keys mole skink	SSC	
Eumeces egregius lividus	Bluetail mole skink	T	T
Gopherus polyphemus	Gopher turtle	SSC	
Graptemys barbouri	Barbour's map (=sawback) turtle	SSC	
Kinosternon bauri	Striped mud turtle	E*	
Lepidochelys kempi	Atlantic ridley turtle	E	E
Macroclemys temmincki	Alligator snapping turtle	SSC	
Neoseps reynoldsi	Sand skink	T	T
Nerodia fasciata taeniata	Atlantic salt marsh snake	T	T
Pituophis melanoleucus mugitus	Florida pine snake	SSC	
Pseudemys concinna suwanniensis	Suwannee cooter	SSC	
Stilosoma extenuatum	Short-tailed snake	T	
Storeria dekayi victa	Florida brown snake	T*	
Tantilla oolitica	Miami black-headed snake; rimrock crowned snake	T	
Thamnophis sauritus sackeni	Florida ribbon snake	T*	
*Applicable in lower Florida Keys only			
Birds			

Ajaia ajaja	Roseate spoonbill	SSC	
Ammodramus maritimus juncicolus	Wakulla seaside sparrow	SSC	
Ammodramus maritimus mirabilis	Cape Sable seaside sparrow	E	E
Ammodramus maritimus peninsulae	Scott's seaside sparrow	SSC	
Ammodramus savannarum floridanus	Florida grasshopper sparrow	E	
Aphelocoma coerulescens	Florida scrub-jay	T	T
Aramus guarauna	Limpkin	SSC	
Campephilus principalis	Ivory-billed woodpecker	E	E
Charadrius alexandrinus tenuirostris	Southeastern snowy plover	T	
Charadrius melodus	Piping plover	T	T
Cistothorus palustris griseus	Worthington's marsh wren	SSC	
Cistothorus palustris marianae	Marian's marsh wren	SSC	
Columba leucocephala	White-crowned pigeon	T	
Dendroica kirtlandii	Kirtland's warbler	E	E
Egretta caerulea	Little blue heron	SSC	
Egretta rufescens	Reddish egret	SSC	
Egretta thula	Snowy egret	SSC	
Egretta tricolor	Tricolored (=Louisiana) heron	SSC	
Eudocimus albus	White ibis	SSC	
Falco peregrinus tundrius	Arctic peregrine falcon	E	
Falco sparverius paulus	Southeastern American kestrel	T	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**GFC**	**FWS**
Grus americana	Whooping crane	SSC	T(E/P)
Grus canadensis pratensis	Florida sandhill crane	T	
Haematopus palliatus	American oystercatcher	SSC	
Haliaeetus leucocephalus	Bald eagle	T	T

Mycteria americana	Wood stork	E	E
Pandion haliaetus	Osprey	SSC*	
Pelecanus occidentalis	Brown pelican	SSC	
Picoides borealis	Red-cockaded woodpecker	T	E
Polyborus plancus audubonii	Audubon's crested caracara	T	T
Rostrhamus sociabilis	Snail kite	E	E
Rynchops niger	Black skimmer	SSC	
Speotyto cunicularia	Burrowing owl	SSC	
Sterna antillarum	Least tern	T	
Sterna dougallii	Roseate tern	T	T
Vermivora bachmanii	Bachman's warbler	E	E
*Applicable in Monroe County only			
Mammals			
Balaena glacialis	Right whale	E	E
Balaenoptera borealis	Sei whale	E	E
Balaenoptera physalus	Finback whale	E	E
Blarina carolinensis (=brevicauda) shermani	Sherman's short-tailed shrew	SSC	
Eumops glaucinus floridanus	Florida (=Wagner's) mastiff bat	E	
Felis concolor coryi	Florida panther	E	E
Megaptera novaeangliae	Humpback whale	E	E
Microtus pennsylvanicus dukecampbelli	Duke's (=Florida) saltmarsh vole	E	E
Mustela vison evergladensis	Everglades mink	T	
Myotis grisescens	Gray bat	E	E
Myotis sodalis	Indiana bat	E	E
Neotoma floridana smalli	Key Largo woodrat	E	E
Odocoileus virginianus clavium	Key deer; toy deer	E	E
Oryzomys argentatus	Silver rice rat	E	E
Oryzomys palustris sanibeli	Sanibel Island rice rat	SSC	
Peromyscus gossypinus allapaticola	Key Largo cotton mouse	E	E
Peromyscus polionotus allophrys	Choctawhatchee beach mouse	E	E

Peromyscus polionotus niveiventris	Southeastern beach mouse	T	T
Peromyscus polionotus peninsularis	St. Andrews beach mouse	E	
Peromyscus polionotus phasma	Anastasia Island beach mouse	E	E
Peromyscus polionotus trissyllepsis	Perdido Key beach mouse	E	E
Physeter catodon	Sperm whale; cachalot	E	E
Podomys floridanus	Florida mouse	SSC	
Sciurus niger avicennia	Big Cypress (=mangrove) fox squirrel	T	
Sciurus niger shermani	Sherman's fox squirrel	SSC	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**GFC**	**FWS**
Sorex longirostris eionis	Homosassa shrew	SSC	
Sylvilagus palustris hefneri	Lower Keys marsh rabbit	E	E
Tamias striatus	Eastern chipmunk	SSC	
Trichechus manatus	West Indian (=Florida) manatee	E	E
Ursus americanus floridanus	Florida black bear	T*	
*Not applicable in Baker and Columbia counties and Apalachicola National Forest			
Corals			
Dendrogyra cylindrus	Pillar coral	E	
Crustaceans			
Palaemonetes cummingi	Squirrel Chimney (=Florida) cave shrimp	T	
Procambarus econfinae	Econfina crayfish	SSC	
Procambarus erythrops	Sims Sink crayfish	SSC	
Procambarus pictus	Black Creek crayfish	SSC	
Insects			
Heraclides aristodemus	Schaus' swallowtail butterfly	E	E

ponceanus			
Molluscs			
Liguus fasciatus	Florida tree snail	SSC	
Orthalicus reses	Stock Island tree snail	E	T*
*Applies only to the subspeceis *O.r. reses*			

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Plants			
Acacia choriophylla	Tamarindillo	E	
Acrostichum aureum	Golden leather fern	E	
Acrostichum danaeifolium	Giant leather fern	C	
Actaea pachypoda	Baneberry; doll's eyes	E	
Adiantum melanoleucum	Fragrant maidenhair fern	E	
Adiantum tenerum	Brittle maidenhair fern	E	
Alvaradoa amorphoides	Alvaradoa	E	
Amorpha crenulata	Crenulate (=Miami) lead plant	E	E
Anemia wrighti	Parsley fern	E	
Aquilegia canadensis	Wild (=Southern; =Canadian) columbine	E	
Arabis canadensis	Sicklepod	E	
Argythamnia blodgettii	Blodgett's wild-mercury	E	
Aristolochia tomentosa	Dutchman's pipe; pipevine	E	
Asclepias curtissii	Curtiss' (=sandhill) milkweed	E	
Asclepias viridula	Apalachicola (=green) milkweed	T	
Asimina tetramera	Four-petal (=opossum) pawpaw	E	E
Asplenium auritum	Auricled spleenwort	E	
Asplenium monanthes	San Felasco (=single sorus) spleenwort	E	
Asplenium pumilum	Dwarf (=chervil) spleenwort	E	
Asplenium serratum	Bird's nest spleenwort; wild birdnest fern	E	
Asplenium subtile	Slender spleenwort	E	

Asplenium trichomanes-dentatum	Slender spleenwort	E	
Asplenium verecundum	Delicate spleenwort	E	
Aster hemisphericus	Aster (unnamed)	E	
Aster spinulosus	Pinewoods aster	E	
Athyrium filix-femina	Southern lady fern	T	
Baptisia hirsuta (=B. calycosa var. *hirsuta*)	Pineland (=hairy) wild indigo	T	
Baptisia megacarpa	Apalachicola wild indigo	E	
Baptisia simplicifolia	Coastal Plain wild indigo; scare-weed	T	
Basiphyllaea corallicola	Carter's orchid	E	
Bigelowia nuttalli	Nuttal's rayless goldenrod	E	
Blechnum occidentale	Sinkhole fern	E	
Bletia purpurea	Pine pink orchid	T	
Bonamia grandiflora	Florida (=large-flowered) bonamia	E	T
Bourreria cassinifolia	Little strongback	E	
Brassia caudata	Long-tailed spider orchid	E	
Brickellia cordifolia	Flyr's brickell-bush	E	
Brickellia eupatorioides var. *floridana* *(=B. mosieri)*	Florida brickell-bush; Florida boneset	E	
Bulbophyllum pachyrrhachis	Rattail orchid	E	
Bumelia anomala	Clark's buckthorn	E	
Bumelia lycioides	Gopherwood buckthorn	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Bumelia thornei	Thorne's buckthorn	E	
Burmannia flava	Fakahatchee burmannia	E	
Byrsonima lucida	Locust berry	E	
Cacalia diversifolia	Variable-leaved Indian plantain	T	
Calamintha ashei	Ashe's savory; lavender basil	T	
Calamovilfa curtissii	Curtiss' reedgrass; Curtiss' sand grass	T	
Callirhoe papaver	Poppy mallow	E	

Calopogon barbatus	Bearded grass pink	T	
Calopogon multiflorus	Many-flowered grass pink	E	
Calycanthus floridus	Sweetshrub	E	
Calyptranthes zuzygium	Myrtle of the river	E	
Calystegia catesbaeiana	Catesby's bindweed	E	
Campanula robinsiae	Robins' (=Chinsegut) bellflower	E	E
Campylocentrum pachyrrhizum	Leafless orchid	E	
Campyloneurum angustifolium	Narrow strap fern	E	
Campyloneurum costatum	Tailed strap fern	E	
Campyloneurum phyllitidus	Long strap fern	E	
Canella winteriana	Wild cinnamon	E	
Carex baltzelli	Baltzell's sedge	T	
Cassia keyensis (=Chaemecrista lineata var. *keyensis*)	Big Pine partridge pea; Florida Keys senna; Key cassia	E	
Catesbaea parviflora	Small-flowered (=dune) lily-thorn	E	
Catopsis berteroniana	Powdery (=yellow) catopsis	E	
Catopsis floribunda	Many-flowered air plant	E	
Catopsis nutans	Nodding catopsis	E	
Celtis iguanaea	Iguana hackberry	E	
Celtis pallida	Spiny hackberry	E	
Cereus eriophorus	Indian River prickly apple	E	E
Cereus gracilis	West coast prickly apple	E	
Cereus pentagonus	Dildoe (=barbed wire) cactus	E	
Cereus robinii	Tree cactus	E	E
Chamaesyce cumulicola	Sand dune spurge	E	
Chamaesyce deltoidea ssp. *deltoidea*	Wedge (=deltoid; =rockland) spurge	E	E
Chamaesyce garberi	Garber's spurge	E	T
Chamaesyce porteriana	Porter's spurge	E	
Cheilanthes microphylla	Southern lip fern	E	
Chionanthus pygmaeus	Pygmy fringetree	E	E
Chrysophyllum oliviforme	Satinleaf	E	
Chrysopsis cruiseana (=C. gossypinus crioseana)	Cruise's golden aster	E	
Chrysopsis floridana	Florida golden aster	E	E
Cienfuegosia yucatanensis	Yellow hibiscus	E	

(=C. heterophylla)			
Cladonia perforata	Perforate reindeer lichen; deer moss	E	E
Cleistes divaricata	Rosebud orchid; spreading pogonia	T	
Clitoria fragrans	Pigeon-wing (=sandhill) butterfly-pea	E	T

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Clusia rosea	Balsam apple	E	
Coccothrinax argentata	Silver palm	E	
Colubrina cubensis	Colubrina	E	
Conradina breviflora	Short-leaved rosemary	E	E
Conradina etonia	Etonia rosemary	E	E
Conradina glabra	Apalachicola (=panhandle) rosemary	E	E
Conradina grandiflora	Large-flowered rosemary	E	
Corallorhiza odontorhiza	Autumn coralroot	E	
Cordia sebestena	Geiger tree	E	
Cornus alternifolia	Pagoda dogwood	E	
Cranichis muscosa	Moss orchid	E	
Crataegus phaenopyrum	Washington thorn	E	
Croomia pauciflora	Few-flowered croomia	E	
Crossopetalum ilicifolium	Christmas berry	E	
Crossopetalum rhacoma	Rhacoma	E	
Crotolaria avonensis	Avon Park rattlebox; Avon Park harebells	E	E
Cryptotaenia canadensis	Honewort	E	
Ctenitis sloanei	Red-hair comb fern; Florida tree fern	E	
Ctenitis submarginalis	Brown-hair comb fern	E	
Cucurbita okeechobeensis	Okeechobee gourd; Indian pumpkin	E	E
Cupania glabra	Cupania	E	
Cyrtopodium punctatum	Cowhorn (=cigar) orchid	E	
Deeringothamnus pulchellus	White squirrel-banana; beautiful pawpaw	E	E
Deeringothamnus rugelii	Yellow squirrel-banana; Rugel's pawpaw	E	E
Delphinium carolinianum	Carolina larkspur	E	

Dennstaedtia bipinnata	Cuplet (=hay-scented) fern	E	
Dicerandra christmanii	Garrett's mint	E	E
Dicerandra cornutissima	Long-spurred balm; Robins' mint	E	E
Dicerandra frutescens	Scrub balm; Lloyd's mint	E	E
Dicerandra immaculata	Lakela's (=Olga's) mint	E	E
Digitaria pauciflora	Florida pineland crabgrass	E	
Dodecatheon meadia	Shooting star	E	
Drosera filifolia	Dew-thread	E	
Drosera intermedia	Water sundew	T	
Eltroplectris calcarata (=Centrogenium setaceum)	Spurred neottia	E	
Encyclia boothiana	Dollar (=dogtooth) orchid	E	
Encyclia cochleata	Shell (=clamshell) orchid	E	
Encyclia pygmaea	Dwarf epidendrum	E	
Encyclia tampensis	Butterfly orchid	C	
Epidendrum acunae	Acuna's epidendrum	E	
Epidendrum anceps	Dingy-flowered epidendrum	E	
Epidendrum conopseum	Greenfly orchid	C	
Eidendrum difforme	Unbelled epidendrum	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Epidendrum nocturnum	Night-scent orchid	E	
Epidendrum rigidum	Rigid epidendrum	E	
Epidendrum strobiliferum	Matted epidendrum	E	
Epigaea repens	Trailing arbutus	E	
Eragrostis tracyi	Sanibel Island lovegrass	E	
Eriogonum longifolium var. *gnaphalifolium (=E. floridanum)*	Scrub buckwheat	E	T
Ernodea cokeri	One-nerved ernodea	E	
Ernodea littoralis	Beach creeper	T	
Eryngium cuneifolium	Wedge-leaved button snake-root; scrub celery	E	E
Erythronium umbilicatum	Dogtooth lily; dimpled dogtooth violet	E	

Eugenia confusa	Redberry ironwood	E	
Eugenia rhombea	Red stopper	E	
Eulophia alta	Wild (=ground) coco	T	
Euphorbia telephioides	Telephus spurge	E	T
Forestiera godfreyi	Godfrey's swamp privet	E	
Galactia smallii	Small's milkpea	E	E
Galeandra beyrichii	Helmet orchid	E	
Garberia heterophylla	Garberia	T	
Gentiana pennelliana	Wiregrass gentian	E	
Goodyera pubescens	Downy rattlesnake orchid	E	
Gossypium hirsutum	Wild cotton	E	
Govenia utriculata	Gowen's orchid	E	
Guaiacum sanctum	Lignum-vitae tree	E	
Guzmania monostachia	Fuch's bromeliad	E	
Habenaria distans	Rein orchid (unnamed)	E	
Harperocallis flava	Harper's beauty	E	E
Harrisella filiformis	Threadroot orchid	T	
Hartwrightia floridana	Florida hartwrightia	T	
Hasteola robertiorum	Gulf Hammock Indian plantain	E	
Helianthus carnosus	Lakeside (=flatwoods) sunflower	E	
Hepatica nobilis (=H. americana)	Liverleaf	E	
Hexalectris spicata	Crested coralroot	E	
Hexastylis arifolia	Heartleaf	T	
Hippomane mancinella	Manchineel	E	
Hybanthus concolor	Green violet	E	
Hydrangea arborescens	Wild hydrangea	E	
Hymenocallis henryae	Henry's spiderlily	E	
Hypelate trifoliata	Inkwood; white ironwood	E	
Hypericum cumulicola	Highlands scrub St. John's-wort	E	E
Hypericum edsonianum	Edison's St. John's-wort	E	
Hypericum lissophloeus	Smooth-barked St. John's-wort	E	
Ilex krugiana	Krug's holly	E	
Illicium floridanum	Florida anise	T	

Return to Table of Contents

		Designated

		Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Illicium parviflorum	Yellow star anise	E	
Ionopsis utricularioides	Delicate ionopsis; violet orchid	E	
Ipomoea microdactyla	Wild potato morning glory	E	
Ipomoea tenuissima	Rocklands morning glory	E	
Isoetes engelmannii	Engelmann's quillwort	E	
Isotria verticillata	Whorled pogonia	E	
Jacquemontia curtissii	Pineland (=Curtiss') clustervine	E	
Jacquemontia reclinata	Beach (=reclined) clustervine	E	E
Jacquinia keyensis	Joewood	T	
Justicia cooleyi	Cooley's water willow	E	E
Justicia crassifolia	Thick-leaved (=large-flowered) water willow	E	
Kalmia latifolia	Mountain laurel	T	
Lantana depressa	Pineland lantana	E	
Lechea cernua	Nodding (=drooping; =scrub) pinweed	T	
Lechea divaricata	Pine (=spreading) pinweed	E	
Lechea lakelae	Lakela's pinweed	E	
Leitneria floridana	Florida corkwood	T	
Leochilus labiatus	Lipped orchid	E	
Lepanthopsis melanantha	Harris' tiny orchid	E	
Lepuropetalon spathulatum	Little people	E	
Liatris ohlingerae	Florida gayfeather; scrub blazing star	E	E
Liatris provincialis	Godfrey's gayfeather	E	
Licaria triandra	Gulf licaria	E	
Lilium catesbaei	Catesby's lily	T	
Lilium iridollae	Panhandle lily	E	
Lindera melissifolia	Swamp spicebush; Jove's fruit; pondberry	E	E
Lindera subcoriacea	Bog spicebush	E	
Linum arenicola	Sand flax	E	
Linum carteri	South Florida (=Everglades) flax	E	
Linum westii	West's flax	E	
Liparis nervosa	Tall twayblade	E	
Listera australis	Southern twayblade	T	
Litsea aestivalis	Pond spice; pond bush	E	
Lobelia cardinalis	Cardinal flower	T	

Lomariopsis kunzeana	Climbing holly fern	E	
Lupinus aridorum (=L. westianus var. *aridorum*)	McFarlin's (=scrub) lupine	E	E
Lupinus westianus	Gulfcoast (=panhandle) lupine	T	
Lycopodium cernuum	Nodding clubmoss	C	
Lycopodium dichotomum	Hanging (=coneless) clubmoss	E	
Lythrum curtissii	Curtiss' loosestrife	E	
Macbridea alba	White birds-in-a-nest	E	T
Macradenia lutescens	Trinidad macradenia	E	
Macranthera flammea	Hummingbird flower	E	
Magnolia acuminata	Cucumber tree	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Magnolia ashei	Ashe's magnolia	E	
Magnolia pyramidata	Pyramidal magnolia	E	
Malaxis unifolia	Green adder's mouth	E	
Malus angustifolia	Crabapple	T	
Marshallia obovata	Barbara's buttons (unnamed)	E	
Marshallia ramosa	Southern barbara's buttons	E	
Matela alabamensis	Alabama milkweed; Alabama anglepod	E	
Matela baldwyniana	Baldwin's milkweed; Baldwin's anglepod	E	
Matela flavidula	Yellow-flowered anglepod	E	
Matela floridana	Florida milkweed; panhandle anglepod	E	
Matela gonocarpos	Anglepod (unnamed)	T	
Maxillaria crassifolia	Hidden orchid	E	
Maxillaria parviflora	Minnie-max	E	
Medeola viginiana	Indian cucumber-root	E	
Melanthera parvifolia	Small-leaved melanthera	E	
Microgramma heterophylla	Climbing vine fern	E	
Monotropa hypopithys	Pinesap (unnamed)	E	
Monotropsis reynoldsiae	Pygmy-pipes; sweet pinesap	E	
Myrcianthes fragrans (=Eugenia simpsonii)	Simpson's ironwood; Simpson's stopper	T	

Najas filifolia	Slender naiad	T	
Nemastylis floridana	Fall-flowering pleat-leaf; celestial lily	E	
Nephrolepis biserrata	Giant sword fern	T	
Neurodium (=Paltonium) lanceolatum	Ribbon fern	E	
Nolina atopocarpa	Florida beargrass	T	
Nolina brittoniana	Scrub (=Britton's) beargrass	E	E
Okenia hypogaea	Burrowing four-o'clock	E	
Oncidium bahamensis	Dancing lady orchid	E	
Oncidium floridanum	Florida oncidium	E	
Oncidium luridum	Mule-ear (=dingy-flowered) orchid	E	
Ophioglossum palmatum	Hand adder's tongue fern	E	
Opuntia spinosissima	Semaphore cactus	E	
Opuntia stricta	Shell mound prickly pear cactus	T	
Opuntia triacantha	Keys joe-jumper	E	
Osmunda cinnamomea	Cinnamon fern	C	
Osmunda regalis	Royal fern	C	
Oxypolis greenmanii	Giant water dropwort	E	
Pachysandra procumbens	Allegheny spurge	E	
Panicum abscissum	Cutthroat grass	E	
Parnassia caroliniana	Coastal (=Carolina) grass-of-parnassus	E	
Parnassia grandifolia	Grass-of-parnassus	E	
Paronychia chartacea	Papery whitlow-wort	E	T
Pecluma dispersa	Polypoda fern (unnamed)	E	
Pecluma plumula	Plume polypoda fern	E	
Pecluma ptilodon	Swamp plume polypoda fern	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Pellaea atropurpurea	Cliff brake fern	E	
Peperomia glabella	Cypress peperomia	E	
Peperomia humilis	Pepper (unnamed)	E	
Peperomia magnoliifolia (=P. spathulifolia)	Spatulate peperonia	E	
Peperomia obtusifolia (=P.	Florida (=Everglades) peperomia	E	

floridana)			
Phoradendron rubrum	Mahogany mistletoe	E	
Phyllanthus liebmannianus	Pinewood dainties; Florida leaf flower	E	
Physocarpus opulifolius	Ninebark	E	
Pinckneya bracteata (=P. pubens)	Hairy fevertree	T	
Pinguicula caerulea	Blue flowered butterwort	T	
Pinguicula ionantha	Godfrey's (=panhandle) butterwort	E	T
Pinguicula lutea	Yellow flowered butterwort	T	
Pinguicula planifolia	Chapman's (=swamp) butterwort	T	
Pinguicula primuliflora	Primrose-flowered butterwort	E	
Pityopsis flexuosa	Panhandle (=Florida) golden aster	E	
Platanthera blephariglottis	Large white-fringed orchid	T	
Platanthera ciliaris	Yellow-fringed orchid	T	
Platanthera clavellata	Little club-spur orchid; green rein orchid	E	
Platanthera cristata	Golden (=crested) fringed orchid	T	
Platanthera flava	Southern tubercled orchid; gypsy-spikes	T	
Platanthera integra	Southern yellow fringeless orchid; orange rein orchid	E	
Platanthera nivea	Snowy orchid; bog torch	T	
Pleopeltis astrolepis	Star-scaled fern	E	
Pleurothallis gelida	Frosted orchid	E	
Pogonia ophioglossoides	Rose pogonia	T	
Poinsettia pinetorum	Everglades poinsettia	E	
Polygala lewtonii	Scrub milkwort; Lewton's polygala	E	E
Polygala smallii	Tiny (=Small's) milkwort	E	E
Polygonella ciliata var. *basiramia (=P. basiramia)*	Hairy (=tufted) jointweed	E	E
Polygonella macrophylla	Large-leaved jointweed	T	
Polygonella myriophylla	Small's jointweed; sandlace	E	E
Polygonum meisnerianum	Mexican tear-thumb	E	
Polyradicion (=Polyrrhiza) lindenii	Ghost orchid; palm polly	E	
Polystachya flavescens (=P. concreta:	Pale-flowered polystachya	E	

=P. extinctoria)			
Ponthieva brittoniae	Mrs. Britton's shadow witch	E	
Prescottia oligantha	Small-flowered orchid	E	
Prunus geniculata	Scrub plum	E	E
Pseudophoenix sargentii	Buccaneer (=Sargent's cherry) palm	E	
Pteris bahamensis	Cretan brake fern	E	
Pteroglossaspis (=Eulophia) ecristata	Non-crested coco; false coco	T	
Remirea maritima	Beach star	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Rhapidophyllum hystrix	Needle palm	C	
Rhexia parviflora	Apalachicola (=small-flowered) meadowbeauty	E	
Rhipsalis baccifera	Mistletoe cactus	E	
Rhododendron alabamense	Alabama azalea	E	
Rhododendron austrinum	Florida flame (=orange) azalea	E	
Rhododendron canescens	Pink azalea	C	
Rhododendron chapmanii	Chapman's rhododendron	E	E
Rhus michauxii	Michaux's sumac	E	
Ribes echinellum	Miccosukee (=Florida) gooseberry	E	T
Roystonea elata	Florida royal palm	E	
Rudbeckia nitida	St. John's-susan; yellow coneflower	E	
Ruellia noctiflora	Night-flowering wild petunia	E	
Sachsia bahamensis	Bahama sachsia	E	
Salix eriocephala	Heart-leaved willow	E	
Salix floridana	Florida willow	E	
Salvia urticifolia	Nettle-leaved sage	E	
Sarracenia leucophylla	White-top pitcherplant	E	
Sarracenia minor	Hooded pitcherplant	T	
Sarracenia psittacina	Parrot pitcherplant	T	
Sarracenia purpurea	Decumbant pitcherplant	T	
Sarracenia rubra	Red-flowered (=sweet) pitcherplant	T	
Scaevola plumieri	Inkberry	T	

Schisandra coccinea	Bay star vine	E	
Schizaea germanii	Ray (=tropical curly-grass) fern	E	
Schwalbaea americana	American chaffseed	E	E
Scutellaria floridana	Florida skullcap; helmet-flowers	E	T
Selaginella eatonii	Pygmy spikemoss	E	
Silene polypetala	Fringed campion; fringed catchfly	E	E
Sphenomeris clavata	Parsley (=wedgelet) fern	E	
Sphenostigma coelestina	Bartram's ixia	E	
Spigelia gentianoides	Gentian (=panhandle) pinkroot	E	E
Spigelia loganioides	Florida (=Levy) pinkroot	E	
Spiranthes adnata	Pelexia	E	
Spiranthes brevilabris	Florida ladies' tresses	E	
Spiranthes costaricensis	Costa Rican ladies' tresses	E	
Spiranthes elata	Tall neottia	E	
Spiranthes laciniata	Lace-lip ladies' tresses	T	
Spiranthes longilabris	Long-lip ladies' tresses	T	
Spiranthes ovalis	Oval ladies' tresses	E	
Spiranthes polyantha	Florida Keys (=green) ladies' tresses	E	
Spiranthes torta	Southern ladies' tresses	E	
Spiranthes tuberosa	Little ladies' tresses; little pearl twist	T	
Stachydeoma araveolens	Mock pennyroyal	E	
Stachys crenata	Shade betony	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Stachys tenuifolia	Narrow-leaved betony	E	
Staphylea trifolia	Bladdernut	E	
Stenorrhynchos lanceolata	Leafless beak orchid	T	
Stewartia malacodendron	Silky camellia	E	
Strumpfia maritima	Pride-of-big-pine	E	
Stylisma abdita	Hidden stylisma	E	
Suriana maritima	Bay cedar	E	
Swietenia mahogani	West Indian mahogany	E	
Taxus floridana	Florida yew	E	
Tectaria coriandrifolia	Hairy (=Hattie Bauer) halberd fern	E	

Tectaria heracleifolia	Broad halberd fern	T	
Tectaria fimbriata (=T. lobata)	Least halberd fern	E	
Tephrosia angustissima	Narrow-leaved (=coastal) hoary pea	E	
Tetrazygia bicolor	Tetrazygia	T	
Thalictrum cooleyi	Cooley's meadowrue	E	E
Thalictrum thalictroides	Rue anemone	E	
Thelypteris augescens	Abrupt-tipped maiden fern	T	
Thalypteris grandis	Collier County maiden fern	E	
Thelypteris patens	Grid-scale maiden fern	E	
Thelypteris reptans	Creeping star-hair fern	E	
Thelypteris reticulata	Lattice-vein (=cypress) fern	E	
Thelypteris sclerophylla	Stiff star-hair fern	E	
Thelypteris serrata	Dentate lattice vein fern	E	
Thrinax morrissi	Brittle thatch palm	E	
Thrinax radiata	Florida thatch palm	E	
Tillandsia balbisiana	Inflated (=reflexed) wild pine	T	
Tillandsia fasciculata	Common (=stiff-leaved) wild pine	E	
Tillandsia flexuosa	Twisted and banded air plant	E	
Tillandsia pruinosa	Fuzzy-wuzzy (=hoary) air plant	E	
Tillandsia utriculata	Giant wild pine; giant air plant	E	
Tillandsia valenzuelana	Soft-leaved wild pine	T	
Tipularia discolor	Crane-fly orchid	T	
Torreya taxifolia	Florida torreya	E	E
Tournefortia gnaphalodes	Sea lavender	E	
Tragia saxicola	Florida keys (=rocklands) noseburn	E	
Trichomanes holopterum	Entire winged bristle fern	E	
Trichomanes krausii	Krause's bristle fern	E	
Trichomanes lineolatum	Lined bristle fern	E	
Trichomanes punctatum	Florida bristle fern	E	
Trillium lancifolium	Lance-leaved wake-robin	E	
Triphora craigheadii	Craighead's nodding-caps	E	
Triphora latifolia	Broad-leaved nodding-caps	E	
Triphora trianthophora	Three-birds orchid	T	
Tripsacum floridanum	Florida tripsacum	E	

Return to Table of Contents

		Designated Status	
Scientific Name	**Common Name(s)**	**FDA**	**FWS**
Tropidia polystachya	Young-palm orchid	E	
Vanilla barbellata	Worm-vine orchid; link vine	E	
Vanilla dilloniana	Leafless (=Dillon's) vanilla	E	
Vanilla mexicana	Unscented vanilla	E	
Vanilla phaeantha	Leafy (=oblong-leaved) vanilla	E	
Vanilla planifolia	Commercial vanilla	E	
Veratrum woodii	Woods' false hellebore	E	
Verbena maritima	Coastal vervain	E	
Verbena tampensis	Tampa vervain	E	
Verbesina chapmanii	Chapman's crownbeard	T	
Vicia ocalensis	Ocala vetch	E	
Viola tripartita	Yellow violet	E	
Warea amplexifolia	Clasping (=wide-leaf) warea	E	E
Warea carteri	Carter's mustard	E	E
Xanthorhiza simplicissima	Yellowroot	E	
Xyris longisepala	Kral's (=karst pond) yellow-eyed grass	E	
Xyris scabrifolia	Harper's (=harsh-leaf) yellow-eyed grass	T	
Zamia floridana	Florida coontie	C	
Zamia integrifolia	Florida arrowroot	C	
Zamia umbrosa	East coast coontie	C	
Zanthoxylum americanum	Prickly ash	E	
Zanthoxylum coriaceum	Leathery prickly ash	E	
Zanthoxylum flavum	Yellowheart	E	
Zephyranthes atamasco	Rain lily	T	
Zephyranthes simpsonii	Simpson's zephyr lily	T	
Zephyranthes treatiae	Treat's zephyr lily	T	
Zigadenus leimanthoides	Coastal death camas	E	
Ziziphus celata	Florida (=scrub) jujube	E	E

Return to Table of Contents

Breeding Bird Atlas -- ALACHUA County, FL

COMMON NAME	HIGHEST		QUAD			BLOCK		
	Breeding	Class	CO	PR	PO	CO	PR	PO
Pied-billed Grebe	FY	Confirmed breeding	1	0	5	1	0	6
Anhinga	NY	Confirmed breeding	6	0	0	10	0	0
Least Bittern	ON	Confirmed breeding	3	0	1	3	1	1
Great Blue Heron	NY	Confirmed breeding	7	0	0	10	0	0
Great Egret	NY	Confirmed breeding	2	0	0	3	0	0
Snowy Egret	NY	Confirmed breeding	3	0	0	5	0	0
Little Blue Heron	NY	Confirmed breeding	4	0	0	5	0	0
Tricolored Heron	NY	Confirmed breeding	2	0	0	2	0	0
Cattle Egret	NY	Confirmed breeding	5	0	0	7	0	0
Green Heron	NY	Confirmed breeding	7	2	3	9	8	10
Black-crowned Night-Heron	ON	Confirmed breeding	1	0	0	1	0	0
Yellow-crowned Night-Heron	ON	Confirmed breeding	1	0	0	1	0	0
White Ibis	NY	Confirmed breeding	4	0	0	4	0	0
Wood Stork	NY	Confirmed breeding	1	1	0	1	1	0
Black Vulture	NY	Confirmed breeding	1	0	0	1	0	0
Turkey Vulture	NE	Confirmed breeding	1	0	0	1	0	0
Canada Goose	SH	Possible Breeding	0	0	1	0	0	1
Muscovy Duck	FY	Confirmed breeding	3	0	0	3	0	0
Wood Duck	NY	Confirmed breeding	7	4	0	10	10	5
Mallard	FY	Confirmed breeding	1	0	1	1	0	1
Mottled Duck	FY	Confirmed breeding	1	0	0	1	2	0
Osprey	NY	Confirmed breeding	8	0	0	12	2	0
Swallow-tailed Kite	NY	Confirmed breeding	1	3	2	1	3	5
Mississippi Kite	NY	Confirmed breeding	4	3	2	6	5	5
Bald Eagle	NY	Confirmed breeding	7	0	0	16	0	0
Cooper's Hawk	T	Probable Breeding	0	1	2	0	1	2
Red-shouldered Hawk	NY	Confirmed breeding	12	1	0	19	6	11
Broad-winged Hawk	FY	Confirmed breeding	2	0	0	2	3	0
Red-tailed Hawk	NY	Confirmed breeding	3	8	2	4	11	11
American Kestrel	NY	Confirmed breeding	2	4	1	5	5	3
Wild Turkey	NE	Confirmed breeding	9	1	3	15	4	5
Northern Bobwhite	NY	Confirmed breeding	11	3	0	25	15	8
Black Rail	T	Probable Breeding	0	1	0	0	1	0
King Rail	P	Probable Breeding	0	1	0	0	1	2
Purple Gallinule	NY	Confirmed breeding	6	1	1	8	1	3
Common Moorhen	NE	Confirmed breeding	7	1	1	11	4	4
Limpkin	FY	Confirmed breeding	1	0	5	1	1	5
Sandhill Crane	NY	Confirmed breeding	3	1	1	4	2	1
Killdeer	NY	Confirmed breeding	9	1	3	14	4	5
Black-necked Stilt	ON	Confirmed breeding	1	0	0	1	0	0
American Woodcock	SH	Possible Breeding	0	0	2	0	0	2
Rock Dove	NY	Confirmed breeding	4	4	1	5	5	6
Mourning Dove	NY	Confirmed breeding	12	2	0	28	17	6
Common Ground-Dove	NE	Confirmed breeding	4	10	0	5	16	14
Monk Parakeet	SH	Possible Breeding	0	0	1	0	0	1

COMMON NAME	HIGHEST		QUAD			BLOCK		
	Breeding	Class	CO	PR	PO	CO	PR	PO
Yellow-billed Cuckoo	NY	Confirmed breeding	5	8	1	5	18	11
Barn Owl	NY	Confirmed breeding	2	0	0	3	1	0
Eastern Screech-Owl	NY	Confirmed breeding	6	3	1	9	4	1
Great Horned Owl	NY	Confirmed breeding	7	2	2	9	4	10
Barred Owl	ON	Confirmed breeding	10	3	1	14	7	9
Common Nighthawk	NY	Confirmed breeding	4	6	4	4	12	15
Chuck-will's-widow	NY	Confirmed breeding	8	5	1	11	13	7
Chimney Swift	NY	Confirmed breeding	7	4	2	8	10	12
Ruby-throated Hummingbird	NY	Confirmed breeding	9	2	3	10	6	14
Belted Kingfisher	P	Probable Breeding	0	1	2	0	1	3
Red-headed Woodpecker	NY	Confirmed breeding	13	0	1	26	10	7
Red-bellied Woodpecker	NY	Confirmed breeding	14	0	0	40	12	4
Downy Woodpecker	NY	Confirmed breeding	12	2	0	20	11	14
Hairy Woodpecker	A	Probable Breeding	0	2	1	0	2	2
Red-cockaded Woodpecker	T	Probable Breeding	0	2	0	0	2	0
Northern Flicker	NY	Confirmed breeding	8	3	2	18	7	4
Pileated Woodpecker	NY	Confirmed breeding	9	5	0	13	23	9
Eastern Wood-Pewee	NY	Confirmed breeding	2	3	1	2	3	2
Acadian Flycatcher	FS	Confirmed breeding	4	3	2	6	4	8
Great Crested Flycatcher	NY	Confirmed breeding	13	1	0	36	12	4
Eastern Kingbird	NY	Confirmed breeding	12	0	2	17	10	6
Loggerhead Shrike	NY	Confirmed breeding	12	1	1	27	7	7
White-eyed Vireo	NY	Confirmed breeding	13	1	0	29	10	5
Yellow-throated Vireo	NY	Confirmed breeding	5	5	3	7	8	15
Red-eyed Vireo	NY	Confirmed breeding	7	5	1	12	9	12
Blue Jay	NY	Confirmed breeding	14	0	0	32	13	6
American Crow	ON	Confirmed breeding	11	1	2	11	8	23
Fish Crow	NY	Confirmed breeding	5	2	6	7	3	20
Purple Martin	NY	Confirmed breeding	13	0	0	25	2	5
Northern Rough-winged Swallow	NY	Confirmed breeding	3	0	0	3	0	0
Barn Swallow	P	Probable Breeding	0	1	3	0	1	3
Carolina Chickadee	NY	Confirmed breeding	13	1	0	25	12	9
Tufted Titmouse	NY	Confirmed breeding	14	0	0	44	5	3
Brown-headed Nuthatch	NY	Confirmed breeding	4	0	1	5	0	3
Carolina Wren	NY	Confirmed breeding	14	0	0	40	8	4
Blue-gray Gnatcatcher	NY	Confirmed breeding	10	4	0	16	9	12
Eastern Bluebird	NY	Confirmed breeding	12	2	0	27	10	8
Wood Thrush	FY	Confirmed breeding	1	4	0	1	4	2
American Robin	T	Probable Breeding	0	1	1	0	1	2
Gray Catbird	ON	Confirmed breeding	1	0	2	1	1	3
Northern Mockingbird	NY	Confirmed breeding	14	0	0	41	6	5
Brown Thrasher	NY	Confirmed breeding	12	2	0	27	16	6
European Starling	NY	Confirmed breeding	13	1	0	24	6	8
Northern Parula	FS	Confirmed breeding	13	1	0	25	14	7
Yellow-throated Warbler	FS	Confirmed breeding	5	5	1	5	8	4
Pine Warbler	NY	Confirmed breeding	10	2	2	19	3	13
Prothonotary Warbler	FS	Confirmed breeding	4	2	1	4	4	7

COMMON NAME	HIGHEST		QUAD			BLOCK		
	Breeding	Class	CO	PR	PO	CO	PR	PO
Swainson's Warbler	T	Probable Breeding	0	1	0	0	1	0
Louisiana Waterthrush	SH	Possible Breeding	0	0	2	0	0	2
Common Yellowthroat	FS	Confirmed breeding	9	2	2	10	9	13
Hooded Warbler	FS	Confirmed breeding	3	0	3	4	0	4
Yellow-breasted Chat	T	Probable Breeding	0	1	0	0	2	1
Summer Tanager	NY	Confirmed breeding	10	4	0	18	20	5
Eastern Towhee	NY	Confirmed breeding	13	1	0	23	17	6
Bachman's Sparrow	NY	Confirmed breeding	2	5	1	2	7	3
Northern Cardinal	NY	Confirmed breeding	14	0	0	47	0	2
Blue Grosbeak	NY	Confirmed breeding	8	4	1	15	16	9
Indigo Bunting	NY	Confirmed breeding	5	6	3	7	15	14
Painted Bunting	P	Probable Breeding	0	1	0	0	1	0
Red-winged Blackbird	NY	Confirmed breeding	8	3	2	17	11	6
Eastern Meadowlark	NY	Confirmed breeding	7	4	1	10	5	11
Common Grackle	NY	Confirmed breeding	13	0	1	24	4	11
Boat-tailed Grackle	NY	Confirmed breeding	8	0	4	16	0	13
Brown-headed Cowbird	NY	Confirmed breeding	11	2	1	14	11	15
Orchard Oriole	NY	Confirmed breeding	12	2	0	25	9	5
House Sparrow	NY	Confirmed breeding	9	1	1	16	3	4

Legend: CO= Confirmed, PR= Probable, PO= Possible.
Notes: Breeding bird summary by quad (14 surveyed), and blocks (70 surveyed). 111 species recorded.
Source: Florida Breeding Bird Atlas.

APPENDIX C

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: November 7, 2002

Location: Flightline Aviation (Gainesville Regional Airport)

Subject: Master Plan Kick-Off

In Attendance Mr. Rick Crider, A.A.E. – Airport Director – Gainesville Regional Airport
Mr. Jeff Breeden, AICP – Reynolds, Smith & Hills, Inc.
Mr. Todd Lindner C.M. – Reynolds, Smith & Hills, Inc.

The following is a summary of the comments and discussions conducted at a meeting to discuss the kick-off of the Gainesville Regional Airport Master Plan Project. The meeting was held at Flightline Aviation (FBO) at Gainesville Regional Airport November 7, 2002.

Mr. Breeden asked about contact personnel and the ability to acquire the requisite airport data and information for developing the Master Plan.

Mr. Crider explained all data collection should begin with him in which he would direct us to the correct individual if he did not know the location of the material or he would ask for the aid of Suzanne, his Administrative Assistant.

Mr. Crider further explained he would in all likelihood have a signed work order for us by the afternoon of November 7th.

Mr. Crider also pointed out the aerial photogrammetry portion of the project had been kicked-off the previous day with R.W. Armstrong. A formal Master Plan kick-off meeting was being planned for the first week of December (December 5th) with R. W. Armstrong in which members of the Technical Advisory Committee (TAC) would be invited. Prior to December 5th, Gantt Charts prepared by R.W. Armstrong and R, S and H reflecting the project schedule should be merged to one chart.

To include surrounding counties in the Master Planning process, Dr. John Norris is coordinating the development of an outreach program, which will result in the formation of a committee, composed of leaders from the surrounding counties.

Mr. Breeden pointed out the importance of including the planners from the City of Gainesville and Alachua County in the TAC committee.

Mr. Crider explained that the Metropolitan Transportation and Planning Organization (MTPO) had devised an East Gainesville Comprehensive Plan, in which the airport had been discussed. Historically, East Gainesville has been economically depressed.

Currently under consideration is the possibility of a land exchange between Alachua County and the City of Gainesville. The property under consideration is property located at the corner of Waldo and 39th owned by the county and property across 39th (opposite from the airport) owned by the city.

Mr. Crider has also been notified that the airport's PFC application has been approved at $4.50 per passenger ticket.

To discuss airport terminal security projects Mr. Crider's goal is to have a meeting during the middle or latter part of November, which will include architects and Bill Sandifer.

At present, Sabre is conducting an air service development study. Leakage studies for Gainesville Regional Airport have been previously conducted. U.S. Airways has dropped one flight from Gainesville during the month of November. After much marketing, Mr. Crider anticipates Continental will soon begin service to Gainesville.

Mr. Crider reiterated the need for continued coordination and preparation for the December 5th meeting and the meeting was adjourned.

Meeting dates in addition to the December 5th meeting was not discussed.

Meeting Notes - Draft

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: December 9, 2002

Location: Gainesville Regional Airport

Subject: Kick Off Meeting for Airport Master Plan

Invited

Technical Advisory Committee Members
Bob Van Riper – Flightline Gainesville
John Briscoe – FedEx Express (absent)
Rich Weir – Atlantic Southeast Airlines (absent)
Richard Owen – Federal Aviation Administration (absent)
Rich Crider – GACRAA
Rolund Luster – FDOT (absent)
Rosemary Crowder – Piedmont Airlines (absent)
Tate Fisher – GACRAA
Frank Stagl – Transportation Security Agency
Patrick Bainter – GACRAA
Dean Mimms – City of Gainesville Planning
Rick Drummond – Alachua County Growth Management (absent)

Policy Advisory Committee Members
Randell Reid – Alachua County Manager (absent)
Wayne Bowers – City of Gainesville Manager (absent)
Charles Young – President, University of Florida (absent)
Kyle Kay – Ocala City Council
Marie Sanderson – NCFRPC (absent)
Parnell Townley – Marion County BoCC
Patrick Bainter – GACRAA
John Cooper – Bradford County BoCC (absent)

Consultant Team
Bill Sandifer – RS&H
Jeff Breeden – RS&H

Above is a listing of invited members of the Technical Advisory Committee and Policy Advisory Committee members for the preparation of an Airport Master Plan Update for the Gainesville Regional Airport. Those members absent are noted on the list and additional attendees are listed at the end of this document.

The following is a summary of the comments and discussions, which took place during the kick off meeting for the Airport Master Plan Update at the Gainesville Regional Airport on December 9, 2002 at 1:00 PM.

Mr. Crider opened the meeting and expressed his appreciation of those attending this kick off meeting. Mr. Crider then introduced Mr. Bill Sandifer and Mr. Jeff Breeden representing Reynolds Smith & Hills, Inc who will be leading the master planning process.

Mr. Breeden began the presentation by introducing the outline and goals for the meeting.

Mr. Sandifer introduced the Master Planning team members and their receptive roles. Mr. Sandifer also outlined the specific roles of the Technical Advisory Committee members and the Policy Advisory Committee members. It was also mentioned that this would be the only meeting where the two groups would meet together since their roles in the process are different and unique. Mr. Sandifer also explained the master planning process that will be used for this study.

Mr. Breeden presented the goals and objectives of the master plan study and specific issues relating to the Gainesville Regional Airport. A general discussion ensued concerning air service available at the Gainesville Regional Airport, fare costs, and proximity to both Orlando International Airport and Jacksonville International Airport. Mr. Breeden discussed the intention of the master plan team to work with the City of Gainesville to incorporate the Airport Master Plan into the City's comprehensive plan in order to eliminate future DRI requirements. Mr. Breeden then outlined the anticipated project deliverables.

Mr. Sandifer lead the discussion on a Strengths, Weakness, Opportunities and Threats (SWOT) analysis. Mr. Sandifer lead off the discussion by stating that the consulting team could work independently and produce a technically sound master planning document but in order to determine specific issues facing the surrounding region and specifically the Gainesville Regional Airport, we would like detailed input from both committees. Mr. Sandifer also invited the members to challenge the consulting team on their assumptions and recommendations within the study. Listed below is the summary of the SWOT analysis:

Strengths

1. University Town (University of Florida)
2. Airport well located in VFR/IFR flight corridors (easy access)
3. Compatible land use (large land buffers)
4. Government Cooperation and support
5. Adequate airside facilities
6. High growth market- potential future high growth of region
7. Air Traffic services for pilots
8. Potential high air cargo growth – customs available from Ocala and future Foreign Trade Zone (FTZ) opportunity
9. Adequate approaches and open airspace around the airport

10. Geographically well located – easy surface access and low travel time
11. Flight Service Station – (1 of 3 located in Florida)
12. Ease of traveler experience
13. NASA SATS Lab program participant
14. Good quality of life in region
15. Available capacity of airport and expansion potential
16. Ability to attract funding
17. Tower on the field
18. Flight school potential
19. Combined strengths of Ocala and Gainesville combined
20. Cargo capabilities

Weakness

1. Poor public relations in the past
2. Entrance needs landscaping
3. Proximity to the other airports / geographic location
4. Highway access
5. Public perception
6. Challenges to development
7. Lack of competition among airlines
8. Aging infrastructure
9. Limited instrumentation / NAVAIDS to pilots
10. Lack of low visibility minimums during foggy / inclement weather
11. No empty hangars to lease/rent
12. Airport located within well-field protection area
13. Runway intersection configuration reduces safety and capacity
14. Lack of parallel runway for training purposes
15. Lack of necessary taxilanes for efficient aircraft circulation
16. Lack of aircraft wash rack
17. Ocala's location
18. Public perception
19. Limited flight instruction
20. Lack of air service

Opportunities

1. Public involvement during master planning process
2. Comprehensive planning process
3. Higher levels of traffic since 9/11
4. Waiting list for aircraft hangars
5. Available land
6. Education/ Proximity (SATS LAB)
7. Strategic Intermodal Systems Plan
8. Airport should be addressed/ considered during East side planning and development
9. Medical care in the region
10. Regional cooperation
11. Airport neighborhood
12. Closer coordination with Ocala

13. Opportunities with Santa Fe
14. Potential to attract more business at the Airport
15. Utilization of the Fairgrounds

Threats

1. Status of Airline industry
2. Dependence on the airline industry / no control
3. Local regional politics
4. Education of the public
5. Funding potential for proposed development
6. Ocala Regional Airport is growing at Gainesville Regional Airport's expense

At the end of the SWOT analysis, Mr. Breeden outlined the proposed 14 month project schedule and closed the meeting

The Meeting was adjourned at 3:00 PM

Meeting Notes by Breeden

Cc: Lawrence Calderon – City of Gainesville Planning
Elgin Branch – FDOT District 2
Dashwood Hicks – GPA
Mac McEachern
Dexter Jones –RWA
Drew Genneken - RWA

T:\2013363001.001\\Administrative\Meeting Notes\kick off meeting notes 12-9-02.doc

JB

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: March 28, 2003

Location: SJWMD Office Gainesville

Subject: Meeting with SJWMD regarding conservation easement

In Attendance
Barbara Hatchet – SJWMD
Sergio Reyes – Eng Denman
David Denman – Eng Denman
Beverly Birkitt – Birkitt Environmental
Ann XX – Birkitt Environemntal
Paul Schmidt – RSH
Jeff Breeden – RSH

The following is a summary of the discussions that took place at a meeting with SJWMD staff in Gainesville regarding the preparation of a permit application to construct taxiway drainage improvements and the potential transfer of conservation easement at the Gainesville Regional Airport which was held on March 28, 2003 at 10:00 AM.

The purpose of the meeting was to discuss compliance issues with the SJWMD along with a permit that will be submitted for the taxiway drainage project. The compliance issues revolve around two primary issues:

Item #1 - Recordation of the existing conservation easement of approx. 65 acres. Ms Hatchett stated that the airport has two options, either record the existing conservation easement on the airport where originally agreed and work out a transfer agreement with the District at a future date or look at moving the conservation easement to a new location.

Item #2 - Resolution of compliance issues regarding the clearing of trees within the approach to runway 28 without a permit.

There are several issues with item #1 that were discussed:

The Gum Root Swamp property that is being considered to be used for the transfer of the conservation easement is currently managed by the parks and recreation department of the city of Gainesville. Ms. Hatchet stated that we need to make sure there isn't an existing conservation easement on the property and to provide documentation on how and why the property was purchased.

Ms Hatchet stated that the non recordation of the conservation easement and the tree clearing activities could be handled in a consent order but we suggested we really did not want to end up in this process and asked if there were any other options. Ms Hatchet suggested there were some other less onerous methods to deal with these issues but wanted to be assured that the airport was making progress in resolving everything. Ms Hatchet also said that the conservation easement and tree clearing activities

would need to be resolved prior to the issuance of any additional permits. We stated that the airport was in the process of sending a follow up letter to her request and she should have it this week.

Action Items:

1. Send letter to SJWMD district that outlines our intention of resolving these issues.

2. Arrange a meeting with City manager and Anne Bigalow (352) 334-2236 to discuss using the Gum Root Swamp property. If this looks like a viable option, then we will finalize our scope of work to work through these issues.

3. If the gum root swamp does not look like a viable option, then I would suggest we will provide a phase 1 and phase 2 scope of work. Phase 1 will be mitigation site identification and phase 2 will be the actual technical analysis and transfer of the easement.

The meeting was adjourned at 11:30 AM

Meeting Notes by Breeden

Cc: Rick Crider – Director of Aviation GNV

File:\aviation\2019466001\swfia\administrative\meetingnotes\4-03-03 DCA meeting Notes.doc

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: June 8, 2004

Location: Gainesville Regional Airport

Subject: Policy Advisory Committee Meeting & Presentation
Airport Master Plan Update-Working Paper No. 2
Aviation Demand/Capacity Analysis And Facility Requirements
Alternatives

In Attendance:

Rick Crider, A.A.E.	Gainesville Regional Airport	Jim Stringfellow	PAC Member
Elaine Funk	Gainesville Regional Airport	Erik Bredfeldt	Gainesville Economic Develop.
Tate Fisher	Gainesville Regional Airport	Bill Sandifer	Reynolds, Smith & Hills, Inc.
Mike Threet	Community Member	Jeff Breeden	Reynolds, Smith & Hills, Inc.
Christopher Thurow	Bradford County	Todd Lindner	Reynolds, Smith & Hills, Inc.

The following is a summary of the presentation and discussions, which took place at the Policy Advisory Committee (PAC) meeting held at the Gainesville Regional Airport regarding Working Paper No. 2 of the Airport Master Plan Update. Working Paper No. 2 includes Section 3 – Aviation Demand/Capacity Analysis And Facility Requirements and Section 4 – Alternatives. The primary purpose of the meeting was to discuss findings of the analysis conducted to determine the Airport's existing and projected capacity based on existing conditions and future demand documented in Section 2 – Aviation Demand Forecast. Also presented in the meeting were facility requirements perpetuated by the projected demand and proposed developmental alternatives.

The meeting began with a welcome from Mr. Rick Crider and a brief introduction of the PAC members and RS&H team members in attendance. Following introductions Mr. Jeff Breeden conducted a presentation of the findings of the demand/capacity analysis, facility requirements needed to meet future demand and proposed developmental alternatives.

Mr. Breeden began by explaining the different roles of the PAC and the Technical Advisory Committee (TAC) and reviewed the overall project organizational chart. Whereas an Airport Master Plan Update is prepared by developing upon an Airport's existing Master Plan, Mr. Breeden pointed out the Gainesville Master Plan will be more reflective of a traditional Airport Master Plan, which is developed from scratch. Mr. Breeden added that facilitating aircraft and passengers is somewhat easy as compared to obtaining funds and securing funding sources required for constructing the required facilities. For this reason, Section 7 – Plan Implementation will include a very detailed financial section.

Mr. Breeden proceeded into the findings of the demand/capacity analysis and began by defining Annual Service Volume (ASV) and reviewing the Federal Aviation Administration's (FAA) recommendations for implementing improvements. FAA recommends planning for improvements when aircraft operations reach 60% ASV. Additionally, FAA recommends having

planned improvements in place when aircraft operations reach 80% ASV. A PAC member requested a clarification regarding the metric used to measure ASV. Is ASV a function of aircraft operations or passengers? Mr. Breeden confirmed that ASV is measured in terms of annual aircraft operations. A PAC member then asked if a peak number of operations were calculated. Mr. Breeden answered in the affirmative. Following the response the presentation continued with an explanation of the calculations conducted to determine the existing and projected ASV. Through this analysis the existing capacity provided by the airfield was determined to be sufficient for meeting the projected demand. Mr. Breeden was then asked if he knew the number of daily aircraft operations needed by an airport to justify a parallel runway. Mr. Breeden responded that he could not be 100% sure, but thought that the figure was approximately 350 daily aircraft operations.

Mr. Breeden continued with a definition of design or critical aircraft and a description of the FAA's Airport Reference Code (ARC) classification system. Currently the design aircraft for Runway 10/28 is B-727, which has an ARC of C-III. In the future, the design aircraft for Runway 10/28 will be changed to a B-737, which also maintains an ARC of C-III. For Runway 6/24 the current design aircraft is the Learjet 24, which has an ARC of C-I. In the future, the design aircraft for Runway 6/24 will be changed to a Canadair Regional Jet. Presently the Canadair Regional Jet maintains an ARC of C-II. However, design specifications for the next generation of regional jets indicates the aircraft will be constructed with a longer wingspan increasing ARC to C-III. As a result, the projected ARC for Runway 6/24 will be C-III.

For the runway length analysis, Mr. Breeden explained Runway 10/28 is the Airport's primary runway, while 6/24 serves as the Airport's secondary runway. Additionally, through a wind analysis Mr. Breeden pointed-out 95% or greater wind coverage for crosswind conditions is accomplished with the existing runway orientation. FAA guidelines recommend the length of an airport's secondary runway be approximately 80% of the length of the airport's primary runway. In the future, plans are to maintain Runway 10/28 as the airfield's primary runway with no alterations to length. Mr. Breeden pointed out the need for improving the airfield's operational flexibility, which can be achieved by lengthening Runway 6/24. Current plans are to extend Runway 6/24 to 6,500-feet. Beyond planning year 2023 consideration may be given to extending Runway 10/28 to 9,000-feet and 6/24 to 7,200-feet.

The pavement condition and rehabilitation plan presented by Mr. Breeden indicated the surface associated with Runway 10/28 is in fair condition and can be maintained with yearly upkeep before being rehabilitated in 2023. Presently, the surface associated with Runway 6/24 is in fair but declining condition and will need to be rehabilitated prior to planning year 2008.

A PAC member asked what is premise used to determine the numbers placed on runway ends. Mr. Breeden responded that runways are designated according to the magnetic course associated with orientation assumed by the runway surface. Through a review of the magnetic declination occurring in the Gainesville area, Mr. Breeden explained designations of both Runways 10/28 and 6/24 need to be changed to 11/29 and 7/25 respectively. The re-designation will require the remarking of the runways, revising airfield signage and coordination with FAA to change necessary publications.

Regarding taxiways, Mr. Breeden pointed-out that Taxiway A exceeds FAA design standards for Runway to Taxiway separation by 125-feet. A shift of the taxiway will allow for more developable space and should be conducted as part of the extension project associated with Taxiway 6/24. While the surface condition of Taxiway B and C are considered poor and will require rehabilitation prior to 2013, Taxiway A and E are in fair and good condition respectively.

Taxiway A will be undergoing improvements prior to 2008 as a result of shifting the Taxiway and Taxiway E is scheduled to be rehabilitated in 2013.

Mr. Breeden indicated existing space associated with the terminal is adequate, however a reallocation of the space is necessary to allow the terminal to achieve maximum operational efficiency. Additionally, a terminal renovation project currently underway will include three new jet bridges. The reallocation of space as previously mentioned is scheduled to take place as part of the terminal renovation project. Mr. Breeden further provided a description of the terminal renovation project, spatial allocations and phasing. Additionally, Mr. Breeden indicated spatial development is a function of priority relative to budget availability.

The ARFF facility located at Gainesville Regional Airport is currently listed as a Class A facility, but maintains the equipment necessary to meet Class B specifications. Future projections of air traffic indicate the Airport will require Class B ARFF capabilities between 2008 and 2013.

Line of sight issues due to vegetation and location of the VORTAC have resulted in the relocation or airfield modifications to facilitate Air Traffic Control Tower (ATCT) operations. Mr. Breeden recommended obtaining the appropriate permits to remove trees creating the existing obstructions and relocate or raise existing ATCT to view air traffic activity occurring on the opposite side of the VORTAC.

Other facility modifications presented by Mr. Breeden included constructing a new airport maintenance building, constructing a consolidated rental car facility, construction of an airport hotel and additional General Aviation (GA) facilities including a wash rack for GA aircraft. The existing airport maintenance building is inadequate for the Airport's needs. Funding for the new maintenance building will be provided through an FDOT grant recently received by the Airport. The consolidated rental car facility will be funded through a Consolidated Facility Charge (CFC) collected from the rent-a-car companies.

With regard to development of the airport hotel, Mr. Breeden explained that the proposed location would conflict with the approach surface associated with a precision approach established for Runway 6.

Mr. Breeden discussed the continued development of air cargo operations at Gainesville Regional Airport. Presently, FedEx is in need of additional space to facilitate expanding operations. The former Gator Air site is recommended as a short-term solution and a long-term solution is being devised in the Alternatives Section of the Master Plan.

GA facilities presented included a review of apron space, t-hangars and conventional hangars. Mr. Breeden indicated the existing GA apron and tiedown space is sufficient for the 20-year period assuming the space is reconfigured to meet the individual needs of each element. For covered aircraft storage additional t-hangars and conventional hangars are recommended for each phase of the planning period.

Non-aviation support and miscellaneous facility recommendations included the following:

- Stormwater Master Plan
- Federal Aviation Regulation (FAR) Part 150 Noise Study
- SWPPP and SPCC Plan Update
- Environmental Mitigation
- Fencing and Security Concerns

- Potential Cell Tower Site Development
- New airport access road for passenger terminal
- Local Comprehensive Plan Coordination
- Development of a business park

Earlier in the presentation a questioned had been raised regarding the implementation of noise and land use zones. In his description of the miscellaneous facility recommendations, Mr. Breeden pointed-out the importance of incorporating noise and land use zones through the FAR Part 150 Noise Study process.

Mr. Breeden presented the alternatives for the extension of Runway 6/24 to 6,500, air cargo design, ATCT relocation, GA development and miscellaneous development. Each developmental alternative for the extension of Runway 6/24 is also being reviewed to determine the practicality and feasibility of incorporating an Instrument Landing System (ILS) on either runway end. The following is a list of alternatives presented by Mr. Breeden for the extension of Runway 6/24:

- Extend Runway 6/24 2,820-feet northeast and relocate the threshold associated with the approach end of Runway 6 500-feet northeast.

- Extend Runway 6/24 3,320-feet northeast and relocate the threshold associated with the approach end of Runway 6 1,000-feet northeast.

- Extend Runway 6/24 4,800-feet northeast and relocate the threshold associated with the approach end of Runway 6 2,500-feet northeast.

Considerations to be given to each Runway 6/24-extension alternative include:

- Operational Factors
- Environmental Factors
- Minimal Disruption of Airport Operations
- Possible Incorporation of an ILS Approach

Mr. Breeden described the build alternatives associated with the development of a new air cargo facility. Air cargo development alternatives under consideration include the following:

- Build a new facility in the northeast quadrant of the airfield
- Build a new facility in the southeast quadrant of the airfield

Design factors associated with the air cargo facility to be considered include:

- Operational Requirements
- Airside Access
- Minimize Environmental Impacts
- Expansion Potential

Mr. Breeden described the build alternatives associated with the ATCT modifications. ATCT development alternatives under consideration include the following:

- Remove trees, which are obstructing the ATCT line of sight.
- Increase height of ATCT or construct a new taller ATCT in present location.
- Build a new ATCT near the Flight Service Station (FSS) on the west side of the airfield.
- Build a new ATCT along new access road west of terminal.

Design factors associated with development of the ATCT to be considered include:

- Facility Requirements
- Vehicle Access
- Impact to Future Development

Mr. Breeden described the build alternatives associated with GA development. GA development alternatives under consideration include the following:

- Build additional t-hangars.
- Build additional corporate hangars.
- Construct additional fuel storage within the fuel farm.
- Establish additional tiedowns.
- Construct a new wash rack.

Mr. Breeden described the build alternatives associated with miscellaneous development. Miscellaneous development alternatives under consideration include the following:

- Expansion of the area designated for auto parking.
- Development of a new airside service road.
- Development of a new consolidated rental car quick-turn-around (QTA) facility.
- Preservation of property for future terminal expansion.
- Construction of a new airport hotel and business park.
- Construction of a new road, which will provide airport access from Waldo Road.

Mr. Breeden concluded his presentation by instructing committee members to submit written comments to Mr. Rick Crider who consolidate and forward the comments to the study team. Upon implementing the committee's comments, Mr. Breeden explained that the chapters would not be redistributed to committee members, but will be incorporated into the final comprehensive draft copy of the Master Plan document at conclusion of the study. Mr. Breeden reviewed the project schedule and pointed-out that the next working paper will be delivered in September and will include a public input session. The session was then opened for additional questions. A PAC member asked if the Study would now be submitted to the Airport Board for approval. Mr. Crider interjected that the meeting was being held strictly for informational purposes. A question was raised regarding project funding and the different methods used to fund projects. Mr. Crider responded that projects are funded through the FAA, FDOT, local

sources, Passenger Facility Charges (PFCs) and CFCs. After addressing any additional questions or issues the presentation was adjourned.

Following the conclusion of the presentation, an informational session was held for committee members and attendees. The informational session was held in open-house format, in which individual stations containing illustrations and diagrams of the build alternatives were established. The informational session provided committee members and attendees the opportunity to speak with Study Team Members one-on-one and obtain any clarification regarding the topics previously presented by Mr. Breeden. The informational session lasted approximately an hour before dispersing.

Action Items:
The second working paper will be coordinated with FAA and FDOT for review and comment prior to initiating development of the next working paper.

CC:	Mr. Wayne Bowers	City of Gainesville
	Dr. T. James Gallagher	GACRAA
	Mr. Mark Hill	Alachua County
	Councilman Kyle Kay	Ocala City Council
	Mayor W. Raymond Kirkland	City of Lake City
	Mr. John E. Poppell	University of Florida
	Mr. Marlie Sanderson, AICP	North Central Florida Regional Planning Council
	Commissioner Parnell Townley	Marion County Board of Commissioners

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: June 8, 2004

Location: Gainesville Regional Airport

Subject: Technical Advisory Committee Meeting & Presentation
Airport Master Plan Update-Working Paper No. 2
Aviation Demand/Capacity Analysis And Facility Requirements
Alternatives

In Attendance:

Rick Crider, A.A.E.	Gainesville Regional Airport	John Kelley	Atlantic Southeast Airlines
Suzanne Schiemann	Gainesville Regional Airport	Ken Williams	Atlantic Southeast Airlines
Tate Fisher	Gainesville Regional Airport	Hemal Thakkar	Atlantic Southeast Airlines
Allen Penksa	Gainesville Regional Airport	Bill Sandifer	Reynolds, Smith & Hills, Inc.
Frank Stagl	Transportation Security Admin.	Jeff Breeden	Reynolds, Smith & Hills, Inc.
Elgin Branch	Florida Dept. of Transportation	Todd Lindner	Reynolds, Smith & Hills, Inc.
Dean Mimms, AICP	City of Gainesville	James Higman	Community Member
Jay Curtis	University Air Center	Mac McEachern	Community Member

The following is a summary of the presentation and discussions, which took place at the Tactical Advisory Committee (TAC) meeting held at the Gainesville Regional Airport regarding Working Paper No. 2 of the Airport Master Plan Update. Working Paper No. 2 includes Section 3 – Aviation Demand/Capacity Analysis And Facility Requirements and Section 4 – Alternatives. The primary purpose of the meeting was to discuss findings of the analysis conducted to determine the Airport's existing and projected capacity based on existing conditions and future demand documented in Section 2 – Aviation Demand Forecast. Also presented in the meeting were facility requirements perpetuated by the projected demand and proposed developmental alternatives.

The meeting began with a welcome from Mr. Rick Crider and a brief introduction of the TAC members and RS&H team members in attendance. Following introductions Mr. Jeff Breeden conducted a presentation of the findings of the demand/capacity analysis, facility requirements needed to meet future demand and proposed developmental alternatives.

Mr. Breeden began by explaining the different roles of the TAC and the Policy Advisory Committee (PAC) and reviewed the overall project organizational chart. Whereas an Airport Master Plan Update is prepared by developing upon an Airport's existing Master Plan, Mr. Breeden pointed out the Gainesville Master Plan will be more reflective of a traditional Airport Master Plan, which is developed from scratch. Mr. Breeden added that facilitating aircraft and passengers is somewhat easy as compared to obtaining funds and securing funding sources required for constructing the required facilities. For this reason, Section 7 – Plan Implementation will include a very detailed financial section.

Mr. Breeden proceeded into the findings of the demand/capacity analysis and began by defining Annual Service Volume (ASV) and reviewing the Federal Aviation Administration's (FAA) recommendations for implementing improvements. FAA recommends planning for improvements

when aircraft operations reach 60% ASV. A TAC member asked Mr. Breeden to define "operations". Mr. Breeden responded that one takeoff or one landing represented one operation. Following the response the presentation continued with an explanation of the calculations conducted to determine the existing and projected ASV. Through this analysis the existing capacity provided by the airfield was determined to be sufficient for meeting the projected demand.

Mr. Breeden continued with a definition of design or critical aircraft and a description of the FAA's Airport Reference Code (ARC) classification system. Currently the design aircraft for Runway 10/28 is B-727, which has an ARC of C-III. In the future, the design aircraft for Runway 10/28 will be changed to a B-737, which also maintains an ARC of C-III. For Runway 6/24 the current design aircraft is the Learjet 24, which has an ARC of C-I. In the future, the design aircraft for Runway 6/24 will be changed to a Canadair Regional Jet. Presently the Canadair Regional Jet maintains an ARC of C-II. However, design specifications for the next generation of regional jets indicates the aircraft will be constructed with a longer wingspan increasing ARC to C-III. As a result, the projected ARC for Runway 6/24 will be C-III.

For the runway length analysis, Mr. Breeden explained Runway 10/28 is the Airport's primary runway, while 6/24 serves as the Airport's secondary runway. Additionally, through a wind analysis Mr. Breeden pointed-out 95% or greater wind coverage for crosswind conditions is accomplished with the existing runway orientation. FAA guidelines recommend the length of an airport's secondary runway be approximately 80% of the length of the airport's primary runway. In the future, plans are to maintain Runway 10/28 as the airfield's primary runway with no alterations to length. Mr. Breeden pointed out the need for improving the airfield's operational flexibility, which can be achieved by lengthening Runway 6/24. Current plans are to extend Runway 6/24 to 6,500-feet. Beyond planning year 2023 consideration may be given to extending Runway 10/28 to 9,000-feet and 6/24 to 7,200-feet.

The pavement condition and rehabilitation plan presented by Mr. Breeden indicated the surface associated with Runway 10/28 is in fair condition and can be maintained with yearly upkeep before being rehabilitated in 2023. Presently, the surface associated with Runway 6/24 is in fair but declining condition and will need to be rehabilitated prior to planning year 2008.

Runways are designated according to the magnetic course associated with orientation assumed by the runway surface. Through a review of the magnetic declination occurring in the Gainesville area, Mr. Breeden explained designations of both Runways 10/28 and 6/24 need to be changed to 11/29 and 7/25 respectively. The re-designation will require the remarking of the runways, revising airfield signage and coordination with FAA to change necessary publications.

Regarding taxiways, Mr. Breeden pointed-out that Taxiway A exceeds FAA design standards for Runway to Taxiway separation by 125-feet. A shift of the taxiway will allow for more developable space and should be conducted as part of the extension project associated with Taxiway 6/24. While the surface condition of Taxiway B and C are considered poor and will require rehabilitation prior to 2013, Taxiway A and E are in fair and good condition respectively. Taxiway A will be undergoing improvements prior to 2008 as a result of shifting the Taxiway and Taxiway E is scheduled to be rehabilitated in 2013.

Mr. Breeden indicated existing space associated with the terminal is adequate, however a reallocation of the space is necessary to allow the terminal to achieve maximum operational efficiency. Additionally, a terminal renovation project currently underway will include three new jet bridges. The reallocation of space as previously mentioned is scheduled to take place as part of the terminal renovation project. Mr. Breeden further provided a description of the terminal renovation project, spatial allocations and phasing. Additionally, Mr. Breeden indicated spatial

development is a function of priority relative to budget availability. A TAC member asked about the phasing of three new jet bridges and if the jet bridges incorporated at the same time or individually. Mr. Crider responded that the three jet bridges would be implemented at the same time. A question was then raised with regard to the location for deicing operations. Currently, deicing is performed at the gate, which allows for the collection of deicing fluid. Mr. Crider acknowledged that this is an issue, which needs to be resolved since deicing operations will need to be temporarily relocated.

The ARFF facility located at Gainesville Regional Airport is currently listed as a Class A facility, but maintains the equipment necessary to meet Class B specifications. Future projections of air traffic indicate the Airport will require Class B ARFF capabilities between 2008 and 2013.

Line of sight issues due to vegetation and location of the VORTAC have resulted in the relocation or airfield modifications to facilitate Air Traffic Control Tower (ATCT) operations. Mr. Breeden recommended obtaining the appropriate permits to remove trees creating the existing obstructions and relocate or raise existing ATCT to view air traffic activity occurring on the opposite side of the VORTAC.

Other facility modifications presented by Mr. Breeden included constructing a new airport maintenance building, constructing a consolidated rental car facility, construction of an airport hotel and additional General Aviation (GA) facilities including a wash rack for GA aircraft. The existing airport maintenance building is inadequate for the Airport's needs. Funding for the new maintenance building will be provided through an FDOT grant recently received by the Airport. The consolidated rental car facility will be funded through a Consolidated Facility Charge (CFC) collected from the rent-a-car companies.

With regard to development of the airport hotel, Mr. Breeden explained that the proposed location would conflict with the approach surface associated with a precision approach established for Runway 6. A TAC member questioned the possibility of moving the hotel sight slightly to the south to avoid the possible approach surface. Mr. Breeden responded that moving the hotel sight is a possible solution. However, Alachua County currently owns this property. Therefore, the City of Gainesville and Gainesville Regional Airport did not want to be presumptive of the county's intentions for the property.

Mr. Breeden discussed the continued development of air cargo operations at Gainesville Regional Airport. Presently, FedEx is in need of additional space to facilitate expanding operations. The former Gator Air site is recommended as a short-term solution and a long-term solution is being devised in the Alternatives Section of the Master Plan.

GA facilities presented included a review of apron space, t-hangars and conventional hangars. Mr. Breeden indicated the existing GA apron and tiedown space is sufficient for the 20-year period assuming the space is reconfigured to meet the individual needs of each element. For covered aircraft storage additional t-hangars and conventional hangars are recommended for each phase of the planning period.

Non-aviation support and miscellaneous facility recommendations included the following:

- Stormwater Master Plan
- Federal Aviation Regulation (FAR) Part 150 Noise Study
- SWPPP and SPCC Plan Update
- Environmental Mitigation
- Fencing and Security Concerns

- Potential Cell Tower Site Development
- New airport access road for passenger terminal
- Local Comprehensive Plan Coordination
- Development of a business park

Earlier in the presentation a questioned had been raised regarding the implementation of noise and land use zones. In his description of the miscellaneous facility recommendations, Mr. Breeden pointed-out the importance of incorporating noise and land use zones through the FAR Part 150 Noise Study process.

Mr. Breeden presented the alternatives for the extension of Runway 6/24 to 6,500, air cargo design, ATCT relocation, GA development and miscellaneous development. Each developmental alternative for the extension of Runway 6/24 is also being reviewed to determine the practicality and feasibility of incorporating an Instrument Landing System (ILS) on either runway end. The following is a list of alternatives presented by Mr. Breeden for the extension of Runway 6/24:

- Extend Runway 6/24 2,820-feet northeast and relocate the threshold associated with the approach end of Runway 6 500-feet northeast.

- Extend Runway 6/24 3,320-feet northeast and relocate the threshold associated with the approach end of Runway 6 1,000-feet northeast.

- Extend Runway 6/24 4,800-feet northeast and relocate the threshold associated with the approach end of Runway 6 2,500-feet northeast.

Considerations to be given to each Runway 6/24-extension alternative include:

- Operational Factors
- Environmental Factors
- Minimal Disruption of Airport Operations
- Possible Incorporation of an ILS Approach

Mr. Breeden described the build alternatives associated with the development of a new air cargo facility. Air cargo development alternatives under consideration include the following:

- Build a new facility in the northeast quadrant of the airfield
- Build a new facility in the southeast quadrant of the airfield

Design factors associated with the air cargo facility to be considered include:

- Operational Requirements
- Airside Access
- Minimize Environmental Impacts
- Expansion Potential

Mr. Breeden described the build alternatives associated with the ATCT modifications. ATCT development alternatives under consideration include the following:

- Remove trees, which are obstructing the ATCT line of sight.
- Increase height of ATCT or construct a new taller ATCT in present location.
- Build a new ATCT near the Flight Service Station (FSS) on the west side of the airfield.
- Build a new ATCT along new access road west of terminal.

Design factors associated with development of the ATCT to be considered include:

- Facility Requirements
- Vehicle Access
- Impact to Future Development

Mr. Breeden described the build alternatives associated with GA development. GA development alternatives under consideration include the following:

- Build additional t-hangars.
- Build additional corporate hangars.
- Construct additional fuel storage within the fuel farm.
- Establish additional tiedowns.
- Construct a new wash rack.

A TAC member questioned the need for additional fuel storage capacity. Mr. Breeden responded that additional fuel storage was necessary to prepare for future growth. An additional point made by the TAC member was the need for better fuel farm access, in which Mr. Crider and Mr. Breeden both agreed.

Mr. Breeden described the build alternatives associated with miscellaneous development. Miscellaneous development alternatives under consideration include the following:

- Expansion of the area designated for auto parking.
- Development of a new airside service road.
- Development of a new consolidated rental car quick-turn-around (QTA) facility.
- Preservation of property for future terminal expansion.
- Construction of a new airport hotel and business park.
- Construction of a new road, which will provide airport access from Waldo Road.

Mr. Breeden concluded his presentation by instructing committee members to submit written comments to Mr. Rick Crider who consolidate and forward the comments to the study team. Upon implementing the committee's comments, Mr. Breeden explained that the chapters would not be redistributed to committee members, but will be incorporated into the final comprehensive draft copy of the Master Plan document at conclusion of the study. Mr. Breeden reviewed the project schedule and pointed-out that the next working paper will be delivered in September and will include a public input session. The session was then opened for additional questions. After addressing any additional questions or issues the presentation was adjourned.

Following the conclusion of the presentation, an informational session was held for committee members and attendees. The informational session was held in open-house format, in which individual stations containing illustrations and diagrams of the build alternatives were established. The informational session provided committee members and attendees the opportunity to speak with Study Team Members one-on-one and obtain any clarification regarding the topics previously presented by Mr. Breeden. The informational session lasted approximately an hour before dispersing.

Action Items:
The second working paper will be coordinated with FAA and FDOT for review and comment prior to initiating development of the next working paper.

CC:	Mr. Dave Cannady	FedEx Express
	Ms. Rosemary Crowder	Piedmont Airlines
	Mr. Rick Drummond	Alachua County-Dept. of Growth Management
	Mr. Roland Luster	Florida Dept. of Transportation
	Mr. Richard Owen	Federal Aviation Administration

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: April 21, 2005

Location: Gainesville Regional Airport

Subject: Political Advisory Committee Meeting

In Attendance
Jim Stringfellow –GACRAA
Christopher Thurow – Bradford County Board of County Comm.
Mac McEachern – Citizen
Randy Reid – Alachua County Manager
Erik Bredfeldt – City of Gainesville
Rick Crider – Gainesville Airport
Jeff Breeden – Reynolds Smith & Hills, Inc.
Russ Owen – Reynolds, Smith & Hills, Inc.

The following is a summary of the comments and discussions which took place during a Political Advisory Committee meeting with the Political Advisory Board, established for the Gainesville Airport Master Plan Update. This meeting began at 1:45 PM on April 21, 2005.

Mr. Breeden started the meeting off with a brief introduction and passed out a copy of the presentation. The meeting began with a short recap of the progress of the Master Plan Update. Mr. Breeden, explained that the last chapters have gone out to the committee members in draft form and RS&H will address any comments before finalizing the last three chapters of the report.

Mr. Breeden explained that the development themes both short and long term will be addressed in the meeting. Mr. Breeden then discussed the overall process of the master plan as well as the committee's role and purpose. There was some discussion about the historical trend line of GNV and the positive growth that the airport has seen is due to additional markets and service. Mr. Thurow explained that not many people know that GNV exists, and what is being done to market the airport. Mr. Crider answered that there is money being used to market the surrounding counties and that will continue with radio, billboards and other media outlets. Mr. Crider said that retirees like the airport for the easier commute as well as the less hectic and confusing layout as well as the parking. Mr. Thurow brought up the possibility of changing the airport name to more of a Regional airport.

Mr. Breeden then discussed the different Phases of the terminal renovation and explained that the Passenger Boarding Bridges were being installed, the second phase for renovation is the meeter/greeter area and finally the third phase is the airline ticket counters and the face of the building. Other short-term development themes that were discussed were eclipse aviation, rental car service facility, air cargo service facility and the Runway 6/24 Extension. The long-term development themes that were discussed were moving the existing control tower and an avigation easement west of Waldo Road.

The next discussions focused on local government review and the DRI process. Mr. Crider explained some of the merits of abandoning the DRI process. Mr. Breeden explained the recent changes to the DRI process. DRI's are (developments of regional impact), and there has been some recent legislation that has been passed that Mr. Breeden explained to the committee. This would entail the city of Gainesville and possibly Alachua County to adopt the Airport Master Plan in the Comprehensive plan of the two entities. This will allow development at the airport to become easier and quicker due to the inclusion of the Airport Master Plan in the city's comp plan. There was much discussion as to whether getting the city out of the approval process would help the airport. The discussion then moved back to some important environmental issues such as water quality, creeks and floodplains, crossing little hatchet creek and that the airport needs to develop a Stormwater Mater Plan as well as a Spill Prevention Control Plan.

Mr. Breeden explained the relevance of the last three Chapters (5, 6, 7) of the Master Plan and went into detail as to the substance of each Chapter. Chapter 5 Environmental Overview, has 20 categories, and explained which categories are considered "impacts" for certain projects. Mr. Breeden explained that the last noise study (Part 150) was conducted in 1986 and showed any incompatible land use on airport property and that this study helps local government with zoning and planning. One question that was asked about the noise contours is why is the contour growing west? It was explained that the contours are a cumulative study and not single incident, also with the Runway extension and cargo service all relate to the contours. It was explained that the contours are weighted and are conducted over a 24 hour period, with night time noise given a higher weight than day time noise. Mr. Breeden discussed the importance of having a current zoning map and said that RS&H is working on finalizing one. This will help the airport monitor surrounding land use as well as height zones and runway clear zones.

Mr. Breeden summarized what the Environmental Overview chapter explained and introduced Mr. Owen to explain the list of Capital Improvement Projects. Mr. Owen highlighted some of the larger and more critical projects and explained that the list has around 100 projects. All of the projects had a financial value to them and it was explained that this was a good starting point, but once the projects get closer, than the financial analysis will become more exact. Mr. McEachern stated that the current FEMA maps were out of date and they need to be updated. Mr. Thurow asked in the next update to have 1 sheet of paper detail the condensed version of a project list and other important facts and dates so he can give to his Board of County Commissioners.

Finally, Mr. Breeden summarized the three chapters and explained to the group that there were boards in the back as to what the future development of the airport would

look like and invited the members to take a look and Mr. Owen and Mr. Breeden were there to answer questions. Mr. Breeden thanked everyone for coming and said that the Master Plan Update would be completed in the next 3-4 months.

The Meeting was adjourned at 3:00 PM

Meeting Notes by Owen

Cc:

JB

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: April 21, 2005

Location: Gainesville Regional Airport

Subject: Technical Advisory Committee Meeting

In Attendance
Michael Ferguson – ASA Corporate Safety
Tate Fisher – Gainesville Airport
Allan Penksa – Gainesville Airport
Frank Stagl – DHS/TSA
Dean Mimms – City of Gainesville
Ken Williams – ASA Manager
Hemal Thakkar – ASA, Properties and Facilities
Rick Crider – Gainesville Airport
Jeff Breeden – Reynolds Smith & Hills, Inc.
Russ Owen – Reynolds, Smith & Hills, Inc.

The following is a summary of the comments and discussions which took place during a Technical Advisory Committee meeting with the Technical Advisory Board, established for the Gainesville Airport Master Plan Update. This meeting began at 9:45 AM on April 21, 2005.

Mr. Breeden started the meeting off with a brief introduction and passed out a copy of the presentation. The meeting began with a short recap of the progress of the Master Plan Update. Mr. Breeden, explained that the last chapters have gone out to the committee members in draft form and RS&H will address any comments before finalizing the last three chapters of the report.

Mr. Breeden explained that the development themes both short and long term will be addressed in the meeting. Mr. Breeden then discussed the overall process of the master plan as well as the committee's role and purpose. There was some discussion about the historical trend line of GNV and the positive growth that the airport has seen is due to additional markets and service. Mr. Williams asked Mr. Crider with the expansion of the terminal as well as the parking lot if the LEO money will be enough and what type of impact will the expansions have on the carriers financially, will the air carriers be asked for more money for LEO's. Mr. Crider responded that currently and in the future the airport does not plan on asking the air carriers for more of a financial stake.

Mr. Breeden then discussed the different Phases of the terminal renovation and explained that the Passenger Boarding Bridges were being installed, the second phase for renovation is the meeter/greeter area and finally the third phase is the airline ticket counters and the face of the building. Other short-term development themes that were discussed were eclipse aviation, rental car service facility, air cargo service facility and the Runway 6/24 Extension. The long-term development themes that were discussed were moving the existing control tower and a possible hotel site.

Mr. Breeden explained the relevance of the last three Chapters (5, 6, 7) of the Master Plan and went into detail as to substance of each Chapter. Chapter 5 Environmental Overview, has 20 categories and which categories are considered "impacts" for certain projects. Mr. Breeden explained that the last noise study (Part 150) was conducted in 1986 and showed any incompatible land use on airport property and that this study helps local government with zoning and planning. One question that was asked about the noise contours is why is the contour growing west? It was explained that the contours are a cumulative study and not single incident, also with the Runway extension and cargo service all relate to the contours. It was explained that the contours are weighted and are conducted over a 24 hour period, with night time noise given a higher weight than day time noise. Mr. Breeden discussed the importance of having a current zoning map and said that RS&H is working on finalizing one. This will help the airport monitor surrounding land use as well as height zones and runway clear zones.

After the discussions about zoning and some environmental regulations and the 20 factors that were analyzed in the Environmental Overview chapter, Mr. Breeden explained the recent changes to the DRI process. DRI's are (developments of regional impact), and there has been some recent legislation that has been passed that Mr. Breeden explained to the committee. Much of the discussion was focused on the DRI abandonment process. This would entail the city of Gainesville and possibly Alachua County to adopt the Airport Master Plan in the Comprehensive plan of the two entities. This will allow development at the airport to become easier and quicker due to the inclusion of the Airport Master Plan in the city's comp plan. The discussion then moved back to some important environmental issues such as water quality, creeks and floodplains, crossing little hatchet creek and that the airport needs to develop a Stormwater Mater Plan as well as a Spill Prevention Control Plan.

Mr. Breeden summarized what the Environmental Overview chapter explained and introduced Mr. Owen to explain the list of Capital Improvement Projects. Mr. Owen highlighted some of the larger and more critical projects and explained that the list has around 100 projects. All of the projects had a financial value to them and it was explained that this was a good starting point, but once the projects get closer, than the financial analysis will become more exact. Mr. Williams asked a question as to what projects will be completed. Mr. Crider explained that the money was there for some of the larger projects, Waldo Road access road, rental car facility, parking expansion as well as terminal expansion just to name a few. Mr. Williams was impressed and excited that the airport was moving forward with many of the projects.

Finally, Mr. Breeden summarized the three chapters and explained to the group that there were boards in the back as to what the future development of the airport would

look like and invited the members to take a look and Mr. Owen and Mr. Breeden were there to answer questions. Mr. Breeden thanked everyone for coming and said that the Master Plan Update would be completed in the next 3-4 months.

The Meeting was adjourned at 11:00 AM

Meeting Notes by Owen

Cc:

JB

Meeting Notes

Reynolds, Smith and Hills, Inc.
Architectural, Engineering, Planning and Environmental Services

Date of Meeting: June 15, 2006

Location: Gainesville Regional Airport

Subject: Political/Technical Advisory Committee Meeting

In Attendance
Joe Piazza – RD Air
Chris Branaham – RD Air
Tate Fisher – Gainesville Airport
Allan Penksa – Gainesville Airport
Peter Johnson – Airport Authority
Kinnon Thomas – GACRAA Board
Joe Dunlap – GACRAA Board
Garrick Crocker – Gainesville Airport
Erik Bredfeldt – City of Gainesville
Dean Mimms – City of Gainesville
Ken Williams – ASA Manager
Lynn Noffsinger – GACRAA Staff
Jeff Breeden – Reynolds Smith & Hills, Inc.
Russ Owen – Reynolds, Smith & Hills, Inc.
Steve Horton – Horton and Liebowitz Consultants

The following is a summary of the comments and discussions which took place during a Political and Technical Advisory Committee meeting with the Political and Technical Advisory Board, established for the Gainesville Airport Master Plan Update. This meeting began at 10:05 AM on June 15, 2005.

Mr. Breeden started the meeting off with a brief introduction and passed out a copy of the presentation. The meeting began with a short recap of the progress of the Master Plan Update. He also discussed the organizational chart and the roles of the two committees. The handouts were of the last two chapters of the Master Plan Update. Mr. Breeden, explained that the last chapters have gone out to the committee members in draft form.

Mr. Breeden discussed the Airport Service Area and explained that the majority of travelers come from Alachua County. The historical trends of scheduled activity were discussed next. A board member asked, Why there was a downturn in activity? The reason being capacity, leakage, primary carriers, the Southwest Factor, discount Airlines at Orlando and Jacksonville, and Regional Jets. Ken Williams expressed the

need for some of the most recent data (2003-2004), and Allan Penksa believed that he would be able to provide him with the data.

Mr. Breeden then discussed the next phase of the terminal renovations as well as the new Eclipse hangar currently under construction. He also, detailed the recent announcement that DaysJets selected Gainesville Regional Airport as one of their airports to develop a terminal (portal).

Mr. Breeden explained that the development themes both short and long term will be addressed in the meeting. Mr. Breeden then discussed the overall process of the master plan as well as the committee's role and purpose. Other short-term development themes that were discussed were eclipse aviation, rental car service facility, air cargo service facility and the Runway 6/24 Extension. The long-term development themes that were discussed were moving the existing control tower and a possible hotel site.

There was discussion about the SJRWMD issues, and those issues were to be wrapped up soon. The Airport Lands Transfer issue was discussed and it was believed that the Airport would not be asking the city to transfer the lands. Mr. Bredfeldt asked, since Gainesville Regional Airport is classified as a SIS –emerging hub, does that give us a leg-up? And Mr. Breeden responded by saying, yes, it is another funding source for future projects.

Mr. Breeden then introduced Mr. Horton who explained the financial analysis of the airport. Mr. Horton stated that he went through all the files and interviewed key personnel to complete his portion of the report. He discussed the overall approach of the Chapter 8 (Financial Analysis) of the Master Plan. Then, he discussed in further detail the different funding sources. There were some questions for Mr. Horton regarding an analysis of funding sources historically and currently. This question was answered by Garrick, by explaining that some of the more recent funding sources (CFC, PFC, etc), Gainesville has recently begun to receive, but historically they never asked for these funds, so it would be very hard to compare the funding sources historically to current times.

Mr. Horton discussed the revenues, and showed some tables that compared Gainesville Regional Airport with other commercial service airports. In all cases, Gainesville Regional Airport performed better than the average of similar airports its size.

Mr. Breeden discussed the final process for to complete the Master Plan and said that RS&H is completing the ALP as well as the finishing touches of the complete document.

Mr. Williams discussed the need for more terminal apron for safety and security reasons due to the University and its charter flights for Football and Basketball. Mr. Breeden said that in the future there are plans to increase the apron size. Finally, Mr. Williams asked about a future hotel development, and Mr. Breeden stated that there is a site near Waldo Road that has been considered for a future hotel site.

No other participants had any questions, Mr. Breeden thanked everyone for coming and the meeting was adjourned at 11:30.

Meeting Notes by Owen

Cc:

JB

APPENDIX D

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 1A **Description: Construct 4,150 LF Runway Extension**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	EROSION AND SEDIMENT CONTROL	1	LS	$50,000.00	$50,000.00
2	CLEARING AND GRUBBING	15	AC	$2,000.00	$30,000.00
3	EMBANKMENT/EXCAVATION	120,000	CY	$5.00	$600,000.00
4	ASPHALT MILLING	26,200	SY	$10.00	$262,000.00
5	SUBBASE COURSE	51,000	SY	$3.00	$153,000.00
6	BASE COURSE	48,000	SY	$12.00	$576,000.00
7	BITUMINOUS SURFACE COURSE	10,500	TON	$75.00	$787,500.00
8	BITUMINOUS PRIME COAT	18,500	GAL	$2.00	$37,000.00
9	BITUMINOUS TACK COAT	27,800	GAL	$2.00	$55,600.00
10	PAVEMENT MARKINGS	1	LS	$75,000.00	$75,000.00
11	SHOULDER GRADING	1	LS	$200,000.00	$200,000.00
12	SODDING	5,000	SY	$2.50	$12,500.00
13	SEEDING	5	AC	$2,000.00	$10,000.00
14	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$400,000.00	$400,000.00
15	RUNWAY EDGE LIGHTING	75	EA	$1,000.00	$75,000.00
16	AIRFIELD GUIDANCE SIGN	4	EA	$5,000.00	$20,000.00
17	5 KV CABLE	10,000	LF	$1.50	$15,000.00
18	NO. 6 COPPER COUNTERPOISE	10,000	LF	$1.50	$15,000.00
19	TWO-WAY 4" DUCT, CONCRETE ENCASED	400	LF	$45.00	$18,000.00
20	TWO-WAY 4" DUCT, NON-ENCASED	10,000	LF	$14.00	$140,000.00
21	ALLOWANCE FOR WETLAND MITIGATION	4	AC	$40,000.00	$160,000.00
22	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$50,000.00	$50,000.00
23	REHABILITATION OF MIRLS, PAPIS, REILS	1	LS	$150,000.00	$150,000.00
	Construction Total				$3,891,600.00
	Mobilization			**10%**	$389,160.00
	Professional Service Total			**25%**	$972,900.00
	Add Contingency			**20%**	$778,320.00
				TOTAL	**$6,031,980.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 1B **Description: Construct 4,150 LF Parallel Taxiway "A"**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	EROSION AND SEDIMENT CONTROL	1	LS	$75,000.00	$75,000.00
2	CLEARING AND GRUBBING	10	AC	$2,000.00	$20,000.00
3	EMBANKMENT/EXCAVATION	68,000	CY	$5.00	$340,000.00
4	BASE COURSE	24,000	SY	$12.00	$288,000.00
5	BITUMINOUS SURFACE COURSE (4")	7,300	TON	$75.00	$547,500.00
6	BITUMINOUS PRIME COAT	13,500	GAL	$2.00	$27,000.00
7	BITUMINOUS TACK COAT	20,000	GAL	$2.00	$40,000.00
8	PAVEMENT MARKINGS	1	LS	$75,000.00	$75,000.00
9	SHOULDER GRADING	1	LS	$200,000.00	$200,000.00
10	SODDING	13,500	SY	$2.50	$33,750.00
11	SEEDING	5	AC	$2,000.00	$10,000.00
12	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$250,000.00	$250,000.00
13	RUNWAY EDGE LIGHTING	100	EA	$1,000.00	$100,000.00
14	AIRFIELD GUIDANCE SIGN	9	EA	$5,000.00	$45,000.00
15	5 KV CABLE	12,000	LF	$1.50	$18,000.00
16	NO. 6 COPPER COUNTERPOISE	12,000	LF	$1.50	$18,000.00
17	TWO-WAY 4" DUCT, CONCRETE ENCASED	1000	LF	$45.00	$45,000.00
18	TWO-WAY 4" DUCT, NON-ENCASED	11,000	LF	$14.00	$154,000.00
19	ALLOWANCE FOR WETLAND MITIGATION	4	AC	$40,000.00	$160,000.00
20	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$50,000.00	$50,000.00
	Construction Total				$2,496,250.00
	Mobilization			**10%**	$249,625.00
	Professional Service Total			**25%**	$624,062.50
	Add Contingency			**20%**	$499,250.00
				TOTAL	**$3,869,187.50**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 1C Description: Installation of a Non-Precision Instrument Approach

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	INSTALLATION OF A LOCALIZER	1	LS	$300,000.00	$300,000.00
2	ALLOWANCE FOR FAA COORDINATION	1	LS	$50,000.00	$50,000.00
				Construction Total	$350,000.00
				Mobilization **10%**	$35,000.00
				Professional Service Total **25%**	$87,500.00
				Add Contingency **20%**	$70,000.00
				TOTAL	**$542,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 1D **Description: Relocation of Existing Airport Landside Perimeter Road**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	EROSION AND SEDIMENT CONTROL	1	LS	$50,000.00	$50,000.00
2	CLEARING AND GRUBBING	6.5	AC	$2,000.00	$13,000.00
3	EXISTING ASPHALT PAVEMENT REMOVAL	1,700	SY	$10.00	$17,000.00
4	EMBANKMENT/EXCAVATION	10,000	CY	$5.00	$50,000.00
5	BASE COURSE (6 IN)	27,000	SY	$12.00	$324,000.00
6	BITUMINOUS SURFACE COURSE (1.5")	2,100	TON	$75.00	$157,500.00
7	BITUMINOUS PRIME COAT	10,500	GAL	$2.00	$21,000.00
8	PAVEMENT STRIPING	11,000	SF	$1.00	$11,000.00
9	SODDING	4500	AC	$2.50	$11,250.00
10	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
11	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
12	ALLOWANCE FOR SIGNAGE	1	LS	$35,000.00	$35,000.00
			Construction Total		$1,039,750.00
			Mobilization	**10%**	$103,975.00
			Professional Service Total	**25%**	$259,937.50
			Add Contingency	**20%**	$207,950.00
				TOTAL	**$1,611,612.50**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 2A **Description: ILS Approach for Runway 10**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	CAT 1 ILS (LOCALIZER, GLIDESCLOPE, ALS)	1	LS	$2,000,000.00	$2,000,000.00
2	FAA COORDINATION	1	LS	$150,000.00	$150,000.00
3	PROPERTY ACQUISITION	30	AC	$20,000.00	$600,000.00

Construction Total		$2,750,000.00
Mobilization	**10%**	$275,000.00
Professional Service Total	**25%**	$687,500.00
Add Contingency	**20%**	$550,000.00
	TOTAL	**$4,262,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 2B **Description: Replace PAPI with a VASI on Runway 10**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	REMOVE PAPI FROM RW10	1	LS	$5,000.00	$5,000.00
2	INSTALL VASI FOR RW10	1	LS	$50,000.00	$50,000.00
3	ALLOWANCE FOR FAA COORDINATION	1	LS	$30,000.00	$30,000.00

Construction Total		$85,000.00
Mobilization	**10%**	$8,500.00
Professional Service Total	**25%**	$21,250.00
Add Contingency	**20%**	$17,000.00
	TOTAL	**$131,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 2C **Description:** Runway 10/28 Crack Sealing

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	ASPHALT CRACK SEALING	100,000	LF	$2.50	$250,000.00
				Construction Total	$260,000.00
				Mobilization **10%**	$26,000.00
				Professional Service Total **25%**	$65,000.00
				Add Contingency **20%**	$52,000.00
				TOTAL	**$403,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 2D **Description:** Runway 10/28 Marking

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	PAVEMENT MARKINGS	125,000	SY	$1.00	$125,000.00
				Construction Total	$135,000.00
				Mobilization **10%**	$13,500.00
				Professional Service Total **25%**	$33,750.00
				Add Contingency **20%**	$27,000.00
				TOTAL	**$209,250.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 2E **Description: Runway 10/28 Safety Area Improvements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ENVIRONMENTAL STUDY	1	LS	$50,000.00	$50,000.00
2	ALLOWANCE FOR WETLAND MITIGATION	3	AC	$40,000.00	$120,000.00
3	SITEWORK	1	LS	$250,000.00	$250,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$100,000.00	$100,000.00
			Construction Total		$520,000.00
			Mobilization	**10%**	$52,000.00
			Professional Service Total	**25%**	$130,000.00
			Add Contingency	**20%**	$104,000.00
				TOTAL	**$806,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 3A **Description: Taxiway "A" Improvements from Taxiway "B" to "C"**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	25,000	CY	$8.00	$200,000.00
2	AIRFIELD PAVEMENT	11,200	SY	$40.00	$448,000.00
3	ALLOWANCE FOR SEEDING AND SODDING	1	LS	$150,000.00	$150,000.00
4	ALLOWANCE FOR LIGHTING & SIGNAGE	1	LS	$50,000.00	$50,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
6	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,048,000.00
Mobilization	**10%**	$104,800.00
Professional Service Total	**25%**	$262,000.00
Add Contingency	**20%**	$209,600.00
	TOTAL	**$1,624,400.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 3B **Description: Taxiway "A" Improvements from Taxiway "C" to threshold of Runway 6**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	PAVEMENT REMOVAL	2,000	SY	$10.00	$20,000.00
2	SITEWORK	26,000	CY	$8.00	$208,000.00
3	AIRFIELD PAVEMENT	11,200	SY	$40.00	$448,000.00
4	ALLOWANCE FOR SEEDING/SODDING/EROSION CONTROL	1	LS	$150,000.00	$150,000.00
5	LIGHTING & SIGNAGE	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR DRAINGAE IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
7	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,076,000.00
Mobilization	**10%**	$107,600.00
Professional Service Total	**25%**	$269,000.00
Add Contingency	**20%**	$215,200.00
	TOTAL	**$1,667,800.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 3C **Description:** Taxiway Hold Aprons

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	15,000	CY	$8.00	$120,000.00
2	PAVEMENT	9,800	SY	$40.00	$392,000.00
3	ALLOWANCE FOR SEEDING AND SODDING	1	LS	$150,000.00	$150,000.00
4	ALLOWANCE FOR LIGHTING AND SIGNAGE	1	LS	$100,000.00	$100,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$40,000.00	$40,000.00
6	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$40,000.00	$40,000.00

Construction Total		$842,000.00
Mobilization	**10%**	$84,200.00
Professional Service Total	**25%**	$210,500.00
Add Contingency	**20%**	$168,400.00
	TOTAL	**$1,305,100.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 4A **Description: Taxiway "B" Improvements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK PREPARATION	1	LS	$10,000.00	$10,000.00
2	AIRFIELD PAVEMENT REHABILITATION	15,600	SY	$35.00	$546,000.00
3	ALLOWANCE FOR SEEDING/SODDING/EROSION CONTROL	1	LS	$50,000.00	$50,000.00
4	REHABILITATE LIGHTING AND SIGNAGE	1	LS	$75,000.00	$75,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$5,000.00	$5,000.00
7	PAVEMENT REMOVAL	560	SY	$10.00	$5,600.00
8	PAVEMENT MILLING	8,000	SY	$10.00	$80,000.00

Construction Total		$821,600.00
Mobilization	**10%**	$82,160.00
Professional Service Total	**25%**	$205,400.00
Add Contingency	**20%**	$164,320.00
	TOTAL	**$1,273,480.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 5A **Description: Taxiway "C" Improvements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK PREPARATION	1	LS	$10,000.00	$10,000.00
2	PAVEMENT REHABILITATION	11,200	SY	$35.00	$392,000.00
3	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$50,000.00	$50,000.00
4	REHABILITATE LIGHTING AND SIGNAGE	1	LS	$75,000.00	$75,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$40,000.00	$40,000.00
6	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$5,000.00	$5,000.00

Construction Total		$572,000.00
Mobilization	**10%**	$57,200.00
Professional Service Total	**25%**	$143,000.00
Add Contingency	**20%**	$114,400.00
	TOTAL	**$886,600.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 6A **Description: Taxiway "E" Improvements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK PREPARATION	1	LS	$10,000.00	$10,000.00
2	PAVEMENT REHABILITATION	51,500	SY	$35.00	$1,802,500.00
3	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$100,000.00	$100,000.00
4	REHABILITATE LIGHTING AND SIGNAGE	1	LS	$125,000.00	$125,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$5,000.00	$5,000.00

Construction Total		$2,092,500.00
Mobilization	**10%**	$209,250.00
Professional Service Total	**25%**	$523,125.00
Add Contingency	**20%**	$418,500.00
	TOTAL	**$3,243,375.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT: 2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE: 13-Apr-05

Project No.: 7A **Description: Renovate Existing Automated Flight Service Station Building**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR BUILDING RENOVATIONS	1	LS	$500,000.00	$500,000.00
				TOTAL	**$500,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7B **Description: Seal Coat GA Apron & T-Hangar Apron Pavements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK PREPARATION	1	LS	$25,000.00	$25,000.00
2	SEAL COAT	160,000	SY	$3.00	$480,000.00
				Construction Total	$505,000.00
				Mobilization **10%**	$50,500.00
				Professional Service Total **25%**	$126,250.00
				Add Contingency **20%**	$101,000.00
				TOTAL	**$782,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7C **Description: Rehabilitate Taxilane & Apron Pavements for T-Hangars "I" & "J"**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK PREPARATION	1	LS	$10,000.00	$10,000.00
2	PAVEMENT REHABILITATION	11,000	SY	$25.00	$275,000.00
3	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$75,000.00	$75,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$40,000.00	$40,000.00
			Construction Total		$400,000.00
			Mobilization	**10%**	$40,000.00
			Professional Service Total	**25%**	$100,000.00
			Add Contingency	**20%**	$80,000.00
				TOTAL	**$620,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7D **Description:** Eclipse Aircraft Hangar and Site Improvements

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$100,000.00	$100,000.00
2	OFFICE BUILDING	15,000	SF	$130.00	$1,950,000.00
3	HANGAR	40,000	SF	$75.00	$3,000,000.00
4	CONCRETE APRON PAVING	3,350	SY	$65.00	$217,750.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
7	VEHICULAR PAVEMENT	3,800	SY	$25.00	$95,000.00

Construction Total		$5,612,750.00
Mobilization	**10%**	$561,275.00
Professional Service Total	**25%**	$1,403,187.50
Add Contingency	**20%**	$1,122,550.00
	TOTAL	**$8,699,762.50**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7E **Description:** Corporate Hangar - Site Prep and Apron

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	26,400	CY	$8.00	$211,200.00
2	AIRFIELD PAVEMENT	12,900	SY	$40.00	$516,000.00
3	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$150,000.00	$150,000.00
4	ALLOWANCE FOR LIGHT & SIGNAGE	1	LS	$50,000.00	$50,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
6	ALLOWANCE FOR UTILITY MODIFICATIONS	1	LS	$200,000.00	$200,000.00
7	ALLOWANCE FOR VAULT MODIFICATIONS	1	LS	$25,000.00	$25,000.00

Construction Total		$1,352,200.00
Mobilization	**10%**	$135,220.00
Professional Service Total	**25%**	$338,050.00
Add Contingency	**20%**	$270,440.00
	TOTAL	**$2,095,910.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7F **Description:** Construct (3) 80x80 Coporate Hangars

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	CORPORATE HANGARS (3 @ 80' X 80')	19,200	SF	$75.00	$1,440,000.00
3	VEHICULAR PAVEMENT	2,300	SY	$25.00	$57,500.00
4	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$100,000.00	$100,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR UTILITIES IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,707,500.00
Mobilization	**10%**	$170,750.00
Professional Service Total	**25%**	$426,875.00
Add Contingency	**20%**	$341,500.00
	TOTAL	**$2,646,625.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7G **Description: Construct (3) 10 Unit T-Hangars**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	18,000	CY	$8.00	$144,000.00
2	T-HANGARS (3 @ 10 UNITS EA)	3	EA	$220,000.00	$660,000.00
3	AIRFIELD PAVEMENT	9,000	SY	$40.00	$360,000.00
4	VEHICULAR PAVEMENT	3,500	SY	$25.00	$87,500.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
6	ALLOWANCE FOR UTILITIES IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
7	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$150,000.00	$150,000.00

Construction Total		$1,651,500.00
Mobilization	**10%**	$165,150.00
Professional Service Total	**25%**	$412,875.00
Add Contingency	**20%**	$330,300.00
	TOTAL	**$2,559,825.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7H **Description:** New Access Rd. Across Little Hatchet Creek

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$150,000.00	$150,000.00
2	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$75,000.00	$75,000.00
3	VEHICULAR PAVEMENT	1,200	SY	$20.00	$24,000.00
4	300' CONCRETE BRIDGE	1	LS	$1,000,000.00	$1,000,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$100,000.00	$100,000.00

Construction Total		$1,399,000.00
Mobilization	**10%**	$139,900.00
Professional Service Total	**25%**	$349,750.00
Add Contingency	**20%**	$279,800.00
	TOTAL	**$2,168,450.00**

NOTE:

1. ASSUMING CONCRETE COLUMN AND BEAM BRIDGE.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 7I **Description: Aircraft Wash Rack**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$25,000.00	$25,000.00
2	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$40,000.00	$40,000.00
3	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$40,000.00	$40,000.00
5	CONCRETE AIRFIELD PAVEMENT	1,200	SY	$60.00	$72,000.00
			Construction Total		$177,000.00
			Mobilization	**10%**	$17,700.00
			Professional Service Total	**25%**	$44,250.00
			Add Contingency	**20%**	$35,400.00
				TOTAL	**$274,350.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8A **Description: Terminal Renovations**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	PHASE 1				
2	PASSENGER BOARDING BRIDGE	3	EA	$400,000.00	$1,200,000.00
3	VESTIBULE	1,000	SF	$200.00	$200,000.00
4	PHASE 2				
5	INTERIOR RENOVATIONS	10,000	SF	$150.00	$1,500,000.00
6	PHASE 3				
7	INTERIOR RENOVATIONS	4,000	SF	$150.00	$600,000.00
8	PHASE 4				
9	INTERIOR RENOVATIONS	4,000	SF	$125.00	$500,000.00
10	PHASE 5				
11	EXTERIOR RENOVATIONS (500' X 15' CANOPY)	7,500	SF	$100.00	$750,000.00
			Construction Total		$4,750,000.00
			Mobilization	**10%**	$475,000.00
			Professional Service Total	**25%**	$1,187,500.00
			Add Contingency	**20%**	$950,000.00
				TOTAL	**$7,362,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8B **Description: Construct New Airport Access Rd. to Waldo Rd.**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	7,000	CY	$8.00	$56,000.00
2	VEHICULAR PAVEMENT	13,500	SY	$35.00	$472,500.00
3	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$300,000.00	$300,000.00
4	ALLOWANCE FOR LIGHTING AND SIGNAGE	1	LS	$300,000.00	$300,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$300,000.00	$300,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$150,000.00	$150,000.00

Construction Total		$1,578,500.00
Mobilization	**10%**	$157,850.00
Professional Service Total	**25%**	$394,625.00
Add Contingency	**20%**	$315,700.00
	TOTAL	**$2,446,675.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8C **Description:** Consolidated Rental Car Facility

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	CAR WASH BUILDING	1	LS	$400,000.00	$400,000.00
2	CAR WASH EQUIPMENT	1	LS	$200,000.00	$200,000.00
3	OTHER RENTAL CAR EQUIPMENT	1	LS	$150,000.00	$150,000.00
4	VEHICULAR PAVEMENT	7,500	SY	$30.00	$225,000.00
5	ALLOWANCE FOR UTILITIES, DRAINAGE, LANDSCAPING AND SIGNAGE	1	LS	$100,000.00	$100,000.00

Construction Total		$1,075,000.00
Mobilization	**10%**	$107,500.00
Professional Service Total	**25%**	$268,750.00
Add Contingency	**20%**	$215,000.00
	TOTAL	**$1,666,250.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8D **Description:** Rental Car Ready Return Lot Expansion

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	4,000	CY	$18.00	$72,000.00
2	VEHICULAR PAVEMENT	8,000	SY	$25.00	$200,000.00
4	RELOCATE GATES	2	EA	$13,000.00	$26,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
6	ALLOWANCE FOR SODDING/SEEDING/EROSION CONTROL	1	LS	$125,000.00	$125,000.00
7	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
	Construction Total				$623,000.00
	Mobilization			**10%**	$62,300.00
	Professional Service Total			**25%**	$155,750.00
	Add Contingency			**20%**	$124,600.00
				TOTAL	**$965,650.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8E **Description: Auto Parking Lot Expansion for Terminal**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	10,000	CY	$8.00	$80,000.00
2	VEHICULAR PAVEMENT	19,500	SY	$25.00	$487,500.00
3	NEW TICKETING BOOTHS	2	EA	$60,000.00	$120,000.00
4	CARD SWIPE PAY LANE	1	EA	$30,000.00	$30,000.00
5	NEW TICKET DISPENSERS	3	EA	$5,000.00	$15,000.00
6	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$250,000.00	$250,000.00
7	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
8	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
			Construction Total		$1,207,500.00
			Mobilization	**10%**	$120,750.00
			Professional Service Total	**25%**	$301,875.00
			Add Contingency	**20%**	$241,500.00
				TOTAL	**$1,871,625.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8F **Description: Auto Parking Lot Rehabilitation**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1	LS	$10,000.00	$10,000.00
2	REHABILITATION	27,000	SY	$15.00	$405,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$300,000.00	$300,000.00
			Construction Total		$765,000.00
			Mobilization	**10%**	$76,500.00
			Professional Service Total	**25%**	$191,250.00
			Add Contingency	**20%**	$153,000.00
				TOTAL	**$1,185,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8G **Description:** Covered Parking

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	COVERED SPACES	100	EA	$2,000.00	$200,000.00
2	ALLOWANCE FOR UTILITY MODIFICATIONS	1	LS	$100,000.00	$100,000.00
			Construction Total		$300,000.00
			Mobilization	**10%**	$30,000.00
			Professional Service Total	**25%**	$75,000.00
			Add Contingency	**20%**	$60,000.00
				TOTAL	**$465,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8H **Description: Employee Parking Relocation**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1,500	CY	$8.00	$12,000.00
2	VEHICULAR PAVEMENT	3,350	SY	$25.00	$83,750.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
5	ALLOWANCE FOR LIGHTING AND SIGNAGE	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
	Construction Total				$320,750.00
	Mobilization			**10%**	$32,075.00
	Professional Service Total			**25%**	$80,187.50
	Add Contingency			**20%**	$64,150.00
				TOTAL	**$497,162.50**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8I **Description: Taxistand Ready Lot**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	800	CY	$8.00	$6,400.00
2	ROOF STRUCTURE	750	SF	$200.00	$150,000.00
3	VEHICULAR PAVEMENT	1,500	SY	$25.00	$37,500.00
4	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
5	ALLOWNCE FOR LANDSCAPING	1	LS	$25,000.00	$25,000.00
6	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$30,000.00	$30,000.00

Construction Total		$323,900.00
Mobilization	**10%**	$32,390.00
Professional Service Total	**25%**	$80,975.00
Add Contingency	**20%**	$64,780.00
	TOTAL	**$502,045.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8J **Description:** Air Traffic Control Tower Relocation

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ATCT	1	LS	$2,500,000.00	$2,500,000.00
2	DUCT BANK	4,500	LF	$50.00	$225,000.00
3	RUNWAY AND TAXIWAY PAVEMENT REMOVAL AND REPLACEMENT	150	SY	$80.00	$12,000.00
4	VEHICULAR ASPHALT REMOVAL AND REPLACEMENT	200	SY	$50.00	$10,000.00

Construction Total		$2,747,000.00
Mobilization	**10%**	$274,700.00
Professional Service Total	**25%**	$686,750.00
Add Contingency	**20%**	$549,400.00
	TOTAL	**$4,257,850.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8K **Description:** Install New Airport Landside Signage

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SIGNAGE - MAST ARM MOUNTED	6	EA	$50,000.00	$300,000.00
2	SIGNAGE - POLE MOUNTED	10	EA	$5,000.00	$50,000.00
3	ALLOWANCE FOR UTILITY MODIFICATIONS	1	LS	$30,000.00	$30,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$430,000.00
Mobilization	**10%**	$43,000.00
Professional Service Total	**25%**	$107,500.00
Add Contingency	**20%**	$86,000.00
	TOTAL	**$666,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8L **Description: Phase 2 Air Cargo/Rental Car Quick Turn Around Facility**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	3,000	CY	$18.00	$54,000.00
2	VEHICULAR PAVEMENT	5,860	SY	$25.00	$146,500.00
3	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
			Construction Total		$400,500.00
			Mobilization	**10%**	$40,050.00
			Professional Service Total	**25%**	$100,125.00
			Add Contingency	**20%**	$80,100.00
				TOTAL	**$620,775.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 8M Description: Airport Signage Rehabilitation

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR SIGNAGE REHABILITATION	1	LS	$150,000.00	$150,000.00
				TOTAL	**$150,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 9A **Description:** Air Cargo Facility

LINE#	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	7,000	CY	$8.00	$56,000.00
2	AIRFIELD PAVEMENT	20,000	SY	$60.00	$1,200,000.00
3	VEHICULAR PAVEMENT	17,000	SY	$25.00	$425,000.00
4	AIR CARGO BUILDING	60,000	SF	$120.00	$7,200,000.00
5	ALLOWANCE FOR SODDING/SEEDING	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
7	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$100,000.00	$100,000.00
	Construction Total				$9,231,000.00
	Mobilization			**10%**	$923,100.00
	Professional Service Total			**25%**	$2,307,750.00
	Add Contingency			**20%**	$1,846,200.00
				TOTAL	**$14,308,050.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10A **Description: Upgrade Airport Security Fencing**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	23	AC	$5,000.00	$115,000.00
2	10' BARBED FENCE	50,000	LF	$15.00	$750,000.00

Construction Total		$865,000.00
Mobilization	**10%**	$86,500.00
Professional Service Total	**25%**	$216,250.00
Add Contingency	**20%**	$173,000.00
	TOTAL	**$1,340,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10B **Description: Remote Airport Security Cameras and Surveillance**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	REMOTE AIRPORT SECURITY CAMERAS AND SURVEILLANCE	1	LS	$500,000.00	$500,000.00
2	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$300,000.00	$300,000.00

Construction Total		$800,000.00
Mobilization	**10%**	$80,000.00
Professional Service Total	**25%**	$200,000.00
Add Contingency	**20%**	$160,000.00
	TOTAL	**$1,240,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10C **Description:** Upgrade Airport Fiber Optics

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	FIBER OPTIC CABLE	5,000	LF	$50.00	$250,000.00
				Construction Total	$250,000.00
				Mobilization 10%	$25,000.00
				Professional Service Total 25%	$62,500.00
				Add Contingency 20%	$50,000.00
				TOTAL	**$387,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10D **Description:** Stormwater Master Plan

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	STORMWATER MASTER PLAN	1	LS	$250,000.00	$250,000.00
				Construction Total	$250,000.00
				Mobilization **10%**	$25,000.00
				Professional Service Total **25%**	$62,500.00
				Add Contingency **20%**	$50,000.00
				TOTAL	**$387,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10E **Description: Phase 1 - Airport Drainage Improvements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$1,000,000.00	$1,000,000.00
				TOTAL	**$1,000,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10F **Description: Construct Airport Maintenance Building**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	3,800	CY	$8.00	$30,400.00
2	AIRPORT MAINTENANCE BUILDING	4,850	SF	$70.00	$339,500.00
3	VEHICULAR PAVEMENT	6,300	SY	$25.00	$157,500.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR LANDSCAPING	1	LS	$75,000.00	$75,000.00

Construction Total		$702,400.00
Mobilization	**10%**	$70,240.00
Professional Service Total	**25%**	$175,600.00
Add Contingency	**20%**	$140,480.00
	TOTAL	**$1,088,720.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10G **Description: Airport Maintenance Equipment**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	4 X 4 CREW CAB	1	EA	$40,000.00	$40,000.00
2	4WD TRACTOR	2	EA	$170,000.00	$340,000.00
3	BACKHOE	1	EA	$150,000.00	$150,000.00
4	SKID STEER	1	EA	$30,000.00	$30,000.00
5	AERIAL LIFT TRUCK	1	EA	$75,000.00	$75,000.00
6	4 X 4 OPS VEHICLE	1	EA	$50,000.00	$50,000.00
7	TRAILER	1	EA	$25,000.00	$25,000.00
8	DUMPTRUCK	1	EA	$130,000.00	$130,000.00

Construction Total		$840,000.00
Mobilization	**10%**	$84,000.00
Professional Service Total	**25%**	$210,000.00
Add Contingency	**20%**	$168,000.00
	TOTAL	**$1,302,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10H **Description:** ARFF Vehicle

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ARFF VEHICLE	2	EA	$250,000.00	$500,000.00

Construction Total		$500,000.00
Mobilization	**10%**	$50,000.00
Professional Service Total	**25%**	$125,000.00
Add Contingency	**20%**	$100,000.00
	TOTAL	**$775,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10l **Description: Construct Airport Perimeter Road Around SE side of Airport**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	45,000	CY	$8.00	$360,000.00
2	LIGHT-DUTY VEHICULAR PAVEMENT	21,400	SY	$20.00	$428,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$250,000.00	$250,000.00

Construction Total		$1,038,000.00
Mobilization	**10%**	$103,800.00
Professional Service Total	**25%**	$259,500.00
Add Contingency	**20%**	$207,600.00
	TOTAL	**$1,608,900.00**

NOTE:

1. ASSUMING FENCE PROJECT HAS BEEN COMPLETED AND ACCESS ROAD DOES NOT CROSS WETLANDS
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10J Description: Obstruction Removal

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR OBSTRUCTION INVESTIGATION & REMOVAL	1	LS	$500,000.00	$500,000.00
				TOTAL	**$500,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10K **Description:** Fuel Truck Access Road Segment

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	700	CY	$30.00	$21,000.00
2	VEHICULAR PAVEMENT	1,400	SY	$35.00	$49,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
4	ALLOWANCE FOR SEEDING/SODDING	1	LS	$35,000.00	$35,000.00
5	ALLOWANCE FOR MISCELLANEOUS UTILITY IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
	Construction Total				$155,000.00
	Mobilization			**10%**	$15,500.00
	Professional Service Total			**25%**	$38,750.00
	Add Contingency			**20%**	$31,000.00
				TOTAL	**$240,250.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10L **Description:** FAR Part 150 Study

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR FAR PART 150 STUDY	1	LS	$300,000.00	$300,000.00
				TOTAL	**$300,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10M **Description: Wildlife Management Plan**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR WILDLIFE MANAGEMENT PLAN	1	LS	$150,000.00	$150,000.00
				TOTAL	**$150,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10N **Description: Second Electrical Vault Installation**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ELECTRICAL VAULT INSTALLATION	2,000	SF	$150.00	$300,000.00
2	ALLOWANCE FOR EQUIPMENT, REGULATORS, ETC.	1	LS	$400,000.00	$400,000.00

Construction Total		$700,000.00
Mobilization	**10%**	$70,000.00
Professional Service Total	**25%**	$175,000.00
Add Contingency	**20%**	$140,000.00
	TOTAL	**$1,085,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10O **Description:** Fuel Farm Expansion

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK & PREPARATION	1	LS	$50,000.00	$50,000.00
2	15,000 GALLON ABOVE GROUND TANK JET A	1	LS	$100,000.00	$100,000.00
3	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	CONTAINMENT BARRIER	1	LS	$100,000.00	$100,000.00
5	ALLOWANCE FOR OIL/WATER SEPARATOR	1	LS	$30,000.00	$30,000.00

Construction Total		$330,000.00
Mobilization	**10%**	$33,000.00
Professional Service Total	**25%**	$82,500.00
Add Contingency	**20%**	$66,000.00
	TOTAL	**$511,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10P **Description: Relocate Cul-de-Sac on West End of the Airport Landside Road**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR RELOCATING CUL-DE-SAC	1	LS	$200,000.00	$200,000.00
				TOTAL	**$200,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10Q **Description: Airport Rezoning Assistance**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR AIRPORT REZONING ASSISTANCE	1	LS	$50,000.00	$50,000.00
				TOTAL	**$50,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10R **Description: Airport Comprehensive Plans Amendment**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR AIRPORT COMPREHENSIVE PLAN AMENDMENT	1	LS	$200,000.00	$200,000.00
				TOTAL	**$200,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 10S **Description: Relocate a Portion of the Airside Access Road**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	2,000	CY	$8.00	$16,000.00
2	VEHICULAR PAVEMENT	3,800	SY	$30.00	$114,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR SEEDING/SODDING	1	LS	$30,000.00	$30,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
			Construction Total		$235,000.00
			Mobilization	**10%**	$23,500.00
			Professional Service Total	**25%**	$58,750.00
			Add Contingency	**20%**	$47,000.00
				TOTAL	**$364,250.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 11A **Description: Land Acquisition for Runway 6/24 Extension**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	LAND ACQUISITION	42	AC	$10,000.00	$420,000.00
2	APPRAISAL @ 10%	1	LS	$42,000.00	$42,000.00

Construction Total		$462,000.00
Mobilization	**10%**	$46,200.00
Professional Service Total	**25%**	$115,500.00
Add Contingency	**20%**	$92,400.00
	TOTAL	**$716,100.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 11B **Description: Land Acquisition for Air Cargo Access Road**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	LAND ACQUISITION	6	AC	$20,000.00	$120,000.00
2	APPRAISAL @ 10%	1	LS	$12,000.00	$12,000.00

Construction Total		$132,000.00
Mobilization	**10%**	$13,200.00
Professional Service Total	**25%**	$33,000.00
Add Contingency	**20%**	$26,400.00
	TOTAL	**$204,600.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 11C **Description: Land Acquisition for Airport Loop Road**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	LAND ACQUISITION	4	AC	$50,000.00	$200,000.00
2	APPRAISAL @ 10%	1	LS	$20,000.00	$20,000.00

Construction Total		$220,000.00
Mobilization	**10%**	$22,000.00
Professional Service Total	**25%**	$55,000.00
Add Contingency	**20%**	$44,000.00
	TOTAL	**$341,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 11D **Description:** Land Acquisition for Runway 6 RPZ

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	LAND ACQUISITION (N/A)	0	AC	$0.00	$0.00

Construction Total		$0.00
Mobilization	**10%**	$0.00
Professional Service Total	**25%**	$0.00
Add Contingency	**20%**	$0.00
	TOTAL	**N/A**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 12A **Description: Crack Sealing for Runway 10/28**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	ASPHALT CRACK SEAL	100,000	LF	$2.50	$250,000.00

Construction Total		$260,000.00
Mobilization	**10%**	$26,000.00
Professional Service Total	**25%**	$65,000.00
Add Contingency	**20%**	$52,000.00
	TOTAL	**$403,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 12B **Description: Crack Sealing for Runway 6/24**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	ASPHALT CRACK SEAL	60,000	LF	$2.50	$150,000.00

Construction Total		$160,000.00
Mobilization	**10%**	$16,000.00
Professional Service Total	**25%**	$40,000.00
Add Contingency	**20%**	$32,000.00
	TOTAL	**$248,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 12C **Description: Runway 6/24 Re-Marking**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	RUNWAY RE-MARKING	80,000	SF	$1.00	$80,000.00

Construction Total		$90,000.00
Mobilization	**10%**	$9,000.00
Professional Service Total	**25%**	$22,500.00
Add Contingency	**20%**	$18,000.00
	TOTAL	**$139,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 12D **Description: Runway 10/28 Re-Marking**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	RUNWAY MARKINGS	125,000	SF	$1.00	$125,000.00

Construction Total		$135,000.00
Mobilization	**10%**	$13,500.00
Professional Service Total	**25%**	$33,750.00
Add Contingency	**20%**	$27,000.00
	TOTAL	**$209,250.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 13A **Description: Construct Connector to Taxiway "C"**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	15,000	CY	$8.00	$120,000.00
2	AIRFIELD PAVEMENT	7,500	SY	$40.00	$300,000.00
3	ALLOWANCE FOR LIGHTING AND SIGNAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
5	ALLOWANCE FOR SEEDING/SODDING	1	LS	$50,000.00	$50,000.00

Construction Total		$670,000.00
Mobilization	**10%**	$67,000.00
Professional Service Total	**25%**	$167,500.00
Add Contingency	**20%**	$134,000.00
	TOTAL	**$1,038,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14A **Description: Crack Seal and Seal Coat Exist. GA Aprons, Hangar Taxiways and T-Hangar Aprons**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$20,000.00	$20,000.00
2	CRACK SEAL/SEAL COAT	190,000	SY	$3.50	$665,000.00

Construction Total		$685,000.00
Mobilization	**10%**	$68,500.00
Professional Service Total	**25%**	$171,250.00
Add Contingency	**20%**	$137,000.00
	TOTAL	**$1,061,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14B **Description: Rehabilitate All GA Side Apron (flood) Lighting**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE TO REHABILITATE FLOOD LIGHTING	1	LS	$500,000.00	$500,000.00
				TOTAL	**$500,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14C Description: Rehabilitation of All Existing T-Hangars

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE TO REHABILITATE T-HANGARS	1	LS	$2,000,000.00	$2,000,000.00
				TOTAL	**$2,000,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14D Description: Rehabilitate Sunshades

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE TO REHABILITATE COVERED AIRCRAFT PARKING	1	LS	$300,000.00	$300,000.00
				TOTAL	**$300,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14E **Description:** Rehabilitate Joint Aviation Unit Hangar

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE TO REHABILITATE HANGAR	4,875	SF	$35.00	$170,625.00

Construction Total		$170,625.00
Mobilization	**10%**	$17,062.50
Professional Service Total	**25%**	$42,656.25
Add Contingency	**20%**	$34,125.00
	TOTAL	**$264,468.75**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14F **Description: Rehabilitate East GA Apron**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1	LS	$10,000.00	$10,000.00
2	REHABILITATE PAVEMENT	49,000	SY	$25.00	$1,225,000.00
3	ALLOWANCE FOR SEEDING/SODDING	1	LS	$250,000.00	$250,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00

Construction Total		$1,685,000.00
Mobilization	**10%**	$168,500.00
Professional Service Total	**25%**	$421,250.00
Add Contingency	**20%**	$337,000.00
	TOTAL	**$2,611,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14G **Description: T-Hangar Taxiway to Serve Northeast "T" Hangar Area**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1,200	CY	$8.00	$9,600.00
2	AIRFIELD PAVEMENT	600	SY	$40.00	$24,000.00
3	LIGHTING AND SIGNAGE	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
5	ALLOWANCE FOR SEEDING/SODDING	1	LS	$25,000.00	$25,000.00

Construction Total		$133,600.00
Mobilization	**10%**	$13,360.00
Professional Service Total	**25%**	$33,400.00
Add Contingency	**20%**	$26,720.00
	TOTAL	**$207,080.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14H **Description: Construct 3(10) Unit T-Hangars**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE WORK	18,000	CY	$8.00	$144,000.00
2	T-HANGARS (3 AT 10 UNITS EACH)	3	EA	$220,000.00	$660,000.00
3	AIRFIELD PAVEMENT	9,000	SY	$40.00	$360,000.00
4	VEHICULAR PAVEMENT	3,500	SY	$25.00	$87,500.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
7	ALLOWANCE FOR SODDING/SEEDING	1	LS	$150,000.00	$150,000.00

Construction Total		$1,651,500.00
Mobilization	**10%**	$165,150.00
Professional Service Total	**25%**	$412,875.00
Add Contingency	**20%**	$330,300.00
	TOTAL	**$2,559,825.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14I **Description: Construction of Midfield FBO facility**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	30,000	CY	$8.00	$240,000.00
2	AIRFIELD PAVEMENT	16,500	SY	$40.00	$660,000.00
3	VEHICULAR PAVEMENT	10,400	SY	$25.00	$260,000.00
4	FBO HANGARS	3	EA	$800,000.00	$2,400,000.00
5	LIGHTING AND SIGNAGE	1	LS	$250,000.00	$250,000.00
6	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$350,000.00	$350,000.00
7	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
8	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$150,000.00	$150,000.00

Construction Total		$4,510,000.00
Mobilization	**10%**	$451,000.00
Professional Service Total	**25%**	$1,127,500.00
Add Contingency	**20%**	$902,000.00
	TOTAL	**$6,990,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14J **Description: Construct (3) 80x80 Corporate Hangars**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$50,000.00	$50,000.00
2	CORPORATE HANGARS (3 AT 80X80)	19,200	SF	$75.00	$1,440,000.00
3	PARKING AND ACCESS PAVEMENT	2,300	SY	$25.00	$57,500.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$100,000.00	$100,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$100,000.00	$100,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,797,500.00
Mobilization	**10%**	$179,750.00
Professional Service Total	**25%**	$449,375.00
Add Contingency	**20%**	$359,500.00
	TOTAL	**$2,786,125.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14K **Description: Construct New FBO Hangar and Terminal Space**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1,500	CY	$8.00	$12,000.00
2	100 X 120 HANGAR	12,000	SF	$85.00	$1,020,000.00
3	FBO TERMINAL	1,500	SF	$150.00	$225,000.00
4	ALLOWANCE FOR LANDSCAPING	1	LS	$50,000.00	$50,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,407,000.00
Mobilization	**10%**	$140,700.00
Professional Service Total	**25%**	$351,750.00
Add Contingency	**20%**	$281,400.00
	TOTAL	**$2,180,850.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14L **Description: Construct New Auto Parking**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	2,500	CY	$8.00	$20,000.00
2	VEHICULAR PAVEMENT	2,500	SY	$25.00	$62,500.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$60,000.00	$60,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
	Construction Total				$242,500.00
	Mobilization			**10%**	$24,250.00
	Professional Service Total			**25%**	$60,625.00
	Add Contingency			**20%**	$48,500.00
				TOTAL	**$375,875.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14M **Description: Remove/Relocate T Hangar Building "F"**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR REMOVAL/RELOCATION OF BUILDING "F"	1	LS	$50,000.00	$50,000.00

TOTAL **$50,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14N **Description: Rehabilitate/Construct Aircraft Apron**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	30,000	CY	$8.00	$240,000.00
2	REHABILITATE AIRCRAFT APRON	15,000	SY	$20.00	$300,000.00
3	CONSTRUCT AIRCRAFT APRON	15,000	SY	$40.00	$600,000.00
4	LIGHTING AND SIGNAGE	1	LS	$150,000.00	$150,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$250,000.00	$250,000.00
6	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
7	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,665,000.00
Mobilization	**10%**	$166,500.00
Professional Service Total	**25%**	$416,250.00
Add Contingency	**20%**	$333,000.00
	TOTAL	**$2,580,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 14O **Description:** Renovate Former Gulf Atlantic Hangar

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR HANGAR RENOVATION (8,000 SF)	1	LS	$250,000.00	$250,000.00
				TOTAL	**$250,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 15A **Description:** Terminal Area Study

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR TERMINAL AREA STUDY	1	LS	$150,000.00	$150,000.00

TOTAL **$150,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 15B **Description: Auto Parking Lot Expansion**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	10,000	CY	$8.00	$80,000.00
2	VEHICULAR PAVEMENT	19,500	SY	$25.00	$487,500.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$250,000.00	$250,000.00
4	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
5	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$150,000.00	$150,000.00

Construction Total		$1,042,500.00
Mobilization	**10%**	$104,250.00
Professional Service Total	**25%**	$260,625.00
Add Contingency	**20%**	$208,500.00
	TOTAL	**$1,615,875.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 15C **Description:** Construct Cell Phone Lot

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	2,000	CY	$8.00	$16,000.00
2	VEHICULAR PAVEMENT	4,000	SY	$30.00	$120,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$20,000.00	$20,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$15,000.00	$15,000.00

Construction Total		$196,000.00
Mobilization	**10%**	$19,600.00
Professional Service Total	**25%**	$49,000.00
Add Contingency	**20%**	$39,200.00
	TOTAL	**$303,800.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 15D **Description: Construct Two-Lane Outbound Roadway**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	3,500	CY	$8.00	$28,000.00
2	VEHICULAR PAVEMENT	7,000	SY	$25.00	$175,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$85,000.00	$85,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$70,000.00	$70,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$85,000.00	$85,000.00

Construction Total		$443,000.00
Mobilization	**10%**	$44,300.00
Professional Service Total	**25%**	$110,750.00
Add Contingency	**20%**	$88,600.00
	TOTAL	**$686,650.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16A **Description: Renovate and Rehabilitate ARFF Building**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	RENOVATE 5,600 SF ARFF BUILDING	1	LS	$400,000.00	$400,000.00
2	BUILDING EXPANSION	1,000	SF	$150.00	$150,000.00
3	VEHICULAR PAVEMENT	4,000	SY	$25.00	$100,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$30,000.00	$30,000.00
5	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$20,000.00	$20,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$750,000.00
Mobilization	**10%**	$75,000.00
Professional Service Total	**25%**	$187,500.00
Add Contingency	**20%**	$150,000.00
	TOTAL	**$1,162,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16B **Description: Obstruction Removal**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR OBSTRUCTION INVESTIGATION AND REMOVAL	1	LS	$500,000.00	$500,000.00
				TOTAL	**$500,000.00**

NOTE:

1. THIS FUNDING LEVEL DOES NOT COVER BUILDING REMOVAL.
2.
3.
4.



AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16C **Description: Install Differential GPS System**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR GPS TOWER INSTALLATION	1	LS	$1,000,000.00	$1,000,000.00
2	ALLOWANCE FOR FAA COORDINATION	1	LS	$500,000.00	$500,000.00

TOTAL **$1,500,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16D **Description:** Non-Aviation Land Use Study

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	NON-AVIATION LAND USE STUDY	1	LS	$100,000.00	$100,000.00
				TOTAL	**$100,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16E **Description: Rehabilitate/Install Security Fencing**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR FENCE REHABILITATION	1	LS	$250,000.00	$250,000.00
2	ALLOWANCE FOR SECURITY CAMERAS	1	LS	$150,000.00	$150,000.00

Construction Total		$400,000.00
Mobilization	**10%**	$40,000.00
Professional Service Total	**25%**	$100,000.00
Add Contingency	**20%**	$80,000.00
	TOTAL	**$620,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16F **Description: Stormwater Management**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR STORMWATER MANAGEMENT	1	LS	$1,000,000.00	$1,000,000.00

TOTAL **$1,000,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16H **Description: Security Road**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	4,000	CY	$8.00	$32,000.00
2	VEHICULAR PAVEMENT	8,000	SY	$25.00	$200,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
4	ALLOWANCE FOR SODDING/SEEDING	1	LS	$35,000.00	$35,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$25,000.00	$25,000.00

Construction Total		$367,000.00
Mobilization	**10%**	$36,700.00
Professional Service Total	**25%**	$91,750.00
Add Contingency	**20%**	$73,400.00
	TOTAL	**$568,850.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16H **Description: Phase 2 Airport Drainage Improvements**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$1,000,000.00	$1,000,000.00
				TOTAL	**$1,000,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16I **Description:** Airport Master Plan Update

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR MASTER PLAN UPDATE	1	LS	$500,000.00	$500,000.00
				TOTAL	**$500,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16J **Description: Construction Dump Testing and Closing**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR CONSTRUCTION DUMP TESTING AND CLOSING	1	LS	$500,000.00	$500,000.00
				TOTAL	**$500,000.00**

NOTE:

1.
2.
3.
4.



AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 16K **Description:** Land Acquisition for Stormwater Pond

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR LAND ACQUISITION	140	AC	$10,000.00	$1,400,000.00
2	APPRAISAL @ 10%	1	LS	$140,000.00	$140,000.00
				TOTAL	**$1,540,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 17A **Description: Crack Sealing for Runway 6/24**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	ASPHALT CRACK SEAL	60,000	LF	$2.50	$150,000.00

Construction Total		$160,000.00
Mobilization	**10%**	$16,000.00
Professional Service Total	**25%**	$40,000.00
Add Contingency	**20%**	$32,000.00
	TOTAL	**$248,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 17B **Description:** Runway 6/24 Re-Marking

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	RUNWAY RE-MARKING	80,000	SF	$1.00	$80,000.00

Construction Total		$90,000.00
Mobilization	**10%**	$9,000.00
Professional Service Total	**25%**	$22,500.00
Add Contingency	**20%**	$18,000.00
	TOTAL	**$139,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 17C **Description:** Rehabilitate 10/28

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	REHABILITATE 10/28	1	LS	$2,635,000.00	$2,635,000.00

Construction Total		$2,645,000.00
Mobilization	**10%**	$264,500.00
Professional Service Total	**25%**	$661,250.00
Add Contingency	**20%**	$529,000.00
	TOTAL	**$4,099,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 17D **Description:** Install Runway 10/28 Centerline Lights

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	INSTALL CENTERLINE LIGHTS	1	LS	$890,000.00	$890,000.00

Construction Total		$900,000.00
Mobilization	**10%**	$90,000.00
Professional Service Total	**25%**	$225,000.00
Add Contingency	**20%**	$180,000.00
	TOTAL	**$1,395,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 18A Description: INSTALL TWY "E" GUARD LIGHTS AND STOP BARS

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK PREPARATION	1	LS	$285,000.00	$285,000.00
					$0.00
					$0.00
					$0.00
					$0.00
					$0.00
			Construction Total		$285,000.00
			Mobilization	10%	$28,500.00
			Professional Service Total	25%	$71,250.00
			Add Contingency	20%	$57,000.00
				TOTAL	$441,750.00

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19A **Description: Crack Seal and Seal Coat Exisiting Paved GA Apron, Hangar Taxiways and T-Hangar Apron**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$20,000.00	$20,000.00
2	CRACK SEAL/SEAL COAT	232,000	SY	$3.50	$805,000.00
				Construction Total	$825,000.00
				Mobilization **10%**	$82,500.00
				Professional Service Total **25%**	$206,250.00
				Add Contingency **20%**	$165,000.00
				TOTAL	**$1,278,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19B **Description:** Rehabilitate Existing GA Access Roads

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	REHABILITATE GA ACCES ROADS AND PARKING AREAS	85,000	SY	$25.00	$2,125,000.00

Construction Total		$2,125,000.00
Mobilization	**10%**	$212,500.00
Professional Service Total	**25%**	$531,250.00
Add Contingency	**20%**	$425,000.00
	TOTAL	**$3,293,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19C Description: Rehabilitate Existing FAA Facilities Sector Office Building

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR OFFICE REHABILITATION	1	LS	$250,000.00	$250,000.00
				TOTAL	**$250,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19D **Description:** Rehabilitate WWII Hangar

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR REHABILITATION OF WWII HANGAR	1	LS	$300,000.00	$300,000.00

TOTAL **$300,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19E **Description: Rehabilitate University Air Center Auto Parking Lots**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1	LS	$10,000.00	$10,000.00
2	REHABILITATE PARKING LOTS	10,000	SY	$15.00	$150,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$15,000.00	$15,000.00
4	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$35,000.00	$35,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$15,000.00	$15,000.00

Construction Total		$225,000.00
Mobilization	**10%**	$22,500.00
Professional Service Total	**25%**	$56,250.00
Add Contingency	**20%**	$45,000.00
	TOTAL	**$348,750.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19F **Description: Rehabilitate West GA Apron**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	RELOCATE PORT-A-PORT HANGAR	7	EA	$15,000.00	$105,000.00
2	SITEWORK	1	LS	$20,000.00	$20,000.00
3	REHABILITATE AIRFIELD PAVEMENT	4,000	SY	$25.00	$100,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
5	ALLOWANCE FOR SODDING/SEEDING	1	LS	$35,000.00	$35,000.00

Construction Total		$310,000.00
Mobilization	**10%**	$31,000.00
Professional Service Total	**25%**	$77,500.00
Add Contingency	**20%**	$62,000.00
	TOTAL	**$480,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19G **Description: Construct (3) 10 Unit T-Hangars**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE WORK	18,000	CY	$8.00	$144,000.00
2	T-HANGARS (3 @ 10 UNITS EACH)	3	EA	$220,000.00	$660,000.00
3	AIRFIELD PAVEMENT	9,000	SY	$40.00	$360,000.00
4	VEHICULAR PAVEMENT	3,500	SY	$25.00	$87,500.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$200,000.00	$200,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
7	ALLOWANCE FOR SODDING/SEEDING	1	LS	$150,000.00	$150,000.00

Construction Total		$1,651,500.00
Mobilization	**10%**	$165,150.00
Professional Service Total	**25%**	$412,875.00
Add Contingency	**20%**	$330,300.00
	TOTAL	**$2,559,825.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19H **Description: Construct (3) 80x80 Corporate Hangars**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITE PREPARATION	1	LS	$10,000.00	$10,000.00
2	CORPORATE HANGARS (3 AT 80X80)	19,200	SF	$75.00	$1,440,000.00
3	PARKING AND ACCESS PAVEMENT	2,300	SY	$25.00	$57,500.00
4	ALLOWANCE FOR SODDING/SEEDING	1	LS	$100,000.00	$100,000.00
5	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$50,000.00	$50,000.00

Construction Total		$1,707,500.00
Mobilization	**10%**	$170,750.00
Professional Service Total	**25%**	$426,875.00
Add Contingency	**20%**	$341,500.00
	TOTAL	**$2,646,625.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19l **Description:** Convert Existing Taxiway "A" into Airside Access Road

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1	LS	$10,000.00	$10,000.00
2	RE-MARKING	1	LS	$50,000.00	$50,000.00

Construction Total		$60,000.00
Mobilization	**10%**	$6,000.00
Professional Service Total	**25%**	$15,000.00
Add Contingency	**20%**	$12,000.00
	TOTAL	**$93,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 19J **Description: Construct Paved Auto Parking for Aeroflite Hangar**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1,000	CY	$8.00	$8,000.00
2	VEHICULAR PAVEMENT	2,000	SY	$25.00	$50,000.00
3	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$20,000.00	$20,000.00
4	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$20,000.00	$20,000.00

Construction Total		$123,000.00
Mobilization	**10%**	$12,300.00
Professional Service Total	**25%**	$30,750.00
Add Contingency	**20%**	$24,600.00
	TOTAL	**$190,650.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 20A Description: Terminal Building Expansion

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	TERMINAL BUILDING EXPANSION	58,000	SF	$275.00	$15,950,000.00

Construction Total		$15,950,000.00
Mobilization	**10%**	$1,595,000.00
Professional Service Total	**25%**	$3,987,500.00
Add Contingency	**20%**	$3,190,000.00
	TOTAL	**$24,722,500.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 20B **Description: Rental Car Ready Return Lot Expansion**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	3,000	CY	$18.00	$54,000.00
2	VEHICULAR PAVEMENT	5,000	SY	$25.00	$125,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$150,000.00	$150,000.00
4	LANDSCAPING	1	LS	$100,000.00	$100,000.00
5	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$30,000.00	$30,000.00

Construction Total		$459,000.00
Mobilization	**10%**	$45,900.00
Professional Service Total	**25%**	$114,750.00
Add Contingency	**20%**	$91,800.00
	TOTAL	**$711,450.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 20C **Description:** Auto Parking Expansion

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	10,000	CY	$8.00	$80,000.00
2	VEHICULAR PAVEMENT	19,500	SY	$25.00	$487,500.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$250,000.00	$250,000.00
4	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$75,000.00	$75,000.00
5	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$150,000.00	$150,000.00

Construction Total		$1,042,500.00
Mobilization	**10%**	$104,250.00
Professional Service Total	**25%**	$260,625.00
Add Contingency	**20%**	$208,500.00
	TOTAL	**$1,615,875.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 20D **Description: Auto Parking Lot Rehabilitation**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	1	LS	$10,000.00	$10,000.00
2	VEHICULAR PAVEMENT REHABILITATION	100,000	SY	$15.00	$1,500,000.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$50,000.00	$50,000.00
4	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$25,000.00	$25,000.00
5	ALLOWANCE FOR LANDSCAPING IMPROVEMENTS	1	LS	$75,000.00	$75,000.00

Construction Total		$1,660,000.00
Mobilization	**10%**	$166,000.00
Professional Service Total	**25%**	$415,000.00
Add Contingency	**20%**	$332,000.00
	TOTAL	**$2,573,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 20E **Description:** Consolidated Rental Car QTA Expansion

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	REHABILITATE AND EXPAND EXISTING FACILITY	1	LS	$600,000.00	$600,000.00
2	SITEWORK	3,500	CY	$8.00	$28,000.00
3	VEHICULAR PAVEMENT	7,500	SY	$25.00	$187,500.00
3	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$90,000.00	$90,000.00
4	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$90,000.00	$90,000.00
5	ALLOWANCE FOR SODDING/SEEDING	1	LS	$35,000.00	$35,000.00

Construction Total		$1,030,500.00
Mobilization	**10%**	$103,050.00
Professional Service Total	**25%**	$257,625.00
Add Contingency	**20%**	$206,100.00
	TOTAL	**$1,597,275.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 21A **Description: Air Cargo Facility Expansion**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	SITEWORK	7,000	CY	$18.00	$126,000.00
2	AIRFIELD PAVEMENT	6,000	SY	$60.00	$360,000.00
3	VEHICULAR PAVEMENT	6,000	SY	$25.00	$150,000.00
4	AIR CARGO BUILDING	20,000	SF	$100.00	$2,000,000.00
5	ALLOWANCE FOR SODDING/SEEDING	1	LS	$50,000.00	$50,000.00
6	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$70,000.00	$70,000.00
7	ALLOWANCE FOR UTILITY IMPROVEMENTS	1	LS	$100,000.00	$100,000.00

Construction Total		$2,856,000.00
Mobilization	**10%**	$285,600.00
Professional Service Total	**25%**	$714,000.00
Add Contingency	**20%**	$571,200.00
	TOTAL	**$4,426,800.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 22A Description: Master Plan Update

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR MASTER PLAN UPDATE	1	LS	$500,000.00	$500,000.00

TOTAL $500,000.00

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 22B **Description: Upgrade Fencing Access Gates and Access Control System**

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR FENCE REHABILITATION	1	LS	$250,000.00	$250,000.00
2	ALLOWANCE FOR SECURITY CAMERAS	1	LS	$150,000.00	$150,000.00

Construction Total		$400,000.00
Mobilization	**10%**	$40,000.00
Professional Service Total	**25%**	$100,000.00
Add Contingency	**20%**	$80,000.00
	TOTAL	**$620,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 22C **Description:** Stormwater Management

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$1,000,000.00	$1,000,000.00

TOTAL **$1,000,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	Preliminary Opinion of Probable Construction Costs	AVCON PROJECT:	2002.026.01
Estimator: VCL, TST	Gainesville Regional Airport - Master Plan Update	DATE:	13-Apr-05

Project No.: 22D **Description:** Phase 3 Airport Drainage Improvements

	ITEM	QUANTITY	UNIT	UNIT PRICE	ITEM COST
1	ALLOWANCE FOR DRAINAGE IMPROVEMENTS	1	LS	$1,000,000.00	$1,000,000.00
				TOTAL	**$1,000,000.00**

NOTE:

1.
2.
3.
4.

AVCON, INC.	20-YEAR CAPITAL IMPROVEMENT PROGRAM (2004-2023)	AVCON PROJECT:	2002.026.01
Estimator: VCL,TST	GAINESVILLE REGIONAL AIRPORT - MASTER PLAN	DATE:	13-Apr-05

**** DRAFT ****

	TOTAL COST
PHASE 1	**$ 90,758,000.00**
PHASE 2	**$ 40,179,000.00**
PHASE 3	**$ 56,533,000.00**
20-YEAR CAPITAL IMPROVEMENT PROGRAM --- TOTAL	**$ 187,469,000.00**

PHASE 1 **$ 90,758,000.00**

RS&H #	PROJECT #	DESCRIPTION		
		RUNWAY 6/24 IMPROVEMENTS		
	1A	Construct 4,150 l.f. Runway Extension	$	6,032,000.00
	1B	Construct 4,150 l.f. Parallel Taxiway "A"	$	3,869,000.00
	1C	Installation of a Non-Precision Instrument Approach	$	543,000.00
	1D	Relocation of Existing Airport Landside Perimeter Road	$	1,612,000.00
		RUNWAY 10/28		
	2A	ILS Approach for Runway 10	$	4,263,000.00
	2B	Replace PAPI with a VASI on Runway 10	$	132,000.00
	2C	Runway 10/28 Crack Sealing	$	403,000.00
	2D	Runway 10/28 Marking	$	209,000.00
	2E	Runway 10/28 Safety Area Improvements	$	806,000.00
		TAXIWAY "A"		
	3A	Taxiway "A" Improvements (Intersection from Taxiway "B" to Intersection of "C")	$	1,624,000.00
	3B	Taxiway "A" Improvements (Intersection from Taxiway "C" to Threshold of Runway 6)	$	1,668,000.00
	3C	Taxiway Hold Aprons	$	1,305,000.00
		TAXIWAY "B"		
	4A	Taxiway "B" Improvements	$	1,273,000.00
		TAXIWAY "C"		
	5A	Taxiway "C" Improvements	$	887,000.00
		TAXIWAY "E"		
	6A	Taxiway "E" Improvements	$	3,243,000.00
		GENERAL AVIATION		
	7A	Renovate Existing Automated Flight Service Station Building	$	500,000.00
	7B	Seal Coat GA Apron & T-Hangar Apron Pavements	$	783,000.00
	7C	Rehabilitate Taxilane & Apron Pavements for T-Hangars "I" & "J"	$	620,000.00
	7D	Eclipse Aircraft Hangar and Site Improvements	$	8,700,000.00
	7E	Corporate Hangar - Site Prep and Apron	$	2,096,000.00
	7F	Construct (3) 80x80 Corporate Hangars	$	2,647,000.00
	7G	Construct (3) 10 Unit T-Hangars	$	2,560,000.00
	7H	New Access Rd. Across Little Hatchet Creek	$	2,168,000.00
	7I	Aircraft Wash Rack	$	274,000.00
		COMMERCIAL SERVICE		
	8A	Terminal Renovations	$	7,363,000.00
	8B	Construct New Airport Access Rd. to Waldo Rd.	$	2,447,000.00
	8C	Consolidated Rental Car Facility	$	1,666,000.00
	8D	Rental Car Ready Return Lot Expansion	$	966,000.00
	8E	Auto Parking Lot Expansion for Terminal	$	1,872,000.00
	8F	Auto Parking Lot Rehabilitation	$	1,186,000.00
	8G	Covered Parking	$	465,000.00
	8H	Employee Parking Relocation	$	497,000.00
	8I	Taxistand Ready Lot	$	502,000.00
	8J	Air Traffic Control Tower Relocation	$	4,258,000.00
	8K	Install New Airport Landside Signage	$	667,000.00
	8L	Phase 2 Air Cargo/Rental Car Quick Turn Around Facility	$	621,000.00
	8M	Airport Signage Rehabilitation	$	150,000.00
		AIR CARGO		
	9A	Air Cargo Facility	$	4,427,000.00

		MISCELLANEOUS		
	10A	Upgrade Airport Security Fencing	$	1,845,000.00
	10B	Remote Airport Security Cameras and Surveillance	$	1,240,000.00
	10C	Upgrade Airport Fiber Optics	$	1,163,000.00
	10D	Stormwater Master Plan	$	250,000.00
	10E	Phase 1- Airport Drainage Improvements	$	1,000,000.00
	10F	Construct Airport Maintenance Building	$	1,411,000.00
	10G	Airport Maintenance Equipment	$	1,302,000.00
	10H	ARFF Vehicle	$	775,000.00
	10I	Construct Airport Perimeter Road Around SE side of Airport	$	1,609,000.00
	10J	Obstruction Removal	$	500,000.00
	10K	Fuel Truck Access Rd. Segment	$	240,000.00
	10L	FAR Part 150 Study	$	300,000.00
	10M	Wildlife Management Plan	$	150,000.00
	10N	Second Electrical Vault Installation	$	1,085,000.00
	10O	Fuel Farm Expansion	$	512,000.00
	10P	Relocate Cul-de-Sac on West End of the Airport Landside Road	$	200,000.00
	10Q	Airport Rezoning Assistance	$	50,000.00
	10R	Airport Comprehensive Plans Amendment	$	200,000.00
	10S	Relocate a Portion of the Airside Access Road	$	364,000.00
		LAND ACQUISITION		
	11A	Land Acquisition for Runway 6/24 Extension	$	716,000.00
	11B	Land Acquisition for Air Cargo Access Road	$	205,000.00
	11C	Land Acquisition for Airport Loop Road	$	341,000.00
	11D	Land Acquisition for Runway 6 RPZ		N/A

PHASE II			**$**	**40,179,000.00**
LINE #	**PROJECT #**	**DESCRIPTION**		
		RUNWAY 6/24 AND 10/28		
	12A	Crack Sealing for Runway 10/28	$	403,000.00
	12B	Crack Sealing for Runway 6/24	$	248,000.00
	12C	Runway 6/24 Re-Marking	$	140,000.00
	12D	Runway 10/28 Re-Marking	$	209,000.00
		TAXIWAY		
	13A	Construct Connector to Taxiway "C"	$	1,039,000.00
	13B	Rehabilitate Taxiway "E"	$	581,000.00
	13C	Rehabilitate Taxiway "C"	$	2,255,000.00
		GENERAL AVIATION		
	14A	Crack Seal and Seal Coat Exist. GA Aprons, Hangar Taxiways and T-Hangar Aprons	$	1,062,000.00
	14B	Rehabilitate All GA Side Apron (flood) Lighting	$	500,000.00
	14C	Rehabilitation of All Existing T-Hangars	$	2,000,000.00
	14D	Rehabilitate Sunshades	$	300,000.00
	14E	Rehabilitate Joint Aviation Unit Hangar	$	264,000.00
	14F	Rehabilitate East GA Apron	$	2,612,000.00
	14G	T-Hangar Taxiway to Serve Northeast "T" Hangar Area	$	207,000.00
	14H	Construct 3 (10) Unit T-Hangars	$	2,560,000.00
	14I	Construct of Midfield FBO facility	$	6,991,000.00
	14J	Construct (3) 80x80 Corporate Hangars	$	2,786,000.00
	14K	Construct New FBO Hangar and Terminal Space	$	2,181,000.00
	14L	Construct New Auto Parking	$	376,000.00
	14M	Remove/Relocate T Hangar Building "F"	$	50,000.00
	14N	Rehabilitate/Construct Aircraft Apron	$	2,581,000.00
	14O	Renovate Former Gulf Atlantic Hangar	$	250,000.00
		COMMERCIAL SERVICE		
	15A	Terminal Area Study	$	150,000.00
	15B	Auto Parking Lot Expansion	$	1,616,000.00
	15C	Construct Cell Phone Lot	$	304,000.00
	15D	Construct Two-Lane Outbound Roadway	$	687,000.00

		MISCELLANEOUS		
	16A	Renovate and Rehabilitate ARFF Building	$	500,000.00
	16B	Obstruction Removal	$	500,000.00
	16C	Install Differential GPS System	$	1,000,000.00
	16D	Non-Aviation Land Use Study	$	100,000.00
	16E	Rehabilitate/Install Security Fencing	$	620,000.00
	16F	Stormwater Management	$	1,000,000.00
	16G	Security Road	$	569,000.00
	16H	Phase 2 Airport Drainage Improvements	$	1,000,000.00
	16I	Airport Master Plan Update	$	500,000.00
	16J	Construction Dump Testing and Closing	$	500,000.00
	16K	Land Acquistion for Stormwater Pond	$	1,540,000.00

PHASE III			**$**	**56,533,000.00**
LINE #	**PROJECT #**	**DESCRIPTION**		
		RUNWAY 6/24 AND 10/28		
	17A	Crack Sealing for Runway 6/24	$	248,000.00
	17B	Runway 6/24 Re-Marking	$	140,000.00
	17C	Rehabilitate 10/28	$	4,100,000.00
	17D	Install Runway 10-28 Centerline Lights	$	1,395,000.00
		TAXIWAY "A,B,C,E"		
	18A	Install Taxiway "E" Guard Lights and Stop Bars	$	442,000.00
		GENERAL AVIATION		
	19A	Crack Seal and Seal Coat Existing Paved GA Apron, Hangar Taxiways and T-hangar Aprons	$	1,279,000.00
	19B	Rehabilitate Existing GA Access Roads	$	3,294,000.00
	19C	Rehabilitate Existing FAA Facilities Sector Office Building	$	250,000.00
	19D	Rehabilitate WWII hangar	$	300,000.00
	19E	Rehabilitate University Air Center Auto Parking Lots	$	349,000.00
	19F	Rehabilitate West GA Apron	$	481,000.00
	19G	Construct (3) 10 Unit T-Hangars	$	2,560,000.00
	19H	Construct (3) 80x80 Corporate Hangars	$	2,647,000.00
	19I	Convert Existing Taxiway "A" into Airside Access Road	$	93,000.00
	19J	Construct Paved Auto Parking for Aeroflite Hangar	$	191,000.00
		COMMERCIAL SERVICE		
	20A	Terminal Building Expansion	$	24,723,000.00
	20B	Rental Car Ready Return Lot Expansion	$	711,000.00
	20C	Auto Parking Expansion	$	1,616,000.00
	20D	Auto Parking Lot Rehabilitation	$	2,573,000.00
	20E	Consolidated Rental Car QTA Expansion	$	1,597,000.00
		AIR CARGO		
	21A	Air Cargo Facility Expansion	$	4,427,000.00
		MISCELLANEOUS		
	22A	Master Plan Update	$	500,000.00
	22B	Upgrade Fencing Access Gates and Access Control Systems	$	620,000.00
	22C	Stormwater Management	$	1,000,000.00
	22D	Phase 3 Airport Drainage Improvements	$	1,000,000.00
		20-YEAR CAPITAL IMPROVEMENT PROGRAM --- TOTAL	**$**	**187,469,000.00**

APPENDIX E

U.S. Department of Transportation
Federal Aviation Administration
Southern Region – Airports Division
Effective Date: May 2004

Airport Layout Plan Drawing Set Checklist

Name of Airport: ___Gainesville Regional Airport _____
Location of Airport: __Gainesville, FL _____
Date of Review: __July 14, 2006_____ Reviewed by: _____

Significant Development Changes Since Previous ALP Approval/ or Narrative

1. _Terminal Expansion_____
2. _Significant General Aviation Expansion _____
3. _Rental Car QTA Facility _____
4. _Runway 6/24 Expansion _____
5. _Deleting the proposed 10L-28R Runway _____
6. _Deleted the Banner Tow Area _____

In order to protect the airspace for future conditions, complete the following information:

Future Airport Reference Point (ARP) **(if same as existing, provide existing ARP)**

ARP Latitude 29.41'29.71"N ARP Longitude 82.16'13.65"W

Future Rwy End Coordinates & Rwy End Elevation **(if same as existing, provide existing coordinates)**

Rwy End 7 Rwy End Latitude 29.41'29.98"N Rwy End Longitude 82.16'46.51"W Rwy End Elevation 149.5
Rwy End 25 Rwy End Latitude 29.42'01.16"N Rwy End Longitude 82.15'42.05"W Rwy End Elevation 128.0
Rwy End 11 Rwy End Latitude 29.41'25.99"N Rwy End Longitude 82.16'50.12"W Rwy End Elevation 147.0
Rwy End 29 Rwy End Latitude 29.41'10.22"N Rwy End Longitude 82.15'27.03"W Rwy End Elevation 104.6

Existing and Proposed Modification of Standards (MOS)

Existing Deviation of Standard/ FAA Approved MOS FAA Approval Date (if any) Expiration Date (if any)

1. _____
2. _____
3. _____

Proposed Deviation of Standard/ FAA Modification of Standards

1. _____
2. _____

Runway Safety Area Re-Evaluations

( ) Concur with Runway Safety Area Determination currently on file with FAA.

( ) Reevaluation of Runway Safety Area Determination completed as part of planning document and shown on this ALP set.

Narrative Report	Yes	No	Comments
Report Provided	( )	( )	N/A
Aeronautical Forecasts			
- 0-5 yrs., 6-10 yrs., 10-20 yrs	( )	( )	N/A
-Total annual operations	( )	( )	N/A
- Annual itinerant operations	( )	( )	N/A
- Based aircraft	( )	( )	N/A
- Annual instrument approaches (if applicable)	( )	( )	N/A
- Annual itinerant operations by critical aircraft	( )	( )	N/A
- Annual itinerant ops by more demanding aircraft	( )	( )	N/A
Proposed Development Justification	( )	( )	N/A
Special Issues (MOS, etc.)	( )	( )	N/A
Development Schedule and Graphics	( )	( )	N/A
Proper Agency Coordination (sponsor, local, state)	( )	( )	N/A
Airport Layout Drawing			
Proper Agency Approval (Sponsor, Local, State)	(X)	( )	
Sheet Size - 24"x36"/ 22" x 34"	(X)	( )	
Scale 1"=200'-600'	(X)	( )	
2'-10' Labeled Contours	(X)	( )	
North Arrow			
- True & magnetic	(X)	( )	
- Declination w/ annual rate of change	(X)	( )	
Wind Rose			
- Source & time period	(X)	( )	
- MPH & knots	(X)	( )	
- 12 MPH individual & combined coverage	(X)	( )	
- 15 MPH individual & combined coverage	(X)	( )	
Airport Reference Point (ARP)			
- Existing w/ Lat./ Long. (NAD 83)	(X)	( )	
- Ultimate w/ Lat./ Long. (NAD 83)	(X)	( )	
Elevations (Existing & Ultimate)			
- Existing runway ends	(X)	( )	
- Displaced thresholds	(X)	( )	
- Ultimate runway ends	(X)	( )	
- Runway intersections	( )	( )	N/A
- Runway high & low points	(X)	( )	
- Touchdown zone elevation (highest Rwy elevation in first 3,000' of any Rwy having published straight -in minima)	(X)	( )	
Drawing Lines			
- Existing property boundary	(X)	( )	
- Ultimate property boundary	(X)	( )	
- Building restriction line (both sides)	(X)	( )	
- Existing development shown as solid	(X)	( )	
- Future development shown as dashed/ shaded	(X)	( )	

Airport Layout Drawing (Continued)	Yes	No	Comments
Runway Drawing Details (Existing & Ultimate)			
- Runway(s) Depiction	(X)	( )	
- Length & width	(X)	( )	
- End numbers	(X)	( )	
- True bearing (nearest sec.)	(X)	( )	
- Markings (basic, NPI, PIR)	(X)	( )	
- Lighting (thresholds only)	(X)	( )	
- Threshold lat/ long & elevations	(X)	( )	
- Displaced threshold lat/ long & elevations	(X)	( )	
- Runway safety areas & dimensions	(X)	( )	
- Runway object free areas & dimensions	(X)	( )	
- Runway obstacle free zones	(X)	( )	
- Centerline w/ true bearing	(X)	( )	
- Approach aids indicated (ILS, REILS, etc.)	(X)	( )	
- Lat/ long & elevation for non-federal on-airport NAVAIDs (used for instrument approach procedure)	( )	(X)	N/A
Taxiway Details (Existing & Ultimate)			
- Taxiway widths	(X)	( )	
- Designations	(X)	( )	
- Separation dimensions to:			
Runway centerline(s)	(X)	( )	
Parallel taxiway(s)	(X)	( )	
Aircraft parking area(s)	(X)	( )	
Aircraft Parking Aprons			
- Existing & ultimate aprons shown	(X)	( )	
- Dimensions	(X)	( )	Shown on TAP Plan
- Tie-down layout/ locations	(X)	( )	
Runway Protection Zones (RPZs)			
- Existing & ultimate RPZs shown	(X)	( )	
- Dimensions	(X)	( )	
- Approach slope (20:1, 34:1, 50:1)	(X)	( )	
Title & Revision Blocks			
- Name and location of airport	(X)	( )	
- Name of preparer	(X)	( )	
- Date of drawing	(X)	( )	
- Drawing title	(X)	( )	
- Revision block			
- FAA disclaimer	(X)	( )	
- Sponsor approval block	(X)	( )	
Airport Data Block (Existing & Ultimate)			
- Airport elevation (MSL)	(X)	( )	
- Airport Reference Point (ARP) Data	(X)	( )	
- Airport & terminal NAVAIDS (beacon, ILS)	(X)	( )	
- Mean maximum temperature	(X)	( )	
- Airport Reference Code (ARC) for each runway	(X)	( )	
- Design Aircraft for each runway	(X)	( )	
- Identify GPS at airport	( )	(X)	N/A

Airport Layout Drawing (Continued)	Yes	No	Comments
Runway Data Block (Existing & Ultimate)			
- % effective gradient	(X)	( )	
- % wind coverage (MPH & knots)	(X)	( )	In the Wind Rose Data Block
- Maximum elevation above MSL	(X)	( )	
- Runway length	(X)	( )	
- Runway width	(X)	( )	
- Runway surface type (turf, asphalt…)	(X)	( )	
- Runway strength (SWG, DWG…)	(X)	( )	
- Part 77 approach category (visual, NPI, PIR)	(X)	( )	
- Type instrument approach (ILS, GPS…)	(X)	( )	
- Approach slope (20:1, 34:1, 50:1)	(X)	( )	
- Runway lighting (HIRL, MIRL, LIRL)	(X)	( )	
- Runway marking (PIR, NPI, BCS)	(X)	( )	
- NAVAIDS & visual aids	(X)	( )	
- Runway safety area dimensions (standard and non-standard)	(X)	( )	
Miscellaneous			
- Airport facility/ building list (existing & future)	(X)	( )	
- Standard legend	(X)	( )	
- Location map	( )	(X)	Sheet 1
- Vicinity map	( )	(X)	Sheet 1
- Roadways, traverse ways identified	(X)	( )	

Additional Comments:

Airport Airspace Drawing

Ultimate Runway Length Plan View of Surfaces	(X)	( )	See sheets 6-9
Profile View of Ultimate Runway Lengths	(X)	( )	See sheets 6-9
Obstruction Data Tables	(X)	( )	See sheets 6-9
Sheet Size Same as ALP	(X)	( )	See sheets 6-9
Plan View Scale 1"=2000'	(X)	( )	See sheets 6-9
Profile View Scale 1"=1000' Horizontal, 1"=100' Vertical	( )	(X)	See sheets 6-9
Title & Revision Blocks	(X)	( )	See sheets 6-9
Approach Plan View Details			
- USGS base map	(X)	( )	See sheets 6-9
- Runway end numbers shown	(X)	( )	See sheets 6-9
- Elevation contours of 50' on all Slopes	(X)	( )	See sheets 6-9
- Show most demanding surface lines as solid and others as dashed	(X)	( )	See sheets 6-9
- Identify penetrating objects & top elevations (for those in inner approach add note, "Refer to the inner portion of the approach surface plan view details for close-in obstructions.")	(X)	( )	See sheets 6-9
- Show PIR approach of 50,000 on separate sheet as necessary	(X)	( )	See sheets 6-9
- Note any height restriction zoning/ ordinances/ statutes in place	( )	(X)	N/A
Approach Profile View Details			
- Ground profile along extended centerline (highest profile elevations of width & length of approach)	(X)	( )	See sheets 6-9
- Identify significant objects (roads, rivers, etc.) w/ elevations	(X)	( )	See sheets 6-9
- Existing & ultimate runway ends and approach slopes	(X)	( )	See sheets 6-9

Additional Comments:

Inner Portion of the Approach Surface Drawing	Yes	No	Comments
Large-Scale Plan View for Each Runway End (up to 100' height above runway end)	(X)	( )	
Large-Scale Profile View for Each Runway End (up to 100' height above runway end)	(X)	( )	
Sheet Size	(X)	( )	
Scale 1"=200' Horizontal, 1"=20' Vertical	(X)	( )	
Title & Revision Blocks	(X)	( )	
Separate Approach Tables with Obstruction Data			
- Type of approach (NPI, etc.)	(X)	( )	
- Approach Slope (20:1, etc.)	(X)	( )	
- Obstruction number	(X)	( )	
- Obstruction description	(X)	( )	
- Approach penetration (in feet)	(X)	( )	
- Proposed mitigation (including "none.")	(X)	( )	
Inner Approach Plan View Details			
- Aerial photo base map	(X)	( )	
- Obstructions numbered	(X)	( )	
- Property line depicted	(X)	( )	
- Identify by numbers all traverse ways w/ elevations & vertical clearances in approach (at approach edge & extended centerline)	(X)	( )	
- Depict existing & ultimate runway ends	(X)	( )	
- Ground contours shown	(X)	( )	
Inner Approach Profile View Details			
- Identify significant terrain/ items in RSA	(X)	( )	
- Identify obstructions with numbers on plan view	(X)	( )	
- Depict roads and railroads at edge of approach as dashed	(X)	( )	

Additional Comments:

Terminal Area Drawing			
Large-Scale Plan View of Terminal/ GA Area(s) as Needed	(X)	( )	
Show Existing & Future Buildings	(X)	( )	
Sheet Size Same as ALP	(X)	( )	
Scale 1"=50'-100'	(X)	( )	
Title & Revision Bocks	(X)	( )	
Legend	(X)	( )	
Building Data Table (Existing & Ultimate)			
- Number facilities	(X)	( )	
- Include top elevations	( )	(X)	N/A
- Identify obstruction marking	(X)	( )	

Additional Comments:

Land Use Drawing (Existing & Ultimate)	Yes	No	Comments
- Basic airport features/ surfaces	(X)	( )	
- Property lines	(X)	( )	
- Include all land uses (industrial, residential, etc.) on & off airport (including non-aeronautical) to minimum 65 LDN	(X)	( )	Addressed in Narrative Report
- Line of sight or runway visibility zones shown	(X)	( )	
- Note any existing land use ordinances/ statutes in place	( )	(X)	Addressed with a Note
- Noise contours as required in scope of work (60, 65 & 70 LDN)	(X)	( )	
- Sheet size same as ALP	(X)	( )	
- Scale same as ALP	(X)	( )	
- Title & revision block	(X)	( )	
- Aerial base map	(X)	( )	
- Legend (symbols and land use descriptions)	( )	(X)	N/A
- Identify recommended land use changes	( )	(X)	Addressed in Narrative Report
- Identify public facilities (schools, parks, etc.)	(X)	( )	

Additional Comments:

Airport Property Map (Existing & Ultimate)			
Property Lines (Clear & Bold)	(X)	( )	
RPZ's Shown	(X)	( )	
Tracts of Land on and off Airport	(X)	( )	
Sheet Size Same as ALP	(X)	( )	
Scale Same as ALP	( )	(X)	SCALE IS 1=600'
Title & Revision Block	(X)	( )	
Legend	(X)	( )	
Airport Features (expansion, etc.)/ Critical Surfaces (RSA's, etc.) Shown (to aid in determining eligible land needs)	(X)	( )	
Data Table			
- Numbering system for parcels	(X)	( )	
- Date of acquisition	(X)	( )	
- Federal aid project number	(X)	( )	
- Type of ownership (fee, easement, federal surplus, etc.)	(X)	( )	
- Parcel acreage	(X)	( )	

Additional Comments: