Appendix A – List of Commonly Used Aviation-Related Acronyms

A

AC	Advisory Circular
ADA	Americans with Disabilities Act
ADAP	Airport Development Aid Program
ADF	Automatic Direction Finder
ADG	Airplane Design Group
ADO	Airport District Office
ADT	Average Daily Traffic
AFD	Airport/Facility Directory
AFSS	Automated Flight Service Station
AGL	Above Ground Level
AIP	Airport Improvement Program
ALP	Airport Layout Plan
ALS	Approach Light System
AMSL	Above Mean Sea Level
AOA	Airport Operations Area
APL	Aircraft Parking Line Limit
ARC	Airport Reference Code
ARFF	Aircraft Rescue and Fire Fighting Facilities
ARP	Airport Reference Point
ARPT	Airport
ARTCC	Air Route Traffic Control Center
ARTS	Automated Radar Terminal System
ASA	Atlantic Southeast Airways
ASL	Above Sea Level
ASM	Available Seat Miles
ASOS	Automated Surface Observation System
ASR	Airport Surveillance Radar
AST	Above Ground Storage Tank
ASTM	American Society for Testing and Materials
ASV	Annual Service Volume
ATC	Air Traffic Control
ATCT	Air Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATM	Available Tonnage Mile
AVGAS	Aviation Gasoline
AWOS	Automated Weather Observing System

B

BRL	Building Restriction Line

C

CAD	Computer Aided Design
CAT I-III	Category I, II, III ILS Approach
CIP	Capital Improvements Program
CRJ	Canadair Regional Jet
CTAF	Common Traffic Advisory Frequency

D

DA	Decision Altitude
DH	Decision Height
DME	Distance Measuring Equipment
DOT	Department of Transportation

E

EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERG	Effective Runway Gradient
ERJ	Embraer Regional Jet

F

FAA	Federal Aviation Administration
FAAP	Federal-Aid Airport Program
FAR	Federal Aviation Regulation
FBO	Fixed Base Operator
FEMA	Federal Emergency Management Agency
FOD	Foreign Object Debris
FONSI	Finding Of No Significant Impact
FSS	Flight Service Station
FTZ	Foreign Trade Zone (a.k.a. Federal Trade Zone or Free Trade Zone)

G

GA	General Aviation
GADO	General Aviation District Office

GAMA	General Aviation Manufacturers Association
GAO	General Accounting Office
GNV	Gainesville Regional Airport
GPS	Global Positioning Satellites
GS	Glide Slope

H

HIRL	High Intensity Runway Lights
HITL	High Intensity Taxiway Lights
HIWAS	Hazardous In-flight Weather Advisory Service

I

IAP	Instrument Approach Procedure
ICAO	International Civil Aviation Organization
IFR	Instrument Flight Rules
ILS	Instrument Landing System
IM	Inner Marker
IMC	Instrument Meteorological Conditions
INM	Integrated Noise Model

L

LAAS	Local Area Augmentation System
LAHSO	Land and Hold Short Operations
LLWAS	Low-Level Wind Shear Alert System
LOA	Letter of Agreement
LOC	Localizer
LPA	THE LPA GROUP INCORPORATED

M

MALS	Medium Intensity Approach Lighting System
MALSF	Medium Intensity Approach Light System
MALSR	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights
MB	Marker Beacon
MDA	Minimum Descent Altitude
MGW	Maximum Gross Weight
MIRL	Medium Intensity Runway Lights
MITL	Medium Intensity Taxiway Lights
MPU	Master Plan Update
MOA	Military Operating Area
MSA	Metropolitan Statistical Area
MSL	Mean Sea Level
MSSA	Metropolitan Statistical Service Area

N

NAS	National Airspace System
NAVAIDS	Navigational Aids
NCP	Noise Compatibility Program
NDB	Non-Directional Beacon
NOAA	National Oceanic and Atmospheric Administration
NOTAM	Notice to Airmen
NAS	National Airspace System
NPI	Non-precision Instrumcnt
NPIAS	National Plan of Integrated Airport Systems
NPL	National Priority List

O

O&D	Origin and Destination
OAG	Official Airline Guide
ODALS	Omnidirectional Approach Light Systems
OFA	Object Free Area
OFZ	Object Free Zone
OM	Outer Marker

P

PA	Precision Approach
PAPI	Precision Approach Path Indicator
PAX	Passengers
PFC	Passenger Facility Charge
PGP	Planning Grant Program
PIR	Precision Instrument Runway
PMPP	Pavement Maintenance Management Program
PVC	Poor Visibility and Ceiling

R

RAIL	Runway Alignment Indicator Light

RCO	Remote Communications Outlet
REIL	Runway End Identification Lights
RJ	Regional Jet
RNAV	Area Navigation
ROFA	Runway Object Free Area
RPM	Revenue Passenger Mile
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RTM	Revenue per Tonnage Mile
RVR	Runway Visual Range
RVZ	Runway Visibility Zone
RW	Runway

S

SEL	Sound Exposure Level
SSALF	Simplified Short Approach Lighting System with sequenced Flashers
SSALS	Simplified Short Approach Lighting System
SSALSR	Simplified Short Approach Lighting System with Runway Alignment Indicator Lights
STIP	State Transportation Improvement Plan

T

TAC	Technical Advisory Committee
TACAN	Tactical Air Navigation
TAF	Terminal Area Forecasts
TAP	Terminal Area Plan
TDZ	Touchdown Zone
TDZE	Touchdown Zone Elevation
TERPS	Terminal Instrument Procedures
TOFA	Taxiway Object Free Area
TRACON	Terminal Radar Approach Control Facility
TRSA	Terminal Radar Service Area
TSA	Taxiway Safety Area
TSA	Transportation Security Administration
TW	Taxiway
TWY	Taxiway

U

USGS	United States Geological Survey

V

VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
VHF	Very High Frequency
VMC	Visual Meteorological Conditions
VOR	VHF Omni-Directional Radar Beacon

Appendix B – 2001 Aviation Forecasts

INTRODUCTION

This report presents the updated forecast of aviation activity that will be used to revise noise exposure maps for the Tallahassee Regional Airport (TLH). These aviation activity forecasts will replace the projections in the 1996 Master Plan Update. To develop the current and five-year noise exposure contours for the airport, a number of projections are necessary that require the following elements of activity at TLH to be analyzed and projected:

Passenger Activity

- Annual Enplanements
- Monthly Enplanements
- Peak Enplanements

Commercial Service Activity

- Passenger Service Operations
- Cargo Operations
- Fleet Mix
- Peak Operations

General Aviation Activity

- Local Operations
- Itinerant Operations
- Fleet Mix
- Peak Operations

Military Activity

- Local Operations
- Itinerant Operations
- Fleet Mix
- Peak Operations

Forecasts for TLH were generated for the 5, 10, and 20 year planning period. Only the 5-year projection is used for the noise analysis update. The forecasts presented are based primarily on historical aviation and socioeconomic data through the year 2000. This data has been supplemented with interviews of airport management and staff, airport tenants, and air traffic control to derive a more complete picture of operational activities and emerging trends at TLH.

PREVIOUS AVIATION ACTIVITY FORECASTS

In the recent past, three aviation activity forecasts have been prepared for TLH. These include those forecasts from the Federal Aviation Administration's (FAA) Terminal Area Forecast, the Florida Aviation System Plan, and the 1996 Master Plan Update. Although new forecasts have been generated in this report, the data contained in previous studies is considered valuable for comparison purposes. One aspect of the analysis undertaken as a part of this report has been to review the previous forecast efforts, compare the results against actual activity levels over the past several years and determine the extent to which the projections appear to provide a reasonable indication of potential growth at TLH over the next 20 years.

Current Master Plan

The last master plan developed for TLH was completed in 1996. This study included forecasts of aviation activity, which were projected for a 20 year planning period. The base year for these forecasts was 1993. The projections of annual passenger enplanements and total operations from the 1996 Master Plan Update are shown in **Table 1-1**. These forecasts have been extrapolated out to the year 2020 to provide a basis of comparison with the forecasts generated in this study.

Table 1-1
1996 MASTER PLAN UPDATE FORECASTS
Tallahassee Regional Airport

Year	Annual Enplanements	Annual Operations
Base Year		
1993	436,584	115,691
Forecast		
1995	498,085	145,841
2000	577,106	158,120
2005	667,441	176,169
2010	763,785	194,117
Extrapolated (by LPA)		
2020	1,013,770	244,240

Source: 1996 Master Plan Update.

Based on the Master Plan Update, annual passenger enplanements for TLH were projected to increase at an average annual growth rate of 3.2 percent. Annual operations were projected to increase at an average annual rate of 2.8 percent. When compared to the actual enplanement levels recorded at TLH, the estimates from the Master Plan Update appear somewhat optimistic. For example, actual levels of TLH passenger enplanements for 2000 were 468,703 persons, which is roughly 108,000 passengers under the level that would be expected if the master plan trend line were to be achieved. Similarly, annual aircraft operations were expected to be roughly 30,000 higher in the master plan than actual levels for the year 2000.

FAA Terminal Area Forecasts

Terminal Area Forecasts (TAF) are prepared by the FAA to provide an indication of FAA workforce requirements based on future traffic levels at the nation's airport facilities. Except for specific regional or state requests, the airports included in the FAA's TAF report must meet at least one of the following criteria:

- Have an existing FAA tower.
- Have an existing FAA Contract tower.
- Candidate for an FAA tower.
- Currently receiving or expected to receive scheduled air carrier or regional/commuter service.
- Currently exceed 60,000 itinerant or 100,000 total aircraft operations.
- Reported 10 or more based aircraft on the latest available Airport Master Record (FAA 5010 form).

Tallahassee Regional Airport meets several of these criteria and is addressed in the FAA TAF. **Table 1-2** depicts the passenger enplanement projections contained, as well as the annual aircraft operations, in the 2000 TAF for TLH. Typically the TAF projections are based on regression analysis with various national economic indicators as the independent variables. The TAF projections extend to the year 2015, and have been extrapolated to the year 2020 for purposes of comparison with projections developed in this analysis.

Table 1-2
FAA TERMINAL AREA FORECASTS
Tallahassee Regional Airport

Year	Annual Enplanements	Annual Operations
Base Year		
1999	456,657	118,099
Forecast		
2000	470,103	119,005
2005	537,338	123,535
2010	604,573	128,065
Extrapolated (by LPA)		
2020	757,944	138,042

Source: FAA Terminal Area Forecast, 2000.

The 2000 FAA TAF projected an average annual growth rate of 2.4 percent and 0.7 percent respectively for annual passenger enplanements and operations. Because the figures reflected above are from a 1999 forecast, they appear to have benefited from being able to factor in fluctuations in activity that occurred since 1993 and this may account for the more conservative projection over the previous master plan projections.

Florida Aviation System Plan

The Florida Aviation System Plan (FASP) is a broad blueprint that guides the development of Florida's public airports. This plan is necessary to ensure that airports work together effectively as a statewide transportation system, provide a link to the global air transportation network, and effectively interface with regional surface transportation.

The latest version of the FASP (1992-2010) was based on data collected up to and including 1990. Because the base data is now more than ten years old, it is considered out of date and no longer valuable as a planning

tool. Currently, the Florida Department of Transportation (FDOT) is in the process of updating these forecasts. Because this update is occurring at the same time as this study, the final projections for TLH were not available. Therefore, no figures from the FASP have been included in this study.

FORECASTING APPROACH

A key element in the forecast process is the identification of local trends that enhance the potential for new or expanded service by existing commercial operators, as well as the potential for the airport to secure new service and users. In developing the various forecasts for TLH, historical and projected demographics of the region were analyzed to identify potential factors that could impact the level or type of aviation activity at TLH.

Factors considered in the forecast analysis included various economic indices of the TLH area. This data was derived from the 2000 edition of the Florida Long-term Economic Forecasts, prepared by the University of Florida's Bureau of Economic and Business Research. Specific data related to area population, income, employment, and various construction indicators, providing an indication of business growth, were obtained. This data was used to develop a series of linear and multiple regression analyses projecting future activity levels.

In addition to regression analysis, assumptions were made with respect to how aviation activity may change in the future based on trends emerging in the aviation industry. This included evaluating TLH's role in the nation's aviation transportation network. Along these lines, many different factors were considered which may influence the course in which activity at an airport develops. The primary goal of the analysis was to develop an approach that gives reasonable consideration to these factors while at the same time providing a rational basis on which to base the forecast process.

Two of the primary considerations that can influence activity forecasts at an airport include historical trends and industry trends. By tracing historical trends, it is possible to determine the impact that economic fluctuations, as well as changes in the market or in airline business practices have had on activity at the airport. Likewise, applying recent or anticipated industry trends can allow educated assumptions to be made as to how a market may be served or activity affected in the future. These considerations play a key role in the forecast of passenger enplanements, commercial operations, and general aviation operations.

PASSENGER ACTIVITY FORECASTS

Tallahassee Regional Airport has experienced both increases and declines in the number of enplaned passengers over the past 20 years. The most significant amount of growth occurred in the 1980's, particularly between 1985 and 1988 when TLH saw passenger enplanements grow from 275,566 to 450,409 annually. In short, in four years TLH saw an increase of approximately 175,000 annual passengers enplaning at the airport. Since that period, enplanement activity has moderated with passenger levels fluctuating between a high in 1995 of 531,308 and the dropping back to 468,703 by the year 2000. **Table 1-3**, displays recorded enplanements at TLH between 1980 and 2000.

Table 1-3 HISTORIC PASSENGER ENPLANEMENTS Tallahassee Regional Airport	
Year	**Annual Enplanements**
1980	306,834
1981	290,088
1982	266,266
1983	286,655
1984	280,965
1985	275,566
1986	356,475
1987	411,225
1988	450,409
1989	438,645
1990	460,341
1991	415,501
1992	439,190
1993	436,584
1994	511,344
1995	531,308
1996	460,362
1997	480,064
1998	465,728
1999	450,403
2000	468,703

Source: 2001 Airport Records and 2000 FAA TAF.

More recently the enplanements at TLH have fluctuated up or down nearly every other year since 1988. Despite these fluctuations, there has still been an overall increase in the last ten years (1991-2000), resulting in an average annual growth of 1.4 percent. The more aggressive rate of growth during the mid to late 1980's has tempered and remained in check throughout most of the 1990's indicating a stabilization of the market and a stabilization of possible competitive factors that contributed to the previous double-digit annual enplanement growth rates. A second, less intensive period of enplanement growth occurred during the 1993 to 1995 time frame. This growth occurred as the nation and Tallahassee were emerging from the deep recession during the early 1990's. This expansion of enplanements is partially attributable to an anomaly that impacted the market. During this time frame the airline industry was experiencing massive losses and a number of airlines sought protection under Chapter 11 bankruptcy. Several of these airlines initiated inordinately low fares, such as that by Air South, to capture market share, which required responses from other major airlines and resulted in fares well below normal levels. These low fares contributed to the growth in passengers in a number of markets; however, much of this was over by the 1994 to 1995 timeframe.

Tallahassee Market Area

The Tallahassee market has benefited from a range of airline choices that emerged after the deregulation of the airline industry in 1978. This range of choices is responsible for the significant increase of enplanements in the mid to late 1980's and has been a contributing factor in the overall growth and stability of passenger

levels ever since. Over the years TLH has been served by a number of different airlines providing connections to airline hubs in Atlanta, Charlotte, Chicago, Cincinnati, Houston, Memphis, Miami, and Pittsburgh. It is anticipated that passengers flying from TLH will continue to have an array of options to connect to larger hub airports in addition to other direct flights. Because Tallahassee is the capitol of Florida, the stability of this service, further supported by intra-state flight connections, is expected to continue through the forecast time frame.

An array of elements influence the aviation industry both nationally and in the Tallahassee market area. Prior to generating aviation activity forecasts for this analysis, it was determined that there have been no significant changes to the factors that affect the TLH market. Tallahassee's service area is defined by the location of other airports providing commercial service as well as the extent of the services provided by each competing facility. As in the past, these surrounding commercial service airports include Panama City–Bay County International to the west (±80 miles), Southwest Georgia Regional (Albany) to the north (±75 miles), Valdosta Regional to the northeast (±60 miles), Jacksonville International to the east (±160 miles), and Gainesville Regional (±130 miles) to the southeast. While the location of these other facilities shapes TLH's market, there are also other factors, such as fares, nonstop destinations, and jet service, which influence a traveler's decision regarding which airport to patronize. All of these factors were taken into consideration for the development of the following forecasts.

Enplanement Projections Using Regression Analysis

Initially, both linear and multiple regression models were generated to provide projections of the passengers anticipated at TLH over the planning period. Individual and combined groups of socioeconomic data for the Tallahassee market were compared to historic passenger levels in an effort to identify any possible relationships or correlations between aviation activity and such things as population, income, or employment growth. This approach is consistent with that employed in aviation planning studies around the nation. Basically, it is assumed that the tendency for people to travel (business or pleasure) is related to variables such as a market area's population, income, employment, and/or construction indicators, which provide an indicator of growth. These variables and assumptions were as follows:

- ✈ Population was included based on the assumption that enplanements are inherently related to the number of people introduced into the region served by the airport.
- ✈ Income data was utilized because the use of aviation has a median level of expense. In other words, it is believed that more people will use air travel as their income levels increase.
- ✈ Employment data was included as it is considered to indicate the relative growth and/or stability of the market area's economy, and business related travel is a key component of commercial aviation.
- ✈ As with employment data, various construction indicators (such as housing starts or business licenses) provide an indication of an area's economic vitality.

A variety of projections were made employing various combinations of the socioeconomic data sets. All of the regression models created resulted in somewhat low statistical correlation values. The highest correlation developed only had an adjusted R-squared value of 0.69. Overall, these models indicated that only a limited relationship existed between the variables used and the projected level of passengers for TLH. The lack of relationship is attributed to the fact that all but one of the socioeconomic variables for the Tallahassee Market has experienced consistent growth throughout the historical enplanement period analyzed. Therefore, no justification for the fluctuations in passenger enplanements could be explained by the socioeconomic data. As such, the regression analyses were subsequently rejected from further consideration as a strong basis for defining future activity levels.

Enplanement Projections Using Market Share Analysis

Another common methodology for forecasting aviation activity is the use of market share analysis. This approach evaluates the extent to which Tallahassee Regional Airport captures a portion of a defined market, whether that is at a national or regional level. Under the market share analysis, TLH's historical passenger enplanements were compared to total U.S. domestic enplanements over a 6-year period. Local trends were identified so that they could be evaluated against trends occurring in the aviation industry.

Each year the FAA publishes their aerospace forecasts, which include the historic and projected passenger enplanements for scheduled U.S. domestic carriers. The figures in the 2001 FAA Aerospace Forecasts show that domestic enplanements for the U.S. have been increasing every year. This trend is expected to continue. In fact, the national figures for domestic enplanements reflect an average annual growth of 3.9 percent between 2000 and 2012. Overall, the average annual growth of U.S. domestic enplanements has exceeded that of TLH. This relationship is expected to continue as a majority of that national growth is equated to significant increases in hub activity at a fairly limited number of the top air carrier airports in the nation.

As expected, when Tallahassee's historical data is compared to the total U.S. domestic market, the airport's share of the national numbers represents a declining rate of market capture, although overall growth in passengers at TLH would occur. The average decrease in market capture was utilized to estimate the expected share of passenger enplanements that TLH would be anticipated to see in the future. These rates were applied with the FAA's national forecasts to project the anticipated level of passenger enplanements for the planning period. The results of this analysis are included in **Table 1-4** below.

Table 1-4
PROJECTED PASSENGER ENPLANEMENTS
Tallahassee Regional Airport

Year	Annual Enplanements
Base Year	
2000	468,703
Forecast	
2005	537,812
2010	620,183
2020	819,298

Source: THE LPA GROUP INCORPORATED, 2001.

The market share analysis described above results in an average annual growth rate of 2.8 percent for Tallahassee Regional Airport over the study period. As mentioned previously, TLH has experienced a 1.4 percent average annual growth for the past ten years; however, over the past 20 years, this average growth per year was 2.1 percent. While the recommended enplanement forecasts exceeds both of these values, it is believed that emergence of higher frequency service with regional jets, continued pressure to keep fares in check, and other local factors tend to support the projections. Overall growth in the passenger transportation industry tends to back these figures. Further, although limited correlations were achieved with the regression procedures, the expected increases in the population, income, and employment in the Tallahassee market, support the passenger forecasts.

COMMERCIAL SERVICE ACTIVITY FORECASTS

Commercial service activity consists of the operations conducted by both passenger and cargo carriers at Tallahassee Regional Airport. The FAA defines an operation as either a single aircraft landing or a single aircraft takeoff. The following sections address the current and projected level of commercial operations that are expected to occur at TLH over the next 20 years.

Passenger Service Operations

Commercial passenger service refers to air carrier, regional/commuter airline, and commercial charter operations. Traditionally, the FAA has defined air carrier and commercial charter operations as those conducted by scheduled and nonscheduled passenger carriers operating aircraft with more than 60 seats. Following this definition, regional/commuter operations cover those operations conducted by regional/commuter airlines with aircraft having 60 seats or less. However, in the changing passenger service industry, these definitions are beginning to run together as newer and larger regional jet and commuter airline aircraft enter service having seating capacities in the 60 to 90 seat range.

This is evident after discussions with airport management have revealed that some commercial operations have been recorded under the generic category of air taxi. Under the true definition, air taxi operations are normally general aviation flights that are conducted on a commercial or "for hire" basis. Typically, these are non-scheduled flights, carrying a small number of passengers, to destination cities without scheduled airline service. However, for this analysis, all passenger service operations will be combined and based solely on the projections of passenger enplanements made in the previous section.

Regional/Commuter Market Trends

Because a significant portion of passenger activity at TLH is serviced by regional/commuter airlines, it is prudent to consider the changing market and trends associated with how regional jets are employed by the airlines. Since airline deregulation in 1978, the flying public has witnessed a significant shift in the way airlines provide service to communities. For many markets, such as TLH, this change has included the introduction of regional/commuter aircraft into airports that had previously seen service by the mainline carriers using considerably large jet aircraft. Major airlines, such as Delta, United, and American for example, have removed large jets from routes and markets that consisted of short haul destinations that result in relatively high costs per seat mile or provided marginal profitability. These routes were turned over to regional commuter partners to serve, particularly during and after the economic downturn of the early 1990's. The aircraft that have been taken out of these markets have been moved into market areas having higher yields and profitability. In some cases jet aircraft have even been removed from profitable markets, so that they could be utilized in markets where they could be even more profitable. Situations similar to all of these examples have occurred at Tallahassee in the past.

While it is obvious that there is a trend toward an expanded role for commuter and regional airlines in new and/or larger markets, the possible affect on a market such as TLH is less apparent. With the expanding role of the regional airlines in larger markets, many regional airlines may be faced with decisions relating to which markets provide the most efficient and profitable use for their aircraft. In short, markets smaller than TLH could see a reduction in the number of flights by these carriers or changes in the equipment used by these carriers. This is very similar to the dilemma that the major airlines faced in the early 1990's. For example, markets such as Albany or Valdosta, GA could see a reduction in service that could allow TLH to capture additional market share that formerly used these other airports. Opportunities for additional service by

existing or new airlines may result from this trend, offering the potential for added connections to new destinations not presently served from the airport.

One reason for optimism has to do with the significant changes in technology that has occurred in all elements of the aircraft fleet. Of particular significance for TLH are the technology changes that have taken place in the fleet of aircraft most commonly used by regional and commuter airlines. These changes are presenting new opportunities for longer stage lengths and more comfortable service. As more reliance is placed on regional and commuter airlines, the need for these larger and more comfortable aircraft has risen to meet the expanding role served by commuter airlines. Commuters are no longer limited to 19, 30, or even older 50 passenger turbo-props. Although nearly 75 percent of the fleet currently serving TLH consists of turbo-prop commuter aircraft, the airport is seeing the emergence of regional jet aircraft at Tallahassee first introduced in the mid 1990s. Primarily these jets have consisted of the 50 seat Canadair Regional Jet (CRJ). CRJ and other regional varieties offer high speed capabilities and similar comfort levels as the larger jet aircraft. These amenities coupled with the aircraft capabilities allow their use on stage lengths once considered beyond acceptable distances for earlier commuter fleets. This has enhanced the ability of the major airlines to restructure their route systems and enhanced the use of both their regional affiliates and the non-affiliated commuter airlines.

The primary airlines using regional jets at TLH are ASA and Comair. The 50 seat Canadair RJ 100ER and Canadair RJ 200ER aircraft operated by these airlines currently represent over 14 percent of the passenger service flights. ASA provides the best example of how regional jets have been introduced to markets around the nation. Prior to 1999, ASA only had 30 seat EMB120 Brasilia turbo-prop aircraft serving the Tallahassee market. During the early months of 1999, they upgraded their service by introducing the 50 seat Canadair RJ 200ER. By 2000, their fleet serving TLH was nearly all Canadair RJ200ER aircraft. Where the 30 seat Brasilia had not been replaced by the regional jet, ASA opted to place the 66 seat ATR-72 turbo-prop. Although Comair introduced regional jets (50 seat Canadair RJ 100ER) to the TLH market much earlier, they have been slower to phase out their 30 seat Brasilia aircraft. However, Comair anticipates retiring all of their remaining turbo-prop aircraft by mid 2002.

During the course of this planning period, the most significant changes in TLH's fleet mix is anticipated to include the newer models of regional jet aircraft presently being designed or about to enter service. Manufacturers are currently developing larger versions of their regional jet aircraft fleets. The aircraft industry is producing new regional jet aircraft both in the 40 to 79 and the 80 to 104 seat ranges. The following reflects the aircraft orders currently in place, according to the 2001/2002 JP Fleets, just for the airlines currently serving TLH.

✈ Delta (ASA)	Canadair RJ 200ER (50 seats) Canadair RJ 700 (70 seats)
✈ Delta (Comair)	Canadair RJ 100ER (50 seats) Canadair RJ 700 (70 seats)
✈ NW Airlink (Express Airlines)	Canadair RJ 200ER (50 seats)

It is anticipated that a portion of the current turbo-prop aircraft serving TLH will be replaced with either the smaller or mid-sized regional jets, particularly in the 21 to 39 seat configuration and in the lower range of the 40 to 79 seat configurations. Likewise, the potential for airlines to up-gauge to the larger 70, 90, and even 100 seat regional jet derivatives is likely to occur over the planning period. Currently, Comair will be the launch customer for the 70 seat Canadair RJ 700 and the manufacturer (Canadair) has begun design on a 90 seat version (Canadair RJ 900). While only regional jets from Canadair presently serve TLH, other aircraft

manufacturers have similar aircraft and are also increasing the size of their fleet. Other regional jets being flown by U.S. airlines include the Fairchild Dornier 328 (34 seats), Embraer RJ-135 (37 seats), the Embraer RJ-145 (50 seats), and the Avro RJ85A (69 seats). As with Canadair, Embraer is presently designing both 70 seat and 90 seat regional jets, while Avro is looking at a 100 seat derivative of their RJ85A. Even those carriers that do not currently have orders are expected to replace the smaller turbo-props with larger regional jets.

All of the narrow body aircraft and occasional wide body aircraft providing passenger service to TLH are operated by Delta, with the exception of those being flown by charter carriers. Some of the newer Boeing 737-832 aircraft operated and on order by Delta, will replace the aging fleet of Boeing 727, Boeing 737, and MD88 aircraft used at TLH. Delta recently announced an accelerated program of retirement for its remaining Boeing 727-200 fleet. Wide body aircraft are presently rare in Tallahassee and usually the result of equipment scheduling. Therefore, the occasional Boeing 767 is still anticipated in the future, although not in large numbers.

In addition to the existing fleet mix and expected changes, it is believed likely that a new carrier or new start-up carrier could begin service by 2005. While many of these carriers operate newer aircraft, some still rely on hush-kitted versions of older aircraft such as the DC-9 series or Boeing 727-200 and Boeing 737-200 series. This is the case with such airlines as AirTran, Pan Am, Southeast, and Spirit Airlines to name a few. While many of their aircraft are older, their continued use through 2010 is not out of the realm of reason. On the regional side, a number of aircraft are likely to operate into and out of TLH. U.S. regional carriers are employing an array of turbo-prop and regional jet aircraft many of which have operated at TLH in the past or are logical potential operators in the future. Within this fleet are aircraft produced by Embraer such as the 135, 140, and 145 regional jet series, ATR, Avro, and Bombardier. These aircraft range from 30 seat up to 90 seat configurations.

The 50 seat Embraer RJ-145LR was added to the fleet mix in 2010 and 2020. Mesa Airlines, who use to operate at TLH for US Airways Express, has many of these aircraft in their fleet and on order. In fact, the Embraer RJ-145LR is utilized and on order for many other regional/commuter airlines. Therefore, it is anticipated that some of these aircraft will serve Tallahassee by the middle of the 20 year planning horizon. Finally, the 50 seat Saab 2000 was also included in 2010 and 2020. While none of the airlines currently serving TLH have these aircraft, it does represent the newer turbo-props in the market. While some see a reduction in turbo-prop usage, the general consensus is that the turbo-prop aircraft still fills a key niche for regional airlines and will continue to be used, particularly in short-haul market pairs. Thus, it is quite possible that the carriers currently operating the smaller and older Saab 340A at Tallahassee may be interested in acquiring the larger sister ship in the future. **Table 1-5** reflects the type and size of aircraft that are expected to serve TLH over the planning period.

Table 1-5
CHANGES IN AIRLINE FLEET MIX
Tallahassee Regional Airport

Seating Configuration	Base Year	Forecast		
	2000	2005	2010	2020
155 +	Boeing 767-300 Boeing 757-232	Boeing 767-300 Boeing 757-232	Boeing 767-300 Boeing 757-232	Boeing 767-300 Boeing 757-232
130 - 154	Boeing 737-832 Boeing 727-232 MD-88	Boeing 737-832 Boeing 727-232 MD-88	Boeing 737-832 MD-88	Boeing 737-832 MD-88
105 - 129	Boeing 737-35B Boeing 737-347 Boeing 737-232 Boeing 737-247	Boeing 737-35B Boeing 737-347 Boeing 737-232 Boeing 737-247 DC-9-32	Boeing 737-35B Boeing 737-347	Boeing 737-35B Boeing 737-347
80 - 104	N/A	N/A	Canadair RJ 900	Canadair RJ 900
40 – 79	Canadair RJ 200ER Canadair RJ 100ER ATR-72	Canadair RJ 200ER Canadair RJ 100 ER Canadair RJ 700 ATR-72	Canadair RJ 200ER Canadair RJ 100ER Canadair RJ 700 RJ-145LR ATR-72 Saab 2000	Canadair RJ 200ER Canadair RJ 100ER Canadair RJ 700 RJ-145LR Saab 2000
21 - 39	DHC-8-102 Embraer EMB-120 Saab 340A	DHC-8-102 Embraer EMB-120 Saab 340A	DHC-8-201	DHC-8-201
0 - 19	Beechcraft 1900C Beechcraft 1900D	Beechcraft 1900C Beechcraft 1900D	Beechcraft 1900D	

Source: THE LPA GROUP INCORPORATED, 2001.

Projections of Passenger Service Operations and Fleet Mix

The projection of passenger enplanements provides a point of beginning for the determination of future commercial service aircraft operations. Projected passenger enplanements are considered in conjunction with other factors that influence the forecast level of airline operations, which include the aircraft type (fleet mix) and number of seats available on a per departure basis. This data is then coupled with the average load factor to determine the number of departures required to meet the anticipated enplanements. Fleet mix data and the historic load factors for TLH were derived from the airport's consolidated monthly schedules and monthly airline traffic reports. Load factors were calculated for each airline serving the airport based on activity levels reported to the airport by the airlines.

In the recent past, the average annual load factors at TLH have been as low as 45.1 percent in 1993, to the current high of 58.5 percent. Over the past few years, average load factors at Tallahassee have remained in the upper 50-percentile level. More recently the data obtained for the first part of 2001 indicates that overall load factors are up over the data from the same period in the base year. On the national level, boarding load factors have increased dramatically reaching an average of 59.0 percent in 2000 for the regional/commuter carriers and 70.9 percent in 2000 for the major airlines. According to the 2001 FAA Aerospace Forecasts, load factors for the regional/commuter carriers are expected to increase to 62.8 percent by 2012. Conversely,

load factors for the major airlines are expected to remain essentially constant with only a minimal decline to 70.5 percent by 2012. The projected load factors are based on the success that the airline industry has achieved in recent years with their sophisticated yield management systems, which have kept demand in close proximity to the supply of seats nationally and in individual markets and is anticipated to continue.

Although the year 2000 boarding load factor (BLF) at Tallahassee Regional was 58.5 percent, monthly load factor levels for the regional/commuter airlines have ranged as high as 88.0 percent for ASA and have been well into the 60-percentile range in a number of months for other carriers. Delta, the only major airline currently providing scheduled service to TLH, had a 65.2 percent average load factor on its Tallahassee routes in 2000. Continued growth in boarding load factors for the commuter airlines serving TLH is anticipated over the course of the planning period; however, not at the levels projected for the nation. For TLH, it is anticipated that the average number of seats will increase over the years, primarily due to an increase in the size of aircraft. However, because TLH is primarily a regional/commuter market, it is assumed that there will still be an emphasis on frequency of service, tempering to some degree the load factors from significant increases. It is assumed that Delta's contribution to the overall load factor will remain relatively stable. Overall boarding load factors are expected to grow from a current annual average level of 58.5 percent to an annual average level of 63.5 percent by 2020. This represents an average annual increase of approximately 0.25 percent. The load factor values utilized for the planning period are depicted in **Table 1-6**.

The base year airline fleet mix for TLH was derived from the airport's consolidated monthly schedules for the year 2000. When historic schedules back to 1997 were reviewed, it showed that the airline fleet mix has remained relatively stable over the past four years. Upon detailed review, there are indications that the existing fleet mix at TLH reflects a slow trend toward additional service by larger regional/commuter aircraft including the addition of regional jet service. These changes, primarily by ASA and Comair, were mentioned in the previous section addressing the market trends of the regional/commuter industry.

The future fleet took into consideration stated orders for new aircraft by the passenger carriers serving the airport, local trends observed at TLH, industry trends as analyzed by the FAA, industry publications, and projected trends defined by both Boeing and Airbus. This information provided a baseline by which the future airline fleet through 2020 was defined, as shown in **Table 1-5**. Fundamental to this future fleet mix projection was the belief that TLH will remain predominately a regional/commuter aircraft market. Further, the airport will experience a continued conversion to regional jets and the seating capacity of these aircraft will grow in a manner consistent with emerging regional/commuter jet types being developed by manufacturers including Avro, Bombardier, Embraer, and Fairchild Dornier. While growth in enplanements has been forecast, the combination of increased aircraft size and growth in boarding load factors will result in limiting major growth in the number of passenger service aircraft operations.

Table 1-6 presents the projection of passenger service operations based on aircraft seating configurations, passenger demand, and boarding load factors out to the year 2020. To calculate annual operations, average seats per aircraft were first multiplied by the boarding load factor to obtain the average passenger enplanements per departure. The result is a yearly forecast of departures, which is then doubled to arrive at projected passenger service aircraft operations.

Table 1-6
FLEET MIX AND FORECAST OF PASSENGER SERVICE OPERATIONS
Tallahassee Regional Airport

Fleet Mix Seating Range	Base Year	Forecast		
	2000	**2005**	**2010**	**2020**
155+	0%	0%	0%	0%
130 – 154	6%	6%	4%	2%
105 - 129	6%	8%	7%	6%
80 - 104	0%	0%	8%	13%
40 - 79	15%	21%	31%	44%
21 - 39	51%	45%	40%	35%
0 - 19	22%	20%	10%	0%
Average Seats per Departure	45	49	54	58
Boarding Load Factor	58.5%	59.8%	61.0%	63.5%
Enplanements per Departure	26	29	33	37
Enplanements	468,703	537,812	620,183	819,298
Annual Departures	18,027	18,545	18,793	22,143
Annual Operations	36,054	37,090	37,586	44,286

Source: THE LPA GROUP INCORPORATED, 2001.

While the level of passenger service operations increases over the planning period, it does so at a relatively slow rate. This reflects the impact of additional aircraft size and the growth in load factor per flight. It is anticipated that over the next twenty years, operations by aircraft with 19 or less seats will nearly disappear, operations in the 21 to 39 seat range will decrease slightly, while service by aircraft in the 40 to 104 seat capacity ranges will experience growth. A reduction in the number of the narrow body aircraft occurs after 2005 to reflect the overall reduction in the number of older aircraft and use of the larger aircraft, such as the Boeing 737-832, within this range. While TLH does experience some limited operations by even larger aircraft (Boeing 757, Boeing 767, etc), the overall number of these operations are not significant enough to be incorporated into the fleet mix based projection of operations.

Cargo Carrier Operations

Currently, there are a very limited number of regularly scheduled cargo flights into or out of Tallahassee. Federal Express (FedEx) conducts the primary dedicated cargo operations; however, some small freight forwarders conduct flights for the United Postal Service (UPS) and other companies, using primarily single engine aircraft. Very little historic data was available for the dedicated cargo operations conducted at TLH. Despite this fact, it was possible to establish the base year level of dedicated cargo operations by combining the historical data with the schedules from 2000. This information is summarized and presented in **Table 1-7**.

Table 1-7
CURRENT ALL-CARGO OPERATIONS
Tallahassee Regional Airport

Operator	Monthly Flights	Annual Operations
FedEx		
Boeing 727-100	32	768
Boeing 727-200	6	144
Mountain Air Cargo (FedEx Feeder)		
Cessna 208B Caravan	35	840
Fokker F27 Friendship	4	96
Freight Forwarders		
Cessna 210	40	960
Cessna 208B Caravan	20	480
Shorts SC7 Skyvan	8	192
Lear 24/25	1	24
Total for 2000	146	3,504

Source: THE LPA GROUP INCORPORATED, 2001.

Although the airfield does not have a history of significant air cargo operations, nor does it appear that any of the existing cargo carriers at Tallahassee are ready to significantly expand, there are emerging trends in the cargo industry that could provide the impetus for additional cargo activity in the future. TLH possesses several attributes attractive to cargo carriers. These include excellent airfield facilities, a base of local cargo volume, good interstate access, and a ready supply of labor interested in part-time employment. These factors were believed significant enough for TLH to potentially lure UPS out of Albany, GA, which does not posses several of these attributes, or to provide an attractive package for other potential carriers. As a result, a projection was made for a slight increase in the future cargo operations at TLH.

Total domestic freight/express cargo is measured using revenue ton miles, which increased nationally on average, 4.9 percent per year, from 1990 to 2000. While some domestic freight/express cargo is carried on passenger airlines, the all-cargo carriers have dominated. This trend is expected to continue, especially in light of the increasing load factors on passenger carriers, which limits space to carry cargo on these flights. According to the FAA, cargo growth has historically had a very high correlation to the nation's gross domestic product. As such, the FAA has forecast domestic freight/express cargo through the year 2012 based on this relationship. Under the FAA analysis, all-cargo domestic freight/express cargo is expected to increase at an annual rate of 6.2 percent through 2012.

While the nation's growth in freight/express cargo has been quite substantial it should be remembered that the top five cargo airports in the nation accounted for more than a quarter of this tonnage. Nonetheless, the amount of cargo that is moved by air throughout the nation is expected to increase. As stated previously nearly all of the socioeconomic variables analyzed for the Tallahassee market area have historically increased and are expected to continue in the future. While these increases are slight, they do indicate a positive growth in the overall economy of the community and with that, it is anticipated that cargo levels for TLH will increase over the planning period. This growth however, will not be on the level forecasted for the nation, rather at a much lower rate. As such, a more conservative 1.5 percent annual growth rate was applied to the

level of all-cargo operations currently conducted at the airfield. The resulting increase in all-cargo operations is reflected in **Table 1-8** as well as the additional cargo flights generated over the course of the planning period.

Table 1-8
FORECAST OF ALL-CARGO OPERATIONS
Tallahassee Regional Airport

Year	Additional Monthly Flights	Total Monthly Flights	Total Operations
Base Year			
2000	0	146	3,504
Forecast			
2005	11	157	3,768
2010	23	169	4,056
2020	51	197	4,728

Source: THE LPA GROUP INCORPORATED, 2001.

Cargo Carrier Operational Fleet Mix

To determine the operational fleet mix of the all-cargo carriers, the existing fleet data was applied to the short term planning period. Based on orders by the cargo carriers and investments in upgrading older aircraft, it is assumed that the current fleet will be relatively the same in 2005. Beyond the short term planning period it becomes a bit more difficult to determine what the various carriers will operate. For 2010, it is projected that a number of the single engine aircraft, such as the Cessna Caravans and 210s, operated by the freight forwarders, will remain. For the larger carriers, existing fleet orders were considered to identify what aircraft may be utilized in the future. In FedEx's case, it is felt that by 2010 and beyond, the Ayres LM200 Loadmaster could replace the Cessna Caravans operated by Mountain Air Cargo. Currently FedEx has 75 of these aircraft on order, with delivery dates set between 2002 and 2006, and will likely require their feeder airlines to utilize the same equipment. While UPS does not currently fly their own aircraft into TLH on a regular basis, it is anticipated that they may add a few flights during the intermediate planning period (2006 to 2010). Most likely these flights would be conducted using their recently re-engined Boeing 727-200 aircraft, or possibly even by some of their Boeing 757-200 aircraft. While an increase is shown throughout the planning period, it is not anticipated that demand will exist to support the use of wide body freighters to serve the Tallahassee cargo market.

GENERAL AVIATION ACTIVITY FORECASTS

There are many elements of aviation that make up the broad definition of general aviation activity. General aviation includes all segments of the aviation industry except for commercial air carriers and the military. Its activities include the training of new pilots, sightseeing, aerial photography, law enforcement, and medical flights, as well as business, corporate, and personal travel. For this study, general aviation has been divided into the subcategories of local and itinerant operations. Local operations are those arrivals or departures performed by aircraft that remain in the airport traffic pattern, or are within sight of the airport. This covers an area within a 20 nautical mile radius of the airfield. Local operations are most often associated with training activity and flight instruction. Itinerant operations are arrivals or departures other than local operations, performed by either based or transient aircraft, that do not remain in the airport traffic pattern or within a 20 nautical mile radius.

Normally flight training activities make up the vast majority of local general aviation operations at an airport. This would include student pilots who are getting started in aviation, pilots continuing training for additional ratings, and pilots conducting the recurrent training required of their rating. At TLH, local operations also include some forestry service flights as well as law enforcement operations. Itinerant general aviation operations are typically comprised of private flight activity, business and corporate activity, air taxi operations, and may also include operations by the forestry service and law enforcement. **Table 1-9** reflects the historic general aviation operations data that was obtained from airport records.

Table 1-9
HISTORIC GENERAL AVIATION ACTIVITY
Tallahassee Regional Airport

Year	Local Operations	Itinerant Operations	Total Operations
1990	46,434	61,052	107,486
1991	31,718	50,639	82,357
1992	27,390	47,300	74,690
1993	21,846	44,101	65,947
1994	23,096	41,319	64,415
1995	20,580	41,127	61,707
1996	18,350	39,679	58,029
1997	21,530	38,151	59,681
1998	19,038	39,807	58,845
1999	18,996	43,648	62,644
2000	20,757	43,443	64,200

Source: Airport Records, 2001.

As can be see in the table above, there was a significant decrease in all general aviation operations during the early to mid 1990's. This decrease in activity is attributed to the severe downturn that the general aviation industry experienced during the late 1980's and early 1990's. The industry decline was the result of product liability considerations, which were also aggravated by a deep recession in the early 1990s and high fuel prices stemming from the Persian Gulf War.

General Aviation Industry Trends

The decrease in general aviation activity experienced in the 1980's and 1990's was due to significant increases in the cost of owning a general aviation aircraft. A large part of this cost was directly attributable to increasing product liability costs, as well as increasing operating costs. Unfortunately, this period, which was also affected by a national recession, ultimately forced the closure of nearly every manufacturer of general aviation piston aircraft. Legislators responded to the sever downturn with the passage of the General Aviation Revitalization Act of 1994. The signing of this act provided a renewed era of optimism for the general aviation market, which has led to a recovery in the industry.

After passage of the General Aviation Revitalization Act, two of the largest manufacturers of small aircraft resumed production in the general aviation market. The Cessna Aircraft Corporation reentered the single-engine piston aircraft market for the first time since 1986. Also, the New Piper Aircraft Corporation emerged from Chapter 11 bankruptcy protection to restart and increase its production schedule. Other aircraft manufacturers and aviation suppliers also began hiring and expanding their production.

Overall, revitalization of the industry has had a positive effect on the number of active general aviation aircraft and the operations these aircraft conduct in the U.S. This was significantly facilitated by the strong economic cycle of the mid to late 1990s. The 2001 FAA Aerospace Forecasts states, "the general aviation industry recorded its 6th consecutive year of increased aircraft shipments and record aircraft billings," something unheard of prior to the 1994 General Aviation Revitalization Act.

General Aviation Activity Projections

For general aviation forecasts, it is preferred to evaluate local and itinerant activity separately; however, this was not considered the best method for TLH. Typically socioeconomic data can be used to reliably project both local and itinerant operations. For example, population might be used in a model for local operations assuming a relationship relative to the number of potential pilots and existing pilots that are in the region served by TLH. Unfortunately, since local and itinerant operations decreased so much in the 1990's, the positive growth in all but one of the socioeconomic variables did not correlate very well. In other words, regression analysis alone could not explain the downturn experienced by general aviation, nor could it account for the increases resulting from the General Aviation Revitalization Act. Therefore, regression analysis was not used to project general aviation activity.

Based on the information available, the best method for projecting the general aviation activity at TLH would be a market share analysis, similar to the one used to forecast passenger enplanements. Because significant changes have occurred since the General Aviation Revitalization Act, a method which considered the overall growth in the industry was required. This is especially true since nearly two thirds of the general aviation activity at TLH is itinerant. Based on airport data, the operational split between local and itinerant traffic has remained relatively stable over the past ten years. This split averaged 30 percent local and 70 percent itinerant. Discussions with the Fixed Base Operator (FBO) and others serving the general aviation users indicated that there was no reason why the local/itinerant split would change.

The best source for information on the nation's general aviation activity is contained in the 2001 FAA Aerospace Forecasts. However, since these forecasts cannot be broken down into individual local versus itinerant operations, total general aviation activity for TLH was reviewed. As with passenger enplanements, calculations were made to determine what has historically been Tallahassee's contribution to the nation's general aviation activity. To do this, only the historical share since the enactment of the revitalization act was considered. Even after the act was initiated, Tallahassee's contribution to the nation's general aviation operations has had a slight decline each year. This downward trend was considered and then applied back to the FAA's national forecasts. The resulting level of general aviation activity reflects a positive growth rate, which slows over the course of the planning period. These projections are reflected in **Table 1-10**, which also applies the historic local versus itinerant split.

Table 1-10
FORECAST GENERAL AVIATION ACTIVITY
Tallahassee Regional Airport

Year	Local Operations	Itinerant Operations	Annual General Aviation Operations
Base Year			
2000	20,757	47,392	68,149
Forecast			
2005	21,816	49,809	71,625
2010	22,929	52,350	75,279
2020	25,327	57,828	83,155

Source: THE LPA GROUP INCORPORATED, 2001.

The results of the market share analysis reflect an average annual growth at TLH in total general aviation operations of 1.0 percent.

General Aviation Operational Fleet Mix

Tallahassee's general aviation activity is composed of a variety of aircraft types and users. Most local general aviation operations are generated through flight training by private and business aircraft tenants, a portion of the U.S. Forestry operations, some Florida Division of Forestry operations, the flights conducted by law enforcement, and some medical flights. The bulk of the itinerant activity is generated by business and corporate activity, including air taxi and charter operations. Unfortunately, there are no records kept which would indicate the operational fleet mix for general aviation activity. As such, operational fleet mixes for both local and itinerant were established based on interviews with the FBO, other airport tenants, and field observations.

The type of aircraft that are based at the airport provide the best indication for the mix of local operations. The detailed based aircraft data supplied by airport management was used in conjunction with the information gathered during interviews with the various airport tenants. While the breakdown for the based aircraft was used to estimate the existing local operational fleet mix, it is anticipated to change in the future. Therefore, knowledge of the anticipated fleet mix is necessary to apply to the current levels. Every year, an estimate of the fleet mix for the nation's active general aviation aircraft is published as part of the FAA's forecasts. In the 2001 FAA Aerospace Forecasts, the number of active general aviation aircraft are projected to increase through the year 2012. The FAA also provides a breakout of the various aircraft type by category and how they are expected to change. The FAA uses the following primary classifications to identify general aviation aircraft: single engine piston, multi engine piston, turbo-prop, jet, and rotorcraft. Overall the share of active single engine piston and multi engine piston aircraft decrease, while turbo-prop, jet, and rotorcraft all increase. Leading these increases are jet aircraft, which are expected to increase nearly two percent by 2012.

As with most airports, the single and multi engine categories are predominately comprised of Cessna, Piper, and Beech models. Likewise, most turbo-props tend to include all models of the Beech King Air and twin Cessna models such as the 414 Chancellor or 421 Golden Eagle. Local jet aircraft are primarily in the Cessna Citation family, while rotorcraft include the OH58 (forestry and law enforcement), UH1 Huey, AH1 Cobra, and MD105 (medical).

Although passage of the General Aviation Revitalization Act has allowed manufacturers of general aviation aircraft to restart operations, the cost associated with operating aircraft still continues to rise. As a result, more and more businesses tend to be the primary users of this mode of transportation, which explains the national shift in the percentage of jet aircraft expected. The FAA national growth rates for each type of aircraft provided the primary basis of fleet mix growth and were applied to the forecast of local general aviation operations. These figures, as well as the individual percentages, are presented in **Table 1-11**.

Table 1-11
LOCAL GENERAL AVIATION OPERATIONAL FLEET MIX
Tallahassee Regional Airport

Year	Single Engine	Multi Engine	Turbo-Prop	Jet	Rotorcraft	Total
Base Year						
2000	13,721 (66.1%)	2,844 (13.7%)	1,162 (5.6%)	498 (2.4%)	2,532 (12.2%)	20,757
Forecast						
2005	14,289 (65.5%)	2,880 (13.2%)	1,222 (5.6%)	720 (3.3%)	2,705 (12.4%)	21,816
2010	14,858 (64.8%)	2,912 (12.7%)	1,307 (5.7%)	963 (4.2%)	2,889 (12.6%)	22,929
2020	16,082 (63.5%)	2,963 (11.7%)	1,469 (5.8%)	1,520 (6.0%)	3,293 (13.0%)	25,327

Source: THE LPA GROUP INCORPORATED, 2001.

Because no air traffic records are kept for the itinerant general aviation fleet, the best approximation comes from those that either conduct or serve such operations. The primary FBO at TLH is Flightline Group, Inc. During conversations with FBO management, estimates were made to establish the current fleet mix at the airport. This information was supplemented with data from the other operators, such as the U.S. Forestry, Florida Division of Forestry, law enforcement, and discussions with air traffic control tower representatives.

For itinerant operations, single engine, multi engine, turbo-prop, and rotorcraft fleets are essentially the same as those for local. However, there are many more jet aircraft in addition to the Citation family. According to interviews, aircraft ranging from the smallest business jets to largest charter jet aircraft conduct operations at TLH. The small to mid sized jets include Gates Lear jets, Falcons, and the Cessna Citations. Larger jets include Gulfstreams, Hawker Siddleys, the new Global Express, and various charter aircraft. The FBO fully anticipates the Boeing Business Jet to appear within the next couple of years. Charter aircraft primarily center around the Florida State University (FSU) and Florida A&M University (FAMU) football and basketball programs. These aircraft consist primarily of hush kitted Boeing 727s and McDonnell Douglas DC9s.

As with the local operations, the FAA forecast change in the nation's active general aviation fleet was applied to represent the change in fleet that could be expected through the planning period. These percentages were then applied to the itinerant general aviation projections. The results are reflected in **Table 1-12**.

Table 1-12
ITINERANT GENERAL AVIATION OPERATIONAL FLEET MIX
Tallahassee Regional Airport

Year	Single Engine	Multi Engine	Turbo-Prop	Jet	Rotorcraft	Total
Base Year						
2000	10,947 (23.1%)	5,640 (11.9%)	11,564 (24.4%)	15,402 (32.5%)	3,839 (8.1%)	47,392
Forecast						
2005	11,208 (22.5%)	5,678 (11.4%)	12,153 (24.4%)	16,636 (33.4%)	4,134 (8.3%)	49,809
2010	11,412 (21.8%)	5,706 (10.9%)	12,826 (24.5%)	17,956 (34.3%)	4,450 (8.5%)	52,350
2020	11,854 (20.5%)	5,725 (9.9%)	14,226 (24.6%)	20,876 (36.1%)	5,147 (8.9%)	57,828

Source: THE LPA GROUP INCORPORATED, 2001.

MILITARY ACTIVITY FORECASTS

Military operations are aircraft operations, which are conducted by an official branch of the U.S. military services. Due to Tallahassee's proximity to a number of military bases in Florida, Georgia, and Alabama, there have historically been a number of military operations conducted at the airfield. Although there are no military aircraft based at the airport, both local and itinerant military operations have been recorded. A majority of the military operations at TLH are training flights. As such, when these aircraft arrive or depart the airfield, many will take the opportunity to practice flying various instrument approaches at the airport. The level of military activity recorded at TLH over the past decade is depicted in **Table 1-13** below.

Table 1-13
HISTORIC MILITARY ACTIVITY
Tallahassee Regional Airport

Year	Local Operations	Itinerant Operations	Total Operations
1990	2,200	4,590	6,790
1991	2,414	3,911	6,325
1992	2,450	4,108	6,558
1993	2,868	4,281	7,149
1994	2,040	3,634	5,674
1995	1,718	3,824	5,542
1996	2,114	4,577	6,691
1997	3,324	4,986	8,310
1998	3,928	5,225	9,153
1999	6,875	3,295	10,170
2000	6,904	7,192	14,096

Source: Airport Records, 2001.

As can be seen, the level of military activity has fluctuated over the past decade. Military operations are difficult to forecast at any airfield, including military bases, since they rely so heavily on each year's available budget. A number of different approaches were taken to project these operations out to the end of the planning period.

None of the demographics for the area could be used for a regression analysis since local growth has little relation to military activity. Likewise, using the historical growth was considered unrealistic as it represented an average annual increase of 7.6 percent. This rate, which primarily results from the significant increases in the past two years, would result in over 60,000 annual military operations at TLH by 2020. The next approach utilized the nation's projected growth rate for military operations as published by the FAA. This rate forecasted an increase of 0.7 percent each year from 2000 to 2012. While this is certainly a reasonable estimate for growth, it was necessary to also consider changes in regional military operations expected to take effect over the next year.

Approximately 70 miles to the northeast of TLH (just beyond Valdosta Regional) is Moody Air Force Base (AFB). While Moody AFB has always conducted military training operations, it appears that the level will increase shortly. Recently representatives from Moody AFB have held meetings with the management of TLH's air traffic control tower to discuss the restructuring of the various Military Operation Areas (MOAs) serving Moody AFB. These are being restructured to support the changing operations planned for Moody. The 347th Operations Support Squadron will begin heavier training operations out of Moody AFB within a year, primarily using the T-2 Buckeye. While it is not known at this point to what extent this may affect TLH, it is anticipated that there will be a slight increase in the number of military operations conducted. To account for the expected military increases, the FAA's anticipated growth rate of 0.7 percent was adjusted slightly upward. This results in an average annual growth rate of 1.0 percent over the planning period.

Historically, there have been more itinerant military operations than local at Tallahassee. This split has been 41 percent local and 59 percent itinerant. Because of the additional training operations from Moody AFB, it is expected that the local and itinerant operations will approach more of an even split. The projections in **Table 1-14** represent the operations shifting to 45 percent local and 55 percent itinerant by 2020.

Table 1-14
FORECAST MILITARY ACTIVITY
Tallahassee Regional Airport

Year	Local Operations	Itinerant Operations	Annual Military Operations
Base Year			
2000	6,904	7,192	14,096
Forecast			
2005	6,222	8,593	14,815
2010	6,696	8,875	15,571
2020	7,740	9,460	17,200

Source: THE LPA GROUP INCORPORATED, 2001.

Military Operational Fleet Mix

As with general aviation, there are no records documenting the mix of the military aircraft that conduct operations at TLH. Therefore, managers from Flightline Group, Inc. and the air traffic control tower were

interviewed to determine the type of military aircraft operating at the airfield. Flightline Group, Inc. provided detailed information, as they are under contract to fuel military aircraft.

In the past, rotorcraft conducted a significant portion of the military operations at TLH. However, this is no longer the case. Currently, only one in every four operations is conducted by a rotorcraft. Because there are virtually no single or multi engine piston military aircraft conducting operations at TLH, the remaining 75 percent of operations are generated by turbo-prop and jet aircraft. It is estimated that turbo-props conduct 40 percent of the current military operations while jets made up the remaining 35 percent. While jet operations include nearly every aircraft in the military inventory, most have consisted of F-15 Eagle, F-16 Falcon, F-18 Hornet, T-2 Buckeye, T-34 Mentor, and even some F-4 Phantom aircraft. Turbo-prop aircraft utilizing the airfield include the T-6 II Texan and the T-37B Tweet, but also includes operations by larger transports such as the C-130 Hercules. Rotorcraft activity primarily consists of OH58 Kiowas, CH47 Chinooks, Sikorsky Blackhawk/Seahawks, and CH46 Sea Knights.

As with the overall forecasts, it is difficult to say what will happen in the future with respect to military operations. However, it was assumed that with the changes at Moody AFB, turbo-prop operations would take on a larger share in the future. The slight shift from jet to turbo-prop activity, while holding rotorcraft constant, is depicted in **Table 1-15**.

Table 1-15
MILITARY OPERATIONAL FLEET MIX
Tallahassee Regional Airport

Year	Single Engine	Multi Engine	Turbo-Prop	Jet	Rotorcraft	Total
Base Year						
2000	0 (0.0%)	0 (0.0%)	5,638 (40.0%)	4,934 (35.0%)	3,524 (25.0%)	14,096
Forecast						
2005	0 (0.0%)	0 (0.0%)	6,296 (42.5%)	4,815 (32.5%)	3,704 (25.0%)	14,815
2010	0 (0.0%)	0 (0.0%)	7,007 (45.0%)	4,671 (30.0%)	3,893 (25.0%)	15,571
2020	0 (0.0%)	0 (0.0%)	8,600 (50.0%)	4,300 (25.0%)	4,300 (25.0%)	17,200

Source: THE LPA GROUP INCORPORATED, 2001.

PEAK ACTIVITY PROJECTIONS

Peak operational activity such as peak month, average day of the peak month, and peak design hour forecasts are used in airport planning to determine the airfield's ability to accommodate projected demand and for the sizing of facilities. There are a number of different peaking analyses that can be conducted. For example, airfield evaluations require that every annual aircraft operation be considered, while passenger terminal facilities need only those operations associated with commercial passenger airlines. To properly plan, size, and design passenger terminal facilities, peaking analyses need to also include the level of enplanements. Basically commercial service airports experience peaks in both passenger airline operations as well as passenger enplanements, although these do not necessarily occur at the same time. Therefore, each of these peaking elements must be evaluated separately since peak airline operations define the demand for airside facilities (gates and ramp), while peak enplanements pose a direct impact on landside facilities (terminal and parking). The following sections provide individual peaking analyses for total airport operations, passenger enplanements, and passenger operations. These projections are based on the historic monthly schedules and airline traffic reports provided by the airport.

Peaks in Total Airport Operations

Operational traffic levels at Tallahassee Regional are fairly well spread out over the year. Since 1996, three different months have recorded the highest level of operations for the respective year. However, the month of April appeared to best represent the busiest month of operations for the airport when the five years of monthly data were averaged. Based on the averages, 10.3 percent of the operations conducted at TLH occur during the month of April. Therefore, this percent was applied to the forecasted annual operations through the year 2020 to estimate the peak month operations for each year.

The values for the average day of the peak month and for the peak hour were calculated using the FAA's methodology found in Advisory Circular 150/5360-7, "Planning and Design Considerations for Airport Terminal Building Development." Under this methodology, taking the number of operations calculated for the peak month and dividing that figure by the number of days in the peak month (30 for April) derived the average day of the peak month. No historical data was available to determine the peak hour operations at TLH, therefore it was estimated that 15 percent of the peak month average day would best represent the number of peak hour operations. The projections for future peak operations at the airport are shown in **Table 1-16**.

Table 1-16
PEAKS IN TOTAL AIRPORT OPERATIONS
Tallahassee Regional Airport

	Base Year	Forecast		
	2000	2005	2010	2020
Total Annual Operations	121,803	127,298	132,492	149,369
Peak Month	12,546	13,112	13,647	15,385
Average Day of the Peak Month	418	437	455	513
Peak / Design Hour	63	66	68	77

Source: THE LPA GROUP INCORPORATED, 2001.

Peaks in Passenger Enplanements

A review of historical monthly enplanements was performed in order to identify the peak month for passenger activity. Between 1996 and 2000, March has been the busiest month for passenger enplanements in every year. It is assumed that the peaks experienced in March are related to the beginning of the regular session for the Florida Legislature as well as the spring breaks of both FSU and FAMU. Historically, peak month passenger enplanements have accounted for 9.5 percent of the total annual enplaned passengers. Because March has 31 days, this number was used to determine the number of average day of the peak month enplanements.

Hourly enplanement data was not available. To define the peak/design hour enplanement level, the number of filled seats during the peak hour of the average day were calculated based on the aircraft fleet defined in the airport schedules and the anticipated load factor. For planning purposes some consideration may be given to adjusting this number upward to address the conservative nature of using the average annual load factor in the analysis. The number of seats filled were calculated using the recorded boarding load factor and available seats during the peak hour period. This analysis showed peak/design hour departures ranging from 363 to 382 seats, for a range of 14.7 to 15.5 percent of the average day enplanements. The higher end was utilized since both load factors and the size of aircraft are expected to increase over the planning period. **Table 1-17** delineates the peak period enplanement levels calculated for the planning period.

Table 1-17
PEAKS IN PASSENGER ENPLANEMENTS
Tallahassee Regional Airport

	Base Year	Forecast		
	2000	2005	2010	2020
Total Passenger Enplanements	468,703	537,812	620,183	819,298
Peak Month	44,527	51,092	58,917	77,833
Average Day of the Peak Month	1,436	1,648	1,901	2,511
Peak / Design Hour	223	255	295	389

Source: THE LPA GROUP INCORPORATED, 2001.

Peaks in Passenger Service

The same methodology employed to evaluate peaks in passenger enplanements was applied to passenger service operations. Monthly departure data was evaluated to identify trends of the peak month. For passenger service operations, the peak month has fluctuated between March and April since 1996. However, on average, April has produced a higher share of the annual passenger service operations at 8.8 percent. This percentage was utilized to calculate the peak month operations, which was then divided by 30 to estimate the number of average day operations. Based on the airport's consolidated airline schedules since 1996, the carriers serving TLH have conducted an average of 14.2 percent of their operations during the peak hour of the peak departure month. The above values were applied to establish the passenger service operational peaks shown in **Table 1-18**.

Table 1-18 PEAKS IN PASSENGER ACTIVTIY Tallahassee Regional Airport				
	Base Year	Forecast		
	2000	2005	2010	2020
Passenger Aircraft Operations	36,054	37,090	37,586	44,286
Peak Month	3,173	3,264	3,308	3,897
Average Day of the Peak Month	106	109	110	130
Peak / Design Hour	15	15	16	18

Source: THE LPA GROUP INCORPORATED, 2001.

SUMMARY OF AVIATION ACTIVITY FORECASTS

The following tables present a summary of the forecasts developed in this report. Overall, aviation activity at Tallahassee Regional is expected to show growth throughout the planning period. In summary, the data and methods used to forecast aviation demand elements for TLH are consistent with those used by the FAA and therefore, accurately reflect current activity trends of the surrounding region and nation.

Table 1-19 SUMMARY OF AIRCRAFT OPERATION FORECASTS Tallahassee Regional Airport				
Year	Passenger Service	All-Cargo	General Aviation	Military
Base Year				
2000	36,054	3,504	68,149	14,096
Forecast				
2005	37,090	3,768	71,625	14,815
2010	37,586	4,056	75,279	15,571
2020	44,286	4,728	83,155	17,200

Source: THE LPA GROUP INCORPORATED, 2001.

Table 1-20 FORCAST OF AVIATION ACTIVITY Tallahassee Regional Airport		
Year	Annual Enplanements	Annual Operations
Base Year		
2000	468,703	121,803
Forecast		
2005	537,812	127,298
2010	620,183	132,492
2020	819,298	149,369

Source: THE LPA GROUP INCORPORATED, 2001.

Appendix C – GPS Technologies

A number of electronic navigational aids are in place to assist pilots in locating the airfield and landing. The Seminole VORTAC, WAKUL NDB, Runway 27 and 36 Instrument Landing Systems (ILS), and GPS assist pilots during poor weather conditions. As mentioned in the Inventory chapter, the ILS systems for Runways 27 and 36 provide Category II and I landing minimums, respectively. Until recently, the only means for an airport to provide precision instrument approach capability was the installation of an ILS consisting of a glide slope, localizer, radio marker beacon, and associated approach landing lights. The ILS is the conventional system used at airports around the world to offer precision instrument capability. Beyond safety enhancement, the installation of a precision approach helps alleviate delays experienced at an airport during instrument meteorological conditions, thus increasing the airfield's overall annual service volume or throughput capacity.

But today, precision instrument approach capabilities are also attainable though the use of the Global Positioning Satellite (GPS) constellation. This system provides a celestial reference for determining the position of any point on or above the Earth's surface. By analyzing the time delays of signals received from some of these satellites, a receiver installed within the airplane is able to determine latitude, longitude, and altitude.

Since the Department of Defense (DOD) acknowledged operational capability of the U.S. GPS in 1993, the satellite navigation system has been significantly enhanced, leading to the creation of new area navigation (RNAV) procedures for the en route, terminal, and approach phases of aircraft operations. RNAV is a method of navigation that permits aircraft operations on any desired flight by referencing to GPS satellites rather than ground-based navigation aids such as the VORTAC or ILS. The overall objective of RNAV is to remove the restrictions imposed by reliance on ground-based navigation aids and the restrictive electronic aircraft tracks in the sky. This change to RNAV opens up more airspace for use by aircraft, increases options for arrival and departures, and reduces separation requirements, thus increasing the overall national airspace capacity. When supported by GPS augmented Wide Area Augmentation System (WAAS), the Local Area Augmentation System (LAAS) or GPS integrated with an Inertial Reference System (IRS), RNAV accuracy is better than the accuracy of ground-based navigation systems.

WAAS provides the required accuracy, availability, and integrity to support GPS use as a primary means of navigation during all phases of flight through Category I precision approaches. Minimums for Category I approaches enable the properly equipped aircraft and trained pilots with the ability to descend as low as 200 feet above ground level before having the runway environment in sight. On-airport systems are not required to achieve a WAAS supported Category I precision approach. LAAS is intended to support approaches to Category I minimums in those instances where WAAS cannot provide the necessary satellite coverage to achieve Category II and Category III precision capabilities. LAAS accomplishes this by using ground stations at the airport to transmit corrected signals to the aircraft in less time.

As WAAS and LAAS technologies are improved, satellite navigation will become the fundamental system used for instrument operations. Airspace will be converted to an RNAV-based structure, eliminating inefficient routes based on the location of ground-based navigational aids.

In 2002, the FAA had developed 3,584 RNAV approaches at several airports in the U.S. These approaches only require the aircraft to be equipped with approach certified GPS receivers. These approaches offer both precision and non-precision capabilities. As mentioned before, precision approaches offer both horizontal and

vertical guidance, allowing for a smooth rate of descent to the runway even if the runway surface is not yet visible. Non-precision approaches, on the other hand, only offer horizontal guidance. Under the new RNAV approaches, non-precision approaches are referred to as LNAV (Lateral Navigation) approaches and precision approaches are identified as LNAV/VNAV (Lateral Navigation/Vertical Navigation) and/or LPV (Localizer Performance with Vertical Guidance).

The LNAV/VNAV procedure is an approach procedure with vertical guidance that falls between a conventional non-precision approach and a true precision approach. According to the FAA, the LNAV/VNAV approaches have the lateral accuracy associated with non-precision approaches, but also have a stable, guided vertical path that leads to the runway aim point. LNAV/VNAV approaches typically have a decision altitude of 350 feet or higher above the runway touchdown point. These approaches require the aircraft to be equipped with an approved barometric VNAV system or a WAAS receiver. Certified WAAS receivers are expected to become available in 2003. LPV approaches will provide lateral and vertical guidance equivalent to the ILS. LPV will allow for a ceiling as low as 250 feet above ground level and an approach visibility minimum of ¾ statue mile. The FAA expects to publish its first LPV procedures by the 2003-year end.

Appendix D – 2003 Air Cargo Analysis (Selected Sections)

Five combinations carriers (passenger airline belly-haul) and one dedicated cargo carrier (FedEx) provide air cargo services at TLH. Services provided by these carriers include air mail, air express, and air freight. At the present time, air cargo activity at TLH occurs among different areas of the airport. The first area, located east of the passenger terminal, includes a dedicated air cargo building and apron. The second accommodates combination carriers' air cargo activities inside the passenger terminal building and on the passenger terminal apron. Finally, the North GA ramp handles operations by FedEx, while the South GA apron accommodates freight forwarder operations.

Air cargo facility requirements at TLH were defined as part of a separate Air Cargo Study that was completed in 2003. This study used cargo activity forecasts and the application of accepted planning standards to determine the extent of facility expansion and enhancements that are needed and should be planned. The following section summarizes the conclusion and recommendations listed in the 2003 Air Cargo study. The air cargo activity forecasts from the 2003 study are included in **Appendix B** of this report.

As mentioned in the 2003 Air Cargo Study, the existing facilities used for air cargo operations can support the air cargo projected demand for up to ten years from now. However, relocation of the existing FedEx facility has been identified as a first priority while solving significant safety deficiencies on the North GA apron. The current mix of heavy commercial aircraft and light general aviation aircraft on this apron is not safe for operations or efficient with respect to facility layout. The consolidation of the air cargo facilities east of the passenger terminal area, adjacent to the existing air cargo building has been identified as the main concern.

Combination Carrier (Passenger Airlines) Building Requirements

Space requirements for the processing and handling of air cargo depends to some extent on the shipment size and whether it is air express, mail, or freight. The latter is typically stored for longer periods and developing the criteria for warehouse, office, or reception areas for air cargo processing can be complicated.

Interviews were conducted with the different air cargo tenants working at the airport. The interviews solicited information such as satisfaction with current facilities, levels of activity conducted from the airport, perceived facility needs, future plans, type of aircraft used, and anticipated fleet additions and/or changes. It is interesting to note that each tenant interviewed was asked whether they would desire less space than they currently occupy. None of the operators were interested in giving up or sharing the space they currently use for cargo operations. The following sections provide details of the air cargo building requirements as expressed by each combination cargo tenant operating at TLH.

AirTran Airways

Since they began operations at TLH in November 2001, the shipment of mail by AirTran Airways has been limited and the cargo non-existent. Nonetheless, AirTran's station manager indicated the eventual need for dedicated air cargo facility space, primarily to facilitate the handling of large shipments. Although the airline stopped carrying cargo in the bellies of their aircraft system wide after September 11th, plans are for this service to return, which would include TLH. It was further explained that the airlines' newer Boeing 717-200 passenger aircraft was much better suited to haul cargo when compared to their retiring DC-9 fleet. Because of the larger space and high bypass

engines, AirTran believes that their Boeing 717s would probably bulk out the cargo space long before they would run out of weight capacity.

In the event air cargo activity increases significantly for AirTran, the airline indicated an ultimate need for air cargo space similar to that which is currently occupied by Delta Air Lines or US Airways Express (2,240 square feet each). It could not be estimated by the airline when this space would be needed. However, in consideration of the air cargo forecast, it is anticipated that this need would begin around 2005.

Delta Air Lines

Delta leases 2,240 square feet of space inside the dedicated air cargo building located east of the terminal. According to the airline's station manager, this space currently meets their present needs. In fact, a visit of their facility showed that not only does Delta have plenty of space available for cargo staging, but that they were also storing items such as catering supplies.

Further discussion with the station manager indicated that Delta and its regional affiliates had plans to increase the number of daily mainline and regional jets flights serving TLH. At the time of the interview, the three daily MD88 flights were projected to increase to five and Comair's 12 daily Canadair Regional Jets to 18 daily flights. While the regional affiliates do not push cargo service, due to limited space in these aircraft, the mainline service does. It was stated that under the current three daily flights, the dedicated air cargo space was good, but once five daily flights are offered, there would probably be a need for additional space. Using a proportionate scale, the ultimate need would be for a total just over 3,700 square feet.

Therefore, approximately 1,500 square feet of additional dedicated air cargo space should be planned for Delta to support their operation at TLH. This would satisfy the current desire for slightly larger space in the air cargo building by the station manager. Much of this desire relates to the fact that due to new regulations, all Delta Dash and Priority First Freight customers now utilize the counter space at the dedicated air cargo building for the drop off and pick up of shipments. Much of this has to do with the fact that customers can no longer leave their unattended vehicles at the terminal curb front to run into the ticket counter or baggage claim office to drop off or pick up shipments. From the interviews, it appears that Delta would be interested in this additional space as soon as it becomes available.

Northwest Airlink

All packages carried by Northwest Airlink are currently stored within their leasehold inside the passenger terminal building. The airline does not expect any significant growth concerning its air cargo activity to and from TLH. This is primarily due to the size of the aircraft they fly into and out of the airport. The current Saab 340 turbo-prop and future regional jets provide very little available cargo space and therefore, limit the service or reliability that can be offered for air cargo. As such, the station manager does not see a need for any future dedicated air cargo space, stating that all future cargo should easily be handled within their terminal leasehold.

US Airways Express

US Airways Express leases 2,240 square feet of space inside the dedicated air cargo building. According to the airline's representatives, the space in this facility not only meets the current needs, but will also provide adequate space for all three of their code-share airlines providing service at TLH over the next 20 years. The primary reason for this is that airlines flying for US Airways Express only operate turbo-prop and regional jet aircraft, which have limited space for mail and cargo. Also, similar to Delta, the airline uses its space in the dedicated air cargo building for their express service, Packages Delivered Quick (PDQ), and for the storage of items such as catering supplies.

Based on the interviews with the combination carriers, a total of approximately 3,740 square feet of additional dedicated air cargo building space will be needed over the next 20 years. For comparison purposes, standard air cargo industry utilization factors were applied. The general utilization factor of 1.5 tons per square foot of cargo building was analyzed with respect to the dedicated air cargo building at TLH. However, this industry standard does not necessarily apply directly to the combination carriers operating at Tallahassee. In fact, the operations conducted at TLH do not include any unitized loads. Thus, a much lower pounds-per-square foot is expected. Also, both of the combination carriers utilize the space in their dedicated cargo facilities for the storage of supplies, ground support equipment (GSE), and even the occasional maintenance of GSE.

Therefore, based on the needs identified during the interviews with the passenger carriers, it is recommended that at least an additional 3,740 of dedicated air cargo building space be provided during the planning period. This would accommodate the space needs identified by AirTran and Delta. Ultimately, it is recommended that the airport should reserve the space necessary to double or even triple the amount of dedicated air cargo space for the combination carriers, including the U.S. Postal Service. Such space should be provided within the proximity of the passenger terminal building to ensure future efficiency of operations. Reserving this amount of space would allow the airport to adequately prepare for any unforeseen growth, such as another airline beginning service at TLH during the planning period. Perhaps more important, the planning of this space would enable the airport to adequately provide the space required for the airlines to conduct other activities such as the storage of supplies, equipment, or the maintenance of GSE.

Additionally, while some airlines have stated that they have enough space to accommodate their cargo services within their passenger terminal leaseholds, it may be necessary to segregate the two in the future. The separation of all cargo operations from the passenger terminal building would obviously provide more space to each respective airline. This separation, which is also regarded as a benefit when considering security issues, may be necessary depending on how the passenger terminal is configured with respect to the Transportation Security Administration's (TSA) new baggage and passenger screening requirements.

As presented in **Table D-1**, the recommendation for additional combination carrier building space is projected. Although this information is presented using the various planning year horizons, the actual timing of the building expansion(s) may vary considerably. As mentioned previously, the airport should consider needs beyond the planning period to ensure the facilities can be expanded when necessary. Also, by presenting the information in this format, it can be compared to the total cargo (both mail and freight) projected for the combination carriers over the 20-year planning period.

Table D-1 Combination Carrier Building Space Requirements				
Year	**Total Projected Cargo (pounds)**	**Total Recommended Space (square feet)**	**Existing Space (square feet)**	**Net Requirement (square feet)**
Base Year				
2001	2,008,004	6,720	6,720	0
Forecast				
2008	3,240,331	10,460	6,720	3,740
2013	3,905,216	13,440	6,720	6,720
2023	5,706,613	20,160	6,720	13,440

Source: The LPA GROUP INCORPORATED, 2002.

The existing location of the building, just east of the passenger terminal, is considered excellent. In fact, its short distance from the terminal reduces GSE travel and cycle times. Further, its proximity to the terminal allows for air cargo tenants to access the terminal without crossing active taxiways or runways. As well, the increased focus on security considerations since the September 11, 2001 terrorist attacks, movements of goods and persons in and out of secure areas is taking on added significance during the planning process. Thus, the dedicated cargo facility particularly benefits from its relation to the terminal area and secure side access. Finally, no space limitations for future expansion of either the ramp or building exists. It is recommended that any dedicated cargo space for the combination carriers be expanded following the design standards used for the construction of the existing building. Similarly, those airlines desiring additional dedicated air cargo space should be provided with a dedicated section of the building, meeting their needs, including the specific needs for loading and unloading docks and airside ramp for operations.

Integrated Carrier (FedEx) Building Requirements

FedEx is the only integrated-cargo carrier at Tallahassee and they currently operate out of a 6,276 square foot building. An interview with the representative from FedEx's Tallahassee operation indicated that the building facility meets the current and long-term demand of the company's bulk freight and express mail. However, if their share of the U.S. mail were to increase significantly, building capacity will become an issue as the floor space is configured with a caster deck to handle the FedEx cargo containers. Currently all of the U.S. mail handled into and out of Tallahassee by FedEx (approximately 160 bags a night) is carried in the bellies of their Boeing 727 aircraft.

Given the manner in which both freight and mail is handled in Tallahassee by FedEx, their operation reflects similarities to both the combination and dedicated cargo carriers with respect to building space. Thus, to estimate the future space needs for their cargo building, the industry utilization rate of 1.5 tons per square foot was applied. It should be noted that typically all-cargo facilities have a much higher pounds-per-square foot ratio than the combination carriers, due to using more unitized or container cargo load processing. Yet, as with the combination carriers, the rate at TLH is slightly lower than industry norms as this location is a non-hub station. In fact, many of the nation's fully integrated cargo carriers are starting to use 2.0 tons per square foot at their larger facilities for planning purposes.

Based on the 1.5 ton ratio and the projected cargo volumes for FedEx, it was calculated that a total of 10,676 square feet of space will be needed by 2023. Future building space requirements for FedEx are presented in **Table D-2**. As with the combination carrier building requirements, while the space has been projected for the various planning years, it does not necessarily represent the actual time the facilities will be needed. Many

other factors may change the timing of these needs or it may be decided that an expansion in the short term will include space for the long term. It should be noted that since no other integrated air cargo carrier was forecast to operate at Tallahassee during the planning period, these numbers only reflect those projected for FedEx.

Table D-2
FedEx Building Space Requirements

Year	Total Projected Cargo (pounds)	Total Recommended Space (square feet)	Existing Space (square feet)	Net Requirement (square feet)
Base Year				
2001	18,370,357	6,123	6,276	(153)
Forecast				
2008	20,557,029	6,852	6,276	576
2013	23,831,231	7,944	6,276	1,668
2023	32,027,181	10,676	6,276	4,400

Source: The LPA GROUP INCORPORATED, 2002.

In the Alternatives Analysis, space for an additional integrated carrier will be considered. While it is not expected for this space to be needed during the planning period of this study, the provision for additional space needs to be incorporated into the analysis. By including such space, the airport will not limit the future potential for another dedicated cargo carrier to be established at TLH.

Cargo Area Taxiway Requirements

As mentioned before, the critical aircraft for air cargo operations at TLH is the Boeing 727-200 operated by FedEx. Although the Boeing 727-200 is a Design Group III aircraft, it has a wheel base of 63.3 feet, which requires an even greater taxiway width and edge safety margin, than others in the same group. The standard Design Group III taxiway width is 50 feet, but for the Boeing 727-200, 60 feet is required. Similarly, the Design Group III taxiway edge safety margin is normally 10 feet; however 15 feet is required for the Boeing 727-200. The edge safety margin is the minimum acceptable distance between the outside of the airplane wheels and the pavement edge. **Table D-3** presents all of the taxiway dimensional standards to be applied at TLH for those facilities dedicated for air cargo operations.

Table D-3
Air Cargo Taxiway Dimensional Standards

Item	Boeing 727-200 (Design Group III)
Taxiway Width	60 feet
Taxiway Edge Safety Margin	15 feet
Taxiway Shoulder Width	20 feet
Taxiway Safety Area Width	118 feet
Taxiway Object Free Area Width	186 feet
Taxilane Object Free Area Width	162 feet

Source: FAA AC 150/5300-13 Change 6.

The taxiways leading up to the existing FedEx aircraft parking apron all meet Design Group IV standards at 75 feet wide. The taxiway that connects the apron in front of the dedicated air cargo building with Taxiway P is 65 feet wide. While this taxiway does not meet the airfield's Design Group IV standard, it does meet the requirement for the Boeing 727-200, which is considered the critical aircraft for this portion of the airport. As

such, no taxiway improvements are necessary for the existing air cargo facilities. All future cargo taxiways/taxilanes will have to accommodate, at a minimum, the standards described above. In addition, any future taxiway or taxilane parallel to Taxiway P will need to maintain the centerline to centerline separation standard of 215 feet for Design Group IV aircraft.

Cargo Aircraft Parking Apron Requirements

Aircraft parking apron requirements are addressed for both the combination carriers and FedEx. The following sections address setback, space, and strength requirements for the ramp areas currently supporting air cargo operations, as well as for those proposed in the future.

Critical Cargo Aircraft Space Requirements

All of the combination carriers operate their aircraft into and out of the passenger terminal apron. The mail and freight shipped inside the belly of these aircraft is never containerized at TLH. Instead the various items are delivered to the aircraft from either the dedicated air cargo building or passenger terminal via tugs and baggage cart trains. The existing passenger terminal apron provides more than 700,000 square feet of space, which is sufficient to support the belly-haul cargo operations that are conducted simultaneously with other passenger aircraft services.

Of more significance is the space that will be required for the aircraft parking aprons dedicated strictly to air cargo operations. Aircraft parking apron needs for the all-cargo carriers were determined to meet the peak operational demand. This was done by examining the existing and future cargo fleet mix, aircraft dimensions, and minimum separation standards for the safe operation and movement of aircraft. While the ultimate ramp size will depend on the final configuration of the buildings, parking areas, and movement areas, this section provides the basic dimensional criteria required to accommodate the anticipated air cargo fleet.

Based on the interviews with air cargo tenants and data from the activity forecasts, at a minimum, the dedicated air cargo apron space in the short term needs to accommodate one Boeing 727-200 and a mix of feeder aircraft which would include two Cessna 208B Caravans and one Fokker F27 Friendship aircraft. As the cargo activity at the airport increases, the needs to be capable of accommodating at least two narrow body aircraft such as the Boeing 727-200 and approximately six turboprop airplanes for the feeder services. As with the cargo building requirements, the airport should ultimately plan for additional dedicated cargo aircraft space to accommodate expansion beyond for the planning period. Therefore, at a minimum the cargo ramp should be able to accommodate three narrow body aircraft such as the Boeing 727-200 and ten feeder aircraft.

In the 2001 Aviation Activity Forecasts, the future fleet mix for the FedEx feeder included the Ayres Loadmaster LM200, which was slated to replace aircraft like the Cessna Caravans and Fokker F27s. The packages delivered by FedEx feeder aircraft are ultimately shipped in containers on aircraft like the Boeing 727 and MD-11. Because of the time required to place the packages either into or out of the containers, FedEx wants a new feeder aircraft that can handle a small number of the containers, thus reducing the time to transfer cargo between facilities and aircraft. This need predicated the design of the Loadmaster LM200. Unfortunately, shortly after the 2001 Aviation Activity Forecasts were published, the Ayres Corporation was going through bankruptcy and FedEx pulled out of the program. Nonetheless, FedEx still desires a new feeder aircraft with the capabilities of the Loadmaster LM200 for its future operations. It is assumed that FedEx will eventually have feeder

aircraft with similar dimensions to the Loadmaster LM200; as such, its dimensions are used along with those for the Boeing 727-200 for future cargo ramp planning. The basic dimensions for these two aircraft are outlined in **Table D-4**.

Table D-4
Critical Cargo Aircraft Dimensions

Aircraft	Wingspan	Length	Height
Feeder Aircraft	64.0 feet	69.0 feet	22.5 feet
Boeing 727-200	108.0 feet	153.2 feet	34.9 feet

Source: The LPA GROUP INCORPORATED, 2002.

At a minimum the various aircraft also need adequate separation from the facilities in and around the ramp area. Any parking positions near buildings must have adequate nose or wingtip clearance. It is recommended that buildings be set back at least 50 feet from the nose (for pushback positions) or wingtip of any parked aircraft. Not only does this spacing enhance the safety of aircraft movements, it also provides the space required for the movement of GSE equipment around the aircraft, taking jet blast into consideration. For non-pushback parking positions, enough space must be provided to allow the aircraft to enter and exit its parking position while maintaining clearance from other aircraft. Finally, adjacent aircraft parking positions need to provide a minimum width of 25 feet between aircraft for wingtip clearance.

Ground Support Equipment (GSE) Space Requirements

Cargo apron service roads need to be provided for tug and cart access, as well as for the other vehicles required to service the aircraft. Service roads with a 25-foot width need to be provided to, from, and around each aircraft position. Since nearly all cargo carriers use containers or pallets, which vary in size and weight, specialized equipment is necessary for their movement. Additional space on the cargo ramps will be required to ensure the safe and efficient loading and unloading of cargo with this type of specialized GSE. Finally, especially for FedEx, any future air cargo ramp space needs to provide the space for the storage and sequencing of cargo containers, and for other support equipment such as ramp lighting fixtures or ramp pancake scales.

Cargo Apron and Taxiway Pavement Strength Requirements

As stated previously, the Boeing 727-200 is the critical aircraft with respect to airport pavement loadings. Any future airside cargo facilities such as parking aprons or taxiways to and from those aprons need to have a strength capable of accommodating the Boeing 727-200 aircraft. Boeing publishes a maximum ramp weight of 210,000 pounds for its passenger Boeing 727-200 aircraft. However, according to the 2001/2002 edition of JP Fleets, a number of FedEx's 200 series Boeing 727s are configured to accommodate a MTOW of approximately 246,825 pounds. Thus, any future air cargo ramp areas and the taxiways/taxilanes serving them, need to be able to accommodate static loads greater than this weight, using the Boeing 727-200's dual wheel landing gear configuration.

The exact strength of the existing dedicated air cargo building's asphalt apron was not available. Since the entire airfield's critical aircraft for pavement strength is the Boeing 727-200, it is assumed that the pavement is capable of accommodating the weight of this aircraft. Nonetheless, before an operator of a large cargo aircraft (anything over 12,500 pounds) is allowed to utilize this ramp, the existing pavement strength should be verified. Similarly, detailed information on the FedEx ramp

was not available; however, since Boeing 727-200 currently operate in this area, it is assumed the pavement is designed for the load of these aircraft.

Cargo Apron Safety Concerns

The current aircraft parking apron used by FedEx located on the North GA ramp provides enough space to support two Boeing 727 aircraft and a mix of feeder aircraft. However, this 126,000 square foot ramp, as well as the entire FedEx facility, is located right in the middle of general aviation facilities. As such, nearly all of the movements and aircraft storage (inside and out) on this side of the airport is conducted by light single and multi-engine general aviation aircraft. These aircraft could easily be damaged by the jet blast associated with operations of the Boeing 727-200. Likewise, any loose object on the pavement can become a missile when projected by such jet blast, with the potential to significantly injure or even kill general aviation pilots and passengers.

Given this safety concern alone, it is recommended that ultimately all of the FedEx facilities be relocated to the east side of the airport, in the general vicinity of the existing dedicated cargo building. This relocation would enhance the airport operations and safety by concentrating air cargo operations on one side of the airfield while maintaining general aviation operations on the other. Currently a majority of the general aviation development proposed for TLH is along the flightline on the east side of Runway 18-36, around FedEx's facilities. In addition, relocating FedEx adjacent to the existing dedicated air cargo building would provide their operation with frontage on the primary runway for the airport. Ultimately this could have beneficial impacts on the community with respect to noise, as nearly all of the current late night air cargo operations are conducted off of Runway 18-36 to the north. It has been documented that this activity contributes to the existing noise impacts north of the airfield.

Air Cargo Infrastructure Requirements

This section examines the necessary ancillary facilities at TLH to support air cargo activity. Included in this analysis are aviation and airport-specific support facilities critical to the daily cargo activity. Specific functional areas studied include security, landside access, automobile parking, tractor-trailer parking and storage, aircraft fueling, and additional ground support equipment issues.

Security Requirements

No matter how future air cargo facilities are developed or operated, all must incorporate the proper means to protect aviation security. Each of the alternatives addressed in this study need to ensure that the functionality of the layout does not compromise security or efficiency. As indicated earlier, the recommendation to place freight forwarder operations in the vicinity of the dedicated cargo building will only work if the two operations are independent. The rules governing the commercial air carriers and those of the general aviation freight forwarders need to be considered, as there are significant differences between the two. Each alternative in the following chapter will reflect the fencing and security measures necessary to protect aircraft and airport operations.

Landside Access

The two-way road providing access to the dedicated air cargo building is connected to the exiting half of the passenger terminal access loop. While this road is properly sized for the automobile and truck

traffic expected to use it, the fact that it dead-ends at the air cargo building requires all vehicles to join the terminal access road to return to Capital Circle. Even if this was not the case, each vehicle going to the air cargo building must make a left turn across those vehicles exiting the terminal curb front. This is not an ideal situation and should be abandoned in the future.

Whether the air cargo facilities are expanded or not, the access to this building should be evaluated as part of the alternatives analysis. To minimize the impacts those vehicles entering and exiting the cargo area have on the terminal loop road, an alternative access route should be explored. While a dedicated access route to and from the air cargo facilities would require an additional curb cut along Capital Circle S.W., it is considered necessary as the cargo facilities and related traffic on this side of the airfield expand. For two way traffic, truck access roads should be provided at a minimum width of 26 feet.

The current two-lane access into the FedEx facilities is adequate at this point. As suggested by FedEx management, some improvements could be made such as reconfiguring the way it ties into the parking lot or even to create a complete loop back out to Capital Circle. However, since the recommendation of this study is to ultimately relocate FedEx's facilities to the east side of the airport, no improvements are necessary for this access road. Alternatives for the future access into the relocated FedEx facilities will be incorporated with the access improvements recommended for the dedicated air cargo building.

Automobile Parking

Currently at the dedicated air cargo building, both public and employee automobile parking is provided by two lots. The ten spaces in these lots meet the existing demand. However, now that the priority package customers for Delta and US Airways Express must use the dedicated air cargo building, additional parking will eventually be needed for this service to continue at this location. As the volume of freight and mail by the combination carriers slowly increases over the planning period, so to will the need for additional automobile parking spaces. Thus, as additional facilities are built on this side of the airport, an adequate number of parking spaces need to be provided. For general planning purposes, the current 10 spaces provide adequate support of the existing dedicated air cargo building. Therefore, at least 30 spaces should be included in layout, which will allow the building to ultimately triple in size.

Under the current leasehold for FedEx, a 16,500 square foot space is allocated for automobile parking. This area is part of a much larger parking lot that served the old passenger terminal building. There are numerous spaces in this area and management stated automobile parking was not a problem. However, when FedEx's facilities are relocated, a dedicated vehicle parking lot for employees and customers will need to be provided. For the future, a matching 16,500 square feet of parking space would be more than sufficient if properly configured. Using the general development standard of three cars for each 1,000 square feet of commercial building space, the ultimate FedEx facility would only need 30 automobile spaces. At 300 square feet for each parking position, 16,500 square feet could provide 55 spaces. Based on the interview with FedEx management, this is more than ample space for their operation at TLH over the next 20 years. While the overall freight for FedEx is expected to increase, the nature of their operation does not directly equate to a need for additional automobile spaces. A minimum of 30 spaces should be provided.

Of more concern for the facility planning is related to the additional space required for delivery trucks, which is addressed in the next section. It should be noted that the alternatives for future cargo facilities address how the existing parking lots can be expanded and/or relocated. And, for each alternative, the location of the automobile parking takes into consideration its proximity to the truck movements into and out of the loading bays.

Tractor Trailer Parking and Storage

Each of the three tenants at the existing dedicated air cargo building have one or more truck loading docks. As the facility expands, each individual leasehold will require at least one dedicated loading dock. The overall number for each tenant will depend on the building configuration and size of the individual leasehold. The existing landside truck ramp area for FedEx provides approximately 14,000 square feet of space and includes five docks. Although this area is considered to provide sufficient room for the loading and unloading of cargo in the short-term, additional docks will be needed as the FedEx building is expanded. The ultimate number of truck loading bays will vary based on the size and configuration of the building. It is certain that representatives from FedEx will be involved in the layout of their building when it is relocated and/or expanded.

An area of 23,400 square feet is leased to FedEx for the parking and storage of their tractor-trailers. Using a 12 by 70 foot tractor-trailer parking stall dimension, this area can accommodate approximately 27 trailers in a tight configuration. According to FedEx management, this paved parking, adjacent to their automobile parking, provides sufficient space for the 20-year planning period. It is suggested that the same amount of space should be provided at the relocated facility. As a safety measure, it is recommended that the trailer parking have better separation from the employee and customer parking. Each of the cargo development alternatives attempts to segregate these two operations.

Aircraft Fueling

Currently all of the aircraft fueling at Tallahassee Regional is conducted through the use of fueling trucks operated by Flightline. The same is expected to be true for all of the air cargo operations in the future. Therefore, as with the tugs, safe and secure access needs to be provided between Flightline's facilities and any of the future air cargo aircraft parking areas.

Additional Ground Support Equipment (GSE) Considerations

While a certain amount of space is required to accommodate the GSE supporting cargo aircraft, other operations with this equipment will require additional space. If one or more of the tenants decides to not only store, but also maintain GSE out of their dedicated air cargo leaseholds, more space than that described previously will be required. For dedicated storage (as FedEx sometimes does) and maintenance, additional space must be provided around the cargo facilities. The space needs to be adequate enough to support the intended purpose without obstructing their primary role to support aircraft operations. To be more specific, the amount of GSE vehicles on the active ramps should be limited to that required to support daily aircraft operations. Thus, some storage and maintenance space should be provided for the parking, staging, and/or repair of GSE. Ultimate space requirements will depend on the needs of the tenant. For planning purposes, space will be dedicated in the various alternatives, which will allow operations of this sort to be conducted in the cargo area.

Express Courier and Freight Forwarder Requirements

The use of the South GA ramp by the various express courier and freight forwarding companies leads to some security and safety issues. To prevent this, it is recommended that the appropriate building and ramp space, as well as other requisite facilities, be designated to support the activity by these various operators. Unfortunately, sizing the appropriate facilities is difficult as many times such a decision is a business one based on level of service or other factors. Nonetheless, dedicated facilities should be planned with enough space for the storage of any cargo, equipment, or supplies. In addition, building space should be made available to support all aspects of the express courier and freight forwarding operations, including, but not necessarily limited to: office space, a flight planning room, restrooms, telephones, and lounge.

Whether this building space is provided through the existing Flightline terminal facilities or by another structure is not significant. Of importance here is the security issue associated with the airside portion of these operations. The proper aircraft parking space needs to be provided and configured in such a manner to allow the necessary delivery and pick-up of cargo, while preventing unauthorized access to the airside of the airport. Given the south ramp's proximity to the passenger terminal building, the current practice of allowing delivery vehicles with access to the airfield for loading, unloading, drop-off, or pick-up services is unacceptable. This mode of operation significantly compromises the entire airfield security.

To combat this, it is recommended that all of the express courier and freight forwarding operations conducted at the airport be required to meet some standards to ensure that airport security is not compromised. The airport needs to establish minimum standards which once enforced would ensure that only properly authorized individuals and vehicles are allowed on the airside. A good option would be to relocate the existing express courier and freight forwarder operations in an area other than the south ramp. For example, space on the northern half of the airfield would allow the segregation of the express courier and freight forwarding operations from those associated with passenger activity. In fact, should FedEx move to the east side of the airport, their abandoned facility and ramp would provide an ideal location for the express courier and freight forwarding operations. At a minimum, the appropriate aircraft parking space should be provided for all of the commercial FAR Part 135 cargo operations. Currently this space would need to accommodate a minimum of four Cessna 210s and one Shorts Skyvan. While no forecasts were developed, this type of activity is expected to increase such that twice the ramp space should be provided in the future.

Appendix E – Parking Feasibility Study
Chapter 1: Inventory of Existing Conditions

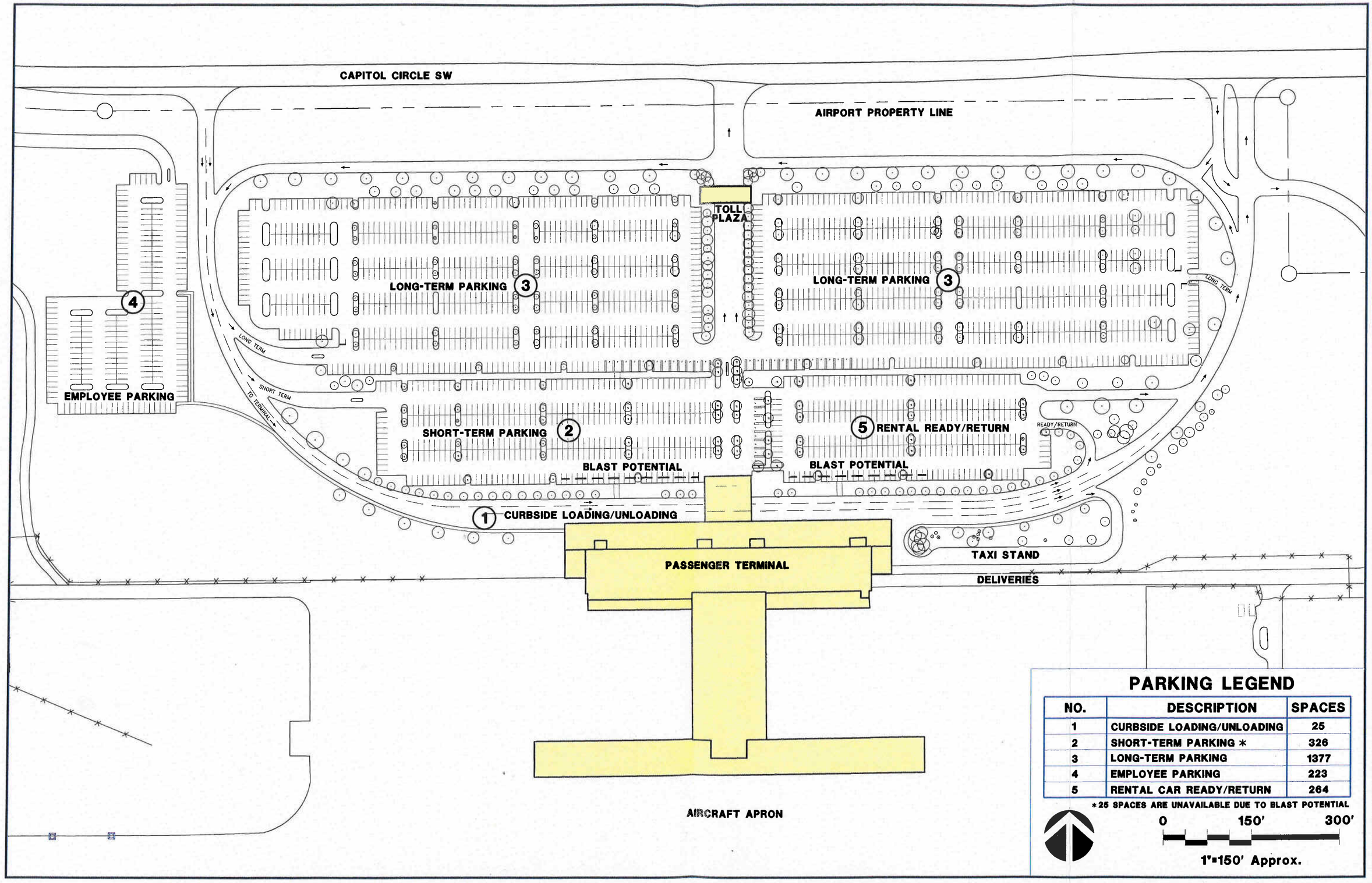
Introduction

In 2003, the airport hired The LPA Group Incorporated to evaluate the terminal area and the feasibility of expanding its parking facilities to accommodate future growth. This report documents the first phase of that effort – the inventory of existing conditions. The increasing level of passenger activity at the Tallahassee Regional Airport has prompted the need for this parking expansion feasibility study. The public parking lots have been estimated to experience 85 percent (short-term) and 95 percent (long-term) of their respective capacities during peak periods. The addition of approximately 90 new Transportation Safety Administration (TSA) employees is expected to increase the demand on the employee parking lot as well. It has been determined that the rental car ready/return lot (250 spaces) is currently adequate, however, the rental agencies are asking for covered spaces for their priority customers. From Capital Circle Southwest the terminal loop road transitions up approximately 15′ to the level of the terminal curb-front and then back down once passed the terminal building. The elevation of the parking lot areas within the loop road is also approximately 15′ below the curb road. A series of stairs and ramps provides pedestrian access between the two areas. This report identifies and discusses the existing usage of each of the terminal area parking and roadway functions.

In addition to parking capacity, any increase in the size of the existing parking lots, or the addition of new lots, will have a direct affect on the drainage system of the terminal area. A preliminary study of the existing retention/detention ponds is included in this project to address the functionality and capacity of each currently serving the drainage requirements of the parking facilities at TLH.

Access Roadway

The public, within the Tallahassee region, accesses the Tallahassee Regional Airport terminal area via Capital Circle Southwest. The primary public entrance to the terminal area is via the terminal loop road, which intersects Capital Circle Southwest east and west of the terminal area. Traffic on the terminal loop road is one-way. Access to the long-term and short-term public parking lots is provided prior to arriving at the terminal curbside. A second entrance into the long-term parking lot is provided beyond the terminal curbside. Vehicles leaving the long-term and short-term lots use a common exit drive that passes through a toll plaza. At curbside, there is a lane for parallel curbside parking, a lane for double parking and maneuvering, and two drive lanes for flow through traffic. The rental car ready/return lot is entered from the loop road only after passing in front of the terminal building. Vehicular traffic leaving the terminal curb is provided the option of re-circulating back to the terminal building, parking lots, and rental car lots on the loop road, or exiting the terminal complex at the east intersection with Capital Circle Southwest. **Figure 1-1** illustrates the terminal loop road and key parking areas of the Terminal Area Complex



PARKING LEGEND

NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING *	326
3	LONG-TERM PARKING	1377
4	EMPLOYEE PARKING	223
5	RENTAL CAR READY/RETURN	264

*25 SPACES ARE UNAVAILABLE DUE TO BLAST POTENTIAL

0 150' 300'

1"=150' Approx.

Figure 1-1

Terminal Building Curbside

Directly adjacent to the curb, outside the terminal building, are 25 parallel curbside parking spaces for attended vehicles. The curbside parking consists of passenger unloading and loading, ground transportation, and taxi and limousine service. A canopy extends the length of the terminal building above the single curbside-parking lane. A covered walkway provides weather-guarded passage from the center of the terminal building to the short-term, long-term, and rental ready/ return lots located across the terminal loop road. National Security levels enact varying degrees of security within the terminal area, these affect the way traffic accessing the terminal building is handled. At higher levels of security cars are not permitted to park in front of the terminal, while at lower levels they are allowed to do so, provided they are not left unattended.

Short-Term Parking

The short-term parking lot is located across the access road from the terminal building in the southwest corner of the area within the loop road, and its entrance is in the northwest corner of the lot. Vehicles exit the parking lot through a one-directional gate into the long-term lot and a drive leading to the common toll plaza. The short-term lot consists of 351 spaces, however 8 are reserved for handicapped use, and 25 have been blocked off due to blast potential leaving 326 effective spaces available. If the airport elected to conduct searches of vehicles entering the short-term lot, then those spaces could be re-opened for use.

Long-Term Parking

The long-term parking lot is located just to the north of the short-term lot and the rental car ready/return lot within the terminal loop road. The first entrance to the lot is on the southwest corner of the lot before the entrance to the short-term lot on the loop road. The second entrance to long-term parking enters from the east side of the lot once you have passed the terminal building and the entrance to the rental car ready/return lot. Tallahassee Regional Airport currently does not have a parking lot shuttle system; therefore the longest walk to the terminal experienced by a passenger is approximately 840′. Traffic leaves via the common toll plaza centered in the long-term lot. This lot consists of 1,377 spaces; twenty-two are reserved for handicapped use, which is considered by the Florida Building Code to be deficient by two spaces.

Exit Toll Plaza

All vehicles leaving the short-term and long-term surface lots are directed to a common exit toll plaza located within the long-term parking lot. This facility provides three exit lanes and space for 11 cars to stack in each lane. Currently all three lanes have booths for manned operation, however, one is equipped for automatic credit card payment but is rarely staffed.

Employee Parking

Employee parking is located northwest of the terminal building outside of the terminal loop road. A connecting road provides access to and from the employee parking lot from Capital Circle Southwest west of the entrance to the terminal loop road. A sidewalk connects this lot to the terminal building. Its maximum walk distance to the terminal entrance is 1,041′. The employee parking lot consists of 223 spaces. Provisions are made so that any employee with a disability may use the handicapped parking spaces closer to the terminal.

Rental Car Ready and Return

The rental car ready/return lot is located in the southeast area within the terminal loop road. Its entrance and exit are accessed from the loop road after passing in front of the terminal building. There are currently eight rental car agencies serving Tallahassee Regional Airport, six of which are on-site. All rental car agencies currently have off-site maintenance facilities, most of which are located on Capital Circle Drive. Dedicated spaces per agency range, among the six current on-airport companies, from 38 to 60 total spaces per agency. This parking lot has no dedicated handicapped parking spots, however, each rental car agency provides alternate accommodations to their handicapped patrons. The ready/return lot is the only parking lot that exits out onto the terminal loop road. Rental cars entering the lot are inspected for explosives so that the entire 264 spaces of the ready/return lot can be used. If the vehicle searches were discontinued, then the 21 spaces closest to the terminal would be blocked off.

Existing Parking Lot Totals

Table 1-1 Summarizes the existing Terminal Area parking lot capacities:

Table 1-1
FACILITY REQUIREMENTS SUMMARY

Parking Lot	# Spaces
Curbside Parking Spaces	25
Short-Term Surface*	351
Long-Term Surface	1377
Employee Parking	223
Rental Car Ready / Return	264

*25 spaces are not currently available due to blast potential

Retention/ Detention Ponds

Figure 1-2 illustrates the key Drainage Functions of the Terminal Area

There are three (3) significant detention ponds located within the study area. Figure 1-2 identifies these areas and the inlet and pipe systems draining to them. One is located northwest of the employee parking, the other two are larger and are symmetrically located east and west of the loop road and terminal parking. All three ponds serve as detention basins which function by percolation of the water into the ground. No outfall or relief is provided. The ponds vary in size, and the watersheds, which drain to them. The pond to the west of the parking area drains the western portion of the parking lot. The northwest pond drains the employee parking lot and a portion of the long-term parking. The largest pond to the east drains the eastern half of the parking area and is interconnected to the entire drainage system around the terminal ramp.

At the east pond's deepest point to the south, it is 15′ below the surrounding grade. This is due to the higher ground elevation of the terminal and the terminal ramp. At the north end, it is only 8′ deep. The west pond is 10′ deep at it's eastern most point and 8′ to the west. The northwest pond is a uniform 15′ in depth. The bottom elevations of these ponds are a function of the elevations of outfall pipes, which drain to them. The pond bottoms are set at elevations that provide outfalls from the pipe systems from the parking areas which drains to them.

Table 1-2 Compares the size of the ponds, and the volume of earth, required to level and fill the areas:

Table 1-2
DETENTION/RETENTION POND CAPACITIES

	Volume	
Pond	(ft^3)	(cy)
Northwest	375,000	13,900
West	420,000	15,500
East	1,325,000	49,000

Inlets are positioned in the parking lot and are interconnected to drain to the ponds as described above. Curb inlets for the terminal access road also drain to these areas. A critical element in the design of such ponds is the overflow elevations. For these relatively deep ponds (when considering the highly permeable soils) the overflow occurs not at the banks, but at the top elevation of the lowest grate inlet. If during a critical storm event the pond begins to fill up, water will back up and flow out of the grate inlets before it ever nears the top of bank. The detention capacity of the ponds is, however, significantly less that the overall size of the excavated area.

Table 1-3 Illustrates the lowest grate elevations for the inlets and corresponding ponds in which they drain to:

Table 1-3
EFFECTIVE POND SIZES

Pond	Inlet Elev.	Pond bottom	Useable depth of pond	Actual Depth
Northwest	54.77	45.00	9.77′	15′
West	61.00	55.50	5.50′	8-10′
East	59.00	52.50	6.50′	8-15′

The pond depths do not appear to be excessive, i.e., they were not created as a one time borrow pit for terminal construction. Pipe slopes are set at minimums and thus the pipe outfalls are at the highest possible elevations. This is what controls the pond depths. Standing water is rarely seen in these ponds. This is due to the highly permeable soils inherent with the terrain around the airport.

EXISTING DRAINAGE

CONTOURS ARE AT 1' INTERVALS

CAPITOL CIRCLE SW

NORTHWEST
VOLUME= 14,000 CY
45'.0

4
EMPLOYEE PARKING

LONG-TERM PARKING

TOLL PLAZA

LONG-TERM PARKING

SHORT-TERM PARKING

RENTAL READY/RETURN

WEST
3
VOLUME= 15,500 CY
55.5'

52.5'

5
EAST
VOLUME= 49,000 CY

DELIVERIES/ AIR CARGO

PASSENGER TERMINAL

TAXI

DELIVERIES

1
VOLUME=182,698 FT.^3

2
VOLUME=390,957 FT.^3

AIRCRAFT APRON

3 VOLUME=103,459 FT.^3

5 VOLUME=49,357 FT.^3

4 VOLUME=93,487 FT.^3

Figure 1-2

Appendix E
Chapter 2: Concepts Development

Parking Improvement Options

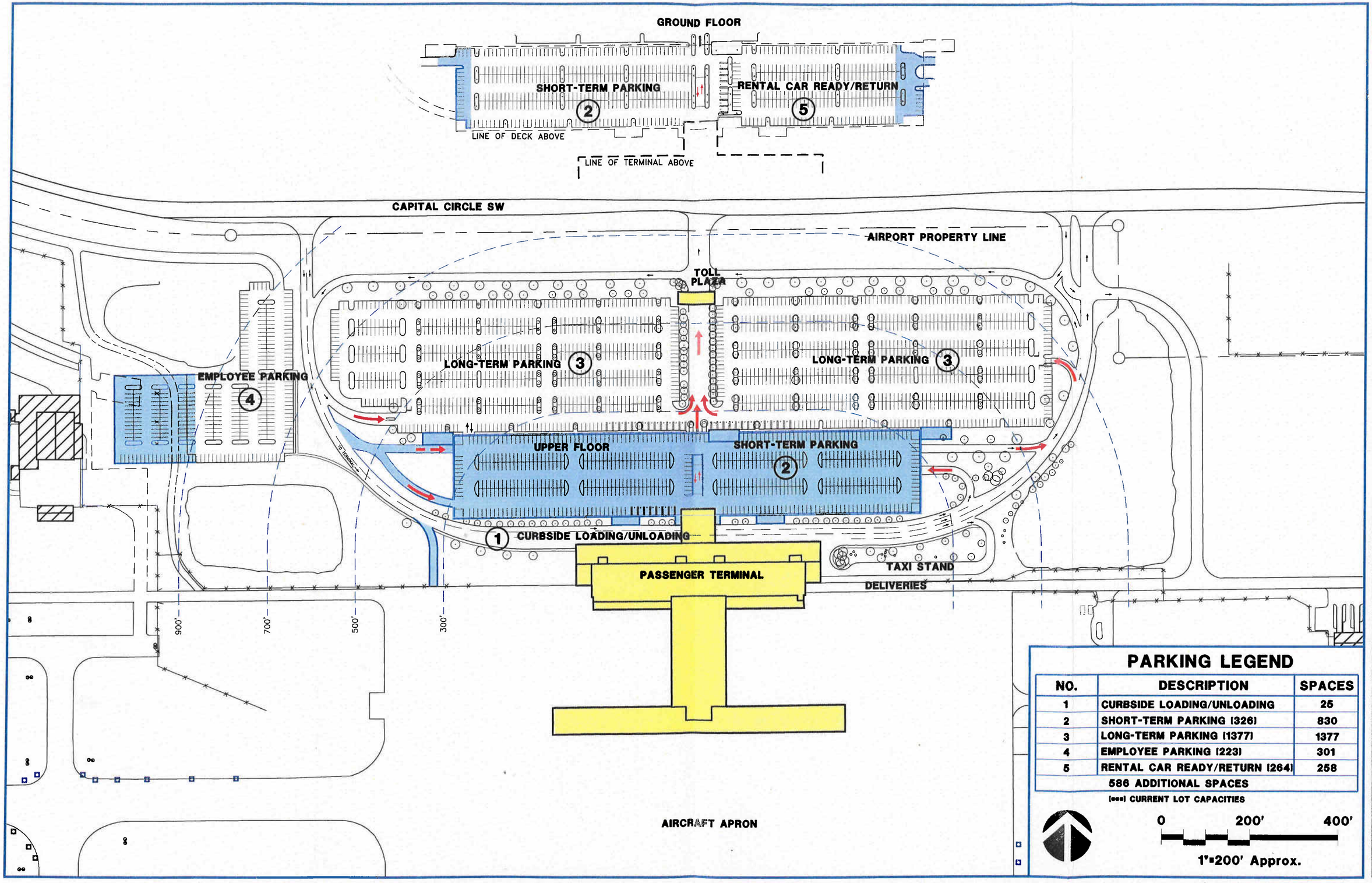
The Tallahassee Regional Airport has experienced increasing levels of aviation activity, which in turn creates a greater demand for parking. Although the airport has recently increased the size of the long-term lot, the current short-term and the expanded long-term lots are experiencing occupancy rates of 85 percent and 95 percent respectively. In spite of this recent 180 space expansion of the long-term public parking lot, the airport has identified the need for an additional 400-600 spaces. Included in this 400-600 space number is the requirement of approximately 90 additional spaces to meet employee parking demands brought on by the addition of the TSA staff now operating at TLH.

Five (5) concepts have been developed that meet the additional space requirements through various expansion scenarios. Each concept, while meeting the projected parking demands as provided by the airport, is unique in its approach to the layout of the public parking areas. When used in conjunction with one another, various concepts may fulfill the long-term parking needs. While some concepts have minimal impact on the surrounding site others involve greater impacts such as the relocation of various roads, parking lots, and/or detention ponds. The following report shall identify and discuss key issues of each of the concepts provided.

Concept One

Concept One is based on the construction of a parking structure over the existing surface short-term and rental car ready/return parking lots. This structure would be north of the terminal building directly across the terminal access road. In addition to the main parking expansion accommodated by the new parking deck, the existing surface employee parking lot is expanded to the west. This concept increases the overall parking capacity of TLH by 586 spaces, divided between the short-term and employee parking lots. The existing short-term and rental car Ready / Return lots located on the lower level of the new parking structure will require expansion to accommodate the footprint of the structure above. The majority of short-term parking, approximately 500 spaces, is located on the second level of the parking structure, while the remainder is located on the ground floor adjacent to the rental car Ready / Return lot. The 90-space expansion of the employee lot requires that the apron access road be abandoned and removed.

A reconfigured access lane provides entry to the lower level of the deck, while a new ramp is used to access the upper level short-term parking spaces. A two-lane ramp in the center of the structure allows short-term customers the ability to circulate between floors. With the upper level of the structure at the same elevation as the terminal curb road, direct access is provided from the short-term lots to the main entrances of the terminal building. Traffic exiting the upper and lower level parking lots still uses the existing centrally located tollbooth.



PARKING LEGEND

NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING (326)	830
3	LONG-TERM PARKING (1377)	1377
4	EMPLOYEE PARKING (223)	301
5	RENTAL CAR READY/RETURN (264)	258
	586 ADDITIONAL SPACES	

(###) CURRENT LOT CAPACITIES

0 200' 400'

1"=200' Approx.

Concept One

The cost for this option considers a complete reconstruction of the lower level surface parking into the ground level of the parking structure. This is due to the construction disturbance associated with the removal of the landscaped islands and the column footings. It is not known at this time whether spread footings or piles will be required, however, it will be impossible to maintain the structural integrity of the asphalt during the construction. Most likely, concrete pavement will be required for this lower level, attributing to the high cost per new space of the overall work.

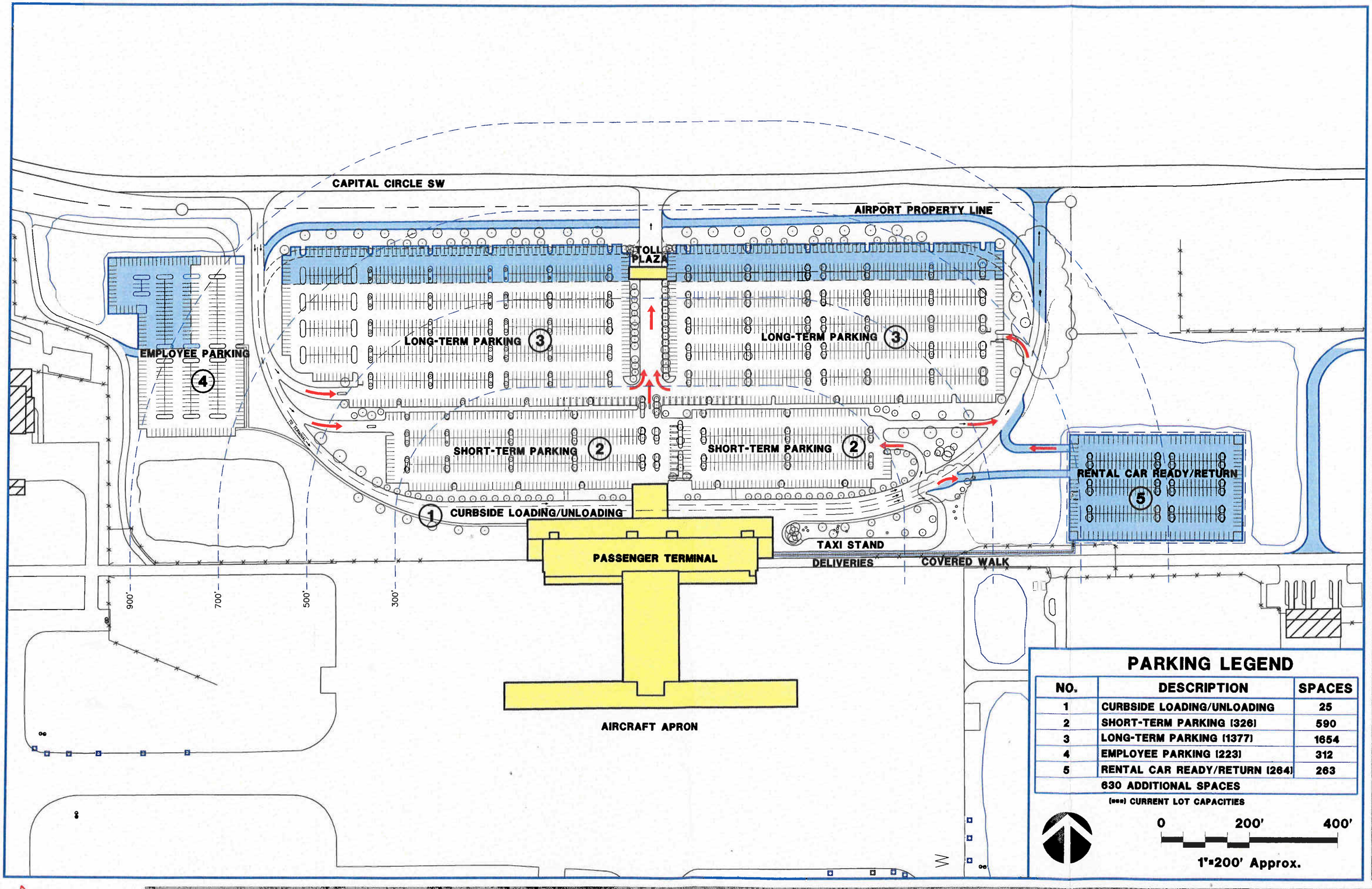
The construction of a two level (ground and upper) parking deck will have the smallest overall impact on the existing site, yet the actual construction of the facility will involve a great deal of phasing to leave portions of the existing short-term and rental car ready/return lot open for use until complete. While the constructability and cost implications of this option is somewhat concerning it does provide a solid solution to several areas of concern. The future parking requirements are met, the rental car companies are provided with covered parking for their premium customers, and passenger walk distances remain the same.

Concept Two

Concept Two provides the desired expansion through surface expansion rather than structure construction. It accomplishes this by relocation the terminal recirculation road north to make way for three additional rows of parking. It provides 277 more spaces in the long-term parking lots. This concept also relocates the rental car ready/return lot and expands the employee lot. A new 263 space rental car Ready / Return lot is included outside the terminal loop road east of the terminal building and a 90 space expansion of the employee parking lot is included to the northwest. The total parking capacity of the airport increases by a total of 630 spaces. Relocating the terminal loop road is essential to this concept, in that it provides the room necessary to expand the long-term parking lot to the north. To free up space within the loop road the rental car ready/return lot is moved outside of the loop to the east of the terminal building, this additional space allows for expanded short-term parking functions. The option of adding a canopy to a portion or all of the ready/return lot is available, providing the rental car companies with covered parking for their customers.

The northern relocation of the terminal recirculation road maintains the existing traffic flow pattern. Passengers who wish to use the long-term and short-term parking lots use the existing entry roads to the respective parking lots. The existing rental car entrance drive becomes the new “downstream” entrance to the short-term lot, while the existing long-term lot access remains the same. The Ready / Return lot exit onto the loop road would be abandoned in order to force traffic to use the existing toll plaza. Access to the rental car ready/return lot is provided by a new set of entry and exit drives located downstream from the terminal building. The new rental car ready/return parking lot would be lower than the terminal roadway due to the drop in topographic elevation in this area. The majority of the elevation change would be accomplished in the entry and exit drives to the lot, allowing the lot to be relatively level. A new entry to the expanded employee parking lot is also created to accommodate the reconfiguration of the detention pond to the northwest of the lot.

Concept two will have a major impact on the existing site. To fully execute this concept, several roads and detention ponds must be realigned or relocated. The delivery and air cargo access will



PARKING LEGEND

NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING (326)	590
3	LONG-TERM PARKING (1377)	1654
4	EMPLOYEE PARKING (223)	312
5	RENTAL CAR READY/RETURN (264)	263
	630 ADDITIONAL SPACES	

(###) CURRENT LOT CAPACITIES

0 200' 400'

1"=200' Approx.

be re-routed to provide a separate entrance across from Lake Bradford Road in a separate, upcoming project and the cost for this work is not included in the analysis. To construct this at grade parking lot, fill would be required to bring the site up to grade. Both the detention pond to the northwest and the pond directly east of the terminal building will undergo major reconfigurations to accommodate this concept. Impacts to these ponds will be compensated by expansion into other directions. This concept, while meeting the parking requirements has several disadvantages, such as the amount of roadway and detention pond reconfiguration involved, and the increased walk distances from the employee parking lot and the rental car lot. The maximum walk distance from the terminal to the rental car ready/return lot currently is 300'. The new configuration increases this distance to almost 1,100'. It may be possible during a detailed design analysis to decrease this distance to 1,000 but the closest space will be approximately 600', twice as far as the furthest space currently.

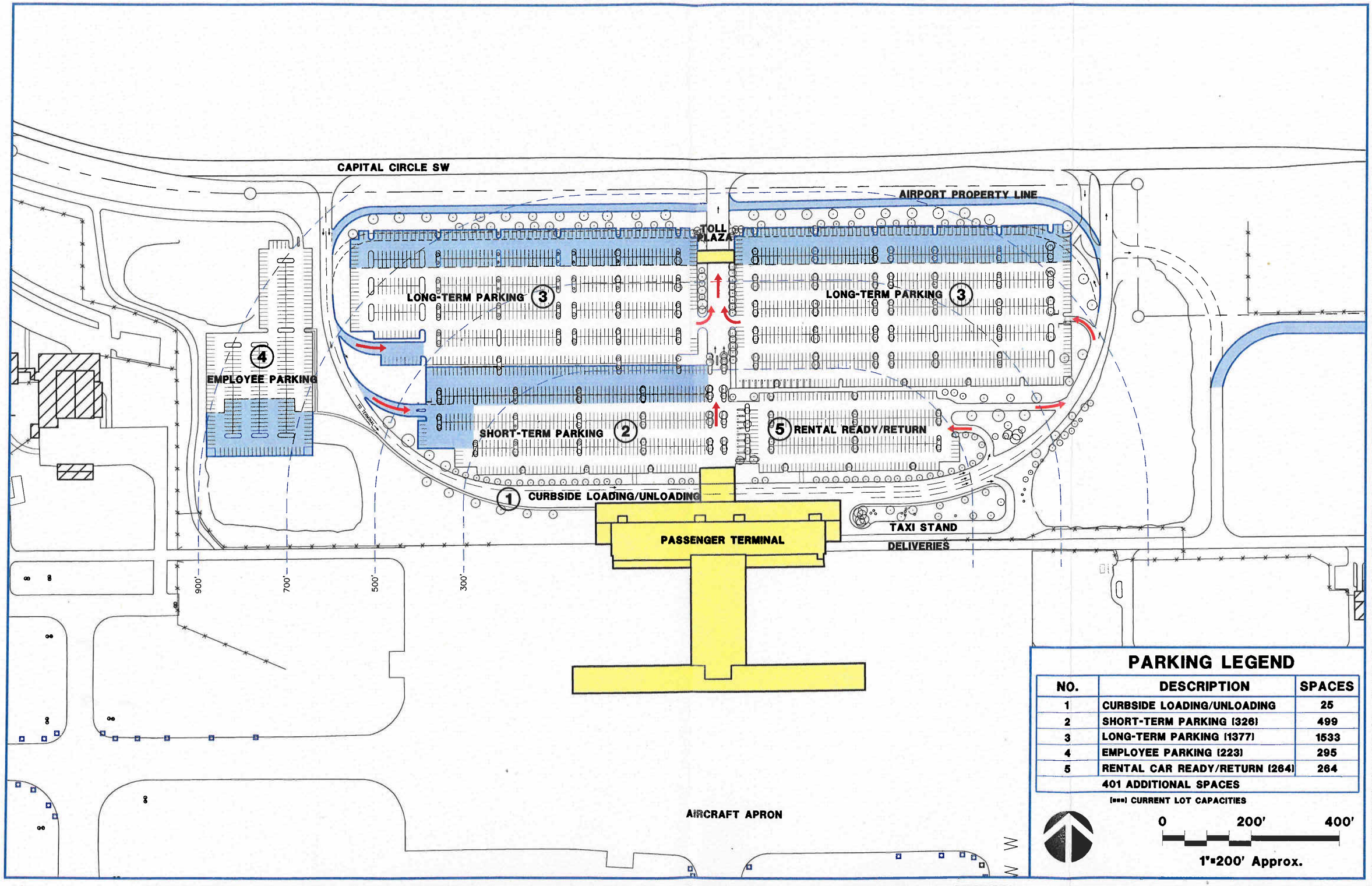
Concept Three

Concept Three also provides the desired expansion through surface expansion rather than structure construction. Its configuration is similar to Concept Two but it does not provide as many new spaces because it maintains the rental car Ready / Return Lot inside the terminal loop road. Expansion of the Short-Term lot is accomplished through a reassignment of some of the existing long-term spaces into short-term spaces. The 156-space expansion of the long-term parking lot is the main focus of concept three, however the employee parking lot and the short-term lot capacities are also increased by 90 spaces and 173 spaces respectively. The terminal loop road must be pushed further north in order to create enough space to increase the size of the long-term lot. The short-term lot capacity is increased, simply by encroaching into the southern portion of the long-term lot. The reallocation of space between these two parking lots forces the reconfiguration of both entry roads. Increasing the overall capacity of the employee lot is accomplished by expanding it to the south.

The changes to the terminal area road in concept three will be the reconfiguration of the entry roads to the short and long-term parking lot, the relocation of the loop road, and the realignment of the delivery road. The relocation of the terminal area loop road is similar to Concept Two in that moving the road north is necessary to create the space required to increase the capacity of the long-term lot. Even though these components are being altered, the current traffic pattern will remain the same. The employee lots expansion to the south makes the reconfiguration of the southern detention ponds necessary, yet it does not increase the walk distance to the employee lot. This option is more suitable than Concept Two in that there is less earthwork involved with the filling and expansion of the ponds and drainage reconfiguration.

While this concept provides the fewest additional spaces it is also the least expensive overall and per new space. Concept Three meets the minimum requirements of this program as well as addresses each of the terminal facilities areas of concern. This concept provides an overall expansion of 401 additional parking spaces, as well as the option to cover the existing rental car ready/return lot, and maintains an acceptable walk distance for all parking lots. The immediate demands on the parking facilities will be met with this option, however future expansion will be required for this concept sooner than others to meet the airport's long-range demands.

PARKING LAYOUT



PARKING LEGEND

NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING (326)	499
3	LONG-TERM PARKING (1377)	1533
4	EMPLOYEE PARKING (223)	295
5	RENTAL CAR READY/RETURN (264)	264
	401 ADDITIONAL SPACES	

(###) CURRENT LOT CAPACITIES

0 200' 400'

1"=200' Approx.

Concept Three

TALLAHASSEE REGIONAL AIRPORT

PARKING FEASIBILITY STUDY

Concept Four

Concept Four involves the surface expansion of the long and short-term parking lots to the west, made possible with a western relocation of the terminal loop road. The terminal access road relocation displaces the employee lot, to accommodate the growth of the public parking lots. The long-term lot will increase by 232 spaces while the short-term lot will gain an additional 279 spaces. The employee lot will grow by 99 spaces and be relocated from its existing west side location to the east of the terminal building, similar to Concept Two. An additional 610 spaces will be created in Concept Four between the long-term, short-term, and employee lots. The cargo/delivery road will be relocated similar to the other concepts. The apron access road to the west, which is currently used as a construction entrance, is shown as impacting the Lively Aviation school's parking. However, the complete removal of this road has been discussed. Significant adjustments will be made to the existing detention ponds to accommodate the new locations and increased surface areas of the parking lots.

The traffic flow pattern will remain the same, except the entry to the terminal access road will be relocated further west along Capital Circle Southwest Drive. The entrances to the parking lots maintain their current configuration in their new locations. Employee parking is now downstream of the terminal building located outside of the loop road east of the terminal building. Deliveries as in other concepts will now be entering the terminal area from Lake Bradford Road. The apron access road is redirected around the new detention ponds created to the west of the terminal building.

A concern with this concept is the impacts to the site (roadways, drainage) and also the phasing of the construction to minimize impacts. With this amount of reconfiguration of the existing site, the operation of the terminal area will likely be affected due to the redirection of traffic during certain phases of construction. This concept, similar to Concept Two, has the disadvantages of major impacts to the site and daily airport operations during construction, and all walk distances are increased. This concept however, is the second most affordable of the five concepts provided.

Concept Five

Concept Five adds a 472 space two-story parking structure to the outside of the terminal access road east of the terminal as well as adding 203 surface spaces to the long-term parking lot to the west. The western expansion of the long-term lot requires the relocation of the terminal road and current employee parking lot, and a reconfiguration of the northwest detention pond. Although not shown, the apron access road will either be removed or relocated with this concept. The location of the parking structure which houses the rental car Ready / Return parking and the employee parking provides the unique requirement of constructing a parking garage built on piers. This parking structure configuration would bridge the existing eastern detention pond and offers the advantage of providing no impact to the existing pond.

As in Concept Four the entrance to the terminal area access road is relocated further west from the terminal building to allow room for the expansion of the long-term parking lot. Passengers still enter the long and short-term parking lots as they do currently, however the lead-in drives have been extended to meet the new location of the access road. As is the case in Concept Two the relocation of the Ready / Return lot allows the short-term parking lot to take up the entire area in front of the terminal. A secondary entrance to the short-term lot is provided downstream from the terminal, but the existing exit drive is closed off in order to maintain the use of the existing tollbooth plaza located inside the long-term parking lot. East of the terminal building the entry/exit drive of the new parking structure will transition from the terminal loop road into the parking lot over the eastern detention pond. The parking structure use is split, with the rental car ready/return functions operating on the lower floor and employee parking occupying the upper floor. The exit to the

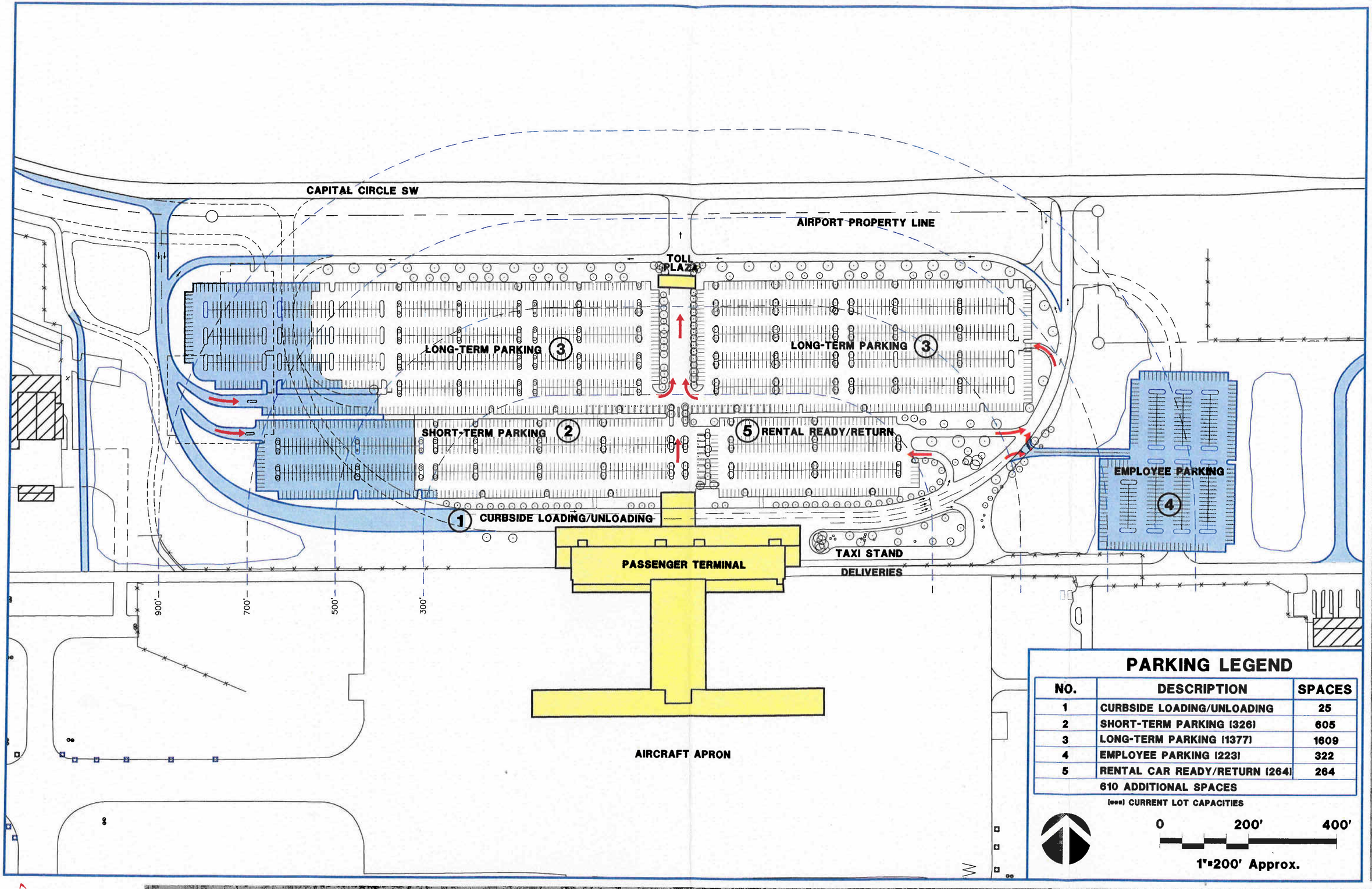
terminal area will remain as it is currently. Traffic flow around the terminal area remains the same, with the exception of the relocation of the deliveries road.

Construction of Concept Five will involve drainage reconfiguration of the west pond but none to the east pond. It will also present the airport with some temporary access inconveniences. The westward expansion of the long-term lot generates the need for an expanded terminal access road, and displaces both the employee parking lot and a detention pond. The parking structure in concept five, although expensive, does not offer the phasing and constructability problems that are evident in the structure from Concept One. Construction of this parking structure could take place without affecting existing airport operations due to its location outside of the terminal area loop road. While the location of the parking structure places it within what is considered to be an allowable walk distance from the terminal, approximately 25 percent of the new long-term spaces are beyond 900'. These increased walk distances, the major site impacts, and the costly construction of the parking structure reduces the viability of Concept Five.

Preferred Development Option

Development of a preferred option in this case is the combination of several key components of the concepts provided, which when acting together fulfill all of the parking demands as described by the airport. The criteria that each of these concepts were weighed against include: Site Impacts, Operational Impacts, Walk Distances, Covered Ready/Return, and overall costs. Each concept was analyzed with these five (5) criteria in mind, and the results of this analysis have been compiled in Table 2-1. Included in this table along with the aforementioned criteria are the existing parking totals as well as the amount of spaces gained and an overall parking space total for each concept.

The five concepts were reviewed with airport staff to weigh their strengths and weaknesses. No single concept provided all of the preferred solutions for short-term, long-term, rental car, and employee parking. A combination of several concepts was determined to provide the airport with its preferred improvement program. The Preferred Concept combines the surface expansion of Short-Term and Long-Term parking from Concept Two or Concept Three, the surface expansion of Employee Parking from Concept One, and the rental car Ready / Return expansion similar to Concept Two.



PARKING LEGEND

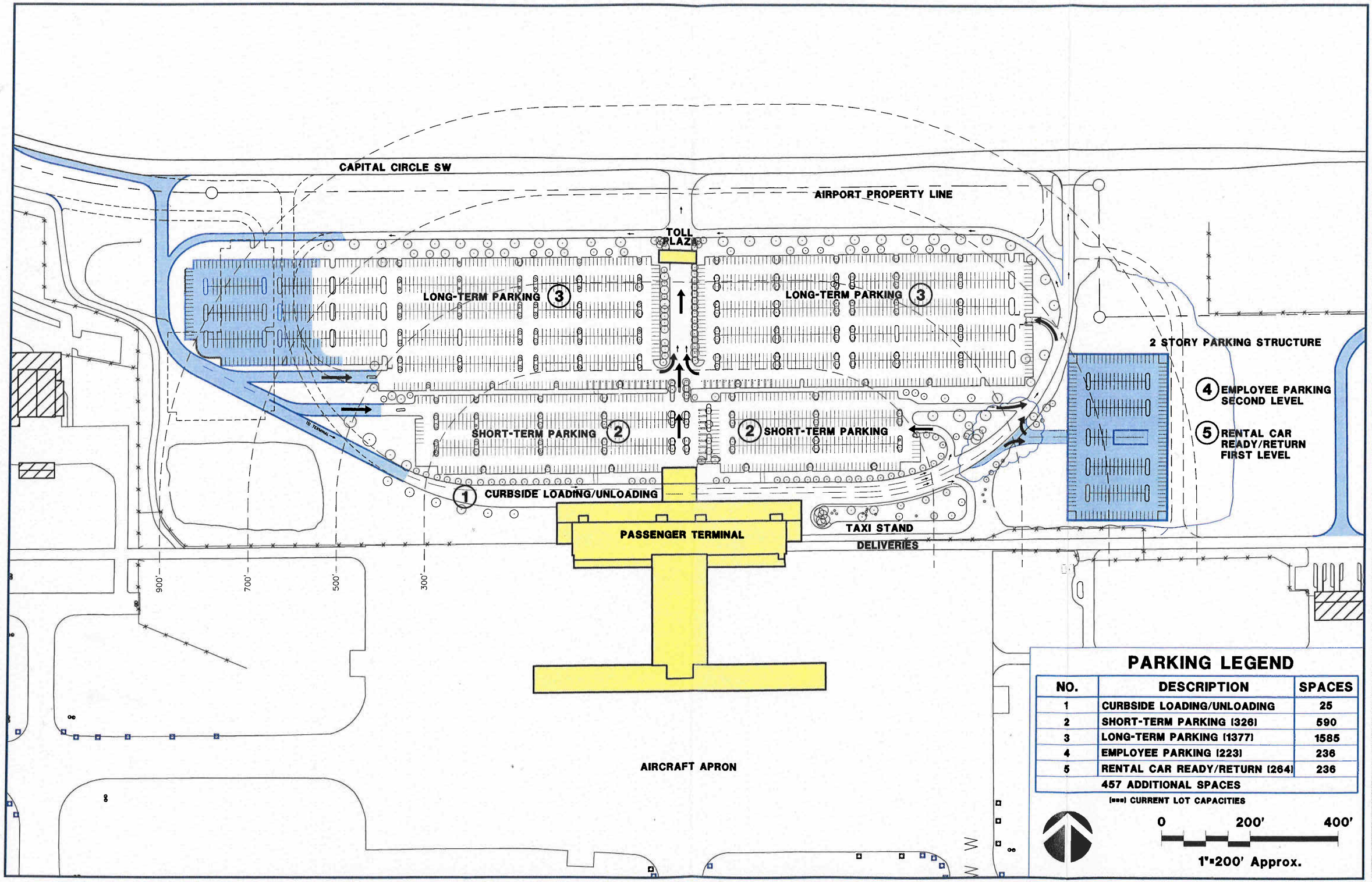
NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING (326)	605
3	LONG-TERM PARKING (1377)	1609
4	EMPLOYEE PARKING (223)	322
5	RENTAL CAR READY/RETURN (264)	264
	610 ADDITIONAL SPACES	

(###) CURRENT LOT CAPACITIES

0 200' 400'

1"=200' Approx.

PARKING LAYOUT



PARKING LEGEND

NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING (326)	590
3	LONG-TERM PARKING (1377)	1585
4	EMPLOYEE PARKING (223)	236
5	RENTAL CAR READY/RETURN (264)	236
	457 ADDITIONAL SPACES	

(###) CURRENT LOT CAPACITIES

0 200' 400'

1"=200' Approx.

Concept Five

TALLAHASSEE REGIONAL AIRPORT

PARKING FEASIBILITY STUDY

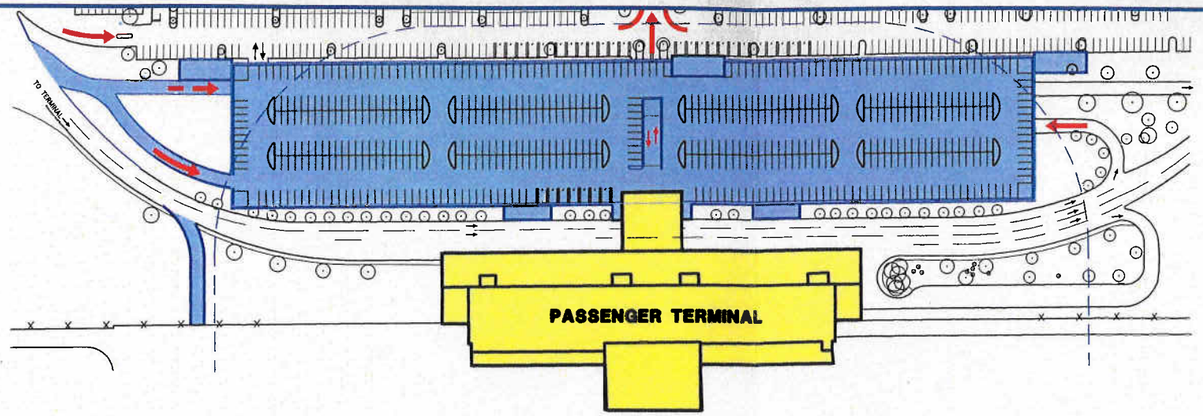
Tallahassee Regional Airport
Parking Feasibility Study

Table 2-1
Concepts Evaluation Matrix

Evaluation Matrix	CONCEPTS					
CRITERIA	One	Two	Three	Four	Five	Preferred
Site Impacts	**Minor**	**Major** Several roads and detention ponds must be realigned/relocated	**Medium** Several roads must be realigned	**Major** Several roads and detention ponds must be realigned/relocated	**Medium** One road and pond must be realigned	**Medium** Two roads and one pond must be realigned
Operational Impacts During Construction	**Major** Short-Term and Ready Return lots must partially close during construction	**Minor**	**Medium** Traffic must be redirected during construction	**Medium** Traffic must be redirected during construction	**Minor**	**Minor**
Walk Distances	Not Impacted	A portion of the Rental Car Ready/Return lot is beyond 900'	Slightly further for the Long-Term lot	A portion of the Long-Term lot is beyond 900'	The Ready/Return and Employee parking lots are beyond 700'	Slightly further for the Long-Term lot
Covered Rental Car Ready/Return	Located Under Short-Term Parking Deck	A covered lot is constructed to the east of the terminal	A canopy could be constructed over the existing lot	A canopy could be constructed over the existing lot	Rental Car Ready Return is located on the ground floor of the parking deck	A covered lot is constructed to the east of the terminal
Existing Parking Spaces	2,215	2,215	2,215	2,215	2,215	2,215
Additional Parking Spaces (Total)	**586** Additional Spaces **(2801)**	**630** Additional Spaces **(2844)**	**401** Additional Spaces **(2616)**	**610** Additional Spaces **(2825)**	**457** Additional Spaces* **(2672)**	**667** Additional Spaces **(2882)**
Parking Deck Cost	**$13,200,000.00**	**0**	**0**	**0**	**$5,667,694.00**	**$0.00**
Surface Parking Cost	**$263,670.00**	**$1,786,113.00**	**$1,293,490.00**	**$2,098,666.00**	**$653,378.00**	**$2,036,113.00**
CONCEPTUAL COST	**$13,463,670.00**	**$1,786,113.00**	**$1,293,490.00**	**$2,098,666.00**	**$6,321,072.00**	**$2,036,113.00**

* Additional Floors (236 spaces) may be added at the cost of $2,832,000 per floor

LONG-TERM EXPANSION OPTION
3 - STORY PARKKING STRUCTURE



PARKING LEGEND

NO.	DESCRIPTION	SPACES
1	CURBSIDE LOADING/UNLOADING	25
2	SHORT-TERM PARKING (326)	763
3	LONG-TERM PARKING (1377)	1533
4	EMPLOYEE PARKING (223)	301
5	RENTAL CAR READY/RETURN (264)	260
	667 ADDITIONAL SPACES	

(###) CURRENT LOT CAPACITIES

0 200' 400'

1"=200' Approx.

CAPITAL CIRCLE SW

AIRPORT PROPERTY LINE

TOLL PLAZA

LONG-TERM PARKING 3

LONG-TERM PARKING 3

4 EMPLOYEE PARKING

TO TERMINAL

SHORT-TERM PARKING 2

SHORT-TERM PARKING 2

5 RENTAL READY/RETURN

1 CURBSIDE LOADING/UNLOADING

PASSENGER TERMINAL

TAXI STAND

DELIVERIES

900'

700'

500'

300'

AIRCRAFT APRON

PARKING LAYOUT

Preferred Concept

Long-Range Analysis

Since the development of the parking feasibility analysis and concepts, the airport's Master Plan Update has generated activity forecasts and future facility requirements analyses. Based on this work, the Preferred Concept expansion program will not accommodate the airport's 20-year growth needs.

Table 2-2 illustrates the results of that analysis.

Table 2-2
FACILITY REQUIREMENTS SUMMARY

Parking Lot	Preferred Concept	2008	2013	2023
Annual Enplanement Forecast		587,127	673,299	891,844
Short-Term Surface	590	359	410	544
Long-Term Surface	1,654	1,534	1,758	2,330
Employee Parking	312	339	367	398
Rental Car Ready / Return	263	387	444	588

Based on the Facility Requirements analysis of the Master Plan Update, a long-range improvement plan for the parking facilities should also include the eventual development of a three level parking structure over the existing Short-Term and rental car Ready / Return parking lots. With this ultimate improvement, one level of the parking structure could serve as Ready / Return parking, another level could serve as Short-Term parking, and a third level could serve as long term parking. The proposed Ready / Return lot would then serve as an overflow lot for the Employee and Long-Term parking lots. The long-range concept is, therefore, similar to Concept One but with an additional level in the parking structure. In this ultimate, long-range configuration, the construction of a 1,600-space, three story parking structure would cost approximately $19,800,000.

Appendix F – Environmental Overview

The purpose of this chapter is to provide a review of existing environmental conditions and a preliminary assessment of potential environmental impacts of planned development at Tallahassee Regional Airport. This overview does not constitute an Environmental Assessment (EA), as defined by the Federal Aviation Administration (FAA) Order 5050.4B. The analysis in this chapter is conducted according to the guidelines set forth in FAA Order 5050.4B, entitled Environmental Handbook. This document includes 20 categories of potential areas of impact that must be addressed. These categories are:

1. Airport Noise
2. Land Use
3. Social Impacts
4. Induced Socio-Economic Impacts
5. Air Quality
6. Water Quality
7. Department of Transportation Act, Section 49(f)
8. Historical, Architectural, Archaeological, And Cultural Resources
9. Biotic Communities
10. Endangered and Threatened Species
11. Wetlands
12. Floodplains
13. Coastal Zone Management Program
14. Coastal Barriers
15. Wild and Scenic Rivers
16. Farmland
17. Energy Supply and Natural Resources
18. Light Emissions
19. Solid Waste Impact
20. Construction Impacts

For the purpose of this overview, these environmental categories will only be addressed if they apply specifically to the Airport. This environmental overview identifies potential environmental impacts that may require a more detailed analysis in a formal EA for the preferred development alternative.

WATER QUALITY

Legislation

The Federal Water Pollution Control Act, as amended by the Clean Water Act provides the authority to establish water control standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, and issue permits for discharges and for dredged and filled materials into surface waters. The Fish and Wildlife Coordination Act requires consultation with the United States Fish and Wildlife Service (USFWS) and the Florida Fish and Wildlife Conservation Commission (FFWCC) when any alteration and/or impounding of water resources is

expected. The Federal National Pollution Discharge Elimination System (NPDES) provides regulations that govern the quality of stormwater discharge into water resources of the United States.

City of Tallahassee Ordinance 04-0-02 (Land Development Ordinance) subjects all property within the corporate limits of the City to the provision of Chapter 5, the Tallahassee Environmental Management Regulations that is enforced by the City's Growth and Management Department including natural resources and stormwater.

Regulatory Agencies

The United States Army Corps of Engineers (COE), the Florida Department of Environmental Protection (FDEP), and the Water Management Districts (WMDs) have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the Environmental Resource Permitting (ERP) Program in Florida. The program authorizes the WMD to receive ERP applications and forward permit application copies to other state and federal agencies including FFWCC and USFWS. In Leon County, where the Airport is located, the Northwest Florida Water Management District administers the ERP program and the City of Tallahassee has a Land Development Ordinance that requires a stormwater operations permit. Permitting requirements for construction that exceed one acre are specified by NPDES and administered by the FDEP. Therefore, the proposed improvement projects at the Airport require an NPDES permit, a state ERP, and City of Tallahassee permit prior to construction of projects that would impact jurisdictional wetlands and surface waters. As part of the permitting process, stormwater runoff has to be treated prior to discharge to any waterbody.

Existing Conditions

The Airport has an NPDES Multi-Sector General Permit, a Stormwater Pollution Prevention Plan, and stormwater management system that consists of a stormwater conveyance system that drains to several dry retention ponds.

Potential Impacts

The projects proposed in this Airport Master Plan Update would result in an increase in impervious surface at the Airport and therefore would result in less infiltration of precipitation and increased stormwater runoff. Short-term water quality impacts may also occur as a result of construction activities associated with the proposed projects.

Recommendations

It is recommended that coordination with the City of Tallahassee, FDEP, and NWFWMD be completed during the environmental review phases of each project for the development of the Airport to determine the potential to reduce or minimize environmental impacts.

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Legislation

The National Historic Preservation Act of 1966 and the Archaeological and Historic Preservation Act of 1974 provide protection against development impacts that would cause change in the historical, architectural, archaeological, or cultural resources.

Regulatory Agencies

The Department of State, Division of Historical Resources is responsible for promoting the historical, archaeological, museum, and folk culture resources in Florida.

Existing Conditions

The National Park Service's National Register Information System database contains records of documented historic and archaeological resources listed on or eligible for listing on the National Register of Historic Places. A review of the National Register of Historic Places, the Florida Master Site file, the Soil Conservation Services first edition soils books, the FDEP Title and Land Records, the Government Land Office notes and other previous cultural studies at the Airport did not document cultural, historical or archaeological resources within the Airport property. Projects completed prior to the development of this Master Plan Update were determined to have no impact to archaeological or historical resources. Undocumented resources may be present in project areas that have not been subjected to previous disturbance.

Potential Impacts

Proposed projects that are located in previously undisturbed areas have the potential to impact cultural resources.

Recommendations

A Phase One Cultural Resources Assessment Survey should be performed for each project, especially in areas where there is a potential for archaeological artifacts to be discovered and/or where excavation is proposed.

BIOTIC COMMUNITIES

Legislation

The Fish and Wildlife Coordination Act (48 Statute 401 as amended; 16USC et. Seq.) considers impacts to habitat and wildlife. Section 2 of this act requires consultation with USFWS, the United States Department of the Interior (USDI), and state agencies that regulate wildlife whenever water resources are modified by a federal, public, or private agency under federal permit of license.

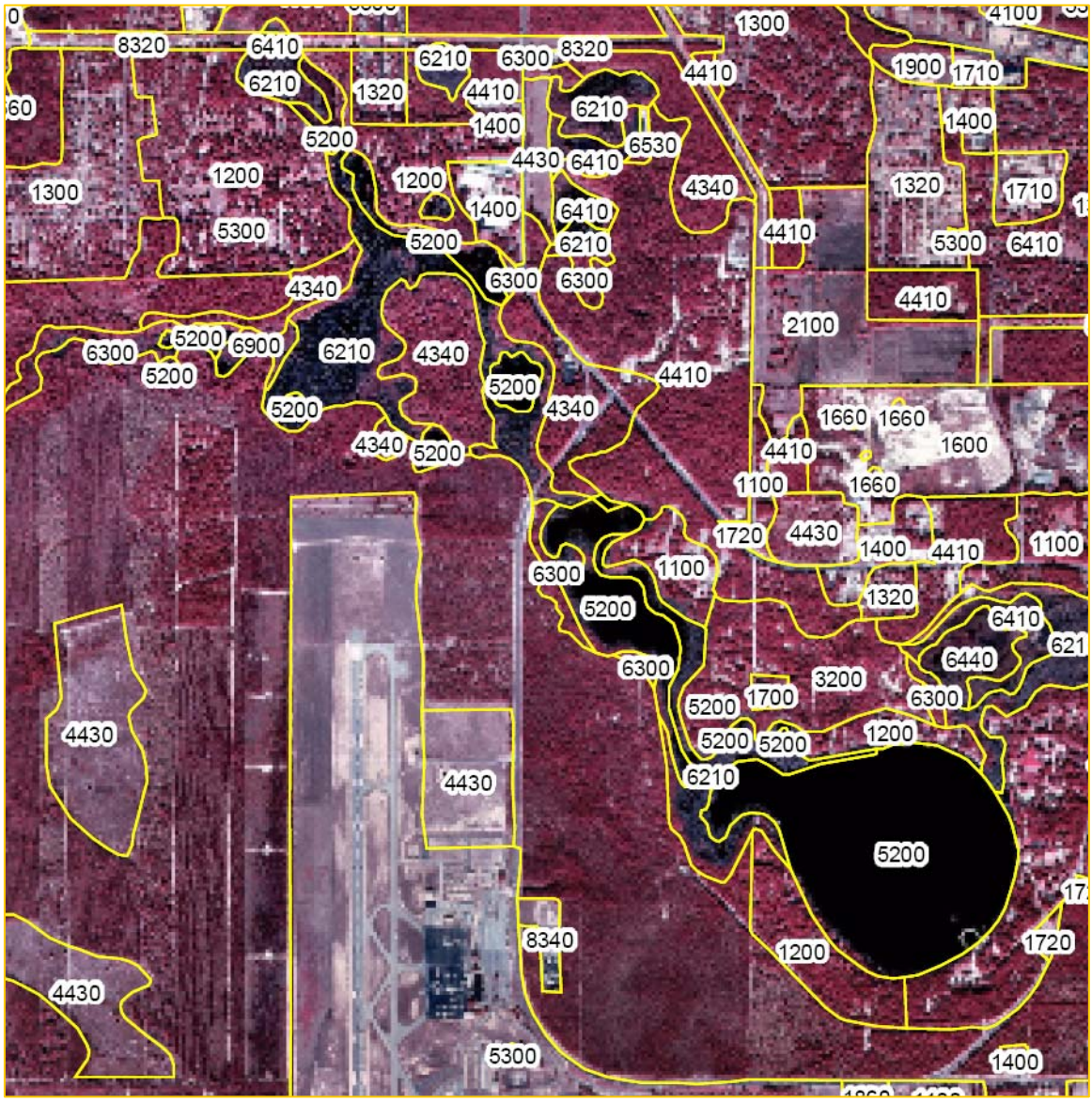
The City Land Development Ordinance subjects all property within the corporate limits of the City to the provision of Chapter 5, the Tallahassee Environmental Management Regulations that is enforced by the City's Growth and Management Department.

Regulatory Agencies

The USFWS and FFWCC have authority under the act to provide comments and recommendations concerning vegetation and wildlife resources. The City of Tallahassee requires a Natural Features Inventory, Environmental Impact Analysis, and Environmental Permit for all development projects within the City limits.

Existing Conditions

FDEP classified the existing land use and cover in Leon County according to Florida Land Use, Cover, and Forms Classification System (FLUCFCS). In March 2005, the LPA Group Incorporated evaluated the new cargo apron located at the southeastern section of the Airport and field verified the land use and cover along the shoreline (LPA 2005). For the purposes of this study, the 2005 LPA study and FDEP FLUCFCS (2000) data were used to identify the biotic communities that would be impacted by the proposed development. The proposed development would impact land use and cover as shown in the following section.



- Undeveloped land (1190)
- Xeric oak forest (4210)
- Hardwood-conifer mixed upland forest (4340)
- Forest regeneration areas (4430)
- Lakes (5200)
- Reservoir (5300)
- Cypress wetland (6210)
- Disturbed land (7400)
- Transportation (8100), specifically, Airports (8110)

Potential Impact

The proposed airport development may impact areas of upland that have been previously disturbed for the construction of the existing Airport, open areas of mowed and maintained grass within the Airport's operations area, and wetlands that lie north of the existing runway. Soil types, comparative elevation, and drainage characteristics determine plant community types that are present in a given area, while dominant vegetation and other environmental factors determine wildlife value and utilization. Although the majority of the biotic communities within the project area are disturbed, they provide wildlife habitat to various animals, some of which may be subject to federal or state regulations due to special protected status.

Recommendations

A site survey to evaluate specific biotic community types and threatened and endangered species within the boundaries of the proposed development and the potential presence of threatened and endangered species should be completed during the EA and/or Environmental Impact Statement (EIS) for each project. It is recommended that a biotic communities and threatened and endangered species survey be completed in the proposed development areas to determine the potential for the presence any threatened or endangered species.

ENDANGERED AND THREATENED SPECIES

Legislation

The Endangered Species Act of 1973 (ESA), as amended, requires federal agencies, in consultation with and assisted by the USFWS, to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat of such species. Section 7 of the Act states that federal agencies must review their actions; if those actions will affect a listed species or its habitat, they must consult with the United States Fish and Wildlife Service.

The City Land Development Ordinance subjects all property within the corporate limits of the City to the provision of Chapter 5, the Tallahassee Environmental Management Regulations that is enforced by the City's Growth and Management Department.

Regulatory Agency

The USFWS, the Florida Department of Agriculture and Consumer Services (FDACS), and FFWCC have jurisdiction over and administer native endangered and threatened species permits for Florida. During the consultation process, the USFWS will determine the significance of potential impacts to federally protected species and will recommend methods to avoid or mitigate for impacts that may occur as a result of the proposed projects.

The FFWCC Threatened and Endangered Species Section reviews and issues permits that involve Florida's protected terrestrial animal species. The FFWCC Bureau of Protected Species Management reviews and issues permits that involve Florida's protected aquatic wildlife species. The FDACS Division of Plant Industry is responsible for providing protection to Florida's protected native plant

species that are classified as endangered, threatened, or commercially exploited.

The City of Tallahassee requires a Natural Features Inventory, Environmental Impact Analysis, and Environmental Permit for all development projects within the City limits.

Existing Conditions

Available GIS maps and literature were compiled and reviewed to determine the types of plant communities and wildlife occurrences that have been previously documented within the project study area. Data sources used in this evaluation included:

- FFWCC's 1999 Eagle Nesting Territory Locations and Activity Status**;**
- FFWCC's Wading Bird Colony Locations**;**
- FFWCC's Wood Stork Colony Locations;
- FFWCC's Manatee Mortality Locations;
- FNAI (Florida Natural Areas Inventory) Matrix of Habitat and Distribution of Rare/Endangered Species for Leon County; and,
- Cargo Apron Expansion Natural Features Inventory Report (LPA, 2005).

Lists of protected fauna and flora potentially occurring in Leon County, and their protection status, are provided in Tables F-1 and F-2.

Protected species that may be expected to occur within the proposed project development areas are those associated with pasturelands, turkey oak hammocks, pine flatwoods, and cypress wetlands. The upland habitats within the proposed project development area have the potential to be utilized by 4 species of herpetofauna, 8 birds, 2 mammals, and 20 plants (Tables F-1 and F-2).

The USFWS database, lists 111 protected species in Florida. According to FFWCC's Wading Bird Nest database, the nearest wading bird colony is Atlas Number 592001, with 250 to 500 nests, last recorded on June 1, 1999. This colony is located approximately 13 miles east northeast of the Airport (Figure 5-6). FFWCC's Wood Stork (*Mycteria americana*) Colony Location database indicates that the nearest wood stork colony is Atlas Number 592003, with 250 to 500 nests, last recorded on April 7, 1999. This colony is located approximately 10.5 miles north northeast of the Airport. Both nests are sufficiently away from all of the project areas where construction activity is not anticipated to adversely impact nesting activity.

The "FNAI Species and Natural Community Occurrence Summary for Leon County" lists 22 plant species, 1 fish, 1 amphibian, 7 reptiles, 11 birds, and 4 mammals. FNAI element occurrence data for protected species locations indicate that there are no protected species within the proposed project areas.

An environmental site visit was performed in association with the cargo apron project and potential extension of Runway 36 by The LPA Group Incorporated. During the visit, two species that are listed as species of special concern in the State of Florida, the gopher tortoise (*Gopherus polyphemus*) and

the bent golden aster (*Pityopsis flexuousa*). In addition, the wetlands located at the end of Runway 18 contain suitable habitat for wading birds.

Recommendations

Additional protected species have the potential to occur at the Airport but have not been observed. It is recommended that a protected species survey be completed during the EA or EIS of each project to:

- Update existing protected species data;
- Determine the presence and location of protected species in sections of the project area that were not previously surveyed;
- Determine the habitat suitability of the area that would be impacted; and
- Determine the type of mitigation necessary to complete the project.

Table F-1
List of Potentially Occurring Fauna

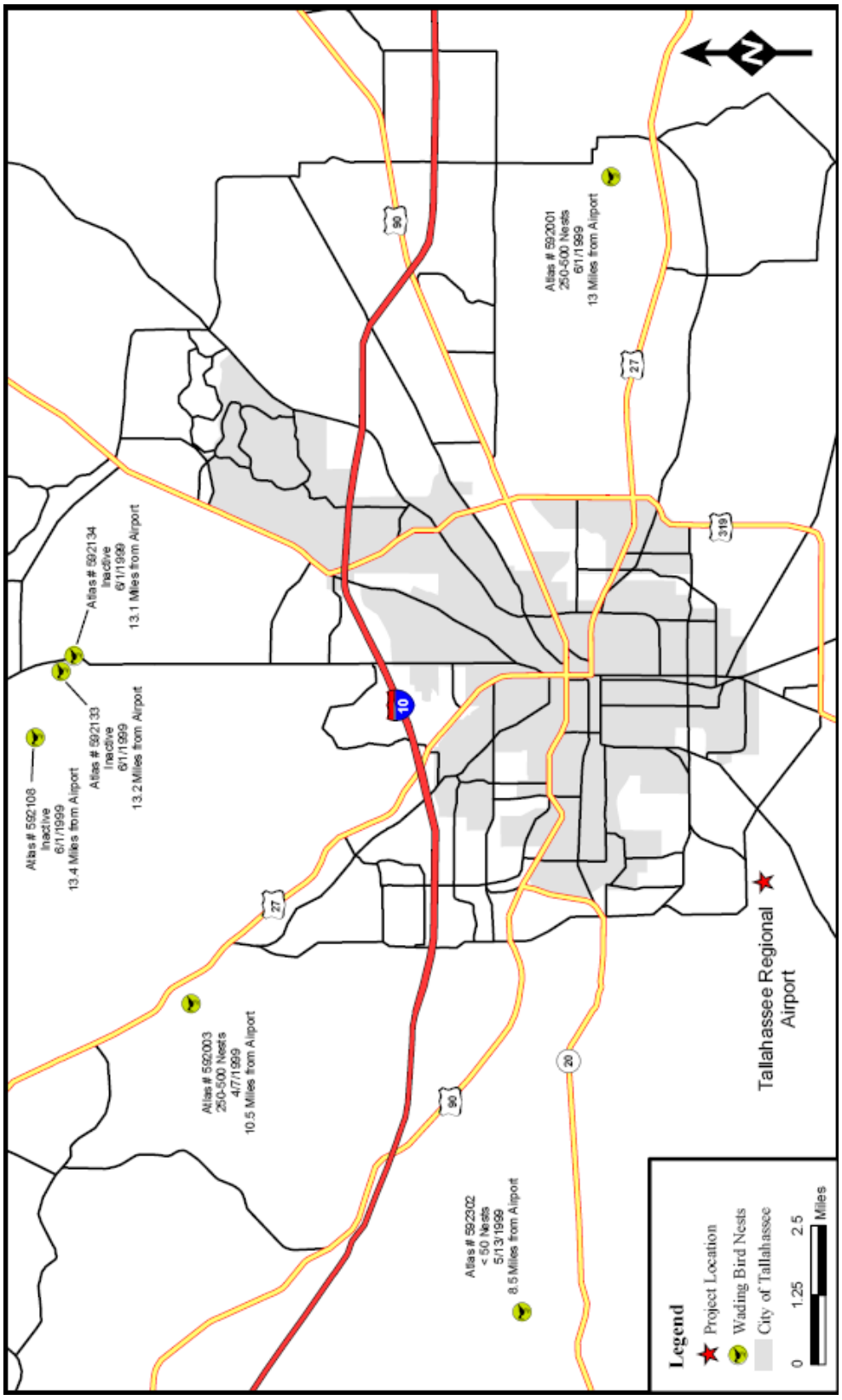
Scientific Name	Common Name	Status	
		USFWS	FFWCC
Herpetofauna			
Rana capito aesopus	Gopher Frog	-	SSC
Drymarchon corais couperi	Eastern Indigo Snake	T	T
Gopherus polyphemus	Gopher Tortoise	-	SSC
Pituophis melanoleucus mugitus	Florida Pine Snake	-	SSC
Avifauna			
Egretta caerulea	Little Blue Heron	-	SSC
Egretta thula	Snowy Egret	-	SSC
Eudocimus albus	White Ibis	-	SSC
Egretta tricolor	Tricolored Heron	-	SSC
Falco peregrinus	Peregrine Falcon	-	E
Falco sparverius paulus	Southeastern American Kestrel	-	T
Haliaeetus leucocephalus	Bald Eagle	-	T
Mycteria americana	Wood Stork	-	E
Mammals			
Myotis grisescens	Gray Bat	-	E
Sciurus niger shermani	Sherman's Fox Squirrel	-	SSC

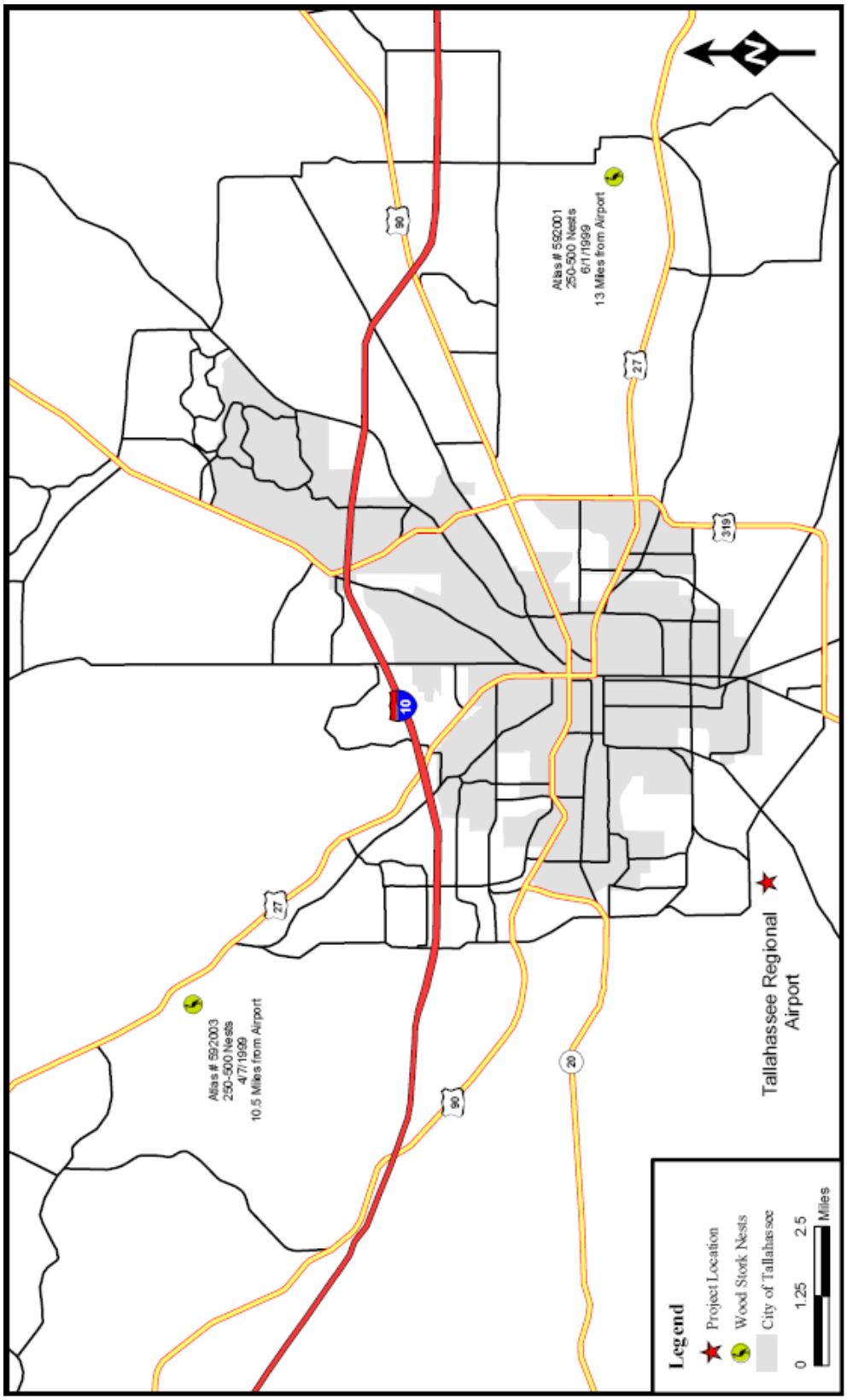
LEGEND:
E = Endangered
T = Threatened
SSC = Species of Special Concern
USFWS = United States Fish and Wildlife Service
FFWCC = Florida Fish and Wildlife Conservation Commission
Source: Official List of Endangered and Potentially Endangered Species in Florida, FFWCC. January 2004.

Table F-2
List of Potentially Occurring Flora

Scientific Name	Common Name	Status	
		USFWS	FDACS
Baptisia simplicifolia	Scare-weed	-	T
Calycanthus floridus	Sweet-shrub	-	E
Drosera intermedia	Spoon-leaved Sundew	-	T
Erythonium umbilicatum	Trout Lily	-	E
Gentiana pennelliana	Wiregrass Gentian	-	E
Hexastylis arifolia	Heartleaf	-	T
Lilium superbum	Turk's Cap Lily	-	E
Magnolia ashei	Ashe's Magnolia	-	E
Magnolia pyramidata	Pyramid Magnolia	-	E
Malaxis unifolia	Green Adder's-mouth	-	E
Pityopsis flexuosa	Bent Golden Aster	-	E
Polygonum meisnerianum var. beyrichianum	Mexican Tear-thumb	-	E
Pycnanthemum floridanum	Florida Mountain-mint	-	T
Rhexia salicifolia	Panhandle Meadowbeauty	-	T
Rhododendron alabamense	Alabama Rhododendron	-	E
Rhododendron austrinum	Florida Flame Azalea	-	E
Schwalbea americana	Chaffseed	E	E
Stachydeoma graveolens	Mock Pennyroyal	-	E
Uvularia floridana	Florida Merrybells	-	E
Xyris longisepala	Karst Pond Xyris	-	E

LEGEND:
E = Endangered
T = Threatened
SSC = Species of Special Concern
USFWS = United States Fish and Wildlife Service
FDACS = Florida Department of Agriculture and Consumer Affairs
Source: Official List of Endangered and Potentially Endangered Species in Florida, FFWCC. January 2004


N
Atlas # 592001
250-500 Nests
6/1/1999
13 Miles from Airport
Atlas # 592134
Inactive
6/1/1999
13.1 Miles from Airport
Atlas # 592133
Inactive
6/1/1999
13.2 Miles from Airport
Atlas # 592108
Inactive
6/1/1999
13.4 Miles from Airport
Atlas # 592003
250-500 Nests
4/7/1999
10.5 Miles from Airport
Atlas # 592302
< 50 Nests
5/13/1999
8.5 Miles from Airport
Tallahassee Regional Airport
Legend
Project Location
Wading Bird Nests
City of Tallahassee
0
1.25
2.5
Miles


N
Atlas # 592001
250-500 Nests
6/1/1999
13 Miles from Airport
Atlas # 592003
250-500 Nests
4/7/1999
10.5 Miles from Airport
Tallahassee Regional Airport
90
27
319
10
20
Legend
Project Location
Wood Stork Nests
City of Tallahassee
0
1.25
2.5
Miles

WETLANDS

Legislation

Executive Order 11990, Protection of Wetlands, mandates that each federal agency take action to minimize the destruction, loss, or degradation of wetlands, and preserve and enhance their natural values. This Executive Order and the permitting requirement of the Clean Water Act Section 404 requires a permit for dredged and fill material in navigable waters of the United States.

The City of Tallahassee Land Development Ordinance authorizes the City Growth Management Department the authority to regulate activities within County jurisdictional wetlands.

Regulatory Agency

The COE, FDEP, and NWFWMD have jurisdiction over and regulate activities that alter the landscape and disrupt water flow to wetland areas and surface waters through the ERP Program in Northwest Florida. Therefore, proposed improvement projects at the Airport require a Section 404 permit and a state ERP prior to construction of projects that would impact jurisdictional wetlands and surface waters.

As part of the permitting process, compensatory mitigation for unavoidable impacts would be required. At a minimum, mitigation must meet the requirements of the COE and FDEP joint permitting requirements. However, the City of Tallahassee may determine that additional mitigation would be necessary in order to satisfy the requirements of the City's environmental permit.

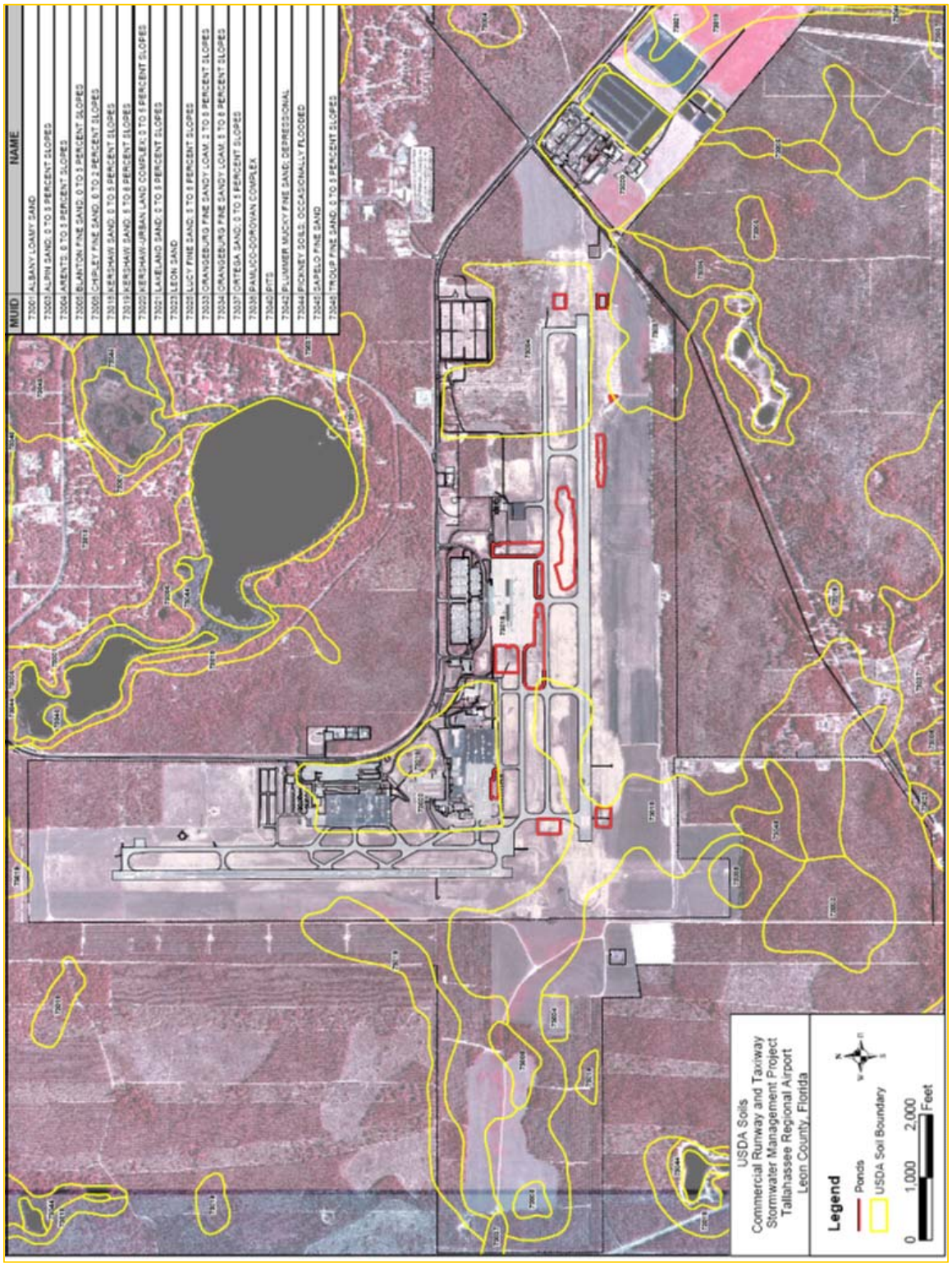
Existing Conditions

Available GIS maps and literature were compiled and reviewed to determine the types of wetland systems that have been previously documented within the project study area. Data sources used in this evaluation included:

- USGS Quadrangle Map;
- NWI maps ;
- FLUCFCS maps (NWFWMD 1999);
- National Resource Conservation Service (NRCS formerly SCS) soil surveys;
- Project aerial photography (1" = 400'); and,
- Leon County contour maps.

The NWI map data indicates that there wetland north of Runway 18. Field surveys conducted in 2005, resulted in the identification and verification of two wetland types that were classified according to the following FLUCFCS:

- Lakes (5200) and
- Cypress wetland (6210)


MUID
NAME
73001 ALBANY LOAMY SAND
73003 ALPIN SAND, 0 TO 5 PERCENT SLOPES
73004 ARENTS, 0 TO 5 PERCENT SLOPES
73005 BLANTON FINE SAND, 0 TO 5 PERCENT SLOPES
73009 CHIPLEY FINE SAND, 0 TO 2 PERCENT SLOPES
73010 KERSHAW SAND, 0 TO 5 PERCENT SLOPES
73019 KERSHAW SAND, 5 TO 8 PERCENT SLOPES
73020 KERSHAW-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES
73021 LAKELAND SAND, 0 TO 5 PERCENT SLOPES
73023 LEON SAND
73028 LUCY FINE SAND, 5 TO 8 PERCENT SLOPES
73033 ORANGEBURG FINE SANDY LOAM, 2 TO 5 PERCENT SLOPES
73034 ORANGEBURG FINE SANDY LOAM, 5 TO 8 PERCENT SLOPES
73037 ORTEGA SAND, 0 TO 5 PERCENT SLOPES
73039 PAMLICO-CODYVIAN COMPLEX
73040 PITS
73042 PLUMMER MUCKY FINE SAND, DEPRESSIONAL
73044 PONKEY SOILS, OCCASIONALLY FLOODED
73045 SAPELO FINE SAND
73046 TROUP FINE SAND, 0 TO 5 PERCENT SLOPES
USDA Soils
Commercial Runway and Taxiway
Stormwater Management Project
Tallahassee Regional Airport
Leon County, Florida
Legend
Ponds
USDA Soil Boundary
0
1,000
2,000
Feet

Potential Impacts

The extension of Runway 36 to the north would impact wetland areas. These wetland impacts would require mitigation and must be permitted through the City, NWFWMD and the COE. Impacts to EFH may also occur within waters adjacent to the Airport that would be filled as a result of the proposed projects.

Recommendation

It is recommended that the limits and quality of the wetlands be determined during the EA or EIS of each project to determine the necessary mitigation to meet regulatory requirements. It is also recommended that the presence or absence of EFH be evaluated for any projects that impact waters on or adjacent to the Airport. Concurrence with these findings should be sought from NOAA Fisheries, and if EFH is to be impacted, a plan for avoiding, mitigating, or offsetting those impacts should be developed.

FLOODPLAINS

Legislation

Executive Order 11988, "Floodplain Management" defines floodplains as lowland areas adjoining inland and coastal waters, especially those areas subject to one percent or greater chance of flooding in any given year.

Regulatory Agencies

The Federal Emergency Management Agency (FEMA) has produced Flood Insurance Rate Maps (FIRMs) for communities participating in the National Flood Insurance Program. These maps detail the 100-year and 500-year base flood elevations. The State of Florida administers and requires compensation for floodplain impacts through the Environmental Resource Permitting process in closed basins. The Airport is within the jurisdiction of NWFWMD.

Existing Conditions

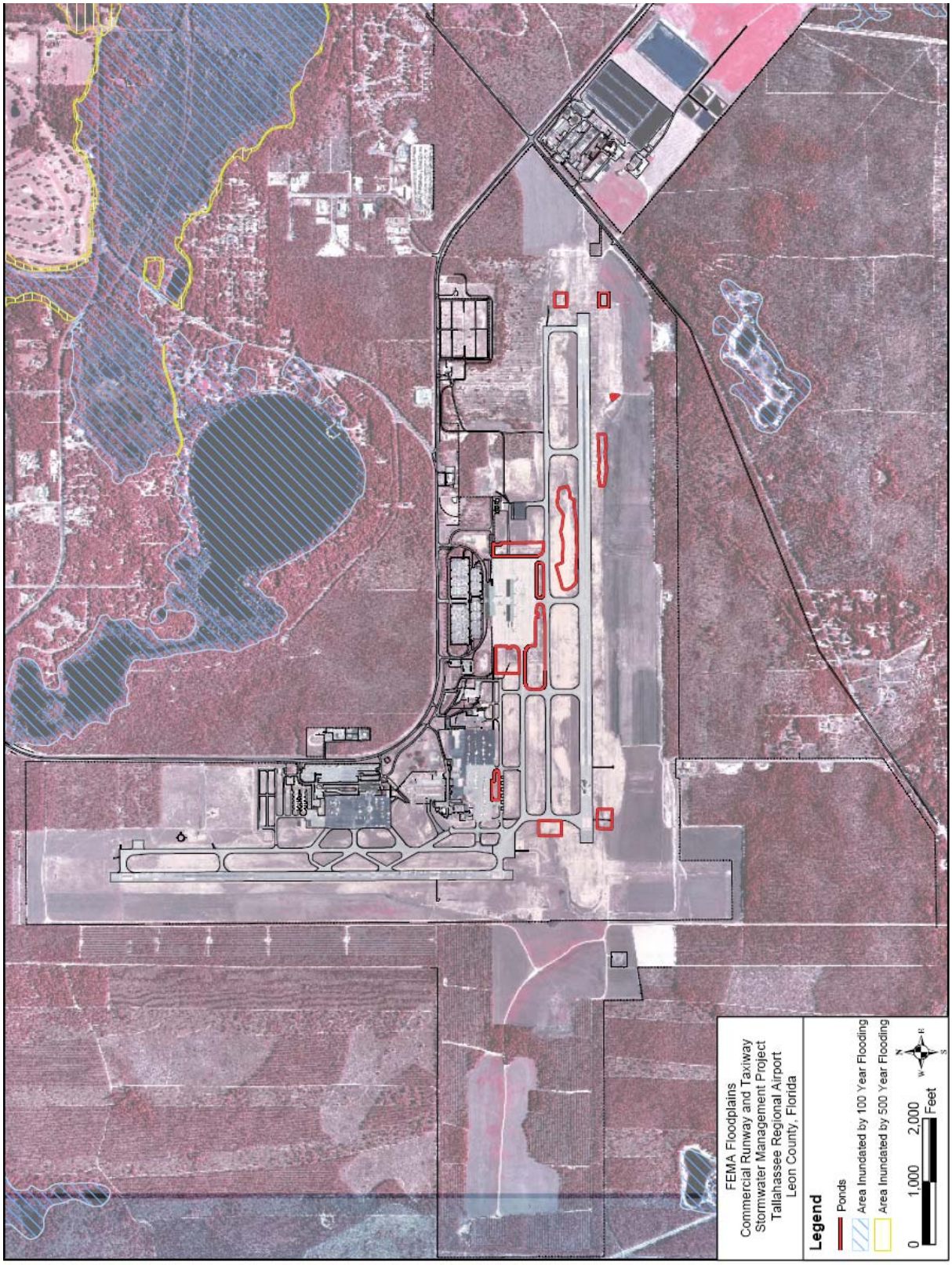
A review of FIRM mapping indicates that majority of the Airport is not within the FEMA designated 100- or 500-year floodplain. The wetland located on northern most portion of the Airport, at the end of Runway 18 is within the 100-year.

Potential Impacts

Construction within the FEMA designated 100-year floodplain would not affect base flood elevations or increase the flood hazard for any of the surrounding areas because it is within a closed basin.

Recommendations

It is recommended that potential floodplain impacts be re-evaluated during the EA or EIS of each project to ensure consistency with FEMA regulatory requirements.


FEMA Floodplains
Commercial Runway and Taxiway
Stormwater Management Project
Tallahassee Regional Airport
Leon County, Florida
Legend
Ponds
Area Inundated by 100 Year Flooding
Area Inundated by 500 Year Flooding
0
1,000
2,000
Feet

FARMLAND

Legislation

The Farmland Protection Policy Act of 1981 (FPPA) requires the evaluation of farmland conversion to non-agricultural areas. Prime farmland is land best suited for producing food, feed, forage, fiber, and oilseed crops. This land has the quality, growing season, and moisture supply necessary to produce sustained crop yields with minimal energy and economic input.

Regulatory Agencies

The National Resources Conservation Service (NRCS) has jurisdiction and should be consulted if farmland is to be converted to non-agricultural use by a federally funded project. The consultation determines whether the farmland is classified as "prime" or "unique." If it is, the Farmland Protection Act requires rating the farmland conversion impacts based upon the length of time farmed, amount of farmland remaining in the area, level of local farm support services, and the level of urban land in the area.

Existing Conditions

The FPPA requires evaluation of farmland conversions to non-agricultural uses. The FPPA defines farmland to not include areas already in or committed to urban development. The U.S. Census Bureau has classified the land surrounding the Airport as an urbanized area, which the FPPA has identified as already in urban development. Therefore, the urbanized area is exempt from the requirements of the act and in turn, the projects proposed in this Master Plan Update would not convert any land in agricultural uses to nonagricultural uses.

Potential Impacts

The projects described in this Master Plan Update would have no impact to farmlands.

Appendix G – Public Involvement

The purpose of this appendix is to document public involvement activities associated with the Tallahassee Regional Airport Master Plan Update. As part of the study, a project brochure and web site were developed to inform the public and interested stakeholders about the ongoing status of the project and to solicit public comment throughout the project's implementation. At the end of the study, a Public Open House was held at the Tallahassee Community College. The Public Open House was advertised in advance and members from the consultant team and airport staff were present to answer questions from the community. Comment forms were developed and used at the meeting to give the attendees an opportunity to provide input on the information being shared by the project team.

Information supporting the public involvement process is incorporated into this appendix as follows:

1. Study Brochure
2. Project Website
3. Public Open House Meeting (Postcard Invitation)
4. City of Tallahassee Commission Briefing Agendas and Minutes
5. City of Tallahassee Commission Briefing (PowerPoint Presentation)

PROJECT BROCHURE AND WEBSITE

As a key element of the Master Plan Update public involvement process, a project brochure and website were developed describing the master planning process, the time frame for the study and key points where public meetings were held, local and consultant contacts, and the overall goals and objectives of the TLH Master Plan Update. Over the course of the study, the website (www.tlhmasterplan.com) was used to highlight issues important to the Airport and the community. The site was also used as a means to post project documents for public review.

PUBLIC INFORMATION MEETING

A Public Information Meeting was conducted to inform the general public and interested stakeholders about the ongoing status of the Airport Master Plan Update and to solicit public comment during the project's implementation. The Project Team coordinated the meeting logistics and facilitated public meetings as appropriate.

The Public Information Meeting was conducted as part of the Airport Alternatives development process in order to solicit input from various stakeholders and members of the local community prior to finalizing refined alternatives. In order to maximize participation, the Consultant Team used an "open house" format to present the master planning process and development concepts to the public. The meeting was conducted on July 12, 2005 at the Tallahassee Community College. Approximately 50 people participated in activities conducted during a two hour affair. Key Consultant Team and Airport staff members were present to answer questions as members of the community viewed project highlights via strategically positioned color graphic presentation displays. Verbal feedback from the public was shared with the team and no written comments were received during the public meeting. Members of the community were invited to review project progress and provide further comments via the project website.

PRESENTATIONS TO THE TALLAHASSEE CITY COMMISSION

During the planning process, members of the Consultant team and Airport staff made two different presentations to the Tallahassee City Commission. An interim presentation of the project was made on September 20, 2005. The Team presented the findings of the final master plan report to the City Commission on May 24, 2006. The associated meeting agenda, minutes, and TLH Master Plan Presentation are provided at the end of this appendix.

AGENCY COORDINATION

As part of the master planning process, key components of the Airport Master Plan Update were coordinated with representatives of the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT) for approval. This includes submittal of the Aviation Forecasts and the Airport Layout Plan drawing set.

Timeframe

The City of Tallahassee, with the assistance of their consultant team, will develop a detailed look at the elements listed. Also, a number of other issues that will arise over the course of the study and potentially impact both the airport and the community will be considered.

Additional Information

Updates and the ability to comment on the progress of the study will be available on the Aviation Department page of the City's website:

Talgov.com

Contact:
Michael Clow
Capital Program Administrator
Tallahassee Regional Airport
Department of Aviation
3300 Capital Circle SW
Tallahassee, FL 32310
(850) 891-7802

Master Plan Study

Over the years, the City of Tallahassee, Tallahassee Regional Airport, and the aviation industry have faced many changes and challenges. A key element of meeting these challenges and preparing for the impact of additional change is to flexibly plan for the future. To this end, the City has initiated an update of the Airport Master Plan that was last developed in 1996.

The Airport Master Plan will be conducted as required by the Federal Aviation Administration (FAA) and the Florida Department of Transportation (FDOT). More importantly, the plan will address goals, objectives, and needs of Tallahassee, its citizens, and customers.

Public Information Brochure

TALLAHASSEE
REGIONAL AIRPORT

Master Plan Process

The primary objective of the Master Plan is to articulate the community's issues, goals, and needs relative to Tallahassee Regional Airport. The plan will also provide the best options to meet future changes in aviation demand as well as regulatory requirements. The master plan process focuses on developing an attainable phased development program to satisfy airport needs in a safe, efficient, economical, and environmentally sound manner. Development of an airport Master Plan proceeds through a series of specific steps that are generally defined by the FAA but allow the planning process to be responsive to airport and community specific needs. These include:

- Inventory
- Aviation Activity Forecasts
- Airfield Capacity Analysis
- Facility Requirements Analysis
- Airport Alternatives Analysis
- Airport Layout Plans
- Financial Plan / Capital Improvement Program

Purpose & Goals of Study

The Master Plan will comprehensively analyze current airport facilities, determine local industry trends, and discuss activities affecting the airport. Using this, the study will then identify and analyze the rapidly changing trends in the aviation industry likely to influence or offer opportunities for future service and operational activity at Tallahassee Regional.

Additionally, the Master Plan will review and analyze a variety of airport facility development alternatives, including a detailed analysis of the existing passenger terminal facilities and adjacent areas to define the best, and most financially feasible options for addressing expected demand levels and other evolving issues, such as heightened security requirements.

Key Issues

Specific issues requiring consideration in the Master Plan include, but are not limited to the following:

- Evaluation of Passenger Terminal Building
- Industrial / Business Development
- Formulate On-Airport Land Use Plan
- Development North of Runway 9-27
- Development East of Runway 18-36
- Access and Circulation Improvements

An Airport Master Plan provides long-term guidance, regarding the viability, use, ongoing development needs, project phasing, and financial requirements of an airport. Based on a forecast of future activity, the Master Plan establishes a schedule of financial and construction priorities. This twenty-year plan serves as a guide to decision makers, airport users, and the public. It presents realistic and achievable airport development in line with both airport and community objectives and financial capabilities

City of Tallahassee - Tallahassee Regional Airport - Master Plan Update

Over the years, the City of Tallahassee, Tallahassee Regional Airport, and the aviation industry have faced many changes and challenges. A key element of the meeting these challenges and preparing for the impact of additional change is to flexibly plan for the future. To this end, the City has initiated an update of the Airport Master Plan that was last completed in 1996.

Airport staff welcomes your comments as we proceed with our review. On this site are several parts of the Master Plan document. Please comment (using the link in the top right corner of the document) on the process, the plans, or just give us your view of the future of our airport.

View Documents

Tallahassee Regional Airport
3300 Capital Circle SW, Suite 1
Tallahassee, FL 32310

The City of Tallahassee is preparing an update of the Airport Master Plan for Tallahassee Regional Airport. You are invited to attend a Public Open House to learn more about the future plans for the airport.

We look forward to seeing you:
Tuesday, July 12, 2005
6:00 p.m. to 8 p.m.
Tallahassee Community College
Student Union
444 Appleyard Drive
Tallahassee, Florida 32304

For more information contact:

Michael Clow
(850) 891-7802

«OWNER»
«MAIL_ADD» «UNIT»
«CITY», «STATE»
«ZIP_CODE»

CITY OF TALLAHASSEE

*AGENDA**

CITY COMMISSION MEETING

May 24, 2006

Citizens who wish to address the City Commission should complete a speaker's slip available in the lobby and return it to the City Treasurer-Clerk (seated at the dais to the audience's far right) prior to the Commission's consideration of the item. All speakers are encouraged to adhere to a three-minute time limit.

Public hearings/workshop: Citizens are entitled to speak on items scheduled for a public hearing/public workshop.

This pertains to Items 16-27.

Other Scheduled Business: The Commission does not usually take public comment on issues not scheduled for a public hearing; however, the City Commission may, at the discretion of the Mayor, recognize speakers.

This pertains to items 1–15.

Unscheduled Speakers: The City Commission welcomes input from the public. City government has a tradition of being accessible to the public. City Commission meetings provide an opportunity for individual citizens to speak directly to elected leaders on matters of concern to them. Therefore, a citizen may address the City Commission about any issue, just prior to the close of the meeting.

* *Selected agenda items are available via the Internet at:*
www.talgov.com

CITY COMMISSION AGENDA

May 24, 2006

4:00 PM

I. CALL TO ORDER

II. INVOCATION

III. PLEDGE OF ALLEGIANCE

IV. AGENDA MODIFICATIONS

V. PRESENTATIONS

1. Presentation by Mr. David Jones, Florida Disabled Outdoors Association, regarding Miracle League athletic field

2. Recognition of Senior City Certified Supervisors---SHARON OFUANI, EQUITY AND WORKFORCE DEVELOPMENT

VI. ANNOUNCEMENTS

VII. APPEARANCES BY CITY COMMISSION APPOINTED BOARDS AND COMMITTEES, AND OTHER GOVERNMENTS

VIII. CONSENT

3. Approval of Continuing consulting Civil Engineering / Architectural Services – Tallahassee Regional Airport (RFP No. 0064-06-KR-TC)---KEN AUSTIN, AVIATION

4. Approval of Change Order to the Construction Contract for the Palmer Munroe Community Center Renovation Contract No 1082--- MICHELLE BONO, CITY MANAGER'S OFFICE

5. Approval to Award Bid No. 0144-06-VA-TC for Ready Mix Concrete---DAVID REID, DEPARTMENT OF MANAGEMENT AND ADMINISTRATION

6. Approval of appropriation from Animal Shelter Donations Account---THOMAS LEWIS, NEIGHBORHOOD & COMMUNITY SERVICE

7. Approval of Subdivision Plat - Summer Lake Phase I---GABRIEL MENENDEZ, PUBLIC WORKS

8. Approval of Subdivision Plat – Apalachee East, Phase III---MENENDEZ

9. Approval of Subdivision Plat - Investment Park Phase II---MENENDEZ

10. Approval of Minutes---GARY HERNDON, TREASURER-CLERK

IX. CONSENT ITEMS PULLED FOR DISCUSSION

X. CITY COMMISSION

XI. INTRODUCTION OF ORDINANCES

XII. POLICY FORMATION AND DIRECTION

11. Discussion of Aviation Master Plan---AUSTIN

12. Approval of Hangar Construction / Lease Award (RFP No. 0063-06-KR-RC)---AUSTIN

13. Presentation of Transit Advertising, Transit Friendly Streets and Transit Staff Restructuring/Expansion ---RON GARRISON, *STARMETRO*

14. Discussion of Solid Waste Service Level Options---REGINALD OFUANI, SOLID WASTE

15. Appointed Officials Salary Review---GLORIA HALL MCNEIL, HUMAN RESOURCES

BREAK

6:00 PM

XIII. PUBLIC HEARINGS

16. First Public Hearing of Ordinance No. 06-O-27 Amending the Sign Code to Allow Tri-vision and Variable Message Signs as Incentives for Removing Billboards, and Amending the Zoning Code to Allow Billboards in Portions of Activity Center AC Zoning Districts---JIM ENGLISH, CITY ATTORNEY

17. Public Hearing and Discussion of the Frenchtown Watershed Stormwater Master Plan---MENENDEZ

18. First and Only Public Hearing on Ordinance No. 06-Z-22AA; Proposed Modification to the Piney Z Plantation PUD (RZ #500) to amend the land uses within the PUD (continued from March 22)---TEDDER, PLANNING

19. Second Public Hearing on First Amendment to Piney-Z-Farms Development Agreement---ENGLISH

20. First and Final Public Hearing On Ordinance No. 06-Z-02AA; Proposed Rezoning from UT to Urban PUD located on Hayden Road---TEDDER

21. First and Final Public Hearing On Ordinance No. 06-Z-16; Proposed Modification to the Southbrook PUD (RZ# 514) to Amend Land Uses Within the PUD— TEDDER

22. First and Final Public Hearing On Ordinance No. 06-Z-18; Proposed Amendment of the Official Zoning Map from Residential Preservation 2 to Central Urban and 1.0 acre located on the north side of W. Fourth Avenue between Old Bainbridge Road and Central Street---TEDDER

23. First and Final Public Hearing on Ordinance 06-Z-19; Proposed Amendment of the Official Zoning Map from MR-1 to University Transition on 1.2 acres located at the intersection of Belle Vue Way and Hayden Road---TEDDER

24. First of Two Public Hearings on Ordinance No. 06-Z-20; Proposed amendment of the Official Zoning Map from Residence 5 to Residential Preservation 1 on 17.5 acres located in the Crawfordville Trace subdivision---TEDDER

25. First and Final Public Hearing On Ordinance No. 06-Z-24; A Proposed Rezoning from RO to RO with HPOI located at 324 West College Avenue and list is the property on the Local Registrar of Historic Places---TEDDER

26. First and Final Public Hearing On Ordinance No. 06-Z-30; Proposed Abandonment of the Wildwood Drive and Park Avenue West right of way--- TEDDER

27. Public Hearing on Ordinance No. 06-O-32 Regarding Qualification Period and Method for Election---ENGLISH

XIV. UNAGENDAED BUSINESS / SPEAKERS

XV. CITY COMMISSION INFORMATION AND SHARING OF IDEAS

TENTATIVE FUTURE CITY COMMISSION ITEMS
(Internal planning document subject to frequent revision)

June 7, 2006; 4:00 p.m. – Regular City Commission Meeting

Discussion of Habitat Challenge---THOMAS LEWIS, NCS

Gaines Street Presentation---GABRIEL MENENDEZ, PUBLIC WORKS

Discussion of Human Services Needs Analysis---THOMAS LEWIS, NEIGHBORHOOD AND COMMUNITY SERVICES

Animal Services Update---LEWIS

Approval of Bid Award for Water Wells and Elevated Tank Fencing Contract---JIM OSKOWIS, WATER UTILITY

Approval to execute a grant agreement with the NWFWMD for construction of the Tram Road Reuse Facility---JIM OSKOWIS, WATER UTILITY

Approval of Purchase Order for Traveling Screen for Southeast Sprayfield---OSKOWIS

Approval of Purchase Order for Screenings Washer for Southeast Farm---OSKOWIS

Approve the Purchase and Installation of Recycle Pumps for TPS Water Reclamation Facility---OSKOWIS

Discussion of Mobile Work Management--- CYNTHIA BARBER, UTILITY BUSINESS & CUSTOMER SERVICE

Discussion of Expedited Permitting

Introduction of Ordinance No. 06-O-25; an abandonment of Capital Cascades Trail Segment 2 located on South Gadsden Street from East Bloxham Street to the CSX Railroad---WAYNE TEDDER, PLANNING

Introduction of Ordinance No. 06-Z-28; a proposed rezoning (RZ #537) from R-3 to R-4 located on Apalachee Parkway---TEDDER

Introduction of Ordinance No. 06-Z-33; a proposed rezoning (RZ #538) from LP to PUD located at 100 Ox Bottom Road---TEDDER

Introduction of Ordinance No. 06-Z-34; A Proposed Rezoning 9RZ #539) from RP-1 to PUD located at 402 Plantation Road---TEDDER

Introduction of Ordinance No. 06-Z-35; a proposed rezoning (RZ #540) from CU to CU-26 located on the corner of Sixth Avenue and Adams Street---TEDDER

Introduction of Ordinance No. 06-Z-36; a proposed rezoning (RZ #541) from CU to CU-26 located at 1034 North Gadsden Street---TEDDER

Introduction of Ordinance No. 06-Z-37; a proposed rezoning (RZ #542) from OR-3 to R-1 located east of Blair Stone Road and south of Phillips Road---TEDDER

Introduction of Ordinance No. 06-Z-40; a proposed rezoning (RZ #543) from CU to CU-45 located at 114 East 5th Avenue---TEDDER

Approval of Ranking for RFP No. 0091-06-BM-TC; Medium and Heavy Duty Truck Contracs---TERRY LOWE, FLEET

Approval of Amendment to the Interlocal Agreement with County on Downtown Redevelopment Area---MICHAEL PARKER, ECONOMIC DEVELOPMENT

Introduction of Voluntary Annexation Ordinance #06-O-38 Southwood Animal Hospital/2528 Capital Circle Southeast---HART

Introduction of Voluntary Annexation Ordinance #06-O-39 Holy Comforter Episcopal School, Inc.---HART

June 13, 2006; 1:00-5:00 p.m. – Operating budget workshop

June 14, 2006; 1:00-3:00 p.m. – Capital budget workshop

June 14, 2006; 3:30 p.m. – Target Issue Workshop

Discussion of Preliminary Evaluation of Costs & Benefits for Transmission Investments---KEVIN WAILES, ELECTRIC UTILITY

Review of Risk Analysis Cases in the Integrated Resource Planning (IRP) Study---KEVIN WAILES, ELECTRIC UTILITY

Discussion of West Pensacola Sector Plan Activities---WAYNE TEDDER, PLANNING

June 19, 2006; 3:00 p.m. – Capital Region Transportation Planning Agency

June 28, 2006; 4:00 p.m. – Regular City Commission Meeting

Approval of Administrative and Semi-Professional Temporary Labor Services IFB No. 0161-06-KR-BC---REID

Discussion of CHSP annual plan---THOMAS LEWIS, NEIGHBORHOOD AND COMMUNITY SERVICES

Public Hearing on the Proposed Budget---DAVID REID, MANAGEMENT & ADMINISTRATION

Discussion of the Criteria for Ranking/Comparing Alternative Resource Plans---KEVIN WAILES, ELECTRIC UTILITY

Second and Final Public Hearing on Ordinance No. 06-Z-20; Proposed amendment of the Official Zoning Map from R5 to RP1 on 17.5 acres located in the Crawfordville Trace Subdivision---TEDDER

June 29, 2006; 9:00-1:00 – Final budget decisions

July 5, 2006; 4:00 p.m. – Regular City Commission Meeting

July 12, 2006; 4:00 p.m. – Regular City Commission Meeting

Hopkins Unit 2 Repowering high energy piping purchase and budget amendment---KEVIN WAILES, ELECTRIC UTILITY

IRP Status Report and Presentation of Case Comparisons---KEVIN WAILES, ELECTRIC UTILITY

Public Hearing on Voluntary Annexation of Ordinance #06-O-38 Southwood Animal Hospital/2528 Capital Circle Southeast---HART

Public Hearing on Voluntary Annexation of Ordinance #06-O-39 Holy Comforter Episcopal School, Inc.---HART

First and Final Public Hearing on Ordinance No. 06-O-25; an abandonment of Capital Cascades Trail Segment 2 located on South Gadsden Street from East Bloxham Street to the CSX Railroad---WAYNE TEDDER, PLANNING

First and Final Public Hearing on Ordinance No. 06-Z-28; a proposed rezoning (RZ #537) from R-3 to R-4 located on Apalachee Parkway---TEDDER

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First and Final Public Hearing on Ordinance No. 06-Z-35; a proposed rezoning (RZ #540) from CU to CU-26 located on the corner of Sixth Avenue and Adams Street---TEDDER

First and Final Public Hearing on Ordinance No. 06-Z-36; a proposed rezoning (RZ #541) from CU to CU-26 located at 1034 North Gadsden Street---TEDDER

First and Final Public Hearing on Ordinance No. 06-Z-37; a proposed rezoning (RZ #542) from OR-3 to R-1 located east of Blair Stone Road and south of Phillips Road---TEDDER

First and Final Public Hearing on Ordinance No. 06-Z-40; a proposed rezoning (RZ #543) from CU to CU-45 located at 114 East 5th Avenue---TEDDER

August 23, 2006; 4:00 p.m. – Regular City Commission Meeting

Public Hearing on Resource Plan---KEVIN WAILES, ELECTRIC UTILITY

August 30, 2006; 4:00 p.m. – Regular City Commission Meeting

Hopkins Unit 2 Repowering main power transformer purchase and budget amendment---KEVIN WAILES, ELECTRIC UTILITY

Adopt Preferred Resource Plan---KEVIN WAILES, ELECTRIC UTILITY

First and Final Public Hearing of Collection of Special Assessments on Tax Bill / Adoption of Resolution 06-R-11 to Adopt the 2006 Non-Ad Valorem Assessment Roll---GARY HERNDON, TREASURER-CLERK

September 11, 2006; 5:00 p.m. – Blueprint Intergovernmental Agency public hearing

September 13, 2006; 4:00 p.m. – Regular City Commission Meeting

First Public Hearing on the budget and millage rate---DAVID REID

September 18, 2006; 3:00 p.m. – Capital Region Transportation Planning Agency

September 20, 2006; 3:30 p.m. – Target Issue Workshop

September 27, 2006; 4:00 p.m. – Regular City Commission Meeting

Second Public Hearing and adoption of the budget and millage rate---DAVID REID MANAGEMENT & ADMINISTRATION

October 11, 2006; 4:00 p.m. – Regular City Commission Meeting

Hopkins Unit 2 Repowering – Piling contractor---KEVIN WAILES, ELECTRIC UTILITY

October 16, 2006; 8:00-5:00 p.m. – Capital Region Transportation Planning Agency retreat

October 18, 2006; 3:30 p.m. – Target Issue Workshop

October 25, 2006; 4:00 p.m. – Regular City Commission Meeting

November 8, 2006; 4:00 p.m. – Regular City Commission Meeting

November 15, 2006; 3:30 p.m. – Target Issue Workshop

November 20, 2006; 3:00 p.m. – Capital Region Transportation Planning Agency

November 21, 2006; 4:00 p.m. – Regular City Commission Meeting

December 5, 2006; 4:00 p.m. – Regular City Commission Meeting

December 13, 2006; 4:00 p.m. – Regular City Commission Meeting

Hopkins Unit 2 Repowering – General work contractor---KEVIN WAILES, ELECTRIC UTILITY

SUMMARY OF COMMISSION MEETING
MAY 24, 2006

The City Commission met in regular session and took the following action:

Item 1 – Received a presentation and request from Mr. David Jones, President and Director of Florida Disabled Outdoors Association, for some City assistance in locating and providing some funding for a Miracle League athletic field for disabled children and adults

The Commission encouraged Mr. Jones to continue working with City and County staff members on a joint venture to help with this request.

Item 2 – Recognized the following City employees graduating from the Senior City Certified Supervisor Training Program, entitled "Freshen Your Intellect" (FYI), and presented certificates of completion to them:

Ms. Edie Harrison, Growth Management
Mr. Lynn Lease, Utility Business and Customer Service
Mr. Daniel Mann, Growth Management
Ms. Denise O'Neal, Growth Management
Ms. Mona Pearson, Fire Department

Items 2.1-10 – Voted 5-0 to approve the staff's recommendations presented in Consent Agenda Items 2.1-10, taking the following action:

Item 2.1 – Approved the following appointments to the Municipal Code Enforcement Board to terms expiring June 2009 *(as recommended by the Mayor):*

Appointment:
Ms. Echo Gates *(replacing Mark Thomasson)*

Reappointment:
Mr. Brian Will

Item 2.2 – Approved the following reappointments to the Downtown Improvement Authority (DIA) to terms expiring June 2009 *(as recommended by the Mayor):*

Mr. William Moor, Jr.
Mr. Andy Reiss
Mr. Thornton Williams

Item 3 – Approved the Selection Committee's ranking of proposals for Continuing Consulting Civil Engineering/Architectural Services for Capital Projects at the Tallahassee Regional Airport, RFP #0064-06-KR-TC, and authorized the City Manager to execute the related general contracts with the following firms:

Reynolds, Smith and Hills, Inc.
CDM
Kimley Horn and Associates

Item 4 – Approved the award of a change order, in the amount of $95,522.52, to the construction contract with Bass Construction Company, Inc., for the Palmer Munroe

Community Center Renovation, for a total revised contract amount of $1,049,165.52 (Contract No. 1082) *(Option 1 as recommended by Facilities Management)*

Item 5 – Approved the award of bid for the purchase of ready-mix concrete (Bid No. 0144-06-VA-TC) to Tallahassee Redi Mix, low bidder meeting specifications, for estimated expenditures of approximately $300,000 per year; authorized staff to enter into a contract for the period June 1, 2006 through May 31, 2007, with the option to extend the contract for up to two one-year periods, with economic price adjustments for each year, should services be deemed satisfactory *(Option 1 as recommended by Procurement)*

Item 6 – Authorized the establishment of a FY2006 work order to support the operation and maintenance of the Tallahassee Leon Community Animal Service Center (TLCASC), and an appropriation of $29,759 to that work order from the Animal Shelter Donations Account #115-0-366005 ($14,129) and the TLCASC Reserve Account #272236 ($15,630) *(Option 1 as recommended by Neighborhood and Community Services [NCS])*

Item 7 – Joined in the dedication and approved the Summer Lake Phase I subdivision plat, containing 2.19 acres subdivided into five (5) lots bounded on the north by Hartsfield Plantation Unit II, and on the south, east and west by unplatted lands, planned for development as single-family residential by Hossein Ghazvini *(as recommended by Public Works/Engineering)*

Item 8 – Joined in the dedication and approved the Apalachee East Phase III subdivision plat containing 77.90 acres subdivided into 92 lots bounded on the north and east by Doyle Connor Boulevard, on the south by Apalachee East Phases I & II and on the west by unplatted lands, planned for development as single-family residential by Apalachee East, Ltd., with Joseph F. Chapman, IV as its president *(as recommended by Public Works/Engineering)*

Item 9 – Joined in the dedication and approved the Investment Park Phase II subdivision plat containing 20.60 acres subdivided into two (2) lots, located on Sessions Road bounded on the north and east by unplatted land, on the south by Interstate 10 and on the west by Investment Park Phase I, planned for development as multi-family attached by Sessions Road Partnership, LLC, with Steven E. Allen as authorized representative officer *(as recommended by Public Works/Engineering)*

Item 10 – Approved the minutes of the following City Commission meetings as distributed *(as recommended by the City Treasurer-Clerk/Records Management):*

March 29, 2006	Regular Meeting
April 19, 2006	Regular Target Issues Workshop

Item 10.1 – Received a Power Point presentation by Mr. Steve Vancore, of VancoreJones Communications, Inc., summarizing the preliminary findings of the citizen survey conducted April 20-May 6, 2006, which indicated that 80% of City residents had a favorable opinion of services provided by the City *(brought forward by Budget & Policy)*

Item 11 – Received a Power Point presentation on a draft Airport Master Plan Update, presented by The LPA Group; voted 5-0 to accept the Airport Master Plan draft and authorize staff to proceed

with remaining elements, including Federal Aviation Administration (FAA) and Florida Department of Transportation (FDOT) review *Option 1 as recommended by Aviation)*

Welcomed Ms. Opal McKinney-Williams, Vice Chair of the Airport Advisory Committee, and representatives of The LPA Group

Discussed the Airport Master Plan and provided the following direction regarding the Airport Master Plan:

- use extreme caution to avoid adverse impacts to environmentally sensitive areas, i.e., the ecology, karst features and sinkholes, as planning proceeded on proposed expansion projects at the Airport

- clarified that Airport Administration would consider offers to buy out remaining homeowners located within the Airport Noise Contour area

- requested that copies of the Airport's Minimum Standards be distributed to the Commissioners

- requested a comparison of minimum standards and fixed base operator operations (FBO) for similar-size comparable regional airports

Item 12 – Voted 5-0 to approve the Selection Committee's ranking on the award of bid for Airport Hangar Construction/Lease RFP #0063-06-KC, and to authorize staff to negotiate and execute Hangar Construction/Lease Agreements with Flightline Group/Development Corporation, sole bidder meeting specifications, for a $2.0-$2.8 million proposal to provide the largest hangar project ever undertaken on the Airport utilizing both the North and Central apron locations *(Option 1 as recommended by Aviation)*

- ascertained the facts of a bid award grievance filed by Aero Associates

- clarified with staff that this project could potentially create opportunity for a second FBO

Item 13 – Voted 5-0 to authorize StarMetro to 1) issue a Request for Information (RFI) for transit advertising services; 2) approve the Staff Restructuring Plan, as presented, including the elimination of 35 temporary positions and overtime, the addition of 27 new full-time drivers, and the addition of three (3) transit staff positions; and 3) approve nine new driver positions for service route enhancements only if the previously submitted FDOT grant is approved in July 2006 *(Option 1 as recommended by StarMetro)*

Item 14 – Voted 5-0 to authorize staff to 1) finalize and execute a negotiated seven-year contract with Waste Pro to provide residential Solid Waste Services in the contracted area of the City, with the contractor to provide the existing level of service (LOS) for the first six (6) months at a cost of $15 per customer per month while City staff investigates the restructuring of services and the Commission to select a permanent LOS before April 1, 2007; and 2) authorize the City Manager, with concurrence from the City Attorney, to execute the contract – at an estimated cost of approximately $600,000 from the Solid Waste Rate Stabilization Fund for the first six months of the contract *(Option 1 as recommended by Solid Waste Services)*

- agreed that some improvement was needed in the collection of solid waste

- suggested that the staff investigate separating the collection of yard trash from the contract for solid waste collection services

Item 15 – DELETED FROM THE AGENDA the Annual Salary Review for Appointed Officials *(an item brought forward by Human Resources) – rescheduled for June 7, 2006*

Item 16 - Held the first of two public hearings on Ordinance No. 06-O-27, introduced on April 26, 2006, which would amend the Sign Code to allow tri-vision and variable message signs as incentives for removing billboards, and amend the Zoning Code to allow billboards in portions of Activity Center AC Zoning districts; set the second public hearing on this ordinance for July 12, 2006 *(brought forward by the City Attorney)*

- discussed some suggestions offered by Commissioner Mustian for staff analysis/recommendations prior to the next public hearing

Mr. Lloyd Childree, 337 Meadow Ridge Drive, representing Lamar Outdoor Advertising, appeared before the Commission in support of this item.

Item 17 – Held a public hearing on the adoption of the Frenchtown Watershed Stormwater Master Plan, brought forward from a public hearing held February 22, 2006; voted 3-2 (Commissioners Lightsey and Mustian opposed) to approve Alternative 6C -- providing for a Greenwood Pond, reduced improvements to the Carter Howell Strong Park Pond, and minimal conveyance improvements; and authorized staff to pursue voluntary acquisitions of land that would help with the aggregation of land needed for Alternative 6A, which would provide for a Rollins Street Pond and broader stormwater management improvements to the overall Frenchtown area, and seek to work out a compromise with impacted citizens in the next six months *(brought forward by Public Works/Stormwater Management)*

The following persons appeared before the Commission relative to this item:
Mr. Bill Rollins, 5460 E. Rollins Street, representing the Rollins Family (opponent)
Ms. Harriet Crawford, 2417 Windy Pine Way, representing Trinity Missionary Baptist Church (opponent)
Mr. Henry C. Hunter, 219 E. Virginia Street, representing Trinity Missionary Baptist Church (opponent)

Item 18 – Held a public hearing on Piney-Z Plantation Planned Unit Development (PUD) Rezoning Ordinance No. 06-Z-22AA, introduced on March 8, 2006, and continued from the public hearing held March 29, 2006; voted 4-1 (Commissioner Gillum opposed) to adopt Ordinance No. 06-Z-22AA, amending the existing Piney-Z Planned Unit Development (PUD) located on the north side of Apalachee Parkway, east of Conner Boulevard, by eliminating 134,495 square feet of non-residential uses, and adding 120 residential units (Applicant: Piney-Z, Ltd.), based on the findings and conditions of the Development Review Committee (DRC), and contingent on approval of the next item (First Amendment to Piney-Z Farms Development Agreement) *(Option 2 as recommended by Planning)*

The Commission expressed concern with the application of the Community Development District (CDD) and observed that care should be taken with future PUDs where an agreement was made on a design expected for the future.

The following persons appeared before the Commission relative to this item:
Mr. Richard Kessler, 753 Eagle View Drive (opponent)
Mr. Tom Cooper, 624 Eagle View Circle (opponent)
Ms. Gwen Mathis, 1200 Brafforton Drive (opponent)
Ms. Geraldine Rudd, 681 Eagle View Circle (opponent)
Ms. Colleen Tice, 1159 Landings Loop (opponent)

Ms. Paula Clark, 11359 Brafforton Drive (opponent)
Ms. Pamela McWilliams, 529 N. Meridian Street (opponent)
Mr. Richard Mergy, 4895 Heritage Park Boulevard (opponent)
Ms. Jill Gustafson, 915 Park View Drive (opponent)
Mr. Cleveland White, 4733 Plantation View Drive (opponent)
Ms. Dedra Mitchell, 967 Park View Drive (opponent)
Ms. Mildred Kelly, 4912 Park View Court, President of the Piney-Z Homeowners Association (proponent)
Mr. Larry Pushor, 974 Park View Drive (proponent)
Mr. Booker Warren, 4655 Fledgling Drive (proponent)
Mr. Gary Zins, 2417 Fleischmann Road, representing Evergreen Communities (proponent)
Mr. Jan M. Bridges, 4865 Lake Park Drive (proponent)
Ms. Nancy Linnan, 215 South Monroe Street, Suite 215, representing Evergreen Communities (proponent)
Ms. Anne Parker, 949 Piney-Z Plantation Road (proponent)
Ms. Tanya Hightower, 4704 Planters Ridge Drive (proponent)

Item 19 – Held the second and final public hearing on the First Amendment to Piney-Z Farms Development Agreement, a Chapter 163 Development Agreement on parcels purchased by Evergreen Communities, Inc., located on the north side of Apalachee Parkway, east of Conner Boulevard, the first public hearing having been held April 26, 2006; voted 4-1 (Commissioner Gillum opposed) to approve this First Amendment to the Development Agreement, changing the designated uses from village center with office/commercial to residential condominium and single-family homes, modifying the highway medical commercial at the northeast corner of Conner Boulevard and Apalachee Parkway to become a 2.06-acre site for office/retail, and changing the 100-foot buffer east of the existing church site to a 30-foot buffer, and providing no reduction to the amount of open space -- maintaining the PUD requirement of 87.59 acres of open space, and extending the expiration date of the Development Agreement from August 28, 2006, to August 28, 2015 *(Option 1 as recommended by the City Attorney)*

There were no speakers on this item.

Item 20 – Held a public hearing on Sterling Traditions Condominiums Rezoning Ordinance No. 06-Z-02AA, introduced on May 10, 2006; voted 5-0 to adopt the ordinance, rezoning .99 acres located on the east side of Hayden Road, approximately 400 feet south of West Pensacola Street, from University Transition (UT) zoning district to Urban Planned Unit Development (UPUD) (RZ-509) (applicant: Tallahassee 300, LLC) *(Option 1 as recommended by Planning)*

Mr. Barry Poole, 2145 Delta Boulevard, representing Poole Engineering & Surveying, Inc. appeared before the Commission in support of this item.

Item 21 – Held a public hearing on Southbrook Rezoning Ordinance No. 06-Z-16, introduced on March 8, 2006, and continued from March 29, 2006, which would amend the existing Southbrook Planned Unit Development (PUD), located on the northwest corner of the intersection of Capital Circle Southwest and Balkin Road, to allow for residential uses throughout the entire property with a maximum residential density of 16 dwelling units per acre, including attached and detached single-family units (applicant: Linderand, Inc.); by consensus, continued the public hearing on this ordinance July 12, 2006, pursuant to the request of the developer *(brought forward by Planning)*

There were no speakers on this item.

Item 22 – Held a public hearing on Southern Comfort Homes, LLC, Etal., Rezoning Ordinance No. 06-Z-18, introduced on May 10, 2006; voted 5-0 to adopt the ordinance, rezoning 1.0 acre located on the north side of West Fourth Avenue between Old Bainbridge Road and Central Street from Residential Preservation 2 (RP2) to Central Urban (CU) (RZ-523), implementing Comprehensive Plan Map Amendment 2006-1-M-001 (owner/applicant: Southern Homes LLC, Sheffield Body Shop, and Welbert Colson, Jr.) *(Option 1 as recommended by Planning)*

There were no speakers on this item.

Item 23 – Held a public hearing on Josh Kasper Rezoning Ordinance No. 06-Z-19, introduced May 10, 2006; voted 5-0 to adopt the ordinance, rezoning 1.2 acres located at the intersection of Belle Vue Way and Hayden Road from Medium Density Residential District (MR-1) to UT (RZ-524), implementing Comprehensive Plan Map Amendment 2006-1-M-002 (applicant/owner: Josh Kasper/Stadium Place of Tallahassee, LLC) *(Option 1 as recommended by Planning)*

There were no speakers on this item.

Item 24 – Held the first of two public hearings on Crawfordville Trace Neighborhood Rezoning No. 06-Z-20, introduced on May 10, 2006, which would rezone 17.5 acres in the Crawfordville Trace Subdivision owned by 43 individuals from Residence 2 to RP1 (RZ-525), implementing Large Scale Comprehensive Plan Map Amendment 2006-1-M-005 (initiated by the Planning Department); and set the second public hearing on the adoption of Ordinance No. 06-Z-20 for July 12, 2006 *(Option 1 as recommended by Planning)*

There were no speakers on this item.

Item 25 – Held a public hearing on McNeill - Spriggs House Rezoning Ordinance No. 06-Z-24, introduced on May 10, 2006; voted 5-0 to adopt the ordinance, rezoning property located at 117 S. Martin Luther King, Jr. Boulevard from Targeted Retail/Office Growth Area (RO) to RO with Historic Preservation Overlay (HPO) zoning district, and providing for the addition of the property to the Local Register of Historic Places (RZ-528) (applicant/owner: Kent Spriggs) *(Option 1 as recommended by Planning)*

There were no speakers on this item.

Item 26 – Held a public hearing on Wildwood Drive & Park Avenue West Abandonment Ordinance No. 06-O-30, introduced on May 10, 2006, which would abandon a public right-of-way located on the Florida State University (FSU) campus north of West Jefferson Street and west of Woodward Avenue (applicant: FSU); by consensus, continued the public hearing on the adoption of the ordinance to July 12, 2006, allowing further analysis of the City conditions for this abandonment *(Option 1 as recommended by Planning)*

There were no speakers on this item.

Item 27 – Held a public hearing on Charter Amendment Ordinance No. 06-O-32, introduced on May 10, 2006; voted 5-0 to adopt the ordinance, amending the Code of Ordinances to make the qualification period and method for election consistent as provided by state law *(Option 1 as recommended by the City Attorney)*

There were no speakers on this item.

The Commission clarified with staff that this year's qualifying period for candidates running in the November election was set for July 17 to noon, July 21, 2006.

Item 28 – Commissioner Mustian requested that the staff investigate and bring back by the end of the current year a recommendation on a streamlined way to plant more trees in the rights-of-way median areas of state roads in the community and to keep the newly-planted trees alive and healthy, and to provide information on how the City was paying the cost of planting the trees.

City Commission Information and Sharing of Ideas:

Commissioner Katz suggested that a potential policy of not renting vehicles that average less than 25 mpg be discussed during the budget process.

Commissioner Lightsey suggested that in the future, the importance of regular meeting attendance needed to be clarified for new committee/board members.

Unagendaed - recognized upcoming retirement of Ms. Brenda Tanner from City employment and thanked her for her service and helpfulness.

CTC:RM:ecg:05-31-06

CITY OF TALLAHASSEE

CITY COMMISSION AGENDA ITEM

ACTION REQUESTED ON:	May 24, 2006
SUBJECT/TITLE:	Airport Master Plan Update
TARGET ISSUE:	Economic Development

STATEMENT OF ISSUE

The Aviation Department engaged The LPA Group, Inc., the airport's general engineering consultant, to perform an Airport Master Plan Update. The airport's most recent master plan update was completed in January 1996.

The primary purpose of an Airport Master Plan is to serve as a planning document to provide guidelines for future airport development to satisfy projected aviation demand within a 20-year study period.

The master plan process includes: inventory, aviation activity forecast, airfield capacity analysis, facility requirements analysis, airport alternatives analysis, airport layout plans, financial plan/capital improvement plan and public involvement.

The Aviation Department staff and The LPA Group will present to the City Commission an overview of the draft Airport Master Plan Update.

RECOMMENDED ACTION

Approval of Option 1 – Accept Airport Master Plan draft and authorize staff to proceed with remaining elements including Federal Aviation Administration (FAA) and Florida Department of Transportation review.

FISCAL IMPACT

None.

Kenneth M. Austin, Director
Aviation Department

Anita R. Favors Thompson
City Manager

For Information, please contact: Michael J. Clow, Airport Capital Program Administrator, extension 7530

ITEM TITLE: **AIRPORT MASTER PLAN UPDATE**

SUPPLEMENTAL MATERIAL/ISSUE ANALYSIS

HISTORY/FACTS & ISSUES

The most recent Airport Master Plan Update was adopted in 1996 and has been used to guide airport development. Updates are recommended every 5-10 years so that changes to aviation demand forecast analysis can be identified and Airport Layout Plans can be revisited.

This draft Airport Master Plan Update serves as a planning document to guide future airport development. The major highlights of this update are outlined below:

- Aviation activity (enplanements and annual operations) at Tallahassee Regional is expected to show growth throughout the planning period with enplanements projected at 819,298 by 2020 and annual operations at 149,369 by same time period.
- The Ivan Munroe Terminal is adequate for the short term but will require expansion and supporting infrastructure in the long-range plan.
- The existing runway and taxiways are capable of handling existing and future growth and provide sufficient airfield access though normal maintenance improvements and upgrades will be required.
- Adequate air cargo space will soon be available with completion of the new Air Cargo Complex.
- Adequate general aviation parking and tie-down areas are available but aircraft maintenance, storage hangars and General Aviation terminal space will be needed in the mid-long term plan.
- Runway 9-27 does not meet FAA Line-of-Sight Requirement and will require extension of Runway 18-36 during repairs to maintain operational safety and air transportation services.
- Improvements are needed in all access routes in the mid and long range plan.

OPTIONS

1. Accept Airport Master Plan draft and authorize staff to proceed with remaining elements including Federal Aviation Administration (FAA) and Florida Department of Transportation review.

   Discussion of Option: This option is recommended as it provides the Airport with an improved and fully justifiable Master Plan for the next 10 to 20 years of development.

2. Modify proposed draft of Airport Master Plan Update and authorize staff to proceed with remaining elements including Federal Aviation Administration (FAA) and Florida Department of Transportation (FDOT) review.

   Discussion of Option: This option should be considered if the City Commission feels changes are needed before submitting this Master Plan Update to the FAA and FDOT for review.

3. Take no action.

   Discussion of Option: This option is not recommended. The current Airport Master Plan Update is out of date; forecasts are in error and include elements that cannot be built for lack of operational necessity or safety/security reasons.

RECOMMENDED ACTION

Approval of Option 1

ATTACHMENTS/REFERENCES

Draft Airport Master Plan Update provided under separate cover.

AIRPORT MASTER PLAN UPDATE

PREPARED FOR

TALLAHASSEE

REGIONAL AIRPORT

THE LPA GROUP
AVIATION CONSULTANTS

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

What is a Master Plan?

- Projection of the Airport's ultimate growth over a 20-year timeframe.
- Plan for the ultimate development of physical facilities.
- Development guide, including timing and costs, that considers adjacent land uses and environmental issues.
- Step-by-step description of the logic used in formulating the plan.
- Display of the plan in graphical and written form.
- Positions the Airport to compete for FAA funding (up to 95%).

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Master Plan Process

- **Inventory**
- **Aviation Activity Forecasts**
- **Airfield Capacity Analysis**
- **Facility Requirements Analysis**
- **Airport Alternatives Analysis**
- **Airport Layout Plans**
- **Financial Plan/Capital Improvement Program**
- **Public Involvement**
  - Technical Advisory Committee Meetings
  - Public Meeting
  - Coordination Meetings
  - Briefings to City Commission
  - Project Web Site/Newsletter

LPA


AIRPORT MASTER PLAN UPDATE
TALLAHASSEE
REGIONAL AIRPORT
Aviation Activity Forecasts
LPA

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

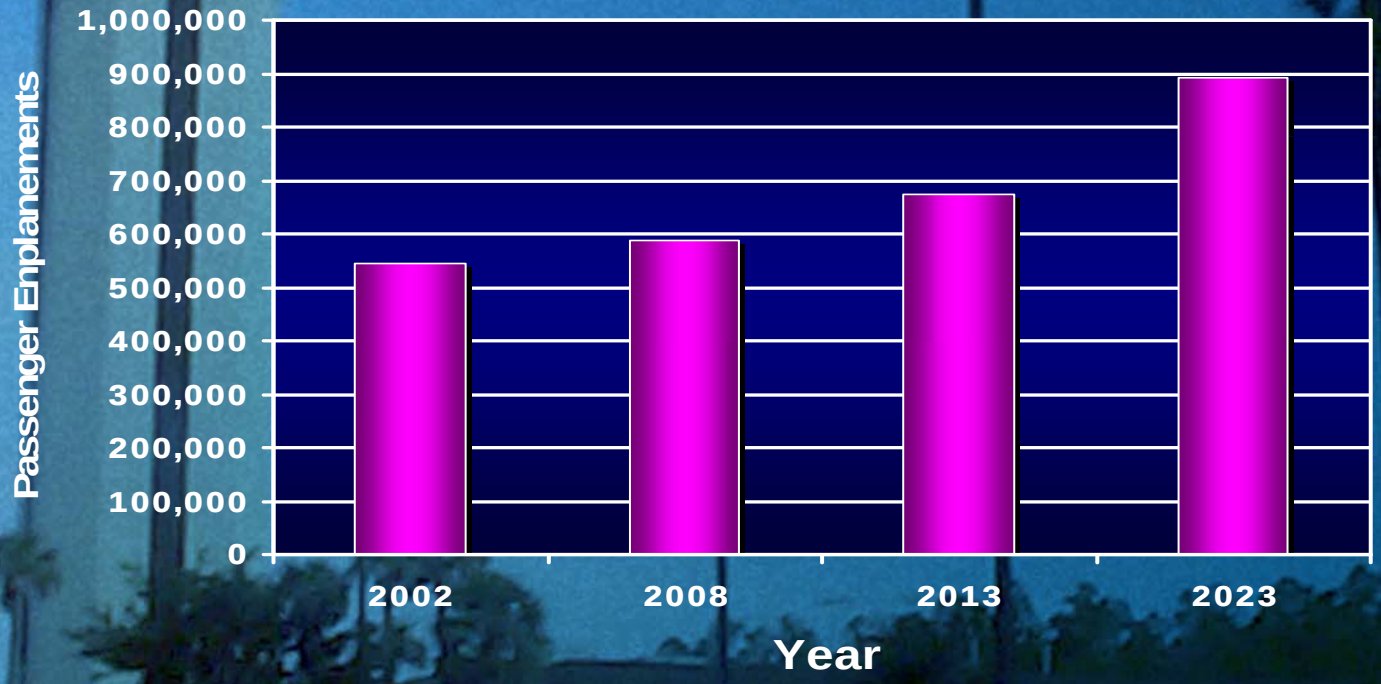
Commercial Passenger Service

- Preserve Viability of Various Terminal Area Development Options
- Opportunities for Enhanced Service into Major Hub Cities not Presently Served
- Consider Options to Improve Airline Service
- Secure Service to Other Hubs
- Consider Methods to get More Passengers to Fly TLH versus Other Airports
- Potential Demand Generated from Spin-off Business Development Near the Airport

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Forecast Enplanements



AIRPORT MASTER PLAN UPDATE

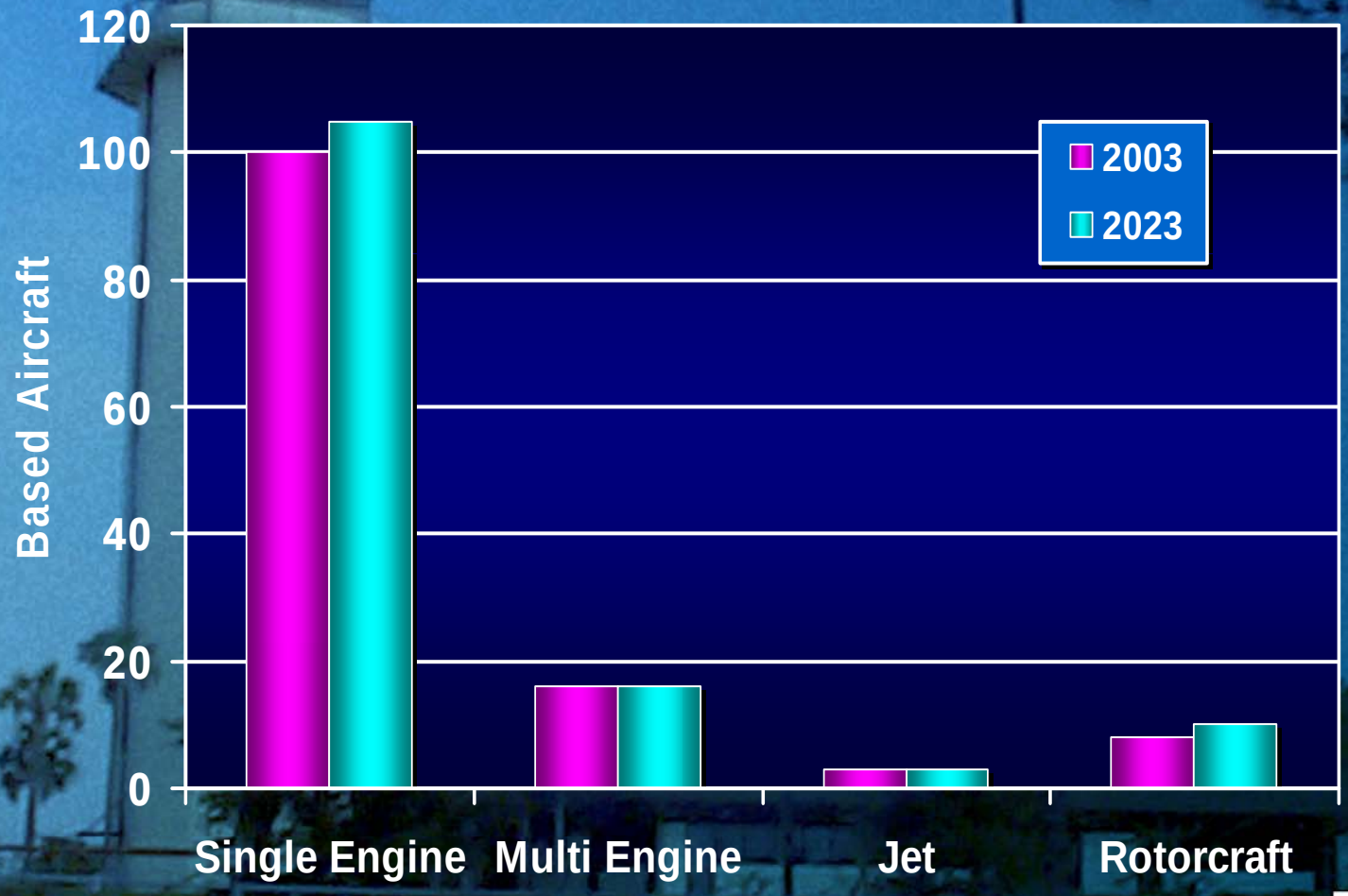
TALLAHASSEE REGIONAL AIRPORT

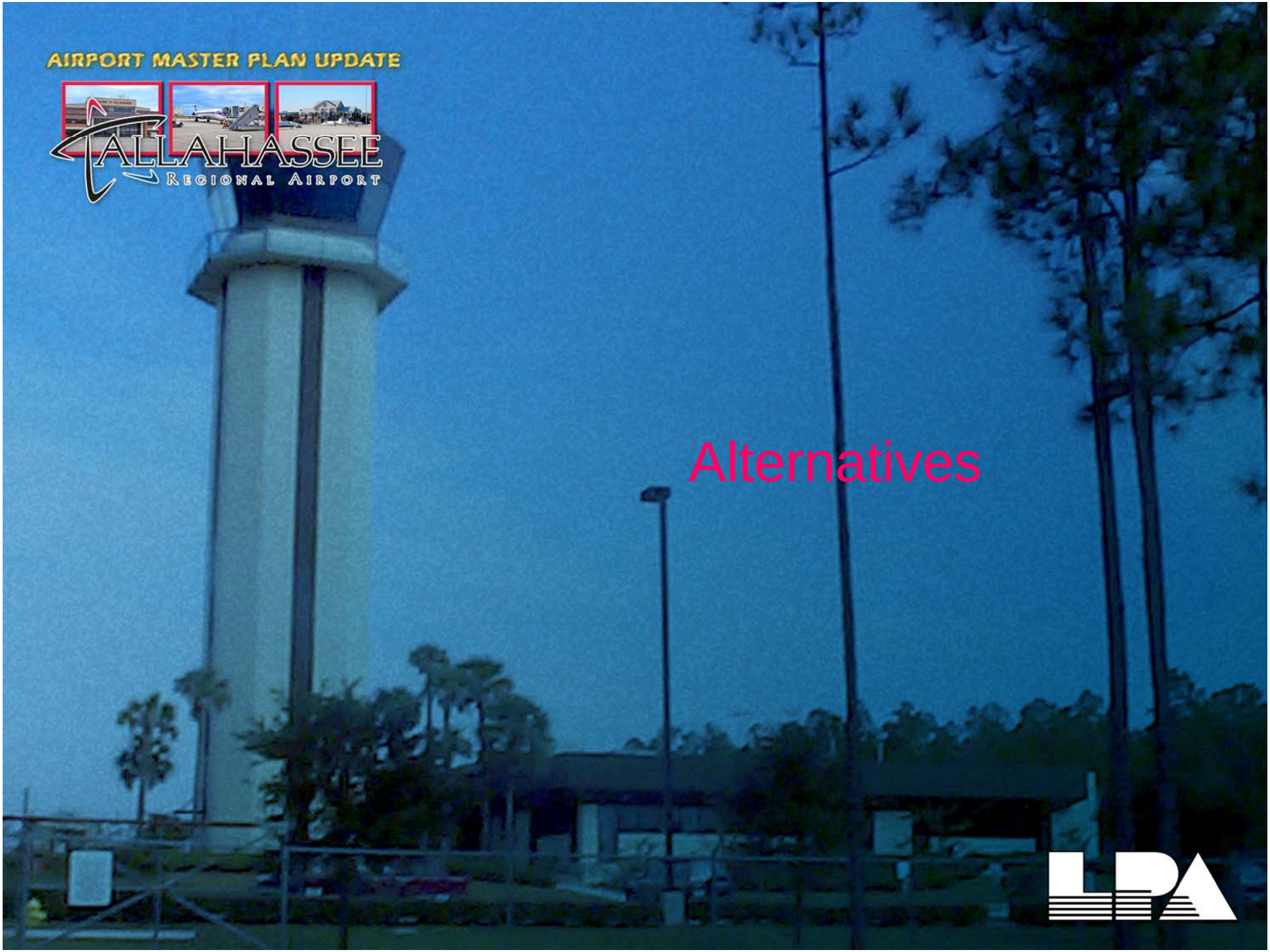
Operations Forecast

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Based Aircraft Fleet Mix Forecast




AIRPORT MASTER PLAN UPDATE
TALLAHASSEE
REGIONAL AIRPORT
Alternatives
LPA

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Alternatives Analysis

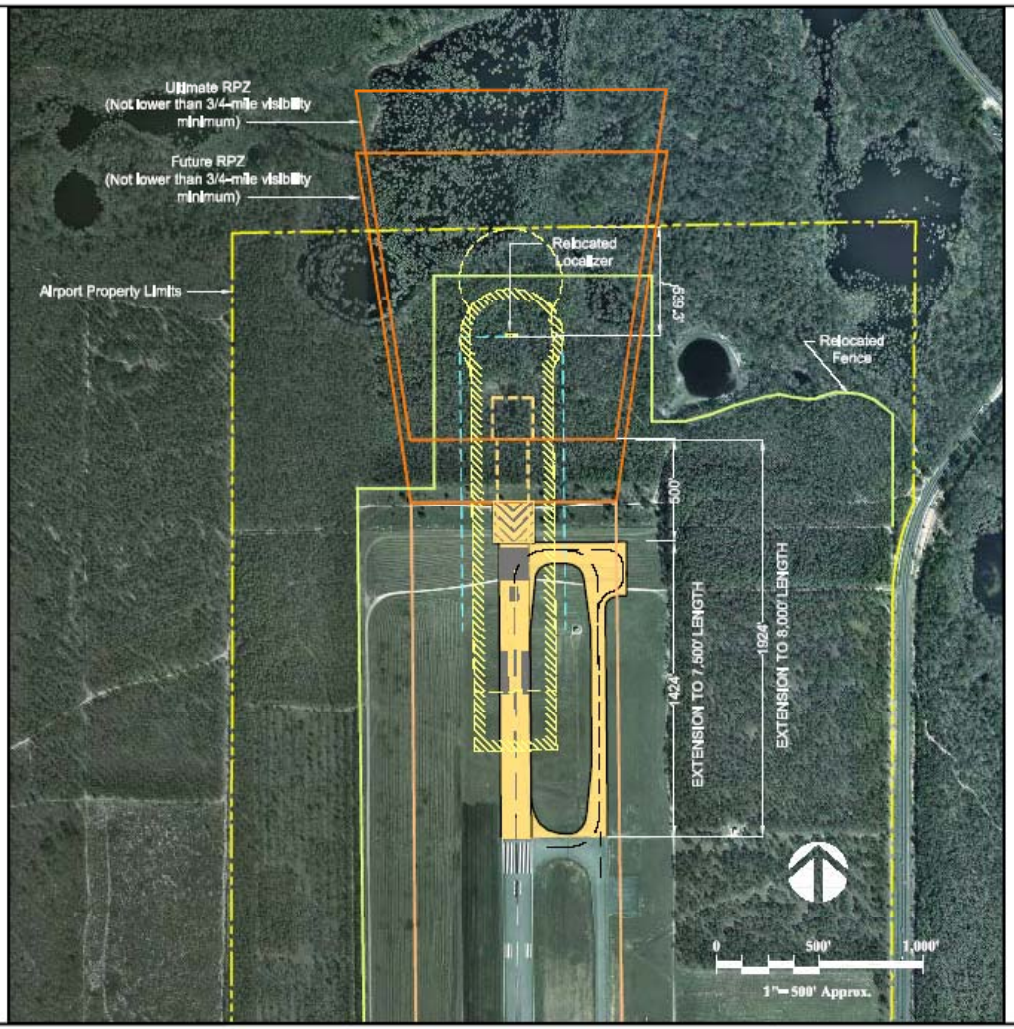
- **Evaluate short, interim and long-term development options**
  - Identify future aviation development areas
  - Identify critical aircraft and demand
  - Identify future landside development areas
- **Evaluate airfield and landside improvements, including**
  - Evaluate existing pavement
  - Evaluate ground access
  - Consider compatible land use
  - Balance airside and landside development for revenue generation

LPA

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Runway 18 North Extension



Runway Extension
Localizer Critical Area
Proposed Airfield Pavement
Future RSA
Future / Ultimate RPZ
Future Part 77 Primary Surface

RUNWAY 18-36 NORTH EXTENSION (7,500', 8,000' ULT.)

6-4

TALLAHASSEE REGIONAL AIRPORT

MASTER PLAN UPDATE

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Taxiways – (Runway 9-27)

PROPOSED TAXIWAY IMPROVEMENTS - RUNWAY 9-27

6-5

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Taxiways – (Runway 18-36)

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

North General Aviation

EXISTING BUILDING DATA TABLE	
BLDG.	DESCRIPTION
1	OLD TERMINAL BUILDING
2	AERO ASSOCIATES HANGAR
3	NORTH CARGO BUILDING
4	FLIGHTLINE NORTH B (USFS)
31	T-HANGAR B
32	T-HANGAR C
33	T-HANGAR D
34	T-HANGAR E
35	T-HANGAR F
36	T-HANGAR G
37	T-HANGAR A (Port-a-ports)
38	CORPORATE HANGARS EE
39	FLIGHTLINE NORTH A (Pepsi)
40	CORPORATE HANGAR D

POTENTIAL HANGAR DEVELOPMENT SITES

C	Area is 160' x 175', ideal for a new 130' x 150' hangar suited for commecial use.
D	Area is 200' x 150', ideal for a new 175' x 130' hangar suited for commercial use.
E	Area is 142' x 164'. ideal for a 140' x 140' hangar. Minimum standards for aircraft parking can be accommodated on new ga apron until federal express relocates.
F	Fedex relocation will make this area available once new cargo facility is constructed.

Proposed Apron

Existing Structures

Potential Site for Hangar Development

Flightline Lease

NORTH GA APRON POTENTIAL DEVELOPMENT

6-7

TALLAHASSEE
REGIONAL AIRPORT

MASTER PLAN UPDATE

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

South General Aviation

EXISTING BUILDING DATA TABLE	
BLDG.	DESCRIPTION
4	FLIGHTLINE NORTH B (USFS)
5	OLD FIRE STATION
6	ELECTRICAL VAULT
7	FUEL FARM
8	FIRE STATION NUMBER 5
9	FLIGHTLINE SOUTH A (Ivan Munroe)
10	FLIGHTLINE SOUTH B (Coastal)
11	CIVIL AIR PATROL
12	STATE OF FLORIDA (DMS Hangar)
13	LEON COUNTY SHERRIFF
14	STATE OF FLORIDA (FOREST SERVICE)
15	LIVELY TECHNICAL SCHOOL (LTS)
20	CAPITAL AVIONICS HANGAR

POTENTIAL HANGAR DEVELOPMENT SITES

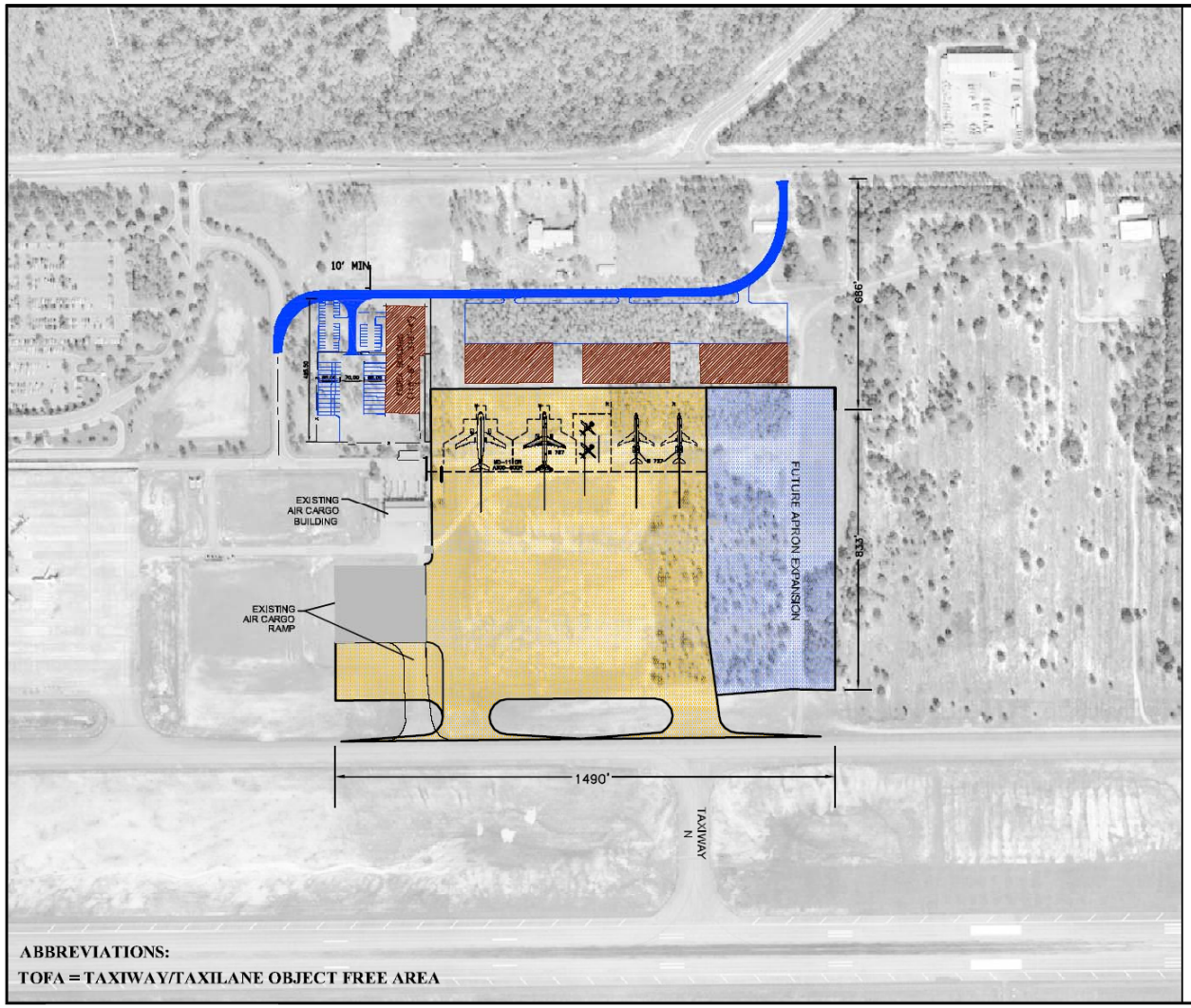
B	IDEAL FOR MULTIPLE 100' x 100' HANGARS OR A 100' x 265' HANGAR.
C	CAPITAL AVIONICS ONLY ONE ELIGIBLE TO DEVELOP THIS AREA. AREA IS 100' x 100'.

CENTRAL AND SOUTH GA APRON POTENTIAL DEVELOPMENT

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Cargo Area



0 300' 600'

1"=300' Approx.

LEGEND

- Proposed Buildings/Structures
- Short-Term Apron Expansion
- Long-Term Apron Expansion
- Proposed Airfield and Roadway Pavement

REFINED AIR CARGO ALTERNATIVE

6-18

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

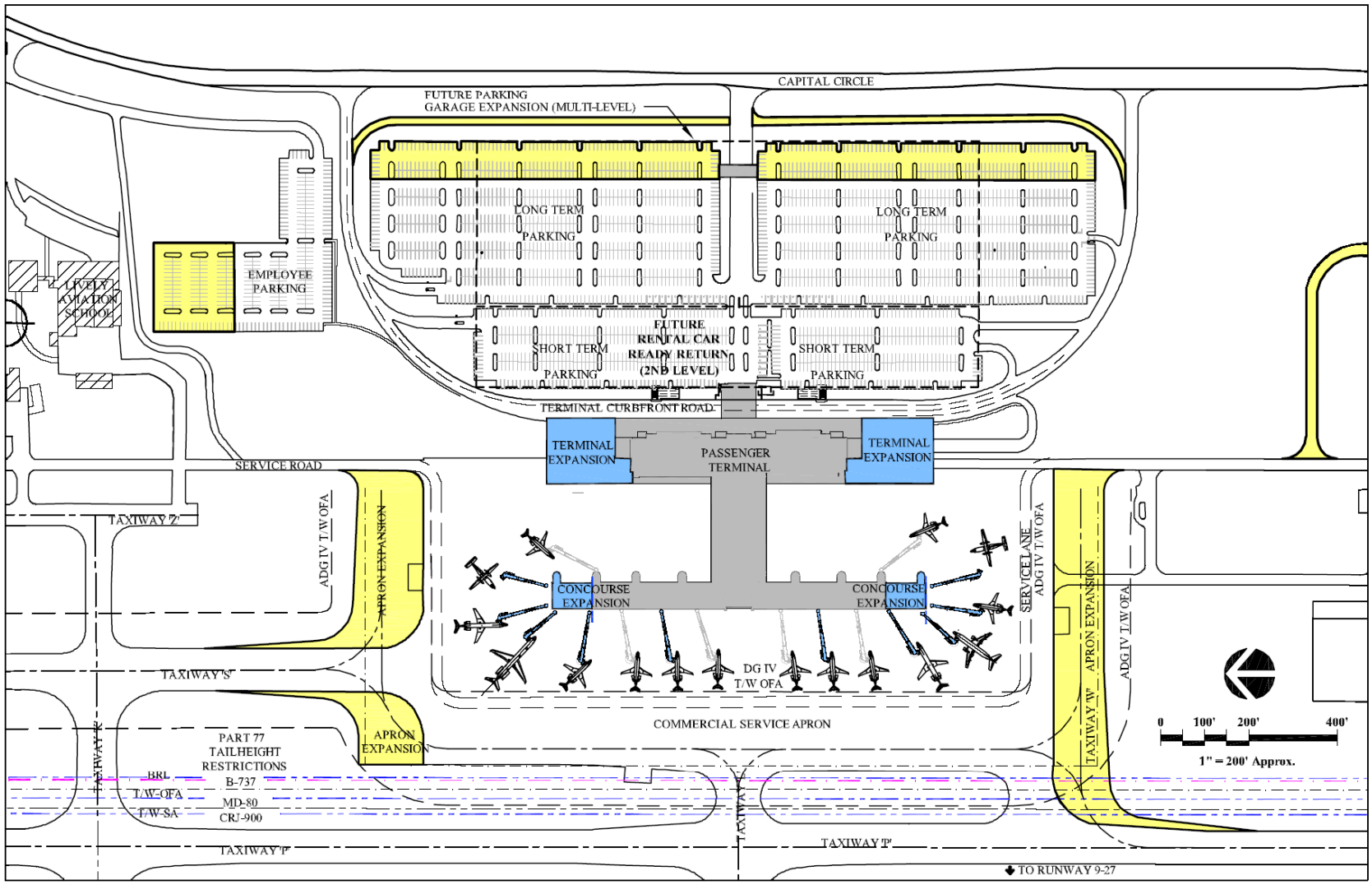
Potential Environmental Challenges

- **Existing Natural Features**
  - Cypress Wetland
  - Gopher Tortoise
  - Suitable habitat for other species
- **Mitigation**
  - Exotic Species Removal
  - Wetland Creation
  - Gopher Tortoise Relocation
  - Other Mitigation Options

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Terminal Area Development



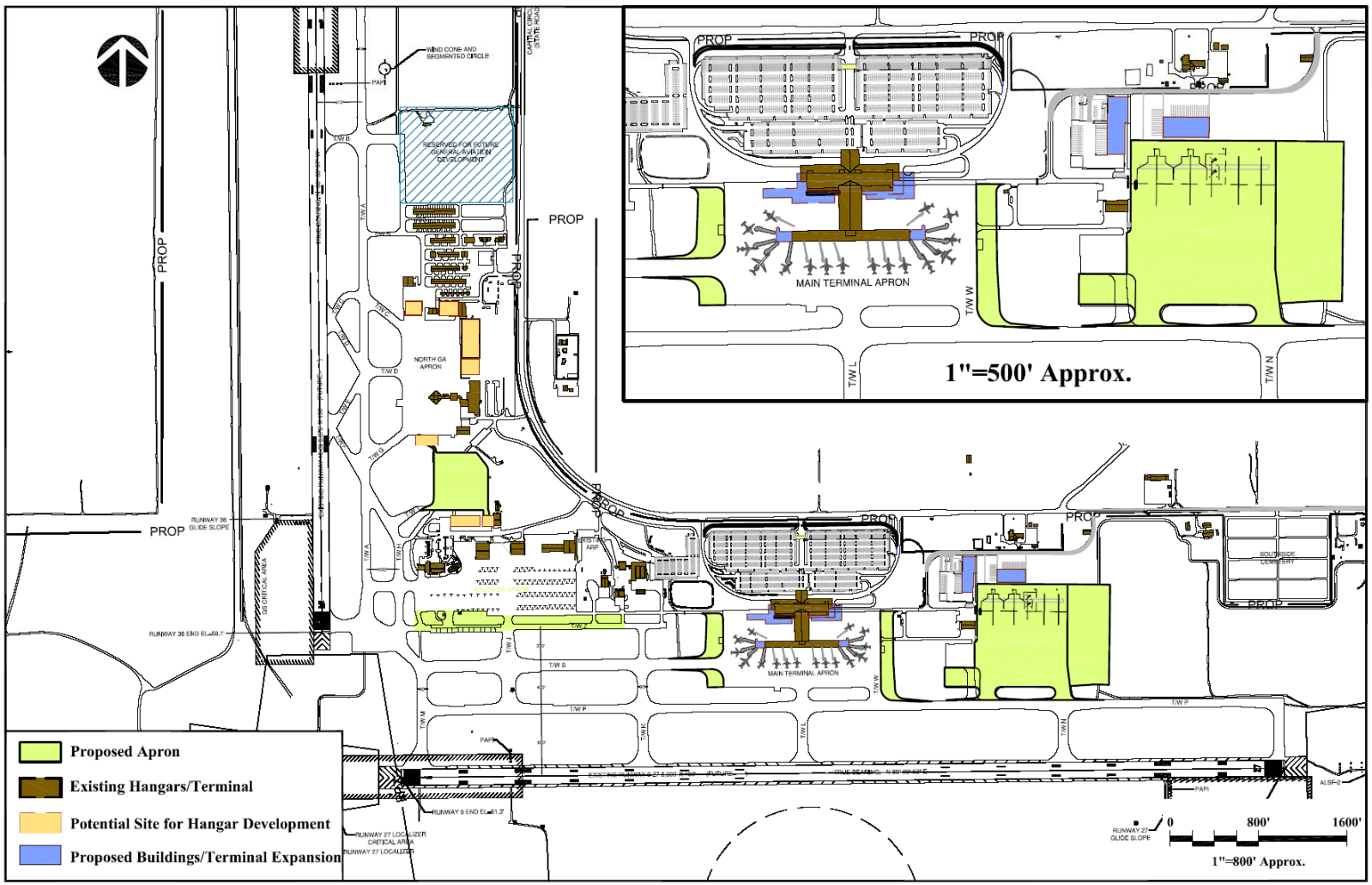
PREFERRED SITE CONCEPT

6-27

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Landside Development Summary



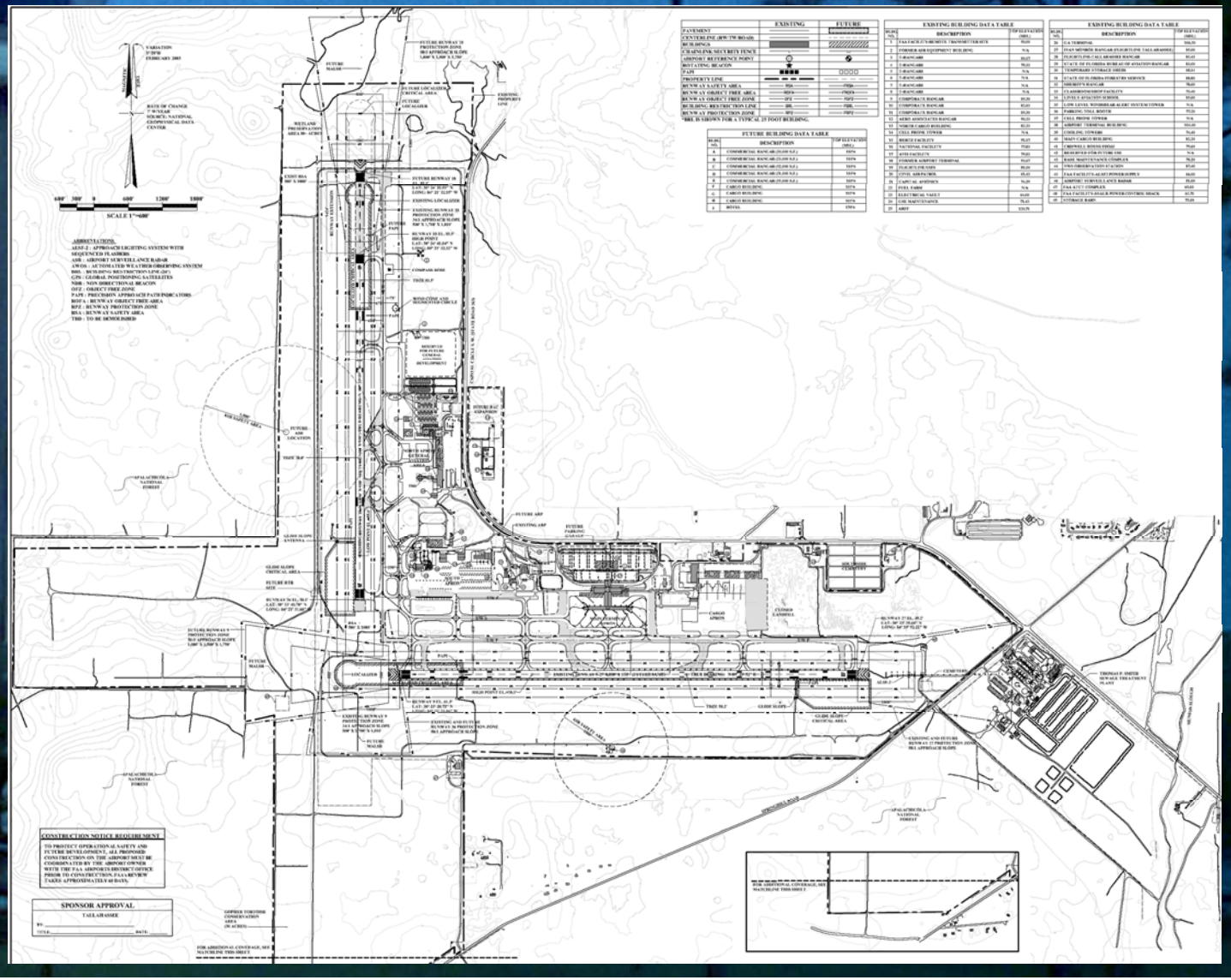
REFINED ALTERNATIVES

6-36

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Airport Layout Plan




AIRPORT MASTER PLAN UPDATE
TALLAHASSEE
REGIONAL AIRPORT
Capital Improvements
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TALLAHASSEE REGIONAL AIRPORT

Runways

Short-Term

- Benefit-Cost Analysis for Runway 18-36 Extension
- Airfield Improvements Design
- Runway 18-36 Environmental Assessment

Intermediate-Term

- Runway 18-36 Extension (Permitting & Design)
- Routine Runway Pavement Maintenance
- Runway 18-36 Extension and Rehabilitation
- Runway 9-27 Lateral Grade Improvements – P1
- Runway 9-27 Reconstruction – P2

Long-Term

- Routine Runway Pavement Maintenance
- Refurbish Runway Lighting

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TALLAHASSEE REGIONAL AIRPORT

Taxiways

Short-Term

- Overlay Taxiway P
- Overlay GA Taxiways
- Taxiway Connector Improvements
- New Taxiway Connector at 9-27

Intermediate-Term

- Taxiway P Lighting (MITL)
- Widen Taxiway W
- Rehabilitate and Extend Taxiway S
- Taxiway P to A Bypass Connector
- Rehabilitate Taxiway Z
- Ongoing Taxiway Rehabilitation
- Runway 9-27 Reconstruction (Taxiway Improvements)

Long-Term

- Widen Taxiways C, D, E and F
- Straighten Taxiway C (High-speed Exit)
- By-pass Taxiway for Runways 9 and 27
- Refurbish Taxiway Lighting
- Taxiway Connector Improvements (N of 9-27 and E of 18-36)
- Taxiway Fillets at S, M, K, L and N

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General Aviation Areas

Short-Term

- Bulk Hangar Rehabilitation
- T-Hangar Development
- South Apron Rehabilitation
- Wash Rack and Fuel Truck Parking

Intermediate-Term

- Extend Lively Apron and Expand Associated Taxiway
- South GA Apron Expansion
- T-Hangar and Taxilane Development
- Helicopter Pads
- GA Access Road Improvements
- North Apron Rehabilitation

Long-Term

- Hangar Development
- CAP Hangar Development
- New FBO Facilities

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Terminal Areas

Short-Term

- Terminal Building Rehabilitation – P1
- Terminal Security Improvements
- Landscape Graphics
- Terminal Apron Lighting
- In-line Baggage Handling System

Intermediate-Term

- Terminal Building Rehabilitation – P2
- Old Terminal Apron Rehabilitation
- Terminal Apron Access
- Air Carrier Apron Rehabilitation and Expansion
- Gate Additions

Long-Term

- Terminal Building Rehabilitation – P3
- Expand New Terminal Building

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Cargo and Surface Access

Short-Term

- Cargo Apron
- Cargo Apron Access
- Terminal Service Road
- Cargo Apron Lighting
- Parking Facility Improvements
- Expand Air Cargo Facility

Intermediate-Term

- GA Access Road Improvements

Long-Term

- Widen Capital Circle SW with Divisional Islands

AIRPORT MASTER PLAN UPDATE

TALLAHASSEE REGIONAL AIRPORT

Next Steps

- Tallahassee City Commission Acceptance of Airport Master Plan Update
- Agency review (FAA/FDOT)
- Address Agency Comments
- Presentation to City Commission for Adoption of Airport Master Plan Update

AIRPORT MASTER PLAN UPDATE

PREPARED FOR

TALLAHASSEE

REGIONAL AIRPORT

THE LPA GROUP
AVIATION CONSULTANTS