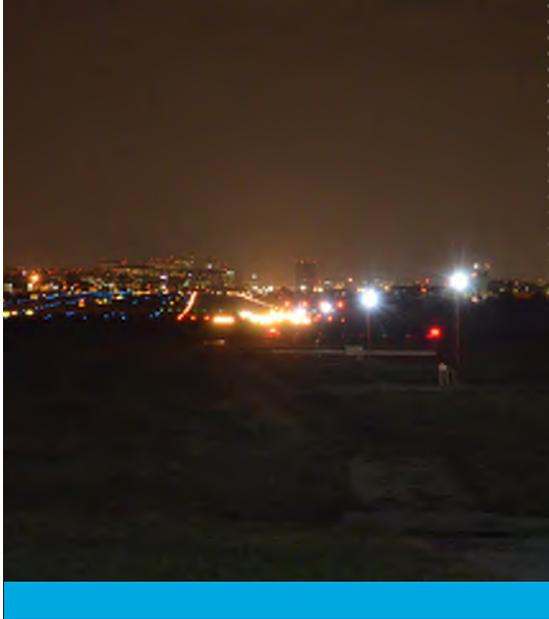




# AIRPORT MASTER PLAN



**FINAL REPORT  
JULY 2016**



# TABLE OF CONTENTS

## CHAPTER 1 | INVENTORY

- INTRODUCTION AND PURPOSE ..... 1-2
- PUBLIC INVOLVEMENT AND PROJECT COMMITTEES ..... 1-3
- STRATEGIC PLAN OVERVIEW ..... 1-4
- FACILITIES INVENTORY ..... 1-5
- EXISTING ENVIRONMENTAL OVERVIEW ..... 1-34
- AVIATION OPERATING ENVIRONMENT ..... 1-38
- AIRPORT MANAGEMENT DOCUMENTS ..... 1-45
- ADDISON SOCIOECONOMICS ..... 1-47
- LAND-USE AND CONTROLS ..... 1-50

## CHAPTER 2 | AVIATION ACTIVITY FORECASTS

- INTRODUCTION ..... 2-2
- SUMMARY OF AIRPORT HISTORICAL OPERATIONS AND BASED AIRCRAFT ..... 2-2
- NATIONAL GENERAL AVIATION TRENDS ..... 2-3
- FAA AEROSPACE FORECASTS ..... 2-9
- TERMINAL AREA FORECAST ..... 2-13
- NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS ..... 2-15
- GENERAL AVIATION DEMAND FORECASTS ..... 2-18

## CHAPTER 3 | FACILITY REQUIREMENTS

- INTRODUCTION ..... 3-2
- AIRFIELD CAPACITY ANALYSIS ..... 3-3
- AIRFIELD LIGHTING AND MARKING REQUIREMENTS ..... 3-14
- NAVIGATION SYSTEMS AND WEATHER AIDS ..... 3-16
- LANDSIDE FACILITIES ..... 3-18



**CHAPTER 4 | AIRPORT ALTERNATIVES ANALYSIS**

INTRODUCTION .....	4-2
AIRSIDE ALTERNATIVES/RECOMMENDATIONS.....	4-4
LANDSIDE DEVELOPMENT CONCEPTS .....	4-9

**CHAPTER 5 | PHASED DEVELOPMENT PLAN**

PHASED DEVELOPMENT PLAN .....	5-2
FUNDING SOURCES AND OPTIONS .....	5-3
PROBABLE PROJECT COSTS .....	5-3

**CHAPTER 6 | FINANCIAL ANALYSIS**

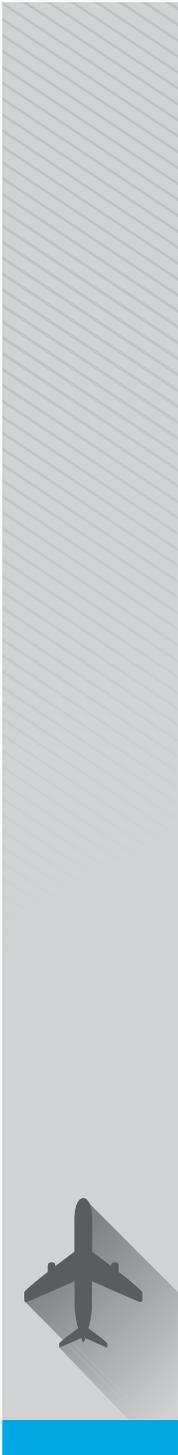
FINANCIAL ANALYSIS OBJECTIVES .....	6-2
OVERALL APPROACH .....	6-2
CAPITAL FUNDING SOURCES .....	6-3
FINANCIAL ANALYSIS AND IMPLEMENTATION PLAN FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM .....	6-5
FINANCIAL ANALYSIS SCHEDULES .....	6-10

**CHAPTER 7 | AIRPORT LAYOUT PLAN AND GEOGRAPHIC INFORMATION SYSTEMS**

INTRODUCTION.....	7-2
AIRPORT LAYOUT DRAWING .....	7-2
INNER PORTION OF THE APPROACH SURFACE DRAWINGS.....	7-2
TERMINAL AREA DRAWINGS.....	7-2
LAND-USE DRAWING.....	7-3
AIRPORT PROPERTY MAP DRAWING .....	7-3
GEOGRAPHIC INFORMATION SYSTEM.....	7-3

**APPENDICES**

APPENDIX A – EXECUTIVE COMMITTEE AND PROJECT STEERING COMMITTEE
APPENDIX B – ADDISON AIRPORT STRATEGIC PLAN – 2013
APPENDIX C – ADDISON AIRPORT WILDLIFE HAZARD MANAGEMENT PLAN
APPENDIX D – AIRPORT SPONSOR GRANT ASSURANCES
APPENDIX E – ADS RULES AND REGULATIONS / MINIMUM STANDARDS FOR COMMERCIAL OPERATORS
APPENDIX F – ADS DESIGN STANDARDS
APPENDIX G – ADS AMP LANDSIDE ALTERNATIVES
APPENDIX H – FINANCIAL SCHEDULES – NUMBERED
APPENDIX K – ADS AIRPORT LAYOUT PLAN
APPENDIX J – DEFINITIONS AND ACRONYMS





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# INVENTORY

## CHAPTER 1

INTRODUCTION  
AND PURPOSE ..... 1-2

PUBLIC INVOLVEMENT  
AND PROJECT  
COMMITTEES ..... 1-3

STRATEGIC  
PLAN OVERVIEW ..... 1-4

FACILITIES INVENTORY .... 1-5

EXISTING  
ENVIRONMENTAL  
OVERVIEW ..... 1-34

AVIATION OPERATING  
ENVIRONMENT ..... 1-38

AIRPORT MANAGEMENT  
DOCUMENTS ..... 1-45

ADDISON  
SOCIOECONOMICS ..... 1-47

LAND-USE  
AND CONTROLS ..... 1-50



# INTRODUCTION AND PURPOSE



## INTRODUCTION AND PURPOSE

The Addison Airport (ADS) Master Plan update is being completed on the heels of the recently completed Strategic Plan through a grant from the Texas Department of Transportation, Aviation Division (TxDOT). The Strategic Plan was completed by the Town of Addison to establish the broad policies and goals for the long-term development of ADS and established the foundation for this document. The Master Plan update bridges between the broad outlines of the Strategic Plan and an actively maintained capital improvement plan providing the details and specifics to accomplish the overarching goals of the Town of Addison at the Addison Airport.

Airport Master Plans are the tool to evaluate the airport's physical facilities, management principals, planned development, and financial foundation and future. Because the aviation industry is not static periodic updates are needed to refresh this information and lay out future plans and expectations. ADS has continued to grow through some tough economic times and excelled maintaining its status as the premier reliever in the Dallas-Fort Worth (DFW) metropolitan area and solidified its position in the national aviation landscape as one of the top general aviation (GA) airports in the nation. Addison Airport continues to lead the way.

Many of the projects and objectives from the previous master plan have been accomplished. ADS recently completed reconstruction/rehabilitation of Runway 15-33 and Taxiway Alpha the major pavements on the airfield. At this writing ADS is preparing to become the second airport in Texas to be equipped with and engineered materials arresting system (EMAS) on the south end of the runway between the Runway 33 end and the localizer (LOC). There will always be airside projects to improve and maintain the airport and this master plan identifies those needs.

With many of the major airfield projects complete, the emphasis of this master plan is on the landside facilities and management. ADS is expecting a number of long-term lease properties to revert to Town ownership during the near term. Other areas on the airfield need to be evaluated with planning for the highest and best use and yield. Management documents, including the Airport Minimum Standards and Rules and Regulations will be updated through the master planning process. An emphasis on the migration of Town development standards onto ADS led to the need for a set of airport development standards that will be developed during this project and be incorporated into the Towns standards specific to ADS. ➔





# PUBLIC INVOLVEMENT AND PROJECT COMMITTEES

## PUBLIC INVOLVEMENT AND PROJECT COMMITTEES

An important element to a major planning process is the public involvement. For the ADS Master Plan public involvement will take on two different options. The first option is the development and involvement of a project steering committee (PSC). The Town and ADS staff were engaged to invite specific individuals to be a part of the PSC. The PSC was comprised of Town citizens, Town Planning and Zoning Committee members, management from fixed base operators (FBO) and cargo/charter operators, individuals from the commercial real estate and banking industries as well as representatives from the Aircraft Owners and Pilots Association (AOPA) and the National Business Aviation Association (NBAA). The focus of this committee was to act as a sounding board receiving and reviewing draft reports and providing feedback during the planning process.

In addition to the PSC, the project had an Administration/Staff Committee. This committee was comprised of Town staff members, ADS management staff, and representatives from the Federal Aviation Administration (FAA), TxDOT, the North Central Texas Council of Governments (NCTCOG), and the consultant team. The Administration/Staff Committee serves in much the same manner as the PSC; however, based on their positions in leadership all of the draft reports

and documents during the planning process were reviewed and approved by this committee prior to submission to the PSC or being made available to the general public of Addison. This committee will also be ex-officio members of the PSC. A full listing of committee members is included in [Appendix A](#).

The second option for public involvement was comprised of public meetings intended for the ADS tenants and general public of the Town of Addison. The purpose of these meetings was as much to inform and educate the community as to achieve their input and buy-in on the overall direction for ADS. These meetings were held in the airport management conference room during the late afternoon and early evening at three junctures during the planning process. The first was during the early project stages to inform and open the process. The second followed the PSC, Town, and airport management selection of the preferred development concepts for various locations on the airfield and within the terminal area. The final public meeting followed the final draft approval and was structured to achieve input and consensus from the ADS tenants and citizens of the Town of Addison before moving the final report to the Town Council for approval. ✈️



# STRATEGIC PLAN OVERVIEW



## STRATEGIC PLAN OVERVIEW

During approximately 18 months preceding the master plan update, airport and Town management completed a thorough strategic planning process for ADS. The purpose of the Strategic Plan was to establish a set of broad policies for airport development. The Strategic Plan set this stage by documenting the airport’s history and identifying its role in the national aviation system.

Through the process Addison Airport’s position as the “single most valuable asset owned by the Town” was solidified. ADS is at the forefront of economic development within the Town. As such, it was determined that ADS future development must reflect the aesthetics values, goals, and aspirations of the citizens and the Town Council. To guide the ADS future the Strategic Plan developed the Town’s Value Proposition for ADS which states “Best Product – to be an industry-leading Reliever airport serving the needs of aviation commerce and general aviation.” Additionally, a Vision Statement was developed for ADS. “To be a safe, thriving

**“BEST PRODUCT - TO BE AN INDUSTRY-LEADING RELIEVER AIRPORT SERVING THE NEEDS OF AVIATION COMMERCE AND GERNERAL AVIATION”**

General Aviation Airport that delivers the “Addison Way” with superior services, an attractive appearance and enhanced sense of community, offering a high-quality

experience for tenants, businesses, visitors, and all stakeholders. Addison Airport will lead the way in creativity, innovation, and fiscal and environmental responsibility within a culture of excellence and regard for others.” The Town’s three primary goals for ADS were identified as:

1. Continue to enhance ADS’s overall value for the benefit of stakeholders.
2. Integrate ADS with the Town’s overall strategic plan.
3. Continue to promote industry-leading practices for safety and security. ✈️

**“TO BE A SAFE, THRIVING GENERAL AVIATION AIRPORT THAT DELIVERS THE “ADDISON WAY” WITH SUPERIOR SERVICES, AN ATTRACTIVE APPEARANCE AND ENHANCED SENSE OF COMMUNITY, OFFERING A HIGH-QUALITY EXPERIENCE FOR TENANTS, BUSINESSES, VISITORS, AND ALL STAKEHOLDERS. ADDISON AIRPORT WILL LEAD THE WAY IN CREATIVITY, INNOVATION, AND FISCAL AND ENVIRONMENTAL RESPONSIBILITY WITHIN A CULTURE OF EXCELLENCE AND REGARD FOR OTHERS.”**





# FACILITIES INVENTORY

## FACILITIES INVENTORY

As the initial step in the airport planning program, the inventory is a systematic data collection process that provides an understanding of past and present aviation factors associated with ADS. A comprehensive inventory, including the following major inventory tasks, is used to form the basis for airport recommendations throughout the Airport Master Plan.

- An on-site inspection (conducted in March and April 2014) and inventory of airport facilities, equipment, and services to assess existing physical conditions.
- Discussions with Airport and Town officials, FBOs, and airport tenants regarding recent airport trends, operations, and services.
- The collection of airport activity data, project records, and aeronautical background information; a review of historical airport information, previous airport layout plans, maps, charts, and photographs of airport facilities; and a record search and review of local airport-related ordinances, policies, operating standards, and lease agreements.
- The collection of regional, county, town and airport development information to understand regional economic conditions and to determine the surrounding airport service area characteristics.

- Review of current and planned on-and-off-airport land-use development and property information, including surrounding land-use patterns, existing and proposed transportation developments, infrastructure, and utilities.

## AIRPORT LOCATION, HISTORY, AND DEVELOPMENT

The Town of Addison encompasses a little more than four square miles of property within the Texas Blackland Prairies ecological sub-region of Texas, approximately 16 miles north of the downtown Dallas business district. Classified as a general aviation reliever airport within the FAA's National Plan of Integrated Airport Systems (NPIAS) and the Texas Airport System Plan (TASP), ADS contains approximately 368 acres, experiences an estimated 98,000 annual operations, and houses more than 600 aircraft of various sizes and complexities. ADS serves Addison, the surrounding DFW suburbs, and it serves as a reliever to Dallas Fort Worth International Airport and Dallas Love Field.

Direct access to the airport and terminal area is provided via Addison Road from a number of major feeders from the Dallas North Tollway, including Keller Springs Road, Arapaho Road, Trinity Mills Road, and Westgrove Drive. The published airport elevation is 644.6 feet above mean sea level (MSL), with airfield coordinates of 32° 58' 06.800" N and 96° 50' 11.200" W. The current magnetic declination at ADS is 3.65° E (NOAA National



# FACILITIES INVENTORY

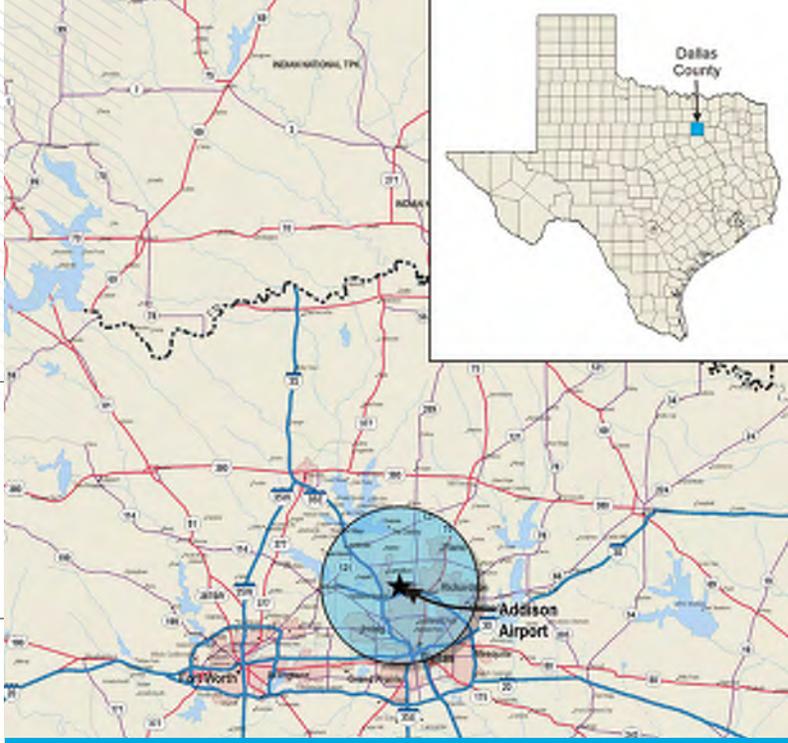


FIGURE 1-1

Geophysical Data Center, 04/14) with an estimated variation change of 0.13° W per year.

As a suburb in the DFW Metroplex, Addison has a thriving business community with a growing citizenry. ADS is an important reliever airport in the DFW airspace system that from inception was designed to serve the business aviation community. **Figure 1-1** depicts the ADS location in the Metroplex. The recently completed Addison Airport Strategic Plan (**Appendix B**) thoroughly documents the airport's history. A few highlights below illustrate its rapid growth and importance in the aviation landscape.

- The private vision and funding of Addison Airport, Inc. established ADS in 1957.
- In 1961 the air traffic control tower opened; the first at a private airport.
- The Town of Addison became sole owner of the Addison Airport in 1976, giving it a public sponsor aimed at protecting it from urban sprawl that had closed a number of other private airports in the area.
- Private management retained through the 1970s and 1980s while Runway 15-33 was extended to 7,202 feet and the crosswind runway was closed to make way for development on the field.

- In 1988 the Town took a more active role in airport operation, management, and development through strong oversight with privatized, contract, day-to-day airfield management and operation.

**Table 1-1**, Historical Airport Projects with Funding Assistance, shows the airport's development history that involved funding assistance from federal and state sources. According to records, since the initial airport acquisition in 1976 by the Town of Addison, the airport has received \$31.8 Million from the FAA and almost \$10 Million from the state (TxDOT, Aviation Division) for various improvements. On FAA grants a local sponsor's grant match share is 10 percent. TxDOT funding can require a match of 10 to 25 percent for improvement grants and 50 percent for Routine Airport Maintenance Program grants. At ADS some of the projects required more local dollars to complete than were available through FAA/TxDOT grant programs. Based on this, the local investment in airport improvements at ADS since 1976 is in excess of \$6.7 Million. ➔



**TABLE 1-1 HISTORICAL AIRPORT PROJECTS WITH FUNDING ASSISTANCE**

YEAR	LOCAL TOTAL	STATE TOTAL	FEDERAL TOTAL	FUNDING TOTAL	PROJECT DESCRIPTION
1976	\$490,000	\$0	\$4,410,000	\$4,900,000	Airport and Property Acquisition
1977	\$230,000	\$0	\$2,070,000	\$2,300,000	Land Acquisition
1979	\$26,000	\$0	\$234,000	\$260,000	Land Acquisition; Powerline Reroute; Fencing; Drainage; Wind Cones, and Lighting Controls
1980	\$50,000	\$0	\$450,000	\$500,000	Land Acquisition; Construct/Mark Taxiway
1980	\$50,000	\$0	\$450,000	\$500,000	Land Acquisition; Construct/Mark Taxiway
1987	\$16,200	\$0	\$145,800	\$162,000	Federal Aviation Regulation (FAR) Part 150 Noise Compatibility Plan Study and Airport Master Plan
1990	\$40,000	\$0	\$360,000	\$400,000	Security Fencing
1992	\$155,000	\$0	\$1,395,000	\$1,550,000	Runway 15-33 Rehabilitation; MALS Upgrade to MALSR
1998	\$247,930	\$0	\$2,231,373	\$2,479,303	Taxiway Bravo System Reconstruction (2,850' x 35'); MITL Installation (south end); Reimburse Engineering/Design
2000	\$12,433	\$0	\$111,897	\$124,330	Engineering/Design for Runway 15 Runway Safety Area; Precision Approach Path Indicators (PAPI)
2001	\$26,145	\$0	\$235,301	\$261,446	Airport Master Plan; Obstacle Evaluation (FAA 405 Survey)
2001	\$32,000	\$0	\$288,000	\$320,000	FAR Part 150 Noise Study
2002	\$8,427	\$0	\$83,720	\$92,147	Engineering/Design for Apron Reconstruction; Taxiway and Parking Repair
2002	\$35,063	\$0	\$105,189	\$140,252	Install Automated Weather Observation System (AWOS)
2003	\$25,263	\$25,263	\$0	\$50,526	RAMP: Crackseal Pavement; Repair Access Road; West Ramp Drainage and Hangar Repairs
2003	\$197,790	\$0	\$1,618,113	\$1,815,903	Reconstruction of Hangar Apron (Hangar A – 3,130 SY, Hangar B – 4,412 SY, Apron A – 11,800 LF)
2004	\$26,850	\$26,850	\$0	\$53,700	RAMP: Concrete Repairs on Access Road; Engineering Fees; Hangar Roof and Door Repairs
2005	\$30,000	\$30,000	\$0	\$60,000	RAMP: Fuel Farm Taxiway Improvements
2006	\$31,582	\$0	\$284,233	\$315,815	Engineering/Design and Construction Apron Rehabilitation near Fuel Farm
2006	\$30,000	\$30,000	\$0	\$60,000	Taxiway Victor Emergency Repairs
<b>TOTALS 1976-2006</b>	<b>\$1,760,683</b>	<b>\$112,113</b>	<b>\$14,472,626</b>	<b>\$16,345,422</b>	

YEAR	LOCAL TOTAL	STATE TOTAL	FEDERAL TOTAL	FUNDING TOTAL	PROJECT DESCRIPTION
2008	\$145,772	\$0	\$1,163,611	\$1,309,383	Access Road (emergency and FAA maintenance); Engineering/Design/Construction of RSA and NAVAID Improvements
2008	\$0	\$0	\$0	\$0	RAMP: AWOS Contract, NADIN, and Replacement Parts and Repairs
2009	\$38,658	\$0	\$753,500	\$792,158	Engineering/Design for Runway 15-33 Improvements, VASI Replacement, AWOS Upgrade, MALSR Replacement; Drainage Improvements; and Guard Lights; FAA MOA
2009	\$57,561	\$50,000	\$0	\$107,561	RAMP: AWOS; Access Road Repair; Pavement and Drainage Improvements; LED Taxiway Lights
2010	\$46,405	\$46,405	\$0	\$92,810	RAMP: Taxiway Reconstruction; AWOS Maintenance/NADIN Service/Repairs
2011	\$1,126,984	\$9,054,024	\$1,088,832	\$11,269,840	Runway 15-33 Reconstruction/Rehabilitation along with Electrical/Lighting Upgrades
2011	\$10,990	\$60,545	\$38,365	\$109,900	Engineered Materials Arresting System Feasibility Study
2011	\$50,000	\$50,000	\$0	\$100,000	RAMP: AWOS Maintenance; General Airport Maintenance
2011	\$39,107	\$214,418	\$137,541	\$391,066	Engineering/Design, Taxiway Alpha Reconstruction/Reconfiguration/Overlay
2012	\$9,999	\$89,994	\$0	\$99,993	Access Control Plan Study
2012	\$47,217	\$47,217	\$0	\$94,434	RAMP: AWOS Maintenance; Airport General Maintenance
2012	\$1,013,000	\$0	\$8,922,543	\$9,935,543	Taxiway Alpha and Runup Area Construction/Reconstruction
2013	\$10,000	\$0	\$90,000	\$100,000	Airport Access Controls Study
2013	\$13,000	\$0	\$117,000	\$130,000	Wildlife Hazard Assessment
2013	\$38,100	\$0	\$342,900	\$381,000	Engineered Materials Attesting System (EMAS) – Design
2014	\$2,353,288	\$0	\$4,500,000	\$6,853,288	Engineered Materials Attesting System (EMAS) – Construction
2014	\$23,900	\$0	\$215,000	\$239,000	Airport Master Plan Update
<b>TOTAL 2008 - 2014</b>	<b>\$5,023,981</b>	<b>\$9,612,603</b>	<b>\$17,369,392</b>	<b>\$32,244,976</b>	
<b>TOTAL</b>	<b>\$6,784,664</b>	<b>\$9,724,716</b>	<b>\$31,842,018</b>	<b>\$48,566,498</b>	

SOURCE: TXDOT, AVIATION DIVISION, TADS DATABASE; FEDERAL TOTAL – FEDERAL AVIATION ADMINISTRATION; STATE TOTAL – TXDOT, AVIATION DIVISION

Development and infrastructure investment at ADS has been provided by more than grant assisted projects. Records for the initial development of ADS, before Town acquisition, were unavailable. However, since 1976, local-only and private investment has played an important and crucial role in ADS growth and progression. **Table 1-2**, Historical Airport

Projects with Local-only/Private Funding, illustrates this point. The total investment through private investment funding is approximately \$31.8 Million. The Town of Addison invested an additional \$10.9 Million while private investment in hangars and other infrastructure is estimated at \$17 million. **Table 1-2** historical airport projects with local/private funding

**TABLE 1-2 HISTORICAL AIRPORT PROJECTS WITH LOCAL/PRIVATE FUNDING**

YEAR	TOWN TOTAL	PRIVATE TOTAL	TOTAL	PROJECT DESCRIPTION
2003	\$530,000	\$0	\$530,000	Airport Parkway Realignment
2005	\$4,000,000	\$0	\$4,000,000	Fuel Farm
2011	\$680,000	\$1,000,000	\$1,680,000	Plane Smart Development/Improvements - Water/Sewer
2011	\$0	\$4,000,000	\$4,000,000	Million Air FBO/Hangar Complex Improvements Development
2012	\$150,000	\$5,500,000	\$5,650,000	Executive Hangar Owners Association Development
2013	\$70,000	\$0	\$70,000	Flight Line Hangar Demolition
2013	\$750,00	\$0	\$750,000	Taxiway Sierra Reconstruction
2014	\$0	\$4,000,000	\$4,000,000	Private Development along Airport Parkway
2014	\$0	\$2,500,000	\$2,500,000	Executive Hangar
2014	\$250,000	\$0	\$250,000	S1 and S3 Apron Reconstruction
2014	\$4,500,000	\$0	\$4,500,000	Executive Hangar Complex Acquisition (MartinAire/Starbase)
<b>TOTAL</b>	<b>\$10,930,000</b>	<b>\$17,000,000</b>	<b>\$27,930,000</b>	

**SOURCE: TOWN OF ADDISON, ADDISON AIRPORT**

## AIRPORT ROLE

The ADS role is well documented in the FAA's NPIAS and General Aviation Airports: A National Asset, TASP, NCTCOG General Aviation and Heliport System Plan GAHSP, and Addison Airport Strategic Plan. Highlights include:

- The single most valuable asset owned by the Town of Addison.
- Designated as a reliever airport to DFW International and Dallas Love Field in the NPIAS, TASP and NCTCOG GAHSP
- Identified by the FAA's Asset study as one of 84 "National" general aviation airports.
- A regional economic engine that supports more than 2,340 jobs and an annual economic impact in excess of \$370 million.

The FAA identifies design standards for airports and their operating pavements based on FAA Advisory Circular 150/5300-13A, Change 1, Airport Design. Pavement

categorization is provided for runways through the runway design code (RDC) while taxiway pavements are designated separately through the taxiway design group (TDG). This is a change from the last master plan, and is not reflected in the Addison Airport Strategic Plan.

The RDC is defined by three variables: airport approach category (AAC), the airplane design group (ADG), and instrument approach procedure (IAP) visibility minimums. Previously, the Airport Reference Code (ARC) and runway design were not classified based on IAP minimum visibilities. **Table 1-3** outlines the AAC and **Table 1-4** documents the ADG. **Table 1-5** delineates the various possibilities defining visibility minimums for IAPs. ➔

**TABLE 1-3 AIRCRAFT APPROACH CATEGORY (AAC)**

AAC	V <sup>REF</sup> /APPROACH SPEED 1
A	Approach speed less than 91 knots
B	Approach speed 91 knots or more but less than 121 knots
C	Approach speed 121 knots or more but less than 141 knots
D	Approach speed 141 knots or more but less than 166 knots
E	Approach speed 166 knots or more

**SOURCE:** FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE 1, AIRPORT DESIGN

1 V<sup>REF</sup> = LANDING REFERENCE SPEED OR THRESHOLD CROSSING SPEED

**TABLE 1-4 AIRPLANE DESIGN GROUP (ADG)**

GROUP #	TAIL HEIGHT (FT [M])	WINGSPAN (FT [M])
I	< 20' (<6m)	< 49' (<15m)
II	20' - <30' (6m - <9m)	49' - <79' (15m - <24m)
III	20' - <30' (6m - <9m)	49' - <79' (15m - < 4m)
IV	45' - <60' (13.5m - <18.5m)	118' - <171' (36m - <52m)
V	60' - < 66' (18.5m - <20m)	171' - <214' (52m - <65m)
VI	66' - <80' (20m - <24.5m)	214' - <262' (65m - <80m)

**SOURCE:** FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE 1, AIRPORT DESIGN

**TABLE 1-5 VISIBILITY MINIMUMS**

RVR (FT) *	INSTRUMENT FLIGHT VISIBILITY CATEGORY (STATUTE MILE)
5000	Not lower than 1 mile
4000	Lower than 1 mile but not lower than ¾ mile
2400	Lower than ¾ mile but not lower than ½ mile
1600	Lower than ½ mile but not lower than ¼ mile
1200	Lower than ¼ mile

**SOURCE:** FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE 1, AIRPORT DESIGN

\* RVR VALUES ARE NOT EXACT EQUIVALENTS



TxDOT, through the TASP, classifies ADS as a Reliever Airport. The TASP describes Reliever Airports as those serving a wide variety of aircraft types and sizes in a metropolitan area served by a commercial service airport. The Reliever Airport must have more than 100 based aircraft or experience greater than 25,000 annual itinerant operations. According to the TxDOT, Aviation Division, Policies and Standards, the minimum requirements for Reliever Airports are:

- **Applicable Design Standard**  
B-II, C-II, C-III, D-II, D-III, D-IV
- **Minimum Runway**
  - ➔ Length: Designed for 75 percent of large airplanes less than 60,000 pounds at 60 percent useful load
  - ➔ Width: 75 Feet
  - ➔ Strength: 30,000 pound single-wheel loading
- **Minimum Taxiway**  
Full-length parallel
- **Minimum Apron**  
Area needed for itinerant and local parking based on AC 150/5300-13A, Change 1, Airport Design – Appendix 5 – 360 square yards for each itinerant aircraft and 300 square yards for each based aircraft
- **Minimum Approach**  
Global Positioning System (GPS) Lateral Approach with Vertical Guidance (LPV), ¾-mile
- **Minimum Lighting**  
MIRL and taxiway centerline stripping or reflectors and turnout lights from the active runway
- **Minimum Visual Approach Aids**  
Lighted wind indicator, segmented circle, rotating beacon, Precision Approach Path Indicators (PAPI), Runway End Indicator Lights (REILS – in extensively light polluted areas only)
- **Minimum Facilities**  
AWOS, fuel, illuminated airfield signage, and terminal building

Based on the application of FAA airport design criteria, TASP/TxDOT Policies and Standards, and a review of the existing facilities and current Airport Layout Drawing (ALD), the Addison Airport is a Reliever Airport with a RDC of D-III-5000. This designation is consistent with the types of aircraft using the airfield and IAPs serving ADS.

### AIRPORT MANAGEMENT/ADMINISTRATION

Addison Airport is owned by the Town of Addison. Since airport acquisition in 1976, the Town has completed the day-to-day airport management through a lease/management agreement. Today, that management contract is held by two separate but closely connected companies, URS Corporation and SAMI Management Incorporated. URS provides professional airport management and maintenance for ADS. SAMI serves the airfield through real estate management and marketing.

### AIRFIELD FACILITIES AND CHARACTERISTICS

As shown in **Figure 1-2**, Existing Airport Layout, Addison Airport is a single runway system with a full parallel taxiway on the east and partial parallel taxiway on the west. **Table 1-6** provides a summary of the airfield components and data. The airside facilities consist of the runway, taxiways, airfield lighting, navigational aids, weather reporting systems, and other various components. ➔



**TABLE 1-6 AIRFIELD FACILITIES**

<b>RUNWAY 15-33</b>	
Length (feet)	7,203
Width (feet)	100
Surfact Material/Treatment	Asphalt/Grooved
Weight Bearing Capacity (pounds)	
Single Wheel Gear (SWG)	60,000
Dual Wheel Gear (DWG)	120,000
Markings	Precision
Displaced Threshold (feet)	
Runway 15	979
Runway 33	772
Runway Lighting	High Intensity Runway Lights (HIRL)
Approach/Lighting Aids	
Vertical Guidance Slope Indicators	Precision Approach Path Indicators (PAPI) (15-4R/33-4L)
Runway End Lights	Runway End Identifier Lights (REIL) (33)
Approach Lighting	Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR – 15)
Visual Aids	Rotating Beacon Lighted Windcone Segmented Circle
Instrument Approach Aids	ILS (Localizer/Glidescope), GPS
Weather Reporting Aids	Automated Terminal Information System (ATIS) Airport Weather Observation System (AWOS)
Engineered Materials Arresting System (EMAS)	Scheduled for Installation Summer 2014

**SOURCE:** FAA AIRPORT FACILITY DIRECTORY/SOUTH CENTRAL, 2014



FIGURE 1-2 GENERAL AIRPORT LAYOUT



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## RUNWAY 15-33

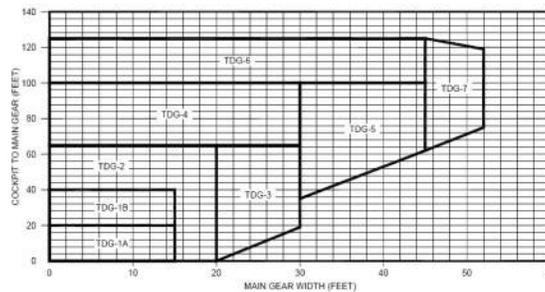
The runway at ADS, Runway 15-33, is 7,203 feet long, 100 feet wide, with a 979-foot displaced threshold on the Runway 15 end and a 772-foot displaced threshold for Runway 33. With these displacements the airport has declared distances published for which all aircraft operators must remain aware to adjust for the displacements and limited safety areas beyond the Runway 33 end. The runway was rehabilitated in 2011 through grant assistance from TxDOT/FAA. During the rehabilitation, portions of the runway received full-depth reconstruction while other areas were overlaid with two inches of asphalt remarking the entire runway with precision approach markings. According to the FAA's Airport/Facility Directory, South Central U.S. February 2014, the main landing gear gross weight bearing capacity for the runway is listed at 60,000 pounds for single-wheel aircraft and 120,000 pounds for dual-wheel aircraft, which reflects the 2011 runway rehabilitation project. The runway is equipped with a High Intensity Runway Light (HIRL) system and a four-light Precision Approach Path Indicator (PAPI) lights located on the left-hand side near the Runway 33 end and the right-hand side near the Runway 15 end. Each runway end is served by both GPS area navigation (RNAV) and instrument landing system (ILS) instrument approach procedures allowing greater operational safety during inclement weather conditions.

There are numerous taxiways and taxilanes at ADS. **Figure 1-2** identifies each major taxiway on the airfield and **Table 1-7** outlines the TDG for each based on existing conditions, operations, and airport capabilities along with specific design parameters associated with each TDG.

## TAXIWAYS/TAXILANES

Airport operations are coordinated to and from the runway and businesses/hangars on the airfield through the establishment of taxiways and taxilanes. Each taxiway is designated with a unique name and designed to accommodate anticipated aircraft operations based on a taxiway design group (TDG). The TDG is a classification system for taxiways/taxilanes based on an airplane's landing gear dimensions; namely, the outer to outer main gear width and the cockpit to main gear distance. The TDG is identified by employment of specific safety parameters associated with each specific TDG shown outlined in FAA AC 150/5300-13A, Change 1, Airport Design, shown below.

**FIGURE 1-3 TAXIWAY DESIGN GROUPS**



**TABLE 1-7 AIRSIDE TAXIWAY DESIGN GROUP AND SAFETY STANDARDS ADDISON REPORT**

TAXILANE	TDG	ACTUAL WIDTH (FT)	DESIGN WIDTH (FT)	TAXILANE SAFETY AREA (FT)	TAXILANE OBJECT FREE AREA (FT)
Alpha	III	50	50	118	186
Bravo	IA/B	35	35	79	131
Charlie (East)	III	55	50	118	186
Charlie (West)	IA/B	35	35	79	131





TAXILANE	TDG	ACTUAL WIDTH (FT)	DESIGN WIDTH (FT)	TAXILANE SAFETY AREA (FT)	TAXILANE OBJECT FREE AREA (FT)
Delta	III	40	50	118	186
Echo (East)	III	90	50	118	186
Echo (West)	IA/B	50	35	79	131
Foxtrot (East)	III	50	50	118	186
Foxtrot (West)	IA/B	34	35	79	131
Golf	III	90	50	118	186
Hotel	III	90	50	118	186
Juliet	III	90	50	118	186

SOURCE: GARVER, RUNWAY 15-33 AND TAXIWAY ALPHA DESIGN DOCUMENTS AND FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE 1, AIRPORT DESIGN. EAST AND WEST TAXIWAY DESIGNATIONS IS IN REFERENCE TO ITS LOCATION TO RUNWAY 15-33.



### TAXIWAY ALPHA

The east-side full parallel taxiway is designated as Taxiway Alpha and is designated TDG-3. It is 50 feet wide and offset from Runway 15-33 centerline-to-centerline a distance of 300 feet. This is a non-standard offset based on the RDC of D-III-5000. The standard offset is 400 feet. This standard is unmet due to the existing terminal development and the insurmountable costs to redevelop Alpha to comply with this standard. During 2012/13 Taxiway Alpha was rehabilitated with portions being reconstructed and the remaining segments being overlaid and remarked. Preceding this project, Taxiway Alpha had extensive electrical improvements that included new above-ground and in-pavement medium intensity taxiway edge lights (MITL). Also included in this project was the installation of in-pavement runway guard lights at the north and south connectors and Taxiways Charlie, Delta, and Juliet with offset guard lights installed at all the remaining connector taxiways to Runway 15-33. These guard lights were installed to help prevent runway incursions.

### TAXIWAY BRAVO

The west-side partial parallel taxiway is designated as Taxiway Bravo. It is 35 feet wide and offset from Runway 15-33 centerline-to-centerline 400 feet. It provides west-side access from the Runway

33 end north to nearly the air traffic control tower (ATCT) and is equipped with MITLs. Bravo serves to access the airport owned T-hangar complex west of the Runway 33 end and the various other through-the-fence hangars on the airport's west side.

### SUPPORTING TAXIWAYS/TAXILANES

ADS is served by taxiways and taxilanes in various locations, as depicted on **Figure 1-2**, to provide a smooth operating environment expediting aircraft movements from Runway 15-33 to all businesses and aircraft storage facilities and locations on the field. Taxiways Charlie, Echo, and Foxtrot span between taxiways Alpha and Bravo on both sides of Runway 15-33. Taxiways Delta, Golf, Hotel, and Juliet provide access from Taxiway Alpha to Runway 15-33 and vice versa. The following major taxilanes provide access from Alpha into the landside business and hangar facilities: Papa, Quebec, Romeo, Sierra, Tango, Uniform, and Victor. These supporting taxilanes are the major thoroughfares that provide access from the business and aircraft storage to the operational airside of the field.

**Table 1-8** outlines the TDG for each of these taxilanes based on existing conditions, operations, and airport capabilities along with specific design parameters associated each TDG. ➔



**TABLE 1-8** LANDSIDE TAXILANE DESIGN GROUP AND SAFETY STANDARD

TAXILANE	TDG	ACTUAL WIDTH (FT)	DESIGN WIDTH (FT)	TAXILANE SAFETY AREA (FT)	TAXILANE OBJECT FREE AREA (FT)
Papa	IB	30	25	49	79
Quebec	IB	25	25	49	79
Romeo	II	25	35	79	115
Sierra	II	40	35	79	115
Tango	II	35	35	79	115
Uniform	II	35	35	79	115
Victor	III/II	40	50	118	162

**SOURCE:** FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE 1, AIRPORT DESIGN

### AIRFIELD LIGHTING

Lighting is an important part of maintaining the airfield's operational status during night and inclement weather conditions. **Table 1-5** outlines the various airfield lighting features. Pilots identify ADS by locating the rotating beacon, a lighting feature designed to provide alternating white and green lights as it rotates and which can be seen for up to ten miles from the field. The beacon is located atop the ATCT.

Runway 15-33 is equipped with various lighting features. High intensity runway lights (HIRL) run along each side, at each threshold, and each end of Runway 15-33 that is served by both visual and instrument lighting systems. The PAPI-4R/L systems provide pilots on approach during visual conditions with colored light cues that can guide the pilot to fly a prescribed flight path along a predetermined slope to the runway environment. Runway 33 is served by runway end identifier lights (REIL) designed to assist the pilot in identifying the runway environment from other areas of light pollution in urban areas. Runway 15 is served by a MALSR, an approach lighting system designed to support instrument approach procedures and the

pilots/aircraft using them to approach the airfield during periods of low cloud ceiling and limited visibility.

### AIDS TO NAVIGATION (NAVAID)

NAVAIDs, located on the field or at other locations in the region, are specialized equipment that provide pilots with electronic guidance and visual references in an effort to execute instrument approaches and point-to-point navigation. The NAVAIDs available for use by pilots in the vicinity of ADS are Very High Frequency (VHF) Omnidirectional Range/Distance Measuring Equipment (VOR/DME). A VOR/DME is a system of VHF Omnidirectional Range Radio Beacons that emit signals to aid navigation instruments in aircraft to determine the location of the VOR station from the aircraft with respect to magnetic north. The co-located DME is used to measure the slant range distance of an aircraft from the navigational aid in nautical miles (NM). The two VOR/DME units in the ADS vicinity are Cowboy (CVE, 116.2/109) and Maverick (TTT, 113.1/78). Cowboy is located approximately six NM south-southwest of ADS to the northwest of Dallas Love Field. Maverick is located on the south side of the Dallas Fort



Worth International Airport approximately 12 NM southwest of ADS.

The NAVAIDs at ADS are associated with instrument approach procedures and include two instrument landing systems (ILS), each serving one runway end. The ILS is comprised of two components, a localizer and glideslope. The

localizer provides lateral azimuth guidance while the glideslope provides vertical guidance to all aircraft appropriately equipped. Additionally, ADS is served by a GPS signal in support of IAPs.

Currently, there are four published IAPs at ADS with straight-in or circling minimums. Details for these approaches are located in **Table 1-9**.

**TABLE 1-9 INSTRUMENT APPROACH PROCEDURE**

RUNWAY END	APPROACH TYPE	VISIBILITY MINIMUMS	CEILING MINIMUM
Runway 15	ILS or LOC	ILS All Categories – 1-mile LOC All Categories – 1-mile Circling: Category A & B – 1-mile Category C – 1 ½-miles Category D – 2-miles	893' MSL/250' AGL 1,040' MSL/397' AGL 1,200' MSL/556' AGL 1,240' MSL/596' AGL 1,280' MSL/636' AGL
Runway 33	ILS or LOC	ILS All Categories – 1-mile LOC: Category A & B – 1-mile Category C – 1 ½-mile Category D – 1 ¾-miles Circling: Category A & B – 1-mile Category C – 1 ½-mile Category D – 2-miles	894' MSL/250' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,280' MSL/636' AGL
Runway 15	RNAV/GPS	LPV DA: All Categories – 1-mile LNAV/VNAV DA: All Categories – 1-mile LNAV MDA: All Categories – 1-mile Circling: Category A & B – 1-mile Category C – 1 ½-miles Category D – 2-miles	943' MSL/300' AGL 1,076' MSL/433' AGL 1,100' MSL/457' AGL 1,200' MSL/556' AGL 1,240' MSL/596' AGL 1,280' MSL/636' AGL
Runway 33	RNAV/GPS	LNAV/VNAV MDA: Category A & B – 1-mile Category C – 1 ½-mile Category D – 1 ¾-miles Circling: Category A & B – 1-mile Category C – 1 ½-mile Category D – 2-miles	1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,240' MSL/596' AGL 1,280' MSL/636' AGL

**SOURCE: FAA AIRPORT FACILITY DIRECTORY/SOUTH CENTRAL INSTRUMENT APPROACH PROCEDURES, FEBRUARY 2014 LNAV (LATERAL NAVIGATION); VNAV (VERTICAL NAVIGATION)**

## WEATHER REPORTING

ADS has two sources for airport weather. The first is the automated terminal information system (ATIS). The ATCT personnel record weather information consisting of wind direction and velocity, visibility, obstructions to vision, present weather, sky condition, temperature, dew point, altimeter, a density altitude advisory when appropriate and

other pertinent remarks included in the official weather observation. This information is then played on a looped recording through the ATIS. The second system is an automated weather observation system (AWOS). The AWOS is the primary source of wind direction, velocity, and altimeter data for locations equipped similarly to





ADS. The AWOS sensor suite reports the same weather conditions as those on the ATIS recording and can play them on a discrete radio frequency for pilots to receive real-time weather information. At ADS, AWOS information can be accessed by tuning to the ATIS information or telephonically by dialing 972-386-4855.

### LANDSIDE/TERMINAL AREA FACILITIES

The landside/terminal area facilities are those central to the business operations of an airfield. They support transition from the airfield to landside businesses and also the town infrastructure. Landside facilities typically include a terminal building, aircraft storage facilities of various types, aircraft parking aprons and other support facilities like fuel storage and delivery and aircraft rescue and firefighting station.

### AIRPORT MANAGEMENT OFFICES

Airport management is housed in an office building on the east side of the airfield that fronts onto Addison Road immediately south of Keller Springs Road and Jimmy Doolittle Drive. This is not a dedicated terminal building for the airport. The building houses additional tenants that may or may not have a need for airfield access. Airport management is housed on the second floor at the north end of the building. Their facilities include management offices, a conference room, training room, and a reception/lounge area. Airport customers and general aviation passengers are generally accommodated by fixed base operators (FBO) or specialized aviation service organizations (SASO) providing these individuals and their aircraft services on the airfield.

### FIXED BASE OPERATOR FACILITIES

Historically, there have been as many as four full-service FBOs at ADS. Today that number is down to two major FBOs, Atlantic Aviation and Million Air Dallas. Both these FBOs are full-service providers with one primary location on the field but with multiple hangars under lease/management on the airfield.

### Atlantic Aviation



Facilities for Atlantic Aviation, as shown on **Figure 1-4**, are centrally located along Taxiway Alpha on the east side of the airfield. As an FBO, Atlantic provides a broad variety of services that include: aircraft management, fueling, maintenance, and customer service to include concierge service and support. Atlantic's facilities consist of a number of aircraft storage hangars, approximately 110,000 square feet, office space, and nearly 23,000 square yards of aircraft parking and maneuvering apron space.

### Million Air Dallas



The Million Air Dallas complex is located, **Figure 1-4**, on the east side of the airfield at the north end of the landside facilities. Their facilities consist of four aircraft storage hangars along with first-class customer support amenities. These amenities include an on-site customs service, customer concierge service, luxurious hospitality bar, spacious conference rooms, flight planning, pilot's snooze room, and many others. Million Air Dallas is a full-service FBO providing aircraft charter, acquisition, management, and maintenance with nearly 175,000 square feet of hangar and office/amenity space available for its customers. Million Air Dallas also has over 25,000 square yards of apron space for aircraft parking and maneuvering.

## SPECIALIZED AVIATION SERVICE ORGANIZATION (SASO)

ADS is served by over 70 Specialized Aviation Service Organization (SASO) tenants. These SASOs provide a broad array of aviation services to their clientele. **Table 1-10** documents the ADS SASO categories, numbers of SASOs in each category, and a summary of the services provided. ✈️

**TABLE 1-10 SASO SERVING ADS AVIATION COMMUNITY**

SASO CATEGORY	CATEGORY DESCRIPTION	NUMBER OF SASOS
Aircraft Air Conditioning	Aircraft air conditioning, heating and ventilation systems	1
Aircraft/Aviation Maintenance - Heavy	Aircraft maintenance requiring major airframe work or engine overhaul	6
Aircraft/Aviation Maintenance - Light	Aircraft airframe and engine maintenance	4
Aircraft Management	Aircraft management and consulting	4
Aircraft Sales	Aircraft brokering services for piston/turbine aircraft	5
Aviation Consulting	Consulting services specific to an aircraft type or operations type	1
Aviation Insurance	Aircraft insurance services	6
Avionics Sales/Repairs Instrument Sales/Service	Aircraft instruments, avionics, and electronics repair and maintenance	7
Charter – Cargo	Personal or business related charter for cargo carriage	6
Charter – Passenger	Personal or business related charter for passenger conveyance	8
Corporate Flight Department	Corporate passenger flight services	2
Flight Instruction	Flight training operations	6
Fuel Tank Inspection/Repair	Aircraft fuel tank specialist	1
Government Contracts	Customized maintenance services for military/government aircraft	1
Hangar/Office Leasing	Hangar/office leasing and hangar development	2
Museum	Non-profit or for-profit facility displaying historic aircraft and associated items	1
Other	Various and miscellaneous service providers not classified	7
Parts	Sale of aircraft parts	1
Pilot Shop	Sale of pilot supplies	1

SOURCE: ADS BUSINESS DIRECTORY, APRIL 2014

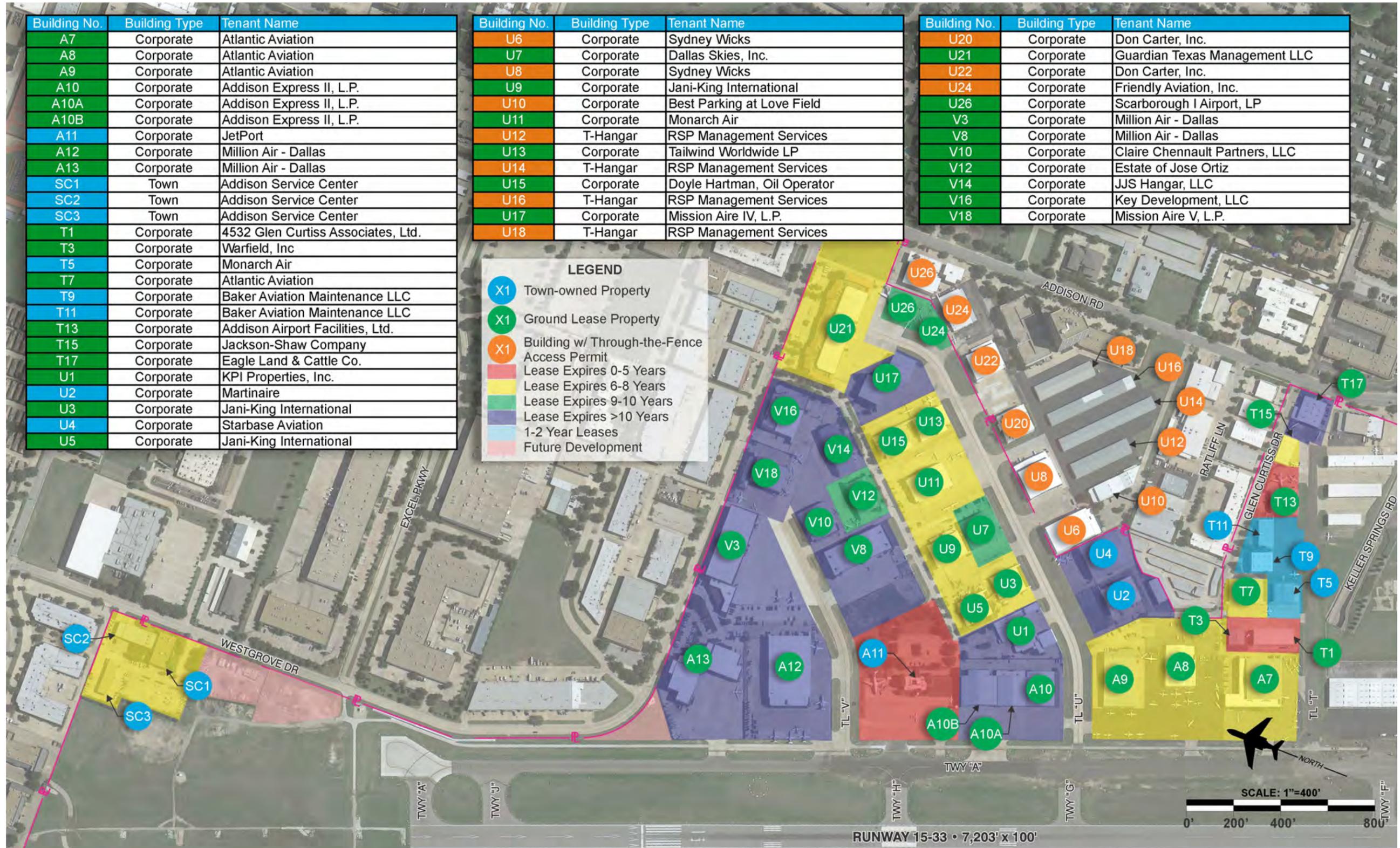




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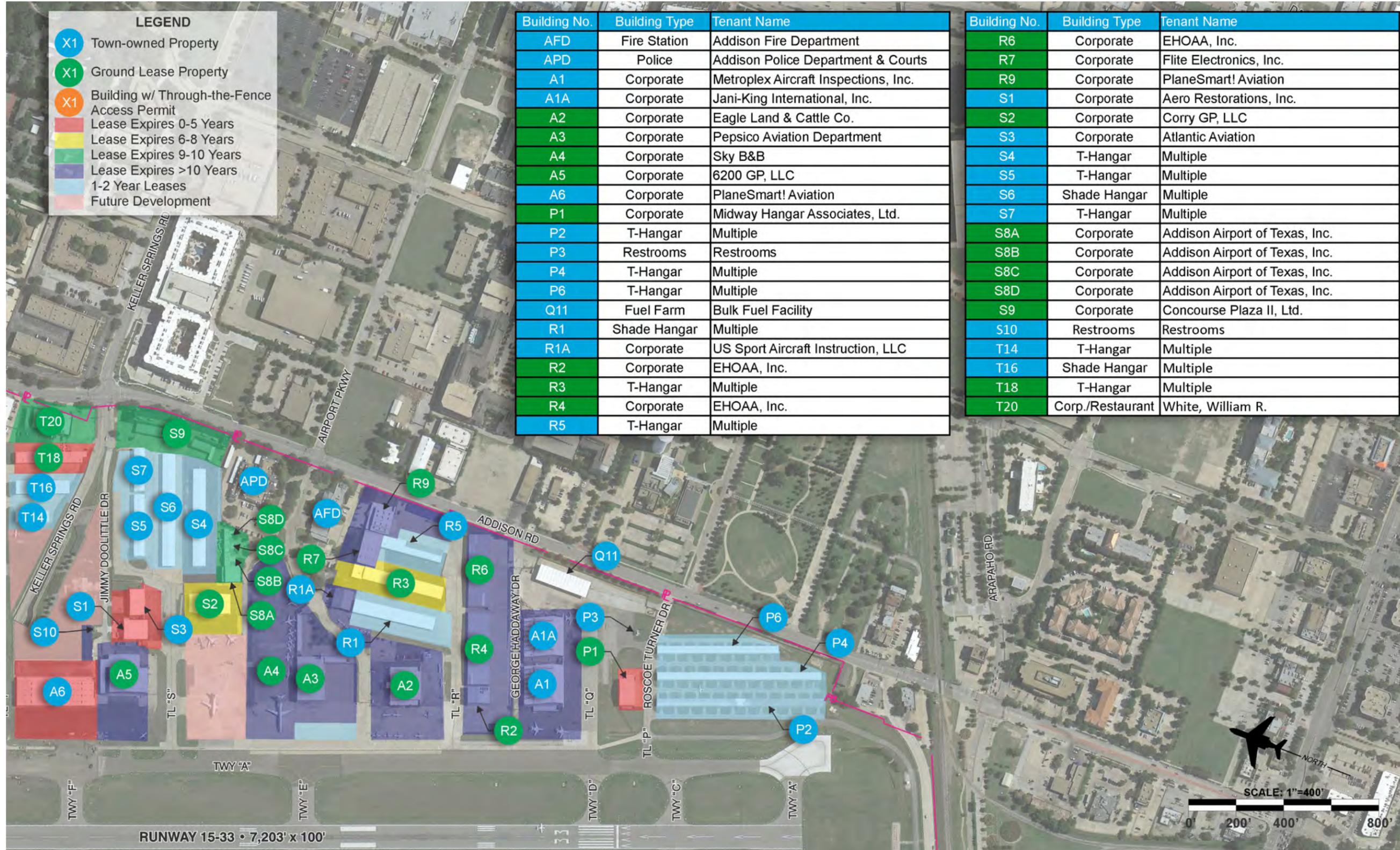
**FIGURE 1-4 TERMINAL AREA EXHIBITS\_NE**



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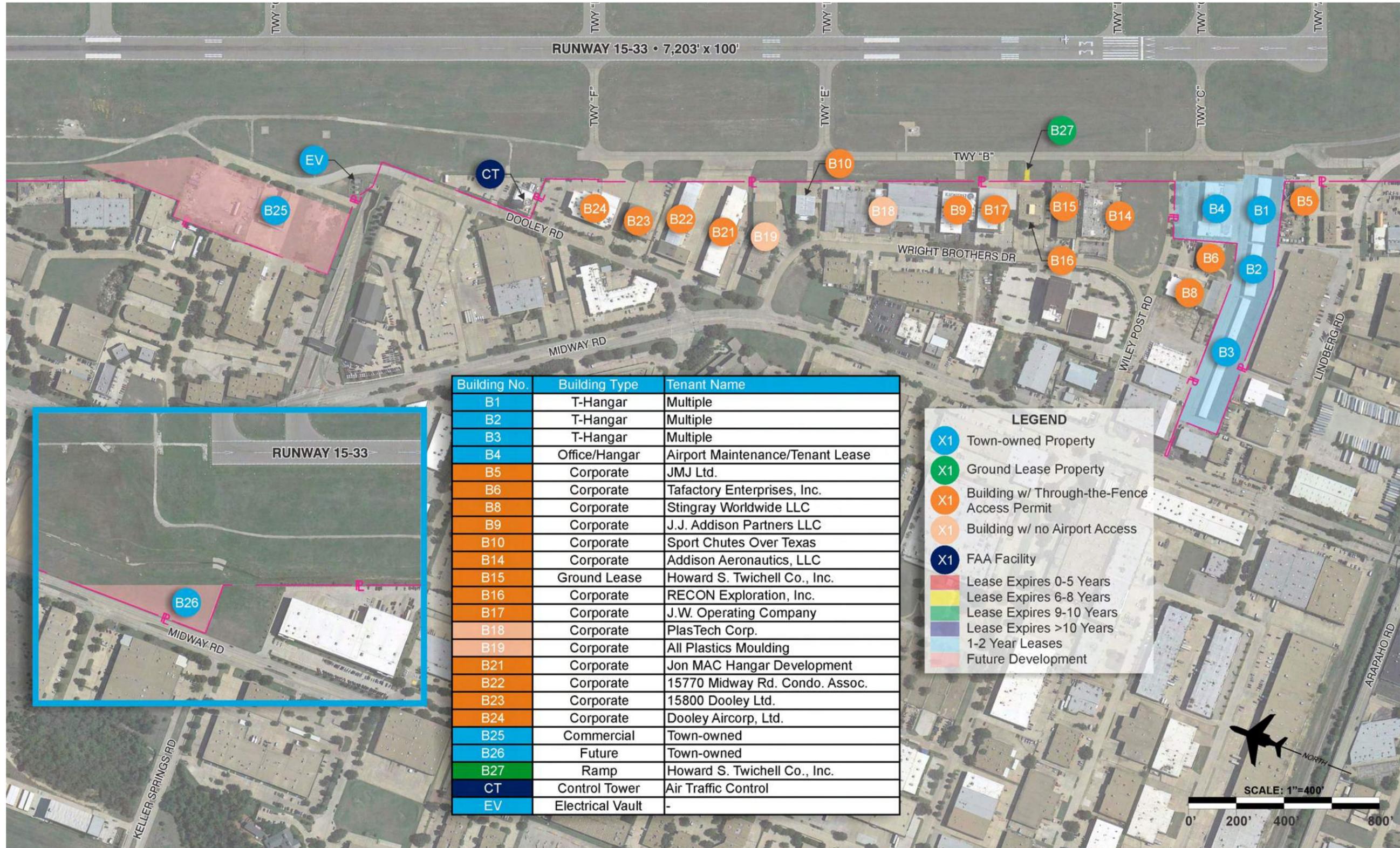
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FIGURE 1-2 GENERAL AIRPORT LAYOUT



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### AIRCRAFT STORAGE/HANGAR FACILITIES

Addison Airport supports the storage of aircraft in a variety of different hangar types. These types are independent of whether the structure is on airfield property or is operated under a through-the-fence use agreement with ADS. **Figures 1-3, 1-4, and 1-5** illustrate where each of these structures are located on the ADS landside, numbered as they are on the airfield. As a general reference, there are 70 corporate/common/box hangars and 20 T-Hangar structures (shade/enclosed). The T-Hangars comprise approximately 255,150 square feet of aircraft storage both open/shade and enclosed type on airport property. An additional 77,440 square feet of enclosed T-Hangars operate via a through-the-fence agreement. Currently there is slightly more than one million square footage of building space at ADS comprised wholly or in part by a corporate/common/box hangar. Approximately 178,000 square feet of additional hangar/office space operates from Taxilane Uniform via a through-the-fence agreement while there are businesses on the west side of the field operating via through-the-fence agreements for their aircraft that include in excess of 250,000 square feet of structures.

### AIRCRAFT PARKING APRONS

The airport has approximately 182,100 square yards of apron space used for parking and maneuvering of aircraft. Most of this apron space is associated with a specific FBO, SASO, or tenant. For the tenants that front Taxiway Alpha there is approximately 106,000 square yards of apron space. This apron space supports tenants like the two major FBOs, Atlantic Aviation and Million Air Dallas, along with various others along the flight

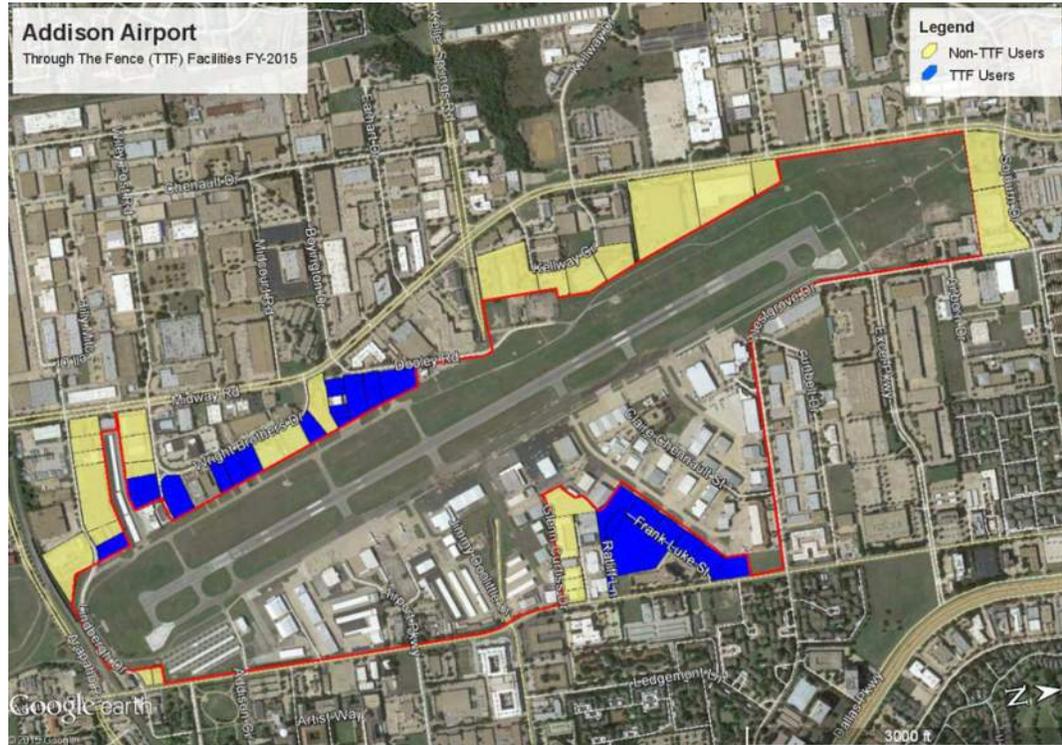
line. The various apron areas can be seen on **Figures 1-3 and 1-4**.

Addison Airport also supports through-the-fence hangar/tenant arrangements. Through-The-Fence (TTF) operations first commenced at Addison Airport in the mid-1960s in an attempt to further solidify the Airport as a prominent business-oriented general aviation airport. Off-airport access occurs when the airport sponsor grants an entity ground access across the airport's property boundary to the airport's airside infrastructure (e.g., runways and taxiways) for aeronautical purposes. Activities commonly associated with TTF operations include residential aeronautical, commercial aeronautical, non-commercial aeronautical, non-aeronautical (vehicular) and government/military operations. Since local codes and ordinances prohibit residential development adjacent to Addison Airport, TTF operations from residential properties do not exist. Similarly, the Airport does not have any government or military TTF operations.

Addison Airport currently has eight commercial TTF users, 16 recreational/incidental business users and one non-aeronautical user. Their off-airport facilities represent more than 250,000+ square feet of additional aircraft storage space. There are another 24 commercial-oriented properties immediately adjacent to Addison Airport that could potentially bring additional aeronautical users if redeveloped accordingly. Access fees paid to the Airport in Fiscal Year 2014 were in excess of \$64,000. **Figure 1-7** illustrates the prevalence and location of these TTF arrangements.



**FIGURE 1-7 THROUGH-THE-FENCE LOCATIONS**



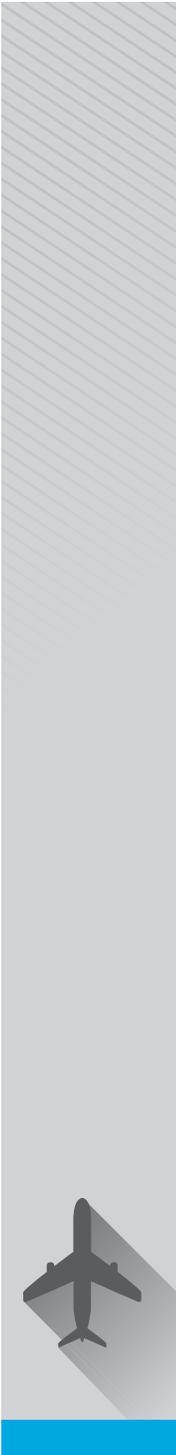
**SOURCE:** SAMI, 2015. PROPERTIES ADJACENT TO THE AIRPORT. BLUE HIGHLIGHTED PROPERTIES ARE CURRENT TTF ACCESS PERMIT HOLDERS. YELLOW HIGHLIGHTED PROPERTIES ARE NON-AVIATION USES WITHOUT ACCESS PERMITS.

**TABLE 1-10 AERONAUTICAL TTF FACILITIES**

ACCESS TYPE	PROPERTY COUNT	LAND AREA (SF)	BUILD. AREA (SF)	HANGAR AREA (SF)	2014 TAX VALUE	ACCESS FEE	ACCESS FEE/SFL
Commercial	8	617,488	60,516	145,360	\$ 6,762,030	\$50,650	\$.082
Rec./Incidental Business Use	16*	549,345	124,290	109,955	\$10,363,770	\$13,545	\$.025
<b>TOTALS</b>	<b>24</b>	<b>1,166,833</b>	<b>184,806</b>	<b>255,315</b>	<b>\$17,125,800</b>	<b>\$64,195</b>	<b>\$.055</b>

\* 5 permits are affiliated with 15770 Midway Condominium Association

**SOURCE:** SAMI, INC., 2015



**TABLE 1-11 NON-AERONAUTICAL TTF FACILITIES**

ACCESS TYPE	PROPERTY COUNT	LAND AREA (SF)	BUILD. AREA (SF)	HANGAR AREA (SF)	2014 TAX VALUE	ACCESS FEE	ACCESS FEE/SFL
Commercial	1	19,210	10,500	0	\$611,840	\$363.47	\$.019
<b>TOTALS</b>	<b>1</b>	<b>19,210</b>	<b>10,500</b>	<b>0</b>	<b>\$611,840</b>	<b>\$363.47</b>	<b>\$.019</b>

SOURCE: SAMI, INC., 2015

Addison Airport is generally regarded as a fully developed and well occupied airport with little opportunity for on-airport expansion. Furthermore, Addison Airport is landlocked by dense industrial and commercial development of substantial value, limiting the likelihood of physical expansion through acquisition of adjacent properties. By offering TTF operations, the Town effectively leverages the Airport’s use and operating capacity without the burden of substantial capital investment. TTF operations are also perceived to provide the Airport a competitive advantage over other airports because of the investment alternative it provides businesses with the need for airport access in support of their non-commercial aeronautical activities (e.g. corporate flight departments, light cargo, manufacturers and distributors, etc.).

Addison Airport’s TTF operations are governed pursuant to Chapter 14, Article III, Division 3 of the Town of Addison’s Code of Ordinances adopted by Ordinance No. 006-054 (the “Access Ordinance”). Among other things, the Access Ordinance sets forth various key terms and definitions that recognize off-airport operations as a unique class of aviation operations compared to on-airport operations. Within this class of aviation operations are two distinct sub-classes recognized by the Town of Addison:

**Commercial Aviation Use:** The operation of a business enterprise providing aviation-related goods, services, or facilities for a commercial purpose (including, without limitation, any activity by the operator securing earnings, income, compensation (i.e. exchange or barter of goods and services), and/or profit from said activities, whether or not such objectives are accomplished) to users of the Airport.

**Recreational/Incidental Business Use:** The use of an off-airport property for aviation operations which is either recreational in nature or is incidental to a non-aviation business conducted on the off-airport property. For example, an architect, technology company, or an oil company using an aircraft to transport people, not product.

The Town of Addison intends to continue to promote and offer TTF operations to the extent such operations serve the Airport’s best interest. TTF incidental business users will be encouraged since they typically conduct a higher frequency of aeronautical operations compared to recreational users (e.g. fuel consumption) and are less likely to conflict with on-airport commercial operators. Commercial aeronautical users (e.g. aircraft storage, charter and aircraft management) will be considered on a case-by-case basis. Off-airport maintenance and repair facilities and services will be discouraged because of their potential for placing on-airport operators at a competitive disadvantage.

## SUPPORT FACILITIES

### Fuel Storage Facility

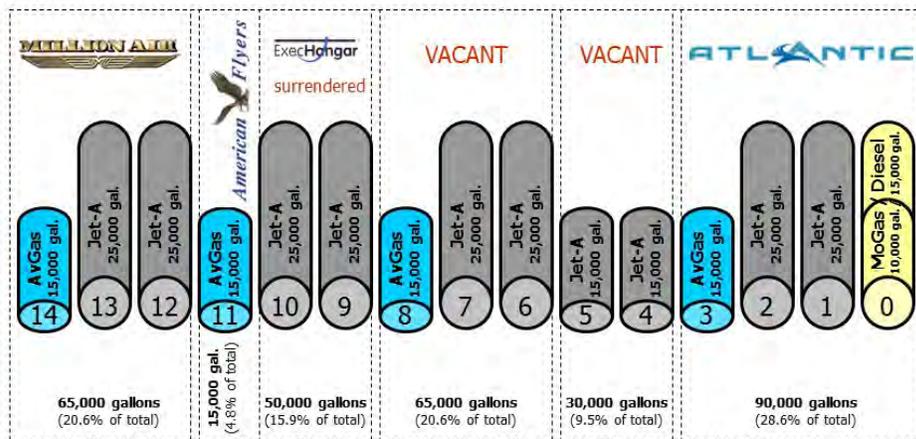
ADS owns and operates a state-of-the-art fuel storage facility located in the southeast quadrant of the airport north of Taxilane Papa. The fuel storage facility, constructed in 2005, and houses 15 fuel storage tanks and metering pumps beneath an arched awning supported by a steel beam superstructure. Total fuel storage capacity of 315,000 gallons includes: Jet-A = 230,000 gallons, AvGAS = 45,000 gallons; Auto Unleaded = 15,000 gallons; MoGas = 10,000 gallons; Diesel = 15,000 gallons. Each tank is set up to be leased to an operator on the airfield. Each operator has their own refueling trucks for aircraft fueling





operations on their designated apron or facility. **Figure 1-6** depicts the current fuel tank setup and divisions based on lease with 95,000 gallons available for tenant lease as negotiated by the airport. Fuel resupply is accomplished via a secure/gated lane between the storage tanks and Addison Road entry of which is near Taxilane Quebec and exit is near Taxilane Papa.

**FIGURE 1-6 AIRPORT FUEL STORAGE LAYOUT**



**Total Storage Capacity: 315,000 gallons**  
 (Aviation Fuels Capacity: 290,000 gallons)

SOURCE: ADDISON AIRPORT



**Table 1-12**, provides a summary of fuel sales in gallons conducted at ADS since 2000. Sales have fluctuated over the years from a high of 9.1 million gallons in 2005 to a low of 5.5 million gallons in 2009, with the 13-year average of 7.27 million gallons.

**TABLE 1-12 AIRPORT FUELING SALES, 2000-2013**

YEAR	AVGAS (GALLONS)	JET A (GALLONS)	TOTAL (GALLONS)
2000	894,627	7,774,196	8,668,823
2001	876,306	7,008,490	7,884,796
2002	803,258	8,119,223	8,922,481
2003	754,703	7,262,967	8,017,670
2004	674,908	7,864,767	8,539,675
2005	1,047,409	8,100,952	9,148,361
2006	801,976	7,386,500	8,188,476
2007	743,372	6,730,221	7,473,593
2008	743,542	5,307,561	6,051,103
2009	668,469	4,780,903	5,449,372
2010 <sup>1</sup>	652,174	5,256,210	5,908,384
2011	562,495	4,650,451	5,212,946
2012	598,818	5,523,990	6,122,808
2013	594,703	5,595,997	6,190,700

**SOURCE:** ADS, APRIL 2014



# EXISTING ENVIRONMENTAL OVERVIEW

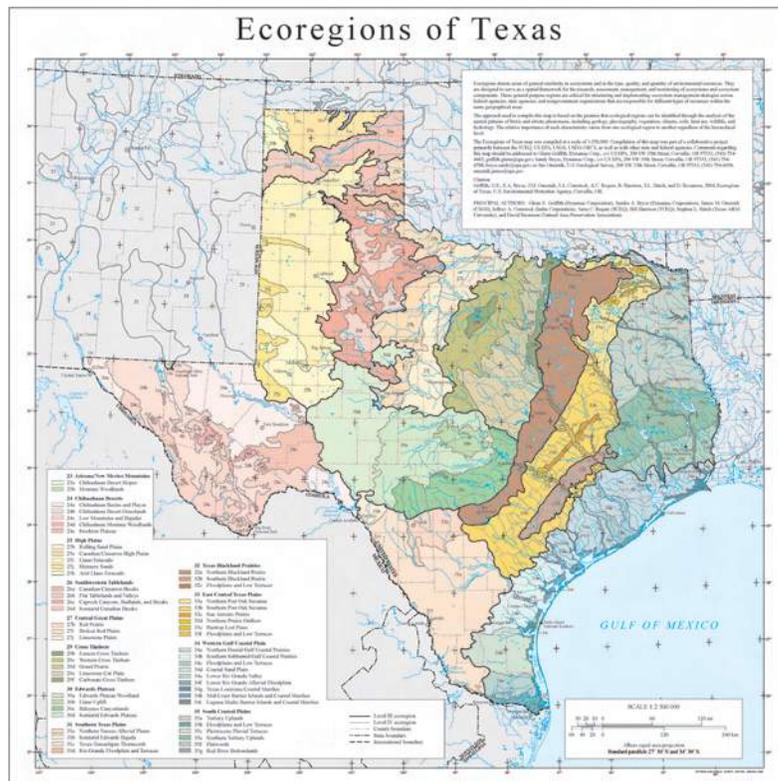


## EXISTING ENVIRONMENTAL OVERVIEW

The site upon which the Airport and Town have grown up was originally part of the Oaks and Prairies ecological subdivision of Texas. Due

to urbanization and conversion to row-crop farming, less than one percent of the original Blackland Prairies exists today. ADS is in an urban setting with commercial real estate and housing development built up around the airport's perimeter.

**FIGURE 1-7 ECOREGIONS OF TEXAS**

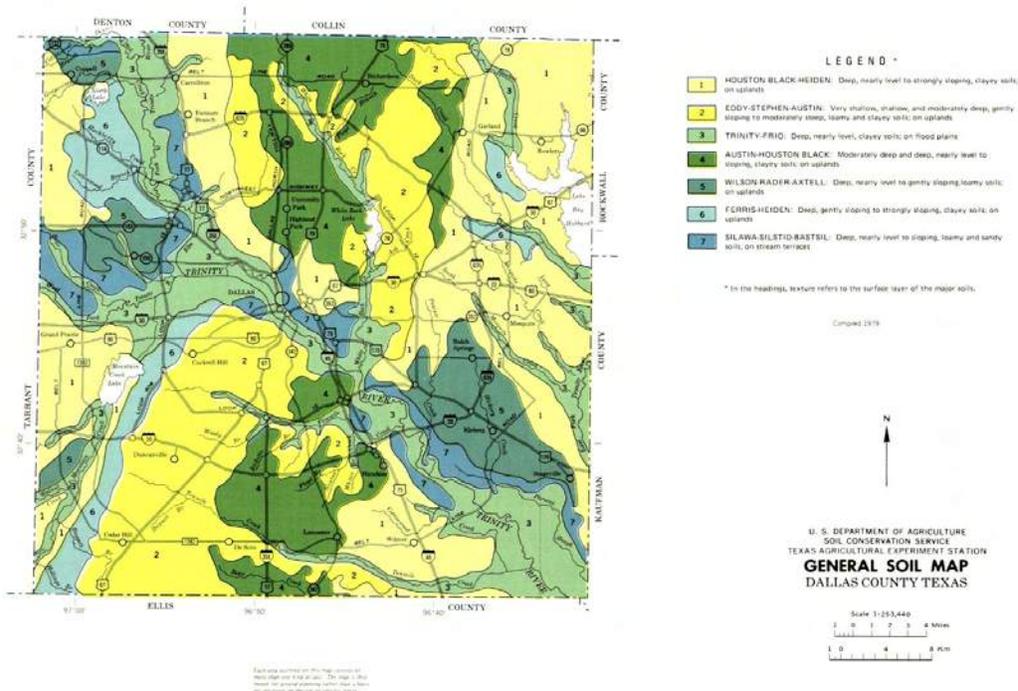


## SOILS

Addison is in Dallas County is in the north-central part of Texas in the Blackland Prairies sub region. This environmental sub region is characterized by fine-textured, clayey soils and natural prairie vegetation. It has a total area of 909 square miles. Elevations range from a high of 850 MSL to a low of 382 MSL. The landscape consists of gently undulating, clayey soils along the area of the Austin Chalk Formation, a limestone escarpment, and nearly level to gently sloping, loamy and clayey soils along the Trinity River and

other major streams. The soils shown in **Figure 1-8** indicate that in the ADS vicinity soils are of two varieties or types: Eddy-Stephen Austin and Austin-Houston Black. The Eddy-Stephen Austin soil type dominates the southern part of ADS and is characterized by very shallow, shallow, and moderately deep, gently sloping to moderately steep loamy and clayey soils on the uplands. The Austin-Houston Black soil type is characterized by deep nearly level to sloping clayey soils on the upland regions.

**FIGURE 1-8 DALLAS COUNTY SOIL TYPES**



## HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The National Historic Preservation Act of 1966 requires that an initial review be made to determine if any properties in or eligible for inclusion in the National Register of Historic Places are within the area of a proposed action's potential environmental impact. The Archaeological and Historic Preservation Act of 1974 provides for the survey, recovery, and preservation of significant scientific, pre-historic, historical, archaeological, or paleontological data when such data may be destroyed or irreparably lost due to a federal, federally funded, or federally licensed project. An online query through the Texas Historical Commission revealed that there are no historic site locations in the airport vicinity; however, a thorough investigation and coordination may need to be conducted through both the state and federal cultural resources offices prior to future airfield construction.

## FISH, WILDLIFE, AND PLANTS

The Endangered Species Act requires each federal agency to ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of habitat of such species. As provided by the Texas Parks and Wildlife Department, several species are listed for Dallas County. As defined by the U.S. Fish and Wildlife, Endangered Species is any species of wildlife whose continued existence as a viable component of the state's wild fauna is determined

to be in jeopardy, and a Threatened Species is any species of wildlife that appears likely, within the foreseeable future, to become an endangered species. **Table 1-13** lists the threatened and endangered species for Dallas County on both a federal and state status.

A recent project for the airfield was the development of a Wildlife Hazard Assessment (WHA). This project was completed by Kleinfelder in 2014 and a copy of the report is provided as reference in **Appendix C**. During the WHA monthly wildlife observations were conducted both day and night by the consultant. None of the genus or species were observed on ADS during these periods. Since it is uncertain if any of these species reside near or on airport property coordination with U.S. Fish and Wildlife Service and Texas Parks and Wildlife is necessary before any future construction



**TABLE 1-13 DALLAS COUNTY THREATENED AND ENDANGERED SPECIES**

COMMON NAME	GENUS/SPECIES	FEDERAL STATUS	STATE STATUS
<b>BIRDS</b>			
American Peregrine Falcon	Falco peregrines anatum	DL	T
Arctic Peregrine Falcon	Falco peregrines tundrius	DL	
Bald Eagle	Haliaeetus leucocephalus	DL	T
Black-capped Vireo	Vireo atricapilla	LE	E
Golden-cheeked Warbler	Dendroica chrysoparia	LE	E
Henslow's Sparrow	Ammodramus henslowii	LE	E
Interior Least Tern	Sterna antillarum athalassos	LE	E
Peregrine Falcon	Falco peregrines	DL	T
Piping Plover	Charadrius melodus	LT	
Sprague's Pipit	Anthus spregueii	C	
Western Burrowing Owl	Athene cucularia hypugaea		
White-faced Ibis	Plegadis chihi		T
Whooping Crane	Grus Americana	LE	E
Wood Stork	Mycteria americana		T
<b>INSECTS</b>			
Black Lordithon rove beetle	Lordithon niger		
<b>MAMMALS</b>			
Cave myotis bat	Myotis velifer		
Plains spotted skunk	Spilogale putorius interrupta	LE	E
<b>MOLLUSKS</b>			
Fawnsfoot	Truncilla donaciformis		
Little spectaclecase	Villosa lienosa		
Louisiana pigtoe	Pleurobema riddellii		T
Texas heelsplitter	Potamilus amphichaenus		T
Texas pigtoe	Fusconaia askewi		T
Wabash pigtoe	Fusconaia flava		T
<b>REPTILES</b>			
Alligator snapping turtle	Macrochelys temminckii		T
Texas garter snake	Thamnophis sirtalis annectens		
Texas horned lizard	Phrynosoma cornutum		T
Timber/Canebrake rattlesnake	Crotalus horridus		T
<b>PLANTS</b>			
Glen Rose yucca	Yucca necopina		
Warnock's coral-root	Hexalectris warnockii		

**SOURCE:** TEXAS PARKS AND WILDLIFE DEPARTMENT  
 T = STATE LISTED THREATENED  
 E = STATE LISTED ENDANGERED.  
 DL = FEDERALLY DELISTED  
 LE = FEDERALLY LISTED ENDANGERED/THREATENED



# AVIATION OPERATING ENVIRONMENT



## AVIATION OPERATING ENVIRONMENT

ADS operates in a very busy aviation rich environment. As one of 11 reliever airports to Dallas – Fort Worth International and Dallas Love Field, the airspace and operations within can be complicated. The visual flight rules chart in **Figure 1-9** depicts the complex airspace in the DFW area that includes ADS.

### AIRSPACE AND AIR TRAFFIC CONTROL

All flights conducted within the national airspace system, whether under Visual Flight Rules (VFR) or Instrument Flight Rules (IFR), do so based on regulations mandated by the FAA. Based on these rules, each airport—whether private or public—has a specific role that it plays as part of this airspace system. As seen in **Figure 1-9, Airspace, Airports, and NAVAIDs Summary**, the local airspace immediately surrounding ADS is designated as Class D airspace. It lies beneath the DFW/DAL Class B airspace. The ADS Class D airspace begins at the surface and rises to include elevations up to 2,500 feet above mean sea level (MSL). Usually, Class D airspace is circular with a radius of 5 miles. The ADS Class D airspace is superseded by the DFW/DAL Class B airspace. All flights and aircraft operating to or from ADS must be capable of communicating with Air Traffic Control (ATC) before entering the Class B airspace and be equipped

with mode C altitude reporting transponders. Because of the restrictive airspace at Addison pilot training is limited and touch-and-go operations are prohibited.

An additional factor of the airspace around the airport is the designation of Special-Use airspace. Special-Use airspace is that area specifically designated by ATC to segregate flight activity related to military and national security needs from other airspace users. Contact with and advisories from ATC is recommended. Currently, there are seven different kinds of special-use airspace that include: alert areas, military operations areas (MOA), military training routes (MTS), restricted areas, prohibited areas, warning areas, and temporary flight restriction (TFR) areas. There is only one Special Use Airspace within the DFW area and Class B Airspace that is centered on the residence of President Bush in Dallas. The airspace within this area is classified as “National Defense Airspace” and aircraft are to remain clear of this area up to 1,500 feet above ground level (AGL) unless authorized by ATC.

### AIR TRAFFIC SERVICE AREAS AND AVIATION COMMUNICATIONS

ADS is served by an FAA ATCT. The ADS ATCT is open from 6 AM to 10 PM daily. The ATCT is located at mid-field on the airport’s west side. The professional controllers provide ground control services issuing taxi instruction and relaying instrument flight plans to aircraft operating at ADS.



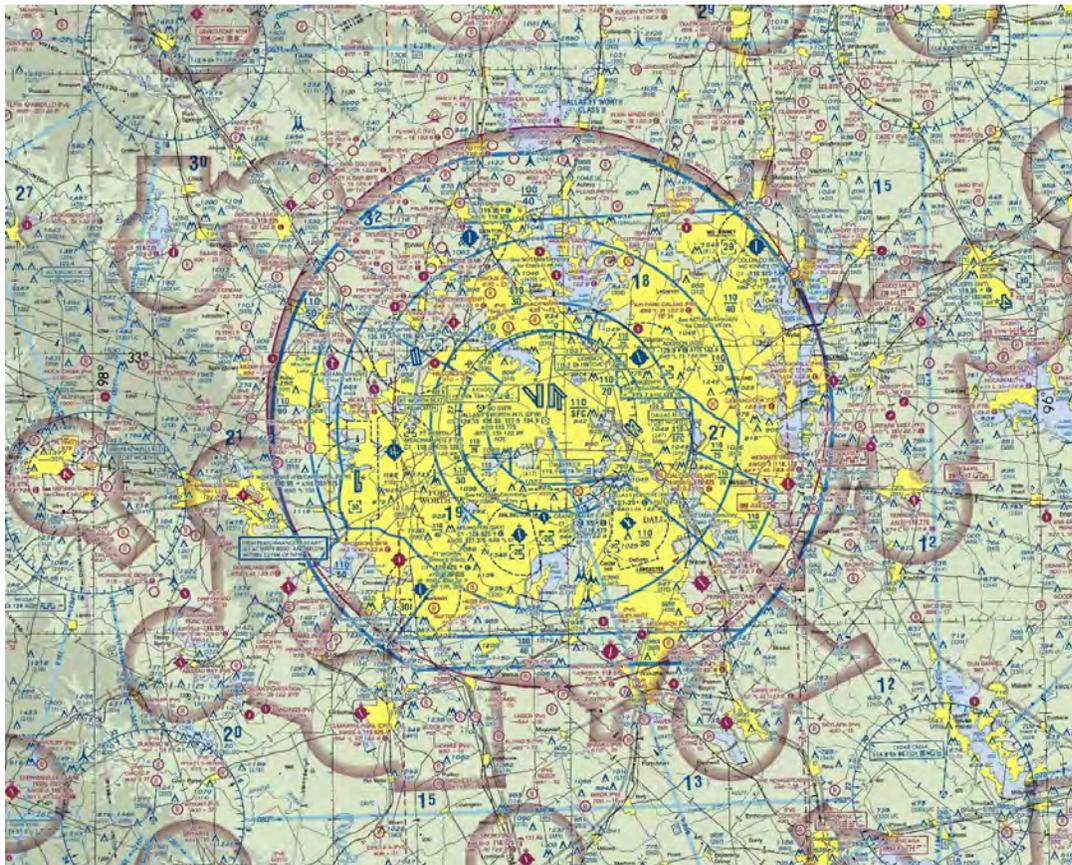
The tower controllers provide airspace guidance and sequencing for those other aircraft in the airspace system arriving at or departing from ADS. **Figure 1-9** is a part of the VFR sectional chart showing the various airport facilities and airspace in the ADS and DFW region.

**Figures 1-10** depicts the profile view the Class B airspace in the DFW region that is controlled by the Dallas Terminal Radar Approach Control (TRACON) facility at DFW International Airport. The TRACON provides communication and approach sequencing for all of the aircraft arriving on instrument flight plans to DFW International, Love Field, the eleven reliever airports in the region

including ADS, and various other aviation facilities.

Beyond the Class B airspace and TRACON boundaries, FAA air traffic controllers, stationed at En-Route Control Centers or Air Route Traffic Control Centers (ARTCC), provide for the safe movement of aircraft operating primarily under IFR conditions within a defined geographic jurisdiction. There are currently 22 geographic ARTCC's established within the continental United States, each one responsible for a specific geographic region or boundary delineation. Addison Airport is located within the Fort Worth ARTCC, which manages airspace in portions of Oklahoma, Arkansas, Louisiana, and Texas.

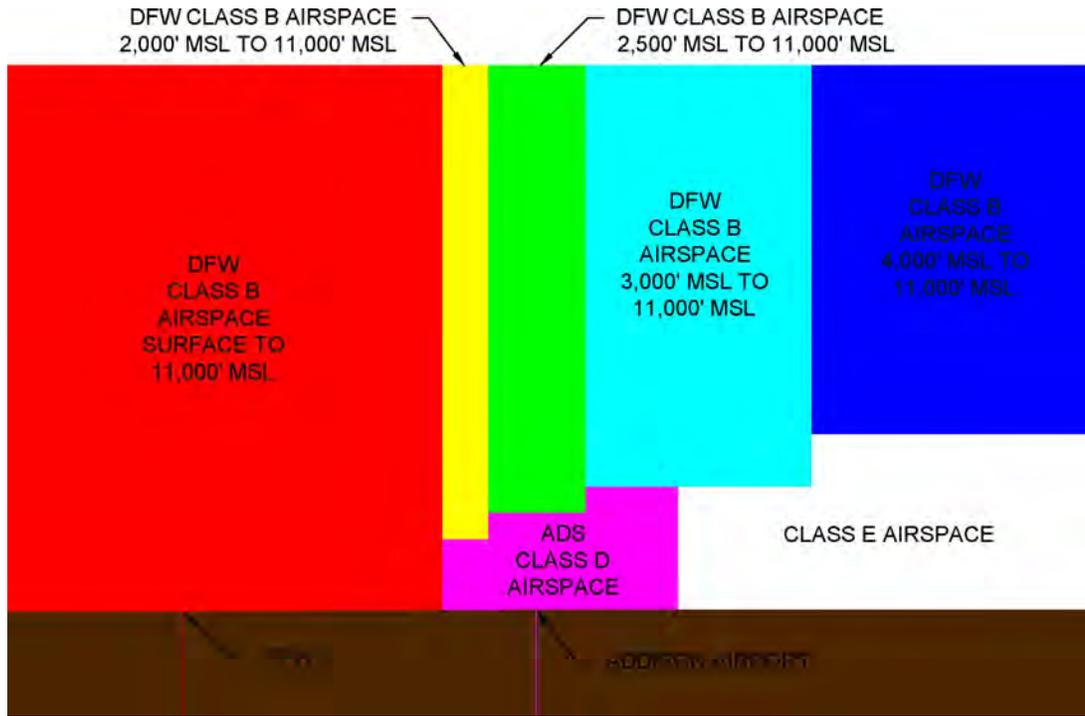
**FIGURE 1-9** AIRSPACE, AIRPORTS, AND NAVAIDS SUMMARY



SOURCE: FAA DALLAS VFR SECTIONAL CHART, MARCH 2014



**FIGURE 1-10** ADDISON AND DFW/DAL AIRSPACE PROFILE



SOURCE: GARVER, LLC, 2014

**ADDISON AIRPORT SERVICE AREA AND AREA AIRPORTS**

The airport service area is generally defined as the geographic region served by a select airport. A determination can be made regarding the Addison Airport service area by locating competing airports and their relative distance to population centers, assessing the role of surrounding airports, and evaluating their facilities, equipment and services, as well as programmed expansion projects. Its location in the DFW Metroplex complicates the service area. The number of competing public and private airports can both widen and contract the service area depending on the users perceived level of service and amenities offered at a given airport.

Surrounding airports have varying degrees of influence on the airport service area with respect to competing services (flight training, charters, fuel,

maintenance, courtesy car, security, etc.), facilities and equipment, navigational aids, and accessibility. **Table 1-14** lists the primary competing airports for Addison along with their major service elements. It should be noted, however, that the demand for aviation facilities does not necessarily conform to political or geographical boundaries. **Figure 1-11** illustrates the various airports in the region. ADS is found in the central sub region of the graphic.

**DFW INTERNATIONAL AIRPORT:**

Dallas Fort Worth International Airport (DFW) is located between the cities of Dallas and Fort Worth, eleven miles west-southwest of ADS. DFW is owned by the cities of Dallas and Fort Worth. It is one of the busiest commercial service airports in North America. DFW has seven paved runways all with ILS precision approaches. There are over 677,000 operations a year at DFW to world-wide destinations. ADS is a reliever to DFW.



**DALLAS LOVE FIELD:**

The City of Dallas owns and operates Dallas Love Field (DAL). The airfield is located seven miles south of ADS and is managed by the City's Department of Aviation. DAL serves both commercial airline and GA corporate user needs. DAL has parallel runways (13-31) with a total of four instrument landing systems. It also has a crosswind runway (18-36). Six full service fixed base operators (FBOs) at DAL provide GA users with a wide variety of services including fuel, maintenance, hangar rentals, and charters. DAL is served by Southwest Airlines, Continental Express and American Airlines/American Eagle.

**DALLAS EXECUTIVE AIRPORT:**

Dallas Executive (RBD) is located 17 miles south of ADS. It serves business and leisure travelers. RBD has an FAA contract control tower and ILS precision approaches. Three full service FBOs provide fuel, maintenance, hangars, and tie-downs.

**MCKINNEY NATIONAL AIRPORT:**

McKinney National Airport (TKI) is located in McKinney, Texas, 18 miles northeast of ADS. It is owned and managed by the City of McKinney. TKI is a GA reliever airport with business and personal aviation transportation facilities. In 2011, a new 78-foot air traffic control tower was constructed. In 2012 a new 7,002-by-150-foot runway (18/36) was completed. There are 238 planes based at TKI which experiences over 80,000 annual operations.

**GRAND PRAIRIE MUNICIPAL AIRPORT:**

Grand Prairie Municipal (GPM) has a 4,001-foot-long, 75-foot-wide lighted, concrete runway. Services provided at GPM include aircraft repair/maintenance, cargo handling, helicopter operations, and support facilities for training, private aviation and business flying activities. GPM handles planes ranging from small piston planes to large business turboprop aircraft and helicopters. It lies 19 miles south-southwest of ADS.

**ARLINGTON MUNICIPAL:**

The Arlington Municipal Airport (GKY) is a full-service general aviation "reliever" airport located 22 miles south-southwest of ADS. Runway 16/34 is 6,080 ft. x 100 ft. with medium intensity lighting and a full parallel taxiway. An ILS provides a

precision approach and two published non-precision approaches are available to assist aircraft operations in inclement weather. There are 96 T-hangars, 51 tie-downs and maintenance services at GKY.

**RALPH M. HALL MUNICIPAL AIRPORT:**

The Ralph M. Hall Municipal Airport is a small GA facility serving the City of Rockwall and Rockwall County. It is approximately 20 miles east of ADS. With approximately 62 based aircraft the airport experiences more than 30,000 annual operations from the 3,373'x 45' runway supported by GPS IAPs to each runway end.

**MESQUITE METRO AIRPORT:**

Mesquite Metro Airport (HQZ) is classified as a reliever for DFW/DAL. There are 181 planes based on the airport and 120,000 annual operations. HQZ is located 20 miles southeast of ADS.

**DENTON ENTERPRISE AIRPORT:**

The Denton Enterprise Airport (DTO) is located within the city limits of the City of Denton and 23 miles west-northwest of ADS. Aviation services provided at DTO include: 100 LL & Jet-A, full service aeronautical maintenance and repairs, hangars, tie downs, flight schools, and full-service FBOs.

**ALLIANCE AIRPORT:**

Fort Worth Alliance Airport (AFW) is located 24 miles west of ADS. AFW features a vast array of flight services, including air cargo and corporate and military aviation. AFW is owned by the City of Fort Worth and managed by privately-held Alliance Air Services. AFW provides hangars, tie-downs, and fuel and maintenance infrastructure. AFW is served by an FAA Air Traffic Control Tower.

**FORT WORTH MEACHAM INTERNATIONAL:**

Meacham International Airport (FTW) is located 28 miles west-southwest of ADS. There are three full-service FBOs, aircraft maintenance facilities, hangars, tie-downs and fuel. FTW has 312 based aircraft are based and experiences approximately 86,800 operations per year. There are three paved runways and precision instrument approaches to Runway 16-34





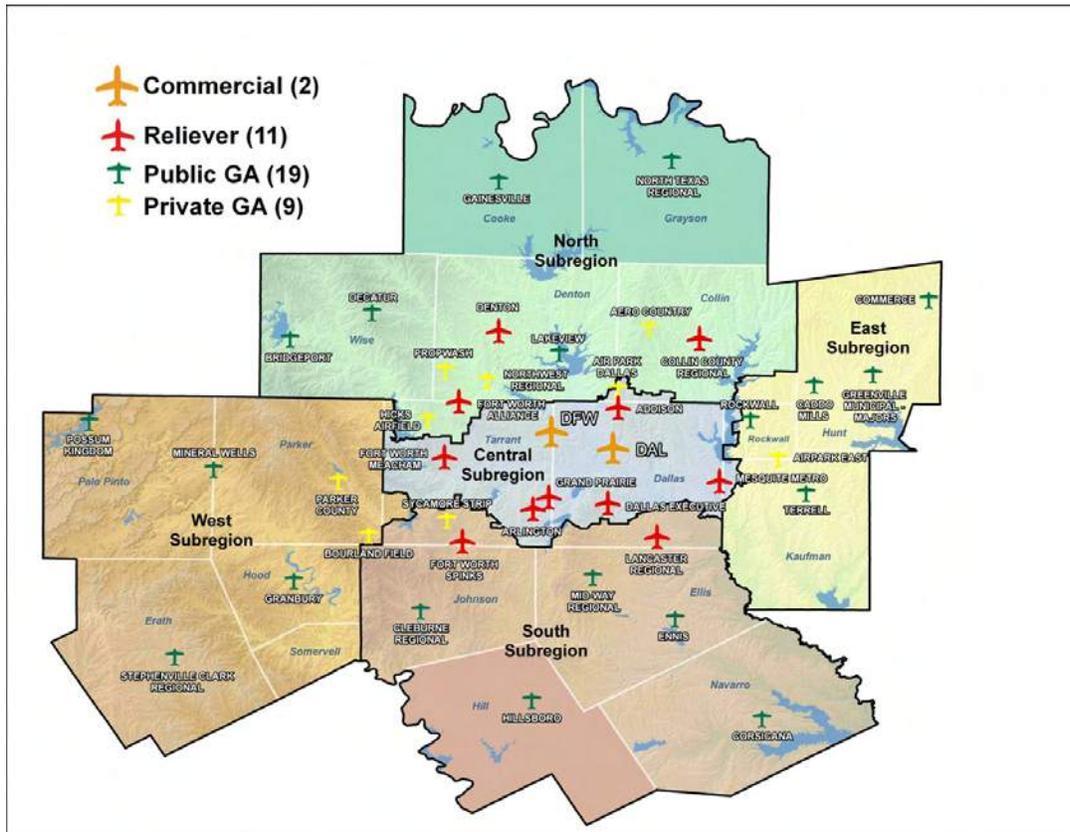
TABLE 1-14 AREA PUBLIC-USE AIRPORT FACILITIES

AIRPORT NAME AIRPORT SPONSOR DISTANCE FROM ADS	AIRPORT ROLE	RUNWAY CHARACTERISTICS	AIRCRAFT/ OPERATIONS	AIRPORT SERVICES
Addison Airport	R	15-33; 7,203' x 150' (P) (L)	595 planes 94,003 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
DFW International Airport Dallas/Fort Worth, TX 11 miles west-southwest	C	17C-35C; 13,401' x 150' (P) 17R-35L; 13,401' x 200' (P) 18L-36R; 13,400' x 200' (P) 18R-36L; 13,400' x 150' (P) 13R-31L; 9,301 x 150' (P) 13L-31R; 9,000' x 200' (P) 17L-35R; 8,500' x 150' (P)	677,001 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Dallas Love Field Dallas, TX 7 miles south	C	13R-31L; 8,801' x 150' (P) 13L-31R; 7,752' x 150' (P) 18-36; 6,147' x 150' (P)	223 planes 177,422 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Dallas Executive Airport Dallas, TX 17 miles south	R	13-31; 6,451' x 150' (P) 17-35; 3,800' x 150' (P)	141 planes 63,166 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
McKinney National Airport McKinney, TX 18 miles northeast	R	18-36; 7,002' x 150' (P)	238 planes 83,750 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Grand Prairie Municipal Airport Grand Prairie, TX 19 miles south-southwest	GU	17-35; 4,001' x 75' (P)	203 planes 98,001 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Arlington Municipal Airport Arlington, TX 22 miles south-southwest	R	16-34; 6,080' x 100' (P)	235 planes 74,036 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Ralph M. Hall Municipal Airport Rockwall, TX 20 miles east	BU	17-35; 3,373' x 45' (P)	62 planes 38,020 ops	NPI, Fuel/Repair, Hangars/Tie
Mesquite Metro Airport Mesquite, TX 20 miles east-southeast	R	17-35; 5,999' x 100' (P)	181 planes 120,000 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Denton Enterprise Airport Denton, TX 23 miles west-northwest	R	18-36; 7,002' x 150' (P)	371 planes 157,994 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Alliance Airport Fort Worth, TX 24 miles west	R	16L-34R; 9,600' x 150' (P) 16R-34L; 8,220' x 150' (P)	19 planes 137,607 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie
Fort Worth Meacham International Airport, Fort Worth, TX 28 miles west-southwest	R	16-34; 7,502' x 150' (P) 17-35; 4,005' x 75' (P) 9-27; 3,677' x 100' (P)	312 planes 86,800 ops	PI (ILS) *, Fuel/Repair, Hangars/Tie

Symbols: CS – Commercial Service; R – Reliever Airport; GU – General Utility Airport; BU – Basic Utility; (P) – Paved runway surface; (T) – Turf or gravel runway surface (L) – Pilot controlled runway lighting; (\*) – Control tower; NPI – Non-precision instrument approach; PI – Precision instrument approach, Instrument Landing System (ILS)

SOURCE: FAA FORM 5010 REPORT, AIRPORT MASTER RECORDS, APRIL 2014

**FIGURE 1-11** NCTCOG AREA AIRPORTS



**SOURCE:** NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, GENERAL AVIATION AND HELIPORT SYSTEM PLAN.

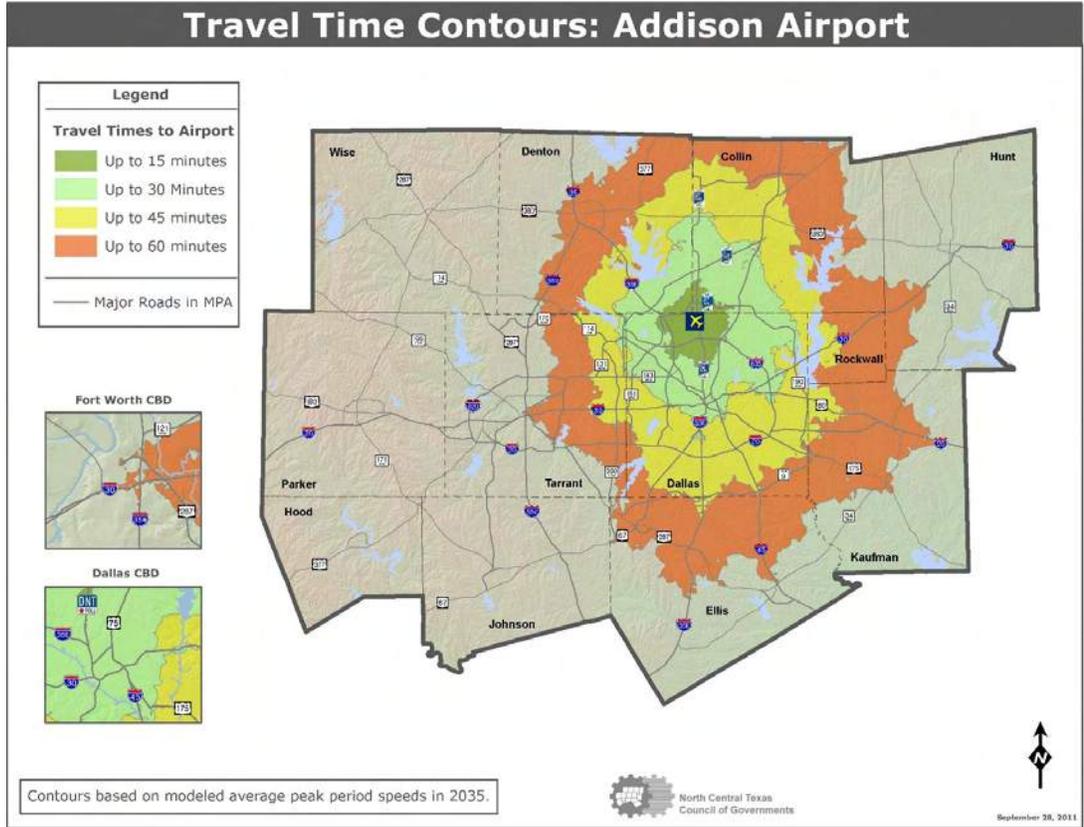
Based on the data available defining a finite service area for ADS is best arrived at through use of the drive-time analysis completed by the NCTCOG.

**Figure 1-12** highlights the complex nature of ground transportation in the DFW Metroplex and best defines the ADS Service Area based on 2011 information. Those residents and businesses within the 30 minute drive-time segment of **Figure**

**1-12** fall into the defined service area for ADS both today and in the future. This area includes all of the Dallas central business district and downtown area. Those beyond this area can and oftentimes do use ADS when the next closer airport does not provide the same level of outstanding service or unmatched capabilities afforded at ADS.

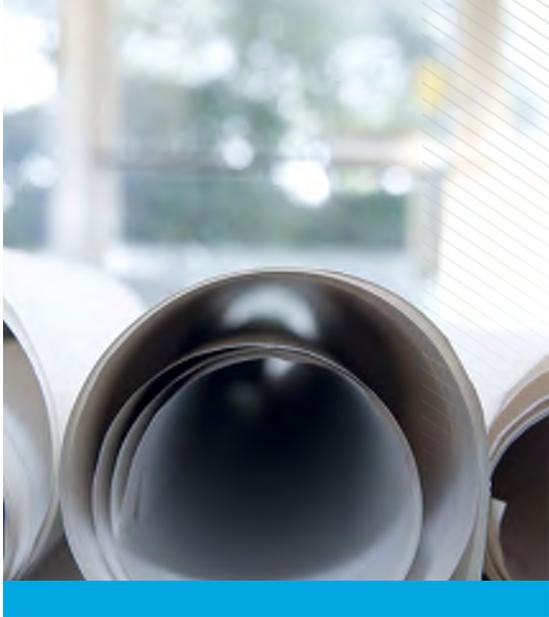


FIGURE 1-12 NCTCOG ADS DRIVE-TIME ANALYSIS



SOURCE: NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS.





# AIRPORT MANAGEMENT DOCUMENTS

## AIRPORT MANAGEMENT DOCUMENTS

Establishing the appropriate level of management and control of the airport landside environs is an important part of managing a busy and complex airport like Addison. Beyond the controls established in lease agreements the airport must have two important management documents in place: Minimum Standards and Airport Rules and Regulations. ADS is a mature general aviation facility with long established sets of these important management documents. Updating these documents periodically and as part of the master plan provides a continuing process of improvement for airport management, the airport sponsor, and tenants.

### MINIMUM STANDARDS

Airports that receive federal funding assistance are required to accept a body of guiding principles known as grant assurances. These grant assurances are designed to ensure the airport is operated for the public good. Two of these grant assurances apply specifically to the development and management of airport minimum standards.

Under Grant Assurances 22 and 23, the airport sponsor is required to make the airport available to the public for use without discrimination to all types of aeronautical service providers. Further, in any contract or lease executed by the airport

sponsor under which a right is granted to provide services to the public on the airport the sponsor shall insert and provide provisions outlining certain conduct of service to the general public by the contractor. In general these contract provisions are meant to ensure the service provider do so in a non-discriminatory manner and will not allow an exclusive right to the contractor for providing any specific service on the airport. A full copy of the airport grant assurances are contained in **Appendix D**.

The ADS Minimum Standards have been developed through several iterations with the last update completed, approved, and adopted by Town Council on March 1, 2004. As things have changed in the aviation industry and at ADS, it is incumbent upon the airport and sponsor that the Minimum Standards be updated periodically to reflect the current service providers on the field and anticipate any current trends towards new or changing situations or conditions on the airfield or service provider industry. After a thorough review of the ADS Minimum Standards the following general recommendations for revision are provided with a full draft ADS Minimum Standards included in **Appendix D** for review and adoption by the airport and sponsor.

- Section II: Outline specifics for small business/ individual self-fueling provisions.
- Section III: Provide applicants a clear and direct process with an anticipated review/

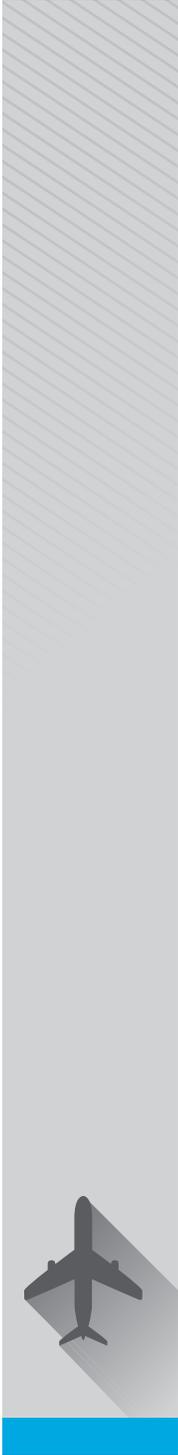


response time by airport management of the applicant's submitted documents.

- Section IV: Remove any description of the minimum staffing requirements from this section specifying these in either the Airport Rules and Regulations or in the tenant lease agreement language.
- Section V: Subsection 2 revised to specify the minimum service equipment required to operate as an FBO on the field. Additionally, reconsideration of the required minimum acreage and ramp space to reflect existing and anticipated available properties for establishing a new FBO on the airfield.
- Section VI: For non-public fuel service providers, this section should be revised to specify a lease/permit arrangement for bulk fuel storage within the Airport's fuel farm with minimum storage needs.
- Section VII: Recommend revision of title to reflect industry standard language for Specialized Aviation Service Operators (SASO). Also make revisions to this section that are as specific as those in the FBO section delineating minimum requirements for lease areas, minimum equipment, and other items specific to the SASO type. This expanded discussion will provide for enough specificity without creating an unfair advantage to operate as a SASO versus as an FBO.

## RULES AND REGULATIONS

Airport rules and regulation documents are designed to influence safe, orderly, and efficient airport operations and are applicable to all persons using the airport regardless of reason or intent. The current ADS Rules and Regulations were adopted on December 14, 2010 based on Article 14 of the Addison Code of Ordinances and are affected by an amendments adopted. Overall, the ADS Rules and Regulations are very well written with only minor recommendations for revision that is included in a revised draft in [Appendix E](#) for review and adoption by the sponsor and airport.





# ADDISON SOCIOECONOMICS

## ADDISON SOCIOECONOMICS

An assessment of regional economic conditions is conducted to gain a better understanding of the relationship between historic and future aviation activity levels within an airport's area of influence. This information is essential and directly influences a local airport. Therefore, the following socio-economic information, population, median family income, and income distribution has been collected to understand current conditions and influence assumptions involved in the development of the aviation demand forecasts for the Addison Airport.

### ADDISON AND DFW REGIONAL ECONOMY

Addison is just one of many incorporated towns in Dallas County. It began as Peters Colony in the mid-1800s and was established with its first residence on White Rock Creek in the early 1900s. At one point it was known as Noell Junction, and was finally incorporated in 1953 as the City of Addison. In 1982 the name changed to the Town of Addison. The Town has grown up as a business hub attracting many corporate headquarters and other subsidiary and supporting businesses. Addison is unique in this aspect as it only has approximately 13,000 residents while the daytime population can be nearly ten times larger. Adding to the uniqueness of Addison is that in the 4.35 square miles that is Addison there are more than 170 restaurants, 22 hotels, 118 acres of beautifully kept parks, and home to the Cavanaugh Flight Museum at Addison Airport.

Dallas County, founded in 1846, is now the ninth most populous county in the United States. The total population in 1850 was only 2,743. The City of Dallas was incorporated in 1856 and has grown up as a center for industry attracting businesses and workers from Texas, the South, and Midwest. The ten year average growth rate for Dallas County since 1860 is nearly 60 percent. This is a result of the aggressive growth of the oil and gas industry and in the early years the cotton industry. In the early years, rail served as a growth catalyst. This has been replaced in large part by the aviation and airport industry evidenced by the two major air carrier and eleven reliever airports in the region.

### POPULATION

Population growth can be directly tied to success and growth at the airport supporting a given population set. ADS supports a much wider population base than that solely found within the Town of Addison. Based on geography, town/city boundaries, and documentation of based aircraft home addresses, ADS supports the GA community and needs of Farmers Branch, Plano, Carrollton and portions of the following counties, Dallas, Denton, Collin, and Tarrant. **Table 1-15** provides population information for the Town of Addison, City of Farmers Branch, City of Carrollton, City of Plano as well as Dallas County, Collin County, Tarrant County, Denton County, and the State of Texas. Population trends and expected rate of change provide insight into an area's economic potential. Past population changes can be used as an indicator, with State averages for comparison



of overall general aviation trends. Population growth from 1980 to 2000 was significant for the Town of Addison. Population reports fell off slightly from 2000 to 2010. These same trends were not reflected in the surrounding communities of Carrollton, Farmers Branch and Plano. Each showed continued growth. Despite the 2010 population figures, the Town of Addison's growth has outpaced Dallas County at more than twice the rate since 1980. Supporting populations from adjacent counties is also promising as each have shown significant growth from 1980.

The Texas Water Development Board population forecasts show continued growth for DFW as

the business community provides the catalyst for growth and more employment opportunities are created in Texas. Population forecasts are promising anticipating a moderate growth rate for Addison. Each of the surrounding communities show a moderated growth rate from that experienced through the 1990s and early 2000s. Collin and Denton Counties are expected to continue their growth as a slightly lesser rate but provide the promise of more individuals and families moving to the DFW Metroplex in turn the potential for more aviation users.

TABLE 1-15 HISTORICAL AND FORECAST POPULATION

	HISTORICAL					FORECAST		
	1980	1990	2000	2010	ANNUAL GROWTH RATE 1980-2010	2020	2030	GROWTH RATE 2015-2025
<b>TOWN/CITY POPULATIONS</b>								
Addison	5,553	8,783	14,166	13,056	3.09%	14,539	17,431	1.83%
Carrollton	40,495	82,169	109,576	119,097	3.59%	126,763	129,176	0.19%
Farmer's Branch	24,863	24,250	27,508	28,616	0.55%	30,613	32,509	0.60%
Plano	72,331	127,885	222,030	259,841	4.49%	268,000	278,000	0.37%
<b>COUNTY POPULATIONS</b>								
Dallas	1,556,419	1,852,810	2,218,899	2,368,139	1.45%	2,566,134	2,822,809	0.96%
Collin	144,576	264,036	491,675	782,341	5.85%	956,716	1,116,830	1.56%
Denton	143,126	273,525	432,976	662,614	5.19%	901,645	1,135,397	2.33%
Tarrant	860,880	1,170,103	1,446,219	1,809,034	2.47%	2,006,473	2,281,666	1.29%
<b>STATE POPULATIONS</b>								
Texas	14,229,191	16,986,335	20,851,820	25,145,561	1.93%	29,510,184	33,628,653	1.32%

**SOURCE:** STATE AND COUNTY – U.S. DEPARTMENT OF COMMERCE, BUREAU OF ECONOMIC ANALYSIS. CITY INFORMATION – U.S. CENSUS BUREAU – INTERNET LOOKUP, POPULATION PROJECTIONS FROM THE TEXAS WATER DEVELOPMENT BOARD, APRIL 2014



## MEDIAN FAMILY INCOME

**Table 1-16** provides the historic median family income for the region based on real dollars from 1999. Median household income indicates the relative changes between income and population. As the productivity of business and industry increases, median household income also rises. The median household income in Addison and

Dallas County have lagged behind both the State of Texas and the nation from 1999 to 2009. The Town of Addison median household income has surpassed Dallas County but only slightly and it is anticipated that as more industry moves into the area median household incomes will be on the rise. Assumptions of general aviation utilization can make use of the trends reflected in the median household incomes of the region.

**TABLE 1-16** MEDIAN FAMILY INCOME

	HISTORICAL		
	1999	2009	ANNUAL GROWTH RATE 1999-2009
<b>ADDISON</b>	\$48,566	\$57,425	1.69%
<b>DALLAS COUNTY</b>	\$43,324	\$49,159	1.27%
<b>STATE OF TEXAS</b>	\$39,927	\$51,563	2.59%
<b>UNITED STATES OF AMERICA</b>	\$41,994	\$53,046	2.36%

**SOURCE:** US CENSUS BUREAU, 2008-2012 AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES.

## INCOME DISTRIBUTION

**Table 1-17** displays the distribution of household income for Addison, Dallas County, the State of Texas, and the United States. Studies completed by the U.S. Department of Commerce have determined that the likelihood of taking a trip by air increases as household income increases. A parallel can be applied to the general aviation market potential. The inclination to own and/or operate a general aviation aircraft or travel via

commercial air carriers for business or pleasure is a direct function of income. Using income as a gauge to aviation activity, statistics indicate that nearly 38 percent of Addison households earn income of \$75,000 or more and 33.3 percent of Dallas County households earn above this threshold. This level of income is important because it identifies a segment of the local population that can be considered capable of participating in GA activity.

**TABLE 1-17** HOUSEHOLD INCOME DISTRIBUTION (2010)

LOCALE	LESS THAN \$15,000	\$15,000-\$24,999	\$25,000 - \$34,999	\$35,000 - \$49,999	\$50,000 - \$74,999	\$75,000 +
<b>ADDISON</b>	7.7 %	10.5%	7.7 %	15.8%	21.9 %	37.2 %
<b>DALLAS COUNTY</b>	12.2 %	11.6 %	11.9 %	14.9 %	18.4 %	30.9 %
<b>STATE OF TEXAS</b>	12.8%	11.0 %	10.9 %	13.9 %	18.0 %	33.3 %
<b>UNITED STATES</b>	12.6 %	10.7 %	10.4 %	13.7 %	18.2 %	34.4 %

**SOURCE:** U.S. CENSUS BUREAU, 2008-2012 AMERICAN COMMUNITY SURVEY. LAND USE AND CONTROLS



# LAND-USE AND CONTROLS



## LAND USE AND CONTROLS

The Town of Addison provides for land use control through a series of ordinances all of which are located online at <http://library.municode.com>.

This site may be accessed through the Town of Addison's webpage under their Planning and Zoning Division. Part II, Chapter 14 of the Addison, Texas Code of Ordinances defines and establishes land use controls and zoning specific to ADS and compatible land use planning in ADS's vicinity. Chapter 14 lays out the various zones controlled by the airport based on airspace at, over, and beyond the airport's physical boundaries and the town's property limits. Height limitations are established as well as conforming or acceptable uses are outlined.

### DEVELOPMENT STANDARDS

The Town of Addison, through its Planning and Zoning Department, has created a series of development standards based on zoning categories. These were developed/updated during the recently completed Town Comprehensive Plan process. With the knowledge that ADS was to complete an Airport Master Plan Update, the Town did not include any specific development standards on the airport in anticipation that this would be accomplished during the master plan update. Towards that end a series of evaluations

of existing structures has been completed and with the final Addison Airport Design Standards included in [Appendix F](#).

### ACQUISITION STRATEGIES

Addison Airport is a fully developed airport surrounded by substantial urban development. The Airport is virtually landlocked by major thoroughfares and highway arteries, commercial businesses and community amenities that limit expansion opportunities. Nonetheless, a viable alternative to promote the continued growth and expansion of Addison Airport is targeted real property acquisitions.

Accordingly, the Town has adopted certain criteria to aid in identifying and targeting favorable opportunities to acquire additional real estate for the benefit of the Airport:

- Properties deemed necessary to protect the airport-at-large and its airspace in accordance with FAA regulations and grant assurances;
- Properties immediately adjacent to the Airport having ready access to existing airport infrastructure (e.g., taxiways and runways) without the requirement of substantial additional capital investment;
- Properties adjacent to the Airport, which are underutilized or have no aeronautical functions;



- Properties required for strategic purposes to protect the airport; and,
- Properties which may become available in the marketplace that share a common property boundary with the airport.

When a favorable opportunity is identified and appropriate funding is available, airport management and Town staff will coordinate their acquisition initiatives with TxDOT and FAA to maximize the financial participation of these two agencies with respect to their respective airports' land acquisition program. As a governmental agency with the power of eminent domain, the Town must carry out such acquisitions pursuant to Section 21 of the Texas Property Code and Title 49, Code of Federal Regulations (CFR), Part 24, Uniform Relocation Assistance and Real Property Acquisitions for Federal and Federally Assisted Programs, the implementing regulation for the Uniform Relocation Assistance and Real Property Acquisitions Policies Act, also known as the "Uniform Act."

As recent as May 2012, the citizens of the Town of Addison voted to approve the issuance of

\$7 Million in general obligation bonds for the purpose of acquiring selected properties adjacent to the Airport to add to the Airport's real estate portfolio. By mid-2014 the Town acquired two existing income-producing properties consisting over 90,000 square feet of conventional hangar and office space on 4.5 acres. Both properties are immediately adjacent to the Airport requiring nominal, if any, infrastructure investment. One property previously being used as an auto detail shop was converted back into an aeronautical-use facility directly benefiting the Airport. The revenue derived from these properties will augment the Airport's financial standing by nearly ten percent and will mitigate the effects of short-term revenue loss during planned redevelopment initiatives elsewhere on the Airport. In connection with these land acquisitions, TxDOT/FAA funded \$1,910,000 toward the land acquisition costs, nearly 30% of the total acquisition cost through their respective Airport Improvement Programs.





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# AVIATION ACTIVITY FORECASTS

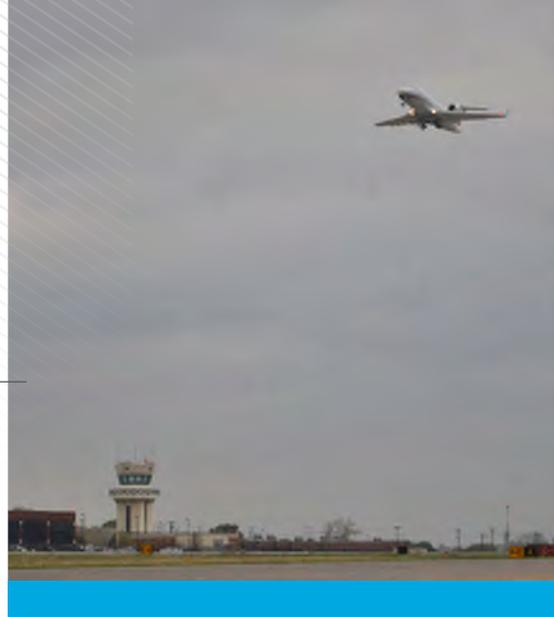
## CHAPTER 2

### CONTENTS

- INTRODUCTION ..... 2-2
- SUMMARY OF AIRPORT  
HISTORICAL OPERATIONS  
AND BASED AIRCRAFT ..... 2-2
- NATIONAL GENERAL  
AVIATION TRENDS ..... 2-3
- FAA AEROSPACE  
FORECASTS ..... 2-9
- TERMINAL  
AREA FORECAST ..... 2-13
- NORTH CENTRAL  
TEXAS COUNCIL OF  
GOVERNMENTS ..... 2-15
- GENERAL AVIATION  
DEMAND FORECASTS ..... 2-18



# INTRODUCTION



## INTRODUCTION

Forecasting aviation activity helps the local airport sponsor guide future airport facility and equipment needs. The preferred demand forecasts are used to identify the type, extent, and timing of aviation development. In addition, the forecasts are instrumental in identifying airport-related infrastructure and capacity needs, and guiding the timing and financial feasibility of airport development alternatives.

Airport activity is often influenced by the types of aviation services offered to transient and based aircraft and by the general business environment at an airport and in the local community. In addition, factors such as vigorous local airport marketing, gains in sales and services, increased industrialization, changes in transportation preferences, and fluctuations in the national or local economy all influence aviation demand. Aviation activity forecasts are developed in accordance with national trends and regional/local influences and in context with the inventory findings. This chapter examines aviation trends and the numerous factors that have influenced those trends in the United States, Texas, and Addison. ✈️

## SUMMARY OF AIRPORT HISTORICAL OPERATIONS AND BASED AIRCRAFT

**Table 2-1, *Historic Aviation Activity*** summarizes the available historic based aircraft and annual

operations (local, itinerant, air taxi, and military) at Addison Airport (ADS) since 2000. A based aircraft is defined as an actively registered airplane stationed at a select airport that regularly uses the airport as the primary “home base” for filing flight plans, frequently uses available airport amenities, and/or maintains a formal commitment for long-term aircraft parking/storage. An aircraft operation is one takeoff and/or landing of an aircraft. Aircraft operations are identified as local and itinerant. Local operations consist of those within a 20-mile radius of the airport, while itinerant operations include all operations other than local, having a terminus of flight or origination of flight at another airport at least 20 miles away.

The following observations were identified at ADS as part of the inventory of historic and current airport activity levels::

- **Aircraft Summary:** Based aircraft at ADS remained steady at approximately 775 until 2008 after which the FAA placed strict rules on counting based aircraft. Since the low of 197 based aircraft in 2009 ADS’s based numbers have remained fairly constant at approximately 600.
- **Operational Summary:** From a high of over 170,000 operations in 2000, the ADS operations have declined to the low of just over 94,000 in 2011. A steady and modest climb has begun indicating a possible recovery of the GA industry. ✈️

**TABLE 2-1 HISTORICAL AIRPORT ACTIVITY**

YEAR	BASED AIRCRAFT	LOCAL OPERATIONS	ITINERANT OPERATIONS	AIR TAXI AND COMMUTER	TOTAL AIRPORT OPERATIONS
2000	728	8,795	161,471	31	170,297
2001	768	13,988	146,163	70	160,221
2002	728	14,220	144,734	150	151,044
2003	774	22,072	128,393	97	150,562
2004	774	16,917	119,778	233	136,928
2005	774	13,718	119,336	169	133,223
2006	774	10,664	123,254	174	134,094
2007	774	14,977	116,856	168	132,001
2008	197	26,514	121,081	164	147,759
2009	563	17,993	95,594	121	113,708
2010	603	7,436	87,219	228	94,883
2011	603	6,455	87,721	131	94,307
2012	603	6,590	89,428	94	96,112
2013	606	6,091	89,743	106	95,940

SOURCE: FAA TERMINAL AREA FORECASTS

## NATIONAL GENERAL AVIATION TRENDS

An understanding of recent and anticipated trends within the general aviation (GA) industry is important when assessing aviation demand in Addison and at the Addison Airport (ADS). National trends can provide insight into the potential future of aviation activity—some may affect aviation demand in the study area while others will have little or no appreciable impact on local aviation demands.

Various data sources were examined and used to support the analysis of national GA trends. Those sources include:

- Federal Aviation Administration, FAA Aerospace Forecasts, Fiscal Years 2014 - 2034
- National Business Aircraft Association (NBAA), NBAA Business Aviation Fact Book, 2014

- General Aviation Manufacturers Association (GAMA), General Aviation Statistical Databook and Industry Outlook, 2013

### GENERAL AVIATION OVERVIEW

GA aircraft are defined as all aircraft not flown by commercial airlines or the military. GA activity is divided into six use categories, as defined by the FAA.

- Personal
- Business
- Instructional
- Air Taxi/Air Tours
- Corporate
- Other

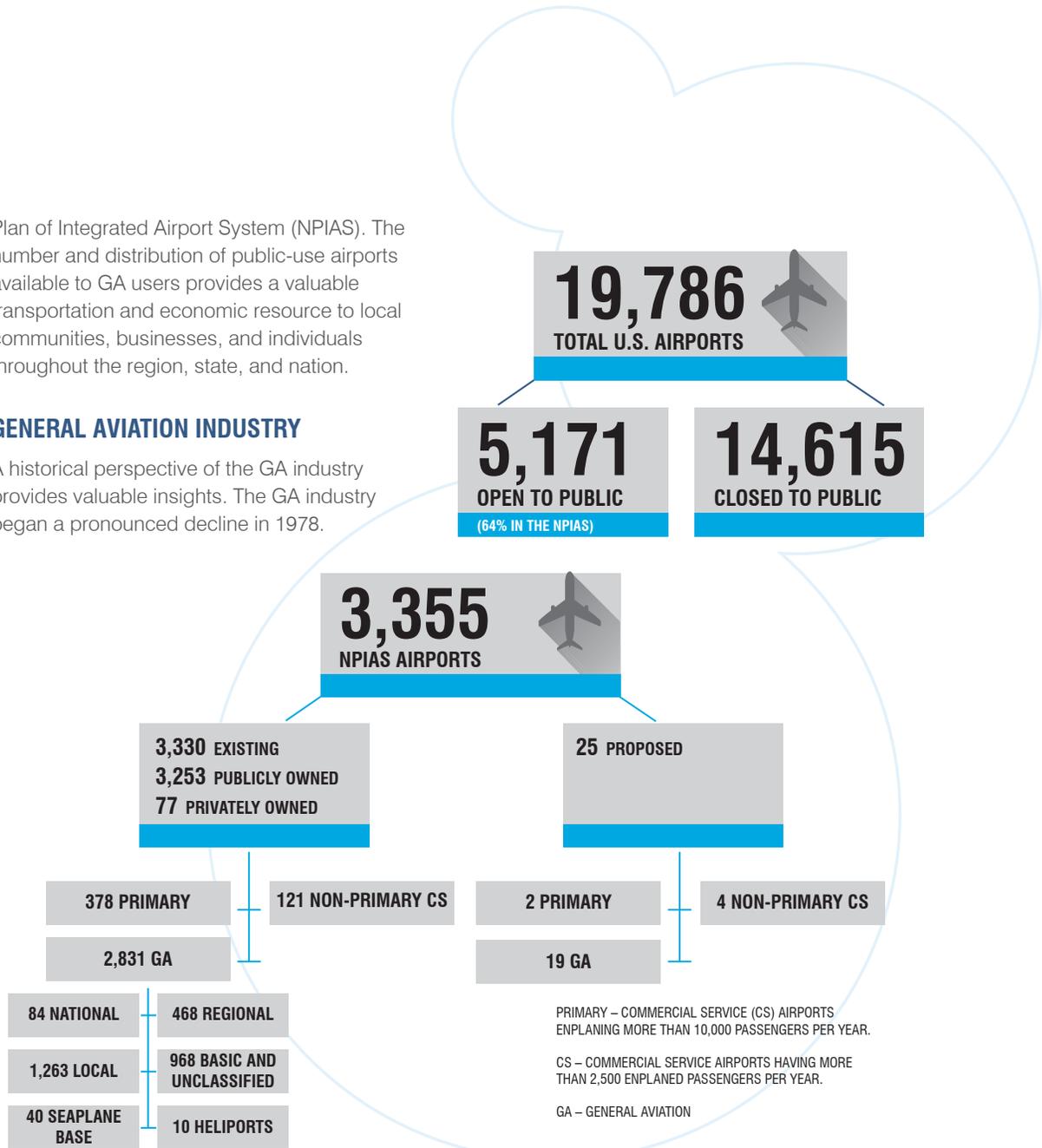
Personal use and air taxi (FAR Part 135) use of GA aircraft are the two largest components of GA activity. These operations occur primarily at GA airports across the nation. At the date of this plan, there are 19,786 public and private airports located throughout the United States, and 5,171 of these are open to public use. The following graphic displays the breakdown of airports as described in the FAA's 2013 – 2017 National



Plan of Integrated Airport System (NPIAS). The number and distribution of public-use airports available to GA users provides a valuable transportation and economic resource to local communities, businesses, and individuals throughout the region, state, and nation.

**GENERAL AVIATION INDUSTRY**

A historical perspective of the GA industry provides valuable insights. The GA industry began a pronounced decline in 1978.



Source: FAA Report to Congress: National Plan of Integrated Airport System 2013 – 2017 and FAA ASSET II: In-depth Review of 497 Unclassified Airports.

This decline continued in a sporadic manner through most of the 1980s and into the early 1990s with minimal recoveries in the latter years. Nationally, this decline resulted in the loss of more than 100,000 manufacturing jobs and a drop in aircraft production from about 18,000 annually to only 928 aircraft in 1994. This was accompanied

by a dramatic drop in the number of new student pilots.

In 1994, the passage and adoption of the *General Aviation Revitalization Act (GARA)* brought some relief to the GA aircraft industry by establishing an 18-year statute of repose on liability related to the manufacturing of all GA aircraft and their



components. This legislation prompted some general aviation aircraft manufacturers to return their single-engine piston aircraft production lines to limited output. Aircraft production levels have remained well below those experienced during the 1960s and 1970s due to continually rising manufacturing costs.

More recently, the terrorist attacks of 2001, the continued war on terror, and the current prolonged recessionary national economy have had a dampening effect on GA industry trends—as witnessed by layoffs at aircraft manufacturers and the limited numbers of new aircraft orders worldwide. Significant restrictions were placed on GA flying after 9/11, which resulted in severe limitations being placed on GA activity in a number of important areas of the country. Most of these restrictions have now been lifted, and business and corporate aviation is experiencing some positive gains resulting from additional GA aircraft use for business and corporate travel. This benefit has been tied directly to the increased security measures implemented at commercial service airports that significantly influence travel times. Many of these trends are reflected in the fuel sales figures presented in the Inventory Chapter for ADS and the ADS historical operations numbers.

The current economic situation has depressed growth in the GA industry. The trends shown in the FAA Aerospace Forecasts 2014 – 2034 continue to document this situation with reductions in hours flown at both commercial and GA airports across the nation. The future appears to optimistic showing a favorable rebound over the next decade. While the GA sector is forecast to grow 1.4 percent annually through 2034, a majority of this growth is in the fixed wing turbine aircraft fleet and in an increasing utilization rate for both

single and multi-engine piston aircraft offset by the slowing in the fleets aging due to greater introductions of new aircraft into the fleet.

### GENERAL AVIATION FUNCTION AND ROLE

The FAA recognizes three broad categories of aviation activity: GA, certificated air carrier, and military. Convenient, safe, and rapid accessibility is one of the most important variables affecting community growth and economic vitality. GA includes all civilian aircraft other than certificated air carriers and military aircraft, and FAA statistics indicate that GA represents the largest, and in many ways, the most significant segment of the national air transportation system. With nearly 80 percent of GA flying conducted for business purposes, GA has directly contributed to manufacturing and service industries moving to the edges of large metropolitan areas and to urban and rural communities with adequate aviation facilities.

### HISTORICAL GENERAL AVIATION SHIPMENTS AND BILLINGS

The shipment of GA aircraft is an important indicator used to measure the health of GA in the United States. Shipments represent new GA aircraft that have entered the active GA fleet, and billings represent the cost of those new aircraft shipments. Total annual shipments and billings of GA aircraft are tracked and reported by the General Aviation Manufacturers Association (GAMA). **Figure 2-1, U.S. Aircraft Shipments, 2000-2013**, depicts historical GA shipment statistics for aircraft manufactured in the United States from 1998 through 2013. The most pronounced drop experienced following the steady climb to 2008 is followed by a slow steady rise from 2009 through 2013. This is a key indicator in a recovering aviation economy.



**FIGURE 2-1 U.S. AIRCRAFT SHIPMENTS, 1998 – 2013**

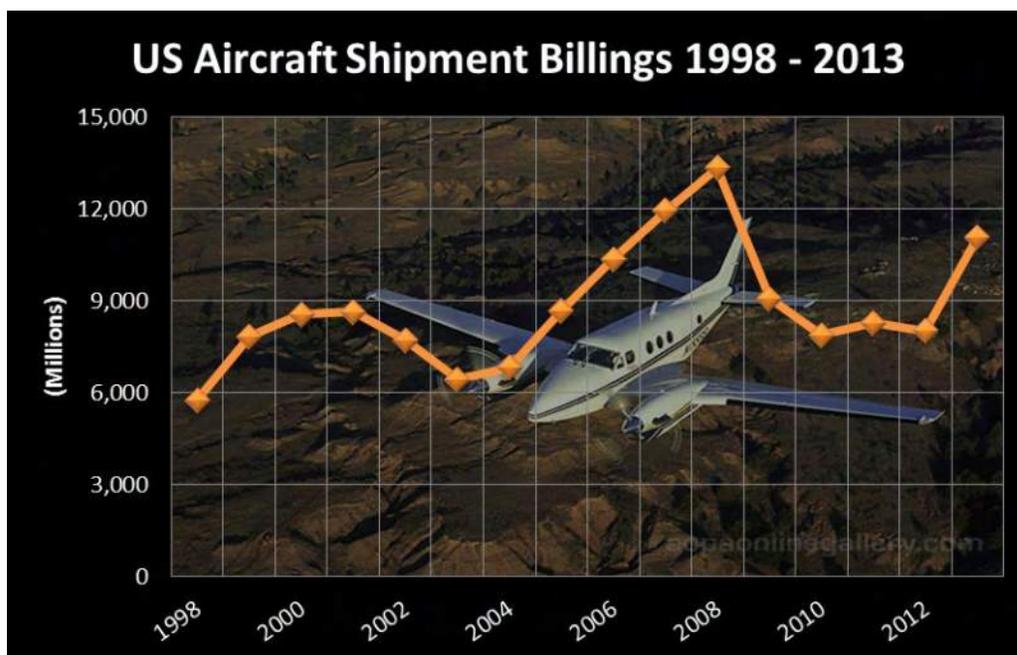


SOURCE: GAMA STATISTICAL DATABOOK, 2013

GAMA also tracks total billings to both domestic and international customers for GA aircraft manufactured in the United States. As illustrated in **Figure 2-2**, *U.S. Aircraft Shipment Billings, 1998-2013*, GAMA’s statistics reflect a similar pattern to overall shipments. However, the pronounced increase in billings between 2012 and 2013 provides the industry with some very positive indications for the continued recovery of the aviation industry from the economic downturn experienced through the mid-2000s. While aircraft shipment billings have increased since 2008, the billings (or costs) associated with those aircraft shipments have increased as well. This is indicative of the growing sophistication of the new aircraft entering the GA fleet and the consumer drive for that need.



**FIGURE 2-2 U.S. AIRCRAFT SHIPMENT BILLINGS, 1998 – 2013**



SOURCE: GAMA STATISTICAL DATABOOK, 2013

### BUSINESS USE OF GENERAL AVIATION

Business aviation is the fastest growing segment of GA. More and more companies and individuals are using GA aircraft as a tool to improve their business efficiency and productivity. Many of the nation’s employers who use GA are members of the National Business Aviation Association (NBAA). The NBAA indicates that approximately 95 percent of all Fortune 500 companies operate GA aircraft of various sizes and complexities. In fact:

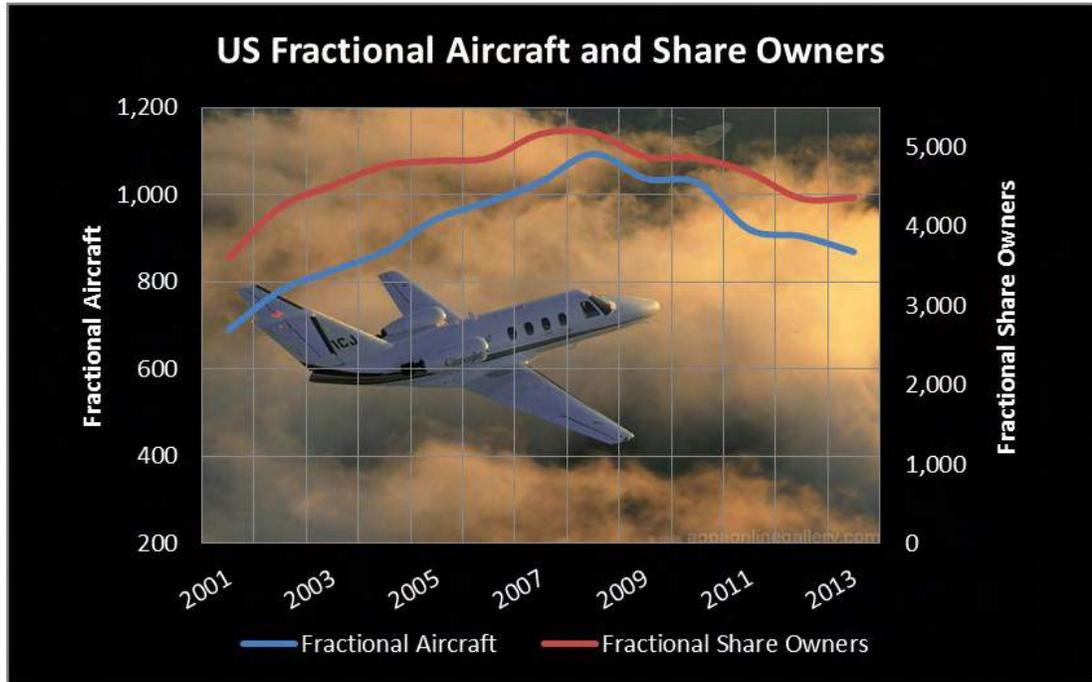
- Among Business Week’s “50 Most Innovative Companies,” 95 percent of the S&P 500 companies on the list own and use business aircraft.
- Among Fortune’s “100 Best Places to Work,” 86 percent of the S&P 500 companies on the list utilize their own business aircraft.
- Among Business Week’s “25 Best Customer Service Companies,” 90 percent of the S&P 500 on the list own and operate GA aircraft for business travel.

- Among Fortune’s “50 World’s Most Admired Companies,” 95 percent of the S&P 500 companies on list utilize their own aircraft.

Smaller companies using business aircraft is on the rise evidenced by the growth of the fractional programs from 2000 through 2009. After this timeframe this growth has moderated and declined slightly due to the economic downturn and companies using other various chartering, leasing, and partnerships arrangements. **Figure 2-3, U.S. Fractional Ownership, 2001-2013**, illustrates the growth and near-term decline of fractional ownership in the United States. Fractional ownership arrangements began to appear in the mid-1980s. From the mid-1990s through late 2009, their growth was significant. According to GAMA, in 2002 there were 4,244 fractional ownership arrangements representing 780 aircraft; by 2010, there were approximately 4,862 arrangements representing 1,027 aircraft. This growth in an eight-year period equates to a growth factor of 25 percent or 3.1 percent annually for fractional aircraft and 13.5 percent or 1.5 percent annually for fractional arrangements.



**FIGURE 2-3 U.S. FRACTIONAL OWNERSHIP, 2001 – 2013**



SOURCE: GAMA STATISTICAL DATABOOK, 2013





## FAA AEROSPACE FORECASTS

### FAA AEROSPACE FORECASTS

Annually, the FAA publishes aerospace forecasts that summarize existing conditions and attempt to predict trends in aviation activity components. Each published forecast provides an analysis of previous aerospace forecasts and updates them in reference to the year's trends in aviation and economic activity. Many factors are considered in the FAA's development of aerospace forecasts. Some of the most important considerations are United States and international economic forecasts and anticipated trends in fuel costs. In general, the FAA's aerospace forecasts provide one of the most detailed evaluations of historical and forecast aviation trends. They provide the general framework for examining future levels of aviation activity for the nation, specific states and regions,

and airports. Items monitored and forecast by the FAA on an annual basis include:

- Active pilots
- Active aircraft fleet
- Active hours flown

Historical and projected activity in each of these categories will be examined in the following sections. Data presented is based on the most recent available data, contained in *FAA Aerospace Forecasts, Fiscal Years 2015-2035*.

#### ACTIVE PILOTS

Active pilots are defined by the FAA as individuals who hold both a pilot certificate and a valid medical certificate. **Table 2-2** summarizes historical and projected U.S. active pilots by certificate type.



**TABLE 2-2 HISTORICAL AND PROJECTED U.S. ACTIVE PILOTS BY CERTIFICATE**

CERTIFICATE TYPE	2010	2015 <sup>1</sup>	2020 <sup>1</sup>	2025 <sup>1</sup>	2030 <sup>1</sup>	2034 <sup>1</sup>	% ANNUAL GROWTH
Student	119,119	119,550	116,850	115,650	115,550	116,050	-0.14%
Recreational	212	235	235	230	225	225	0.09%
Sport Pilot	3,682	5,700	7,800	10,050	12,650	15,200	5.91%
Private	202,020	183,900	180,950	180,450	181,250	182,450	-0.33%
Commercial	123,705	110,950	112,800	114,550	118,100	122,000	0.07%
Airline Transport	142,198	150,600	153,300	157,600	162,600	167,200	0.63%
Rotorcraft	15,377	15,415	17,750	20,750	24,000	26,800	2.53%
Glider	21,275	20,560	20,955	21,285	21,450	21,700	0.14%
Instrument Rated <sup>2</sup>	318,001	307,850	313,550	315,100	320,700	325,400	0.14%
<b>Total Pilots</b>	<b>627,588</b>	<b>606,910</b>	<b>610,640</b>	<b>620,565</b>	<b>635,915</b>	<b>651,625</b>	<b>0.20%</b>

**SOURCE:** FAA AEROSPACE FORECASTS, FISCAL YEARS 2014-2034 <sup>1</sup> 2015, 2020, 2025, 2030, AND 2034 FIGURES HAVE BEEN ESTIMATED AND FORECAST BY THE FAA RESPECTIVELY <sup>2</sup> INSTRUMENT RATED PILOTS ARE NOT INCLUSIVE OF OVERALL TOTAL

As shown in **Table 2-2**, the FAA projects slow, steady growth in the active pilot population through 2034. Total active pilots are projected to increase from 627,588 in 2010 to approximately 651,625 by 2034, which represents an annual growth rate of approximately 0.20 percent. Through 2034, the following pilot types are projected to experience the greatest annual growth percentage: sport pilots (5.91 percent), rotorcraft pilots (2.53 percent), and airline transport pilots (0.63 percent).

During the timeframe from 2000 through 2013, the number of active private pilots declined approximately 0.10 percent annually. In the initial forecast years, this trend is expected to continue; however, in the out years, active private pilots are

expected to rebound. It is important to recognize that instrument-rated pilots will continue to be a growing segment within the active pilot population through 2034 as a result of the increasing sophistication of today's aircraft and their avionics suites.

### ACTIVE GENERAL AVIATION AIRCRAFT AND AIR TAXI FLEET

The FAA tracks the number of active GA aircraft in the United States fleet. An active aircraft is one that is currently registered and has flown at least one hour during the year. **Table 2-3** summarizes recent active GA aircraft trends along with FAA projections of active aircraft, by aircraft type.



**TABLE 2-3 HISTORICAL AND PROJECTED U.S. ACTIVE AIRCRAFT**

AIRCRAFT TYPE	2010	2015 <sup>1</sup>	2020 <sup>1</sup>	2025 <sup>1</sup>	2030 <sup>1</sup>	2034 <sup>1</sup>	% ANNUAL GROWTH
Single-Engine Piston	139,519	121,850	118,015	115,200	113,740	113,975	-0.74%
Multi-Engine Piston	15,900	14,130	13,820	13,435	13,090	12,890	-0.77%
<b>TOTAL PISTON</b>	<b>155,419</b>	<b>135,980</b>	<b>131,835</b>	<b>128,635</b>	<b>126,830</b>	<b>126,865</b>	<b>-0.74%</b>
Turbo-Prop	9,369	10,175	10,445	11,205	12,725	14,370	1.70%
Turbo-Jet	11,484	12,250	14,010	16,325	19,935	22,050	2.91%
<b>TOTAL TURBINE</b>	<b>20,853</b>	<b>22,425</b>	<b>24,455</b>	<b>27,530</b>	<b>32,035</b>	<b>36,420</b>	<b>2.36%</b>
Rotorcraft	10,102	11,045	12,830	14,585	16,370	17,895	2.48%
Experimental	24,784	26,415	28,500	30,555	32,715	34,440	1.40%
Light Sport	6,528	2,370	3,080	3,745	4,445	4,880	0.33%
Other	5,684	5,035	5,080	5,120	5,165	5,200	-0.22%
<b>TOTAL AIRCRAFT</b>	<b>223,370</b>	<b>203,270</b>	<b>205,780</b>	<b>210,170</b>	<b>217,560</b>	<b>225,700</b>	<b>0.15%</b>

**SOURCE: FAA AEROSPACE FORECASTS, FISCAL YEARS 2014-2034** <sup>1</sup> 2015, 2020, 2025, 2030, AND 2034 FIGURES HAVE BEEN ESTIMATED AND FORECAST BY THE FAA RESPECTIVELY

The total active aircraft are only expected to increase at 0.15 percent annually. Jet, turbo-prop and rotorcraft aircraft will experience the largest growth during the forecast period. Since 2000, the trend for active aircraft is witnessing an upturn when compared to the downturn between 2000 and 2005, which was a result of an economic downturn and attrition of older piston aircraft. The outlook for new aircraft is relatively flat for piston fixed wing aircraft while most other categories are showing a positive sign. This is an important and necessary component of commerce and recreation indicating they will continue to play a vital role in society.

Despite the recent decline in aircraft deliveries, one of the most important trends identified by the FAA in these forecasts is the relatively strong growth anticipated in active GA jet aircraft. This trend illustrates a movement in the GA community toward higher-performing, more demanding aircraft. Growth in GA business jet aircraft is projected to significantly outpace growth in all other segments of the GA aircraft fleet through the forecast period.

### ACTIVE HOURS FLOWN

The FAA also uses hours flown as another measure to project general aviation activity. Hours flown in GA turbine powered aircraft from 2000 to 2010 fluctuated around the 6,000 hour mark. After 2010 turbine utilization has begun to trend upwards as shown in **Figure 2-4**. As turbine-type aircraft utilization was increasing, piston aircraft utilization was been decreasing through the same period. While piston-type aircraft will virtually show little growth, turbine-type aircraft are expected to steadily increase for the next several years. Turbine growth is expected to increase at an average annual rate of 2.4 percent versus a -0.4 percent average annual growth for pistons during the forecast period of 2013 to 2034. **Figure 2-4, Active General Aviation and Air Taxi Hours Flown**, depicts general aviation hours flown from 2000 through 2013 as well as projected hours to be flown through 2034.

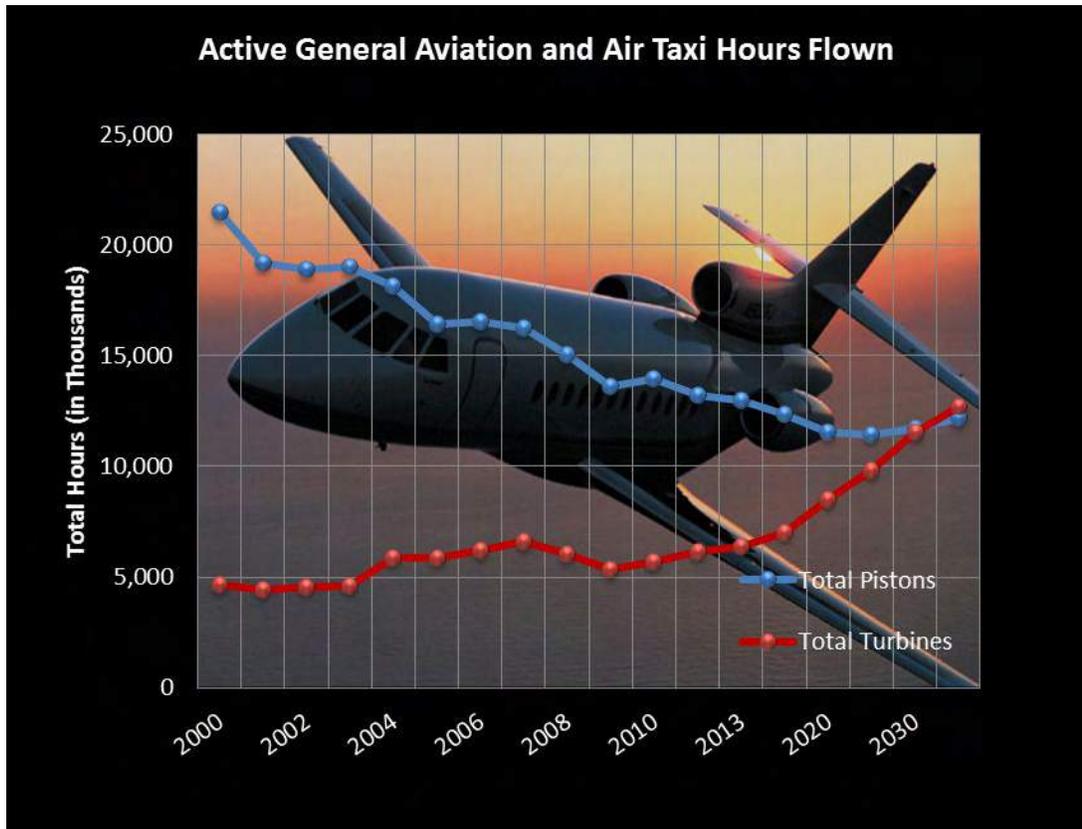
As presented by the FAA in their *Aerospace Forecasts Fiscal Years, 2014-2034*, the annual growth in hours flown for all aircraft over the forecast period is approximately 3.2 percent.



Compared to the projected average annual growth rate of the GA active fleet, approximately 2.4 percent, the projected increase indicates an anticipation of greater aircraft utilization. Hours flown by GA aircraft are estimated to reach approximately 32.4 million by 2034, compared to an estimated 23.9 million in 2013. Of note is the

sustained near-term climb of turbine operations that carries through the forecast period allowing turbine hours flown to meet and exceed those of the piston fleet despite their forecast turnaround and moderate climb in the out years of the forecast period.

**FIGURE 2-4 ACTIVE GENERAL AVIATION AND AIR TAXI HOURS FLOWN**



SOURCE: FAA AEROSPACE FORECASTS, FISCAL YEARS 2014-2034

**SUMMARY OF NATIONAL GENERAL AVIATION TRENDS**

General aviation activity is cyclical in nature, which has been demonstrated by the historical data presented. Regardless of the GA activity rebounding due to GARA during the mid and late-1990s, the terrorist attacks of 2001, the war on terror, and the economic downturn have

depressed GA activity over recent years. A slow to moderate recovery has begun with increasing aircraft deliveries and hours flown as well as the introduction of new innovative aircraft into the GA fleet. FAA projections of general aviation activity, including active pilots, active aircraft, and hours





## TERMINAL AREA FORECAST

flown, all show moderate but promising growth through the forecast horizon of 2034. Following stalled growth, most components of GA activity are projected to rebound and surpass previous activity levels. An important national trend that has the potential to impact GA at ADS is the growing proportion of jet aircraft in the active GA fleet and the growing sophistication of both active pilots and aircraft. The continuing ability of ADS to accommodate the existing and growing GA activity, specifically by the turbine fleet, will be an important consideration. ✈️

### TERMINAL AREA FORECAST

The Terminal Area Forecast (TAF) is a detailed FAA forecast-planning database produced each year covering airports in the NPIAS. The TAF is prepared to assist the FAA in meeting its planning, budgeting, and staffing requirements. The TAF forecasts are made at the individual airport level and are based in part on the national FAA Aerospace Forecasts. The TAF contains historical and forecast data for enplanements, airport operations, instrument operations, and based aircraft. TAF data covers the 264 FAA and 251 contract-towered airports, 31 terminal radar approach control facilities, and 2,817 non-FAA airports as of 2013. Data in the TAF are presented on a U.S. Governmental fiscal year basis which runs from October through September. The TAF assumes an unconstrained demand for aviation services.

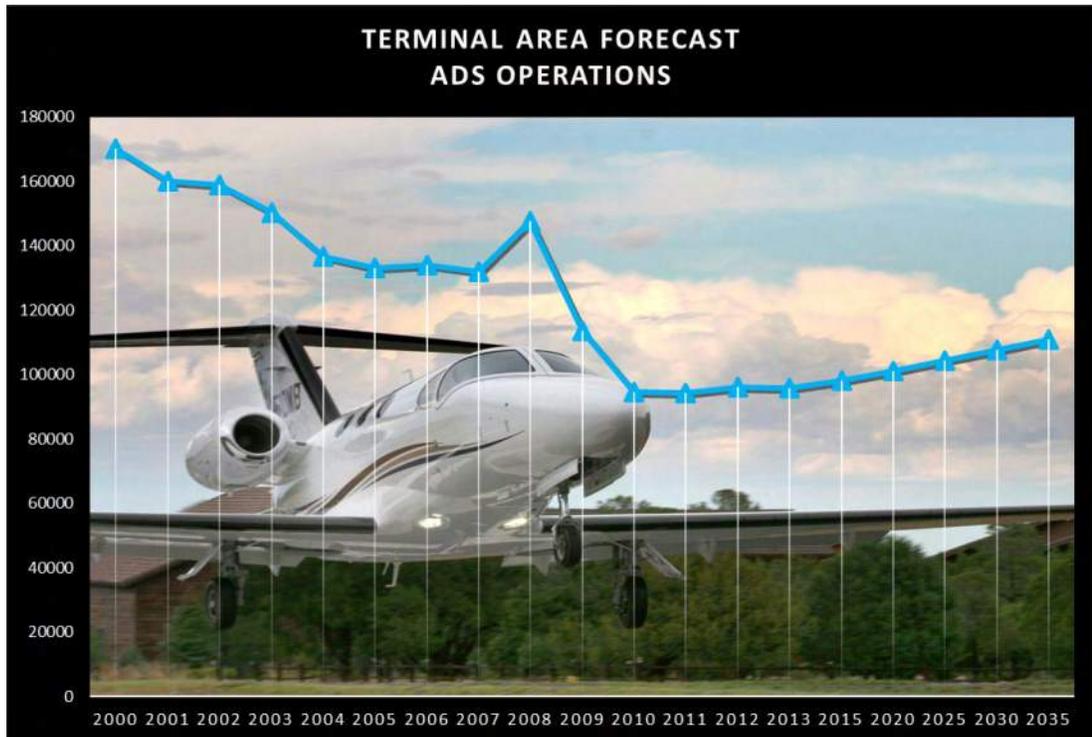
As its primary input, the TAF uses the FAA Aerospace Forecasts from the specific year. Aviation activity forecasts for FAA-towered and federal contract-towered airports are developed using historical relationships between airport passenger demand and/or activity measures and local and national factors that influence aviation activity. At airports similar to ADS, the TAF data is generated from historical data reported by the airport or airport sponsor. The TAF generally reflects a slight or zero-percent growth rate in the absence of a control tower. Based on the TAF for



ADS presented in **Figure 2-5**, the FAA reflects a 0.67 percent growth rate and is showing the same number of annual operations through 2035. While this is a very modest growth rate for an airport

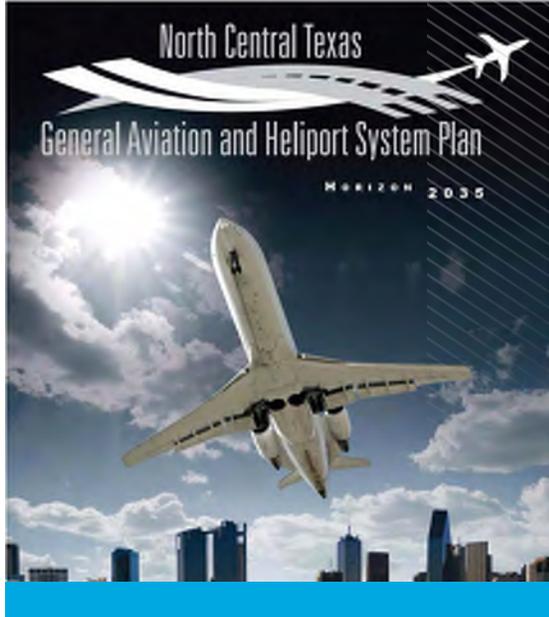
like ADS it is a recovery from the average decline in operations of approximately five percent that occurred from 2000 through 2012.

**FIGURE 2-5 TERMINAL AREA FORECAST – HISTORICAL AND FORECAST**



SOURCE: FAA ATADS, FISCAL YEARS 2000-2035. FORECAST YEARS BEGIN WITH 2015.





# NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

## NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

The North Central Texas Council of Governments (NCTCOG) began the development of a General Aviation and Heliport System Plan (GAHSP) in 2007. The focus of the GAHSP was to provide a multi-year program to analyze and evaluate the GA and vertical flight capabilities across the 16 county region of DFW and beyond through the 2035 planning horizon. The plan was finalized in May 2012 and provides a number of useful tools for regional aviation planners, airport sponsors, the Texas Department of Transportation, Aviation

Division (TxDOT), and the FAA. One of the major components of the GAHSP was the development or regional wide forecasts to identify facility needs. The NCTCOG’s approach to the forecasts was nonstandard using a combination of market share and single variable regression analyses for jet operations and a multinomial linear regression for non-jet based aircraft and operations. These forecasts were developed at the airport level initially and then rolled up into each of the sub-regions shown in the Inventory Chapter of this report. Addison Airport is in the Central sub region of the GAHSP and the GAHSP forecasts for total based aircraft and operations are presented in **Tables 2-4** and **2-5**, and **Figures 2-6** and **2-7**.

**TABLE 2-4 GAHSP SUB REGION BASED AIRCRAFT FORECAST**

NCTCOG BASED AIRCRAFT FORECAST						
SUB REGION/ FORECAST YEAR	2010	2015	2020	2025	2030	2035
North	1,934	2,133	2,314	2,499	2,685	2,877
South	559	664	757	850	944	1,039
East	239	321	383	445	508	570
West	290	350	398	445	493	540
Central	1,602	1,764	1,942	2,128	2,322	2,516
<b>TOTAL</b>	<b>4,624</b>	<b>5,232</b>	<b>5,794</b>	<b>6,367</b>	<b>6,952</b>	<b>7,542</b>

SOURCE: NCTCOG, GA AND HELIPORT SYSTEM PLAN.

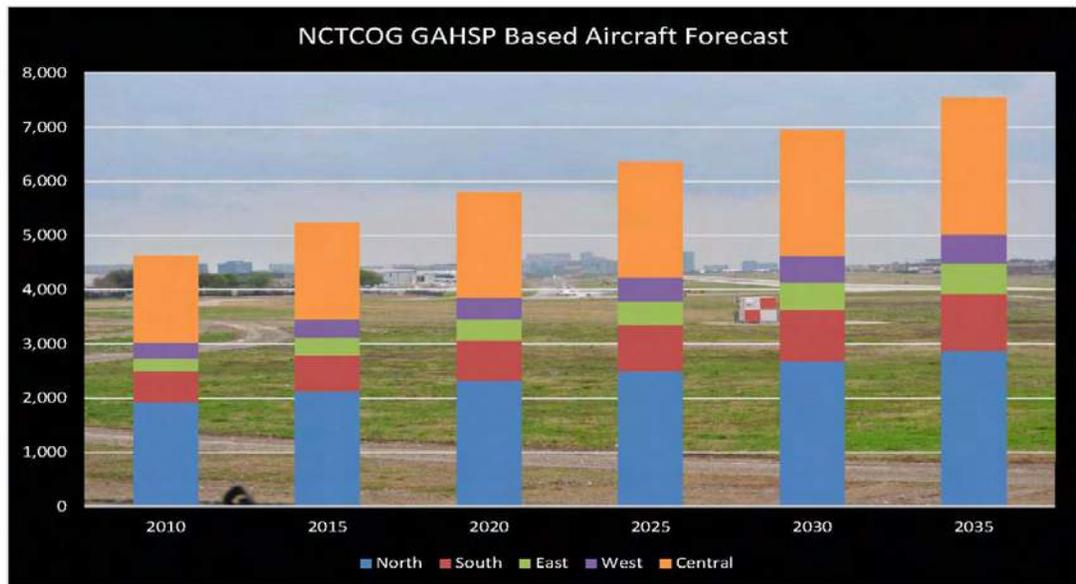


**TABLE 2-5 GAHSP SUB REGION BASED OPERATIONS FORECAST**

NCTCOG GAHSP OPERATIONS FORECASTS						
SUB REGION/ FORECAST YEAR	2010	2015	2020	2025	2030	2035
North	648,660	685,016	730,238	778,320	828,532	881,710
South	236,260	246,689	264,276	282,788	302,290	322,422
East	149,192	160,809	170,994	181,828	192,724	204,328
West	95,935	105,584	113,681	121,997	130,530	139,179
Central	554,759	590,028	638,054	690,343	746,391	804,459

SOURCE: NCTCOG, GA AND HELIPORT SYSTEM PLAN.

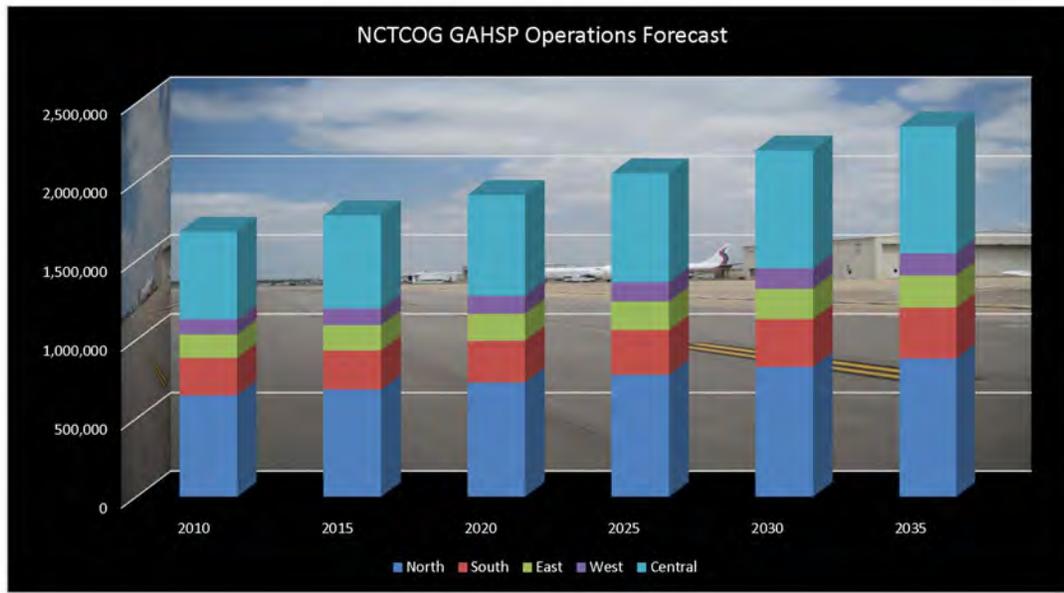
**FIGURE 2-6 GAHSP SUB REGION BASED AIRCRAFT FORECAST**



SOURCE: NCTCOG, GA AND HELIPORT SYSTEM PLAN.



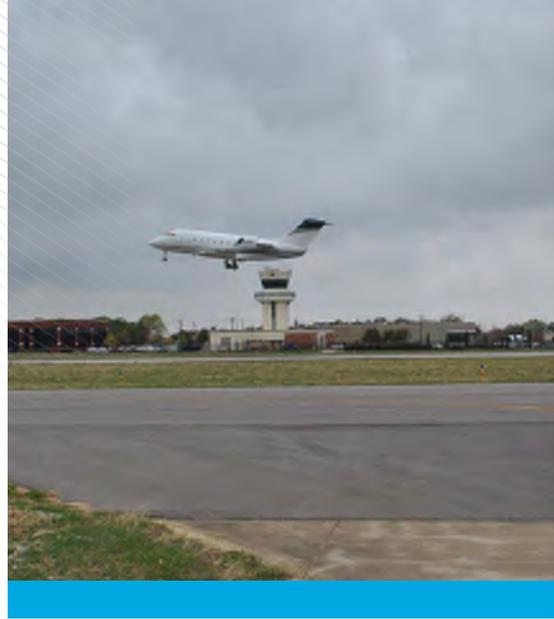
**FIGURE 2-7 GAHSP SUB REGION BASED OPERATIONS FORECAST ADDISON AIRPORT**



SOURCE: NCTCOG, GA AND HELIPORT SYSTEM PLAN.



# GENERAL AVIATION DEMAND FORECASTS



## GENERAL AVIATION DEMAND FORECASTS

Based on information obtained in the inventory analysis, the following factors and assumptions have been incorporated into the GA forecasts of based aircraft and annual operations for Addison Airport:

- An “unconstrained” forecast of aviation demand assumes facility improvements will lead the demand with the proactive nature of the local airport sponsor.
- Greater aircraft utilization resulting from airfield and terminal area improvements can be both directly and indirectly linked to economic development activity.
- Future operational levels are attributable to business needs, flight training, and recreational interests.
- Future airport facilities will continue to accommodate a broad array of GA aircraft and remain flexible in serving larger business-type aircraft.
- The forecast of based aircraft and operational levels is tied to the potential for the airport to attract employment and economic development to the area that could be aviation-related.



## FORECAST METHODOLOGIES

Development of aviation forecasts involves analytical and judgmental assumptions to realize the highest level of forecast confidence. The GA demand forecasts are developed in accordance with national and regional trends, and in context with the inventory findings, including local population and per capita income trends. The forecasts developed here begin with baseline information from 2013/4 and with 2015 as the first forecast year. National GA trends and forecasts, used to provide a baseline of growth rates, are provided by the *FAA Aerospace Forecasts, Fiscal Years 2014-2034*. These forecasts are unconstrained, indicating facilities will be developed as the need arises. Various forecast techniques are used to develop GA forecasts for Addison Airport and could include:

### TREND ANALYSIS

Trend analysis is the simplest and most familiar form of forecasting and is also one of the most widely used. Historical data is collected and used to forecast an estimate of the aviation demand element into future years. An assumption of this forecast method is that historical levels for aviation demands will continue and influence similar linear progressions on the future demand levels. Though this assumption seems broad in its application, it can serve as a reliable benchmark against other forecast methods.

## REGRESSION ANALYSIS

The forecasts of aviation demand (the dependent variable) are projected on the basis of one or more external indicators (the independent variables). Historical values for both the dependent and independent variables are analyzed to determine their relationships. Once defined, this relationship is used to project the dependent variable with a forecast or projection of the independent variable. In aviation forecasting, an example of the dependent variable is based aircraft. Population or median household income levels are commonly used independent variables that aid in the projection of aviation growth.

## MARKET ANALYSIS

These aviation demand forecasts are developed based on a causal model technique in which independent variables statistically relate the relationship(s) between historical events and aviation demands. This forecast method typically uses an easily identifiable independent variable such as population, which has a high correlation on the indirect cause-and-effect relationship within certain segments of the GA industry. The market share often employs a static and dynamic variable relationship between community factors and GA trends that aids in predicting aviation growth based on forecast community indicators such as population.

## AIRCRAFT OPERATIONS FORECASTS

In developing the ADS projections, several existing forecasts were reviewed. As presented in **Table 2-6** and **Figure 2-8**, *Summary of Aircraft Operations Forecasts, 2015-2035*, this assessment includes the FAA Terminal Area Forecasts, the NCTCOG GAHSP Forecasts, the *FAA Aerospace Forecast Fiscal Years, 2014-2034*, average annual growth rate of 1.4%, the Dallas County and Collin County average annual growth rate of 0.96% percent, the *FAA Aerospace Forecasts* for turbine aircraft with a 3.3 percent average annual growth rate, and Preferred Forecast that represents an average between the combined county growth rate and the NCTCOG forecasts. This equates to an average annual growth rate of 2.3%.

While most operations growth rates are typically tied to population, it is assumed that population statistics for Dallas County, Collin County, and the Town of Addison, as well the FAA forecast for all of general aviation are too low based on the mature level of turbine operations at ADS. The FAA Aerospace Forecasts for turbine aircraft and the NCTCOG forecast were both more aggressive than expected for ADS to meet and sustain. As the economy improves, it is not unreasonable to assume ADS could achieve the operations level provided by the higher forecast. However, at this time the Preferred Forecasts selected provides ADS with an achievable but aggressive growth schedule that exceeds the FAA Aerospace for all of GA but is tempered by knowledge of the economics and opportunities at ADS.

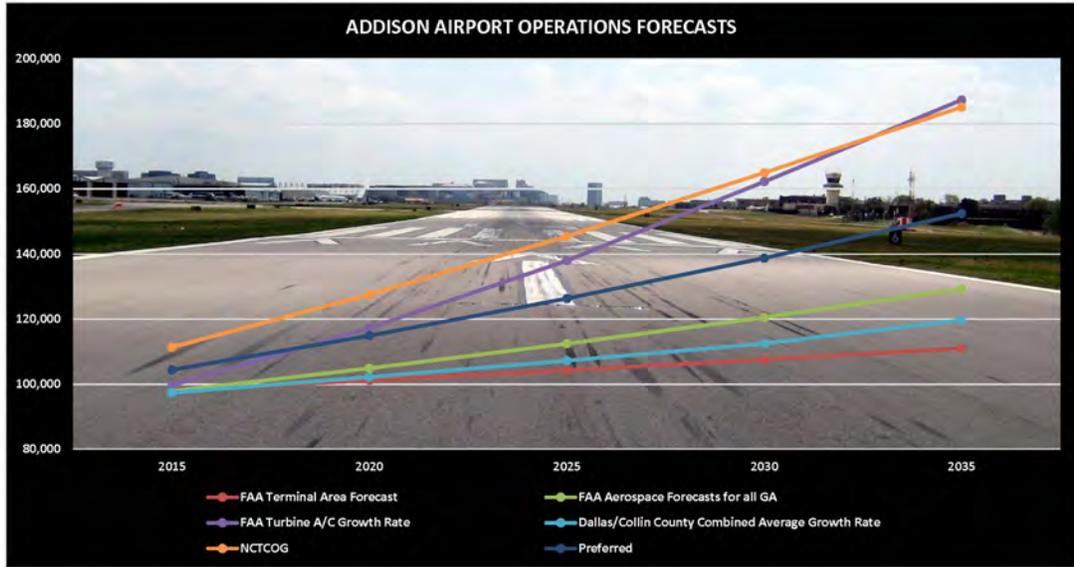
**TABLE 2-6 SUMMARY OF AIRCRAFT OPERATIONS FORECASTS, 2015-2035**

YEAR	FAA TERMINAL AREA FORECAST	FAA AEROSPACE FORECASTS FOR ALL GA	FAA TURBINE A/C GROWTH RATE	DALLAS/ COLLIN COUNTY COMBINED GROWTH RATE	NCTCOG	PREFERRED
2015	92,600	91,260	92,970	90,867	97,500	93,500
2020	98,100	97,830	109,356	95,327	109,600	101,800
2025	104,300	104,372	128,631	100,007	120,900	110,500
2030	107,600	112,422	151,303	104,917	133,400	119,200
2035	111,000	120,515	174,698	110,543	147,200	128,900

SOURCE: GARVER, FAA TERMINAL AREA FORECASTS <sup>1</sup>



**FIGURE 2-8 SUMMARY OF AIRCRAFT OPERATIONS FORECASTS, 2015-2035**



SOURCE: GARVER FORECAST DATA FOR ADDISON AIRPORT, 2014

**AIRCRAFT FLEET MIX FORECAST**

**Table 2-7** and **Figure 2-9**, *Summary of Operations by Aircraft Type, 2015-2035*, displays the aircraft fleet mix operations forecast for ADS for each phase throughout the 20-year planning period. The operations forecast of aircraft mix is used to determine future airfield design, facility, and service needs, and the configuration of terminal area facilities.

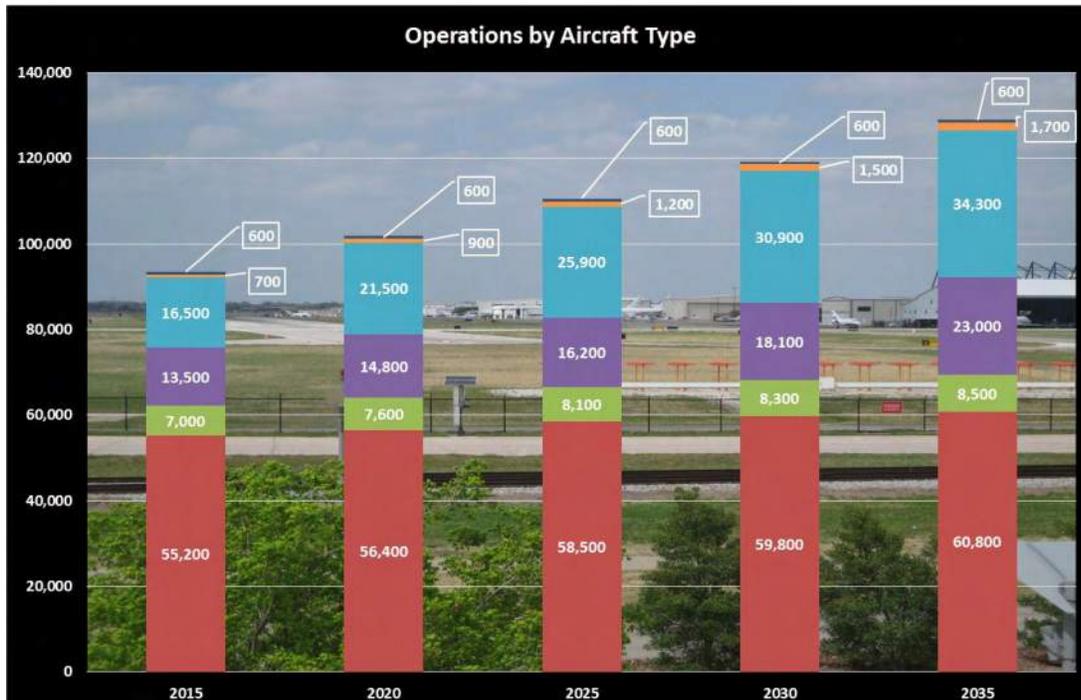
**TABLE 2-7 SUMMARY OF OPERATIONS BY AIRCRAFT TYPE, 2015-2035**

OPERATIONS BY TYPE	2015	2020	2025	2030	2035
Single-Engine	55,200	56,400	58,500	59,800	60,800
Multi-Engine	7,000	7,600	8,100	8,300	8,500
Turbo-Prop	13,500	14,800	16,200	18,100	23,000
Turbo-Jet	16,500	21,500	25,900	30,900	34,300
Helicopter	700	900	1,200	1,500	1,700
Military	600	600	600	600	600
<b>TOTAL</b>	<b>93,500</b>	<b>101,800</b>	<b>110,500</b>	<b>119,200</b>	<b>128,900</b>

SOURCE: GARVER



**FIGURE 2-9 SUMMARY OF OPERATIONS BY AIRCRAFT TYPE, 2015-2035**



SOURCE: GARVER FORECAST DATA FOR ADDISON AIRPORT, 2014

Total operations can be further broken down into categories and design groups. This additional breakdown helps to better define the types of aircraft that will operate at the airport in the future. It also allows for better planning of future facilities and airside needs for the airport and the ability to justify such facilities when the market demands such construction. **Table 2-8, Fleet Mix Operations by Design Group, 2015-2035**, displays this breakdown for the 20-year planning effort.





**TABLE 2-8 FLEET MIX OPERATIONS BY DESIGN GROUP, 2015-2035**

AIRCRAFT APPROACH CATEGORY	2015	2020	2025	2035
Category A (Less than 91 knots)	57,500	60,500	63,200	66,500
Category B (92 – 120 knots)	28,600	32,100	35,600	46,000
Category C (121 – 140 knots)	4,900	5,700	6,800	10,200
Category D (141 - 161 knots)	1,200	2,000	3,100	3,900
AIRPLANE DESIGN GROUP				
Group I (Less than 49 feet)	98,500	70,030	71,600	73,700
Group II (49 feet to 78 feet)	19,250	24,000	28,310	38,700
Group III (79 feet to 118 feet)	4,300	6,100	8,600	13,900
Group IV (119 feet to 171 feet)	150	170	190	300
Helicopter	100	900	1,200	1,700
Military	600	600	600	600
TOTAL	93,500	101,800	110,500	128,900

**SOURCE:** GARVER. AIRCRAFT APPROACH CATEGORY IS BASED ON 1.3 TIMES THE STALL SPEED OF THE AIRCRAFT AT THE MAXIMUM CERTIFIED LANDING WEIGHT IN THE LANDING CONFIGURATION. REPRESENTATIVE OF THE ANTICIPATED OPERATIONS FOR EACH AIRCRAFT APPROACH CATEGORY AND AIRPLANE DESIGN GROUP. TOTALS MAY NOT EQUAL DUE TO ROUNDING.

### LOCAL AND ITINERANT OPERATIONS

According to FAA Order 7210.3U, Facility Operation and Administration, February 16, 2006, a local operation is any operation performed by an aircraft that “remains in the local traffic pattern, performs a simulated instrument approach, or operates to or from the Airport and a practice area within a 20-mile radius of the field or tower.” An itinerant operation is any operation that is not

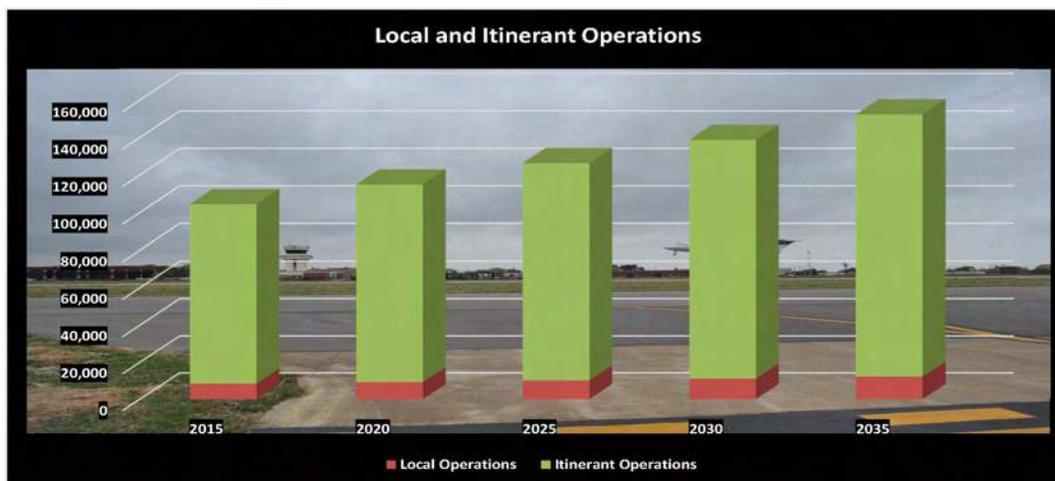
considered local. According to tower records, only eight percent of the operations conducted at the airport are local and 92 percent are itinerant. These percentages reflect the business aircraft operations atmosphere at ADS and are expected to remain at or near these same levels throughout the forecast period. **Table 2-9** and **Figure 2-10**, *Summary of Local and Itinerant Operations, 2015-2035*, provides a summary of this information.

**TABLE 2-9 SUMMARY OF LOCAL AND ITINERANT OPERATIONS, 2015-2035**

YEAR	2015	2020	2025	2030	2035
Local Operations	7,480	8,150	8,850	9,500	10,300
Itinerant Operations	86,020	93,650	101,650	109,700	118,600
TOTAL	93,500	101,800	110,500	119,200	128,900

**SOURCE:** GARVER ACTUAL/BASELINE

**FIGURE 2-10 SUMMARY OF LOCAL AND ITINERANT OPERATIONS, 2015-2035**



SOURCE: GARVER FORECAST DATA FOR ADDISON AIRPORT, 2014

### ANNUAL INSTRUMENT APPROACH FORECAST

**Table 2-10, Annual Instrument Approach Forecasts, 2015-2035**, summarizes the forecast of annual civilian instrument approaches at ADS throughout the planning period. The forecast of annual instrument approaches (AIAs) provides further guidance in determining requirements for the type, extent, and timing of future navigational aid (NAVAID) equipment. These figures are strictly

for IFR operations conducted during instrument meteorological conditions (IMC), which exist whenever the cloud ceiling is at or below 1,000 feet and/or visibility is lower than 3 miles. If instrument approaches are calculated for marginal visual flight rules (MVFR) conditions, the monthly potential instrument approaches to ADS would nearly double. MVFR weather conditions occur whenever the cloud ceiling is lower than 3,000 feet and/or the visibility is less than 5 miles..

**TABLE 2-10 ANNUAL INSTRUMENT APPROACH FORECASTS, 2015-2035**

CATEGORY	2015	2020	2025	2030	2035
Annual Operations	93,500	101,800	110,500	119,200	128,900
Forecast Air Taxi Operations	10,300	12,200	14,400	16,700	19,300
% IFR Weather	11.0%	11.0%	11.0%	11.0%	11.0%
% IFR Rated Pilots	50.7%	50.9%	50.8%	50.4%	49.9%
<b>TOTAL ANNUAL INSTRUMENT APPROACHES</b>	<b>3,200</b>	<b>3,700</b>	<b>4,200</b>	<b>4,800</b>	<b>5,600</b>

SOURCE: GARVER, 2014 AND FAA AEROSPACE FORECASTS 2014-2034



### FORECAST OF BASED AIRCRAFT

The number of GA aircraft that can be expected to base at an airport facility is dependent on several factors, such as available facilities, airport operator services, airport proximity and access, etc. GA operators are particularly sensitive to both the quality and location of their basing facilities, with proximity of home and work often identified as the primary consideration in the selection of an aircraft-basing location. According to airport personnel, existing hangars are at or near capacity, consisting of approximately 610 fixed wing aircraft: 315 single-engine, 95 multi-engine piston/turboprops, and over 200 business jets. Demand for aircraft hangar storage is moderate, with an active list of those seeking new or upgraded hangar facilities and businesses/individuals seeking to build new or improved hangars at ADS to store their aircraft.

Determining the number and type of aircraft anticipated to be based at an airport is a vital component in developing the plan for the airport. Depending on the potential market and forecast, the airport will tailor the plan in response to anticipated demand. Generally, there is a relationship between aviation activity and based aircraft in terms of operations per based aircraft (OPBA). The national trend has been changing with more aircraft being used for business purposes

and less for recreation or pleasure and this is certainly the situation at ADS. This trend impacts the OPBA in that business aircraft are flown more often than pleasure aircraft.

The ADS current aircraft mix is weighted towards the turbine fleet that reflects a 2.4 percent annual growth rate postulated by the *FAA Aerospace Forecasts, 2014-2034*. The FAA's Terminal Area Forecast data also indicates ADS based aircraft will only grow at an annual rate of approximately 0.5 percent. Based on operation levels since 2009, the average OPBA for ADS is 167. Applying this OPBA graduated incrementally based on returning to the ADS 20-year historic OPBA of 225 through the 20-year planning period derives an average annual growth rate of 0.5 percent. This growth rate is comparable to 0.6 percent for all GA aircraft reflected in the *FAA Aerospace Forecasts, 2014-2034*. The NCTCOG GAHSP forecast ADS based aircraft to grow at a rate 1.4 percent. ADS is not your typical GA airport. The OPBA was selected as the preferred based aircraft option, which is consistent with both the FAA's TAF and overall GA growth rates in the most recent FAA Aerospace Forecasts. **Table 2-11** and **Figure 2-11** provide a summary of the forecasts for based aircraft anticipated at the airport over the 20-year planning period.

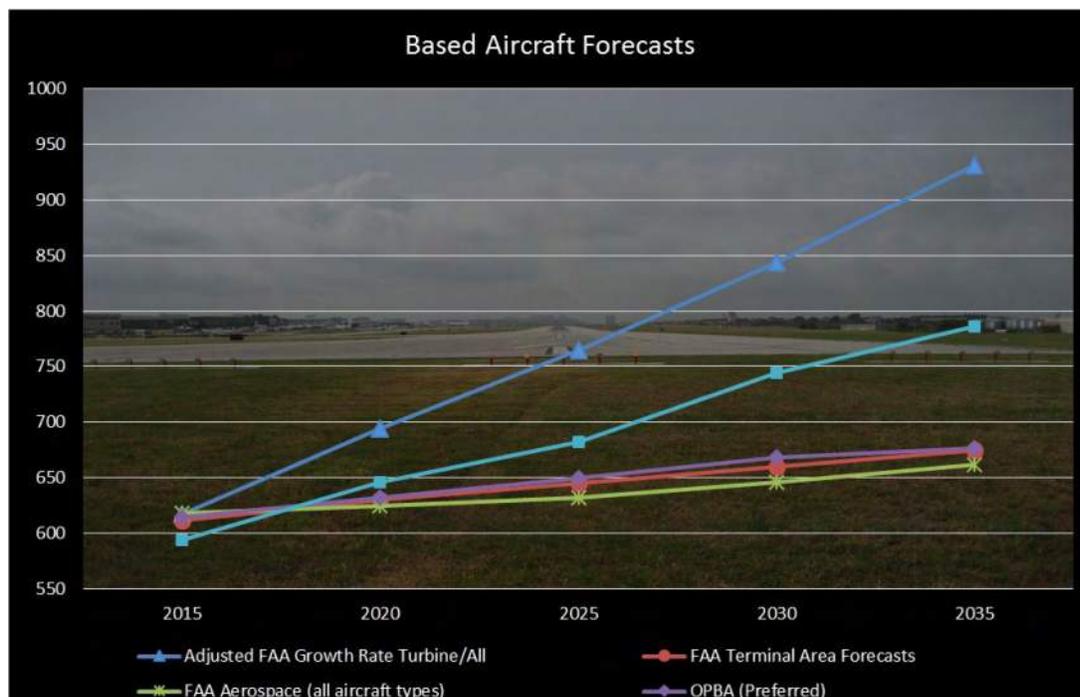
**TABLE 2-11 SUMMARY OF BASED AIRCRAFT FORECASTS, 2015-2035**

YEAR	FAA GROWTH RATE TURBINE	FAA TERMINAL AREA FORECASTS	FAA AEROSPACE (ALL AIRCRAFT TYPES)	OPBA (PREFERRED)	NCTCOG GAHSP
2015	617	612	618	614	594
2020	694	630	625	632	646
2025	765	645	632	650	682
2030	844	660	646	668	744
2035	931	675	662	677	786

SOURCE: GARVER, FAA TAF – TERMINAL AREA FORECASTS, NCTCOG



**FIGURE 2-11 BASED AIRCRAFT FORECAST SUMMARY, 2015-2035**



SOURCE: GARVER, 2014

The mix of based aircraft for incremental periods throughout the planning period is illustrated in **Table 2-12** and **Figure 2-12**, *General Aviation Based Aircraft Fleet Mix, 2015-2035*. With an existing high percentage of single-engine aircraft based on the

field, the percentage of turbine aircraft, particularly turbo-prop, are expected to increase as a part of the total based aircraft population. This is in line with overall trends in GA with aircraft being used more and more for business purposes.

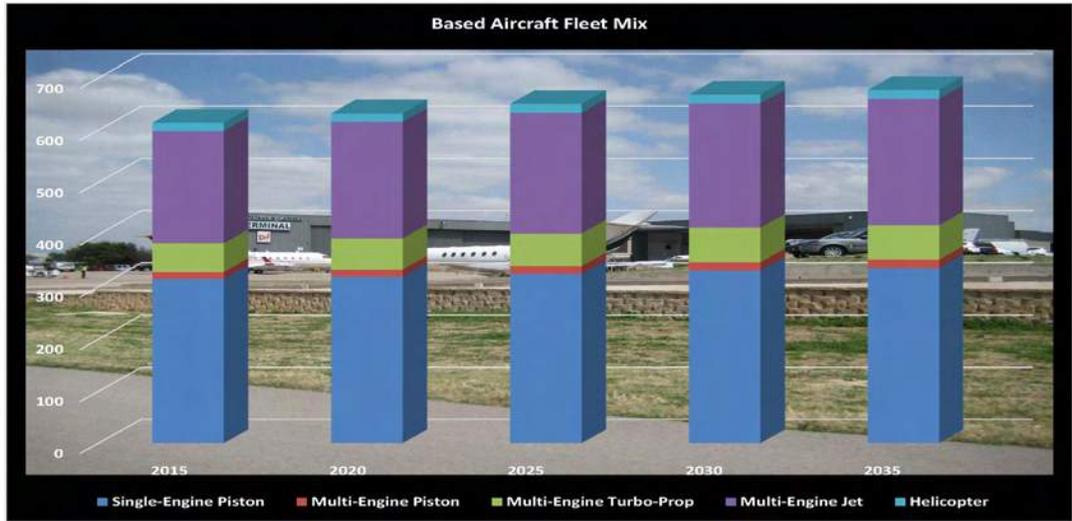
**TABLE 2-12 GENERAL AVIATION BASED AIRCRAFT FLEET MIX, 2015-2035**

AIRCRAFT TYPE	2015	2020	2025	2030	2035
Single-Engine Piston	315	319	325	331	336
Multi-Engine Piston	13	14	15	16	16
Turbo-Prop <sup>2</sup>	55	60	63	66	68
Turbo-Jet	215	223	232	238	240
Helicopter	16	16	17	17	17
<b>TOTAL</b>	<b>614</b>	<b>632</b>	<b>650</b>	<b>668</b>	<b>677</b>

SOURCE: GARVER



**FIGURE 2-12 GENERAL AVIATION BASED AIRCRAFT FLEET MIX, 2015-2035**



SOURCE: GARVER FORECAST DATA FOR ADDISON AIRPORT, 2014

### CRITICAL AIRCRAFT

The “critical” aircraft at the airport is the largest and most demanding aircraft conducting at least 250 operations per year on the airfield. Determining the critical aircraft is important for assessing airport design and layout and the structural and equipment needs for both the airfield and terminal area. It is evaluated with respect to size, speed, and weight. The aircraft operating at ADS vary widely from small piston flight trainers to large, complex, sophisticated business jets. Based on the types of aircraft utilizing the airport, the existing “critical” aircraft at ADS is in the Runway Design Code (RDC) D-III-2400 category. The preferred forecasts confirm this to be the critical aircraft during the short-term and maintain it as such throughout the 20-year planning period.

This ARC coincides with what is reflected on the most recent approved Airport Layout Plan, as well the Development Worksheet Database on file with the TxDOT, Aviation Division. The existing

and future critical aircraft at ADS is not defined by a single aircraft. Based on the myriad of aircraft operating on the field today it requires a group approach to define the critical aircraft. Today there are numerous Gulfstream aircraft models that are in the aircraft approach category D. With ample operations by these and itinerant aircraft of the same size/type the ADS aircraft approach category is D. The growing numbers of Gulfstream 650s, Boeing Business Jets, and Boeing 737 are all in the airplane design group III thus defining the airplane design group. Hence, the ADS design aircraft is in the D-III category.

The future critical aircraft must apply the anticipated or forecast operations and based aircraft. Despite the growing size and numbers of business jets on the field, it is not anticipated that the future RDC or critical aircraft will change. **Table 2-13** illustrates aircraft specifications for several of the most demanding aircraft based and operating at ADS. .



**TABLE 2-13 FUTURE CRITICAL AIRCRAFT CHARACTERISTICS**

AIRCRAFT TYPE AND ARC	WING SPAN	AIRCRAFT LENGTH	AIRCRAFT HEIGHT	SEATING	MAX GROSS TAKEOFF WEIGHT	BALANCED FIELD LENGTH	APPROACH SPEED
Gulfstream 450 ARC D-II	77.8'	89.3'	25.2'	8	74,600 lbs.	5,600'	140
Gulfstream 650 ARC C-III	99.7'	99.8'	25.7'	19 (Typ.)	91,000 lbs.	5,858'	140
Boeing BBJ2 ARC D-III	117.4'	129.5'	41.1'	19 (Typ.)	174,200 lbs.	6,985'	142

**SOURCE: GARVER**



### FORECAST SUMMARY

The various forecast elements are displayed in **Table 2-14, Aviation Forecast Summary, 2015-2035**. The forecasts, combined with the inventory data, will be used to identify and develop the facility

requirements and the need for improved general aviation facilities to serve the Addison Airport. The next chapter, Facility Requirements, identifies the types and extent of facilities needed to adequately accommodate the demand levels identified in this chapter.

**TABLE 2-14 AVIATION FORECAST SUMMARY, 2015-2035**

YEAR	2015	2020	2025	2030	2035
<b>BASED AIRCRAFT BY TYPE</b>					
Single-Engine	315	319	322	331	333
Multi-Engine	13	13	14	14	14
Turbo-Prop	61	65	65	70	72
Turbo-Jet	217	226	238	242	247
Helicopter	8	8	11	11	11
<b>TOTAL BASED AIRCRAFT</b>	<b>614</b>	<b>631</b>	<b>650</b>	<b>668</b>	<b>677</b>
<b>OPERATIONS</b>					
General Aviation					
Single-Engine	55,200	56,700	58,500	59,800	60,800
Multi-Engine	7,000	7,600	8,100	8,800	8,500
Turbo-Prop	13,500	14,800	16,200	18,100	23,000
Turbo-Jet	16,500	21,500	25,900	30,900	34,300
Helicopter	700	900	1,200	1,500	1,700
Military	600	600	600	600	600
<b>LOCAL OPERATIONS</b>	<b>7,480</b>	<b>8,150</b>	<b>8,850</b>	<b>9,500</b>	<b>10,300</b>
<b>ITINERANT OPERATIONS</b>	<b>86,020</b>	<b>93,650</b>	<b>101,650</b>	<b>109,700</b>	<b>118,600</b>
<b>TOTAL</b>	<b>93,500</b>	<b>101,800</b>	<b>110,500</b>	<b>119,200</b>	<b>128,900</b>

SOURCE: GARVER, 2014





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# FACILITY REQUIREMENTS

## CHAPTER 3

INTRODUCTION ..... 3-2

AIRFIELD  
CAPACITY ANALYSIS ..... 3-3

AIRFIELD LIGHTING  
AND MARKING  
REQUIREMENTS ..... 3-14

NAVIGATION SYSTEMS  
AND WEATHER AIDS ..... 3-16

LANDSIDE  
FACILITIES ..... 3-18



# INTRODUCTION



## INTRODUCTION

This chapter evaluates the airfields operational capacity and delay and also identifies the long-range requirements used to determine the facilities needed to meet the forecast demand as planned in accordance with Federal Aviation Administration (FAA) airport design standards and airspace criteria. Identification of a needed facility does not necessarily constitute a “requirement” in terms of design standards, but an “option” for facility improvements to accommodate future aviation activity. However, market demand will ultimately drive the requirements for construction and development at Addison Airport (ADS).

Airfield facility components include runways, taxiways, navigational aids (NAVAIDs), airfield marking/ signage, and lighting, while terminal area components are comprised of hangars, terminal building, aircraft parking apron, fuel dispensing units, vehicular parking, and airport access requirements.

As previously presented in the Inventory Chapter, the FAA outlines design standards in *FAA Advisory Circular (AC) 150/5300-13A Change 1, Airport Design*. Runway pavements and associated safety areas are delineated through the runway design code (RDC) while taxiway pavements and safety areas are defined by the taxiway design group (TDG). The RDC/TDG correlate the design and layout of an airport to the operational and physical characteristics of the critical / design aircraft. The RDC/TDG directly influence pertinent safety criteria such as runway length, runway width, runway/ taxiway separation distances, building setbacks, size of required safety and object free areas, etc. The critical / design aircraft is based on the largest type aircraft expected to operate at an airport on a regular basis defined as a minimum of 500 annual operations (landings or takeoffs).





# AIRFIELD CAPACITY ANALYSIS

## AIRFIELD CAPACITY ANALYSIS

The FAA's standard method for determining airport capacity and delay for long-range planning purposes can be found in *Advisory Circular (AC) 150/5060-5, Airport Capacity and Delay*. For this portion of the analysis, generalized airfield capacity was calculated in terms of: 1) hourly capacity of runways and 2) annual service volume (ASV). This approach utilizes the projections of annual operations by the proposed fleet mix as projected in the Forecast Chapter while considering a variety of other factors that are described below.

### AIRFIELD CHARACTERISTICS

In addition to the aviation activity forecasts, a number of the Airport's characteristics and operational conditions are required in order to properly conduct the FAA capacity analysis. These elements affecting airfield capacity include:

- Runway Configuration,
- Aircraft Mix Index,
- Taxiway Configuration,
- Operational Characteristics, and
- Meteorological Conditions.

When analyzed collectively, the above elements provide the basis for establishing the generalized operational capacity of an airport as expressed by Annual Service Volume. The following sections evaluate each of these characteristics with respect to Addison Airport.

### RUNWAY CONFIGURATION

The runway configuration is one of the primary factors that determine airfield capacity. The capacity of a two or more runway system is substantially higher than an airport with a single runway. If runways intersect, the capacity is generally not as great as in a parallel runway layout because operations on the second runway are not possible until the aircraft on the first runway has cleared the intersection point.

As previously mentioned in the Inventory Chapter, the primary runway, Runway 15-33, has a northwest/southeast alignment, and there is no crosswind runway.

### TAXIWAY CONFIGURATION

The distance an aircraft has to travel to an exit taxiway after landing also sets limits on the airfield capacity. Larger aircraft require more distance to slow to a safe speed before exiting the runway. Thus, they require greater runway occupancy times. If taxiways are placed at the approximate location where the aircraft would reach safe taxiing speed, the aircraft can exit and clear the runway for another user. However, if the taxiway is spaced either too close or too far from the touchdown zone, the aircraft will likely spend more time on the runway than if the taxiway had been in the optimal location. The optimal location for exit taxiways is in a range from 2,000 feet to 4,000 feet from the landing threshold with each exit separated by at least 750 feet.



Based on the FAA criteria, the exit factor within the formula is maximized when a runway has four exit taxiways within the optimal range. As previously documented, Runway 15-33 is served by Taxiway Alpha, full-length parallel east of the runway, and Taxiway Bravo, a partial parallel taxiway west of the runway. There are nine exit/connector taxiways for Runway 15-33 along Taxiway Alpha only five of which meet the optimal location criteria. Taxiway Bravo currently has three connector taxiways to Runway 15-33 only two that meet the optimal exit taxiway criteria. However, when construction of the Taxiway Bravo extension to the Runway 15 end is complete, two more exit/connector taxiways that meet the optimal criteria will be added.

### AIRCRAFT MIX INDEX

The operational fleet at an airport influences an airfield’s capacity based upon differing aircraft requirements. Various operational separations are set by the FAA for a number of safety reasons. An airfield’s capacity is the time needed for the aircraft to clear the runway either on arrival or departure. As aircraft size and weight increases, so does the time needed for it to slow to a safe taxing speed or to achieve the needed speed for takeoff. Thus, a larger aircraft generally requires more runway occupancy time than a smaller aircraft. As

additional larger aircraft enter an airport’s operating fleet, the lower the capacity will likely be for that Airport.

There are four categories of aircraft used for capacity determinations under the FAA criteria. These classifications are based upon the maximum certificated takeoff weight, the number of engines, and wake turbulence classifications. The aircraft indexes and characteristics are shown in the following table, **Table 3-1**, Aircraft Classifications, and the following figure, **Figure 3-1**, Cross Section of Aircraft Classifications.

These classifications are used to determine the mix index, which is required to calculate the theoretical capacity of an airfield. The mix index is defined as the percent of Class C aircraft plus three (3) times the percent of Class D aircraft, reflected as a percentage (C+3D). The percent of A and B class aircraft do not count towards the calculation of mix index due to the quick dissipation of turbulence produced by this category. Using the FAA formula, the aircraft mix for the Airport will be 20 by the end of the planning effort.

**TABLE 3-1 AIRCRAFT CLASSIFICATIONS**

AIRCRAFT CLASS	MAXIMUM CERTIFICATED TAKEOFF WEIGHT (LBS)	NUMBER OF ENGINES	WAKE TURBULENCE CLASSIFICATION <sup>1</sup>
A and B	Under 12,500	Single-/Multi-	Small
C	12,500 – 300,000	Multi-	Large
D	Over 300,000	Multi-	Heavy

SOURCE: FAA ADVISORY CIRCULAR 150/5360-5, CHANGE 2, AIRPORT CAPACITY AND DELAY.

<sup>1</sup> WAKE TURBULENCE CLASSIFICATIONS AS DEFINED BY THE FAA, SMALL – AIRCRAFT OF 41,000 LBS. MAXIMUM CERTIFICATED TAKEOFF; LARGE – AIRCRAFT MORE THAN 41,000 LBS CERTIFICATED TAKEOFF WEIGHT, UP TO 255,000 LBS; HEAVY – AIRCRAFT CAPABLE OF TAKEOFF WEIGHTS OF MORE THAN 255,000 LBS WHETHER OR NOT THEY ARE OPERATING AT THIS WEIGHT DURING A PARTICULAR PHASE OF FLIGHT.



**FIGURE 3-1 CROSS SECTION OF AIRCRAFT CLASSIFICATIONS**

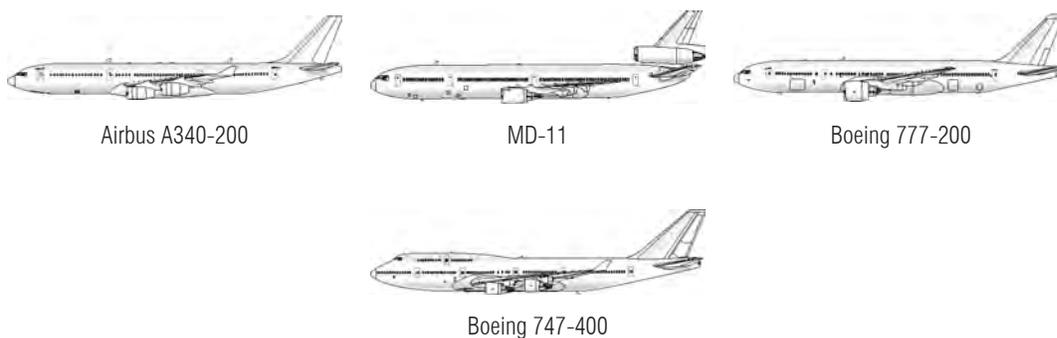
**CLASS A AND B – 12,500 LBS. OR LESS (SINGLE-/MULTI-ENGINE)**



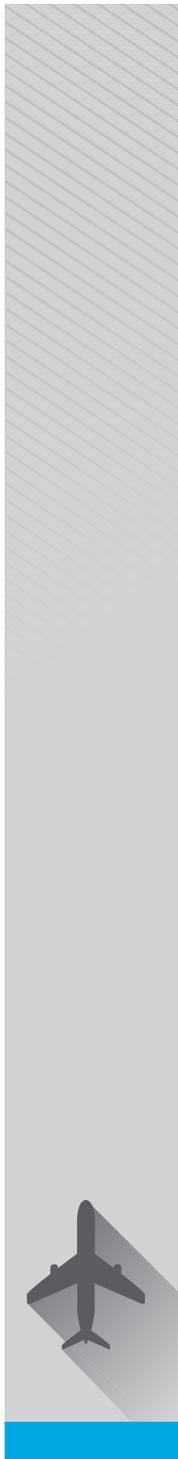
**CLASS C – LARGE AIRCRAFT, 12,500 LBS. TO 300,000 LBS.**

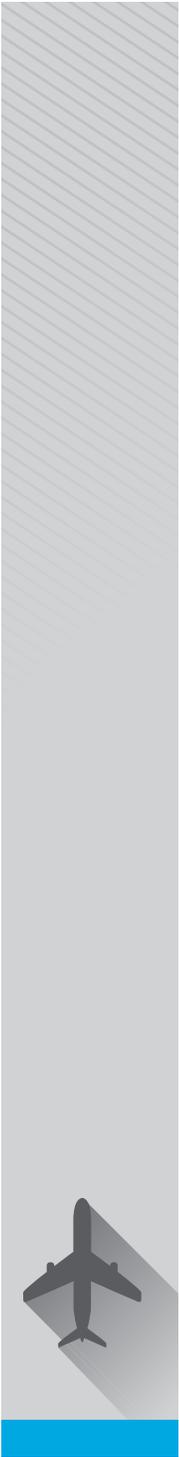


**CLASS D – HEAVY AIRCRAFT, MORE THAN 300,000 LBS.**



SOURCE: DR. ANTONIO TRANI, DEPARTMENT OF CIVIL ENGINEERING, VIRGINIA TECH UNIVERSITY.





## AIRFIELD OPERATIONAL CHARACTERISTICS

Operational characteristics that can affect an airfield’s overall capacity include the percent of aircraft arrivals and the percent of touch-and-go operations.

### PERCENT OF AIRCRAFT ARRIVALS

The percent of aircraft arrivals is the ratio of landing operations to the total operations for the airport. This percent is considered due to the fact that aircraft approaching an airport for landing require more runway occupancy time than an aircraft departing the airfield. The FAA methodology used provides for computing airfield capacity with a 40 percent, 50 percent, or 60 percent of arrivals. For a general aviation airport such as Addison Airport, the percent of arrivals is not typically a significant factor and for purposes of calculations, the 50 percent of arrivals factor is used. However, at Addison Airport the business aircraft climate impacts capacity especially during specific times of the day and during inclement weather situations. For the purposes of capacity and delay calculations, the 60 percent arrivals factor was used.

### PERCENT OF TOUCH-AND-GO OPERATIONS

The percent of touch-and-go operations plays a critical role in determination of airport capacity. Touch-and-go operations are typically associated with flight training activity. At Addison Airport, touch-and-go operations are discouraged due to the operational nature of the airfield and the congested airspace surrounding the airfield and constitute less than ten percent of the total airfield operations.

### METEOROLOGICAL CONDITIONS

Aircraft operating parameters are dependent upon the weather conditions, such as cloud ceiling height and visibility range. As weather conditions deteriorate, pilots must rely on instruments to define their position both vertically and horizontally. Capacity is lowered during such conditions because the FAA requires aircraft separation increases for safety reasons. Additionally, some airports may have limitations with regards to their instrument approach capability which also

impacts capacity during inclement weather. The FAA defines three (3) general weather categories, based upon the ceiling height of clouds above ground level and visibility.

- Visual Flight Rules (VFR): Cloud ceiling is greater than 1,000’ above ground level (AGL) and the visibility is at least three statute miles;
- Instrument Flight Rules (IFR): Cloud ceiling is at least 500’ AGL but less than 1,000’ AGL and/or the visibility is at least one statute mile but less than three (3) statute miles; and
- Poor Visibility and Ceiling (PVC): Cloud ceiling is less than 500’ AGL and/or the visibility is less than one statute mile.

ADS observes VFR conditions approximately 92.5% of the time, IFR conditions approximately 6.8% of the time, and PVC conditions approximately 0.7% of the time.

## HOURLY CAPACITY OF RUNWAYS

Hourly capacity of a runway measures the maximum number of aircraft operations that can be accommodated by an airport’s runway configuration in one hour. This capacity is calculated by analyzing the appropriate series of graphs and tables for VFR and IFR conditions within FAA (AC) 150/5060-5. From these figures, the hourly capacity is calculated by multiplying the hourly capacity base, the touch-and-go factor, and the exit factor together. The equation for this formula is:

$$\text{Hourly Capacity} = C^* \times T \times E$$

where:

C\* = hourly capacity base

T = touch-and-go factor

E = exit factor

The airport’s calculated hourly capacity can be seen in the following table, **Table 3-2**, Hourly Capacity.

**TABLE 3-2 HOURLY CAPACITY**

YEAR	VFR OPERATIONS	IFR OPERATIONS	WEIGHTED HOURLY CAPACITY (CW)
2015	89.93	48.00	41.21
2025	73.60	47.35	39.34
2035	72.68	47.00	42.33

SOURCE: FAA ADVISORY CIRCULAR 150/5360-5, CHANGE 2, AIRPORT CAPACITY AND DELAY.

### ANNUAL SERVICE VOLUME

Under the FAA methodology, the most important value that must be computed to evaluate the capacity at an airport is the annual service volume (ASV). ASV represents a measure of the approximate number of total operations that an airport can support annually. Using the FAA's methodology to estimate ASV, the ratio of annual operations to average daily operations, during the peak month, must first be calculated along with the ratio of average daily operations to average peak hour operations, during the peak month. These values are then multiplied together resulting in a product to be multiplied by the weighted hourly capacity.

The equation used to calculate ASV is:

$$\text{Annual Service Volume} = Cw \times D \times H$$

where:

Cw = weighted hourly capacity

D = ratio of annual operations to average daily operations during the peak month

H = ratio of average daily operations to average peak hour operations during the peak month

The Airport's ASV, as calculated based on the method above, can be seen in the following table, **Table 3-3**, Annual Service Volume (ASV).

**TABLE 3-3 ANNUAL SERVICE VOLUME (ASV)**

YEAR	ANNUAL OPERATIONS	DESIGN HOUR OPERATIONS	ANNUAL SERVICE VOLUME (ASV)	FAA MAXIMUM ANNUAL SERVICE VOLUME (ASV)	CAPACITY LEVEL
2015	93,500	38.5	100,087	230,000	43.5%
2020	101,800	41.9	108,287	230,000	47.1%
2025	110,500	45.6	95,433	230,000	41.5%
2030	119,200	49.2	94,883	230,000	41.3%
2035	128,900	53.2	102,597	230,000	44.6%

SOURCE: FAA ADVISORY CIRCULAR 150/5360-5, CHANGE 2, AIRPORT CAPACITY AND DELAY.



## RUNWAY LENGTH REQUIREMENTS

FAA AC150/5325-4B, *Runway Length Requirements*, provides guidance to help determine the most appropriate recommended runway lengths for an airport, which is predicated upon the category of aircraft using the airport. By design, the primary runway typically has the longest length, the most favorable wind conditions, the greatest pavement strength, and the lowest straight-in instrument approach minimums.

**TABLE 3-4 RUNWAY LENGTH REQUIREMENTS – RUNWAY 15-33**

AIRCRAFT CATEGORY	LENGTH (DRY PAVEMENT)	LENGTH (WET PAVEMENT)	DEFICIENCY
Aircraft between 12,500 and 60,000 pounds			
75% of fleet at 60% useful load	4,820'	4,820'	0'
75% of fleet at 90% useful load	7,050'	7,050'	0'
100% of fleet at 60% useful load	5,680'	5,680'	0'
100% of fleet at 90% useful load	9,450'	9,450'	2,247'

**SOURCE: AC 150/5325-4B, RUNWAY LENGTH REQUIREMENTS FOR AIRPORT DESIGN, FIGURES 3-1 AND 3-2. GENERALIZED LENGTH ONLY. ACTUAL LENGTHS SHOULD BE CALCULATED BASED ON THE SPECIFIC AIRCRAFT'S OPERATIONAL NOMOGRAPHS. USEFUL LOAD REFERS TO ALL USABLE FUEL, PASSENGERS, AND CARGO. CALCULATIONS BASED ON 645' AIRPORT ELEVATION, MEAN MAXIMUM DAILY TEMPERATURE OF 96° AND MAXIMUM DIFFERENCE IN RUNWAY END ELEVATION OF 0.8'. FIGURES ARE INCREASED 10 FEET FOR EACH FOOT OF ELEVATION DIFFERENCE BETWEEN HIGH AND LOW POINTS OF RUNWAY CENTERLINE. <sup>1</sup> BY REGULATION, THE LENGTH FOR TURBO-JET POWERED AIRPLANES IS INCREASED 15% UP TO 5,500', WHICHEVER IS LESS FOR 60% USEFUL LOADS AND 15% UP TO 7,000', WHICHEVER IS LESS FOR 90% USEFUL LOADS.**

Runway 15-33 meets the length requirements for 75 percent of the large general aviation fleet (12,500 pounds to 60,000 pounds) at 60 percent useful load, 75% of the this fleet at 90% useful load and 100% of the fleet at both 60%. However, it is deficient at 100% of fleet at 90% useful load by 2,247 feet. Any future runway lengthening to accommodate the larger categories of aircraft will require justification and approval through TXDOT before any funding assistance is granted.

A significant factor to consider when analyzing the generalized runway length requirements is that the actual length necessary for a runway is a function of elevation, temperature, and stage length. As temperatures change, the runway length requirements change accordingly. Thus, if a runway is designed to accommodate 75% of the fleet at 60% useful load, this does not prevent larger aircraft at certain times and during specific conditions from utilizing the runway. However, the amount of time such operations can safely occur

is restricted. These design runway lengths do not absolve the pilot from calculating the specific runway length needed to conduct a safe take-off or landing for the specific aircraft being operated during current weather conditions.

### ENGINEERING MATERIALS ARRESTOR SYSTEM (EMAS)

The runway dimensions are 7,202 feet by 100 feet with a runway designation of 15-33. A deficiency in the Runway Safety Area (RSA) on the Runway 33 end was first identified in the previous Airport Master Plan. There is approximately 390 feet of safety area that exists on the Runway 33 end.

Several alternatives to eliminate the deficiency were analyzed in this master plan. The airport published declared distances as a short-term, interim solution. In the 15 direction, the declared distances shorten the available runway by 610 feet. The most significant impact was on the Landing Distance



Available (LDA) for Runway 15. With a threshold that is displaced 979 feet the LDA for Runway 15 became 5,613 feet.

One of the alternatives for a long-term solution considered in the master plan was the implementation of an Engineering Materials Arrestor System (EMAS). An EMAS feasibility study was conducted in 2012, that compared multiple alternatives with various EMAS bed configurations, runway extensions, and relocating existing roadways and railroads with a variety of horizontal and vertical alignments. From this study, it was determined the best long term solution was to construct an EMAS bed within the current footprint of the 390-foot safety area without relocating the existing localizer antenna. In March 2013, TxDOT Aviation executed a contract with Garver to design the EMAS for the Runway 33 Safety Area.

### AIRFIELD DESIGN STANDARDS

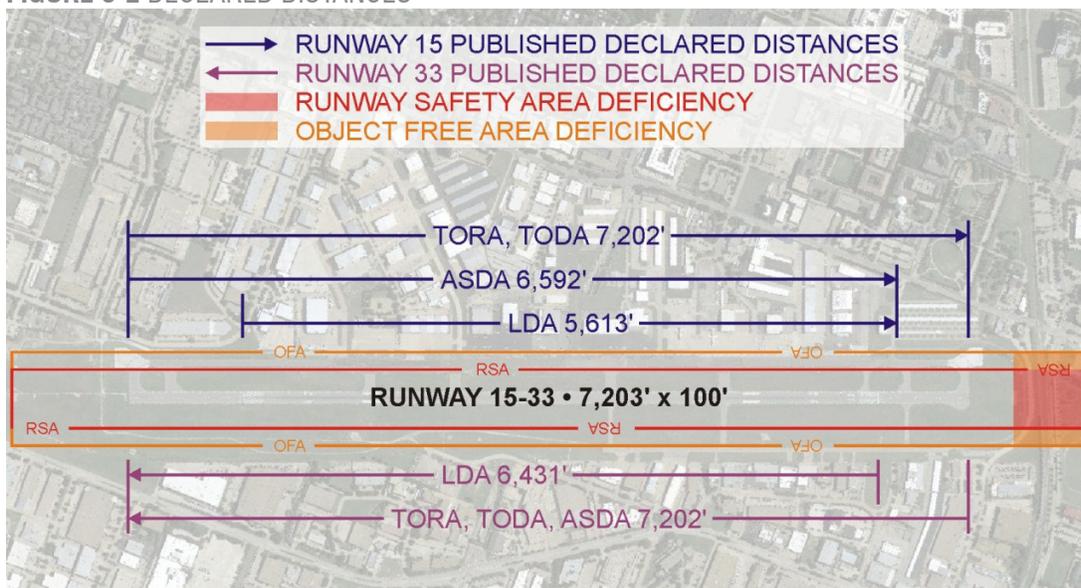
Compliance with airport design standards is required to maintain a minimum level of operational safety. The major airport design elements, as follows, are established from *FAA Advisory Circular 150/5300-13A, Change 1, Airport Design and*

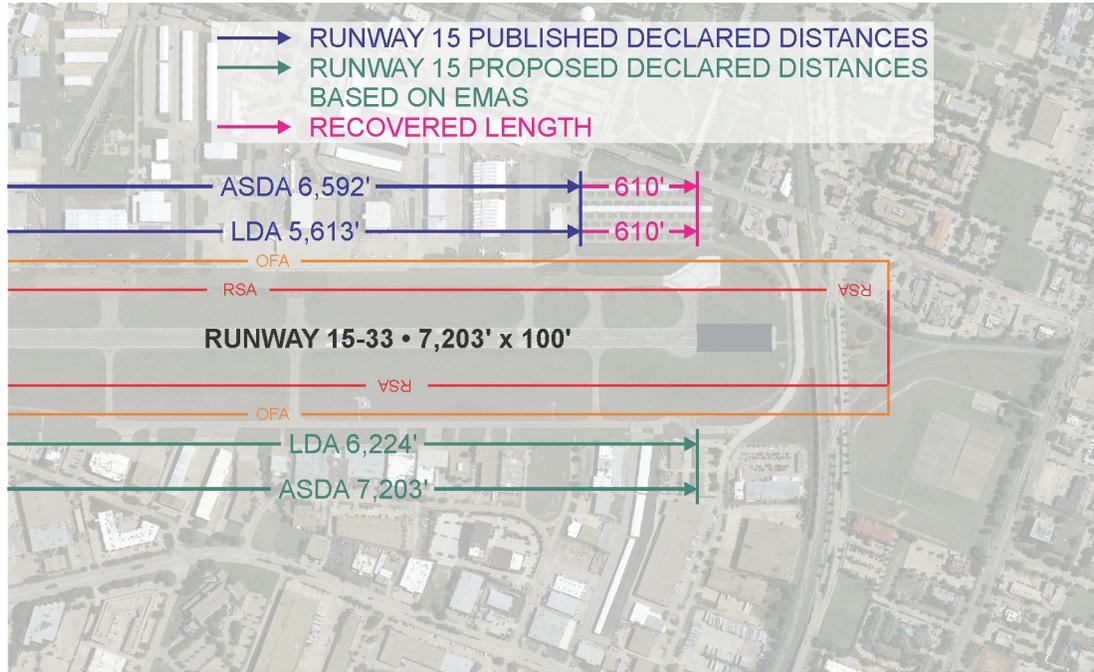
*Federal Aviation Regulations (FAR) Part 77, Objects Affecting Navigable Airspace*, and should conform with FAA airport design criteria without modification to standards.

### RUNWAY SAFETY AREA (RSA)

The RSA is a two-dimensional area surrounding and extending beyond the runway and taxiway centerlines. This safety area is provided to reduce the risk of damage to airplanes in the event of undershoot, overshoot, or excursion from the runway. In addition, it must be cleared and free of objects except those required for air navigation and graded to transverse and longitudinal standards to prevent water accumulation, as consistent with local drainage requirements. Under dry conditions, the RSA must support emergency equipment and aircraft without causing structural damage or injury to the occupants. The FAA recommends the airport own the entire RSA in “fee simple” title. Based on FAA design standards, the RSA should extend beyond the end of the runway for 1,000 feet for D-III runways. In an effort to retain the current usable runway length, the airport has implemented declared distances as a remedy for a short-term interim solution for the deficiency in safety area

FIGURE 3-2 DECLARED DISTANCES



**FIGURE 3-3** DECLARED DISTANCES (EMAS)


length. The above figure, **Figure 3-2**, graphically illustrates the existing deficiency and take-off and landing distances for each runway end of Runway 15-33 based on declared distances.

### OBJECT FREE AREA (OFA)

The OFA is a two-dimensional area surrounding runways, taxiways and taxilanes. It must remain clear of objects except those used for air navigation or aircraft ground maneuvering purposes, and requires clearing of above-ground objects protruding higher than the runway edge elevation at an adjacent point within the OFA. An object is considered any ground structure, navigational aid, people, equipment, terrain or parked aircraft. The FAA recommends that the airport own the entire OFA in “fee simple” title. Currently, with ARC D-III standards for Runway 15-33, the Airport accommodates the full width of the 800 foot requirement and the required 1,000 foot length beyond the runway end.

### OBSTACLE FREE ZONE (OFZ)

The OFZ is airspace above and centered along the runway centerline, and precludes taxiing and parked airplanes and object penetrations except for frangible post mounted NAVAIDs expressly located in the OFZ by function. Due to the facilities required, only the Runway OFZ is applicable. The length of the OFZ is fixed at 200 feet beyond the associated runway end, but the width is dependent upon the RDC and visibility minimums associated with the instrument approach procedures associated with the runway. The OFZ’s at ADS are in compliance for the group of aircraft operating at the field and the specific design length and width.

### BUILDING RESTRICTION LINE (BRL)

The BRL represents the boundary that separates the airside and landside facilities and identifies suitable building area locations based on airspace and visibility criteria. The BRL, recommended to provide a 35.0-foot minimum clearance, is established with reference to the FAR Part 77



primary and transitional surfaces, as well as the airfield safety areas. Based on the activity at the field, instrument approach types, and RDC the BRL should be at 745 feet from the runway centerline to provide the prescribed 35-foot clearance for Runway 15-33. As such, the lower the height of the building, the less distance required between the runway centerline and placement of existing or proposed facilities. Thus, a 25-foot building height would only require a separation distance of 675 feet for Runway 15-33.

### RUNWAY APPROACH SURFACE

The approach surface is a three-dimensional trapezoidal FAR Part 77 imaginary surface extending beyond each runway end and has a defined slope requiring clearance over structures and objects beyond the runway threshold. The purpose of the approach surface is to provide proper clearance for the safe approach and landing of aircraft. The existing approach surface dimensions associated with Runway 15-33 is 500' x 10,000' x 3,500'. Any obstructions to this surface will be depicted in the Airport Layout Plan (ALP).

While FAR Part 77 provides the basic framework to identify existing obstructions within the vicinity of the Airport, the FAA has just recently published new criteria for airspace requirements for either vertically or non-vertically guided approaches to airports. This new criteria is to provide guidelines and specifications for listing obstructions in support of the new Airports Geographic Information System (AGIS) initiative and can be found in *Advisory Circular 150/5300-18B*. Because of the infancy of

this new program, it is still uncertain what affect it will have on Airports and how it will be applied in a cost-effective manner. Until this requirement is implemented nationwide, the use of Part 77 criteria for obstruction identification will be utilized.

### RUNWAY LINE OF SIGHT

An acceptable runway profile permits any two points, generally each runway end, five (5) feet above the runway centerline to be mutually visible for the entire runway length. The sight distance along a runway from an intersecting taxiway needs to be sufficient to allow a taxiing aircraft to enter safely or cross the runway, in addition to seeing vehicles, wildlife and other hazardous objects. However, if the runway offers a full-length parallel taxiway, an unobstructed line of sight will exist from any point five feet above the runway centerline to any other point five feet above the runway centerline for one-half the runway length. There are no line-of-sight requirements for taxiways. As the Airport is equipped with a full-length parallel taxiways for both runways, there are no line of sight deficiencies.

As can be seen in the **Table 3-5, *Airport Design Standards***, the airport meets or exceeds the design criteria for Runway 15-33 with the exception of the Safety Area and Object Free Area. In the future, if any lowering of the instrument approach minimums occurs, new criteria may impose deficiencies in design standards.



**TABLE 3-5 AIRPORT DESIGN STANDARDS**

ITEM	RUNWAY 15-33	FAA DESIGN STANDARD (D-III, LOWER THAN ¼-MILE VIS. MIN.)
<b>Runway Design</b>		
Width	100'	150'
RSA Width	500'	500'
RSA Length beyond R/W end	<b>1,000'/600'</b> <b>Declared Distance/EMAS</b>	1,000'/1,000'
OFA Width	800'	800'
OFA Length beyond R/W end	<b>1,000'/600'</b> <b>Declared Distance/EMAS</b>	1,000'/1,000'
Obstacle Free Zone Width	400'	400'
Obstacle Free Zone Length	200'	200'
<b>Runway Setbacks -Runway Centerline to:</b>		
Parallel Taxiway Centerline	400' (B) 300' (A)	400'
Holdline	250'	250'
Aircraft Parking Area	500' +	500'
<b>Taxiway Design</b>		
Width	50'	50'
Safety Area Width	118'	118'
Object Free Area Width	186'	186'

SOURCE: AC 150/5300-13A, CHANGE 1, AIRPORT DESIGN. BOLD TYPE INDICATES DESIGN DEFICIENCY. ROFA WIDTH IS DEFICIENT DUE TO THE LOCATION OF STATE HIGHWAY 27 AND AIRPORT PERIMETER FENCING AND RSA/ROFA LENGTH BEYOND RUNWAY 12 END IS DEFICIENT DUE TO POSITION OF EXISTING LOCALIZER.

**RUNWAY PROTECTION ZONE (RPZ)**

The RPZ is a two-dimensional trapezoid area beginning 200 feet beyond the paved runway end, and extends along the runway centerline. The purpose of the RPZ is to enhance the protection of people and property on the ground, and to prevent obstructions potentially hazardous to aircraft. RPZ dimensions are determined by the type of aircraft expected to operate at an airport (small or large)

and the type of approach planned for the runway ends (visual, precision, or non-precision). The recommended visibility minimums for the runway ends are determined with respect to published instrument approach procedures, the ultimate runway ARC, airfield design standards, instrument meteorological conditions, wind conditions, and physical constraints (approach slope clearance) beyond the extended runway centerline. The FAA



recommends that airports own the entire RPZ in “fee simple” title and that the RPZ be clear of any non-aeronautical structure or object that would interfere with the arrival and departure of aircraft. However, if “fee simple” interest is unachievable, the next option is controlling the heights of objects through an aviation easement. While some automobile parking is allowable within the RPZ, provided they are outside the central portion, other land uses such as residences, places of

public gathering (churches, schools, hospital, office buildings, shopping centers, and other uses with similar concentrations of persons typify places of public assembly), and fuel facilities are not permitted within the RPZ. **Table 3-6**, *Runway Protection Zone Dimensions*, delineates the RPZ requirements. The current Runway 15-33 RPZ dimensions are 500’ x 1,700’ x 1,010’ as defined in the following table.

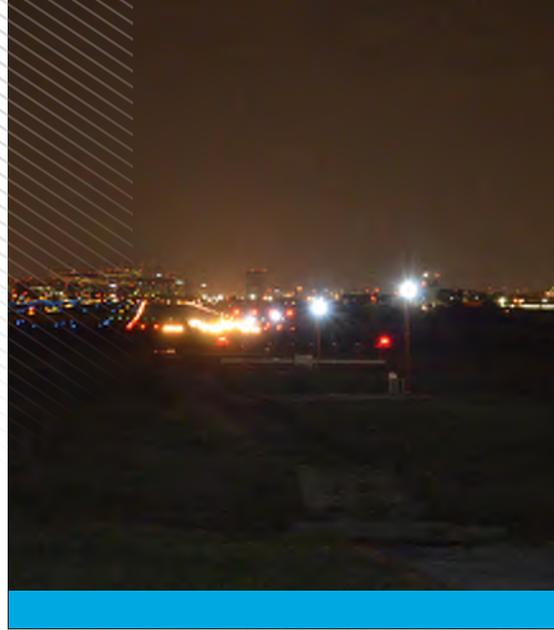
**TABLE 3-6** RUNWAY PROTECTION ZONE DIMENSIONS

APPROACH VISIBILITY MINIMUMS	FACILITIES EXPECTED TO SERVE	LENGTH	INNER WIDTH	OUTER WIDTH	ACRES
Visual and Not Lower than 1-Mile	Aircraft Approach Categories C & D	1,700’	500’	1,010’	29.465
Not Lower Than ¾-Mile	All Aircraft	1,700’	1,000’	1,510’	48.978
Lower Than ¾-Mile	All Aircraft	2,500’	1,000’	1,750’	78.914

SOURCE: FAA ADVISORY CIRCULAR 150/5300-13A, CHANGE 1, AIRPORT DESIGN.



# AIRFIELD LIGHTING AND MARKING REQUIREMENTS



## AIRFIELD LIGHTING AND MARKING REQUIREMENTS

Airport lighting is used to help maximize the utility of the airport during day, night and adverse weather conditions. FAA Order 7021.2C, Airport Planning Standard Number One - Terminal Air Navigation Facilities and Air Traffic Control Services specify minimum activity levels to qualify for visual and electronic navigational aids and equipment. Recommended lighting systems for the Airport include:

### RUNWAY LIGHTING/PAVEMENT MARKING

Pilot-controlled medium intensity runway lighting (MIRL) is recommended as the standard lighting system to define the lateral and longitudinal limits of the runway system. If a precision approach is considered at the Airport then high intensity runway lights (HIRL) along with an approach lighting system are recommended. Runway pavement markings should follow requirements as prescribed in *FAA Advisory Circular 150/5340-1J, Standards for Airport Markings*. Currently, Runway 15-33 is equipped with HIRL lighting. In addition, the runway pavement has precision markings to meet the existing precision approach category requirements.

### TAXIWAY LIGHTING/PAVEMENT MARKING (MITL)

Medium intensity taxiway lights (MITL) are the recommended lighting system for all taxiway sections and turning radii. MITL's can also be pilot

controlled and wired to the same remote system as the runway lights. However, new technology in taxiway lighting is proving to be beneficial in the form of LED lights. While these lights do have a higher up-front cost, the solar powered capacity and the lack of need for wiring eventually pays for itself over the long run. These lights also illuminate twice as long as regular lighting. Taxiway edge reflectors can be used as a less expensive lighting alternative. In addition, all paved taxiways should be painted with standard taxiway markings as prescribed in *FAA Advisory Circular 150/5340-1J, Standards for Airport Markings*. Currently, the Airport has MITL lights along the parallel taxiway, connector taxiways, and apron areas.

### APPROACH LIGHTING SYSTEM (ALS)

ALS provide the basic means to transition from instrument flight to visual flight for landing. Operational requirements dictate the sophistication and configuration of the approach light system for a particular runway. Depending on the type of approach a particular runway is served by, certain ALS are required to meet the requirements of aiding pilots in the identification of the airport environment during instrument meteorological conditions. ALS are a configuration of signal lights starting at the landing threshold and extending into the approach area a distance of 2400-3000 feet for precision instrument runways and 1400-1500 feet for non-precision instrument runways. Some systems include sequenced flashing lights which appear to the pilot as a ball of light traveling towards the runway at high speed (twice



a second). Runway 15 is equipped with a 1,400' Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights. There are no approach lights for the Runway 33 end.

### RUNWAY END IDENTIFIER LIGHTS (REIL)

This lighting system provides rapid and positive identification of the runway approach end, consisting of a pair of synchronized (directional) flashing white strobes located laterally along the runway threshold. REILs are typically installed along with threshold lights at each runway end. Currently, REILs are in place on Runway 33. REIL's are not commonly needed unless an airport is situated within an area of heavy light pollution or adjacent to areas that would deem them necessary at specific times such as a lighted ball field, lighted rodeo grounds, etc.

### VISUAL GUIDANCE INDICATORS (PRECISION APPROACH PATH INDICATORS – PAPI)

This lighting system emits a sequence of colored light beams providing continuous visual descent guidance information along the desired final approach descent path (normally at 3 degrees for 3 nautical miles during daytime, and up to 5 nautical miles at night) to the runway touchdown point. The system normally consists of two (PAPI-2) or four (PAPI-4) lamp housing units installed 600 to 800 feet from the runway threshold and offset 50 feet to the left of the runway edge. As previously mentioned, a PAPI-4 system is currently installed on the left side of Runway 33 and on the right side of 15.

### AIRPORT SIGNS

Standard airport signs provide runway and taxiway location, direction, and mandatory instructions for aircraft movement on the ground. A system of standard signs is recommended to indicate

runway, taxiway and aircraft parking destinations. *FAA Advisory Circular 150/5345-44G, Specifications for Taxiway and Runway Signs* and *FAA Advisory Circular 150/5340-18D, Standards for Airport Sign Systems*, should be followed for proper implementation of airport signs.

### RUNWAY GUARD LIGHTS (WIG/WAGS)

Runway guard lights are designed to alert pilots that they are approaching an active runway. They are installed at taxiway/runway intersections. They are primarily used to enhance the conspicuity of taxiway/runway intersections during low visibility conditions, but may be used in all weather conditions. Runway guard lights may consist of either a pair of elevated flashing yellow lights installed on either side of the taxiway, or a row of in-pavement yellow lights installed across the entire taxiway, at the runway holding position marking.

**Addison Airport is equipped with both in-pavement and elevated runway guard lights.**

### WIND CONE/SEGMENTED CIRCLE/AIRPORT BEACON

A segmented circle with a lighted wind cone, only required at airports with published non-standard traffic patterns, is recommended as the standard wind indicator and airport traffic pattern delineator. The airport rotating beacon is used for visual airport identification during nighttime hours and inclement weather conditions. As mentioned in the previous chapter, both these visual aid cues are in good working order.



### MAIN PARKING APRON LIGHTING

It is essential for safety and security that the main apron/ramp area is provided with adequate lighting to illuminate the main aircraft parking, fueling and hangar taxilane areas. Lighting seems to be adequate; however, if additional lighting is required at some point in the future, numerous economical light fixtures are available that offer adequate lighting.

## NAVIGATION SYSTEMS AND WEATHER AIDS

Airport navigation aids (NAVAIDs) are installed on or near an airport to increase the airport's reliability during night and inclement weather conditions and to provide electronic guidance and visual references for executing an instrument approach to the airport or runway.

*FAA Order 7021.2C, Airport Planning Standard Number One - Terminal Air Navigation Facilities and Air Traffic Control Services*, specifies minimum activity levels to qualify for instrument approach equipment and approach procedures. As forecasted in the previous chapter, approximately 4,100 operations, or 2.7 percent of operations, will be conducted under instrument conditions by the end of the 20-year planning period. The following describes the status of existing and new NAVAIDs used at general aviation airports.

### INSTRUMENT LANDING SYSTEM (ILS)

An ILS system is composed of two primary land-based components, the localizer and glideslope. The ILS system enables an appropriately equipped and piloted aircraft to be flown to a runway end with visibility as low as ½-mile and cloud ceilings at or near 200 feet above ground level. The localizer provides lateral (horizontal) alignment guidance while the glideslope provides descent (vertical) guidance. Often functioning with these two components are marker beacons, which provide for identification of interim points on the approach,

and an approach lighting system that provides for rapid identification of the runway environment during inclement weather conditions. The airport has both the localizer and the glideslope NAVAIDs serving both runway ends.

### DISTANCE MEASURING EQUIPMENT (DME)

DME provides a continuous readout of the distance remaining to the touchdown point at an airport or the equipment when not located with an airport.

### VERY HIGH FREQUENCY ONMI-DIRECTIONAL RADIO RANGE (VOR/VORTAC)

The VOR/VORTAC system emits a very high frequency radio signal utilized for both enroute navigation and non-precision approaches. It provides the instrument rated pilot with 360 degrees of azimuth information oriented to magnetic north. Due to the recent development of more precise navigational systems it is planned to be phased-out by the FAA (no additional enroute units installed after 1995/deactivation by 2010). The Cowboy VOR/DME, located 5.8 NM southwest of the field is employed for some of the standard terminal arrival and departure procedures at ADS.

### GLOBAL POSITIONING SYSTEM (GPS)

GPS is a highly accurate worldwide satellite navigational system that is unaffected by weather and provides point-to-point navigation by encoding transmissions from multiple satellites and ground-based data-link stations using an airborne receiver. GPS is presently FAA-certified for en-route and non-precision instrument approach navigation with precision instrument approaches based on GPS are being developed for commercial airports and coming on-line in the near future. The current program provides for GPS stand-alone and overlay approaches (GPS overlay approaches published for runways with existing VOR/DME, RNAV and NDB approaches). Recently, the selective availability segment of the channel was decommissioned, thereby enhancing the accuracy of the GPS signal. The Wide Area Augmentation System (WAAS) is under final development and



testing stages and when installed at or near an airport will provide a signal correction which will enable GPS precision approaches. A straight-in area navigation instrument approach is available to both runway ends utilizing GPS signals and on-aircraft receivers to guide aircraft to a safe landing at the Addison Airport.

### **AUTOMATED WEATHER OBSERVING SYSTEM (AWOS)/AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS)**

Automated weather systems consist of various types of sensors, a processor, a computer-generated voice subsystem, and a transmitter to broadcast minute-by-minute weather data from a fixed location directly to the pilot. The information is transmitted over the voice portion of a local NAVAID (VOR or DME), or a discrete VHF radio frequency. The transmission is broadcast in 20-30 second messages in standard format, and can be received within 25-nautical miles of the automated

weather site. AWOS/ASOS are significant for non-towered airports with instrument procedures to relay accurate and invaluable weather information to pilots. At airports with instrument procedures, an AWOS/ASOS weather report eliminates the remote altimeter setting penalty, thereby permitting lower minimum descent altitudes (lower approach minimums). These systems should be sited within 500 to 1,000 feet of the primary runway centerline. *FAA Order 6560.20B, Siting Criteria for Automated Weather Observing Systems*, assists in the site planning for AWOS/ASOS systems. According to all pertinent airport related information (Airport Facilities Directory, AirNav.com, FAA Form 5010), as well as a windshield survey, the Airport is equipped with an AWOS-3 that meets all of the parameters of FAA Order 6560.20B.



# LANDSIDE FACILITIES



## LANDSIDE FACILITIES

### TERMINAL AREA REQUIREMENTS

The terminal building serves both a functional and social capacity central to the operation, promotion and visible identity of any airport. The key terminal area requirements are developed in consideration of the following general landside design concepts:

- Future terminal area development for general aviation airports serving utility and larger than utility aircraft should be centralized.
- Planned development should allow for incremental linear expansion of facilities and services in a modular fashion along an established flightline. Major design considerations involve minimizing earthwork/grading, avoiding flood-prone areas and integrating existing paved areas to reduce pavement (taxilane) costs;
- Future terminal expansion should allow sufficient maneuverability and accessibility for appropriate types (mix) of general aviation aircraft within secured access areas;
- Future terminal area development should enhance safety, visibility, and be aesthetically pleasing;
- Industrial/Business park planning should be integrated with the overall plan for the terminal area and enable airside access for those industries that require it as an economic benefit.

### AIRCRAFT STORAGE (HANGARS)

Future hangar areas should achieve a balance between maintaining an unobstructed expansion area, minimizing pavement development and allowing convenient access. For planning purposes, hangars should accommodate at least 95 percent of all based general aviation aircraft. Typically, single-engine aircraft demand 1,000 to 1,200 square feet, twin-propeller aircraft require 1,200 to 3,000 square feet and business turboprop/jet aircraft require approximately 3,000 square feet. General hangar design considerations include the following:

- Construction of aircraft hangars beyond an established building restriction line (BRL) surrounding the runway and taxiway areas. Moreover, they must be built beyond the runway obstacle free zone (OFZ), runway and taxiway object free area (OFA), the runway visibility zone (RVZ) and remain clear of the FAR Part 77 Surfaces (Transitional, Approach and Primary) and Threshold Siting Surfaces.
- Maintaining the minimum recommended clearance between T-hangars - 75 feet for one-way traffic, and 125 feet for two-way traffic. Taxilanes supporting T-hangars should be no less than 25 feet wide. Individual paved approaches to each hangar stall are typically less costly, but not preferred to paving the entire T-hangar access/ramp area.



- Construction of additional hangar space to accommodate 95 percent of the based aircraft forecasts.
- Interior and exterior lighting and electrical connections on new hangar construction. Block-style straight-unit T-hangars occupy more space, but are generally preferred over nested T-hangars and can be extended more easily. Enclosed hangar storage with bi-fold doors is recommended.
- Adequate drainage with minimal slope differential between the hangar door and taxilane. A hard-surfaced hangar floor is recommended, with less than one percent downward slope to the taxilane/ramp.
- Segregate hangar development based on the hangar type and function. From a planning standpoint, hangars should be centralized in terms of auto access, and located along the established flight line to minimize costs associated with access, drainage, utilities and auto parking expansion.

### AIRCRAFT STORAGE (BASED AIRCRAFT/ITINERANT AIRCRAFT APRON)

Paved aircraft parking and tie-down areas should be provided for approximately 40 percent of the peak/design day itinerant aircraft, plus approximately 25 percent of the based aircraft. FAA airport planning criteria recommends 360 square yards (3,240 square feet) per itinerant aircraft space and approximately 400 square yards (3,600 square feet) per based aircraft. Other site specific apron planning and design considerations include:

- Maintaining the apron area beyond all airfield safety areas per airport design requirements (RSA, OFA, RPZ, OFZ and RVZ).
- Preserving the minimum runway centerline to aircraft parking apron separation of 500 feet for ARC D-III with approach visibility minimums not lower than 1-mile.

Planning for sufficient aircraft taxiing and maneuvering space, for entering and exiting the

aircraft parking apron without risk of structural damage, and to allow two-way passing of aircraft leading to the connecting taxiway. It is preferable for the main aircraft apron to be located near the mid-section of the primary runway with sufficient space to allow for a continuation of building and hangar expansion adjacent to the terminal area flight line.

### FUEL STORAGE REQUIREMENTS

Fuel storage requirements are based on the forecast of annual operations, aircraft utilization, average fuel consumption rates, and the forecast mix of general aviation aircraft. On average, the typical single-engine airplane consumes 12.0 gallons of fuel per hour and flies approximately 100 nautical miles (1.0 to 1.5 hours) per flight. Turbine aircraft generally will fly greater distances averaging 300 nautical miles and approximately 1.5 – 2.0 hours. Market conditions will determine the ultimate need for fuel tanks and their size. The following guidelines should be implemented when planning future airport fuel facilities:

- Aircraft fueling facilities should remain open continually (24-hour access), remain visible and be within close proximity to the terminal building or FBO to enhance security and convenience.
- Fuel storage capacity should be sufficient for average peak-hour month activity, which normally occurs during the summer months.
- Fueling systems should permit adequate wing-tip clearance to other structures, designated aircraft parking areas (tie-downs), maneuvering areas and object free areas (OFA) associated with taxilane and taxiway centerlines.
- The FAA recommends locating the fuel facilities beyond the runway safety areas (RSA) and the building restriction line (BRL). All fuel storage tanks should be equipped with monitors to meet current State and Federal environmental regulations, and be sited in accordance with local fire codes.



- A dedicated fuel truck is typically used for Jet-A due to the liability associated with towing and maneuvering these expensive aircraft up to and in the vicinity of fueling facilities.

Maintaining adequate truck transport access to the fuel storage tanks for fuel delivery.

Capable of storing at least a month's supply of fuel to minimize delivery charges.

### **AUTO PARKING, CIRCULATION, AND ACCESS REQUIREMENTS**

Automobile parking requirements are calculated using 1.4 spaces per design hour passenger, which is typical for non-towered general aviation airports. Based aircraft owners commonly park in their individual hangars while flying. Maintaining a dedicated public auto parking lot in close proximity to the terminal building to provide convenient access for pilots and passengers is essential. Per conversations with airport personnel, the existing terminal parking area is constrained and needs to be expanded to accommodate the additional future and current traffic needs. Potential areas for expansion of auto parking will be reviewed and taken into consideration in the Alternatives Chapter of this report.

### **SUMMARY OF AIRPORT TERMINAL AREA FACILITY REQUIREMENTS**

**Table 3.7, Summary – Aviation Facility Requirements,** summarizes terminal area facility requirements to accommodate the general aviation activity projected for the Airport for each of the three phases spanning the 20-year planning period. As the numbers below indicate, the airport's existing apron facilities are adequate for the existing operations level. However, these facilities will need to be expanded to accommodate the forecasted itinerant traffic. The existing apron will need to be expanded from the current size of 33,880 square yards to 46,000 square yards by the end of the planning period for the remainder of the planning period to accommodate the forecasts developed in the previous chapter.



**TABLE 3-7 SUMMARY – AVIATION TERMINAL FACILITY REQUIREMENTS**

FACILITY	EXISTING 2014	PHASE 1 (0-5 YEARS)	PHASE 2 (6-10 YEARS)	PHASE 3 (11-20 YEARS)
Based Aircraft	614	631	650	677
Annual Operations	93,500	101,800	110,500	128,900
Terminal Building				
Public Use Space	5,200 ft <sup>2</sup>	6,500 ft <sup>2</sup>	7,600 ft <sup>2</sup>	8,600 ft <sup>2</sup>
Lease Use Space	3,400 ft <sup>2</sup>	4,100 ft <sup>2</sup>	4,900 ft <sup>2</sup>	5,600 ft <sup>2</sup>
Total Building Space	8,600 ft <sup>2</sup>	10,600 ft <sup>2</sup>	12,500 ft <sup>2</sup>	14,200 ft <sup>2</sup>
Paved Auto Parking	40,100 ft <sup>2</sup>	49,800 ft <sup>2</sup>	58,200 ft <sup>2</sup>	65,700 ft <sup>2</sup>
Auto Parking Spaces	102	127	148	167
Aircraft Parking Apron				
Based Apron	27,600 yd <sup>2</sup>	28,400 yd <sup>2</sup>	29,300 yd <sup>2</sup>	30,400 yd <sup>2</sup>
Itinerant Apron	61,400 yd <sup>2</sup>	66,800 yd <sup>2</sup>	72,500 yd <sup>2</sup>	84,600 yd <sup>2</sup>
T-Hangars	328,900 ft <sup>2</sup>	334,100 ft <sup>2</sup>	340,100 ft <sup>2</sup>	353,100 ft <sup>2</sup>
Executive/Corporate <sup>1</sup>	686,400 ft <sup>2</sup>	711,100 ft <sup>2</sup>	769,200 ft <sup>2</sup>	798,700 ft <sup>2</sup>
Annual Fuel Flowage				
AvGAS (100LL)	576,421 gallons	589,600 gallons	580,900 gallons	603,000 gallons
Jet-A	5,880,150 gallons	6,626,900 gallons	10,534,600 gallons	20,193,000 gallons
Total Fuel Flowage	6,456,571 gallons	7,216,500 gallons	11,115,500 gallons	20,796,000 gallons

SOURCE: FAA ADVISORY CIRCULAR 150/5300-13A CHANGE 1, AIRPORT DESIGN.

<sup>1</sup> THIS TYPE OF HANGAR TYPICALLY ACCOMMODATES MORE THAN ONE AIRCRAFT.


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# AIRPORT ALTERNATIVES ANALYSIS

## CHAPTER 4

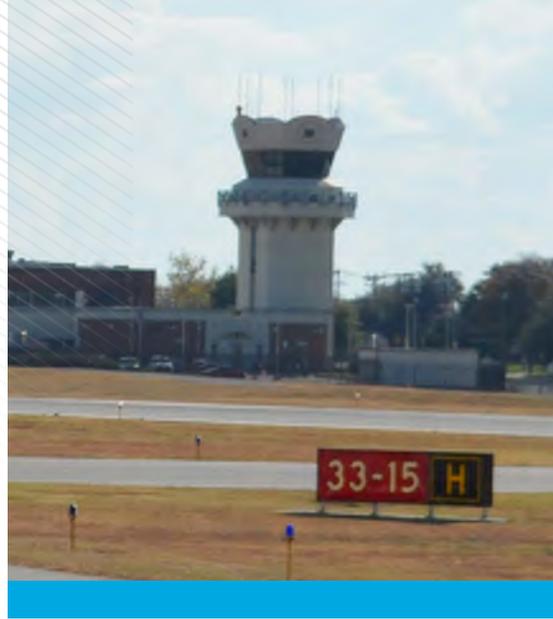
INTRODUCTION ..... 4-2

AIRSIDE  
ALTERNATIVES/  
RECOMMENDATIONS ..... 4-4

LANDSIDE  
DEVELOPMENT  
CONCEPTS ..... 4-9



# INTRODUCTION



## INTRODUCTION

This chapter describes the airfield and terminal area development options for the facility design criteria identified and recommended in the *Facility Requirements* chapter. The focus of this section was to evaluate the merits and deficiencies of alternatives, and provide the technical basis necessary for determining a preferred or recommended airport development plan and property management direction.

While the assessment of development options or concepts was based on technical judgment, the most favorable airport improvement option should be compatible with regional and local planning policies and design standards. Additionally, it should be consistent with social, economic, political and environmental goals. In order to determine the best possible course of action, the alternatives incorporate the following factors in the development and evaluation of potential design options:

- Compliance with FAA airport and airspace guidelines and standards;
- Adherence with the short- and long-range goals and objectives of the Airport and Town of Addison;
- Compatibility with existing and proposed on- and off-airport land uses; and,
- Minimization of potential environmental impacts.

Critical to the success of Addison Airport (ADS) is an effective use of all the properties at the airfield. The need to examine the redevelopment of landside area use was evident; however, property at ADS is at a premium and the need to see the highest and best use of each parcel is critical to ADS continued success. Additional property may be capable of providing new revenue sources; but, property surrounding ADS is costly and seldom on the open market. Alternatives were laid out to most effectively use airport property, and in some cases adjacent property to achieve the most income from redevelopment and future development of ADS and maximizing the aviation business potential for the community.

For the purpose of delineating airside and landside in this chapter, airside facilities are those used for supporting movement and circulation of aircraft and include runways, taxiways, and navigational aids, as well as the airfield service road. Landside facilities pertain to the aircraft apron areas, hangar development areas, terminal area development, and any business park/industrial development areas.

Because all airport functions relate to and revolve around the runway/taxiway layout, airside development is typically evaluated before landside development. Specific considerations include runway length, runway width, and approach protection criteria needed to support the existing and anticipated use of ADS through the planning period. Following a review of these airside development alternatives, a review of landside

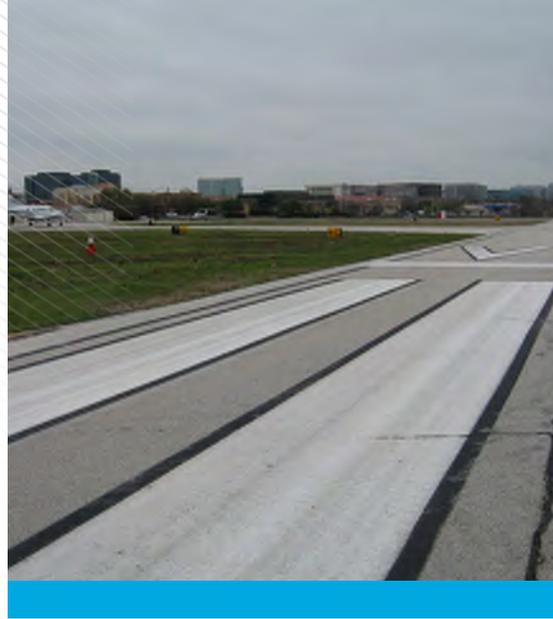


development is also be presented. As part of this process, it is important to establish a set of goals that frame future ADS development and redevelopment. These goals include:

- Providing a safe, efficient operating environment;
- Providing an effective direction for future development at the Airport.
- Enhancing the income potential for ADS by ensuring the highest and best use of available airport property to maximize airport revenue;
- Plan and develop ADS in line with the future needs and requirements of the Airport and Town of Addison; and
- Encourage protection of the established investment by minimizing potential land use conflicts.



# AIRSIDE ALTERNATIVES/ RECOMMENDATIONS



## AIRSIDE ALTERNATIVES/ RECOMMENDATIONS

### RUNWAY, TAXIWAY, AND INSTRUMENT APPROACH CAPABILITIES

#### RUNWAY CAPACITY AND ORIENTATION

The ADS runway, Runway 15-33, provides adequate capacity to accommodate the forecast aircraft operations without excessive delay with an annual service volume just below 50 percent throughout the planning period. The orientation of Runway 15-33 provides adequate crosswind coverage for the entire fleet of aircraft forecast and expected to utilize ADS.

**Recommendation:** The existing runway configuration provides adequate operational capacity and wind coverage; thus, no new runways are recommended for future development.

#### RUNWAY LENGTH

The existing runway length at ADS is adequate in accommodating the existing and forecast operational demand. As shown in the previous Facility Requirements chapter, Runway 15-33, with a length of 7,203 feet, accommodates 75 percent of the national GA fleet at 60 percent useful load and 100 percent of this GA fleet at 60 percent useful load for all GA aircraft weighing less than 60,000 pounds. For aircraft weighing in excess of 60,000 pounds the runway length is sufficient for most users without significant restrictions; however, aircraft operators need to calculate individual aircraft runway length requirements for each operational situation and unique conditions.

**Recommendation:** Retain the existing runway length of 7,203 feet for Runway 15-33.

#### DIMENSIONAL CRITERIA

The primary concerns with regard to the runway system dimensional criteria relate to FAA specified safety area, object free area, and taxiway setbacks. Each runway has its own set of circumstances relating to these dimensional criteria. As an urban airport that was initially developed privately and is now in public ownership through the Town of Addison, ADS has a number of dimensional criteria that fall short of Federal Aviation Administration (FAA) and Texas Department of Transportation, Aviation Division (TxDOT) recommended standards.

As identified in the Facility Requirements chapter, the safety areas beyond the south runway end are insufficient to meet standards; however, an engineered materials arresting system (EMAS) has been installed beyond the Runway 33 end. The EMAS brings the runway safety area into compliance. The installation of the EMAS system aids in providing for the full safety area beyond the Runway 33 end for all declared distance calculations.

Another substandard dimensional criteria involves the centerline-to-centerline offset of Taxiway Alpha from Runway 15-33. The offset is currently at 300 feet while the standard is 400 feet. ADS has a modification to standards for Taxiway Alpha. The cost to relocate in accordance with standards and loss of existing terminal area facilities would be cost prohibitive.

The location of buildings/structures in the terminal area is defined by adequate airspace clearance



beneath Federal Aviation Regulations (FAR) Part 77 Imaginary Airspace Surfaces. Beyond the primary surface, 1,000 feet wide at ADS, is the transitional surface that slopes up at a 7:1 angle. This slope is used to establish a building setback behind which construction of buildings to a given height can be defined. At ADS the building restriction line (BRL) is set at 550 feet. ADS has a modification to standards for the establishment of this non-standard BRL.

**Recommendation:** These deficiencies have not significantly impacted safe airport operations. With the installation of the EMAS beyond the Runway 33 end, new declared distances have been implemented. Retaining the current modifications to standards for the Taxiway Alpha offset and BRL is recommended.

### INSTRUMENT APPROACH CAPABILITIES

Existing instrument approaches at ADS include an instrument landing system (ILS)/localizer (LOC) and area navigation (RNAV)/global positioning system (GPS) procedures to each runway end. The coinciding visibility and ceilings minimums for these approaches were referenced and shown in **Table 1-9** of the Inventory Chapter.

While most airports desire the best and most accommodating approach to each runway end, this desire does not come without additional increased restrictions or potential compatibility issues. Pursuit of improved visibility minimums below the existing 1-mile minimums at ADS introduces a larger runway protection zone (RPZ) size. At present, ADS's RPZs are not owned in fee simple as recommended by FAA guidance. Lowering the visibility minimums for the instrument approach procedures increases the RPZ size and could bring into play stricter guidance on property uses within an RPZ. Based on conversations with airport management, it is not the desire of the Airport to pursue improved approach minimums but to maintain and keep intact the existing approaches and respective visibility and ceiling minimums with which ADS is served today.

Issues with the existing ILS serving the approaches to the Runway 33 have been discovered. ADS recently submitted an FAA Form 7460 to the FAA for the construction of a new hangar. The FAA's

evaluation found that this new hangar would create too much reflectivity of the ILS/LOC signal and render it unreliable for use in the execution of ILS instrument approaches to the Runway 33 end. There are ILS side-band signal zones (3°, 5°, and 10°) for both of the current localizers. The Runway 33 localizer is an older system and has all three of these side-bands while the Runway 15 ILS only has the first two. Based on these zones and level of development, ADS has become a highly reflective environment for the radio signals generated by the localizer systems. As the localizer sends out its signals, the side-band signals are reflecting off of the surfaces/sides of hangars/buildings along the terminal area frontage back into the main signal zone. In order for ADS to continue the redevelopment efforts in the terminal area a solution to the side-band reflectivity is needed in both the short-term and long-term period.

### Short-term Solutions

- Plan new/redevelopment east of the existing flightline allowing for existing structures to shield ILS signals
- Replace/upgrade the Runway 33 ILS
- Apply a non-reflective coating to the western sides of all ADS buildings along Taxiway Alpha

### Long-term Solutions

- Eliminate the Runway 33 ILS in favor of a similarly capable GPS procedure
- Construct new structures with non-reflective surfaces or with non-reflective components
- Incorporate and implement non-reflective construction practices into the ADS Development Standards

**Recommendation:** The Airport does not own all of the recommended property associated with the RPZs off each runway end and these areas are developed to varying degrees. Some properties within the Runway 15 RPZs are beyond the Town of Addison boundaries and fall within the City of Carrollton. It is recommended this property be purchased in fee simple, when available. However, if this is unachievable or creates an undue burden for the Town, the Airport should pursue acquisition of avigation easements that give ADS the ability





to control the height of objects within these areas and the right for aircraft to fly over and operate in the same. The Town of Addison has a zoning ordinance to limit objects of natural growth and man-made objects within specific zones. This ordinance could be modified to reflect this control with RPZs in lieu of property or easement acquisition. Coordination and cooperation will be required from adjoining/impacted municipalities. Further it is recommended ADS retain the existing instrument approach procedures and minimums and replace/upgrade the Runway 33 ILS.

### TAXIWAY SYSTEM

The existing ADS taxiway system provides efficient routing for taxiing aircraft between the Runway 15-33 and various landside use areas. Currently, Taxiway Alpha, the east-side parallel taxiway is offset centerline-to-centerline a distance of 300 feet from Runway 15-33. This taxiway does not meet FAA runway and taxiway design criteria for a D-III airport; however, as previously mentioned, ADS has a modification to standards for its location. Taxiway Bravo, the west-side partial parallel taxiway, for Runway 15-33 is offset a distance greater than the FAA design standard of 400-feet. At present it traverses from Taxiway Foxtrot near mid-field to approximately 300 feet south of Taxiway Charlie at the entrance to the Bravo Series T-hangars. Both parallel and connecting taxiways are equipped with medium intensity lights and appropriate signage. There are runway guard lights and signs installed at all Runway 15-33 east-side hold lines.

Based on the potential to develop the west side of ADS, a likely scenario would be to plan and construct the northern half of Taxiway Bravo. This new access point would eliminate the necessity for aircraft on the west-side to cross Runway 15-33 to reach the Runway 15 end. Additionally, a full parallel taxiway on the west-side would open new areas for hangar development, as shown later in this chapter, and will increase the airports throughput capacity decreasing any delays experienced based on the existing airfield configuration. At this writing the airport is planning, with aid from TxDOT, to extend Taxiway Bravo from its current northern terminus to Taxiway Golf and reconstruct it at 35 feet wide. A short southern extension of approximately 215 feet is planned to connect Taxiway Bravo to the

Runway 33 end. These improvements will serve the existing through-the-fence (TTF) operators on the west-side well and provide opportunities for facility improvements and expanded operations by these operators. These TTF facilities operate a variety of aircraft that range in size from small GA aircraft like a Piper Arrow to larger business/corporate aircraft like Cessna Citations. As Taxiway Bravo improvements are completed with an extension to mid-field and the Runway 15 end in the future the potential opens to heavier use of Bravo and an increase in the size of aircraft being utilized by these TTF operators. As the TTF operator's aircraft size increases beyond the ARC C-II size and reflects similar aircraft of users on the east-side it will warrant an increase in Bravo's width from 35-feet to 50-feet to meet ADS III standards on both east and west sides of the airfield.

**Recommendation:** Programming for Taxiway Bravo extension to the Runway 15 end, widening it to 50 feet as demand warrants, and the associated medium intensity taxiway lights (MITL) and signage.

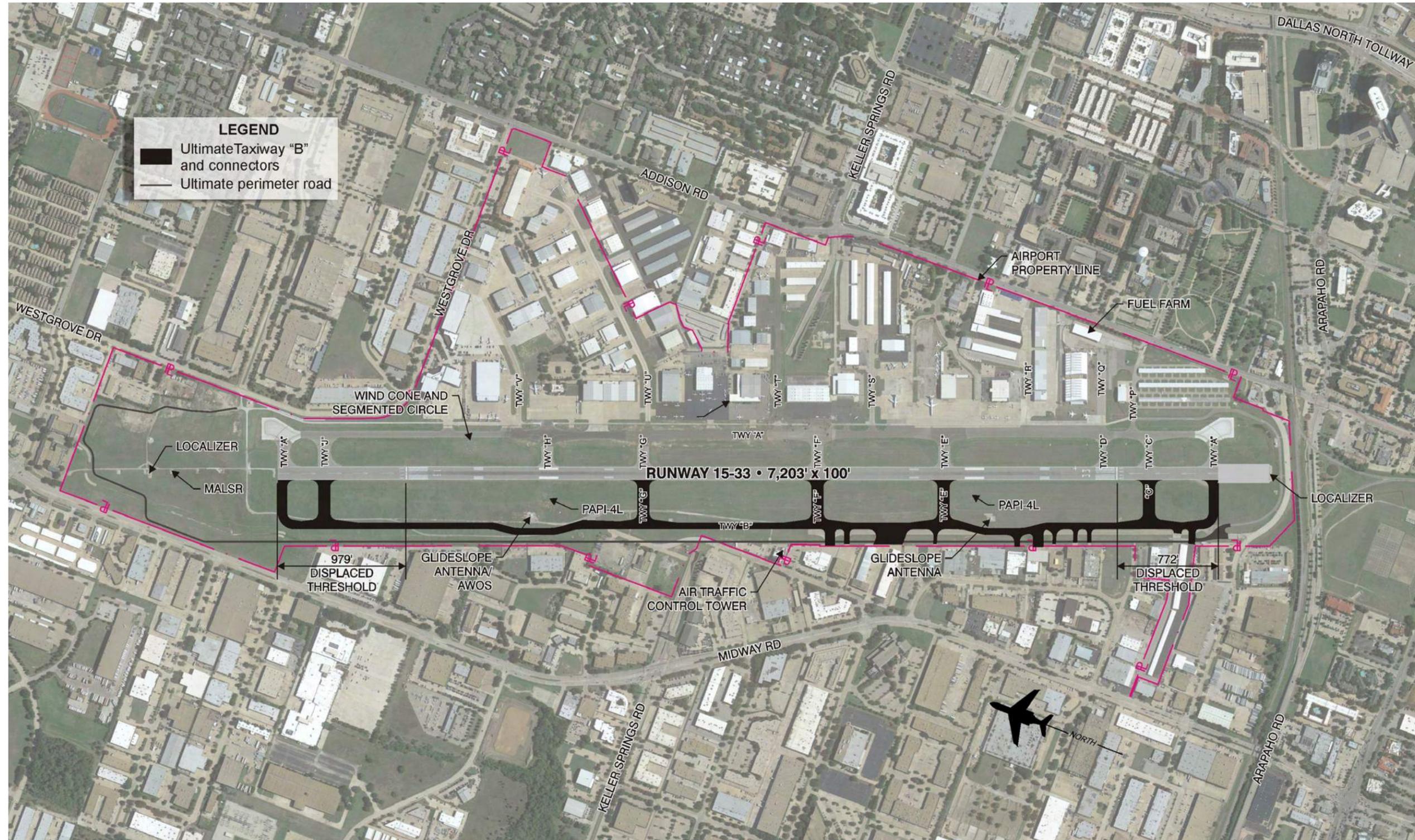
### AIRPORT PERIMETER ROAD

Vehicular access by airport operations and maintenance personnel and tenants is an important aspect of airport management and the day-to-day airport and tenant operations. The east-side and southern end of the airfield are served well by an existing perimeter road. The west-side perimeter road does not allow access to tenants north of the Bravo/Charlie intersection requiring vehicles to utilize Bravo. The findings of the 2012 ADS Technology and Physical Security Systems study indicated a need for the west-side perimeter road. Extending the west-side perimeter road to the north property boundary, across the northern end, and rejoining the east-side perimeter road provides airport operations and maintenance personnel the ability to provide a higher level of vigilance and security around the ADS perimeter.

**Recommendation:** Programming and completing a perimeter road that provides complete perimeter access by airport operations and maintenance personnel and tenant access on both east and west sides of the airfield.

**Figure 4-1** graphically illustrates the recommended airside development for the Airport.

FIGURE 4-1 RECOMMENDED AIRSIDE DEVELOPMENT



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# LANDSIDE DEVELOPMENT CONCEPTS

## LANDSIDE DEVELOPMENT CONCEPTS

With the framework of the Airport's ultimate airside development identified, concepts involving the placement of landside facilities can now be analyzed. The overall objective of the ADS landside development is to identify and illustrate the highest and best use of areas on or adjacent to the airfield for new development but more specifically for redevelopment of this mature urban general aviation (GA) reliever airport.

Concepts for the development of aviation use areas at ADS include considerations for the various types of GA and corporate aircraft storage facilities and aircraft maintenance operations. Facilities to accommodate and better serve the existing and future fixed base operators (FBO) and other commercial and non-commercial tenants is the focus for much of the regrowth and reenergizing within the ADS landside.

### ADS LANDSIDE DEVELOPMENT AREA CONCEPT

Landside development at ADS is nearing a critical and important stage in the regeneration for ADS that was identified through the ADS Strategic Plan development. Three overall goals from the ADS Strategic Plan have been laid out that guide and direct the development of concepts and options for new development and redevelopment within the ADS landside. These goals include:

- Continuing to enhance the airport's overall value for the benefit of ADS stakeholders.
- Fully integrating ADS with the Town of Addison.
- Continuing to promote innovative practices in all aspects of airport management development, operations, and maintenance, where practical.

The primary focus for regeneration of ADS is addressing the number of leases that are due to expire during the next eight years. Currently ADS has 47 ground leases on which private improvements have been made on the Airport's east side. Of these, 25 are set to expire in eight years or less, nearly half of which return in years seven and eight. Lease periods are depicted in the Inventory chapter on **Figures 1-3, 1-4, and 1-5**. As evidenced by these figures the expiring leases are spread throughout the ADS east side.

Initially, seven areas on the east side and three on the west side of ADS were identified for new development or regrowth/redevelopment based on these expiring leases and available property. **Figure 4-2** shows the ten areas under consideration. Three options for each area were developed to reflect the broad range of potential options. Each of these original options are in **Appendix G**. These options were presented to the Executive Committee (EC), Project Steering Committee (PSC), and airport tenants and public for review and comments. The tenant and public portion of this process was an effort to achieve the ADS Strategic Plan Strategy 1-4. The overall goal of the information presented



was to gain guidance and direction towards refining the alternatives process and options focused on identification of a preferred option in each development area that achieves the highest and best use of available property at ADS.

Based on review comments from the EC, PSC, and tenants/public, the ten original areas were in some cases further divided and an additional area along Taxilane Uniform was added into the mix of regrowth opportunities at ADS. Examining the regrowth/redevelopment area uses based on each individual taxiway/taxilane at ADS reveals an existing pattern of use and allows each taxiway/taxilane to be defined by this user type or as a taxiway/taxilane neighborhood. It also allows the planning process to redefine a taxilane's use based on further discovery and future needs outlined to include: airplane design group (ADG), tenant type, pavement strength, design standards, wayfinding signage, and street-side aesthetics

without impacting tenants with greater than eight years remaining on their current lease in most cases.

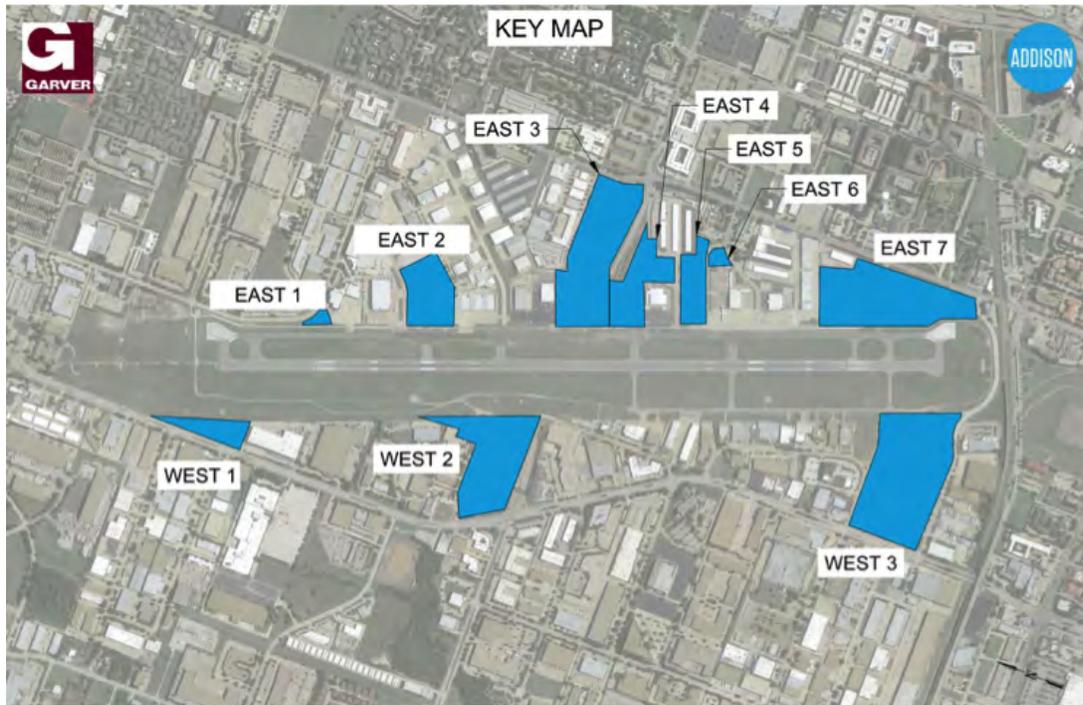
At ADS there are a wide variety of tenants in both ground leases and hangars owned/operated by the Airport. Some of these tenants are commercial tenants while others are non-commercial tenants. Examples of commercial tenants include FBOs, flight training, and aircraft repair shops. Corporate flight departments, individual aircraft owners, and T-hangar tenants are all examples of non-commercial tenants. Based on existing ADS data and experience with tenant types at various other airports, a set of ratios was developed to reflect gross area needed for hangar/building/office, aircraft parking/maneuvering apron/ramp, and automobile access/parking. **Table 4-1** outlines the development area ratios for each tenant type used in the evaluation and refinement of each preferred development option at ADS.

**TABLE 4-1 TENANT DEVELOPMENT AREA RATIOS**

	RAMP	HANGAR	AUTO PARKING
<b>Commercial Tenants</b>			
Fixed Base Operator	33%	33%	33%
Aircraft and Power plant (A&P) / Avionics Shop	40%	40%	20%
Flight Training	50%	40%	10%
Charter (Part 135)	33%	33%	33%
Aircraft Sales	40%	40%	20%
Museum	33%	33%	33%
Cargo	50%	40%	10%
Aircraft Storage	40%	50%	10%
<b>Non-Commercial Tenants</b>			
Government/Terminal	66%	—	33%
Corporate Flight Department	40%	30%	30%
T-Hangar	60%	40%	—
Individual Aircraft Owner	40%	40%	20%



FIGURE 4-2 REGROWTH/REDEVELOPMENT AREAS



Another factor that directly affects the taxiway/taxilane neighborhood concept is the size of aircraft and space available to meet safety and design standards. Taxiway Alpha, the full length parallel taxiway serving the east side of Runway 15-33, can be defined as its own taxiway neighborhood. Similarly, Taxiway Bravo, the partial parallel taxiway on the west side that serves airport property and through-the-fence operators, can be defined as its own taxiway neighborhood. Each taxilane extending east or west from either of these taxiways supporting terminal operations has been designated based on its physical parameters and operations type. The Inventory chapter outlined the parameters surrounding and defining an airport design group (ADG) and **Table 1-8** delineated the existing taxiway/taxilane design group (TDG) for each ADS taxiway/taxilane. Bringing this concept forward and defining each taxiway/taxilane neighborhood by future TDG/ADG is shown in

**Table 4-2.** **Figure 4-3** depicts the taxiway/taxilane neighborhoods and the various areas considered for new development or redevelopment within the ADS terminal area on both the east and west sides of the airfield.

### DEVELOPMENT OPTIONS EVALUATION AND REFINEMENT

Each of the three options created for the ten original regrowth/redevelopment areas was reviewed by the EC, PSC, and tenant/public. Based on comments received in committee and tenant/public meetings as well as further discussions with airport/town staff, these options were reevaluated to outline the redevelopment basis to include: ADG, tenant type, pavement strength, street-side aesthetics, and tenants with eight years or less remaining on their current lease. This process identified tenant type along a given taxilane, design standards, and the development area ratios



**TABLE 4-2 LANDSIDE TAXILANE DESIGN GROUP AND SAFETY STANDARDS**

TAXIWAY/ TAXILANE	TDG/ADG	ACUTAL WIDTH (FT.)	FUTURE DESIGN WIDTH (FT.)	FUTURE TAXIWAY/ TAXILANE SAFETY AREA (FT.)	FUTURE TAXIWAY/ TAXILANE OBJECT FREE AREA (FT.)
Alpha	III	50	50	118	186
Quebec	III	50	50	118	162
Romeo	II	40	35	79	115
Sierra	II/I	40/25	35/25	79/49	115/79
Tango	II	35	35	79	115
Uniform	II	40	35	79	115
Victor	III	40	50	118	162
Bravo	III	50	50	118	186
Lima	I/II	N/A	25	49	79
Mike	I/II	N/A	25	49	79
November	I/II	25	25	49	79

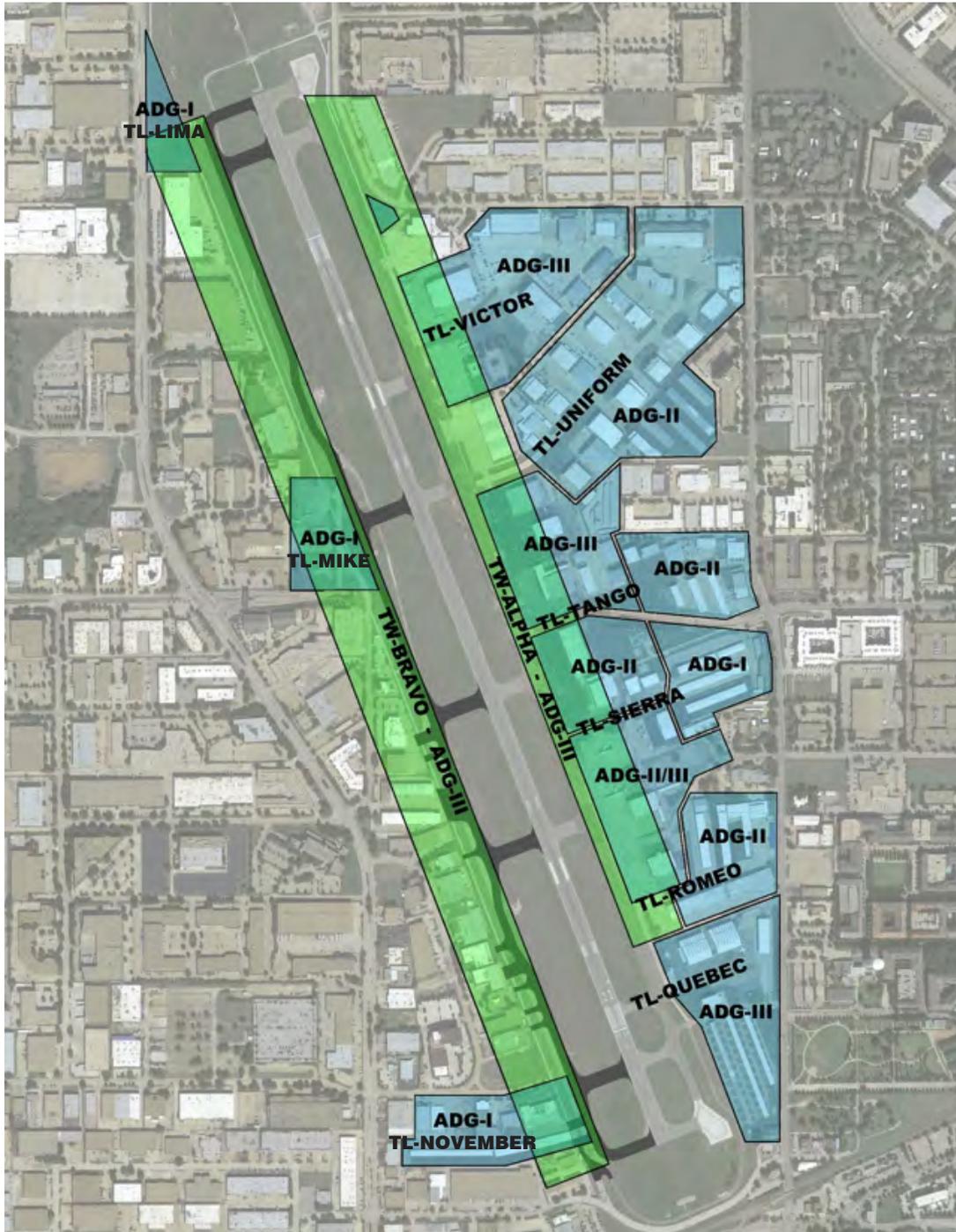
needed for each tenant type. The objective of this process was to arrive at a preferred/recommended option within each taxiway/taxilane neighborhood that defines the future development and regrowth during the next critical eight year period.

Concurrent with the airfield objectives, an evaluation of the needs to guide the blending of ADS with the Town of Addison from an aesthetics standpoint was undertaken. This blending effort is focused on reducing the industrial look and feel at ADS and provide recommendations, where

appropriate, for the ADS Development Standards ([Appendix F](#)), developed during this master plan, to take effect. This aesthetics blending is most pronounced along Addison’s thoroughfares surrounding ADS and those roads internal to the airfield that connect ADS to the Town. Recommended improvements include: wayfinding signage, roadway improvements, street lighting, artistic placements, green spaces, and pocket parks.



**FIGURE 4-3 TAXIWAY/TAXILANE NEIGHBORHOODS**



### TAXILANE LIMA NEIGHBORHOOD

The Taxilane Lima Neighborhood is a future development area that replaces the West-side Area 1. The Lima Neighborhood encompasses approximately three acres, part of which is airport property and a portion that is privately owned. The property is undeveloped but has had a number of development proposals over the years expressed by the private property owner. This area is best suited for hangar options to accommodate ADG A-I/B-I to B-II aircraft or a helicopter operating and maintenance facility. Three potential development options were presented for review and consideration (see [Appendix B](#)) with the preferred option presented in [Figure 4-4](#) and [Table 4-3](#).

#### Recommendation:

- Develop a new helicopter FBO hangar complex with auto parking;
- Install new helipad to conduct simultaneous visual approaches with Runway 15-33;
- Develop helicopter parking apron with four parking pads; and,
- Construct a taxiway connection with the future extension of Taxiway Bravo to diversify utility and accommodate fixed wing aircraft use of this development.

**ADS Strategic Plan strategies:** Strategy 1-2, 1-3, 2-1, 2-2, and 2-4.

**TABLE 4-3 TAXILANE NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
West Area 1 Taxilane Lima	ADG I/II	Helicopter Fixed Base Operator	New Construction Expansion	Midway Road	N/A



FIGURE 4-4 TAXILANE LIMA NEIGHBORHOOD PREFERRED OPTION



### TAXILANE MIKE NEIGHBORHOOD

The Taxilane Mike Neighborhood replaces West-side Area 2 and encompasses approximately five acres of current airport property. Options were developed that only utilized the existing airport property for aeronautical use facilities. Properties beyond the airport boundary had development options proposed out to Midway Road focused on replacing the existing commercial building structures with a corporate office complex that would utilize hangar facilities on airport property. Three potential development options were presented for review and consideration (see [Appendix G](#)) with the preferred option presented in [Figure 4-5](#) and [Table 4-4](#).

#### Recommendation:

- Develop 29 new T-hangar units (16 42-foot door units and 13 48-foot door units);
- Install aviation gasoline (AvGAS) fuel facility with 24-hour credit card system;
- Construct a new controlled access, public building containing tenant lounge, restrooms, meeting rooms, flight planning, and storage;
- Provide new auto parking and access; and,
- Develop a pocket park at the north end of the site west of the perimeter road.

**ADS Strategic Plan strategies:** Strategy 1-2, 1-3, 2-1, 2-2, and 2-4.

**TABLE 4-4 TAXILANE MIKE NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
West Area 2 Taxilane Mike	ADG I/II	Light GA Aircraft Storage Public Space/Park	New Construction 12,500 lb. SW	Kellway Circle	N/A

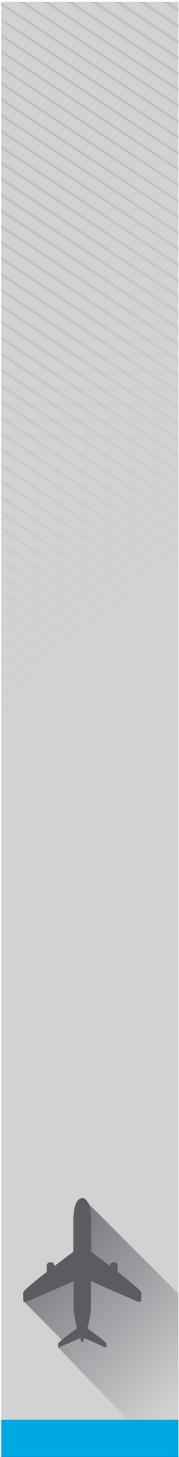
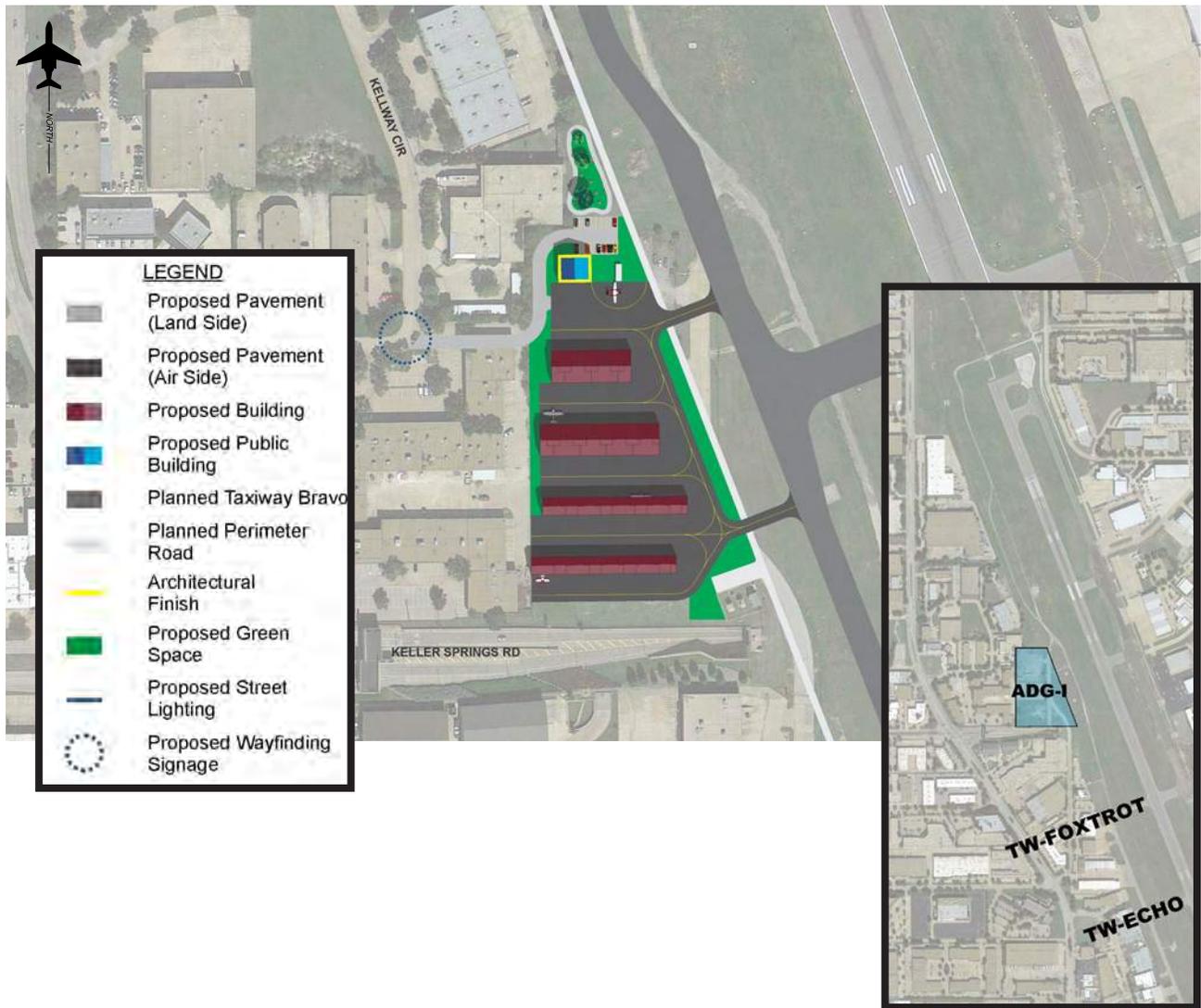


FIGURE 4-5 TAXILANE MIKE NEIGHBORHOOD PREFERRED OPTION



### TAXILANE NOVEMBER NEIGHBORHOOD

The Taxilane November Neighborhood and West-side Area 3 encompass approximately 22 acres. The area currently holds the airport's west-side T-hangars, a few small hangars, airport maintenance facilities, and various commercial buildings. This neighborhood is best suited for corporate aircraft in ADG B-II/C-II to D-III aircraft near Taxiway Bravo and for ADG A-I/B-I aircraft within the remaining area. Three potential development options were presented for review and consideration (see [Appendix G](#)) with the preferred option presented in [Figure 4-6](#) and [Table 4.5](#).

### RECOMMENDATION:

- Develop new corporate hangar and apron fronting onto Taxiway Bravo;
- Acquire additional properties, as available, to foster proposed development;
- Develop a new small/light GA aircraft maintenance shop and apron;
- Construct 37 additional T-hangars (48-foot door units);
- Develop a new controlled access, public building containing tenant lounge, restrooms, flight planning, and meeting rooms; and,
- Install recommended wayfinding signage, lighting, and landscaping along Midway Road, Wright Brothers Drive, and Wiley Post Road.

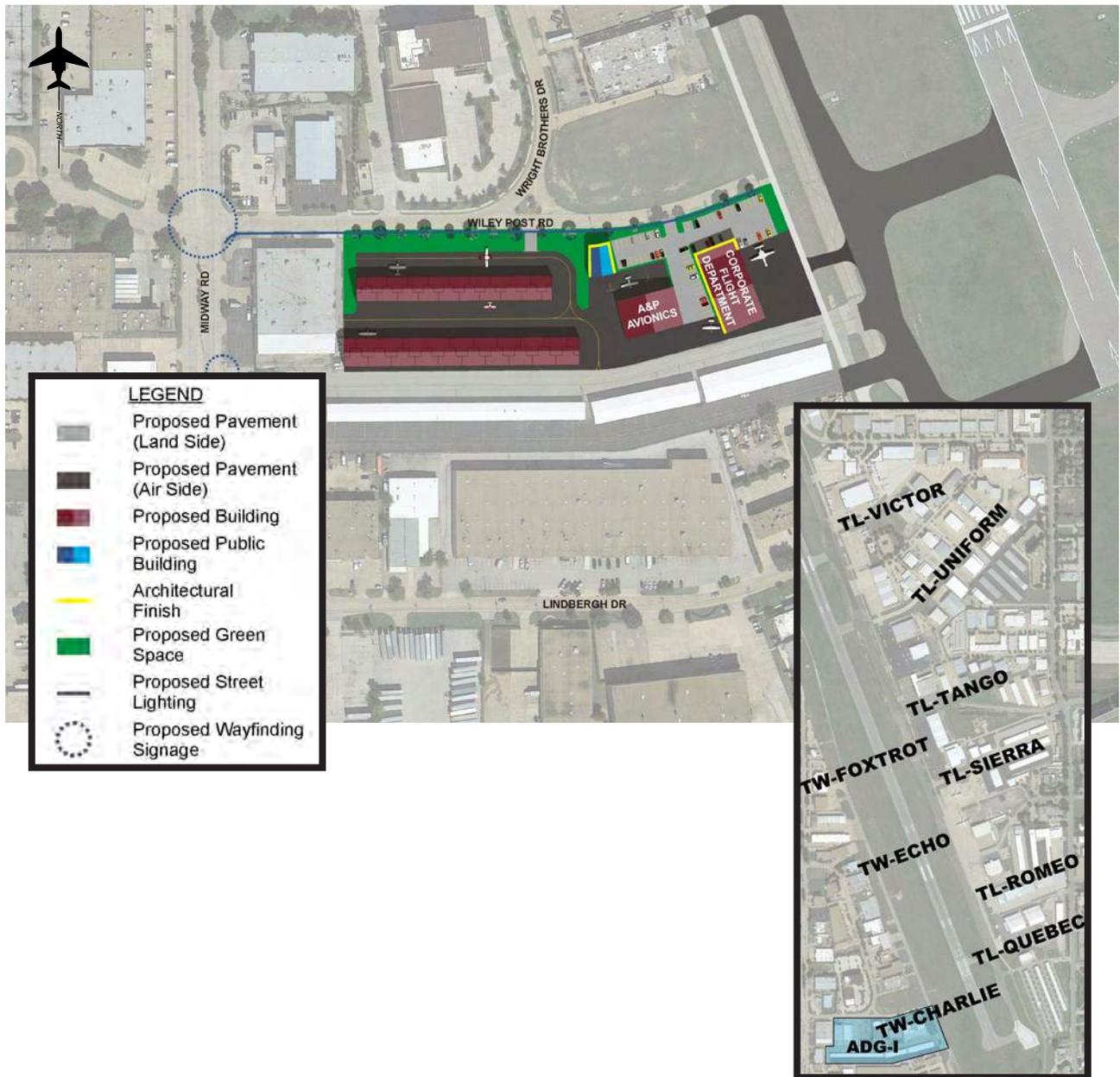
**ADS Strategic Plan strategies:** Strategy 1-2, 2-1, and 2-4.

**TABLE 4-5 TAXILANE NOVEMBER NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
West Area 3 Taxilane November	ADG III/II/I	Corporate Flight Dept. A&P / Avionics Light GA Storage	New Construction Reconstruction Expansion	Wiley Post Road	N/A



FIGURE 4-6 TAXILANE NOVEMBER NEIGHBORHOOD PREFERRED OPTION



### TAXILANE QUEBEC NEIGHBORHOOD

The Taxilane Quebec Neighborhood encompasses the southeast quadrant of the airfield to including the Taxilane Papa T-hangar area previously described as East-side Area 7. The Quebec Neighborhood encompasses approximately 16 acres split into two parts. The southern portion occupied mostly by the Papa T-hangars is approximately 11 acres while the northern optional parcel occupied by the Collins hangars encompasses 5 acres. Three potential development options were presented for review and consideration (see [Appendix G](#)) with the preferred option presented in [Figure 4-7](#) and [Table 4-6](#).

#### RECOMMENDATION:

- Retain Collins hangars (A1 and A1A) based on their iconic and historic nature and expand auto parking on east end;
- Define fuel truck turnaround area to open auto parking area for Collins hangars;
- Relocate the fuel delivery truck exit onto Addison Road;
- Redevelop Papa T-hangar site with a new FBO/corporate hangar complex housing multiple hangars and commercial space with a restaurant and viewing area atop connected to future parking garage east of Addison Road;
- Develop aesthetics blending park and pedestrian space between proposed FBO/ corporate development and Addison Road with direct ties to Addison Circle Park at the existing crosswalks; Included within will be lighted walkways, park benches, art features, landscaping, and a pocket park at the south end with an airfield viewing area;
- Town to develop off-airport three-story parking structure at the northeast intersection of Addison Road and Addison Circle to support town amenities like the conference center and theater as well as ADS and recommended improvements;
- Realign Roscoe Turner Drive with Addison Circle;
- Add wayfinding signage at intersection of Addison Road and Addison Circle, and at the southern entrance to the Quebec Neighborhood; and,
- Install street lighting along the west side of Addison Road that continues the aesthetics blending between ADS and the Town.

**ADS Strategic Plan strategies:** Strategy 1-2, 1-3, 2-1, 2-2, and 2-4.

**TABLE 4-6 TAXILANE QUEBEC NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
West Area 7 Taxilane Quebec	ADG III	Fixed Base Operator Aircraft Storage A&P / Avionics	Reconstruction Expansion	Addison Road	Collins Hangars (A1, A1A)

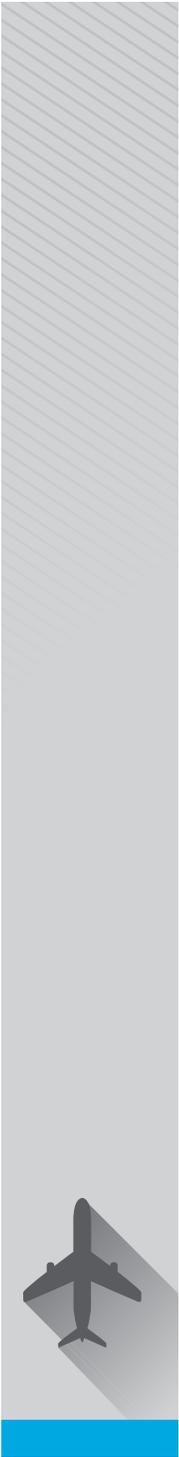
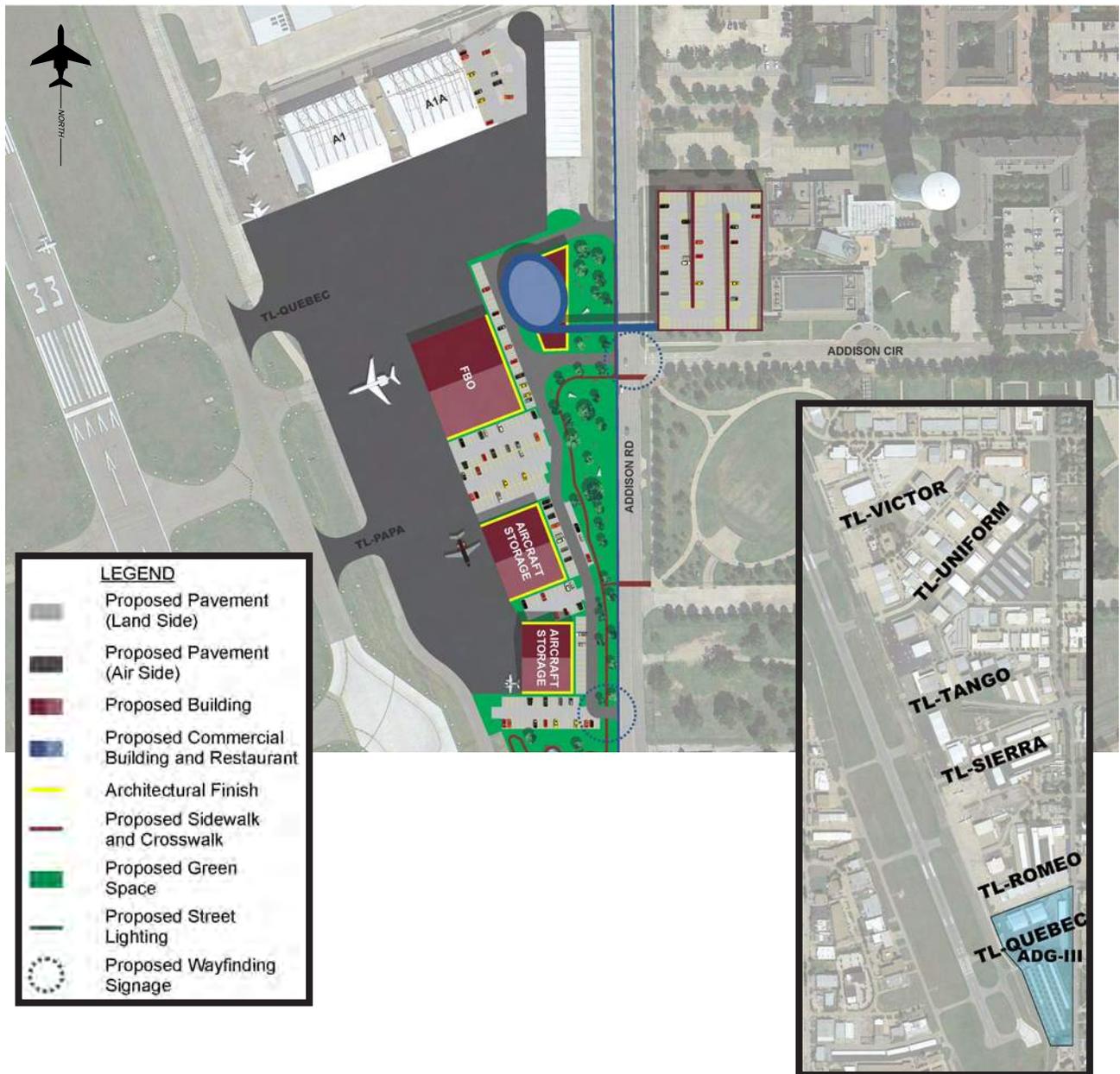


FIGURE 4-7 TAXILANE QUEBEC NEIGHBORHOOD PREFERRED OPTION



### CORPORATE HANGAR NEIGHBORHOOD

The Corporate Hangar Neighborhood encompasses much of what was originally presented as East-side Areas 5 and 6 that originally included approximately five acres. The area was expanded to take in approximately 16 acres for new development and regrowth/redevelopment. The Corporate Hangar Neighborhood along Taxiway Alpha between Taxilane Sierra and Airport Parkway is currently home to the PepsiCo hangar (A3), Eagle Land & Cattle hangar (A2), and Sky B&B hangar (A4). This neighborhood is well served from the landside by Eddie Rickenbacker Drive and Airport Parkway. The preferred development option for the Corporate Hangar Neighborhood is depicted on three potential development options were presented for review and consideration (see [Appendix G](#)) with the preferred option presented in [Figure 4-8](#) and [Table 4-7](#).

### RECOMMENDATION:

- Develop new corporate hangar north of A4 and west of S2;
- Redevelop corporate hangar on S2 location;
- Expand auto parking for each new tenant;
- Add overflow automobile parking on former administration building site;
- Install wayfinding signage at intersections of Airport Parkway with Addison Road and Eddie Rickenbacker Drive;
- Add lighting along Eddie Rickenbacker Drive and Airport Parkway; and,
- Install recommended landscaping along Eddie Rickenbacker Drive and Airport Parkway;
- Provide green space with art feature at intersection of Airport Parkway and Eddie Rickenbacker Drive.

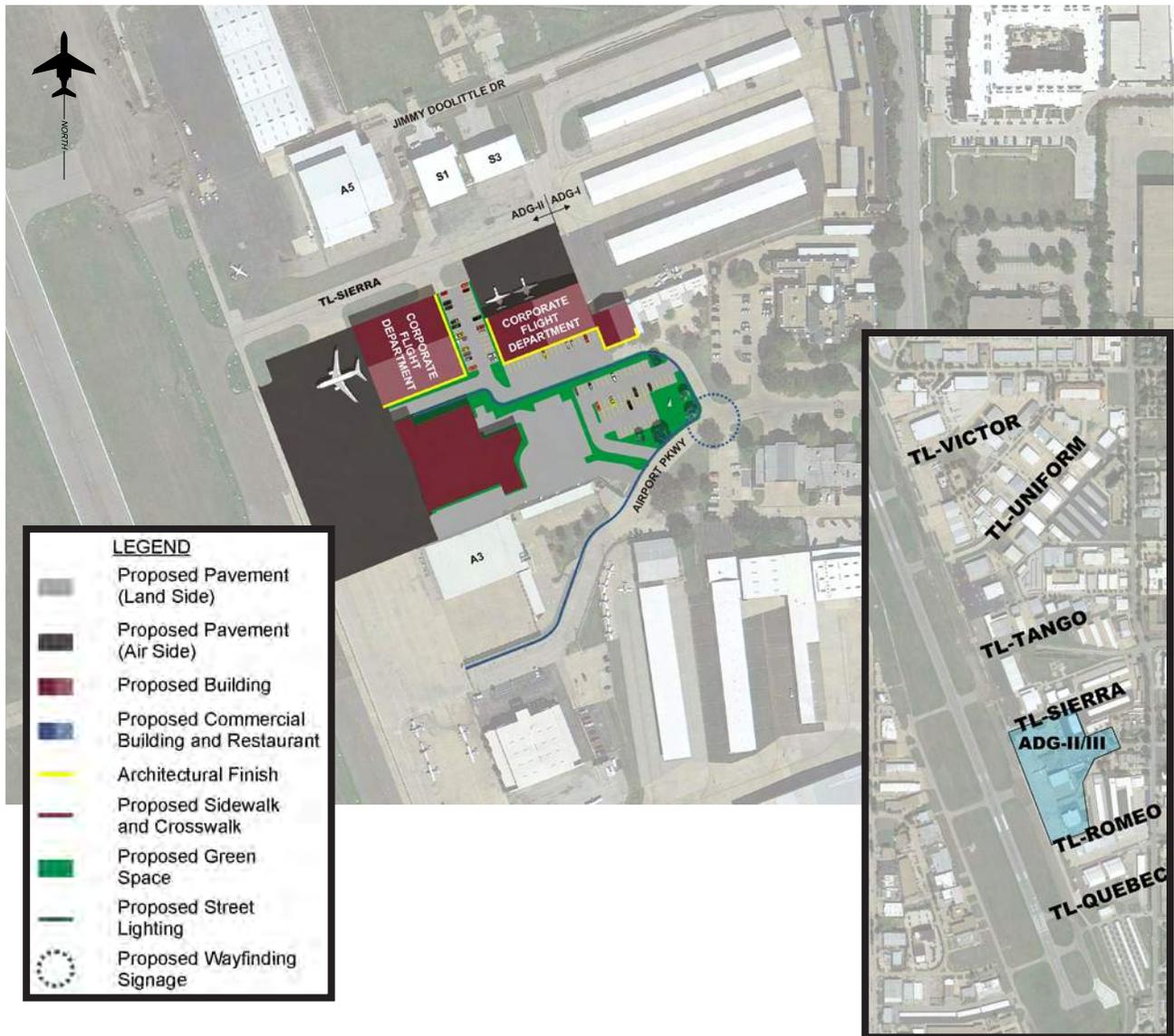
**ADS Strategic Plan strategies:** Strategy 1-2, 2-1, and 2-4.

**TABLE 4-7** CORPORATE HANGAR NEIGHBORHOOD DEVELOPMENT BASIS

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
Area 5/6 Taxilane Sierra (South) Corporate Hangar Neighborhood	ADG III (TW A) ADG II (TL S)	A&P / Avionics Charter (Part 135) T-Hangar Individual Hangar	120,000 lb. DW (TW A) 12,500 lb. DW (TL S)	Airport Parkway  Eddie Rickenbacker Drive	Eagle Land & Cattle (A2) PepsiCo (A3) Sky B&B (A4)



FIGURE 4-8 CORPORATE HANGAR NEIGHBORHOOD PREFERRED OPTION



### TAXILANE SIERRA NEIGHBORHOOD

The Sierra Neighborhood replaces East-side Area 4 and includes a development area of approximately 6.5 acres to construct various aircraft storage facilities and supporting infrastructure. This area is occupied by a public-airport restroom, a grouping of three common/box hangars, and Jimmy Doolittle Road. The Sierra Neighborhood is split into two sections. The western section of Taxilane Sierra was recently reconstructed to support TDG-II aircraft weighing as much as 90,000 pounds operating with dual wheel gear configuration. The eastern section supports smaller aircraft in the TDG-I category and supports the various T-hangars owned and operated by ADS. Three potential development options were presented to airport and town staff for review and consideration (see [Appendix G](#)) with the preferred option presented in [Figure 4-9](#) and [Table 4-8](#).

#### RECOMMENDATION:

- Maintain Jimmy Doolittle Drive entrance from Keller Springs Boulevard;
- Develop expanded auto parking area capable of supporting proposed hangar redevelopment and expansion;

- Redevelop northern section of A6 rotating it to the east; Tie apron from A6 north to Taxilane Tango;
- Install monument wayfinding signage at Addison Road – Keller Springs intersection;
- Provide improved street-side lighting on west side of Addison Road and north side of Jimmy Doolittle Drive;
- Add green space with recommended landscaping and art features between expanded apron and the top of the Keller Springs Boulevard tunnel;
- Coordinate Addison Airport art along the vertical Keller Springs Boulevard tunnel walls;
- Redevelop hangars S1 and S2 as one larger hangar to support ADG-II aircraft maintenance operation; and,
- Develop additional small hangar for an aircraft A/P or avionics business along Jimmy Doolittle Drive.

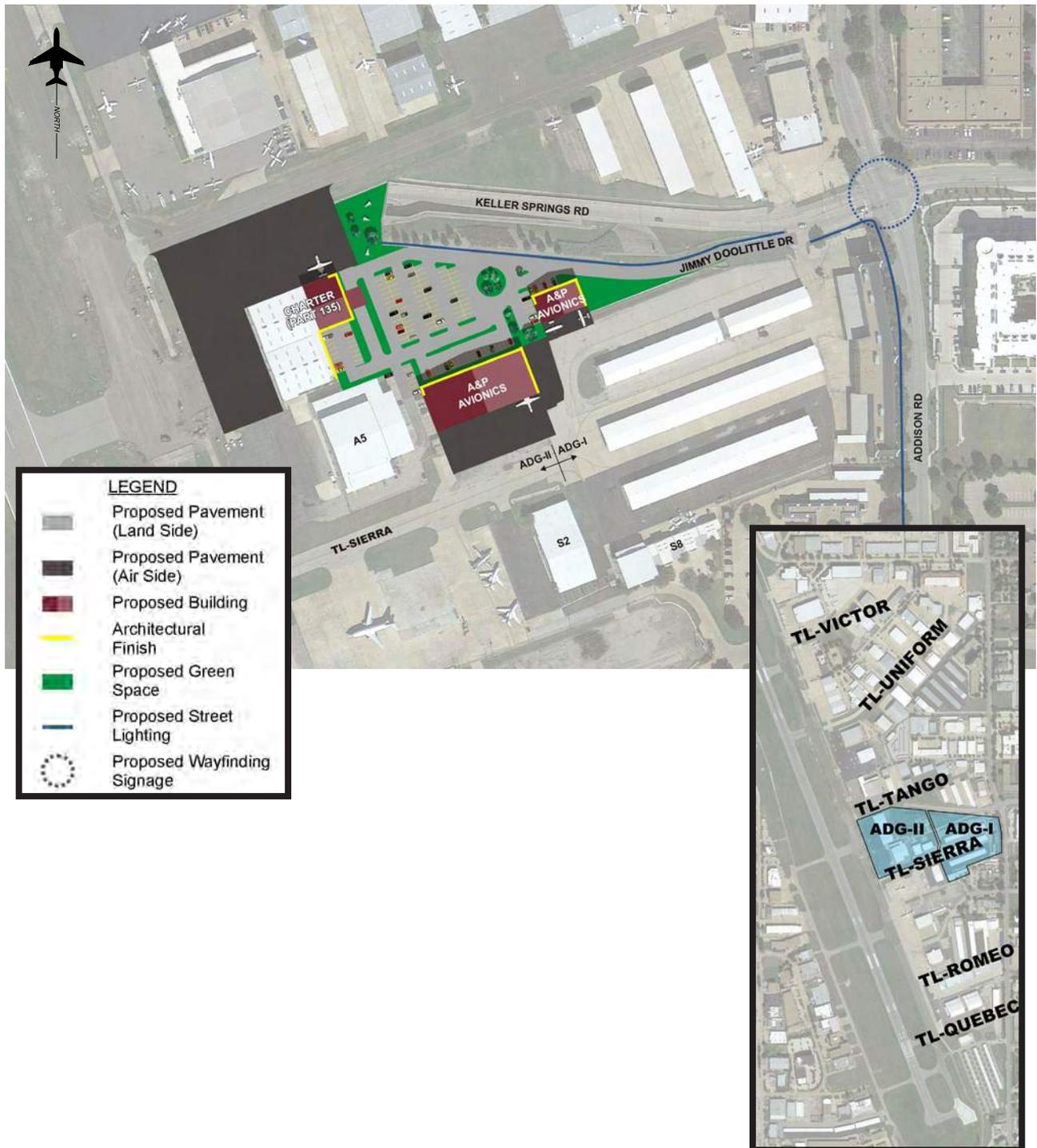
**ADS Strategic Plan strategies:** Strategy 1-2, 1-4, 2-1, 2-3, and 2-4.

**TABLE 4-8 TAXILANE SIERRA NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
Area 4 Taxilane Sierra	ADG II (west) ADG I (east)	A&P / Avionics Charter (Part 135) T-Hangar Individual Hangar	(west) 90,000 lb. DW (east) 12,500 lb. DW	Jimmy Doolittle Drive	6200 GP, LLC (A5) Addison Airport of Texas (S8)



FIGURE 4-9 TAXILANE SIERRA NEIGHBORHOOD PREFERRED OPTION



### TAXILANE TANGO NEIGHBORHOOD

The Tango Neighborhood replaces the East-side Area 3 development area of approximately 15 acres. This area is currently occupied by Atlantic Aviation’s main hangar, two T-hangars, a shade hangar and multiple box/common hangars. Businesses located in this area include Atlantic Aviation, Baker Aviation, Jackson/Shaw, and American Flyers. For the preferred option the area is divided into an east and west region. The east region includes the area between Addison Road and the Atlantic Aviation FBO hangar/facilities. The west region encompasses all of the Atlantic Aviation hangars, aprons, auto parking, and offices. Three potential development options were presented for review and consideration (see **Appendix G**) with the preferred option presented in **Figure 4-10** and **Table 4-9**.

#### RECOMMENDATION:

- Within the Tango Neighborhood western region:
  - Improve both the airside and landside access to FBO facilities;
  - Expand current apron around Atlantic through removal of hangar A8;
  - Replace A8 with north expansion of main Atlantic Aviation hangar (A7) and on the south side of hangar A9;
  - Expand apron north of A9 connecting it with Taxilane Uniform; and,
- Provide for improved vehicular access with a pull-through portico for passenger drop-off and improved parking in close proximity to Atlantic Aviation facilities.
- Within the Tango Neighborhood eastern region:
  - Realign Tango to parallel Keller Springs Boulevard opening up the entire area between Keller Springs Boulevard and Glenn Curtiss Drive for redevelopment;
  - Retain the American Flyers hangar and apron area;
  - Expand auto parking to the south for American Flyers;
  - Redevelop remaining area to support flight training operations, aircraft maintenance shops, charter operators, and the potential for an improved restaurant opportunity with a view of the airfield and air traffic control tower;
  - Improve Glenn Curtiss Drive to allow for landscaping and better lighting;
  - Add wayfinding signage at Addison Road - Glenn Curtiss Drive intersection; and,
  - Develop expanded green space or pocket park at northwest corner of Addison Road and Keller Springs Boulevard.

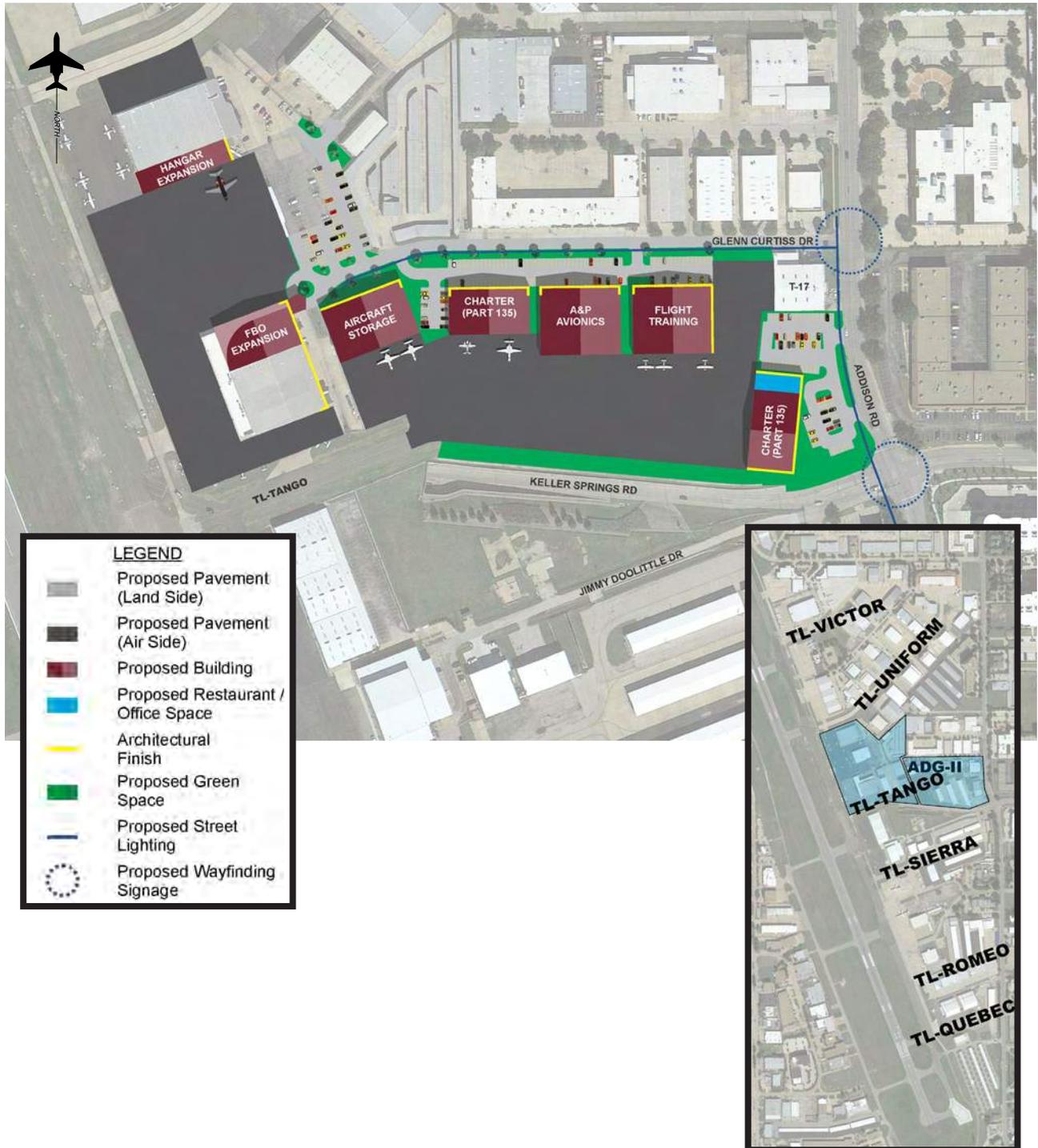
**ADS Strategic Plan strategies:** Strategy 1-2, 1-4, 2-1, and 2-4.

**TABLE 4-9 TAXILANE TANGO NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
Area 3 Taxilane Tango	ADG II	Aircraft Storage A&P / Avionics Flight Training	(west) 75,000 lb. DW (east) Realignment	Addison Road  Glenn Curtiss Drive	American Flyers (T17)



FIGURE 4-10 TAXILANE TANGO NEIGHBORHOOD PREFERRED OPTION



### TAXILANE UNIFORM NEIGHBORHOOD

During the development options evaluation it was determined that many of the hangars/tenants along the north side of Taxilane Uniform were in lease agreements that will be expiring during the eight year window. Thus, redevelopment/regrowth along Uniform has been examined. Three potential development options were presented to project committees, airport and town staff, and TxDOT staff for review and consideration (see [Appendix G](#)) with the preferred option presented in [Figure 4-11](#) and [Table 4-10](#).

### RECOMMENDATION:

- New Development as proposed by the owner/tenant of Westgrove Plaza;
- Redevelopment of hangars on leases due to expire during the next eight years along the north side of Uniform; and,
- Similar wayfinding signage, street lighting, and landscaping as those recommended for the Taxilane Victor Neighborhood.

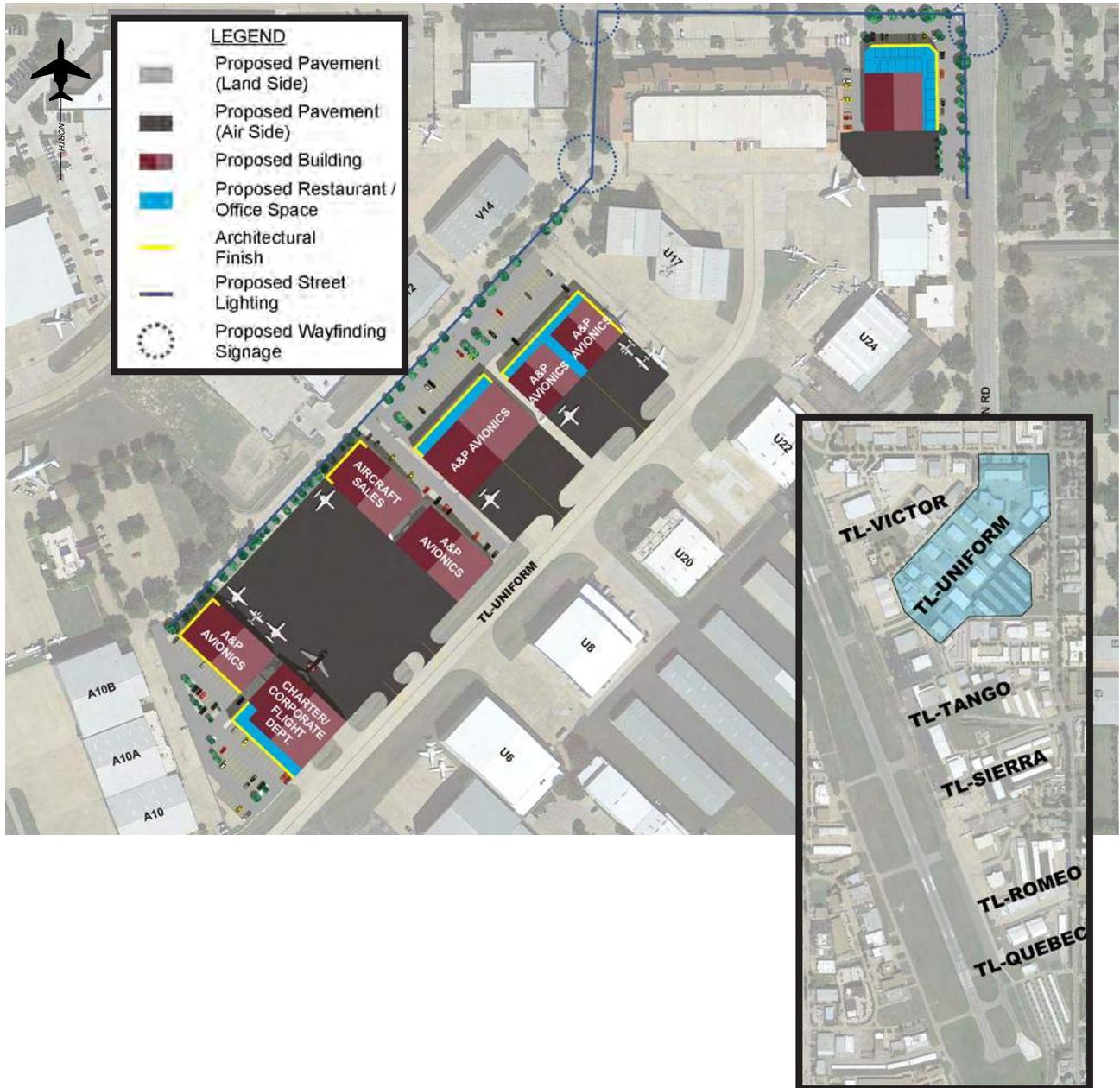
**ADS Strategic Plan strategies:** Strategy 1-2, 2-1, and 2-4.

**TABLE 4-10 TAXILANE UNIFORM NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
Taxilane Uniform	ADG II	Aircraft Storage A&P / Avionics Flight Training	75,000 lb. DW	Claire Chennault Street	Mission Aire IV (U17) Guardian Texas Management (U21)



FIGURE 4-11 TAXILANE UNIFORM NEIGHBORHOOD PREFERRED OPTION



### TAXILANE VICTOR NEIGHBORHOOD

Taxilane Victor is currently undergoing design for reconstruction and will continue to be a TDG-III taxilane. The tenant types along Victor are either fixed based operators, corporate flight departments, or aircraft storage hangars associated with the largest aircraft that operate at ADS. The Victor Neighborhood encompasses the original East-side Area 2 that included approximately six acres of regrowth/redevelopment area. Currently this area is home to the JetPort, apron, and a temporary shade hangar to support large corporate aircraft. The potential options in this area were dependent on retention of the JetPort or redevelopment to serve similar aircraft. This area is suited for FBO/maintenance/avionics type uses or, with retention of the JetPort, repurposing for airport management offices and public terminal facility. After receiving comments from the various parties involved in the master plan a preferred option was identified and is presented in **Figure 4-12** and **Table 4-11**.

### RECOMMENDATION:

- Reuse the JetPort as a public terminal facility possibly housing airport management, US Customs, and other commercial operations like a restaurant or pilot shop;
- New aircraft storage hangar on the Million Air Dallas lease parcel behind the JetPort;
- New medium-sized common/box hangar south of the JetPort;
- New or upgraded wayfinding signage at Westgrove Drive - Claire Chennault Street intersection;
- Street light improvements along Claire Chennault Street; and,
- Improved landscaping along both sides of Claire Chennault Street.

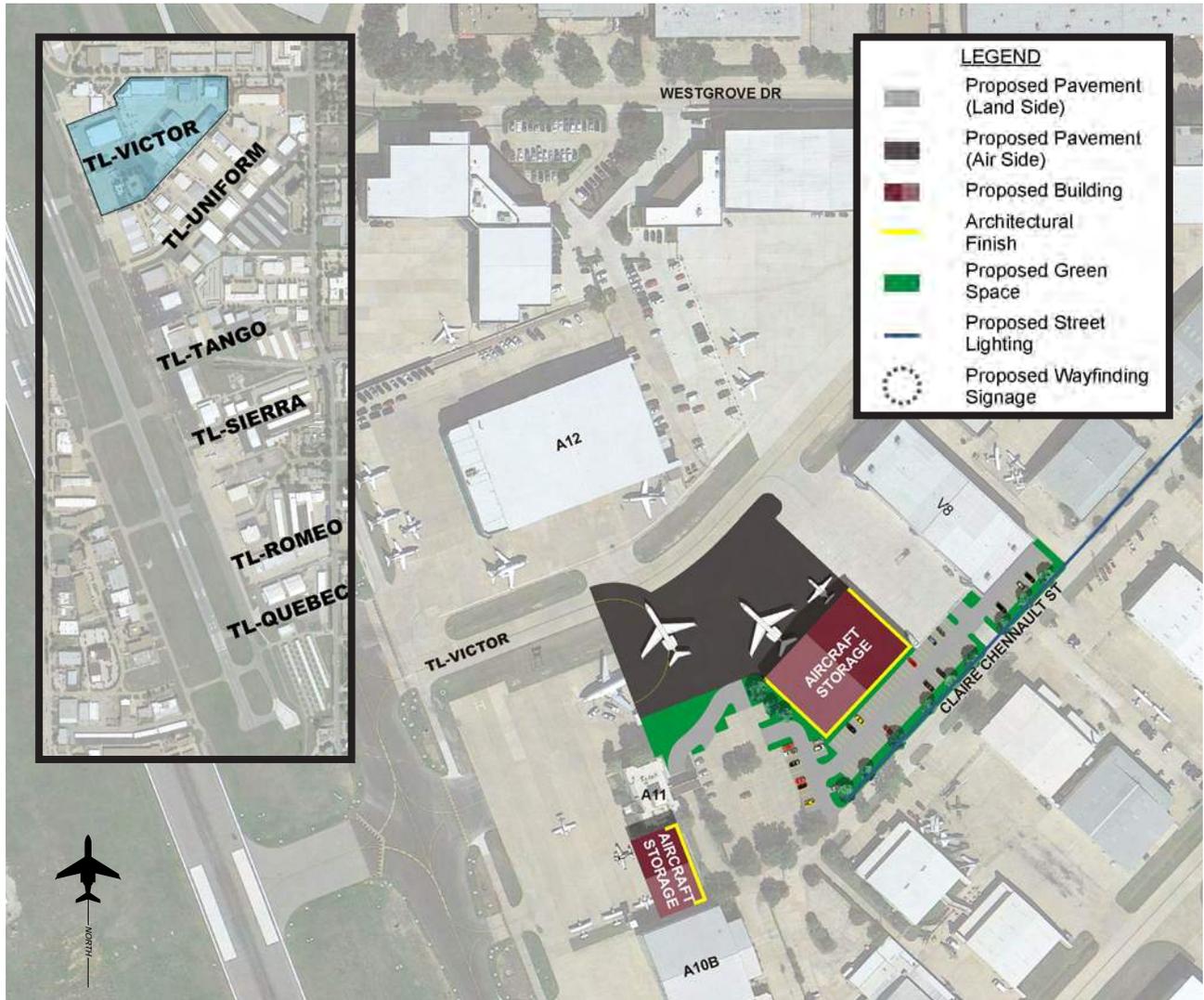
**ADS Strategic Plan Strategies Addressed:** Strategy 1-2, 1-4, 2-1, and 2-4.

**TABLE 4-11 TAXILANE VICTOR NEIGHBORHOOD DEVELOPMENT BASIS**

Basis of Development Alternatives (0-8 years)					
DEVELOPMENT ALTERNATIVE AREA	AIRCRAFT DESIGN GROUP	TENANT TYPES	TAXILANE PAVEMENT	STREET-SIDE AESTHETICS	MORE THAN 8 YEARS REMAINING ON LEASE
Area 1 / 2 Taxilane Victor	ADG III	Fixed Base Operator A&P / Avionics Aircraft Storage	99,950 lb. DW	Westgrove Drive Claire Chennault Street	Million Air Dallas (A12/V8/V3), Claire Chennault Partners (V10), JJS Hangar (V14), Key Development (V16), Mission Aire V (V18), and Jose Ortiz Estate (V12)



FIGURE 4-12 TAXILANE VICTOR NEIGHBORHOOD PREFERRED OPTION



**TAXIWAY ALPHA NEIGHBORHOOD**

The Taxiway Alpha Neighborhood encompasses portions of seven of the original east-side areas. The preferred option within the Alpha Neighborhood is discussed below. It includes the original East-side Area 1 that is focused on a development area of less than one acre with limited use for apron expansion, fuel truck parking, and overflow automobile parking to specifically serve Million Air Dallas and is depicted in **Figure 4-13**.

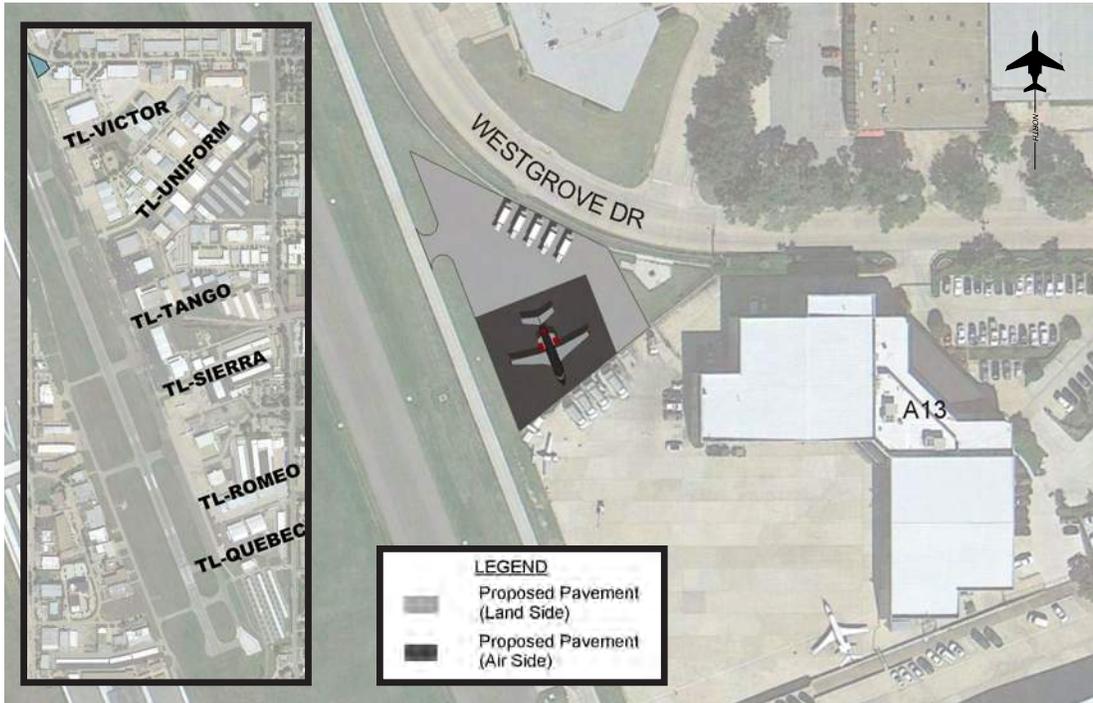
**RECOMMENDATION:**

- Fuel Truck Parking/Maneuvering Space: 11,800 square feet;
- Apron: 1,100 square yards; and,
- Auto Parking: 2,500 square feet.

**ADS Strategic Plan Strategies Addressed:** Strategy 1-2, 1-4, 2-1, and 2-4.

This preferred option allows Million Air Dallas to have a designated parking area for their fuel trucks along with automobile overflow parking and an expanded main apron fronting their primary hangars along Taxiway Alpha.

**FIGURE 4-13 TAXILANE ALPHA PREFERRED OPTION – NORTH END**





SM

# PHASED DEVELOPMENT PLAN

## CHAPTER 5

### CONTENTS

#### PHASED

DEVELOPMENT PLAN ..... 5-2

#### FUNDING SOURCES

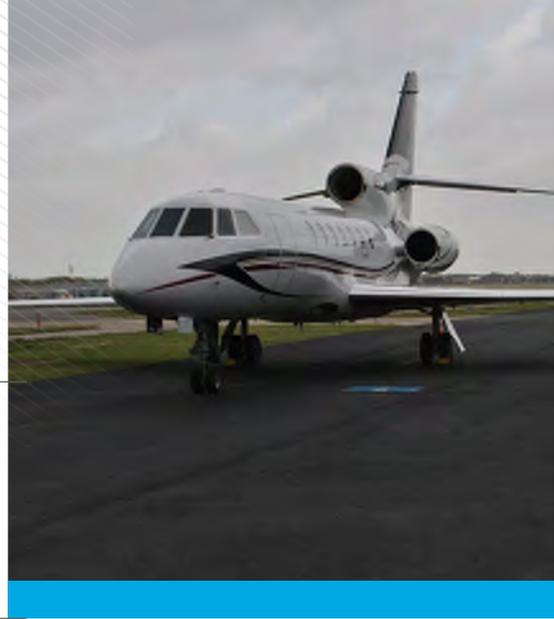
AND OPTIONS ..... 5-3

#### PROBABLE PROJECT

COSTS ..... 5-3



# PHASED DEVELOPMENT PLAN



## PHASED DEVELOPMENT PLAN

The phased development plan is the formulation of an orderly series of improvements intended for the Addison Airport (ADS) reenergizing and development. This development is based on the preferred set of options outlined in the Neighborhood Concepts outlined in the Alternatives chapter. Improvement objects are outlined to have ADS continue to operate a safe, efficient, and attractive public facility that ties in with the Town of Addison from an aesthetic and economic viewpoint.

Opinions of probable costs for individual projects are based on unconstrained funding and have been prepared for improvements that have been identified. Since these probable costs are based on current year dollars, they are intended for planning purposes only and should not be used or construed as construction cost estimates. Formalized opinions of probable costs will be developed as a part of each project’s scoping process during the design and engineering phase. It is important to note that market demand not occurrence within a specific time frame will be the driver for when facilities are constructed. The following guidelines have been followed in the formulation of the Phased Development Plan for ADS:

- The scheduling of projects is prioritized to permit improvements in a coordinated approach. The phasing and priority of each project has been determined with respect to airport safety, demand, compatibility with other airport projects, and Texas Department

of Transportation, Aviation Division (TxDOT) programming schedules;

- Overall, the development plan has been structured to provide the flexibility to meet short and long-range goals. Therefore, individual projects should not be considered as a single improvement, but as part of a project series that arrive at the ultimate concept;
- The development plan does not represent an obligation of local funds, nor does it require a funding commitment without justification of demand levels by the Town of Addison, TxDOT, or Federal Aviation Administration (FAA); and,
- The expressed desire, intent, and ability of the Town to achieve airport land use compatibility, coupled with favorable aesthetics transition, remains important planning and funding considerations.

The following pages identify the proposed phased development for ADS. Each phase consists of projects and improvements categorized by the following areas: 1) land acquisition; 2) airside; 3) landside; 4) aesthetic improvements; and 5) non-capital projects. The Phased Development Plan is divided into the following phases:

- Phase One (2015 – 2020) – Short-term development projects
- Phase Two (2021 – 2025) – Mid-term development projects
- Phase Two (2026 – 2035) – Long-term development projects



## FUNDING SOURCES AND OPTIONS

Funding for general aviation (GA) airports is typically available from federal, state, and local sources. At ADS, a combination of these funding sources, in addition to private financing, will be required during the short and long-term planning periods to implement the preferred airport development. ADS is currently recognized in the Federal Aviation Administration's (FAA) National Plan of Integrated Airport Systems (NPIAS) and was included in the most recent Texas Airport System Plan Update (2010) – which qualifies it for state and federal airport funding. The various project funding sources are outlined in the Financial Analysis chapter of this report.

## PROBABLE PROJECT COSTS

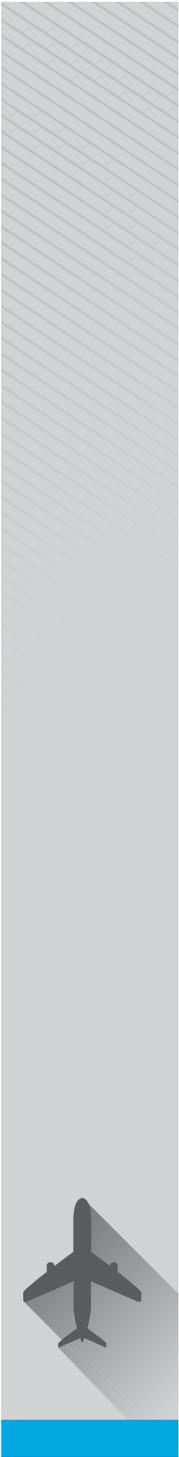
The phased development plan is the formulation of an orderly series of improvements intended to yield a safe, efficient and attractive public facility in a timely and economic manner. A list

of improvement projects has been assembled from the facility requirements and development/redevelopment concepts. This project list, along with the Capital Improvement Program (CIP), is continuously updated by airport management and the FAA/TxDOT. For ADS these proposed projects and their associated costs have been broken down based on airside and landside improvements/needs.

## AIRSIDE IMPROVEMENT PROJECTS

Each airside project is associated with a priority and phase broken down by year. Phase I, shown in **Table 5-1** and **Figure 5-1**, encompasses the first five years (2015 – 2020), Phase II, shown in **Table 5-2** and **Figure 5-2**, the following five years (2021 – 2025), and Phase III, shown in **Table 5-3** and **Figure 5-3**, includes the remaining 10 years (2026 – 2035). Landside improvement projects follow the airside in multiple tables shown based on their associated Taxilane Neighborhood as presented in the preferred options of the Alternatives chapter.



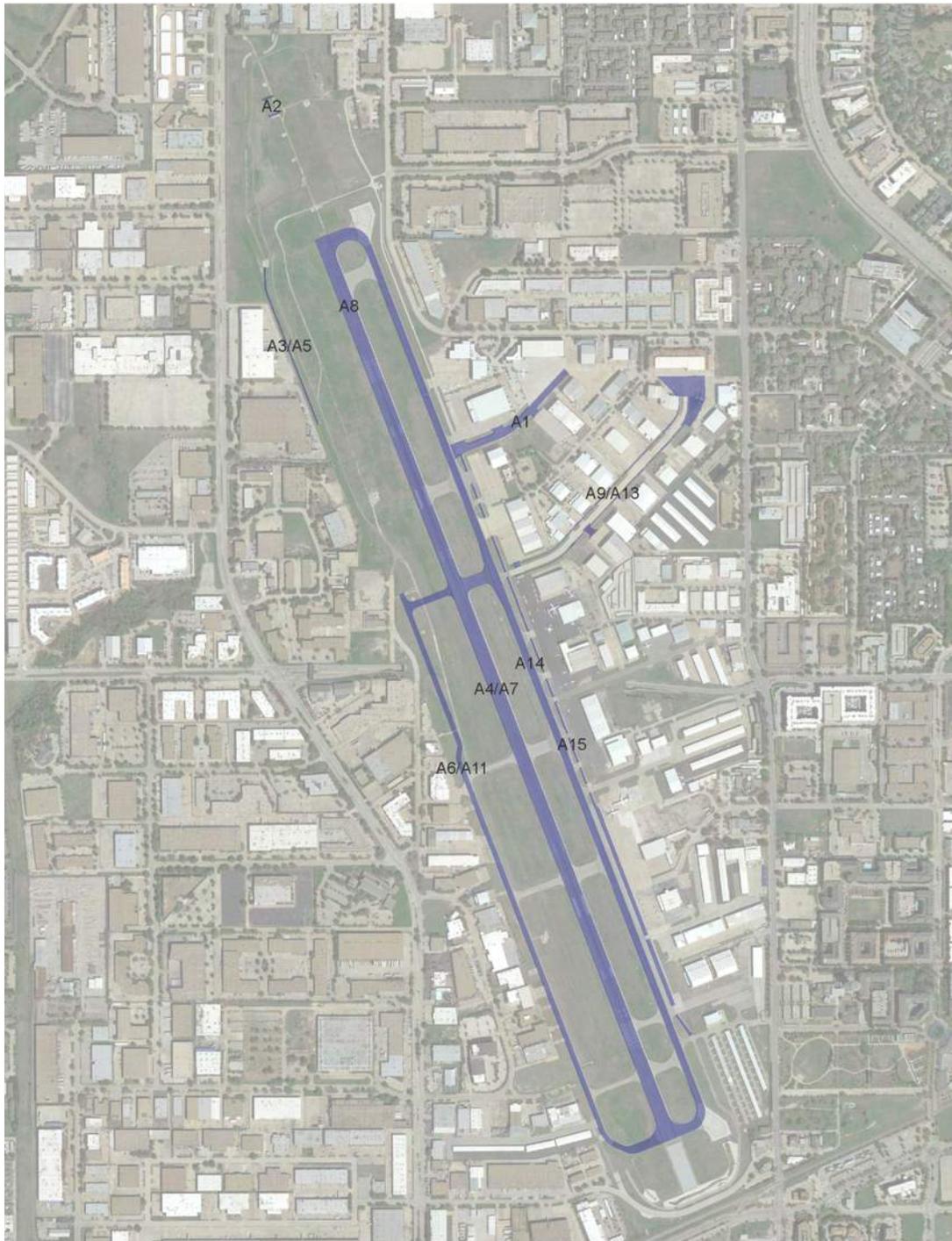


**TABLE 5-1** PHASE ONE (2015 - 2020) AIRSIDE IMPROVEMENT PROJECT COSTS

	YEAR	PROJECT TYPE	LOCAL/ PRIVATE FUNDING	STATE/ FEDERAL FUNDING	TOTAL COST
A1	2015	Taxilane Victor Improvements – Construction	\$203,000	\$1,827,000	\$2,030,000
A2	2015	33 Localizer Replacement – Design/ Coordination	\$155,000	\$ 0	\$155,000
A3	2015	West-side Ditch/Drainage Improvements – Design	\$45,700	\$ 0	\$45,700
A4	2016	Runway 15/33 Rejuvenation – Design	\$1,500	\$13,500	\$15,000
A5	2016	West-side Ditch/Drainage – Construction	\$430,700	\$ 0	\$430,700
A6	2017	Taxiway Bravo/Golf Improvements – Design (MITL, TWY, Service Road)	\$60,500	\$544,500	\$605,000
A7	2017	Runway 15/33 Rejuvenation and Remarkings (16/34) – Construction	\$80,000	\$720,000	\$800,000
A8	2017	Runway/Roadway Weather Information System (RWIS) Installation	\$11,250	\$33,750	\$45,000
A9	2017	Taxilane Uniform Improvements – Design	\$17,500	\$157,500	\$175,000
A10	2017	Access and Security Improvements Phase II/ III – Design	\$11,000	\$99,000	\$110,000
A11	2018	Taxiway Bravo/Golf and West-side Service Road Improvements – Construction	\$675,500	\$6,089,500	\$6,765,000
A12	2018	Access and Security Improvements Phase II/ III – Construction	\$94,000	\$846,000	\$940,000
A13	2018	Taxilane Uniform Improvements – Construction	\$265,600	\$2,390,400	\$2,656,000
A14	2019	Taxiway Alpha Rejuvenation – Design and Construction	\$47,500	\$427,500	\$475,000
A15	2020	East-side Perimeter Road – Design	\$57,500	\$57,500	\$115,000
<b>PHASE ONE TOTAL</b>			<b>\$2,156,250</b>	<b>\$13,206,150</b>	<b>\$15,362,400</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

**FIGURE 5-1** PHASE ONE (2015 - 2020) AIRSIDE IMPROVEMENT PROJECTS



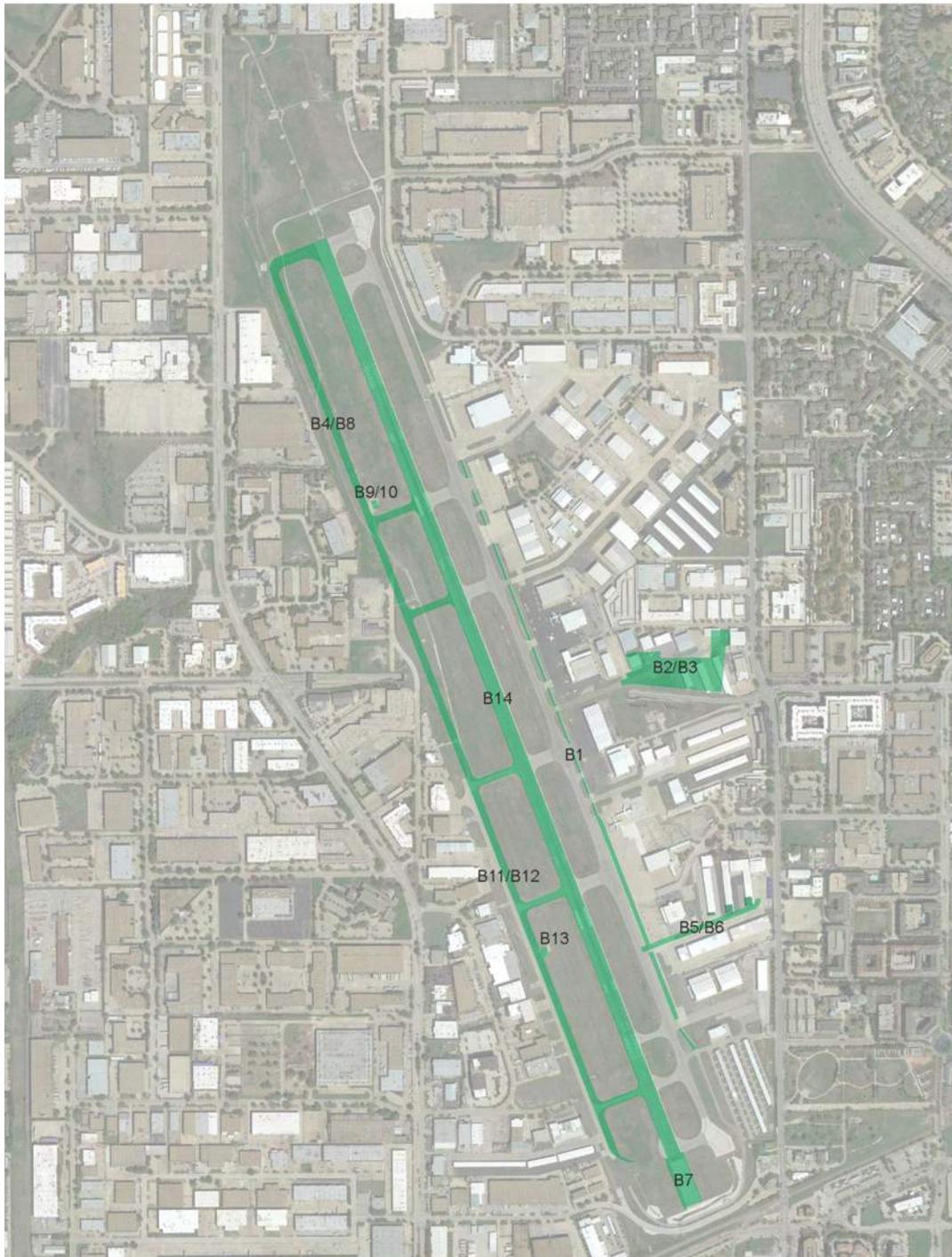


**TABLE 5-2 PHASE TWO (2021-2025) AIRSIDE IMPROVEMENT PROJECT COSTS**

YEAR	PROJECT TYPE	LOCAL/ PRIVATE FUNDING	STATE/ FEDERAL FUNDING	TOTAL COST	
B1	2022	East-side Perimeter Road – Construction (7,800' x 24', 10" Concrete, 2-lane)	\$692,000	\$692,000	\$1,384,000
B2	2022	Taxilane Tango Realignment / Apron Expansion – Design	\$20,000	\$180,000	\$200,000
B3	2023	Taxilane Tango Realignment – Construction	\$165,600	\$1,490,400	\$1,656,000
B4	2023	Taxiway Bravo Extension to Runway 16 End – Design (400' offset, TDG – III)	\$82,700	\$744,300	\$827,000
B5	2023	Taxilane Romeo Reconstruction to Correct OFA – Design	\$2,000	\$18,000	\$20,000
B6	2024	Taxilane Romeo Reconstruction to Correct OFA – Construction	\$20,000	\$180,000	\$200,000
B7	2024	EMAS Rehabilitation (Seam, Seal, Side Coating, and Remarkings)	\$6,500	\$58,500	\$65,000
B8	2024	Taxiway Bravo Extension - Construction	\$550,900	\$4,958,100	\$5,509,000
B9	2024	Runway 16 Glideslope Relocation – Design/ Construction	\$94,000	\$846,000	\$940,000
B10	2024	AWOS Replacement (Service Life)	\$31,250	\$93,750	\$125,000
B11	2024	Taxiway Bravo Reconstruction (South and Connectors) – Design (TDG – III)	\$45,000	\$405,000	\$450,000
B12	2025	Taxiway Bravo Reconstruction (South End 400' Centerline Offset and West Side Connectors) (TDG – III) Construction	\$1,187,000	\$10,683,000	\$11,870,000
B13	2025	Runway 34 Glideslope Relocation – Design/ Construction	\$97,000	\$873,000	\$970,000
B14	2025	Runway 16/34 Structural Overlay – Design	\$41,120	\$370,080	\$411,200
		<b>PHASE TWO TOTAL</b>	<b>\$3,035,070</b>	<b>\$21,592,130</b>	<b>\$24,627,200</b>

**SOURCE: COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.**

**FIGURE 5-2** PHASE TWO (2021-2025) AIRSIDE IMPROVEMENT PROJECTS



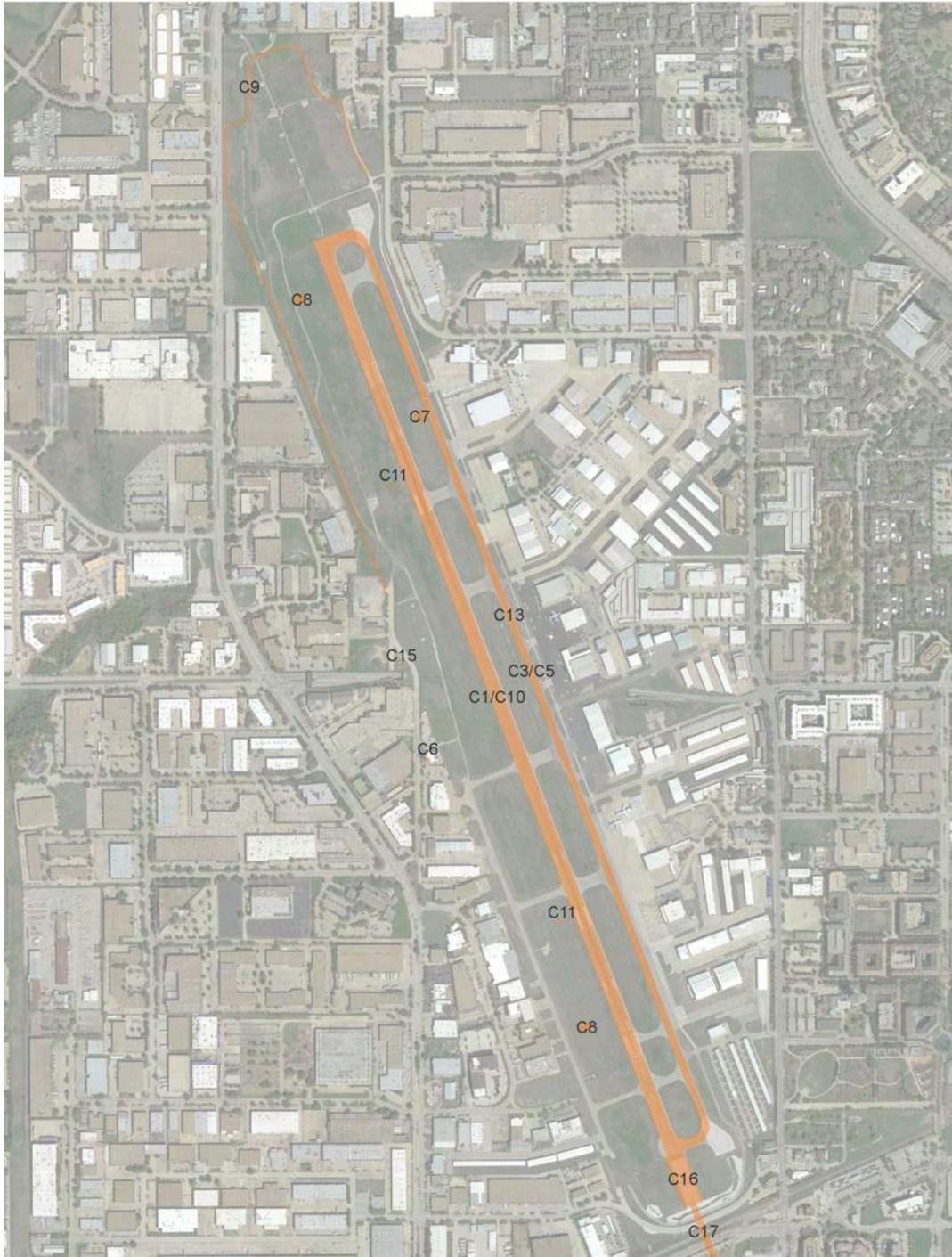
**TABLE 5-3 PHASE THREE (2026-2035) AIRSIDE IMPROVEMENT PROJECT COSTS**

YEAR	PROJECT TYPE	LOCAL/ PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
C1 2026	Runway 16-34 Structural Overlay – Construction	\$274,100	\$2,466,900	\$2,741,000
C2 2026	Update Airport Master Plan	\$30,000	\$270,000	\$300,000
C3 2026	Taxiway Alpha Structural Overlay – Design	\$19,700	\$177,300	\$197,000
C4 2026	Updated AGIS Aeronautical Survey	\$10,000	\$90,000	\$100,000
C5 2027	Taxiway Alpha Structural Overlay - Construction	\$131,400	\$1,182,600	\$1,314,000
C6 2029	Rotating Beacon Replacement	\$3,000	\$27,000	\$30,000
C7 2030	Installation of new primary wind cone	\$3,000	\$27,000	\$30,000
C8 2030	Installation of two supplementary wind cones	\$3,000	\$27,000	\$30,000
C9 2032	North-side Perimeter Road – Design and Construction (10,425' x 12', 8" Concrete, 1-lane)	\$745,500	\$745,500	\$1,491,000
C10 2032	Runway 16/34 HIRL LED Upgrade	\$33,000	\$297,000	\$330,000
C11 2032	PAPI LED Upgrades	\$11,000	\$99,000	\$110,000
C12 2033	Control System Rehabilitation (ALCMS)	\$12,000	\$108,000	\$120,000
C13 2034	Taxiway Alpha MITL Rehabilitation	\$65,000	\$585,000	\$650,000
C14 2034	Runway 16-34 Guard Light Rehabilitation	\$12,500	\$112,500	\$125,000
C15 2034	Vault Rehabilitation	\$35,000	\$315,000	\$350,000
C16 2035	EMAS Replacement	\$485,000	\$4,365,000	\$4,850,000
C17 2032	Approach Lighting System Runway 34	\$133,000	\$1,297,000	\$1,430,000
<b>PHASE THREE TOTAL</b>		<b>\$2,006,200</b>	<b>\$12,191,800</b>	<b>\$14,198,000</b>
<b>TOTAL ALL PHASES</b>		<b>\$7,197,520</b>	<b>\$46,990,080</b>	<b>\$54,187,600</b>

SOURCE: COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.



**FIGURE 5-3** PHASE THREE (2026-2035) AIRSIDE IMPROVEMENT PROJECTS



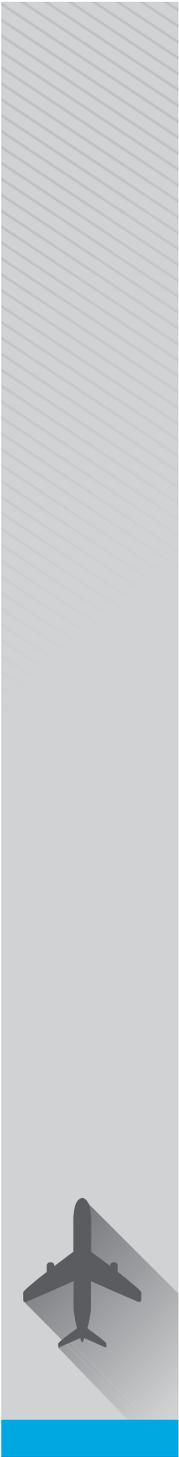
### LANDSIDE IMPROVEMENTS AND REDEVELOPMENT

Landside improvements are projected in nearly every area of the Airport. The presentation of improvement costs on the landside or terminal development is presented based on the established neighborhood concept from the alternatives evaluation process. **Table 5-4** outlines the major funding from local, state, and federal sources for each neighborhood within the ADS landside.

**TABLE 5-4** SUMMARY OF LANDSIDE IMPROVEMENTS AND REDEVELOPMENT COSTS

TAXILANE NEIGHBORHOOD	LOCAL / PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
Taxilane Lima	\$2,993,000	\$225,000	\$3,218,000
Taxilane Mike	\$3,653,000	\$2,758,000	\$6,411,000
Taxilane November	\$13,941,000	\$2,433,000	\$16,374,000
Taxilane Quebec/Papa	\$25,544,000	\$170,000	\$25,714,000
Taxilane Sierra	\$8,597,000	\$ 0	\$8,597,000
Corporate Neighborhood	\$7,330,000	\$ 0	\$7,330,000
Taxilane Tango	\$26,980,000	\$ 0	\$26,980,000
Taxilane Uniform	\$20,301,500	\$ 0	\$20,301,500
Taxilane Victor	\$5,697,000	\$ 0	\$5,697,000
General Landside	\$875,000	\$ 0	\$875,000
Taxiway Alpha	\$2,706,300	\$2,356,700	\$5,063,000
<b>LANDSIDE REDEVELOPMENT TOTAL</b>	<b>\$118,617,800</b>	<b>\$7,942,700</b>	<b>\$126,560,500</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY. TAXILANE PREFERRED DEVELOPMENT DEPICTED IN ALTERNATIVES CHAPTER.



### Taxilane Lima

The Taxilane Lima Neighborhood improvements described in **Table 5-5** reflect the long-term goals for development of a helicopter operations and maintenance facility. It would serve local and itinerant helicopter operations a growing segment of the GA sector. Much of the development would be completed through private investment.

**TABLE 5-5** SUMMARY OF LANDSIDE COSTS — TAXILANE LIMA

YEAR	PROJECT TYPE	LOCAL / PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2025	Heliport FBO Hangar	\$1,600,000	\$ 0	\$1,600,000
2025	Helipad, Apron, Helo Parking	\$1,300,000	\$ 0	\$1,300,000
2025	Taxilane Lima Connection to Taxiway Bravo	\$25,000	\$225,000	\$250,000
2025	Auto Parking	\$65,000	\$ 0	\$65,000
2025	Wayfinding Signage	\$3,000	\$ 0	\$3,000
<b>TOTAL</b>		<b>\$2,993,000</b>	<b>\$225,000</b>	<b>\$3,218,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

**FIGURE 5-4** TAXILANE LIMA IMPROVEMENT PROJECTS



### Taxilane Mike

The proposed Taxilane Mike Neighborhood development is focused on providing a new home for some of those existing tenants in the airports aging T-hangars. It would allow for a focused area that provides 29 new T-hangar units, a 24-hour aviation fuel (100LL) system, public building, and pocket park. The T-hangar units come in two sizes. The first is larger with 48-foot doors that could be home for piston twin-engine aircraft while the smaller 42-foot units will be hangar nearly all of the single-engine GA aircraft. The public building will provide public restrooms, a meeting room, flight-planning amenities, and a lounge/waiting area for local pilots/aircraft owners as well as visitors to ADS. Wayfinding signage would be located along Midway Road at the intersections of Kellway Circle as well as at the entrance to the development from Kellway Circle. The future pocket park at the north end of the development will offer airport visitors and tenants a relaxing venue to view ADS operations.

**TABLE 5-6 LANDSIDE COSTS — TAXILANE MIKE**

YEAR	PROJECT TYPE	LOCAL / PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2017	Light GA T-Hangars (29 units), Taxilane, and Auto Access – Design	\$405,000	\$ 0	\$405,000
2017	Wayfinding Signage at Midway Road and Kellway Circle	\$6,000	\$ 0	\$6,000
2017	Wayfinding Signage at Kellway Circle and Access Point into Mike Development	\$3,000	\$ 0	\$3,000
2018	Light GA T-Hangars (29 units), Taxilane, and Auto Access Construction	\$2,189,000	\$2,758,000	\$4,947,000
2018	Light GA Fueling Facility Design/Construction	\$150,000	\$ 0	\$150,000
2018	Public Use Building – Design/Construction	\$600,000	\$ 0	\$600,000
2018	Public Use Auto Parking – Design/Construction	\$150,000	\$ 0	\$150,000
2018	Pocket Park (North End)	\$150,000	\$ 0	\$150,000
<b>TOTAL</b>		<b>\$3,653,000</b>	<b>\$2,758,000</b>	<b>\$6,411,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.



**FIGURE 5-5** TAXILANE MIKE IMPROVEMENT PROJECTS



### Taxilane November

The Taxilane November Neighborhood is home to a group of existing T-hangars known as the Bravo T-hangars. Future development is focused on expanding T-hangar opportunities while also providing opportunity for a light/small GA aircraft maintenance facility. It would allow for a focused area that provides 37 new T-hangar units, public building, and a corporate flight department hangar fronting towards Taxiway B. The T-hangar units come in two sizes. The first is larger with 48-foot doors that could be home for piston twin-engine aircraft while the smaller 42-foot units will be able to hangar nearly all of the single-engine GA aircraft. The public building will provide public restrooms, a meeting room, flight-planning amenities, and a lounge/waiting area for local pilots/aircraft owners. Wayfinding signage would be located along Midway Road at the intersections of Wiley Post Road and at the entrance to the existing Bravo T-hangars at Richard Byrd Drive.

**TABLE 5-7 LANDSIDE COSTS — TAXILANE NOVEMBER**

YEAR	PROJECT TYPE	LOCAL / PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2021	Landscaping along Wiley Post Road	\$75,000	\$ 0	\$75,000
2021	Lighting along Wiley Post Road	\$92,000	\$ 0	\$92,000
2021	New Corporate Hangar and Ramp	\$2,953,000	\$ 0	\$2,953,000
2021	Wayfinding Signage (Monumental / Secondary) Midway Road and Wiley Post Road	\$14,000	\$ 0	\$14,000
2022	New A&P Hangar for Light GA	\$1,124,000	\$ 0	\$1,124,000
2023	Property Acquisition for Taxilane November Improvements (4.4 Acres)	\$5,880,000	\$1,470,000	\$7,350,000
2024	New T-Hangar (19 units, 48-foot door)	\$1,646,000	\$660,000	\$2,306,000
2025	Light GA Public/Tenant Building and Auto Parking	\$960,000	\$ 0	\$960,000
2025	New T-Hangar (18 units, 42-foot door)	\$1,197,000	\$303,000	\$1,500,000
<b>TOTAL</b>		<b>\$13,941,000</b>	<b>\$2,433,000</b>	<b>\$16,374,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.



**FIGURE 5-6** TAXILANE NOVEMBER IMPROVEMENT PROJECTS





### Taxilane Quebec/Papa

The Taxilane Quebec/Papa Neighborhood is home to Papa T-hangar development, one corporate hangar and the Collins hangars. Future development is focused on redevelopment of all properties in this area with retention of the Collins hangars and improvements to fuel farm access. The preferred development plan calls for removal of the Papa T-hangars and the single corporate hangar to be replaced by a large FBO development that would include large corporate aircraft storage hangars, FBO offices, restaurant, potential office lease space, auto parking, and park features along Addison Road across from Circle Park and a pocket park at the south end of the development for airfield viewing by the public. The FBO offices will provide restrooms, a meeting room, flight-planning amenities, and a lounge/waiting area for local pilots/aircraft owners. Wayfinding signage would be located along Addison Road at the north and south entrances that coincide with Addison Circle and Festival Way.

**TABLE 5-8** LANDSIDE COSTS — TAXILANE QUEBEC/PAPA

YEAR	PROJECT TYPE	LOCAL / PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2016	Aircraft Storage Hangars	\$3,500,000	\$ 0	\$3,500,000
2017	Apron/Ramp/Taxilane	\$4,964,000	\$ 0	\$4,964,000
2017	FBO Hangar (200' x 160')	\$3,800,000	\$ 0	\$3,800,000
2017	Auto Access/Parking	\$1,770,000	\$ 0	\$1,770,000
2017	FBO Office/Commercial Building	\$3,900,000	\$ 0	\$3,900,000
2017	Wayfinding Signage (Monumental-Airport) Addison Road South End of Airport	\$30,000	\$ 0	\$30,000
2017	Wayfinding Signage (Monumental-Tenant) at Addison Road and Addison Circle	\$75,000	\$ 0	\$75,000
2018	Southeast Quadrant Park Features Along Addison Road	\$650,000	\$ 0	\$650,000
2019	Restaurant	\$3,350,000	\$ 0	\$3,350,000
2019	Addison Road Street Lighting – From Westgrove Drive to Lindbergh Drive	\$525,000	\$ 0	\$525,000
2020	Collins Hangar Refurbishment	\$2,300,000	\$ 0	\$2,300,000
2020	Acquire Masonic Lodge and Develop Airport Observation Park	\$680,000	\$170,000	\$850,000
<b>TOTAL</b>		<b>\$25,544,000</b>	<b>\$170,000</b>	<b>\$25,714,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

**FIGURE 5-7** TAXILANE QUEBEC IMPROVEMENT PROJECTS





### Taxilane Sierra

The Taxilane Sierra Neighborhood east of Taxiway Alpha between Taxilane Sierra and Keller Springs Road outlines this preferred development. Hangar redevelopment in this neighborhood provides sites for avionics and powerplant repair facilities off of Taxilane Sierra and modifies the three hangar complex along Taxiway Alpha with the northern hangar redeveloped to open towards Taxilane Tango. This realignment offers significantly more apron space for the tenant. Tenant parking is upgraded between Keller Springs Road and tenant hangar redevelopment and new development. Green space and a prominent location for an art feature is outlined at the top of the Keller Spring Road Toll Tunnel. Wayfinding signage would be located at the intersection of Addison Road and Keller Springs Road with additional tenant specific signage offered along Jimmy Doolittle Drive.

**TABLE 5-9 LANDSIDE COSTS — TAXILANE SIERRA**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2019	Redevelopment of A6 with Apron Expansion – Design / Construction	\$3,580,000	\$ 0	\$3,580,000
2019	Develop Expanded Auto Parking – Taxilane Sierra / Jimmy Doolittle Drive	\$580,000	\$ 0	\$580,000
2020	Jimmy Doolittle Drive Realignment	\$190,000	\$ 0	\$190,000
2020	Lighting along Jimmy Doolittle Drive	\$75,000	\$ 0	\$75,000
2020	Landscaping along Jimmy Doolittle Drive	\$28,000	\$ 0	\$28,000
2020	Wayfinding Signage (Secondary-Multi-tenant) at Keller Springs Road and Jimmy Doolittle Drive	\$14,000	\$ 0	\$14,000
2020	Art Features – NTTA Toll Tunnel	\$30,000	\$ 0	\$30,000
2020	New Small A&P Hangar along Realigned Jimmy Doolittle Drive	\$860,000	\$ 0	\$860,000
2030	Redevelop Hangars S1/S3 as larger Corporate Hangar	\$3,240,000	\$ 0	\$3,240,000
<b>TOTAL</b>		<b>\$8,597,000</b>	<b>\$ 0</b>	<b>\$8,597,000</b>

SOURCE: COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

**FIGURE 5-8 TAXILANE SIERRA IMPROVEMENT PROJECTS**



### Corporate

The Corporate Neighborhood along Taxiway Alpha between Taxilane S and Airport Parkway outlines this preferred development. Future development is focused on redevelopment a new corporate flight facility south of Taxilane Sierra that fronts onto Taxiway Alpha. Additional development includes redevelopment of the properties between this new development and the existing Sierra T-hangars with a new corporate flight department hangar and office complex. Additional and overflow parking will be provided on the former airport administration building site and be accompanied by an art feature and green space at the corner of Airport Parkway and Eddie Rickenbacker Drive. Wayfinding signage would be located along Addison Road at Airport Parkway with additional signage at the intersection of Eddie Rickenbacker Drive and Airport Parkway.

**TABLE 5-10 LANDSIDE COSTS — CORPORATE**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2016	New Corporate Hangar (Former Owens Hangar Location) Design/Construction	\$3,509,000	\$ 0	\$3,509,000
2017	Wayfinding Signage (Secondary-Multi-tenant) at Addison Road Airport Parkway	\$14,000	\$ 0	\$14,000
2017	Wayfinding Signage (Secondary-Multi-tenant) at Addison Road and Eddie Rickenbacker Drive	\$8,000	\$ 0	\$8,000
2017	Landscaping along Airport Parkway and Eddie Rickenbacker Drive	\$42,000	\$ 0	\$42,000
2017	Pocket Park/Art Feature at Airport Parkway and Eddie Rickenbacker Drive	\$50,000	\$ 0	\$50,000
2019	Lighting along Airport Parkway and Eddie Rickenbacker Drive	\$140,000	\$ 0	\$140,000
2021	S2 Hangar Redevelopment Design/Construction	\$3,077,000	\$ 0	\$3,077,000
2033	Automobile Parking (Former Administration Building Site)	\$490,000	\$ 0	\$490,000
<b>TOTAL</b>		<b>\$7,330,000</b>	<b>\$ 0</b>	<b>\$7,330,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.



**FIGURE 5-9 TAXILANE CORPORATE IMPROVEMENT PROJECTS**





### Taxilane Tango

The Taxilane Tango Neighborhood is located between Taxiway Alpha and Addison Road. The backbone of this redevelopment is the realignment of Taxilane Tango to parallel Keller Spring Road. This opens the area up for redevelopment to accommodate a variety of tenant types including flight training, charter operator, aircraft mechanic shops, and aircraft storage. Additionally, a new restaurant is proposed that would have a view down Taxilane Tango towards the air traffic control tower. Glenn Curtiss Drive would be improved to provide better tenant access to this area and the Atlantic FBO facilities along Taxiway Alpha. This Neighborhood also proposes some redevelopment and expansion of the FBO facilities that provides for more apron area without a reduction in overall hangar storage space. Tenant parking is upgraded along Glenn Curtiss Drive and east of the FBO facilities. A pocket part is offered on the northwest corner of Addison Road and Keller Springs Road that would be home for a monument airport sign. Wayfinding signage would be located at the intersection of Addison Road and Keller Springs Road and at Glenn Curtiss Drive and Addison Road.

**TABLE 5-11 LANDSIDE COSTS — TAXILANE TANGO**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2023	Atlantic FBO Redevelopment	\$8,040,000	\$ 0	\$8,040,000
2024	Flight Training Hangar and Ramp (T-17)	\$2,944,000	\$ 0	\$2,944,000
2024	Flight Training Hangar and Ramp	\$2,879,000	\$ 0	\$2,879,000
2025	A&P Hangar and Ramp	\$2,939,000	\$ 0	\$2,939,000
2025	Charter Hangar (west)and Ramp	\$2,617,000	\$ 0	\$2,617,000
2026	Aircraft Storage Hangar and Ramp	\$2,561,000	\$ 0	\$2,561,000
2027	Glenn Curtiss Drive Reconstruction	\$650,000	\$ 0	\$650,000
2027	Charter Hangar (east) and Auto Parking	\$2,996,000	\$ 0	\$2,996,000
2028	Restaurant (Next to Charter Hangar East)	\$880,000	\$ 0	\$880,000
2028	Landscaping along Addison Road north of Keller Springs Boulevard	\$150,000	\$ 0	\$150,000
2028	Wayfinding Signage at Addison Road and Glenn Curtiss Drive (Secondary-Multi-tenant)	\$14,000	\$ 0	\$14,000
2029	Wayfinding Signage (Monumental-Airport), Pocket Park at Addison Road and Keller Springs	\$150,000	\$ 0	\$150,000
2029	Landscaping along Glenn Curtiss Drive	\$35,000	\$ 0	\$35,000
2029	Lighting along Glenn Curtiss Drive	\$125,000	\$ 0	\$125,000
<b>TOTAL</b>		<b>\$26,980,000</b>	<b>\$ 0</b>	<b>\$26,980,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

**FIGURE 5-10 TAXILANE TANGO IMPROVEMENT PROJECTS**



### Taxilane Uniform

The Taxilane Uniform Neighborhood is all that area between Claire Chennault Street and the taxilane. Most of the existing development south of the taxilane operates on a through-the-fence agreement and is privately owned. There is a tenant planned development shown as part of this neighborhood at the intersection of Addison Road and Westgrove Drive. The remaining redevelopment in this neighborhood is focused on accommodating aircraft repair facilities, aircraft sales, and corporate flight departments. Claire Chennault Street will be improved to provide better tenant access to this area and improved auto parking options. Wayfinding signage would be located in three locations Addison Road and Westgrove Drive, Westgrove Drive and Claire Chennault Street, and after the westerly turn along Claire Chennault Street.

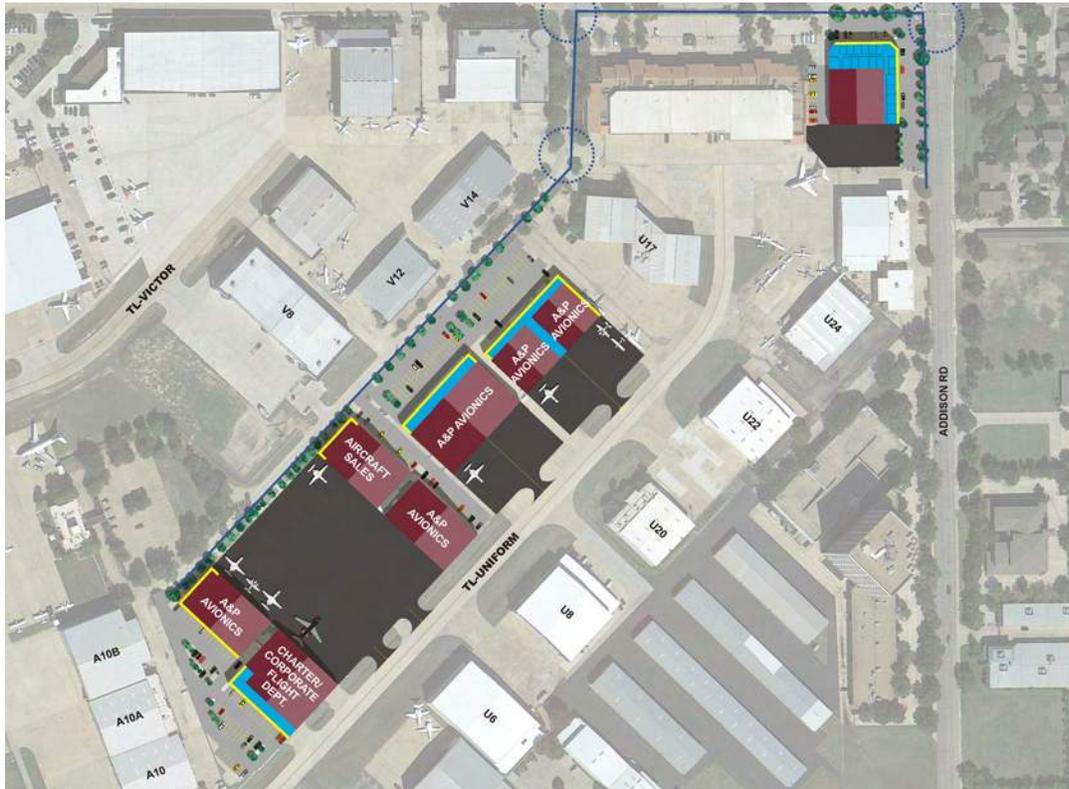
**TABLE 5-12 LANDSIDE COSTS — TAXILANE UNIFORM**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2017	Wayfinding Signage (Secondary) at Westgrove Drive and Claire Chennault Street	\$14,000	\$ 0	\$14,000
2017	Wayfinding Signage (Monumental-Airport) at Westgrove Drive and Addison Road	\$30,000	\$ 0	\$30,000
2019	Claire Chennault Street Improvements (Widening and Drainage)	\$1,250,000	\$ 0	\$1,250,000
2019	Lighting along Claire Chennault Street	\$125,000	\$ 0	\$125,000
2029	Develop Two 100' x 100' Hangars with Office (Cherry Air)	\$4,102,000	\$ 0	\$4,102,000
2029	Develop 200' x 120' Hangar with Office (Monarch)	\$4,079,000	\$ 0	\$4,079,000
2030	Develop 165' x 100' Hangar (Cavanaugh NE)	\$2,149,000	\$ 0	\$2,149,000
2030	Develop 165' x 100' Hangar (Cavanaugh SE)	\$2,100,000	\$ 0	\$2,100,000
2030	Landscaping along Claire Chennault Street	\$42,500	\$ 0	\$42,500
2032	Develop 165' x 100' Hangar (Cavanaugh NW)	\$2,113,000	\$ 0	\$2,113,000
2032	Develop 165' x 100' Hangar with Office (Cavanaugh SW)	\$4,297,000	\$ 0	\$4,297,000
<b>TOTAL</b>		<b>\$20,301,500</b>	<b>\$ 0</b>	<b>\$20,301,500</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.



**FIGURE 5-11 TAXILANE UNIFORM IMPROVEMENT PROJECTS**





### Taxilane Victor

The Taxilane Victor Neighborhood proposes the a new aircraft storage hangar east of the JetPort auto parking lot that fronts onto Victor with ample ramp space for aircraft maneuvering. A new aircraft storage hangar is proposed south of the JetPort for overnight/temporary aircraft storage. Million Air apron expansion to the north to provide fuel truck parking and automobile overflow parking. Wayfinding signage would be located at the intersection of Addison Road and Claire Chennault Street.

**TABLE 5-13 LANDSIDE COSTS TAXILANE VICTOR**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2017	Airport Observation Park – Westgrove Drive	\$250,000	\$ 0	\$250,000
2019	Aircraft Storage Hangar/Apron (Million Air Dallas)	\$4,361,000	\$ 0	\$4,361,000
2023	Million Air Apron Expansion, Fuel Truck Parking, and Auto Overflow Parking	\$289,000	\$ 0	\$289,000
2025	Aircraft Storage Hangar (JetPort South)	\$797,000	\$ 0	\$797,000
<b>TOTAL</b>		<b>\$5,697,000</b>	<b>\$ 0</b>	<b>\$5,697,000</b>

**SOURCE:** COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

**FIGURE 5-12 TAXILANE VICTOR IMPROVEMENT PROJECTS**



### Taxiway Alpha

The Taxiway Alpha Neighborhood proposes the reuse of the JetPort as a public terminal facility housing US Customs and other commercial operators like a small restaurant and a pilot shop. Other development proposed in the Alpha Neighborhood includes the reconstruction of the apron in front of the JetPort. Tenant parking is upgraded along Claire Chennault Street nearest to the western end and the JetPort. Wayfinding signage would be located at the intersection of Addison Road and Claire Chennault Street.

**TABLE 5-14 TAXIWAY ALPHA PROJECT COSTS**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2017	Customs Facility Rehabilitation/ Renovation	\$2,500,000	\$500,000	\$3,000,000
2017	Design of Reconstruction of General Purpose Apron – Customs Facility	\$9,500	\$85,500	\$95,000
2018	Reconstruct General Purpose Apron – Customs Facility	\$196,800	\$1,771,200	\$1,968,000
<b>TOTAL</b>		<b>\$2,706,300</b>	<b>\$2,356,700</b>	<b>\$5,063,000</b>

SOURCE: COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.

### General Landside

The General Landside Projects include the design of a wayfinding signage plan for ADS as well as a new airport maintenance facility. The planning and design for airport wayfinding would establish airport landside signage standards similar to those used within the Town of Addison for public facilities. The new airport maintenance facility is proposed as a stand-alone building on the airport’s west side near the lift station on the site that has historically been used as a temporary construction and staging yard during major runway and taxiway reconstruction projects.

**TABLE 5-15 GENERAL LANDSIDE PROJECT COSTS**

YEAR	PROJECT TYPE	LOCAL/PRIVATE FUNDING	STATE/FEDERAL FUNDING	TOTAL COST
2016	Wayfinding Signage – Plan/Design	\$25,000	\$ 0	\$25,000
2019	Airport Maintenance Facility	\$850,000	\$ 0	\$850,000
<b>TOTAL</b>		<b>\$875,000</b>	<b>\$ 0</b>	<b>\$875,000</b>

SOURCE: COSTS REFLECT CURRENT 2015 DOLLARS AND SHOULD BE USED FOR PLANNING PURPOSES ONLY.





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# FINANCIAL ANALYSIS

## CHAPTER 6

### CONTENTS

FINANCIAL ANALYSIS OBJECTIVES ..... 6-2

OVERALL APPROACH ..... 6-2

CAPITAL FUNDING SOURCES ..... 6-3

FINANCIAL ANALYSIS AND IMPLEMENTATION PLAN FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM ..... 6-5

FINANCIAL ANALYSIS SCHEDULES ..... 6-10



# FINANCIAL ANALYSIS OBJECTIVES



## FINANCIAL ANALYSIS OBJECTIVES

The primary objective of the Financial Analysis for the Addison Airport (ADS) Master Plan is to evaluate the Airport’s capability to fund the Capital Improvement Program (CIP) and to finance airport operations. The program is planned for implementation through three phases of development including a six-year Phase I period (2015-2020), a five-year Phase II period (2021-2025) and a ten-year Phase III period (2026-2035). The analysis includes development of a detailed Financial Implementation Plan. Objectives for developing the Financial Implementation Plan include presenting the results of the implementation evaluation and providing practical guidelines for matching an appropriate amount and timing of financial sources with the planned use of funds. Detailed schedules of projections for the capital program, operating expenses, operating revenues, and cash flow are provided at the end of **Chapter Six** in support of the Financial Plan Summary which presents the results of this evaluation.

### OVERALL APPROACH

Our overall approach for conducting the Financial Analysis included the following steps:

- Gathering and reviewing key airport documents related to historical financial results, capital improvement plans, operating budgets, federal and state regulatory requirements, airport practices, and Town of Addison policies;
- Interviewing key airport management personnel to gain an understanding of the existing operating and financial environment, and overall financial management philosophy;
- Reviewing the Master Plan CIP, cost estimates and development schedule anticipated for the planning period, and projecting the overall financial requirements for the program;
- Determining and analyzing the sources and timing of capital funds available to meet the financial requirements for funding the CIP;
- Analyzing historical and budgeted operating expenses, developing operations and maintenance expense assumptions, reviewing assumptions with airport management, and projecting future operating costs for the planning period;
- Analyzing historical and budgeted revenue sources, developing revenue growth assumptions, reviewing assumptions with airport management, and projecting future revenues for the planning period;
- Developing a detailed Financial Implementation Plan that includes capital



expenditures balanced with capital funding, operating revenues and expenses that result in positive net revenues, and a projection of overall positive cash flow throughout the twenty-one year planning period from 2015 to 2035; and,

- Completing results of the analysis and evaluation in a Financial Plan Summary that provides conclusions regarding the reasonableness of implementing the Airport's Master Plan CIP.

### CAPITAL FUNDING SOURCES

The Master Plan CIP will be funded by several sources. These sources include Federal Aviation Administration (FAA) Airport Improvement Program (AIP) grants administered by the Texas Department of Transportation (TxDOT) - Aviation Division, TxDOT state aviation grants, private third party financing, airport cash reserves/net operating cash flow, and other unidentified funding. These capital funding sources are described in the following chapter sections.

#### FAA AIRPORT IMPROVEMENT PROGRAM STATE BLOCK GRANTS

In Texas, FAA AIP grants for general aviation and reliever airports are administered through TxDOT as part of the FAA State Block Grant Program. Under this Program, the State performs certain AIP administrative functions (such as project prioritization, selection, and monitoring) that are traditionally accomplished by the FAA. The State normally receives one annual block grant based on a formula related to area/population of the state. AIP requirements for airport project eligibility and allowable costs are the same for states receiving a block grant as they would be if the FAA were administering the project. Both AIP entitlement and discretionary grants are administered by TxDOT through the block grant program. Ordinarily, AIP grants fund 90 percent of eligible project costs while the airport sponsor provides the remaining 10 percent in local matching funds.

The FAA classifies certain general aviation, reliever and commercial service airports (those with annual passenger enplanements of 10,000 or less) as Non-Primary Airports for funding purposes.

Addison Airport qualifies as a Non-Primary Airport. Under the AIP reauthorization legislation enacted in 2000 (referred to as AIR-21), Non-Primary Airports receive a non-primary entitlement (NPE) grant equal to 20 percent of the eligible costs of their five year capital improvement program up to a maximum of \$150,000 per year. NPEs are available in the year granted and can be carried over for three additional years. This analysis assumes that Addison Airport will receive the \$150,000 maximum annual entitlement throughout the planning period.

In addition to NPEs, Addison is eligible to receive AIP discretionary grants also administered by TxDOT through the block grant program and awarded in accordance with FAA guidelines. The approval of AIP discretionary funding is based on a project eligibility ranking method the FAA uses to award grants, at their discretion, based on a project's priority and importance within the national airport and airway system. It is reasonable to assume that the Airport will continue to receive discretionary funding during the planning period for higher priority, eligible projects, such as runway, taxiway, safety, security, and aircraft apron improvements. However, since the future availability of AIP discretionary grants is not certain until an actual grant is awarded, it should be noted that any future capital projects that have discretionary funding provided through TxDOT's block grant as a funding source in the implementation plan may need to be delayed until such funds actually become available.

The implementation analysis assumes that the Airport will receive AIP block grants through TxDOT (including NPE and discretionary grants) of \$16.7 million in Phase I, \$29.1 million in Phase II and \$19.0 million in Phase III. The implementation analysis further assumes that the current AIP funding program will continue to be extended through 2035 and that future program authorizations will provide similar funding levels as it currently does and as it has historically provided since the program was established in 1982.



### TXDOT AVIATION DIVISION GRANTS

TxDOT sponsors the Routine Airport Maintenance Program (RAMP) that provides partial funding for “lower cost” airside and landside airport projects. Eligibility is determined at TxDOT’s discretion. Both maintenance and new construction projects are considered. Airside projects generally have higher priority. RAMP funding is limited to \$50,000 per year per airport. The local government match requirement is 50 percent of total project costs up to \$100,000 plus any excess cost over \$100,000. The implementation analysis assumes that TxDOT RAMP grants will be provided throughout the planning period for several minor projects that are included, but not specifically identified, in the operations and maintenance expense analysis of this chapter.

TxDOT also provides partial funding for general aviation terminal building improvements. The maximum grant available is \$500,000. Grants are limited to 50 percent of total project costs up to \$1 million with costs over \$1 million remaining the responsibility of the sponsor. During Phase I, the implementation analysis assumes a \$500,000 TxDOT grant to provide partial funding to rehabilitate the customs facility.

Additionally, TxDOT provides other grant programs for general aviation airports that include partial funding support for aircraft hangars and parking aprons owned by the airport, automobile parking and entry roads related to general aviation terminals/hangars, Automated Weather Observation Systems and aviation fuel facility developments. No funding from these programs was assumed for this analysis.

### PRIVATE THIRD PARTY FINANCING

Many airports use private third party financing when the planned improvements will be primarily used by a private business or other organization and the airport does not want to make such an investment or cannot afford to make such an investment. Projects of this kind typically include private hangars, FBO facilities, rental car facilities, cargo facilities, exclusive use aircraft parking aprons, industrial development areas, non-aviation

commercial areas, and various other projects. Such projects are not eligible for federal or state funding. The implementation analysis assumes that private third parties will provide \$45.8 million in funding to support landside projects (eg., private aircraft hangars and related aprons, taxiways and automobile access facilities) in Phase I, \$28.3 million in Phase II and \$59.3 million in Phase III.

### CASH RESERVES/NET OPERATING CASH FLOW

At the beginning of fiscal year 2015, the Airport had accumulated about \$2.2 million in cash reserves. The Airport currently generates about \$1 million per year in net operating revenues and, during the Phase I planning period, is projected to generate net revenues ranging from \$500,000 to \$1.6 million per year. During the Phase II/III time frames, the Airport is projected to generate \$1.9 to \$2.7 million in net revenue per year. Cash reserves and net revenues are used to pay existing debt service and are available to support a portion of the funding requirements for the capital improvement program. The implementation analysis assumes that the Airport’s cash reserves/net operating revenues will be used to provide \$4.8 million in capital funding during Phase I, \$5.3 million in Phase II and \$6.3 million in Phase III.

### OTHER UNIDENTIFIED FUNDING

Capital funding sources for the significant majority of projects listed in the CIP have been assumed and identified as the traditional airport capital funding sources described in the preceding sections of this chapter. Specific funding sources for a few of the projects cannot be determined at this time. These include selected roadway related projects in Phase I, the Taxilane November land acquisition project in Phase II, and other roadway related projects in Phase III. Also, sufficient funding is not currently available for the customs facility rehabilitation planned for implementation in 2017. As a result, non-traditional funding sources or other unidentified sources will be needed to finance these projects. The sources of this non-traditional “other” funding are unspecified within the CIP. This “other” funding may potentially include sources such as state/local funding,



federal/state/local economic development grants/loans, additional private third party funds, airport debt, and other possible sources. If other funding sources cannot be identified and obtained in the time frames needed, the projects will have to be delayed until such funding can be identified. Consequently, this source of capital funding has been referenced in the implementation analysis financial plan as “Other Unidentified Funding”. The implementation analysis indicates that \$6.1 million of “Other Unidentified Funding” is applied to projects during Phase I, \$7.7 million in Phase II and \$2.3 million in Phase III.

## FINANCIAL ANALYSIS AND IMPLEMENTATION PLAN FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM

This analysis, along with the schedules presented at the end of **Chapter Six**, provides the results of evaluating the financial reasonableness of implementing the Master Plan CIP during the planning period from 2015 through 2035.

### ESTIMATED PROJECT COSTS AND DEVELOPMENT SCHEDULE

The estimated project costs and development schedule is derived from previous results of the Master Plan development analysis. The program for capital expansion and improvement projects is projected for the Phase I planning period from fiscal years ending 2015 through 2020, for the Phase II period from fiscal years ending 2021 through 2025 and for the Phase III period from fiscal years ending 2026 through 2035. For each of these planning periods, **Schedule 6-1** at the end of **Chapter Six** presents the capital program for the identified projects. Within each planning period, individual projects are further categorized as airside projects or landside projects. Airside projects primarily focus on runway and taxiway pavements, airfield lighting, navigational aids, drainage improvements, and access and security improvements. Landside projects are identified by the taxilane in closest proximity to the development area (referred to as “neighborhoods”) and primarily focus on aircraft hangars, hangar aprons/taxilanes, roadway access, lighting, signage, landscaping and parking, aviation fueling facilities, airport maintenance facilities, and other commercial buildings.

As shown in **Schedule 6-1**, the total estimated cost of capital projects is \$180,748,100 in 2015 dollars. The estimated costs for projects scheduled during the period 2016 through 2035 are adjusted by an assumed three percent annual inflation rate. The resulting total escalated costs are \$231,694,786.

**Table 6-1** below presents a summary of **Schedule 6-1** and provides a comparison of 2015 base year costs with escalated costs adjusted for inflation for each of the planning periods.



**TABLE 6-1** SUMMARY OF 2015 BASE YEAR AND TOTAL ESCALATED COSTS FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM

PLANNING PERIODS	2015 BASE YEAR COSTS	TOTAL ESCALATED COSTS
Phase I Projects (2015-2020):		
Airside Projects	\$15,362,400	\$16,520,110
Landside Projects	53,213,000	57,891,833
<b>Total Phase I Projects</b>	<b>\$68,575,400</b>	<b>\$74,411,944</b>
Phase II Projects (2021-2025)		
Airside Projects	\$24,627,200	\$30,739,318
Landside Projects	31,795,000	39,686,063
<b>Total Phase II Projects</b>	<b>\$56,422,200</b>	<b>\$70,425,380</b>
Phase III Projects (2026-2035)		
Airside Projects	\$14,198,000	\$22,120,021
Landside Projects	41,552,500	\$64,737,441
<b>Total Phase III Projects</b>	<b>\$55,750,500</b>	<b>\$86,857,462</b>
All Project Phases (2015-2035)		
Airside Projects	\$ 54,187,600	\$ 69,379,446
Landside Projects	126,560,500	162,315,337
<b>Total Project Cost All Phases</b>	<b>\$180,748,100</b>	<b>\$231,694,786</b>

**SOURCE:** LEIBOWITZ & HORTON AMC ANALYSIS

**NOTE:** ADDITION ERRORS ARE DUE TO ROUNDING OF CALCULATED AMOUNTS.

**SOURCES AND USES OF CAPITAL FUNDING**

As discussed in previous sections of this analysis, a variety of sources are available for funding capital improvements at the Airport. The funding structure of the capital program depends on many factors, including project eligibility for the various funding sources, the ultimate type and use of facilities to be developed, the amounts and timing of funds available and the priorities for scheduling project completion. For planning purposes, assumptions were made related to the funding source of each capital improvement.

The detailed capital funding analysis is provided in **Schedule 6-2** at the end of **Chapter Six**. Within each planning period, the schedule organizes individual projects as airside projects or landside

projects. Airside projects typically include airfield pavements and related improvements which are eligible for FAA AIP grant funding administered by TxDOT along with local match support provided by airport cash. Landside projects include a number of private general aviation development areas (referred to as “neighborhoods”) which are typically funded by private third parties along with some infrastructure costs contributed by airport cash. Landside projects also include public roadway and maintenance/administrative facilities funded with airport cash and other sources.

A summary of the detailed **Schedule 6-2** is presented in the following **Table 6-2** which provides sources of capital funding by type and uses of capital funding by planning period for the capital improvement program.



**TABLE 6-2** SUMMARY OF SOURCES AND USES OF CAPITAL FUNDING FOR THE MASTER PLAN CAPITAL IMPROVEMENT PROGRAM

SOURCES OF CAPITAL FUNDING	PHASE I (2015-20)	PHASE II (2021-25)	PHASE III (2026-35)	TOTALS
TxDOT AIP Block Grants	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	500,000	0	0	500,000
Other Capital	489,321	0	0	489,321
Private Third Party Financing	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	6,121,342	7,700,057	2,270,738	16,092,137
Cash Reserves/Net Operating Cash Flow	4,818,340	5,311,492	6,264,509	16,394,341
<b>Total Sources of Capital Funding</b>	<b>\$74,411,944</b>	<b>\$70,425,380</b>	<b>\$86,857,462</b>	<b>\$231,694,786</b>
USES OF CAPITAL FUNDING				
<b>Airside Projects</b>	<b>\$16,520,110</b>	<b>\$30,739,318</b>	<b>\$22,120,021</b>	<b>\$69,379,449</b>
Landside Projects by Neighborhood:				
Lima	\$0	\$4,016,661	\$0	\$4,016,661
Mike	6,992,296	0	0	6,992,296
November	0	20,437,792	0	20,437,792
Quebec	27,752,758	0	0	27,752,758
Sierra	6,069,768	0	5,047,814	11,117,582
Corporate	3,892,784	3,840,667	763,404	8,496,855
Tango	0	10,035,413	29,507,903	39,543,315
Uniform	1,594,254	0	29,418,320	31,012,574
Victor	5,173,569	1,355,530	0	6,529,099
General	982,432	0	0	982,432
Alpha	5,433,972	0	0	5,433,972
<b>Total Landside Projects</b>	<b>\$57,891,833</b>	<b>\$39,686,063</b>	<b>\$64,737,441</b>	<b>\$162,315,337</b>
<b>Total Uses of Capital Funding</b>	<b>\$74,411,944</b>	<b>\$70,425,380</b>	<b>\$86,857,462</b>	<b>\$231,694,786</b>

SOURCE: LEIBOWITZ & HORTON AMC ANALYSIS

NOTE: ADDITION ERRORS ARE DUE TO ROUNDING OF CALCULATED AMOUNTS.





In the Phase I planning period (2015-2020), it was assumed that airside projects would be funded with 90 percent AIP grants and ten percent local match with airport cash. It was assumed that landside projects would be primarily funded 95 percent with private third party financing and the Airport would provide five percent cash for infrastructure support. Funding for certain roadway related improvements was undetermined at this time and sufficient funding for the customs facility rehabilitation was unavailable to support the preferred 2017 development time frame - the implementation analysis indicates “other unidentified funding” as the source for these projects - if this funding cannot be identified in the amounts and time frames needed, these projects will have to be delayed until funding is identified.

In the Phase II planning period (2021-2025), it was assumed that airside projects would be funded with 90 percent AIP grants and ten percent local match with Airport cash. It was assumed that the majority of landside projects would be funded 95 percent with private third party financing and the Airport would provide five percent cash for infrastructure support. Funding for 80 percent of the taxilane land acquisition project in the November area is uncertain at this time so the funding source is indicated as “other unidentified funding” in the analysis - if sufficient funding cannot be identified during the Phase II time frame, the project will have to be delayed until funding is identified.

In the Phase III planning period (2026-2035), it was assumed that airside projects would be funded with 90 percent AIP grants and ten percent local match with Airport cash. It was assumed that the majority of landside projects would be funded 95 percent with private third party financing and the Airport would provide five percent cash for infrastructure support. Funding for certain roadway related improvements was undetermined at this time so the implementation analysis indicates “other unidentified funding” as the source for these projects - if this funding cannot be identified in the amounts and time frames needed, these projects will have to be delayed until funding is identified.

## PROJECTED OPERATIONS AND MAINTENANCE EXPENSES

**Schedule 6-3** presents actual, estimated, budgeted and projected operating expenses for the Airport from year 2012 through 2035. Actual amounts for 2012 through 2014, estimates for 2015 and budgeted amounts for 2016 provide a comparison with expenses that are projected for the period 2017 through 2035. Operations and maintenance expense projections are based on the Airport’s current budget, the anticipated impacts of inflation, aviation traffic increases, facility improvements, management’s near term estimates, and tenant leasing policies which directly affect operating expenses.

### Operations and Maintenance Expense Projection Assumptions

Operations and maintenance expense growth assumptions, as reflected in **Schedule 6-3**, were developed to project the Airport’s operating expenses during the planning period. The following growth assumptions were applied for the 2017-2035 projection for the following expense categories:

- Town Administration - Growth is based on management estimates through 2020 and a two percent annual growth assumption thereafter.
- RAMP (Routine Airport Maintenance Program) Grant Expense - Throughout the planning period, the fixed annual expense is based on TxDOT’s current policy of providing 50 percent funding up to \$50,000 for eligible capital projects.
- Operations Expense - Projections are based on a 1.5 percent annual growth rate starting in 2017.
- Operator Service Contract - Throughout the planning period, this operating expense is based on the Airport’s service agreements for operations and real estate management. Current agreements base service fees on 7.5 percent of operating revenues.

- Building Capital Repairs and Minor Capital Projects - Throughout the planning period, growth is based on management estimates.
- O&M Equipment - Projections are based on a three percent annual growth rate starting in 2018.

### Projection of Operations and Maintenance Expenses

The projection of operations and maintenance expenses is provided in **Schedule 6-3** at the end of **Chapter Six**. As shown in the schedule, total expenses are expected to grow from \$4,189,170 in 2015 to \$4,932,420 projected for 2020 with a total of \$28,588,885 during the six-year Phase I period. During the five-year Phase II period, expenses are projected to total \$31,027,642 and during the ten-year Phase III period, expenses are projected to total \$60,303,072. The annual growth rate of operating expenses during the planning period is two percent.

### PROJECTED OPERATING REVENUES

**Schedule 6-4** presents actual, estimated, budgeted, and projected operating revenues for the Airport from 2012 through 2035. Actual amounts for 2012 through 2014, estimates for 2015, and budgeted amounts for 2016 provide a comparison with revenues that are projected for the period 2017 through 2035. Revenue projections are based on the Airport's current budget, the anticipated impacts of inflation, aviation traffic increases, existing facility improvements, new property developments and redevelopments, management estimates, property lease terms and rental rate escalations, anticipated lease extensions, and lease renewals.

### Operating Revenue Projection Assumptions

Operating revenue growth assumptions, as reflected in **Schedule 6-4**, were developed to project the Airport's operating revenues during the planning period. The following growth assumptions were applied for the 2017-2035 projection for the following revenue categories:

- Fuel Flowage Fees - Growth is based on management estimates through 2022 with two percent annual growth thereafter. The assumption includes an increase in the fuel flowage fee to \$0.14 per gallon of aviation fuel delivered beginning in 2016/2017.
- Gross Potential Rentals - Throughout the planning period, projections for hangar rentals, tie-down fees, fuel farm income, access fees, expense reimbursements and other commercial property leases are based on existing lease terms and management's assumptions regarding future lease extensions, renewals and the development of new revenue-generating hangars and other facilities.
- Less Vacancy Allowance - Beginning in 2017, projections are based on 3.9 percent of gross potential property rentals.
- User Fees - User fees for customs, waste removal, and other miscellaneous charge projections are based on a 1.5 percent annual growth rate starting in 2017.
- TxDOT Routine Airport Maintenance Program (RAMP) Operating Grants - Throughout the planning period, the fixed annual amount is based on TxDOT's current policy of providing up to \$50,000 per year for eligible projects under the RAMP.
- Interest Earnings and Other - Projections are based on management estimates.

### Projection of Operating Revenues

The projection of operating revenues is provided in **Schedule 6-4** at the end of **Chapter Six**. As shown in the schedule, total revenues are expected to grow from \$5,210,360 in 2015 to \$6,576,345 projected for 2020 with a total of \$34,939,303 during the six-year Phase I period. During the five-year Phase II period, revenues are projected to total \$44,466,676 and during the ten-year Phase III period, revenues are projected to total \$79,835,816. The overall annual growth rate for revenues is 2.6 percent during the planning period.



# FINANCIAL PLAN SUMMARY



## FINANCIAL PLAN SUMMARY

The Financial Plan Summary presented in **Schedule 6-5** at the end of **Chapter Six** includes a Capital Cash Flow section that presents a summary of projected capital funding (from **Schedule 6-2**) and planned capital expenditures (from **Schedule 6-1**) with the cash flow that results from implementing the Master Plan Capital Improvement Program. **Schedule 6-5** also includes an Operating Cash Flow section that summarizes totals for operating revenues (from **Schedule 6-4**) and operating expenses (from **Schedule 6-3**) with cash flow reductions for existing debt service and with the addition of cash reserve balances to provide the cash flow that results from these activities.

In **Schedule 6-1** of the Financial Implementation Analysis, practical approaches were provided for scheduling capital expenditures to match the availability of capital funding. **Schedule 6-2** matched specific capital funding sources with each of the identified projects. The Operating Cash Flow and Capital Cash Flow sections of **Schedule 6-5** indicate that the projections of annual cash flow and ending cash reserve balances are positive for every year throughout the twenty-one year planning period. Based on the assumptions underlying the Financial Implementation Analysis summarized in **Schedule 6-5**, implementation of those projects in the Master Plan CIP that have specific funding sources identified, is financially reasonable.

Key assumptions supporting the achievability of the Master Plan CIP relate to AIP discretionary funding and “other unidentified funding” sources.

Implementation of future capital projects that have AIP discretionary grants provided through TxDOT’s block grant as a funding source may need to be delayed until it can be confirmed that such grants are actually available. Selected roadway related projects and the customs facility rehabilitation in Phase I did not have specific funding sources identified. Also, the November area taxilane land acquisition project in Phase II and other roadway related projects in Phase III did not have specific funding sources indicated. If specific funding sources cannot be identified and obtained in the time frames needed, these projects will need to be delayed until such funding can be identified.

Additionally, the Financial Implementation Analysis for Addison Airport relies on achievement of the Master Plan forecast of aviation activity including aircraft operations, based aircraft, and aviation fuel flowage. Actual aviation activity may temporarily vary from the projected levels without a significant adverse impact on the capital program. If decreased activity levels occur and persist, implementation of many of the proposed projects may not be financially feasible. If aviation demand growth returns and exceeds forecast activity levels some projects may be moved ahead in the development schedule.

## FINANCIAL ANALYSIS SCHEDULES

**Schedules 6-1** through **6-5** provide the detailed financial analysis for implementation of the Master Plan CIP. These schedules are provided on the following pages.

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSM7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I							Phase II 2021-25	Phase III 2026-35	Total Funding
	2015	2016	2017	2018	2019	2020	Total			
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I							Phase II 2021-25	Phase III 2026-35	Total Escalated Costs
		2015	2016	2017	2018	2019	2020	Total			
<b>Phase I Projects (2015-2020)</b>											
<b>Airside Projects - 2015</b>											
I-AOA-01 Construct Taxilane Victor Improvements	\$2,030,000	\$2,030,000						\$2,030,000			\$2,030,000
I-AOA-02 Design/Coordinate - R/W 33 Localizer Replacement	155,000	155,000						155,000			155,000
I-AOA-03 Design Westside Ditch/Drainage Improvements	45,700	45,700						45,700			45,700
<b>Total Airside Projects for 2015</b>	<b>\$2,230,700</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>
<b>Landside Projects - 2015</b>											
-	\$0	\$0						\$0			\$0
-	0	0						0			0
<b>Total Landside Projects for 2015</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total All Projects for 2015</b>	<b>\$2,230,700</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>
<b>Airside Projects - 2016</b>											
I-AOA-04 Construct R/W 33 Localizer Replacement	\$0	\$0						\$0			\$0
I-AOA-05 Design Runway 15/33 & Taxiway Alpha Rejuvenation	15,000	15,450						15,450			15,450
I-AOA-06 Construct Westside Ditch/Drainage Improvements	430,700	443,621						443,621			443,621
<b>Total Airside Projects for 2016</b>	<b>\$445,700</b>	<b>\$0</b>	<b>\$459,071</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$459,071</b>	<b>\$0</b>	<b>\$0</b>	<b>\$459,071</b>
<b>Landside Projects - 2016</b>											
I-Q-01 QUEBEC-Aircraft Storage Hangars	\$3,500,000	\$3,605,000						\$3,605,000			\$3,605,000
I-C-01 CORPORATE-Design/Construct New Corporate Hangar (Former Owens Location)	3,509,000	3,614,270						3,614,270			3,614,270
I-G-01 GENERAL-Plan/Design Wayfinding Signage	25,000	25,750						25,750			25,750
<b>Total Landside Projects for 2016</b>	<b>\$7,034,000</b>	<b>\$0</b>	<b>\$7,245,020</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,245,020</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,245,020</b>
<b>Total All Projects for 2016</b>	<b>\$7,479,700</b>	<b>\$0</b>	<b>\$7,704,091</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,704,091</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,704,091</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSM7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I							Phase II 2021-25	Phase III 2026-35	Total Funding
	2015	2016	2017	2018	2019	2020	Total			
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I							Phase II 2021-25	Phase III 2026-35	Total Escalated Costs
		2015	2016	2017	2018	2019	2020	Total			
<b>Airside Projects - 2017</b>											
I-AOA-07 Design Taxiway Bravo/Golf Improvements (MITL, Service Road)	\$605,000			\$641,845				\$641,845			\$641,845
I-AOA-08 Construct Runway 15/33 Rejuvenation & Runway 16/34 Remarking	800,000			848,720				848,720			848,720
I-AOA-09 Install Runway/Roadway Weather Info System (RWIS)	45,000			47,741				47,741			47,741
I-AOA-10 Design Taxilane Uniform Improvements	175,000			185,658				185,658			185,658
I-AOA-11 Design Access & Security Improvements Phases II/III	110,000			116,699				116,699			116,699
<b>Total Airside Projects for 2017</b>	<b>\$1,735,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,840,662</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,840,662</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,840,662</b>
<b>Landside Projects - 2017</b>											
I-M-01 MIKE-Design Light GA T-Hangars, Taxilane & Auto Access	\$405,000			\$429,665				\$429,665			\$429,665
I-M-02 MIKE-Wayfinding Signage at Midway Road & Kellway Circle	6,000			6,365				6,365			6,365
I-M-03 MIKE-Wayfinding Signage at Kellway Circle & Access Point into Mike Development	3,000			3,183				3,183			3,183
I-Q-02 QUEBEC-Apron/Ramp/Taxilane	4,964,000			5,266,308				5,266,308			5,266,308
I-Q-03 QUEBEC-FBO Hangar (200' x 160')	3,800,000			4,031,420				4,031,420			4,031,420
I-Q-04 QUEBEC-Auto Access/Parking	1,770,000			1,877,793				1,877,793			1,877,793
I-Q-05 QUEBEC-FBO Office/Commercial Building	3,900,000			4,137,510				4,137,510			4,137,510
I-Q-06 QUEBEC-Wayfinding Signage (Monumental) Addison Road South End of Airport	30,000			31,827				31,827			31,827
I-Q-07 QUEBEC-Wayfinding Signage (Monumental) at Addison Road and Addison Circle	75,000			79,568				79,568			79,568
I-C-02 CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Airport Parkway and Addison Road	14,000			14,853				14,853			14,853
I-C-03 CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Addison Road and Eddie Rickenbacker Drive	8,000			8,487				8,487			8,487
I-C-04 CORPORATE-Landscaping Along Airport Parkway and Eddie Rickenbacker Drive	42,000			44,558				44,558			44,558
I-C-05 CORPORATE-Pocket Park/Art Feature at Airport Parkway and Eddie Rickenbacker Drive	50,000			53,045				53,045			53,045
I-U-01 UNIFORM-Wayfinding Signage (Secondary) at Westgrove Drive and Claire Chennault Street	14,000			14,853				14,853			14,853
I-U-02 UNIFORM-Wayfinding Signage (Monumental-Airport) at Westgrove Drive and Addison Road (was I-V-08)	30,000			31,827				31,827			31,827
I-A-01 ALPHA-Design General Purpose Apron Reconstruction Customs Facility	95,000			100,786				100,786			100,786
I-V-01 VICTOR-Airport Observation Park - Westgrove Drive	250,000			265,225				265,225			265,225
I-A-02 ALPHA-Customs Facility Rehabilitation/Renovation	3,000,000			3,182,700				3,182,700			3,182,700
<b>Total Landside Projects for 2017</b>	<b>\$18,456,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,579,970</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,579,970</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,579,970</b>
<b>Total All Projects for 2017</b>	<b>\$20,191,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,420,632</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,420,632</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,420,632</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I							Phase II 2021-25	Phase III 2026-35	Total Funding
	2015	2016	2017	2018	2019	2020	Total			
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule										
		Phase I							Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020	Total				
<b>Airside Projects - 2018</b>												
I-AOA-12 Construct Taxiway Bravo/Golf and Westside Service Road Improvements	\$6,765,000				\$7,392,298				\$7,392,298			\$7,392,298
I-AOA-13 Construct Access & Security Improvements Phases II/III	940,000				1,027,163				1,027,163			1,027,163
I-AOA-14 Construct Taxilane Uniform Improvements	2,656,000				2,902,283				2,902,283			2,902,283
<b>Total Airside Projects for 2018</b>	<b>\$10,361,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,321,744</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,321,744</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,321,744</b>
<b>Landside Projects - 2018</b>												
I-M-04 MIKE-Construct Light GA T-Hangars, Taxilane & Auto Access	\$4,947,000				\$5,405,720				\$5,405,720			\$5,405,720
I-M-05 MIKE-Design/Construct Light GA Fueling Facility	150,000				163,909				163,909			163,909
I-M-06 MIKE-Design/Construct Public Use Building	600,000				655,636				655,636			655,636
I-M-07 MIKE-Design/Construct Public Use Auto Parking	150,000				163,909				163,909			163,909
I-M-08 MIKE-Design/Construct Pocket Park (North End)	150,000				163,909				163,909			163,909
I-Q-08 QUEBEC-SE Quadrant Park Features Along Addison Road	650,000				710,273				710,273			710,273
I-A-03 ALPHA-Reconstruct General Purpose Apron Customs Facility	1,968,000				2,150,487				2,150,487			2,150,487
<b>Total Landside Projects for 2018</b>	<b>\$8,615,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,413,843</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,413,843</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,413,843</b>
<b>Total All Projects for 2018</b>	<b>\$18,976,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,735,588</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,735,588</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,735,588</b>
<b>Airside Projects - 2019</b>												
I-AOA-15 Design/Construct Taxiway Alpha Rejuvenation	\$475,000							\$534,617			\$534,617	\$534,617
-	0							0			0	0
<b>Total Airside Projects for 2019</b>	<b>\$475,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$534,617</b>	<b>\$0</b>	<b>\$0</b>	<b>\$534,617</b>	<b>\$534,617</b>
<b>Landside Projects - 2019</b>												
I-G-02 GENERAL-Airport Maintenance Facility	\$850,000							\$956,682			\$956,682	\$956,682
I-Q-09 QUEBEC-Restaurant	3,350,000							3,770,455			3,770,455	3,770,455
I-Q-10 QUEBEC-Addison Road Street Lighting - From Westgrove Drive to Lindbergh Drive	525,000							590,892			590,892	590,892
I-C-06 CORPORATE-Lighting Along Airport Parkway and Eddie Rickenbacker Drive	140,000							157,571			157,571	157,571
I-S-01 SIERRA-Design/Construct Redevelopment of A6 with Apron Expansion	3,580,000							4,029,322			4,029,322	4,029,322
I-S-02 SIERRA-Develop Expanded Auto Parking - Jimmy Doolittle Drive	580,000							652,795			652,795	652,795
I-U-03 UNIFORM-Claire Chennault Street Improvements (Widening and Drainage)	1,250,000							1,406,886			1,406,886	1,406,886
I-U-04 UNIFORM-Lighting Along Claire Chennault Street	125,000							140,689			140,689	140,689
I-V-02 VICTOR-Aircraft Storage Hangar/Apron (Million Air Dallas)	4,361,000							4,908,344			4,908,344	4,908,344
<b>Total Landside Projects for 2019</b>	<b>\$14,761,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,613,636</b>	<b>\$0</b>	<b>\$16,613,636</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,613,636</b>	<b>\$16,613,636</b>
<b>Total All Projects for 2019</b>	<b>\$15,236,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,148,252</b>	<b>\$0</b>	<b>\$17,148,252</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,148,252</b>	<b>\$17,148,252</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSM7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Total	Phase II 2021-25	Phase III 2026-35	Total Funding
	2015	2016	2017	2018	2019	2020				
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule										
		Phase I						Total	Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020					
<b>Airside Projects - 2020</b>												
I-AOA-16 Design Eastside Perimeter Road	\$115,000						\$133,317	\$133,317			\$133,317	
-	0						0	0			0	
<b>Total Airside Projects for 2020</b>	<b>\$115,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$133,317</b>	<b>\$133,317</b>	<b>\$0</b>	<b>\$0</b>	<b>\$133,317</b>	
<b>Landside Projects - 2020</b>												
I-Q-11 QUEBEC-Collins Hangar Refurbishment	\$2,300,000						\$2,666,330	\$2,666,330			\$2,666,330	
I-Q-12 QUEBEC-Acquire Masonic Lodge & Develop Airport Observation Park	850,000						985,383	985,383			985,383	
I-S-03 SIERRA-Jimmy Doolittle Drive Realignment	190,000						220,262	220,262			220,262	
I-S-04 SIERRA-Wayfinding Signage (Secondary-Multi-Tenant) at Keller Springs Road and Jimmy Doolittle Drive	14,000						16,230	16,230			16,230	
I-S-05 SIERRA-Art Features - NTTA Toll Tunnel	30,000						34,778	34,778			34,778	
I-S-06 SIERRA-New Small A&P Hangar Along Realigned Jimmy Doolittle Drive	860,000						996,976	996,976			996,976	
I-S-07 SIERRA-Lighting Along Jimmy Doolittle Drive	75,000						86,946	86,946			86,946	
I-S-08 SIERRA-Landscaping Along Jimmy Doolittle Drive	28,000						32,460	32,460			32,460	
<b>Total Landside Projects for 2020</b>	<b>\$4,347,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,039,364</b>	<b>\$5,039,364</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,039,364</b>	
<b>Total All Projects for 2020</b>	<b>\$4,462,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,172,681</b>	<b>\$5,172,681</b>	<b>\$0</b>	<b>\$0</b>	<b>\$5,172,681</b>	
<b>Total Phase I Projects</b>	<b>\$68,575,400</b>	<b>\$2,230,700</b>	<b>\$7,704,091</b>	<b>\$21,420,632</b>	<b>\$20,735,588</b>	<b>\$17,148,252</b>	<b>\$5,172,681</b>	<b>\$74,411,944</b>	<b>\$0</b>	<b>\$0</b>	<b>\$74,411,944</b>	

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSM7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule								Phase II 2021-25	Phase III 2026-35	Total Funding
	Phase I										
	2015	2016	2017	2018	2019	2020	Total				
<b>Capital Funds Used</b>											
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691	
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000	
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000	
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321	
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297	
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137	
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637	
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082	
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678	
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)	
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973	

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule								Phase II 2021-25	Phase III 2026-35	Total Escalated Costs
		Phase I										
		2015	2016	2017	2018	2019	2020	Total				
<b>Phase II Projects (2021-2025)</b>												
<b>Airside Projects</b>												
II-AOA-17 Construct Eastside Perimeter Road	\$1,384,000								\$0	\$1,727,489		\$1,727,489
II-AOA-18 Design Taxilane Tango Realignment/Apron Expansion	200,000								0	249,637		249,637
II-AOA-19 Construct Taxilane Tango Realignment	1,656,000								0	2,066,995		2,066,995
II-AOA-20 Design Taxiway Bravo Extension to Runway 16 End	827,000								0	1,032,250		1,032,250
II-AOA-21 Design Taxilane Romeo Reconstruction to Correct OFA	20,000								0	24,964		24,964
II-AOA-22 Reconstruct Taxilane Romeo	200,000								0	249,637		249,637
II-AOA-23 EMAS Rehabilitation	65,000								0	81,132		81,132
II-AOA-24 Construct Taxiway Bravo Extension	5,509,000								0	6,876,255		6,876,255
II-AOA-25 Design/Construct Runway 16 Glideslope Relocation	940,000								0	1,173,295		1,173,295
II-AOA-26 AWOS Replacement	125,000								0	156,023		156,023
II-AOA-27 Design Taxiway Reconstruction Bravo (South & Connectors)	450,000								0	561,684		561,684
II-AOA-28 Reconstruct Taxiway Bravo (South End Centerline Offset & Westside Connectors)	11,870,000								0	14,815,964		14,815,964
II-AOA-29 Design/Construct Runway 34 Glideslope Relocation	970,000								0	1,210,740		1,210,740
II-AOA-30 Design Runway 16/34 Structural Overlay	411,200								0	513,254		513,254
<b>Total Airside Projects for 2021-2025</b>	<b>\$24,627,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$30,739,318</b>	<b>\$0</b>	<b>\$30,739,318</b>
<b>Landside Projects</b>												
II-L-01 LIMA-Heliport FBO Hangar	\$1,600,000								\$0	\$1,997,097		\$1,997,097
II-L-02 LIMA-Helipad, Apron, Helo Parking	1,300,000								0	1,622,641		1,622,641
II-L-03 LIMA-Taxilane Connection to Taxiway Bravo	250,000								0	312,046		312,046
II-L-04 LIMA-Auto Parking	65,000								0	81,132		81,132
II-L-05 LIMA-Wayfinding Signage	3,000								0	3,745		3,745
II-N-01 NOVEMBER-Property Acquisition for Taxilane (4.4 acres)	7,350,000								0	9,174,165		9,174,165
II-N-02 NOVEMBER-New Corporate Hangar & Ramp	2,953,000								0	3,685,892		3,685,892
II-N-03 NOVEMBER-Wayfinding Signage (Multi-Tenant Post-Panel) Midway Road & Wiley Post Road	14,000								0	17,475		17,475
II-N-04 NOVEMBER-Landscaping Along Wiley Post Road	\$75,000								0	93,614		93,614
II-N-05 NOVEMBER-Lighting Along Wiley Post Road	92,000								0	114,833		114,833
II-N-06 NOVEMBER-New T-Hangar (19 units, 48' door)	2,306,000								0	2,878,316		2,878,316
II-N-07 NOVEMBER-New A&P Hangar for Light GA	1,124,000								0	1,402,961		1,402,961
II-N-08 NOVEMBER-Light GA Public/Tenant Building & Auto Parking	960,000								0	1,198,258		1,198,258
II-N-09 NOVEMBER-New T-Hangar (18 units, 42' door)	1,500,000								0	1,872,278		1,872,278
II-C-07 CORPORATE-Design/Construct S2 Hangar Redevelopment	3,077,000								0	3,840,667		3,840,667
II-T-01 TANGO-Atlantic FBO Redevelopment	8,040,000								0	10,035,413		10,035,413
II-V-03 VICTOR-Million Air Apron Expansion, Fuel Truck Parking and Auto Overflow Parking	289,000								0	360,726		360,726
II-V-04 VICTOR-Aircraft Storage Hangar (JetPort South)	797,000								0	994,804		994,804
<b>Total Landside Projects for 2021-2025</b>	<b>\$31,795,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$39,686,063</b>	<b>\$0</b>	<b>\$39,686,063</b>
<b>Total Phase II Projects</b>	<b>\$56,422,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$70,425,380</b>	<b>\$0</b>	<b>\$70,425,380</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSM7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule								Phase II 2021-25	Phase III 2026-35	Total Funding
	Phase I										
	2015	2016	2017	2018	2019	2020	Total				
<b>Capital Funds Used</b>											
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691	
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000	
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000	
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321	
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297	
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137	
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637	
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082	
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	9,132,043	
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)	
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973	

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule								Phase II 2021-25	Phase III 2026-35	Total Escalated Costs
		Phase I										
		2015	2016	2017	2018	2019	2020	Total				
<b>Phase III Projects (2026-2035)</b>												
<b>Airside Projects</b>												
III-AOA-31 Construct Runway 16/34 Structural Overlay	\$2,741,000								\$0	\$4,270,389	\$4,270,389	
III-AOA-32 Update Airport Master Plan	300,000								0	467,390	467,390	
III-AOA-33 Design Taxiway Alpha Structural Overlay	197,000								0	306,920	306,920	
III-AOA-34 Update AGIS Aeronautical Survey	100,000								0	155,797	155,797	
III-AOA-35 Construct Taxiway Alpha Structural Overlay	1,314,000								0	2,047,169	2,047,169	
III-AOA-36 Replace Rotating Beacon	30,000								0	46,739	46,739	
III-AOA-37 Install New Primary Wind Cone	30,000								0	46,739	46,739	
III-AOA-38 Install Two Supplementary Wind Cones	30,000								0	46,739	46,739	
III-AOA-39 Design/Construct Northside Perimeter Road	1,491,000								0	2,322,929	2,322,929	
III-AOA-40 Upgrade Runway 16/34 HIRL LED	330,000								0	514,129	514,129	
III-AOA-41 Upgrade PAPI LED	110,000								0	171,376	171,376	
III-AOA-42 Rehabilitate Runway Lighting Control System (ALCMS)	120,000								0	186,956	186,956	
III-AOA-43 Rehabilitate Taxiway Alpha MITL	650,000								0	1,012,679	1,012,679	
III-AOA-44 Rehabilitate Runway 16/34 Guard Light	125,000								0	194,746	194,746	
III-AOA-45 Rehabilitate Electrical Vault	350,000								0	545,289	545,289	
III-AOA-46 Replace EMAS	4,850,000								0	7,556,142	7,556,142	
III-AOA-47 Approach Lighting System Runway 34	1,430,000								0	2,227,893	2,227,893	
<b>Total Airside Projects for 2026-2035</b>	<b>\$14,198,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$22,120,021</b>	<b>\$22,120,021</b>	
<b>Landside Projects</b>												
III-C-08 CORPORATE-Auto Parking (Former Admin Bldg Site)	\$490,000								\$0	\$763,404	\$763,404	
III-S-09 SIERRA-Redevelop Hangars S1/S3 as Larger Corporate Hangar	3,240,000								0	5,047,814	5,047,814	
III-T-02 TANGO-Rebuild Hangar Area T-17	2,944,000								0	4,586,656	4,586,656	
III-T-03 TANGO-Flight Training Hangar and Ramp	2,879,000								0	4,485,388	4,485,388	
III-T-04 TANGO-A&P Hangar and Ramp	2,939,000								0	4,578,866	4,578,866	
III-T-05 TANGO-Charter Hangar (West) and Ramp	2,617,000								0	4,077,201	4,077,201	
III-T-06 TANGO-Aircraft Storage Hangar and Ramp	2,561,000								0	3,989,955	3,989,955	
III-T-07 TANGO-Reconstruct Glenn Curtiss Drive	650,000								0	1,012,679	1,012,679	
III-T-08 TANGO-Charter Hangar with Offices (East) and Auto Parking	2,996,000								0	4,667,670	4,667,670	
III-T-09 TANGO-Restaurant (Next to Charter Hangar East)	880,000								0	1,371,011	1,371,011	
III-T-10 TANGO-Wayfinding Signage (Monumental), Pocket Park at Addison Road and Keller Springs	150,000								0	233,695	233,695	
III-T-11 TANGO-Wayfinding Signage at Addison Road and Glenn Curtiss Drive (Secondary-Multi-Tenant)	14,000								0	21,812	21,812	
III-T-12 TANGO-Landscaping Along Addison Road North of Keller Springs Boulevard	150,000								0	233,695	233,695	
III-T-13 TANGO-Landscaping Along Glenn Curtiss Drive	35,000								0	54,529	54,529	
III-T-14 TANGO-Lighting Along Glenn Curtiss Drive	125,000								0	194,746	194,746	
III-U-05 UNIFORM-Develop 2 100' x 100' Hangars with Office (Cherry Air)	4,102,000								0	6,390,782	6,390,782	
III-U-06 UNIFORM-Develop 200'x120' Hangar with Office (Monarch)	4,079,000								0	6,354,949	6,354,949	
III-U-07 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NE)	2,149,000								0	3,348,072	3,348,072	
III-U-08 UNIFORM-Develop 165'x100' Hangar (Cavanaugh SE)	2,100,000								0	3,271,732	3,271,732	
III-U-09 UNIFORM-Landscaping Along Claire Chennault Street	42,500								0	66,214	66,214	
III-U-10 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NW)	2,113,000								0	3,291,985	3,291,985	
III-U-11 UNIFORM-Develop 165'x100' Hangar w/ Office (Cavanaugh SW)	4,297,000								0	6,694,586	6,694,586	
<b>Total Landside Projects for 2026-2035</b>	<b>\$41,552,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$64,737,441</b>	<b>\$64,737,441</b>	
<b>Total Phase III Projects</b>	<b>\$55,750,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$86,857,462</b>	<b>\$86,857,462</b>	
<b>Total Project Costs</b>	<b>\$180,748,100</b>	<b>\$2,230,700</b>	<b>\$7,704,091</b>	<b>\$21,420,632</b>	<b>\$20,735,588</b>	<b>\$17,148,252</b>	<b>\$5,172,681</b>	<b>\$74,411,944</b>	<b>\$70,425,380</b>	<b>\$86,857,462</b>	<b>\$231,694,786</b>	

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I							Phase II 2021-25	Phase III 2026-35	Total Funding
	2015	2016	2017	2018	2019	2020	Total			
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I							Phase II 2021-25	Phase III 2026-35	Total Escalated Costs
		2015	2016	2017	2018	2019	2020	Total			
<b>SUMMARY - ALL PROJECTS - ALL PHASES</b>											
<b>Airside Projects</b>											
Phase I Projects	\$15,362,400	\$2,230,700	\$459,071	\$1,840,662	\$11,321,744	\$534,617	\$133,317	\$16,520,110	\$0	\$0	\$16,520,110
Phase II Projects	24,627,200	0	0	0	0	0	0	0	30,739,318	0	30,739,318
Phase III Projects	14,198,000	0	0	0	0	0	0	0	0	22,120,021	22,120,021
<b>Total Airside Projects</b>	<b>\$54,187,600</b>	<b>\$2,230,700</b>	<b>\$459,071</b>	<b>\$1,840,662</b>	<b>\$11,321,744</b>	<b>\$534,617</b>	<b>\$133,317</b>	<b>\$16,520,110</b>	<b>\$30,739,318</b>	<b>\$22,120,021</b>	<b>\$69,379,449</b>
<b>Landside Projects</b>											
LIMA	\$3,218,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,016,661	\$0	\$4,016,661
MIKE	6,411,000	0	0	439,213	6,553,084	0	0	6,992,296	0	0	6,992,296
NOVEMBER	16,374,000	0	0	0	0	0	0	0	20,437,792	0	20,437,792
QUEBEC	25,714,000	0	3,605,000	15,424,425	710,273	4,361,347	3,651,713	27,752,758	0	0	27,752,758
SIERRA	8,597,000	0	0	0	0	4,682,117	1,387,651	6,069,768	0	5,047,814	11,117,582
CORPORATE	7,330,000	0	3,614,270	120,943	0	157,571	0	3,892,784	3,840,667	763,404	8,496,855
TANGO	26,980,000	0	0	0	0	0	0	0	10,035,413	29,507,903	39,543,315
UNIFORM	20,301,500	0	0	46,680	0	1,547,575	0	1,594,254	0	29,418,320	31,012,574
VICTOR	5,697,000	0	0	265,225	0	4,908,344	0	5,173,569	1,355,530	0	6,529,099
GENERAL	875,000	0	25,750	0	0	956,682	0	982,432	0	0	982,432
ALPHA	5,063,000	0	0	3,283,486	2,150,487	0	0	5,433,972	0	0	5,433,972
<b>Total Landside Projects</b>	<b>\$126,560,500</b>	<b>\$0</b>	<b>\$7,245,020</b>	<b>\$19,579,970</b>	<b>\$9,413,843</b>	<b>\$16,613,636</b>	<b>\$5,039,364</b>	<b>\$57,891,833</b>	<b>\$39,686,063</b>	<b>\$64,737,441</b>	<b>\$162,315,337</b>
<b>Total Project Costs</b>	<b>\$180,748,100</b>	<b>\$2,230,700</b>	<b>\$7,704,091</b>	<b>\$21,420,632</b>	<b>\$20,735,588</b>	<b>\$17,148,252</b>	<b>\$5,172,681</b>	<b>\$74,411,944</b>	<b>\$70,425,380</b>	<b>\$86,857,462</b>	<b>\$231,694,786</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

Capital Improvement Projects		Total Escalated Costs	TxDOT AIP Block Grants	TxDOT Aviation Div	Other Capital	Private 3rd Party Financing	Other Unidentified Funding	Cash Reserves/ Net Revenues	Total Funding
<b>Phase I Projects (2015-2020)</b>									
<b>Airside Projects - 2015</b>									
I-AOA-01	Construct Taxilane Victor Improvements	\$2,030,000	\$1,827,000					\$203,000	\$2,030,000
I-AOA-02	Design/Coordinate - R/W 33 Localizer Replacement	155,000			0			155,000	155,000
I-AOA-03	Design Westside Ditch/Drainage Improvements	45,700			45,700			0	45,700
<b>Total Airside Projects for 2015</b>		<b>\$2,230,700</b>	<b>\$1,827,000</b>	<b>\$0</b>	<b>\$45,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$358,000</b>	<b>\$2,230,700</b>
<b>Landside Projects - 2015</b>									
-	-	\$0						\$0	\$0
-	-	0						0	0
<b>Total Landside Projects for 2015</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total All Projects for 2015</b>		<b>\$2,230,700</b>	<b>\$1,827,000</b>	<b>\$0</b>	<b>\$45,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$358,000</b>	<b>\$2,230,700</b>
<b>Airside Projects - 2016</b>									
I-AOA-04	Construct R/W 33 Localizer Replacement	\$0			\$0			\$0	\$0
I-AOA-05	Design Runway 15/33 & Taxiway Alpha Rejuvenation	15,450	13,905					1,545	15,450
I-AOA-06	Construct Westside Ditch/Drainage Improvements	443,621			443,621			0	443,621
<b>Total Airside Projects for 2016</b>		<b>\$459,071</b>	<b>\$13,905</b>	<b>\$0</b>	<b>\$443,621</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,545</b>	<b>\$459,071</b>
<b>Landside Projects - 2016</b>									
I-Q-01	QUEBEC-Aircraft Storage Hangars	\$3,605,000				\$3,424,750		\$180,250	\$3,605,000
I-C-01	CORPORATE-Design/Construct New Corporate Hangar (Former Owens Location)	3,614,270				3,433,557		180,714	3,614,270
I-G-01	GENERAL-Plan/Design Wayfinding Signage	25,750						25,750	25,750
<b>Total Landside Projects for 2016</b>		<b>\$7,245,020</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,858,307</b>	<b>\$0</b>	<b>\$386,714</b>	<b>\$7,245,020</b>
<b>Total All Projects for 2016</b>		<b>\$7,704,091</b>	<b>\$13,905</b>	<b>\$0</b>	<b>\$443,621</b>	<b>\$6,858,307</b>	<b>\$0</b>	<b>\$388,259</b>	<b>\$7,704,091</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Airside Projects - 2017</b>									
I-AOA-07	Design Taxiway Bravo/Golf Improvements (MITL, Service Road)	\$641,845	\$577,660					\$64,184	\$641,845
I-AOA-08	Construct Runway 15/33 Rejuvenation & Runway 16/34 Remarking	848,720	763,848					84,872	848,720
I-AOA-09	Install Runway/Roadway Weather Info System (RWIS)	47,741	42,966					4,774	47,741
I-AOA-10	Design Taxilane Uniform Improvements	185,658	167,092					18,566	185,658
I-AOA-11	Design Access & Security Improvements Phases II/III	116,699	105,029					11,670	116,699
<b>Total Airside Projects for 2017</b>		<b>\$1,840,662</b>	<b>\$1,656,595</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$184,066</b>	<b>\$1,840,662</b>
<b>Landside Projects - 2017</b>									
I-M-01	MIKE-Design Light GA T-Hangars, Taxilane & Auto Access	\$429,665				\$408,181		\$21,483	\$429,665
I-M-02	MIKE-Wayfinding Signage at Midway Road & Kellway Circle	6,365				6,047		318	6,365
I-M-03	MIKE-Wayfinding Signage at Kellway Circle & Access Point into Mike Development	3,183				3,024		159	3,183
I-Q-02	QUEBEC-Apron/Ramp/Taxilane	5,266,308				5,002,992		263,315	5,266,308
I-Q-03	QUEBEC-FBO Hangar (200' x 160')	4,031,420				3,829,849		201,571	4,031,420
I-Q-04	QUEBEC-Auto Access/Parking	1,877,793				1,783,903		93,890	1,877,793
I-Q-05	QUEBEC-FBO Office/Commercial Building	4,137,510				3,930,635		206,876	4,137,510
I-Q-06	QUEBEC-Wayfinding Signage (Monumental) Addison Road South End of Airport	31,827				30,236		1,591	31,827
I-Q-07	QUEBEC-Wayfinding Signage (Monumental) at Addison Road and Addison Circle	79,568				75,589		3,978	79,568
I-C-02	CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Airport Parkway and Addison Road	14,853				14,110		743	14,853
I-C-03	CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Addison Road and Eddie Rickenbacker Drive	8,487				8,063		424	8,487
I-C-04	CORPORATE-Landscaping Along Airport Parkway and Eddie Rickenbacker Drive	44,558				42,330		2,228	44,558
I-C-05	CORPORATE-Pocket Park/Art Feature at Airport Parkway and Eddie Rickenbacker Drive	53,045					53,045	0	53,045
I-U-01	UNIFORM-Wayfinding Signage (Secondary) at Westgrove Drive and Claire Chennault Street	14,853				14,110		743	14,853
I-U-02	UNIFORM-Wayfinding Signage (Monumental-Airport) at Westgrove Drive and Addison Road (was I-V-08)	31,827				30,236		1,591	31,827
I-A-01	ALPHA-Design General Purpose Apron Reconstruction Customs Facility	100,786	90,707					10,079	100,786
I-V-01	VICTOR-Airport Observation Park - Westgrove Drive	265,225					265,225	0	265,225
I-A-02	ALPHA-Customs Facility Rehabilitation/Renovation	3,182,700		500,000			2,682,700	0	3,182,700
<b>Total Landside Projects for 2017</b>		<b>\$19,579,970</b>	<b>\$90,707</b>	<b>\$500,000</b>	<b>\$0</b>	<b>\$15,179,304</b>	<b>\$3,000,970</b>	<b>\$808,989</b>	<b>\$19,579,970</b>
<b>Total All Projects for 2017</b>		<b>\$21,420,632</b>	<b>\$1,747,302</b>	<b>\$500,000</b>	<b>\$0</b>	<b>\$15,179,304</b>	<b>\$3,000,970</b>	<b>\$993,055</b>	<b>\$21,420,632</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Airside Projects - 2018</b>									
I-AOA-12	Construct Taxiway Bravo/Golf and Westside Service Road Improvements	\$7,392,298	\$6,653,068					\$739,230	\$7,392,298
I-AOA-13	Construct Access & Security Improvements Phases II/III	1,027,163	924,447					102,716	1,027,163
I-AOA-14	Construct Taxilane Uniform Improvements	2,902,283	2,612,055					290,228	2,902,283
<b>Total Airside Projects for 2018</b>		<b>\$11,321,744</b>	<b>\$10,189,570</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,132,174</b>	<b>\$11,321,744</b>
<b>Landside Projects - 2018</b>									
I-M-04	MIKE-Construct Light GA T-Hangars, Taxilane & Auto Access	\$5,405,720				\$5,135,434		\$270,286	\$5,405,720
I-M-05	MIKE-Design/Construct Light GA Fueling Facility	163,909				155,714		8,195	163,909
I-M-06	MIKE-Design/Construct Public Use Building	655,636				622,854		32,782	655,636
I-M-07	MIKE-Design/Construct Public Use Auto Parking	163,909				155,714		8,195	163,909
I-M-08	MIKE-Design/Construct Pocket Park (North End)	163,909				155,714		8,195	163,909
I-Q-08	QUEBEC-SE Quadrant Park Features Along Addison Road	710,273				674,759		35,514	710,273
I-A-03	ALPHA-Reconstruct General Purpose Apron Customs Facility	2,150,487	1,935,438					215,049	2,150,487
<b>Total Landside Projects for 2018</b>		<b>\$9,413,843</b>	<b>\$1,935,438</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,900,189</b>	<b>\$0</b>	<b>\$578,216</b>	<b>\$9,413,843</b>
<b>Total All Projects for 2018</b>		<b>\$20,735,588</b>	<b>\$12,125,008</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,900,189</b>	<b>\$0</b>	<b>\$1,710,391</b>	<b>\$20,735,588</b>
<b>Airside Projects - 2019</b>									
I-AOA-15	Design/Construct Taxiway Alpha Rejuvenation	\$534,617	\$481,155					\$53,462	\$534,617
-	-	0						0	0
<b>Total Airside Projects for 2019</b>		<b>\$534,617</b>	<b>\$481,155</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$53,462</b>	<b>\$534,617</b>
<b>Landside Projects - 2019</b>									
I-G-02	GENERAL-Airport Maintenance Facility	\$956,682						\$956,682	\$956,682
I-Q-09	QUEBEC-Restaurant	3,770,455				3,770,455		0	3,770,455
I-Q-10	QUEBEC-Addison Road Street Lighting - From Westgrove Drive to Lindbergh Drive	590,892					590,892	0	590,892
I-C-06	CORPORATE-Lighting Along Airport Parkway and Eddie Rickenbacker Drive	157,571				149,693		7,879	157,571
I-S-01	SIERRA-Design/Construct Redevelopment of A6 with Apron Expansion	4,029,322				3,827,855		201,466	4,029,322
I-S-02	SIERRA-Develop Expanded Auto Parking - Jimmy Doolittle Drive	652,795				620,155		32,640	652,795
I-U-03	UNIFORM-Claire Chennault Street Improvements (Widening and Drainage)	1,406,886					1,406,886	0	1,406,886
I-U-04	UNIFORM-Lighting Along Claire Chennault Street	140,689					140,689	0	140,689
I-V-02	VICTOR-Aircraft Storage Hangar/Apron (Million Air Dallas)	4,908,344				4,908,344		0	4,908,344
<b>Total Landside Projects for 2019</b>		<b>\$16,613,636</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$13,276,502</b>	<b>\$2,138,467</b>	<b>\$1,198,667</b>	<b>\$16,613,636</b>
<b>Total All Projects for 2019</b>		<b>\$17,148,252</b>	<b>\$481,155</b>	<b>\$0</b>	<b>\$0</b>	<b>\$13,276,502</b>	<b>\$2,138,467</b>	<b>\$1,252,129</b>	<b>\$17,148,252</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b><u>Airside Projects - 2020</u></b>									
I-AOA-16	Design Eastside Perimeter Road	\$133,317	\$66,658					\$66,658	\$133,317
-	-	0						0	0
Total Airside Projects for 2020		\$133,317	\$66,658	\$0	\$0	\$0	\$0	\$66,658	\$133,317
<b><u>Landside Projects - 2020</u></b>									
I-Q-11	QUEBEC-Collins Hangar Refurbishment	\$2,666,330				\$2,666,330		\$0	\$2,666,330
I-Q-12	QUEBEC-Acquire Masonic Lodge & Develop Airport Observation Park	985,383	394,153				591,230	0	985,383
I-S-03	SIERRA-Jimmy Doolittle Drive Realignment	220,262					220,262	0	220,262
I-S-04	SIERRA-Wayfinding Signage (Secondary-Multi-Tenant) at Keller Springs Road and Jimmy Doolittle Drive	16,230					16,230	0	16,230
I-S-05	SIERRA-Art Features - NTTA Toll Tunnel	34,778					34,778	0	34,778
I-S-06	SIERRA-New Small A&P Hangar Along Realigned Jimmy Doolittle Drive	996,976				947,127		49,849	996,976
I-S-07	SIERRA-Lighting Along Jimmy Doolittle Drive	86,946					86,946	0	86,946
I-S-08	SIERRA-Landscaping Along Jimmy Doolittle Drive	32,460					32,460	0	32,460
Total Landside Projects for 2020		\$5,039,364	\$394,153	\$0	\$0	\$3,613,457	\$981,905	\$49,849	\$5,039,364
Total All Projects for 2020		\$5,172,681	\$460,811	\$0	\$0	\$3,613,457	\$981,905	\$116,507	\$5,172,681
<b>Total Phase I Projects</b>		<b>\$74,411,944</b>	<b>\$16,655,182</b>	<b>\$500,000</b>	<b>\$489,321</b>	<b>\$45,827,758</b>	<b>\$6,121,342</b>	<b>\$4,818,340</b>	<b>\$74,411,944</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>	<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Phase II Projects (2021-2025)</b>								
<b>Airside Projects</b>								
II-AOA-17 Construct Eastside Perimeter Road	\$1,727,489	\$863,744					\$863,744	\$1,727,489
II-AOA-18 Design Taxilane Tango Realignment/Apron Expansion	249,637	224,673					24,964	249,637
II-AOA-19 Construct Taxilane Tango Realignment	2,066,995	1,860,296					206,700	2,066,995
II-AOA-20 Design Taxiway Bravo Extension to Runway 16 End	1,032,250	929,025					103,225	1,032,250
II-AOA-21 Design Taxilane Romeo Reconstruction to Correct OFA	24,964	22,467					2,496	24,964
II-AOA-22 Reconstruct Taxilane Romeo	249,637	224,673					24,964	249,637
II-AOA-23 EMAS Rehabilitation	81,132	73,019					8,113	81,132
II-AOA-24 Construct Taxiway Bravo Extension	6,876,255	6,188,629					687,625	6,876,255
II-AOA-25 Design/Construct Runway 16 Glideslope Relocation	1,173,295	1,055,965					117,329	1,173,295
II-AOA-26 AWOS Replacement	156,023	117,017					39,006	156,023
II-AOA-27 Design Taxiway Reconstruction Bravo (South & Connectors)	561,684	505,515					56,168	561,684
II-AOA-28 Reconstruct Taxiway Bravo (South End Centerline Offset & Westside Connectors)	14,815,964	13,334,367					1,481,596	14,815,964
II-AOA-29 Design/Construct Runway 34 Glideslope Relocation	1,210,740	1,089,666					121,074	1,210,740
II-AOA-30 Design Runway 16/34 Structural Overlay	513,254	461,929					51,325	513,254
<b>Total Airside Projects for 2021-2025</b>	<b>\$30,739,318</b>	<b>\$26,950,987</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,788,331</b>	<b>\$30,739,318</b>
<b>Landside Projects</b>								
II-L-01 LIMA-Heliport FBO Hangar	\$1,997,097				\$1,897,242		\$99,855	\$1,997,097
II-L-02 LIMA-Helipad, Apron, Helo Parking	1,622,641				1,541,509		81,132	1,622,641
II-L-03 LIMA-Taxilane Connection to Taxiway Bravo	312,046	280,842					31,205	312,046
II-L-04 LIMA-Auto Parking	81,132				77,075		4,057	81,132
II-L-05 LIMA-Wayfinding Signage	3,745				3,557		187	3,745
II-N-01 NOVEMBER-Property Acquisition for Taxilane (4.4 acres)	9,174,165	1,834,833				7,339,332	0	9,174,165
II-N-02 NOVEMBER-New Corporate Hangar & Ramp	3,685,892				3,501,598		184,295	3,685,892
II-N-03 NOVEMBER-Wayfinding Signage (Multi-Tenant Post-Panel) Midway Road & Wiley Post Road	17,475				16,601		874	17,475
II-N-04 NOVEMBER-Landscaping Along Wiley Post Road	93,614				88,933		4,681	93,614
II-N-05 NOVEMBER-Lighting Along Wiley Post Road	114,833				109,091		5,742	114,833
II-N-06 NOVEMBER-New T-Hangar (19 units, 48' door)	2,878,316				2,734,400		143,916	2,878,316
II-N-07 NOVEMBER-New A&P Hangar for Light GA	1,402,961				1,332,813		70,148	1,402,961
II-N-08 NOVEMBER-Light GA Public/Tenant Building & Auto Parking	1,198,258				1,138,345		59,913	1,198,258
II-N-09 NOVEMBER-New T-Hangar (18 units, 42' door)	1,872,278				1,778,665		93,614	1,872,278
II-C-07 CORPORATE-Design/Construct S2 Hangar Redevelopment	3,840,667				3,648,634		192,033	3,840,667
II-T-01 TANGO-Atlantic FBO Redevelopment	10,035,413				9,533,642		501,771	10,035,413
II-V-03 VICTOR-Million Air Apron Expansion, Fuel Truck Parking and Auto Overflow Parking	360,726					360,726	0	360,726
II-V-04 VICTOR-Aircraft Storage Hangar (JetPort South)	994,804				945,064		49,740	994,804
<b>Total Landside Projects for 2021-2025</b>	<b>\$39,686,063</b>	<b>\$2,115,675</b>	<b>\$0</b>	<b>\$0</b>	<b>\$28,347,170</b>	<b>\$7,700,057</b>	<b>\$1,523,161</b>	<b>\$39,686,063</b>
<b>Total Phase II Projects</b>	<b>\$70,425,380</b>	<b>\$29,066,661</b>	<b>\$0</b>	<b>\$0</b>	<b>\$28,347,170</b>	<b>\$7,700,057</b>	<b>\$5,311,492</b>	<b>\$70,425,380</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMPT7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

Capital Improvement Projects	Total Escalated Costs	TxDOT AIP Block Grants	TxDOT Aviation Div	Other Capital	Private 3rd Party Financing	Other Unidentified Funding	Cash Reserves/ Net Revenues	Total Funding
<b>Phase III Projects (2026-2035)</b>								
<b>Airside Projects</b>								
III-AOA-31 Construct Runway 16/34 Structural Overlay	\$4,270,389	\$3,843,350					\$427,039	\$4,270,389
III-AOA-32 Update Airport Master Plan	467,390	420,651					46,739	467,390
III-AOA-33 Design Taxiway Alpha Structural Overlay	306,920	276,228					30,692	306,920
III-AOA-34 Update AGIS Aeronautical Survey	155,797	140,217					15,580	155,797
III-AOA-35 Construct Taxiway Alpha Structural Overlay	2,047,169	1,842,452					204,717	2,047,169
III-AOA-36 Replace Rotating Beacon	46,739	42,065					4,674	46,739
III-AOA-37 Install New Primary Wind Cone	46,739	42,065					4,674	46,739
III-AOA-38 Install Two Supplementary Wind Cones	46,739	42,065					4,674	46,739
III-AOA-39 Design/Construct Northside Perimeter Road	2,322,929	1,161,465					1,161,465	2,322,929
III-AOA-40 Upgrade Runway 16/34 HIRL LED	514,129	462,716					51,413	514,129
III-AOA-41 Upgrade PAPI LED	171,376	154,239					17,138	171,376
III-AOA-42 Rehabilitate Runway Lighting Control System (ALCMS)	186,956	168,260					18,696	186,956
III-AOA-43 Rehabilitate Taxiway Alpha MITL	1,012,679	911,411					101,268	1,012,679
III-AOA-44 Rehabilitate Runway 16/34 Guard Light	194,746	175,271					19,475	194,746
III-AOA-45 Rehabilitate Electrical Vault	545,289	490,760					54,529	545,289
III-AOA-46 Replace EMAS	7,556,142	6,800,528					755,614	7,556,142
III-AOA-47 Approach Lighting System Runway 34	2,227,893	2,005,104					222,789	2,227,893
<b>Total Airside Projects for 2026-2035</b>	<b>\$22,120,021</b>	<b>\$18,978,847</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,141,174</b>	<b>\$22,120,021</b>
<b>Landside Projects</b>								
III-C-08 CORPORATE-Auto Parking (Former Admin Bldg Site)	\$763,404					\$763,404	\$0	\$763,404
III-S-09 SIERRA-Redevelop Hangars S1/S3 as Larger Corporate Hangar	5,047,814				4,795,424		252,391	5,047,814
III-T-02 TANGO-Rebuild Hangar Area T-17	4,586,656				4,357,323		229,333	4,586,656
III-T-03 TANGO-Flight Training Hangar and Ramp	4,485,388				4,261,119		224,269	4,485,388
III-T-04 TANGO-A&P Hangar and Ramp	4,578,866				4,349,923		228,943	4,578,866
III-T-05 TANGO-Charter Hangar (West) and Ramp	4,077,201				3,873,341		203,860	4,077,201
III-T-06 TANGO-Aircraft Storage Hangar and Ramp	3,989,955				3,790,457		199,498	3,989,955
III-T-07 TANGO-Reconstruct Glenn Curtiss Drive	1,012,679					1,012,679	0	1,012,679
III-T-08 TANGO-Charter Hangar with Offices (East) and Auto Parking	4,667,670				4,434,287		233,384	4,667,670
III-T-09 TANGO-Restaurant (Next to Charter Hangar East)	1,371,011				1,302,461		68,551	1,371,011
III-T-10 TANGO-Wayfinding Signage (Monumental), Pocket Park at Addison Road and Keller Springs	233,695					233,695	0	233,695
III-T-11 TANGO-Wayfinding Signage at Addison Road and Glenn Curtiss Drive (Secondary-Multi-Tenant)	21,812				20,721		1,091	21,812
III-T-12 TANGO-Landscaping Along Addison Road North of Keller Springs Boulevard	233,695				222,010		11,685	233,695
III-T-13 TANGO-Landscaping Along Glenn Curtiss Drive	54,529				51,802		2,726	54,529
III-T-14 TANGO-Lighting Along Glenn Curtiss Drive	194,746					194,746	0	194,746
III-U-05 UNIFORM-Develop 2 100' x 100' Hangars with Office (Cherry Air)	6,390,782				6,071,243		319,539	6,390,782
III-U-06 UNIFORM-Develop 200'x120' Hangar with Office (Monarch)	6,354,949				6,037,202		317,747	6,354,949
III-U-07 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NE)	3,348,072				3,180,668		167,404	3,348,072
III-U-08 UNIFORM-Develop 165'x100' Hangar (Cavanaugh SE)	3,271,732				3,108,145		163,587	3,271,732
III-U-09 UNIFORM-Landscaping Along Claire Chennault Street	66,214					66,214	0	66,214
III-U-10 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NW)	3,291,985				3,127,386		164,599	3,291,985
III-U-11 UNIFORM-Develop 165'x100' Hangar w/ Office (Cavanaugh SW)	6,694,586				6,359,857		334,729	6,694,586
<b>Total Landside Projects for 2026-2035</b>	<b>\$64,737,441</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$59,343,368</b>	<b>\$2,270,738</b>	<b>\$3,123,335</b>	<b>\$64,737,441</b>
<b>Total Phase III Projects</b>	<b>\$86,857,462</b>	<b>\$18,978,847</b>	<b>\$0</b>	<b>\$0</b>	<b>\$59,343,368</b>	<b>\$2,270,738</b>	<b>\$6,264,509</b>	<b>\$86,857,462</b>
<b>Total Project Costs</b>	<b>\$231,694,786</b>	<b>\$64,700,691</b>	<b>\$500,000</b>	<b>\$489,321</b>	<b>\$133,518,297</b>	<b>\$16,092,137</b>	<b>\$16,394,341</b>	<b>\$231,694,786</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

Capital Improvement Projects	Total Escalated Costs	TxDOT AIP Block Grants	TxDOT Aviation Div	Other Capital	Private 3rd Party Financing	Other Unidentified Funding	Cash Reserves/ Net Revenues	Total Funding
<b>SUMMARY - ALL PROJECTS - ALL PHASES</b>								
<b>Airside Projects</b>								
Phase I Projects	\$16,520,110	\$14,234,884	\$0	\$489,321	\$0	\$0	\$1,795,906	\$16,520,110
Phase II Projects	30,739,318	26,950,987	0	0	0	0	3,788,331	30,739,318
Phase III Projects	22,120,021	18,978,847	0	0	0	0	3,141,174	22,120,021
<b>Total Airside Projects</b>	<b>\$69,379,449</b>	<b>\$60,164,718</b>	<b>\$0</b>	<b>\$489,321</b>	<b>\$0</b>	<b>\$0</b>	<b>\$8,725,410</b>	<b>\$69,379,449</b>
<b>Landside Projects</b>								
LIMA	\$4,016,661	\$280,842	\$0	\$0	\$3,519,384	\$0	\$216,435	\$4,016,661
MIKE	6,992,296	0	0	0	6,642,682	0	349,615	6,992,296
NOVEMBER	20,437,792	1,834,833	0	0	10,700,446	7,339,332	563,181	20,437,792
QUEBEC	27,752,758	394,153	0	0	25,189,498	1,182,122	986,985	27,752,758
SIERRA	11,117,582	0	0	0	10,190,561	390,675	536,345	11,117,582
CORPORATE	8,496,855	0	0	0	7,296,386	816,449	384,020	8,496,855
TANGO	39,543,315	0	0	0	36,197,086	1,441,120	1,905,110	39,543,315
UNIFORM	31,012,574	0	0	0	27,928,846	1,613,788	1,469,939	31,012,574
VICTOR	6,529,099	0	0	0	5,853,408	625,951	49,740	6,529,099
GENERAL	982,432	0	0	0	0	0	982,432	982,432
ALPHA	5,433,972	2,026,145	500,000	0	0	2,682,700	225,127	5,433,972
<b>Total Landside Projects</b>	<b>\$162,315,337</b>	<b>\$4,535,973</b>	<b>\$500,000</b>	<b>\$0</b>	<b>\$133,518,297</b>	<b>\$16,092,137</b>	<b>\$7,668,931</b>	<b>\$162,315,337</b>
<b>Total Project Costs</b>	<b>\$231,694,786</b>	<b>\$64,700,691</b>	<b>\$500,000</b>	<b>\$489,321</b>	<b>\$133,518,297</b>	<b>\$16,092,137</b>	<b>\$16,394,341</b>	<b>\$231,694,786</b>

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-3

**Master Plan Capital Improvement Program  
Actual, Estimated, Budgeted and Projected Operations & Maintenance Expenses**

21-Mar-16

Operations & Maintenance Expenses	Actual 2012	Actual 2013	Actual 2014	Phase I						Total	Phase II Projected 2021-25	Phase III Projected 2026-35
				Estimate 2015	Budget 2016	Projected						
						2017	2018	2019	2020			
Operating Expenses:												
Town Administration	\$847,008	\$1,147,259	\$1,038,763	\$1,155,423	\$707,212	\$728,430	\$750,290	\$772,800	\$795,980	\$4,910,135	\$4,225,158	\$9,815,360
RAMP Grant Expense	92,784	101,860	100,000	100,000	100,000	100,000	100,000	100,000	100,000	600,000	500,000	999,994
Operations Expense	1,845,839	1,837,517	2,453,851	2,426,776	3,004,748	3,049,819	3,095,567	3,142,000	3,189,130	17,908,040	16,677,718	37,321,811
Operator Service Contract	312,008	349,849	335,592	396,971	413,301	416,009	427,582	439,484	451,727	2,545,074	3,313,963	5,944,411
<b>Total Operating Expenses</b>	<b>\$3,097,639</b>	<b>\$3,436,485</b>	<b>\$3,928,206</b>	<b>\$4,079,170</b>	<b>\$4,225,261</b>	<b>\$4,294,258</b>	<b>\$4,373,439</b>	<b>\$4,454,284</b>	<b>\$4,536,837</b>	<b>\$25,963,249</b>	<b>\$24,716,839</b>	<b>\$54,081,576</b>
Annual Growth Rate	-	10.9%	14.3%	3.8%	3.6%	1.6%	1.8%	1.8%	1.9%	2.4%	2.5%	1.2%
Other Capital Outlays Not Included in the CIP:												
Building Capital Repairs	\$0	\$0	\$0	\$0	\$0	\$491,887	\$328,526	\$658,214	\$356,190	\$1,834,817	\$6,095,387	\$5,682,268
Minor Capital Projects	92,840	108,918	0	0	0	160,000	250,000	60,000	0	470,000	0	0
O&M Equipment	0	0	0	110,000	60,000	36,050	37,132	38,245	39,393	320,820	215,416	539,227
<b>Total Other Capital Outlays Not Included in the CIP</b>	<b>\$92,840</b>	<b>\$108,918</b>	<b>\$0</b>	<b>\$110,000</b>	<b>\$60,000</b>	<b>\$687,937</b>	<b>\$615,658</b>	<b>\$756,459</b>	<b>\$395,583</b>	<b>\$2,625,637</b>	<b>\$6,310,803</b>	<b>\$6,221,495</b>
Annual Growth Rate	-	17.3%	-100.0%	-	-45.5%	1046.6%	-10.5%	22.9%	-47.7%	-	32.6%	-27.9%
<b>Total Operations &amp; Maintenance Expenses</b>	<b>\$3,190,479</b>	<b>\$3,545,403</b>	<b>\$3,928,206</b>	<b>\$4,189,170</b>	<b>\$4,285,261</b>	<b>\$4,982,195</b>	<b>\$4,989,096</b>	<b>\$5,210,743</b>	<b>\$4,932,420</b>	<b>\$28,588,885</b>	<b>\$31,027,642</b>	<b>\$60,303,072</b>
Annual Growth Rate	-	11.1%	10.8%	6.6%	2.3%	16.3%	0.1%	4.4%	-5.3%	3.9%	6.5%	-1.4%

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-4

**Master Plan Capital Improvement Program  
Actual, Estimated, Budgeted and Projected Operating Revenues**

21-Mar-16

Revenues	Actual	Actual	Actual	Phase I						Total	Phase II	Phase III
	2012	2013	2014	Estimate	Budget	Projected					2021-25	2026-35
				2015	2016	2017	2018	2019	2020			
Operating Revenues:												
Fuel Flowage Fees	\$717,667	\$758,758	\$784,286	\$829,044	\$929,760	\$948,355	\$1,059,322	\$1,130,509	\$1,212,119	\$6,109,109	\$7,180,559	\$17,300,258
Gross Potential Rentals	3,551,536	3,665,520	3,930,283	4,252,449	4,505,380	4,560,203	4,547,741	5,334,787	5,347,437	28,547,997	37,586,500	62,406,158
Less Vacancy Allowance	0	0	0	0	(176,911)	(179,064)	(178,574)	(209,479)	(209,976)	(954,004)	(1,475,894)	(2,450,478)
User Fees	(13,656)	81,152	98,739	73,867	161,250	163,669	166,124	168,616	171,145	904,670	895,011	2,002,877
<b>Total Operating Revenues</b>	<b>\$4,255,547</b>	<b>\$4,505,430</b>	<b>\$4,813,308</b>	<b>\$5,155,360</b>	<b>\$5,419,479</b>	<b>\$5,493,163</b>	<b>\$5,594,612</b>	<b>\$6,424,433</b>	<b>\$6,520,725</b>	<b>\$34,607,773</b>	<b>\$44,186,176</b>	<b>\$79,258,816</b>
Annual Growth Rate	-	5.9%	6.8%	7.1%	5.1%	1.4%	1.8%	14.8%	1.5%	5.2%	7.9%	-1.0%
Non-Operating Income:												
TxDOT Operating Grants	\$0	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000	\$250,000	\$500,000
Interest Earnings and Other	529	245	5,000	5,000	5,000	5,150	5,300	5,460	5,620	31,530	30,500	77,000
<b>Total Non-Operating Income</b>	<b>\$529</b>	<b>\$245</b>	<b>\$55,000</b>	<b>\$55,000</b>	<b>\$55,000</b>	<b>\$55,150</b>	<b>\$55,300</b>	<b>\$55,460</b>	<b>\$55,620</b>	<b>\$331,530</b>	<b>\$280,500</b>	<b>\$577,000</b>
<b>Total Revenues</b>	<b>\$4,256,076</b>	<b>\$4,505,675</b>	<b>\$4,868,308</b>	<b>\$5,210,360</b>	<b>\$5,474,479</b>	<b>\$5,548,313</b>	<b>\$5,649,912</b>	<b>\$6,479,893</b>	<b>\$6,576,345</b>	<b>\$34,939,303</b>	<b>\$44,466,676</b>	<b>\$79,835,816</b>
Annual Growth Rate	-	5.9%	8.0%	7.0%	5.1%	1.3%	1.8%	14.7%	1.5%	5.1%	7.8%	-1.0%

**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 6-5

**Master Plan Capital Improvement Program  
Financial Plan Summary  
Estimated, Budgetd and Projected Net Revenues, Capital Funding, Capital Expenditures**

21-Mar-16

Operating/Capital Cash Flow	Phase I						Phase II Projected 2021-25	Phase III Projected 2026-35	
	Estimate	Budget	Projected						Total
	2015	2016	2017	2018	2019	2020			
<b><u>Operating Cash Flow</u></b>									
Revenues:									
Operating Revenues	\$5,155,360	\$5,419,479	\$5,493,163	\$5,594,612	\$6,424,433	\$6,520,725	\$34,607,773	\$44,186,176	\$79,258,816
Non-Operating Income	55,000	55,000	55,150	55,300	55,460	55,620	331,530	280,500	577,000
Total Revenues	\$5,210,360	\$5,474,479	\$5,548,313	\$5,649,912	\$6,479,893	\$6,576,345	\$34,939,303	\$44,466,676	\$79,835,816
Operations & Maintenance Expenses	(4,189,170)	(4,285,261)	(4,982,195)	(4,989,096)	(5,210,743)	(4,932,420)	(28,588,885)	(31,027,642)	(60,303,072)
Net Revenue Before Debt Service	\$1,021,190	\$1,189,218	\$566,118	\$660,816	\$1,269,149	\$1,643,925	\$6,350,417	\$13,439,034	\$19,532,744
Less Existing Debt Service:									
GO Refunding Bonds AMT Series 2014	(366,300)	(367,875)	(369,400)	(375,400)	(380,375)	(383,800)	(2,243,150)	0	0
Combo Tax and Revenue COBs, Series 2013	(216,966)	(219,816)	(217,616)	(215,416)	(217,591)	(219,066)	(1,306,473)	(1,089,631)	(1,741,304)
Total Existing Debt Service	(583,266)	(587,691)	(587,016)	(590,816)	(597,966)	(602,866)	(3,549,623)	(1,089,631)	(1,741,304)
Total Net Operating Cash Flow Available For Capital Expenditures	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440
<b><u>Capital Cash Flow</u></b>									
Beginning Cash Balance	\$2,211,678	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,211,678	\$2,094,132	\$9,132,043
Other Capital Funding Sources:									
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738
Total Other Capital Funding Sources	\$1,872,700	\$7,315,833	\$20,427,576	\$20,925,197	\$15,896,124	\$5,056,174	\$71,493,603	\$65,113,889	\$80,592,953
Total Funds Available for Capital Expenditures	\$4,522,302	\$10,208,961	\$22,911,548	\$22,486,113	\$18,317,832	\$7,266,813	\$76,506,076	\$79,557,423	\$107,516,436
Capital Improvement Program Expenditures	2,230,700	7,704,091	21,420,632	20,735,588	17,148,252	5,172,681	74,411,944	70,425,380	86,857,462
Ending Cash Balance	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973



SM

# AIRPORT LAYOUT PLAN AND GEOGRAPHIC INFORMATION SYSTEMS

## CHAPTER 7

### CONTENTS

INTRODUCTION .....	7-2
AIRPORT LAYOUT DRAWING .....	7-2
INNER PORTION OF THE APPROACH SURFACE DRAWINGS .....	7-2
TERMINAL AREA DRAWINGS .....	7-2
LAND-USE DRAWING .....	7-3
AIRPORT PROPERTY MAP DRAWING .....	7-3
GEOGRAPHIC INFORMATION SYSTEM .....	7-3



# INTRODUCTION



## INTRODUCTION

A set of Airport Layout Plan (ALP) drawings has been prepared for Addison Airport (ADS) that graphically depict the existing and proposed facilities through the 20-year planning program as recommended and approved by the Town of Addison. The set includes: Title Sheet, Airport Layout Drawing (ALD), Inner Portion of the Approach Surface Drawings (IPASD), Terminal Area Drawings (TAD), Land-Use Drawing (LUD), and Airport Property Map (APM). The full plan set is provided in [Appendix J](#). The data from the ALP set was converted to geographic information system (GIS) files and submitted to the Town of Addison and for input into the Federal Aviation Administration, Airports-GIS.

## AIRPORT LAYOUT DRAWING

A scaled single-page drawing depicting existing and ultimate airport development based on proposed land, facilities and equipment recommended for the short and long-term operation and development of the Airport. In addition, the ALD displays separation and clearance distances for future unrestricted development of the Airport and navigational aid (NAVAID) facilities. The layout is the result of a series of analyses and discussions with the Executive Committee and Project Steering Committee to determine the optimum plan to yield

a safe and cost-effective facility that strives toward the highest and best use of airport properties. The proposed improvements include projects needed to meet the projected aviation demands of the airport service area throughout the next 20-years.

## INNER PORTION OF THE APPROACH SURFACE DRAWINGS

Large-scale drawing showing the plan and profile views of the inner portions of the approach surfaces. The plans are designed to identify current and potential structures (roadways, powerlines, trees, etc.) in relation to the existing and ultimate runway threshold and approaches. This drawing aids in determining the clearance or violation of close-in objects based on top elevations as they are encountered along the extended runway centerline and within the approach surfaces. Each violation and/or obstruction is identified, with appropriate future mitigation recommendations.

## TERMINAL AREA DRAWINGS

This is a large-scale drawing of the terminal area showing the ultimate construction of facilities to meet future terminal area requirements. The primary features of this plan include improvements to and new development of facilities and equipment. The ultimate design for the terminal



area provides an adequate and functional layout for aircraft parking and maneuvering, hangar and building development, and other types of airport-related development planned for the Airport. Additionally, the plan will provide adequate separation and clearances for future unrestricted development of all terminal facilities and equipment. At Addison Airport a total of six TADs were developed.

- Southeast TAD
- East Central TAD
- Northeast TAD
- Southwest TAD
- West Central TAD
- Northwest TAD

## LAND-USE DRAWING

A single-page drawing, at the same scale as the ALD, showing all on-airport land uses to include: airport operations protected area (runways/taxiways/safety areas), terminal development, runway protection area, and through-the-fence agreement areas. Some of the airfield utilities are shown on this drawing to include: storm water sewer, domestic water supply, and sanitary sewer.

Land-use beyond the airport boundary within the airport vicinity follows established zoning patterns from the Town of Addison.

## AIRPORT PROPERTY MAP DRAWING

A single-page drawing, Property Map, showing an overlay of all relevant tracts of existing airport fee-simple property and aviation/aviation easement interests including the size (acres), date (grant agreement) and existing ownership status of proposed airport property acquisition.

## GEOGRAPHIC INFORMATION SYSTEM

The Town of Addison has a robust GIS that is maintained under contract by a consultant. In order for all of the Addison Airport data to be included into the Town's GIS, the base file and obstruction data from the ALP set were converted to GIS shapefiles. These files were transferred to the Town of Addison and incorporated into their GIS. Additionally, this data was used to update the Airport's GIS data held by the FAA, Airports-GIS.





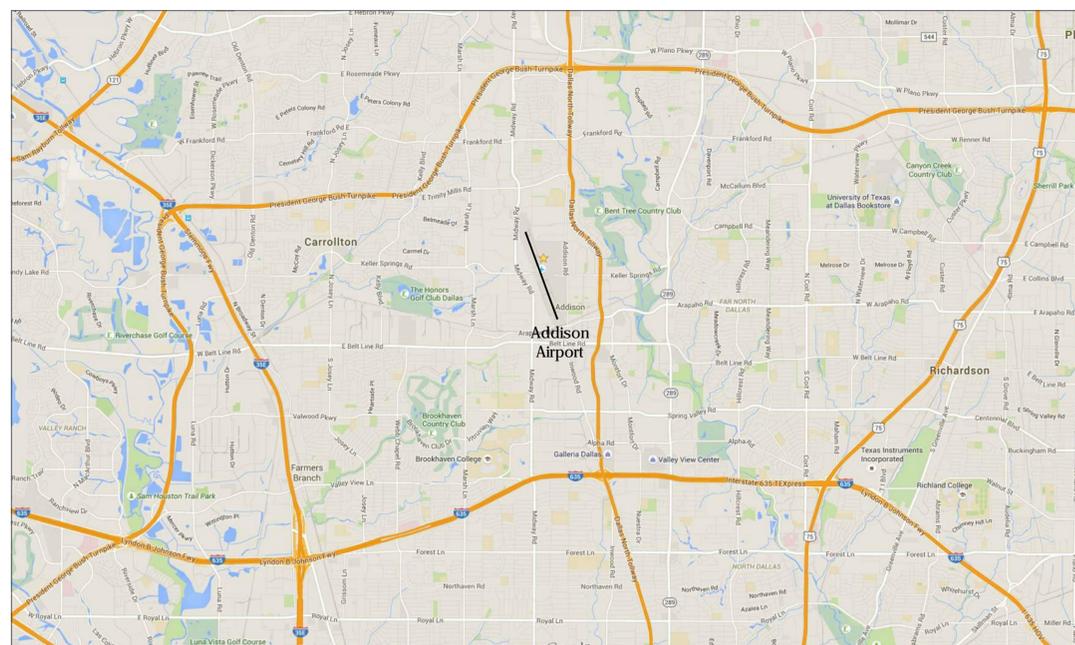
# Airport Layout Plan

Addison Airport  
Addison, Texas

June, 2016



Location Map



Vicinity Map

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
<b>AIRPORT LAYOUT DRAWING</b>	
1	AIRPORT LAYOUT DRAWING
<b>INNER PORTION OF THE APPROACH SURFACE DRAWINGS</b>	
2	IPASD RUNWAY 15
3	IPASD RUNWAY 33
<b>TERMINAL AREA DRAWINGS</b>	
4	SOUTHEAST TERMINAL AREA DRAWING
5	EAST CENTRAL TERMINAL AREA DRAWING
6	NORTHEAST TERMINAL AREA DRAWING
7	SOUTHWEST TERMINAL AREA DRAWING
8	WEST CENTRAL TERMINAL AREA DRAWING
9	NORTHWEST TERMINAL AREA DRAWING
<b>LAND USE AND UTILITIES DRAWING</b>	
10	LAND USE AND UTILITIES DRAWING
<b>AIRPORT PROPERTY MAP DRAWING</b>	
11	AIRPORT PROPERTY MAP

RUNWAY END COORDINATES AND ELEVATIONS			
RUNWAY END	LATITUDE	LONGITUDE	ELEVATION
EXISTING END OF RWY 15	32°58'40.23" N	96°50'25.85" W	636.7'
DISPLACED THRESHOLD OF RWY 15	32°58'31.14" N	96°50'21.88" W	633.5'
EXISTING END OF RWY 33	32°57'33.36" N	96°49'56.62" W	635.9'
DISPLACED THRESHOLD OF RWY 33	32°57'40.53" N	96°49'59.75" W	639.0'

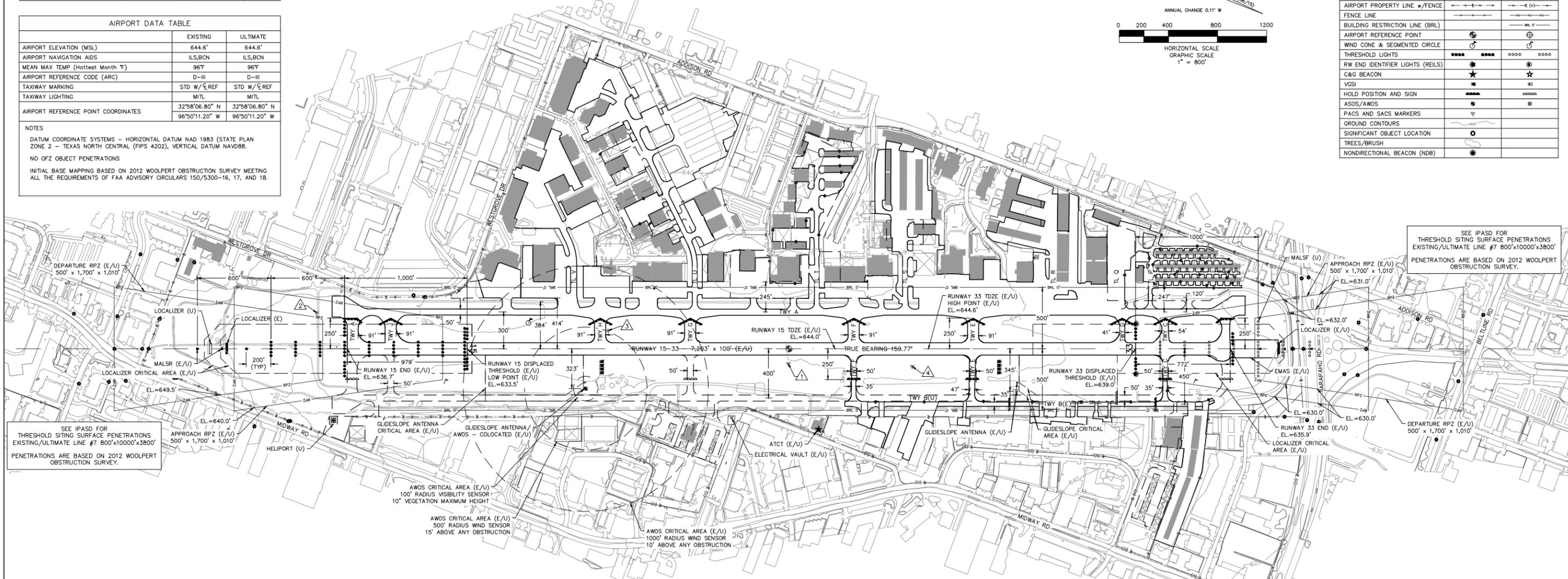
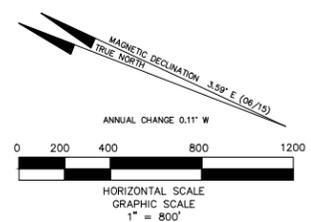
OBSTACLE FREE ZONE PENETRATIONS		
SIG OBJ NO.	OBJECT DESCRIPTION	REMEDIATION
1	-	NO PENETRATIONS EXIST
2	-	-
3	-	-

**GENERAL NOTES:**  
 RUNWAY 15 DISPLACED 979'  
 RUNWAY 33 DISPLACED 772'  
 SEE TERMINAL AREA DRAWINGS FOR BUILDING NUMBERING/DESCRIPTIONS.  
 EMAS PROVIDES EQUIVALENT RSA BEYOND RUNWAY 33 END.  
 RUNWAY 15-33 TO BE RENUMBERED 16-34 DUE TO MAGNETIC DECLINATION CHANGE.

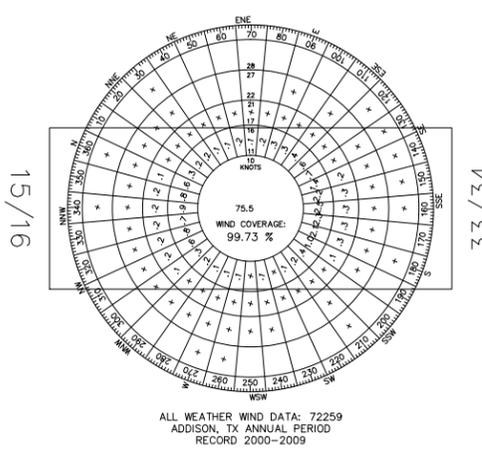
AIRPORT DATA TABLE		
	EXISTING	ULTIMATE
AIRPORT ELEVATION (MSL)	644.6'	644.6'
AIRPORT NAVIGATION AIDS	ILS,BCN	ILS,BCN
MEAN MAX TEMP (Hottest Month °F)	96°F	96°F
AIRPORT REFERENCE CODE (ARC)	D-III	D-III
TAXIWAY MARKING	STD W/Q REF	STD W/Q REF
TAXIWAY LIGHTING	MITL	MITL
AIRPORT REFERENCE POINT COORDINATES	32°58'06.80" N 96°50'11.20" W	32°58'06.80" N 96°50'11.20" W

**NOTES**  
 DATUM COORDINATE SYSTEMS - HORIZONTAL DATUM NAD 1983 (STATE PLAN ZONE 2 - TEXAS NORTH CENTRAL (FIPS 4202), VERTICAL DATUM NAVD88.  
 NO OFZ PENETRATIONS  
 INITIAL BASE MAPPING BASED ON 2012 WOOLPERT OBSTRUCTION SURVEY MEETING ALL THE REQUIREMENTS OF FAA ADVISORY CIRCULARS 150/5300-16, 17, AND 18.

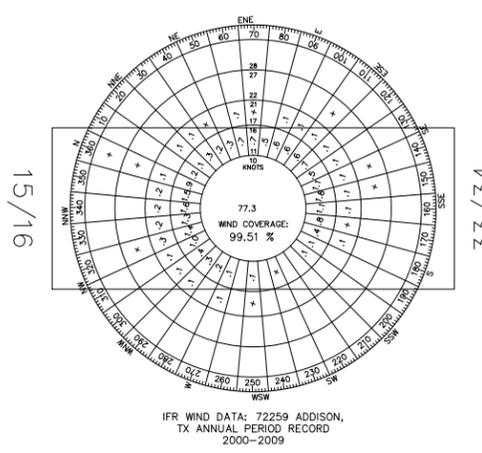
ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	■	■
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊙	⊙
WIND CONE & SEGMENTED CIRCLE	☼	☼
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●	●
C&G BEACON	★	★
VGSI	■	■
HOLD POSITION AND SIGN	■	■
ASOS/AWOS	■	■
PACS AND SACS MARKERS	▽	▽
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	⊙	⊙
TREES/BRUSH	■	■
NONDIRECTIONAL BEACON (NDB)	⊙	⊙



RUNWAY DATA TABLE				
	RW 15-33		RW 16-34	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE
RUNWAY RDC	D-III		D-III	
DESIGN AIRCRAFT & ARC	BBJ2 (D-III)		BBJ2 (D-III)	
BALANCED FIELD LENGTH	6,141'		6,141'	
RUNWAY LENGTH & WIDTH (ft.)	7,203' X 100'		7,203' X 100'	
PAVEMENT DESIGN STRENGTH (1000 lbs.)	60 SW / 120 DW		60 SW / 120 DW	
RUNWAY LIGHTING	HIRL		HIRL	
PERCENT EFFECTIVE GRADIENT	0.01%		0.01%	
PERCENT WIND COVERAGE	99.73%		99.73%	
MAXIMUM ELEVATION ABOVE MSL	644.60'		644.60'	
RW SURFACE TYPE	ASPH (GROOVED)		ASPH (GROOVED)	
RSA - LENGTH BEYOND RW END	1,000' (EMAS)		1,000' (EMAS)	
RSA - WIDTH	500'		500'	
OFA - LENGTH BEYOND RW END	1,000'		1,000'	
OFA WIDTH	800'		800'	
OFZ - LENGTH BEYOND RW END	200'		200'	
OFZ WIDTH	400'		400'	
RUNWAY END	15	33	16	34
APPROACH TYPE	ILS/GPS		ILS/GPS	
APPROACH VISIBILITY MINIMA	1 MILE		1 MILE	
THRESHOLD SITING SURFACE & SLOPE	#7 34:1	#7 34:1	#7 34:1	#7 34:1
RUNWAY MARKING	PIR	PIR	PIR	PIR
RUNWAY VISUAL AIDS	PAPI-4L	PAPI-4L	PAPI-4L	PAPI-4L
TOUCHDOWN ZONE ELEVATION	644.00'	644.60'	644.00'	644.60'
FAR PART 77 APPROACH CATEGORY	PIR		PIR	
FAR PART 77 APPROACH SURFACE SLOPE	40:1/50:1	40:1/50:1	40:1/50:1	40:1/50:1
TAKE-OFF RUN AVAILABLE (TORA)	7,203'	7,203'	7,203'	7,203'
TAKE-OFF DISTANCE AVAILABLE (TODA)	7,203'	7,203'	7,203'	7,203'
ACCELERATE STOP DISTANCE AVAIL. (ASDA)	7,203'	7,203'	7,203'	7,203'
LANDING DISTANCE AVAILABLE (LDA)	6,224'	6,431'	6,224'	6,431'



ALL WEATHER WIND COVERAGE		
RUNWAY	CROSSWIND COMPONENT	PERCENT
RUNWAY 15-33	16 KNOTS	99.73%



IFR WIND COVERAGE		
RUNWAY	CROSSWIND COMPONENT	PERCENT
RUNWAY 15-33	16 KNOTS	99.51%

MODIFICATIONS TO FAA STANDARDS TABLE		
EXIST./ULT.	DESCRIPTION OF MODIFICATION	REASON FOR MODIFICATION
E/U	RDC D-III RUNWAY TO TAXIWAY OFFSET AT 300'	IMPACTS TO EXISTING INFRASTRUCTURE; FAA STUDY NO. 2007-ASW-818-NRA APPROVED MOD

AIRFIELD MONUMENTS				
NO.	TYPE	DESIGNATION	LAT.	LONG.
1	FACS	ARP 2 ADS	32°58'06.41" N	96°50'12.58" W
2	SACS	ADS D	32°58'43.54" N	96°50'23.62" W
3	SACS	AP STA A ADS	32°58'20.97" N	96°50'15.58" W
4	SACS	ARP ADS	32°57'56.95" N	96°50'08.72" W

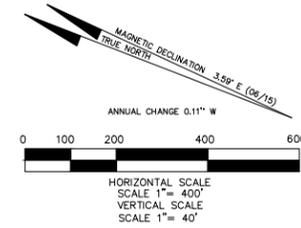
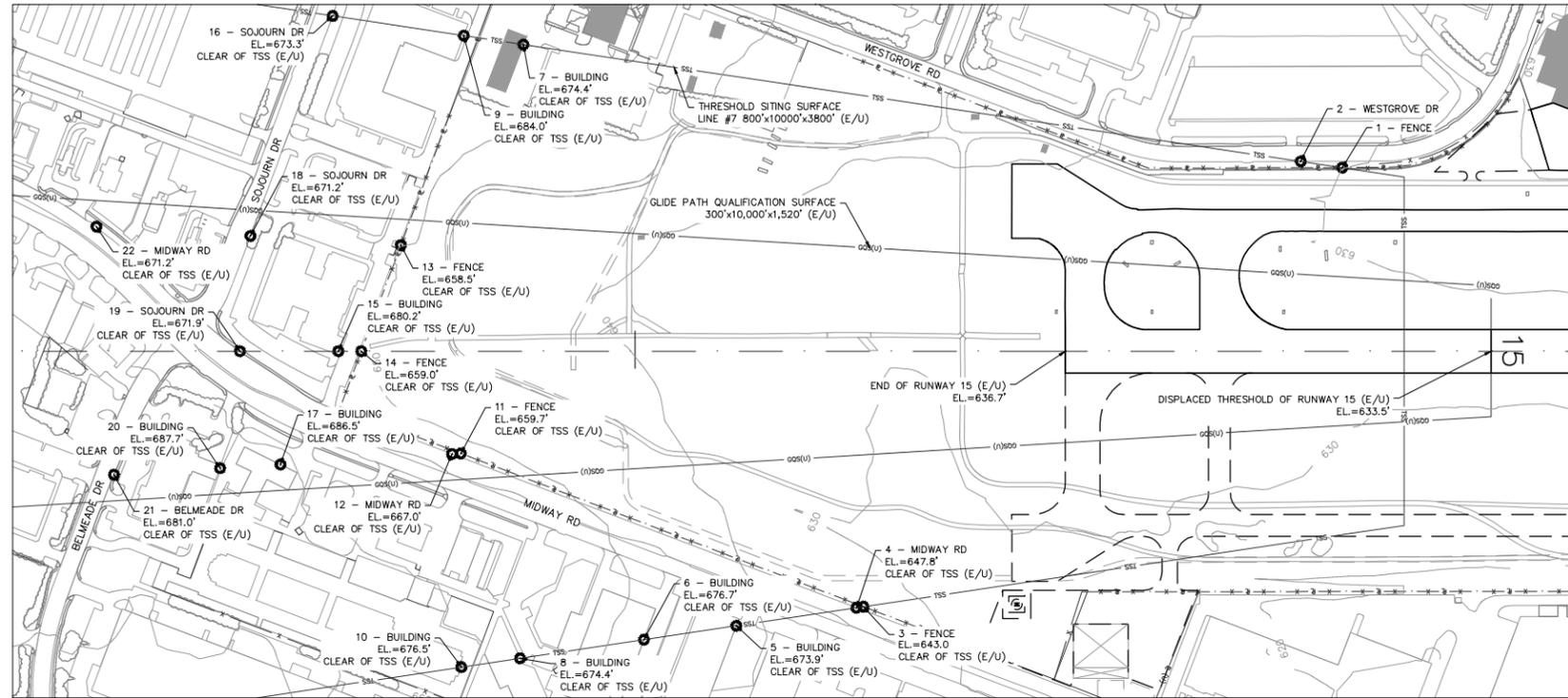
ALL COORDINATES AND ELEVATIONS HORIZONTAL NAD 83, VERTICAL NAVD 88.

TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NRA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED. DAVID FULTON, DIRECTOR, AVIATION DIVISION	AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING. GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX
DATE	DATE
SIGNATURE	SIGNATURE
TITLE, AIRPORT SPONSOR'S REPRESENTATIVE	TITLE
PREPARED BY:	DESIGNED BY:
PLH	JUNE 2016
JAH	JUNE 2016
DRAWN BY:	DATE

AIRPORT LAYOUT DRAWING  
 ADDISON AIRPORT  
 ADDISON, TEXAS (ADS)



### RUNWAY 15 – PLAN VIEW

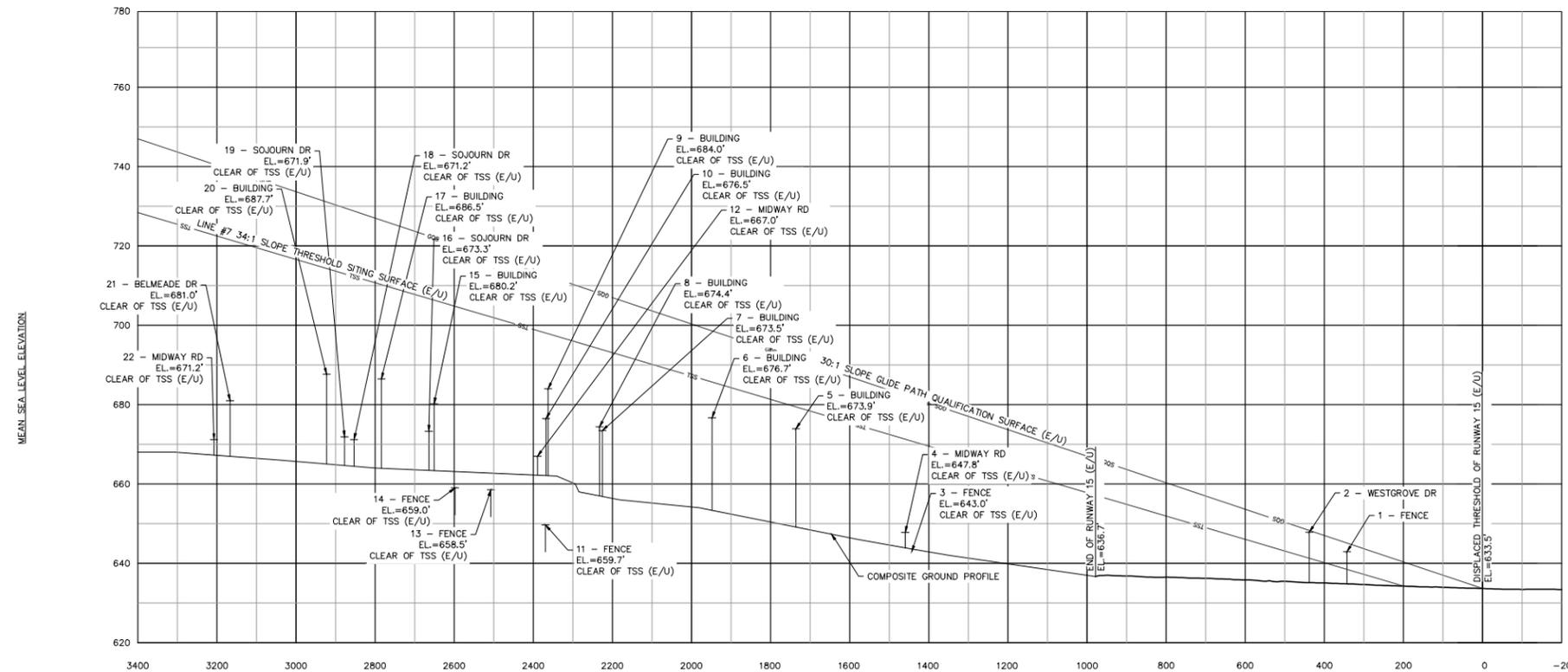


PENETRATIONS TO THRESHOLD SITING SURFACE								
NO.	OBJECT DESCRIPTION	LATITUDE (N)	LONGITUDE (W)	DISTANCE FM RW END	OFFSET FM RW C/L*	TOP ELEVATION**	AMT OF PENETRATION	REMEDIATION
1	FENCE	32°58'35.76"	96°50'18.62"	342.0'	421' L	638.0'	1.6'	LOWER FENCE 1.7' OR INSTALL OBSTR. LIGHT
2	WESTGROVE RD	32°58'36.69"	96°50'18.85"	438.0'	436' L	647.9'	1.8'	LOWER ROAD 1.9' OR RAISE TCH IN FUTURE

FURTHER DISPLACEMENT OF THE RWY 15 THRESHOLD BRINGS ADDITIONAL OBSTRUCTIONS INTO PLAY; GPA SET AT 3.0 DEGREES TO COINCIDE WITH ITS GLIDE PATH; TCH SET AT 60' WHICH IS 8' ABOVE THE ILS TCH.

\* OFFSETS FROM CENTERLINE ARE DESCRIBED RIGHT OR LEFT OF THE RUNWAY CENTERLINE AS SEEN BY A PILOT APPROACHING THE RUNWAY TO LAND  
 \*\* ELEVATIONS ADJUSTED UPWARD 15' FOR PUBLIC ROADWAY, 17' FOR INTERSTATE HIGHWAY, 23' FOR RAILROADS

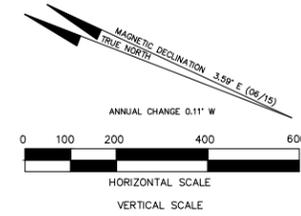
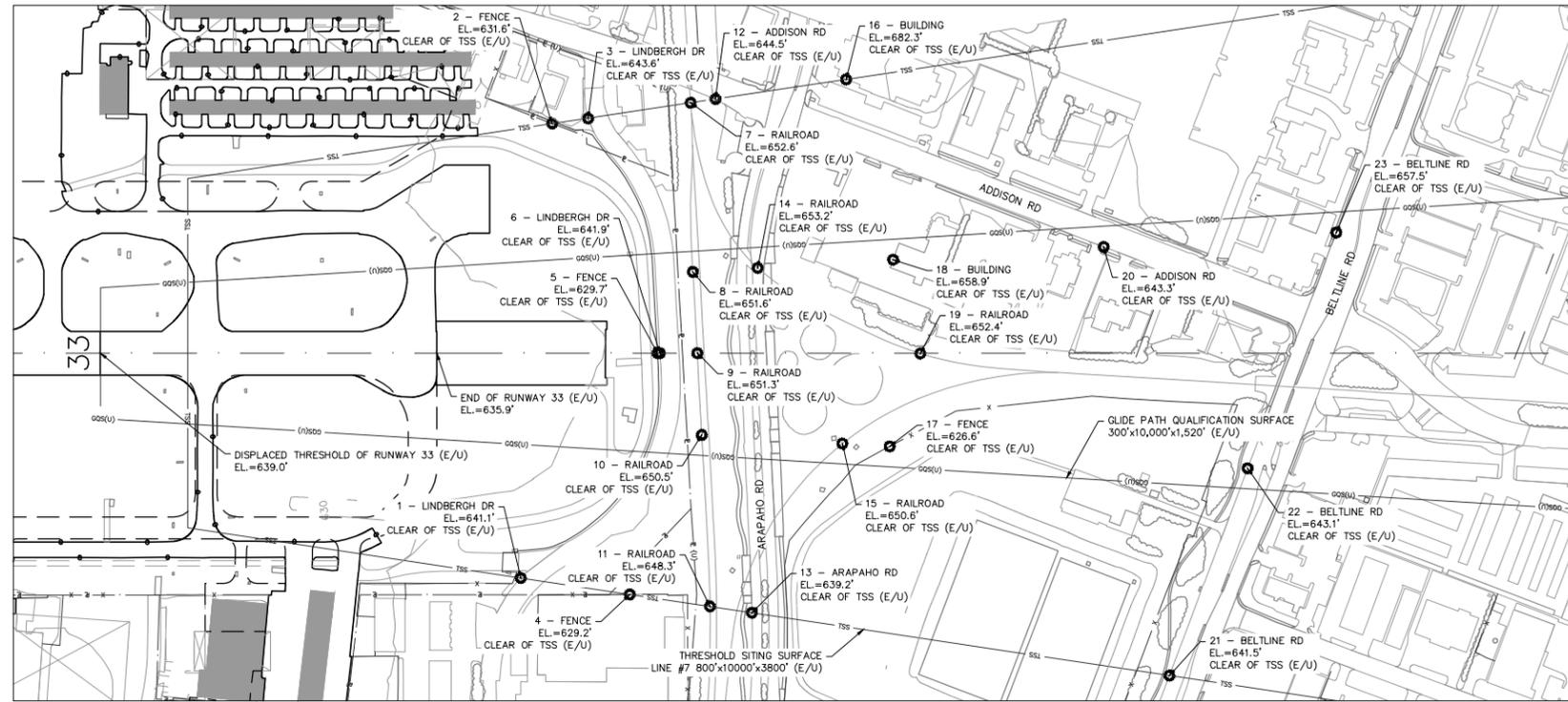
### RUNWAY 15 – PROFILE VIEW



IPASD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	— — — — —	— — — — —
RUNWAY/TAXIWAY TO BE REMOVED	— — — — —	— — — — —
BUILDINGS/FACILITIES	■	□
AIRPORT PROPERTY LINE	— — — — —	— — — — —
AIRPORT PROPERTY LINE w/FENCE	— — — — —	— — — — —
THRESHOLD SITING SURFACE	— TSS —	— TSS (U) —
FENCE LINE	— — — — —	— — — — —
THRESHOLD LIGHTS	● ● ● ● ●	○ ○ ○ ○ ○
RW END IDENTIFIER LIGHTS (RELS)	●	○
GROUND CONTOURS	— — — — —	— — — — —
SIGNIFICANT OBJECT PLAN VIEW	○	○
SIGNIFICANT OBJECT PROFILE VIEW	⊥	⊥
TREES/BRUSH	⊏	⊏

TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NREA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED. DAVID FULTON, DIRECTOR, AVIATION DIVISION	AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING. SIGNATURE _____ DATE _____ TITLE, AIRPORT SPONSOR'S REPRESENTATIVE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX	PLH DESIGNED BY _____ JUNE 2016 DATE JAH DRAWN BY _____ JUNE 2016 DATE

# RUNWAY 33 - PLAN VIEW

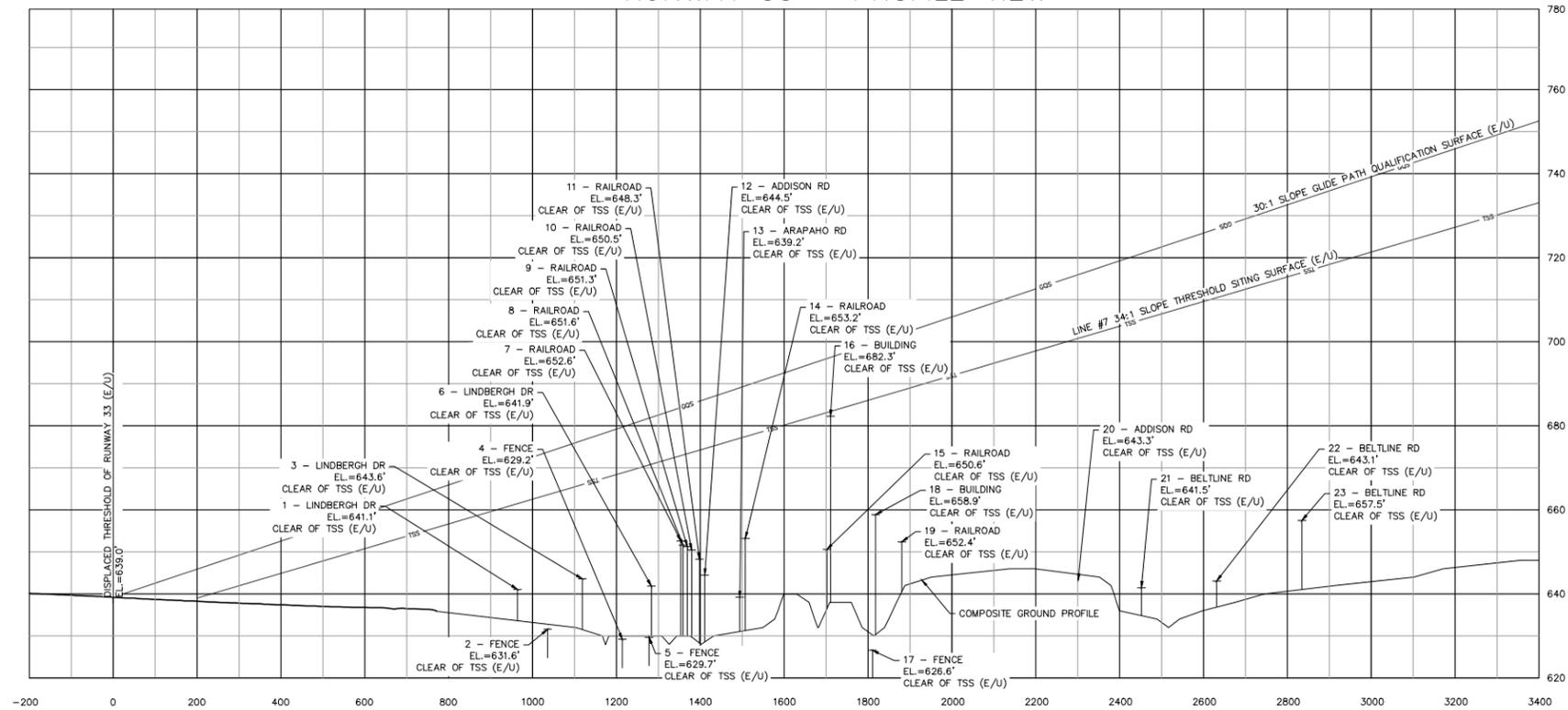


SCALE 1" = 400'  
SCALE 1" = 40'

PENETRATIONS TO THRESHOLD SITING SURFACE								
NO.	OBJECT DESCRIPTION	LATITUDE (N)	LONGITUDE (W)	DISTANCE FM RW END	OFFSET FM RW C/L*	TOP ELEVATION**	AMT OF PENETRATION	REMIEDIATION
1	NO PENETRATIONS							

\* OFFSETS FROM CENTERLINE ARE DESCRIBED RIGHT OR LEFT OF THE RUNWAY CENTERLINE AS SEEN BY A PILOT APPROACHING THE RUNWAY TO LAND  
\*\* ELEVATIONS ADJUSTED UPWARD 15' FOR PUBLIC ROADWAY, 17' FOR INTERSTATE HIGHWAY, 23' FOR RAILROADS

# RUNWAY 33 - PROFILE VIEW

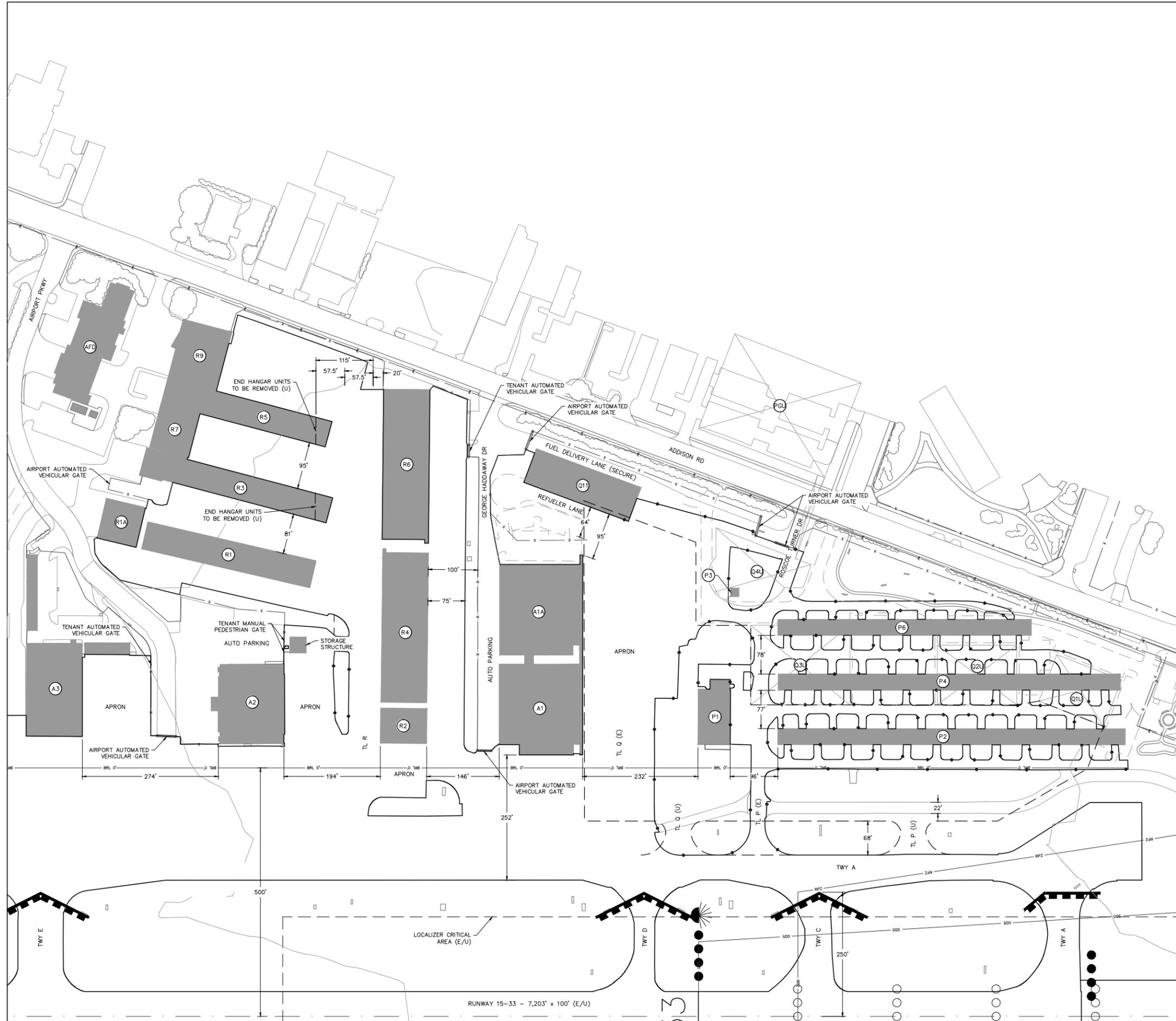


IPASD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	—	- - - -
RUNWAY/TAXIWAY TO BE REMOVED	—	—
BUILDINGS/FACILITIES	—	—
AIRPORT PROPERTY LINE	—	— (U)
AIRPORT PROPERTY LINE w/FENCE	—	— (U)
THRESHOLD SITING SURFACE	—	—
FENCE LINE	—	—
THRESHOLD LIGHTS	●●●●	○●●○
RW END IDENTIFIER LIGHTS (REILS)	●	●
GROUND CONTOURS	—	—
SIGNIFICANT OBJECT PLAN VIEW	○	○
SIGNIFICANT OBJECT PROFILE VIEW	—	—
TREES/BRUSH	—	—

<p>TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION</p> <p>ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NEA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY.</p> <p>COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED.</p> <p>DAVID FILTON, DIRECTOR, AVIATION DIVISION</p>	<p>AIRPORT SPONSOR</p> <p>CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR</p> <p>SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING.</p>
<p>PREPARED BY:</p> <p><b>GARVER</b> 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX</p>	<p>PLH DESIGNED BY JUNE 2016 DATE</p> <p>JAH DRAWN BY JUNE 2016 DATE</p>

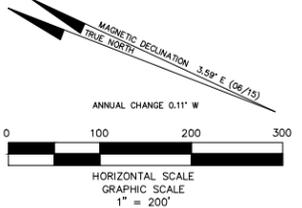
IPASD RUNWAY 33  
ADDISON AIRPORT  
ADDISON, TEXAS (ADS)





ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	■	■
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊕	⊕
WIND CONE & SEGMENTED CIRCLE	⊕	⊕
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●	●
C&G BEACON	★	★
VGSI	■	■
HOLD POSITION AND SIGN	■	■
ASOS/AWOS	■	■
PACS AND SACS MARKERS	▽	▽
GROUND CONTOURS	~	~
SIGNIFICANT OBJECT LOCATION	○	○
TREES/BRUSH	○	○
NONDIRECTIONAL BEACON (NDB)	⊕	⊕

BUILDING TABLE				
BUILDING NUMBER	DESCRIPTION	ELEVATION		ELEVATION
		EXISTING	ULTIMATE	
AFD	FIRE STATION/ARFF	-	-	741.9'
A1	CORPORATE HGR	-	-	711.1'
A1A	CORPORATE HGR	-	-	709.8'
A2	CORPORATE HGR	-	-	667.6'
A3	CORPORATE HGR	-	-	678.7'
P1	CORPORATE HGR	-	-	669.0'
P2	24-UNIT T-HGR	-	-	648.5'
P3	REST ROOMS	-	-	651.6'
P4	22-UNIT T-HGR	-	-	650.7'
P6	15-UNIT T-HGR	-	-	651.1'
Q11	FUEL FARM	-	-	660.8'
R1	16-UNIT SHADE	-	-	660.0'
R1A	CORPORATE HGR	-	-	664.4'
R2	CORPORATE HGR	-	-	671.8'
R3	15-UNIT T-HGR	-	-	660.0'
R4	CORPORATE HGR	-	-	667.2'
R5	10-UNIT T-HGR	-	-	660.0'
R6	CORPORATE HGR	-	-	666.9'
R7	CORPORATE HGR	-	-	664.0'
R9	CORPORATE HGR	-	-	670.5'
Q1U	-	STORAGE HGR	-	TBD
Q2U	-	STORAGE HGR	-	TBD
Q3U	-	FBO	-	TBD
Q4U	-	COMMERCIAL BLDG	-	TBD
PGU	-	PARKING GARAGE	-	TBD

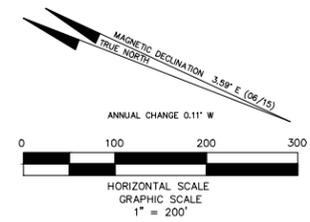


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DAVID FULTON, DIRECTOR, AVIATION DIVISION DATE:	SIGNATURE:	TITLE, AIRPORT SPONSOR'S REPRESENTATIVE:	DATE:
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY:	JUNE 2016 DATE:
		JAH DRAWN BY:	JUNE 2016 DATE:
SOUTHEAST TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			 Aviation Division SHEET 4 OF 11



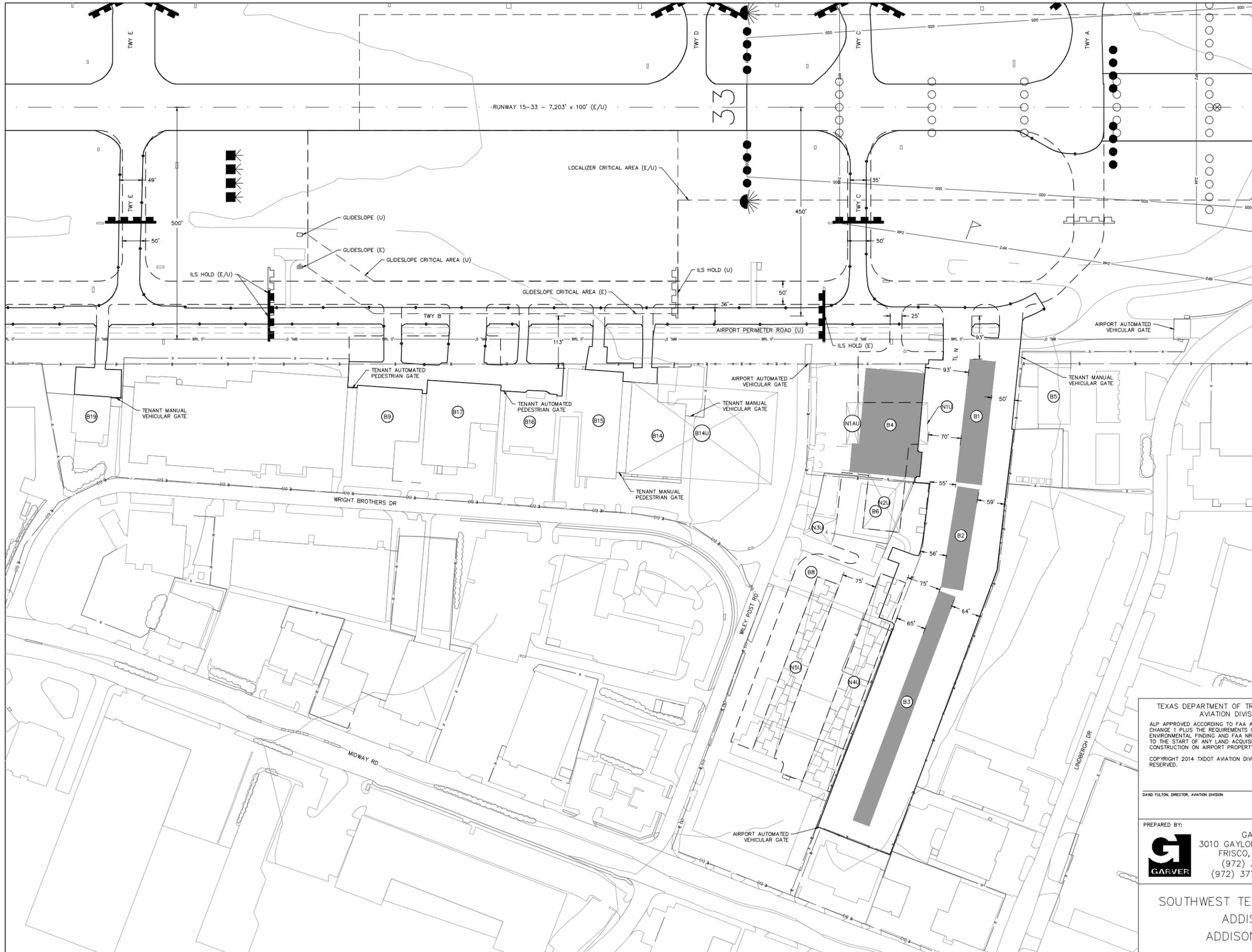
BUILDING TABLE			
BUILDING NUMBER	DESCRIPTION		TOP ELEVATION
	EXISTING	ULTIMATE	
A4	CORPORATE HGR	-	696.0'
A5	CORPORATE HGR	-	681.7'
A6	CORPORATE HGR	-	664.9'
A7	CORPORATE HGR	-	682.3'
A8	CORPORATE HGR	-	667.9'
A9	CORPORATE HGR	-	674.5'
APD	POLICE & COURTS	-	695.5'
S1	CORPORATE HGR	-	666.8'
S2	CORPORATE HGR	-	665.1'
S3	CORPORATE HGR	-	667.5'
S4	18-UNIT T-HGR	-	658.2'
S5	6-UNIT T-HGR	-	662.2'
S6	22-UNIT T-HGR	-	676.0'
S7	3-UNIT T-HGR	-	662.3'
S8A	CORPORATE HGR	-	670.8'
S8B	SINGLE HANGAR	-	662.8'
S8C	SINGLE HANGAR	-	662.8'
S8D	SINGLE HANGAR	-	662.8'
S9	AIRPORT OFFICES & 5 T-HANGARS	-	692.4'
S10	REST ROOMS	-	652.1'
T1	BOX HANGAR	-	664.7'
T3	BOX HANGAR	-	668.9'
T5	BOX HANGAR	-	670.3'
T7	BOX HANGAR	-	666.9'
T9	BOX HANGAR	-	671.0'
T11	BOX HANGAR	-	665.1'
T13	BOX HANGAR	-	674.5'
T14	3-UNIT T-HGR	-	654.2'
T15	BOX HANGAR	-	673.4'
T16	SHADE HANGAR	-	654.2'
T17	BOX HANGAR	-	670.3'
T18	6-UNIT T-HGR	-	660.3'
T20	BOX HANGAR	-	666.5'
A6U	-	HGR EXPANSION	TBD
A7U	-	FBO EXPANSION	TBD
A9U	-	HGR EXPANSION	TBD
S1U	-	A&P AVIONICS HGR	TBD
S2U	-	CORPORATE HGR	TBD
S3U	-	A&P AVIONICS HGR	TBD
S8U	-	CORPORATE HGR	TBD
S8AU	-	CORPORATE HGR	TBD
T1U	-	STORAGE HGR	TBD
T3U	-	CHARTER HGR	TBD
T5U	-	A&P AVIONICS HGR	TBD
T7U	-	FLT TRAINING HGR	TBD
T8U	-	CHARTER HGR	TBD
T10U	-	CHARTER OFFICE	TBD

ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	▭	▭
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊙	⊙
WIND CONE & SEGMENTED CIRCLE	⊙	⊙
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	⊙	⊙
C&G BEACON	★	★
VGSI	⊙	⊙
HOLD POSITION AND SIGN	⊙	⊙
ASOS/AWOS	⊙	⊙
PACS AND SACS MARKERS	⊙	⊙
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	⊙	⊙
TREES/BRUSH	⊙	⊙
NONDIRECTIONAL BEACON (NDB)	⊙	⊙



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DAVID FULTON, DIRECTOR, AVIATION DIVISION	DATE	SIGNATURE	DATE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY JAH DRAWN BY DATE JUNE 2016 DATE JUNE 2016 DATE	
EAST CENTRAL TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
 Aviation Division SHEET 5 OF 11			

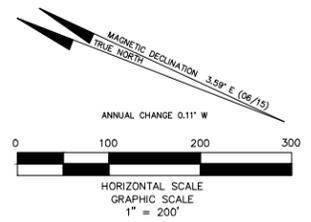




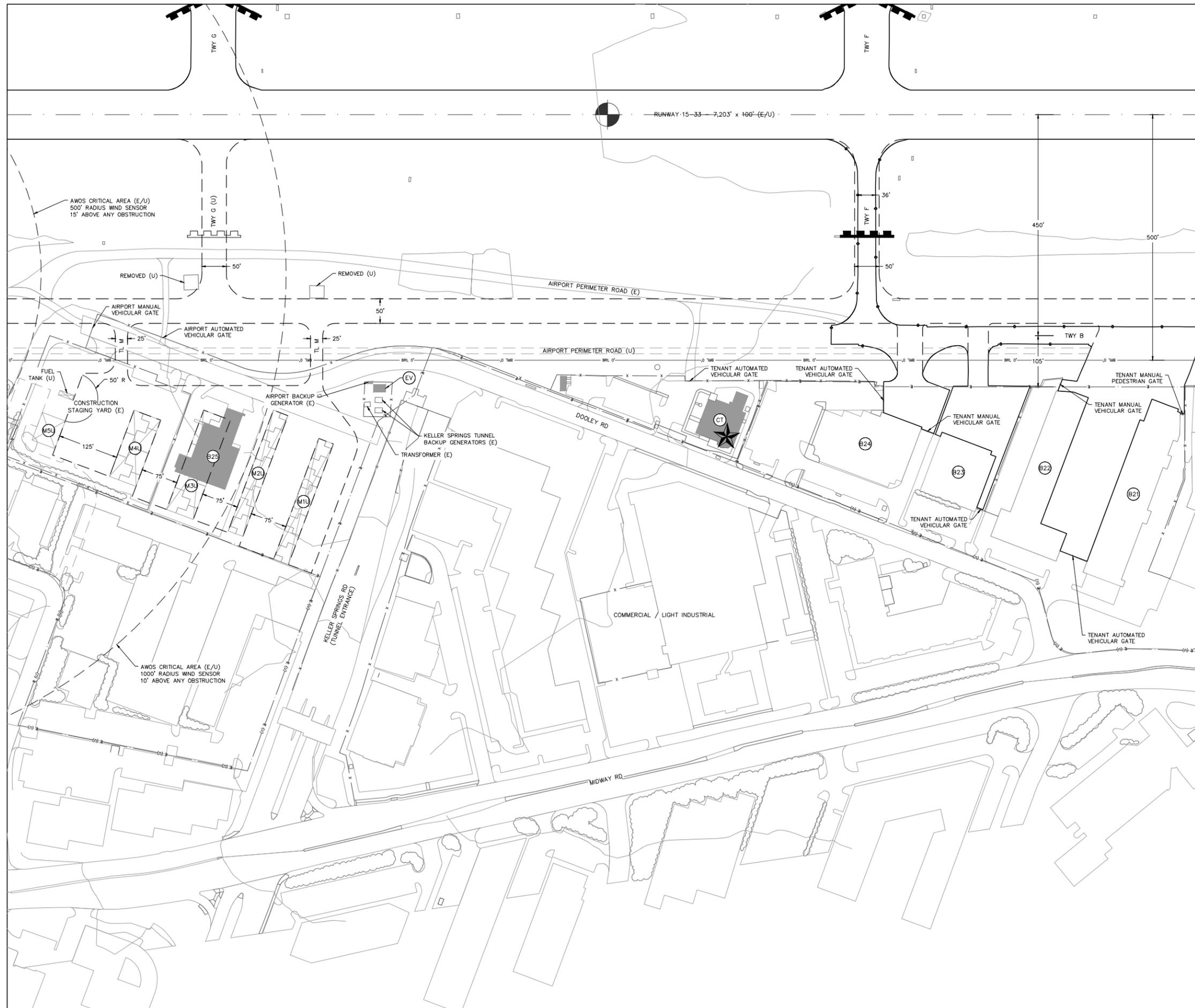
ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	---	---
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	---	---
WIND CONE & SEGMENTED CIRCLE	---	---
THRESHOLD LIGHTS	---	---
RW END IDENTIFIER LIGHTS (REILS)	---	---
C&G BEACON	---	---
VGSI	---	---
HOLD POSITION AND SIGN	---	---
ASOS/AWOS	---	---
PACS AND SACS MARKERS	---	---
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	---	---
TREES/BRUSH	---	---
NONDIRECTIONAL BEACON (NDB)	---	---

BUILDING TABLE			
BUILDING NUMBER	DESCRIPTION		TOP ELEVATION
	EXISTING	ULTIMATE	
B1	T-HGR	-	650.7'
B2	T-HGR	-	653.5'
B3	T-HGR	-	664.8'
B4	COMMERCIAL BLDG	-	663.0'
B5	COMMERCIAL BLDG	-	668.1'
B6	COMMERCIAL BLDG	-	668.4'
B8	COMMERCIAL BLDG	-	665.1'
B9	COMMERCIAL BLDG	-	672.1'
B14	COMMERCIAL BLDG	-	663.1'
B15	COMMERCIAL BLDG	-	675.1'
B16	COMMERCIAL BLDG	-	669.4'
B17	COMMERCIAL BLDG	-	678.3'
B19	COMMERCIAL BLDG	-	674.3'
N1U	-	CORPORATE HGR	TBD
N1AU	-	CORPORATE OFFICE	TBD
N2U	-	A&P AVONICS HGR	TBD
N3U	-	PUBLIC BUILDING	TBD
N4U	-	19-UNIT T-HANGAR	TBD
N5U	-	18-UNIT T-HANGAR	TBD

NOTES:  
 1. LABELED AND UNSHADED HANGARS OPERATING VIA A THROUGH-THE-FENCE USE AGREEMENT.  
 2. SOUTHWEST UNIT OF B5 HOUSES AIRPORT MAINTENANCE EQUIPMENT AND VEHICLES.



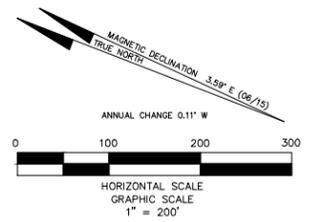
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SOUTHWEST TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
			 Aviation Division SHEET 7 OF 11



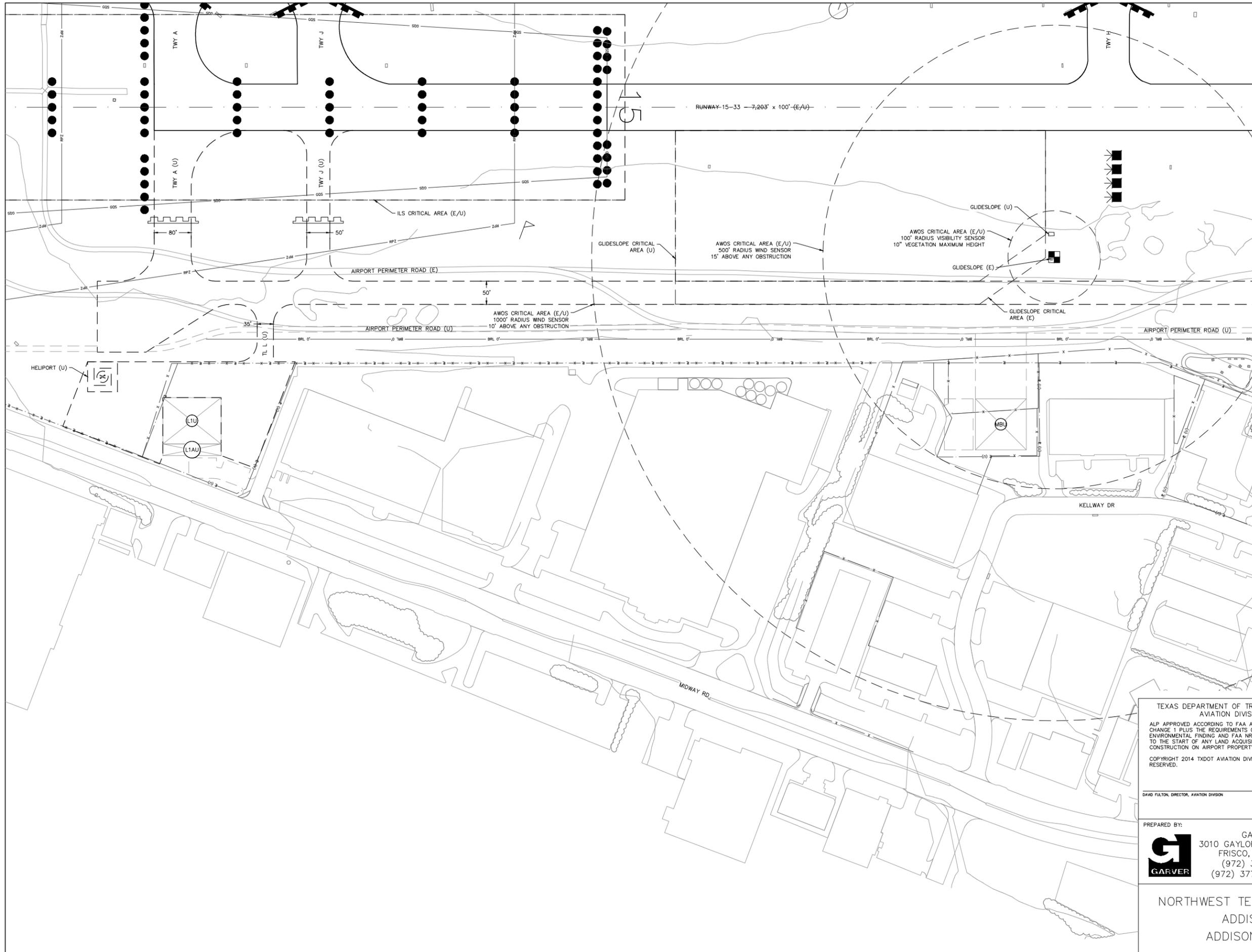
ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	---	---
WIND CONE & SEGMENTED CIRCLE	---	---
THRESHOLD LIGHTS	---	---
RW END IDENTIFIER LIGHTS (REILS)	---	---
C&G BEACON	---	---
VGSI	---	---
HOLD POSITION AND SIGN	---	---
ASOS/AWOS	---	---
PACS AND SACS MARKERS	---	---
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	---	---
TREES/BRUSH	---	---
NONDIRECTIONAL BEACON (NDB)	---	---

BUILDING TABLE				
BUILDING NUMBER	DESCRIPTION			TOP ELEVATION
	EXISTING	ULTIMATE		
B21	COMMERCIAL BLDG	-	-	679.1'
B22	COMMERCIAL BLDG	-	-	677.8'
B23	COMMERCIAL BLDG	-	-	688.1'
B24	COMMERCIAL BLDG	-	-	680.6'
B25	COMMERCIAL BLDG	-	-	651.0'
CT	CONTROL TOWER	-	-	735.5'
EV	ELECTRICAL VAULT	-	-	649.5'
M1U	-	8-UNIT T-HANGAR	-	TBD
M2U	-	8-UNIT T-HANGAR	-	TBD
M3U	-	8-UNIT T-HANGAR	-	TBD
M4U	-	5-UNIT T-HANGAR	-	TBD
M5U	-	PUBLIC BUILDING	-	TBD

NOTE: LABELED AND UNSHADED HANGARS OPERATING VIA A THROUGH-THE-FENCE USE AGREEMENT.

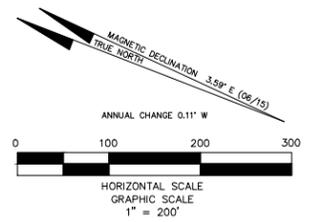


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PREPARED BY:  GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY: _____ JUNE 2016 DATE: _____ JAH DRAWN BY: _____ JUNE 2016 DATE: _____	
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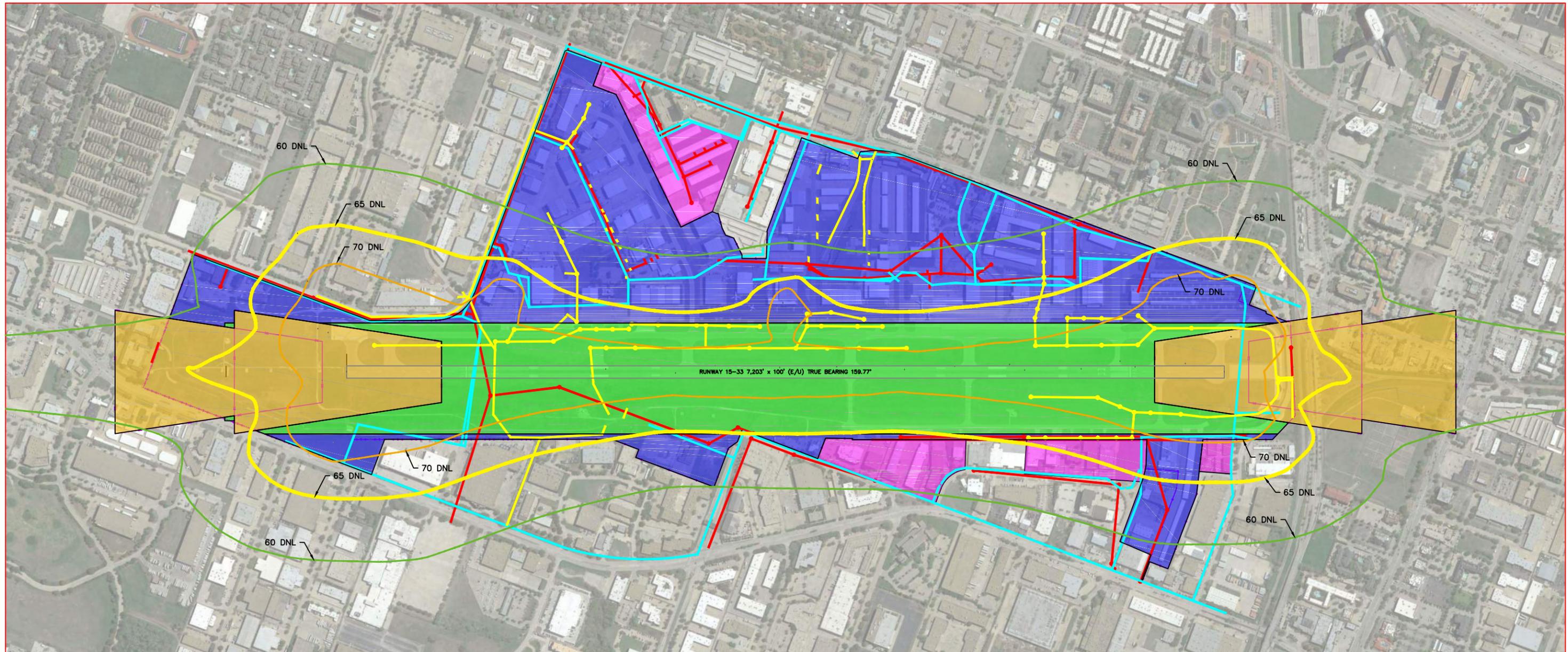


ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	---	---
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	---	---
WIND CONE & SEGMENTED CIRCLE	---	---
THRESHOLD LIGHTS	---	---
RW END IDENTIFIER LIGHTS (REILS)	---	---
C&G BEACON	---	---
VGSI	---	---
HOLD POSITION AND SIGN	---	---
ASOS/AWOS	---	---
PACS AND SACS MARKERS	---	---
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	---	---
TREES/BRUSH	---	---
NONDIRECTIONAL BEACON (NDB)	---	---

BUILDING TABLE				
BUILDING NUMBER	DESCRIPTION			TOP ELEVATION
	EXISTING	ULTIMATE		
L1U	-	-		TBD
L1AU	-	-		TBD
MBU	-	MAINTENANCE BLDG		TBD

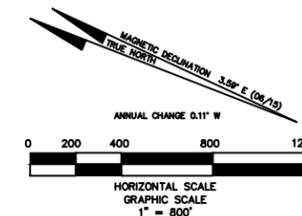


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NORTHWEST TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
			 Aviation Division SHEET 9 OF 11



**LEGEND**

- AIRPORT OPERATIONS PROTECTED AREA
- TERMINAL DEVELOPMENT
- RUNWAY PROTECTION AREA
- THROUGH-THE-FENCE OPERATIONS AREA
- STORM WATER
- DOMESTIC WATER
- SANITARY SEWER



<p style="text-align: center;"><b>TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION</b></p> <p>ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NEA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY.</p> <p>COPYRIGHT 2014 TxDOT AVIATION DIVISION, ALL RIGHTS RESERVED.</p>	<p style="text-align: center;"><b>AIRPORT SPONSOR</b></p> <p>CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR</p> <p>SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TxDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING.</p>
<p>DAVID FILTON, DIRECTOR, AVIATION DIVISION</p>	<p>DATE</p>
<p>PREPARED BY:</p>	<p>SIGNATURE</p>
<p><b>GARVER</b></p> <p>3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX</p>	<p>TITLE, AIRPORT SPONSOR'S REPRESENTATIVE</p>
<p>DESIGNED BY</p>	<p>DATE</p>
<p>DRAWN BY</p>	<p>DATE</p>
<p><b>LAND USE AND UTILITIES DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)</b></p>	
<p>SHEET 10 OF 11</p>	





# AIRPORT MASTER PLAN



**APPENDICES**

**Appendix A**  
**Executive Committee and**  
**Project Steering Committee**

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**ADDISON AIRPORT**  
*Airport Master Plan*

*Addison, Texas*

**Addison Airport Master Plan Executive Committee**

Name	Telephone	Email	Representing
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Joel Jenkinson	972-392-4855	<a href="mailto:Joel.jenkinson@addisonairport.net">Joel.jenkinson@addisonairport.net</a>	Addison Airport Director
Bill Dyer	972-392-4850	<a href="mailto:Bill.dyer@addisonairport.net">Bill.dyer@addisonairport.net</a>	Addison Airport Property Manager
Darci Neuzil	972-392-4850	<a href="mailto:Darci.neuzil@addisonairport.net">Darci.neuzil@addisonairport.net</a>	Addison Airport Assistant Director
Daniel Benson/Bill Macke	800-687-4568	<a href="mailto:dbenson@txdot.gov">dbenson@txdot.gov</a> / <a href="mailto:bill.macke@txdot.gov">bill.macke@txdot.gov</a>	TxDOT Aviation

**Addison Airport Master Plan Project Steering Committee**

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Bob Baumann	972-490-9797	<a href="mailto:bob@edwardbaumann.com">bob@edwardbaumann.com</a>	Town of Addison Citizen
Kathryn Wheeler	972-503-6777	<a href="mailto:wheelerskw@tx.rr.com">wheelerskw@tx.rr.com</a>	Town P&Z
Randy Smith	214-676-8084	<a href="mailto:rsmithref@aol.com">rsmithref@aol.com</a>	Town P&Z
Jeff Carr, FBO Manager	972-248-1600	<a href="mailto:JCarr@millionairdallas.com">JCarr@millionairdallas.com</a>	Million Air
Josh Yahoudy, General Manager	972-713-7000	<a href="mailto:Josh.Yahoudy@atlanticaviation.com">Josh.Yahoudy@atlanticaviation.com</a>	Atlantic Aviation
Stacy Muth	800-368-5387	<a href="mailto:SMuth@Ameristarjet.com">SMuth@Ameristarjet.com</a>	Ameristar Jet Charter, Inc.
Brent Wicker	972-991-1600	<a href="mailto:bwicker@wickerassociates.com">bwicker@wickerassociates.com</a>	Commercial Real Estate
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Steve Hadley	254-235-7924	<a href="mailto:shadley@nbaa.org">shadley@nbaa.org</a>	NBAA
Natalie Bettger	817-695-9280	<a href="mailto:nbettger@nctcog.org">nbettger@nctcog.org</a>	NCTCOG





*ADDISON AIRPORT*  
*Airport Master Plan*

---

*Addison, Texas*



**Appendix B**  
**Addison Airport Strategic Plan**

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# ADDISON AIRPORT STRATEGIC PLAN

2013





## EXECUTIVE SUMMARY



## EXECUTIVE SUMMARY

Addison Airport is the single most valuable asset owned by the Town of Addison and its citizens. As such, it is essential that the airport be operated and developed with the interests of its citizen-owners at the forefront to facilitate economic development for the region. It is also part of a unique community, and its future development must reflect the values – including the aesthetic values – as well as the goals and aspirations of citizens of Addison and the City Council representing those citizens.

The purpose of this Strategic Plan is to establish broad policy goals for the development of Addison Airport through the next 20 years and beyond. The plan is not an airport “road map”; it is meant to provide guidelines and context for making decisions regarding future development.

### Some Airport History

Addison Airport was established in 1957 by a group of private investors and run as a private business enterprise until it was acquired by the Town of Addison (with FAA assistance) in 1976. From 1976 through December 31, 2000, the airport was managed and operated by Addison Airport of Texas, Inc. (AATI). AATI was owned by Henry Stuart, who was the Airport Manager recruited by the airport’s original owners in 1957.

On January 1, 2001, management and operations of the airport were contracted by the Town to the Washington Staubach Addison Airport Joint Venture (WSAAV), a joint venture of Washington Group International and Staubach Airport Management, Inc. WSAAV operated the airport on behalf of the Town through September 30, 2010 when the old contract expired and management responsibility passed to URS and SAMI Management, Inc. (successor companies of the WSAAV joint venture partners) under two new, separate contracts. Under the new agreements, URS provides overall management, operations, and maintenance services while SAMI Management, Inc. handles real estate services.

At its grand opening ceremonies, Addison Airport was marketed as “the World’s Largest Exclusively Executive Airport”; the airport has been focused on serving business aviation throughout its 55+ years of operation. While business aviation has been the primary focus at Addison, other aviation uses are also welcomed and accommodated.

### Addison Airport’s Role in the National Airspace System

Addison is a General Aviation (GA) airport and an FAA-designated Reliever for the region’s two commercial service airports, Dallas–Fort Worth International (DFW) and Dallas Love Field (DAL). Addison also resides in the very top tier of GA airports in the country – a position confirmed by the FAA’s recently-released “ASSET” study, in which Addison was recognized as one of only 84 “National” GA airports among more than 3,000 GA airports in the national airport system plan. Addison is the pre-eminent GA Reliever airport in the State of Texas.

Throughout its life, Addison Airport has always been financially self-sufficient. Moreover, it currently contributes in excess of \$1 Million annually to the Town’s General Fund through taxes on building improvements and business property (aircraft) based at the airport. The airport also contributes significantly to economic growth and development in the region: a 2011 study concluded that Addison Airport supports 2,340 jobs and has an annual economic impact of \$370 Million.

### A Guide for Development

This Strategic Plan is a guide for the next 20 years as Addison seeks to build on the already-considerable success of its airport. The Strategic Plan recognizes and confirms Addison Airport’s status as one of the top GA Relievers in the country as well as its economic value to the North Dallas region. Key elements of the Strategic Plan are the Value Proposition, Vision Statement, and Goals. The plan also identifies strategies and tactics to explain the “how” behind achieving those goals.

The Town of Addison's Value Proposition for Addison Airport is to exemplify the general aviation industry's "best business practices", maintaining consistency with the Town of Addison's own "best product" value proposition emphasizing innovation and creativity.

Thus, the Town's Value Proposition directive for Addison Airport is:

*Best Product – to be an industry-leading Reliever airport serving the needs of aviation commerce and general aviation.*

The Town's aspiration for the airport, or Vision Statement, is an adaptation of the Town of Addison's corporate vision statement:

*To be a safe, thriving General Aviation Airport that delivers the "Addison Way" with superior services, an attractive appearance and enhanced sense of community, offering a high-quality experience for tenants, businesses, visitors, and all stakeholders. Addison Airport will lead the way in creativity, innovation, and environmental and fiscal responsibility within a culture of excellence and regard for others.*

The Town's three primary goals for the airport are:

#### **GOAL 1**

*Continue to enhance the airport's overall value for the benefit of stakeholders*

#### **GOAL 2**

*Fully integrate the airport with the Town of Addison*

#### **GOAL 3**

*Continue to promote industry-leading practices in all aspects of airport management, development, operations, and maintenance*

Section 4 of the Strategic plan outlines the strategies and tactics that will be employed to achieve these goals. Section 5 addresses policy implementation issues, specifically how the plan is intended to be applied, action time frames for pursuit of various tactics identified in Section 4, and provisions for periodic review and update of the Strategic Plan. The Strategic Plan concludes with Findings and Recommendations in Section 6.

Issues addressed in the Findings and Recommendations include: airport certification status (confirming the intent to continue as a GA Reliever); financial planning (necessary to support airport improvements and redevelopment); economic development (using the airport to support and promote economic development not just for Addison, but also including neighboring communities in the North Dallas region); airport redevelopment, land use, infrastructure, and aesthetics; land acquisition strategies (acquiring additional land to protect and expand the airport); "airport-community interface" considerations (building and maintaining support for the airport in the surrounding communities); new accommodations for small aircraft; aviation fueling (addressing another issue of concern to the light aircraft market); and finally, updating the Airport Master Plan.

In summary, this Strategic Plan outlines broad policies and goals for maintaining and enhancing the value of Addison Airport for the benefit of all of its stakeholders, but particularly for the benefit of its citizen owners.

# TABLE OF CONTENTS

<b>1.</b>	<b>Introduction and Purpose</b>	<b>7</b>
<b>2.</b>	<b>Background and History</b>	<b>7</b>
2.1	Airport History and Development	7
2.2	Economic Role and Impact	10
2.3	Addison Airport Governance	12
2.4	The Strategic Planning Process	12
2.4.1	Review of Current Status	13
2.4.2	Identification of Critical Issues	14
2.4.3	SWOT Analysis	14
2.4.4	Goals and Strategy Development	14
2.4.5	Data Collection	14
2.4.6	Consideration of a Value Proposition and Vision Statement	17
<b>3.</b>	<b>Organizational Tenets</b>	<b>17</b>
3.1	Value Proposition	17
3.2	Vision Statement	17
3.3	The Vision for the Future	18
<b>4.</b>	<b>Recommended Policy Initiatives</b>	<b>24</b>
4.1	Goals	24
4.2	Strategies and Tactics	24
4.2.1	Strategies and Tactics to Achieve Goal 1: Continue to enhance the airport's overall value for the benefit of stakeholders	24
4.2.2	Strategies and Tactics to Achieve Goal 2: Fully integrate the airport with the Town	26
4.2.3	Strategies and Tactics to Achieve Goal 3: Continue to promote industry-leading practices in all aspects of airport management, development, operations, and maintenance	29
<b>5.</b>	<b>Policy Implementation</b>	<b>30</b>
5.1	Application of the Strategic Plan	30
5.2	Action Time Frames	30
5.3	Periodic Review of this Strategic Plan	31
<b>6.</b>	<b>Findings and Recommendations</b>	<b>32</b>
6.1	Airport Certification Status	32
6.2	Financial Planning	32
6.3	Economic Development	33
6.4	Redevelopment, Land Use, Infrastructure, and Aesthetics	33
6.4.1	Redevelopment	33
6.4.2	Land Use	34
6.4.3	Infrastructure	35
6.4.4	Aesthetics	35
6.5	Land Acquisition Strategies	35

6.6	Airport-Community Interface .....	36
6.6.1	Airport Administrative Offices .....	36
6.6.2	Airport Maintenance Facility .....	37
6.6.3	An “Airport Community Building” .....	37
6.7	Small Aircraft Accommodations – T-Hangars / Patio Hangars .....	37
6.8	Aviation Fueling .....	38
6.9	Airport Master Plan Update .....	38
<b>7.</b>	<b>Conclusion: Next Steps</b> .....	<b>40</b>
	<b>Appendices</b> .....	<b>45</b>
	Appendix A: Maps – Airport Location .....	1
	Appendix B: Airport Operational and Financial Data .....	6
	Appendix C: SWOT Analysis .....	12
	Appendix D: Airport Visits .....	15
	Appendix E: Tenant Surveys .....	46
	Appendix E.1 Airport Business Survey and Responses .....	46
	Appendix E.2 Hangar Tenant Survey and Responses .....	46
	Appendix F: Goals, Strategies, and Tactics Summary .....	62
	Appendix G: Addison City Council Chapter 380 Policy and Procedures Document .....	66
	Appendix H: Future Concepts for Consideration .....	74



# STRATEGIC PLAN



## 1. INTRODUCTION AND PURPOSE

This Strategic Plan has been developed by a team consisting of two members of the Addison City Council and senior staff from the Town of Addison and Addison Airport. The Addison Airport Strategic Planning Team members are:

*Blake Clemens, Mayor pro Tempore*

*Neil Resnik, City Council Member*

*Lea Dunn, Deputy City Manager*

*Mark Acevedo, Director of General Services*

*Orlando Campos, Director of Economic Development*

*Joel Jenkinson, Airport Director*

*Darci Neuzil, Airport Deputy Director*

*Bill Dyer, Airport Real Estate Manager*

The purpose of this Strategic Plan is to establish broad policy goals for the development of Addison Airport through the next 20 years. This plan is not a “road map”; it is meant to provide guidelines and context for making decisions regarding future development of the airport. The environment in which the airport operates – including economic and market forces, technology, regulatory, and a host of other factors – will surely change in unanticipated ways. Therefore, it is essential that this plan be periodically updated and that it permits sufficient flexibility to adapt to changing conditions. Perhaps most importantly, the plan must be maintained in alignment with the goals and aspirations of the citizens of Addison and the City Council representing those citizens.

## 2. BACKGROUND AND HISTORY

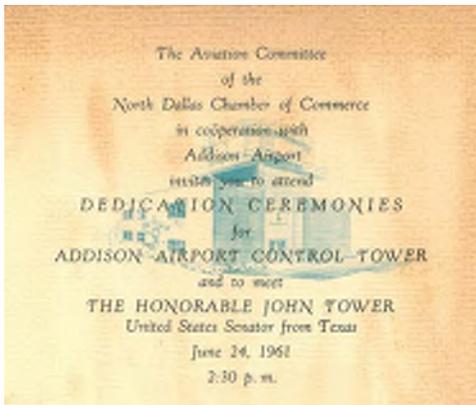
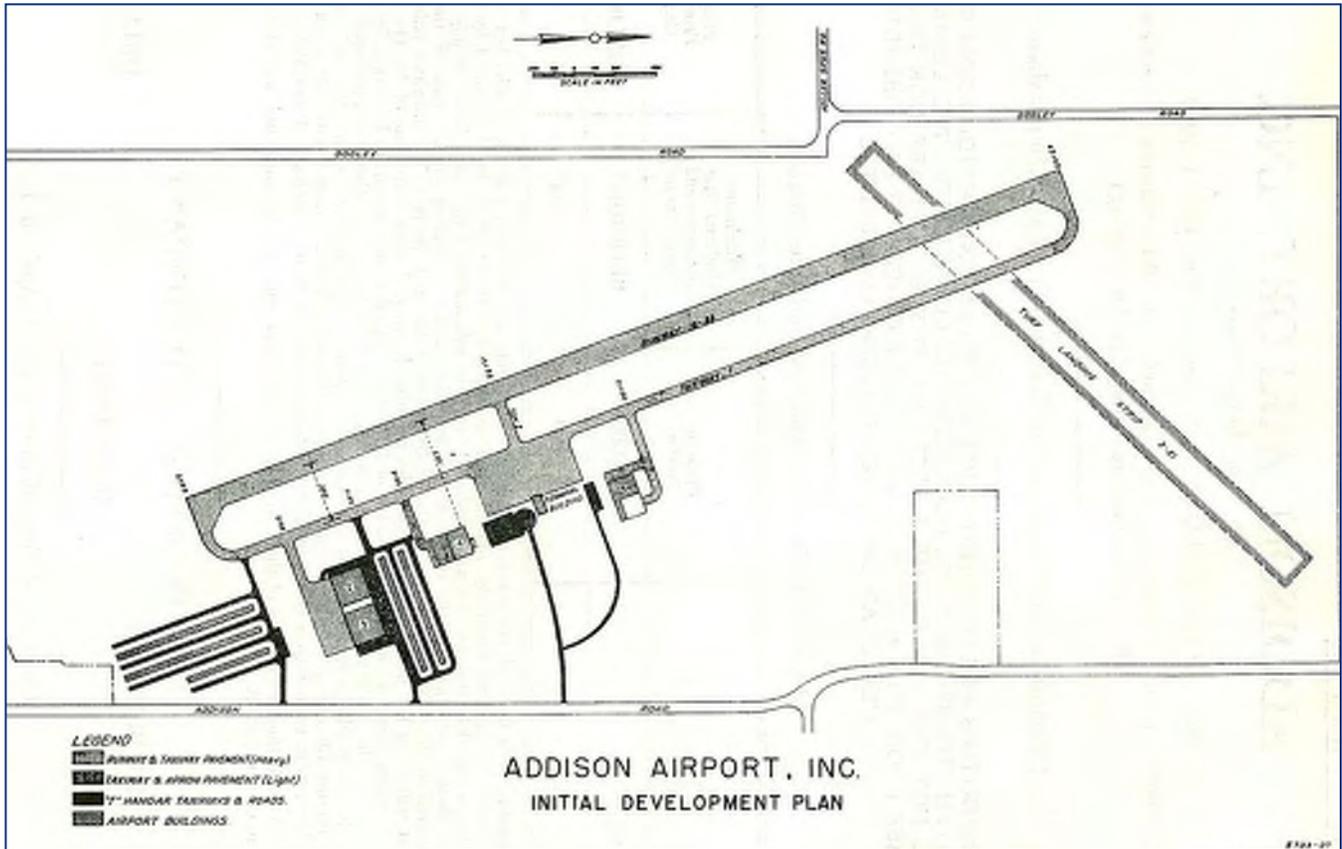
### 2.1 Airport History and Development

Addison Airport was established in 1957 by a group of Dallas businessmen led by John Murchison and W.T. “Bill” Overton. These two men, along with Toddie Lee Wynn, Jr., James I. DeLoache, and W.D. DeSanders, served as the original Directors of Addison Airport, Inc., the private corporation formed to develop the new airport. Groundbreaking ceremonies for the \$2,291,000 project – financed entirely with private funds – were held on March 16, 1957. The original airport featured a 4,500-foot long by 100-foot wide asphalt runway (Runway 15-33) and a 3,200-foot long by 200-foot wide packed turf crosswind runway (Runway 3-21) on a 400-acre site in the largely undeveloped northern suburbs of Dallas. A grand opening ceremony for the airport was held on Friday October 18, 1957.

From the very beginning, Addison Airport was focused on serving the needs of business aviation. At the grand opening ceremony, a sign welcomed attendees to “the World’s Largest Exclusively Executive Airport” while press releases billed it as a “haven for the executive flyer”. Site selection was based in large part on a survey of aircraft owners: the site was purposely chosen because it was conveniently close to those who owned private aircraft, the majority of whom lived in or near North Dallas. Henry Stuart, the operator of Park Cities Aero Services, was selected as the General Manager of the new airport and appointed to the position of Vice President of Addison Airport, Inc.

On July 15, 1960, groundbreaking ceremonies were held for an air traffic control tower for Addison Airport; less than a year later, the facility was completed and a dedication ceremony was held on June 24, 1961. Addison’s air traffic control tower was the first such facility at a privately owned and operated airport to be staffed by FAA personnel.

The initial development plan for Addison Airport (1957).



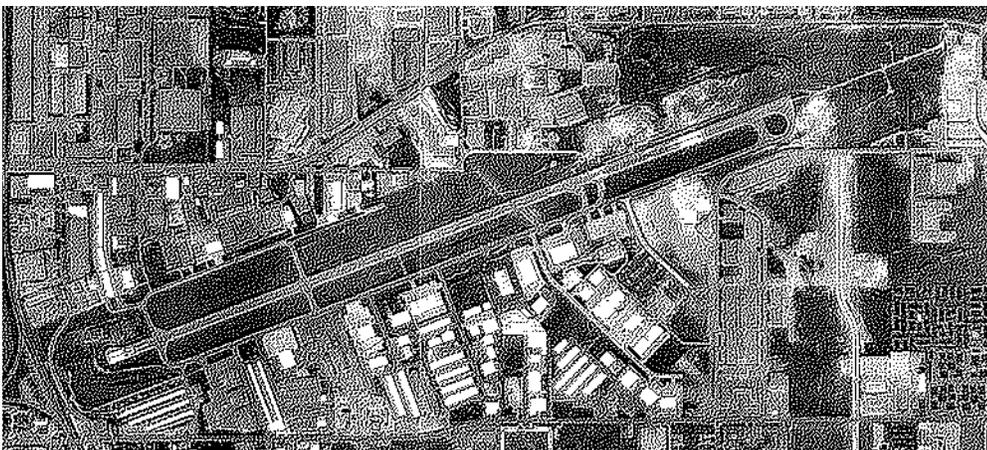
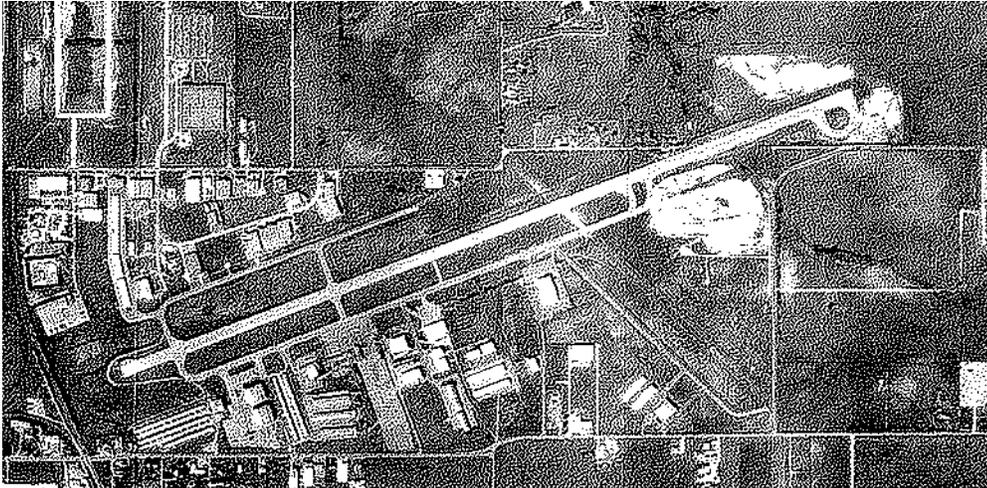
Invitation to the Dedication Ceremony for the Addison Airport air traffic control tower (June 24, 1961).



Invitation to the Grand Opening of Addison Airport (October 18, 1957).

By the mid-1970's, a number of smaller airports closer to downtown Dallas – including the Park Cities and Highland Park airports – had been overrun by development and closed. The FAA, recognizing the importance to the national air transportation system of smaller airports serving business and private aviation interests, took steps aimed at protecting Addison Airport from suffering a similar fate. In 1976, the FAA approached the Town of Addison with a proposal for the Town to acquire the airport and become its public sponsor. The Town eventually agreed to the proposal, and with the assistance of an FAA grant providing 90% of the \$8 Million purchase price became the new owner of Addison Airport in 1976.

(Top) Aerial view of Addison Airport, October 1973. (Bottom) Aerial view of Addison Airport, May 9, 1984.



While the Town agreed to become the owner of the airport, Town leaders did not desire to operate the airport using Town staff. Henry Stuart, who had been managing the airport from the beginning, agreed to provide the \$800,000 that constituted the Town's 10% share of the purchase price for the airport in exchange for a 20-year contract for Addison Airport of Texas, Inc. (AATI, Mr. Stuart's company) to continue operating the airport. AATI was additionally required to contribute \$100,000 towards the construction of an airport road.

Throughout the 1970s, many improvements to the airport's physical infrastructure were made. Extensions were added to both ends of the primary runway (Runway 15-33) which

reached its current length of 7,202 feet by 1973. By the early 1980s, the cross-wind runway (Runway 3-21) had been abandoned, partly in response to noise concerns and partly to enable additional development of the airport's northeast quadrant.

The decade of the 1980s was one of growth and controversy for the airport. A dispute with FAA related to grant assurance compliance issues resulted in suspension of federal funding for airport improvement projects in 1981, and the airport did not receive another FAA grant until 1987. By 1988, the Town of Addison had made the decision to take a more active role in the operation of the airport and

began an evaluation process that examined fuel flowage fees and airport maintenance practices. This resulted in a 1990 amendment to AATI's operating agreement and the establishment of an Upkeep Fund that enabled the Town to exert more influence over maintenance matters. During the course of negotiations between AATI and the Town, FAA indicated a willingness to fund capital improvements if the Town assumed greater control over the operation of the airport. In 1997, the "Addison Airport 2001 Committee" was formed; the Committee provided a report to the Addison City Council containing recommendations for the operation of Addison Airport following the expiration of the agreement with AATI on December 31, 2000. The Committee recommended continuing privatized manage-

Aerial view of Addison Airport, May 29, 2010.



operator, after an initial operating period it became apparent that the structure of the airport operating agreement was somewhat problematic. In particular, the compensation structure was complex and difficult to explain; the Town desired greater transparency. As a result, in 2006 the Town gave notice of intent not to extend the current WSAAV operating agreement beyond its primary term in favor of negotiating a new operating agreement. During the course of negotiations, a decision was made to negotiate two separate new operating agreements, one with each of the two partners in the WSAAV joint venture. Two new contracts were successfully negotiated – one with URS to provide airport management, maintenance, and operations services, and the other with SAMI Management, Inc. to provide real estate management services – and went into effect on October 1, 2010. Although services are provided by two different companies, staff from both work in close cooperation and for most practical purposes function as a single, well-coordinated airport staff.

## 2.2 Economic Role and Impact

With over 700 based aircraft and approximately 100,000 annual aircraft operations, Addison Airport is an important amenity for area residents and businesses, enhancing quality of life and regional economic competitiveness. Airport tenant operations make Addison Airport an important regional employment center as well. Based on an economic impact analysis commissioned by the Texas Department of Transportation and conducted in 2011 by the University of North Texas, approximately 2,340



One of the many jobs provided by Addison Airport: a line service technician fuels a business jet.

jobs with a payroll of over \$136 Million are generated at the airport. Addison Airport provides transportation services to the large corporate community in Dallas, Collin, and Denton Counties. It is estimated that the overall annual economic impact of the airport to the North Texas region is \$370 Million. Between 2006 and 2010, capital expenditures for infrastructure improvements generated \$3.4 Million in economic activity that created 28 job-years of employment (a job-year equals one job lasting one year). In 2011, the airport's runway pavement was rehabilitated and associated lighting, signage, and drainage were also improved, all funded by an \$11.6 Million Airport Improve-

Hangar construction in November 2011. This \$4 Million project was financed with private funds.



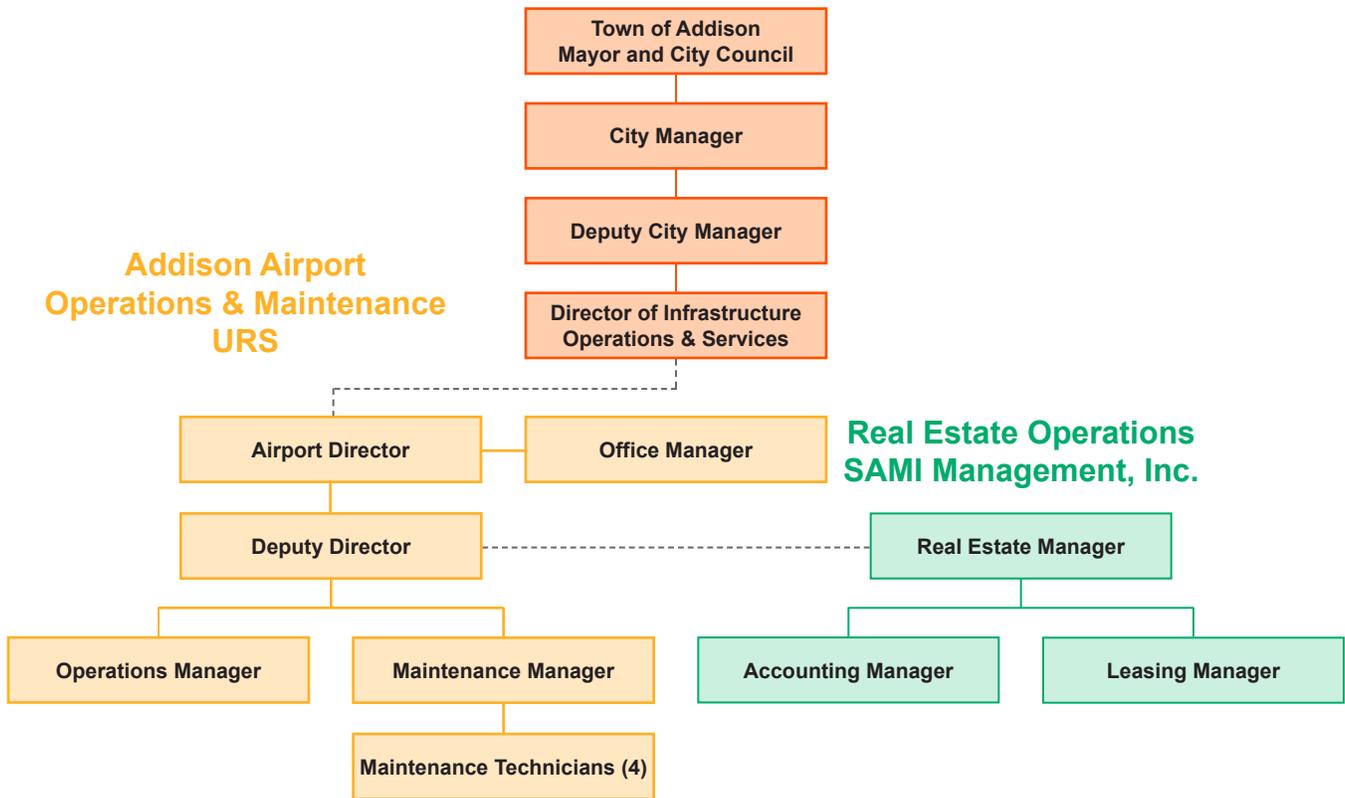
ment Program (AIP) grant from FAA and TX-DOT Aviation. In fall 2012, work began on the reconstruction of Taxiway Alpha; this project is funded by another AIP grant of just under \$10 Million. The project is expected to be complete in fall 2013. AIP grants are funded at 90% from Federal and State sources, with a 10% local match.

In addition to capital expenditures on public infrastructure improvements, the airport has attracted substantial private investments in airport facilities. Five privately funded projects were completed in 2009-2012; these five projects represent \$15 Million of private capital invested in Addison Airport in a four-year span, during a recession.

In summary, Addison Airport plays a vital role in the regional economy, providing significant employment opportunities and air transportation services to the community. Over the past five years, the airport has attracted more than \$40 Million in public and private capital investments in facilities and infrastructure.



Addison Airport's \$11.6 Million runway rehabilitation project (2011) was funded 90% by an Airport Improvement Program (AIP) grant with a 10% local matching share.



### 2.3 Addison Airport Governance

Addison Airport is owned by the Town of Addison, which serves as the public sponsor for purposes of obtaining and administering Airport Improvement Program (AIP) grant funding from the FAA through the block grant program established with TX-DOT Aviation to fund improvements at general aviation airports in the State of Texas. As with all major Town functions, the Mayor and City Council have policy and oversight responsibilities for the airport.

The airport is operated by two private companies, each providing distinct services under separate contracts but functioning together as a unified airport staff. These two companies are the successors of the WSAAV joint venture partner companies. URS, with nine employees including the Airport Director, provides management, operations, and maintenance services; SAMI Management Inc., with three employees, provides real estate management, leasing, and accounting services.

The Airport Director reports to the Town of Addison’s Director of Infrastructure Operations and Services, who in turn reports to the Deputy City Manager. The Deputy City Manager reports to the City Manager, who is the primary point of contact with the Mayor and City Council. This organizational structure is represented in graphical form above.

### 2.4 The Strategic Planning Process

The strategic planning process began in the fall of 2011 with the formation of the airport strategic planning team. The team began its process by reviewing the current status of the airport, including the market(s) being served, and identifying critical issues that will affect the development of the airport in the near future.

The team had no preconceptions or any pre-determined outcome in mind: everything was “on the table” and as many points of view and options for future development that could be gathered were given full consideration.

Key steps in the strategic planning process are briefly reviewed hereafter. These key steps included a huge, sustained data collection effort; development of organizational tenets (a value proposition and a vision statement); development of goals, along with strategies and tactics to achieve those goals; and finally, development of key findings and recommendations. Supporting documentation is contained in the Appendices.

(Top Left) Addison Airport’s air traffic control tower, (Top Right) a Swiss-registered global express business jet takes off from Addison airport. (Bottom) Addison Airport, February 5, 2011: hosting numerous visitors for Super Bowl XLV. Addison was the only airport in the region, including DFW International and Dallas Love Field, that never closed in the week leading up to Super Bowl.



### 2.4.1 Review of Current Status

Perhaps the first question to be addressed by the team was “what is the current status of Addison Airport?” Included in the consideration of this question was Addison Airport’s place in the NPIAS (National Plan of Integrated Airport Systems). Airports in the NPIAS can be divided into two broad categories: commercial service (serving air carrier operations, with airport certification under 14 CFR Part 139) and general aviation. The Federal Aviation Administration (FAA) has long classified commercial service airports into different categories based on numbers of passengers served, but until very recently made no distinctions among general aviation (GA) airports other than

designating certain larger GA airports as “Relievers” for nearby commercial service airports. Addison always has been and always will be a GA airport, and is an FAA-designated Reliever for Dallas–Fort Worth International (DFW) Airport and Dallas Love Field (DAL). Addison is in the very top tier of GA airports in the country – a position confirmed by the FAA’s recently-released “AS-SET” study, in which Addison was recognized as one of only 84 “National” GA airports among more than 3,000 GA airports in the NPIAS – and is the pre-eminent GA Reliever airport in the State of Texas.

Addison Airport, February 5, 2011: hosting numerous visitors for Super Bowl XLV.

Signage for Naples Municipal Airport (APF) which the strategic planning team visited on June 8, 2012.



Addison was the only airport in the region – including DFW International and Dallas Love Field – that never closed in the week leading up to Super Bowl.

The conclusion of the strategic planning team at this stage was that Addison Airport is and should continue to be a “high-end” GA Reliever airport. Attempting to “move up” by seeking Part 139 certification and airline service does not make sense for Addison, and neither would downgrading the airport to make it any less than what it currently is. The airport’s role in the NPIAS was affirmed. At the same time, the team recognized that there clearly are opportunities to improve Addison Airport; consequently, this Strategic Plan is focused on improving the airport consistent with its current role as one of the most important GA Reliever airports in the NPIAS.

### 2.4.2 Identification of Critical Issues

Very early in the strategic planning process (in the fall of 2011) the team identified several critical issues that team members believed would need to be addressed in the immediate to near future. While these “critical issues” were an initial focus of the team, as the planning process evolved it became apparent that these issues needed to be addressed in the larger context of

a comprehensive strategic plan. As a result, this strategic plan is focused primarily on broader policy issues and goals and to a much lesser extent on specific issues.

### 2.4.3 SWOT Analysis

The planning team conducted a “SWOT” (strengths, weaknesses, opportunities, threats) analysis relatively early in the process, and then revisited that analysis later in the process, after visiting a number of other airports and collecting additional data. The SWOT analysis is discussed and summarized in Appendix C.

### 2.4.4 Goals and Strategy Development

Development of goals and strategies to attain those goals is a critical part of the strategic planning process. The team spent several sessions over a period of many months, discussing and developing goals and strategies. There were no preconceived end results or predetermined outcome; everything was “on the table” for discussion. New data collected through various sources was considered in each iteration of this development process. Final goals and the strategies and tactics to be used to achieve these goals are outlined in Section 4 of this plan.

### 2.4.5 Data Collection

The strategic planning team spent many months collecting data from a variety of sources. The team adopted a philosophy in data gathering that “we don’t know what we don’t know” and as a result actively sought input from a wide variety of sources.

### AIRPORT VISITS

One of the most important pieces of the strategic planning team’s data collection efforts was a series of visits to other general aviation airports. The basic idea was to visit airports having reputations for being well run or having other characteristics that would be of interest to the team, meet with the people responsible for the operation of those airports, and gather “best practices” that could be applied here in Addison. In a sense, it was a quest to appropriate some of the best ideas from some

of the best GA airports in the country. Careful consideration was given to the selection of airports to visit; a listing of airports visited is included as Appendix D.

Visits to other airports were conducted through the spring and summer of 2012. In each of these visits, the strategic planning team met with key personnel (including not just airport staff, but also local officials having oversight responsibility for their airport) and toured the airport. Every airport the team visited was very different, an observation that supports the old adage, “when you’ve seen one airport, you’ve seen one airport.” However, all of these airports, as different as they are, had at least one thing in common: every airport we visited knew who and what they are in terms of the market niche they were serving and their business model to serve that market. The staff and officials at each of these airports understand and stay focused on what they do well. This commonality became a key take-away from our visits; the team concluded that this is an essential, defining characteristic of a well-run airport.

(Top Left) Centennial Airport (APA) air traffic control tower. (Top Right) Light aircraft line up for departure from Addison  
(Bottom) A private hangar development at Scottsdale Airport (SDL).



## STAKEHOLDER INPUT

Stakeholder input was sought in the planning process through meetings and surveys. At this stage of the process, the focus was on airport tenant and business stakeholders, not the wider stakeholder community (which the team believed would have been premature). Going forward, input will be solicited from the wider stakeholder base, as detailed in Section 4 of this Strategic Plan.

A key take-away from the stakeholder input process is that different stakeholders often have widely divergent views of what they want the airport to do and be. However, it is important to understand the needs and desires of all the various stakeholders in order to strike appropriate balances between competing interests.

## TENANT SURVEYS

Two surveys of airport tenants were conducted in August-September 2012. One survey was geared towards businesses,

and the other was targeted towards T-hangar and patio hangar tenants; the purpose of these surveys was to solicit input for the development of this Strategic Plan. The surveys with complete results are included as Appendices E.1 and E.2.

A key takeaway from the surveys was that the responses and perceptions of the patio hangar and T-hangar tenants were very different from those of the businesses. Patio and T-hangar tenants operate (almost exclusively) small piston-engine aircraft

Aerial view of Addison Airport, May 12, 2012, following completion of the runway rehabilitation project and two large private hangars on Taxiway Victor (far left center of image).



and as a group tend to be focused primarily on fuel cost and hangar rents. Airport businesses are a more diverse group, with more diverse views and concerns.

#### **TARGETED STAKEHOLDER VISITS**

Beginning in early 2012, the strategic planning team visited a select number of airport businesses. The purpose of these visits was both to learn about the businesses and to solicit their input on the future direction of Addison Airport. The team visited a variety of businesses including FBOs, maintenance and avionics shops, Part 135 cargo and charter operators, and flight schools. A key question that was asked at every visit was “What could the airport do (or do differently) that would help your business?”

#### **VISITS WITH FAA AND TX-DOT AVIATION**

The strategic planning team also visited the FAA (Southwest Region – Airports Division) and TX-DOT Aviation at their respective offices in Fort Worth and Austin. In these meetings, the

team began with a short presentation regarding the strategic planning process, covering the “what” and “why”, before engaging in dialog with agency officials regarding the plan. Both FAA and TX-DOT were very supportive of the process and had useful comments and suggestions for the team.

#### **AIRPORT TENANT MEETINGS**

Four meetings with airport tenants were held. Two meetings included T-hangar and patio hangar tenants and other operators of smaller piston-engine aircraft. The other two meetings were aimed at soliciting the input of airport businesses. These meetings supplemented information gathered from the tenant surveys.

#### **ADDITIONAL DATA SOURCES**

Numerous additional sources of data were accessed and used by the planning team. Many sources are public documents and industry publications, such as FAA Advisory Circulars, the FAA “ASSET” report on GA airports, FAA Grant Assurances (appli-

cable to airports receiving AIP grant funding), and various reports produced by the Airport Cooperative Research Program (ACRP). The team also used internal sources including airport lease files and operational records. Finally, the team also considered the strategic planning document (incorporating the value proposition and vision for the Town of Addison) that was produced and adopted by the Addison City Council in 2012.

#### 2.4.6 Consideration of a Value Proposition and Vision Statement

The most important piece of the strategic plan is the clear articulation of the airport's "value proposition" and vision statement. The value proposition defines in broad terms what kind of organization the airport will be and what levels of services it will provide to its customers, while the vision statement is, in the simplest terms, a statement of the Town's aspirations for the airport going forward. All of the data and input gathered throughout the strategic planning process was weighed and considered in the development of a value proposition and vision statement for the airport, which is considered in the next section of this plan.

## 3. ORGANIZATIONAL TENETS

### 3.1 Value Proposition

An organization's value proposition is, after in-depth analysis, its proclamation of the benefits, costs, and value it believes it can deliver to its customers, prospective customers, and stakeholders within and outside the organization.

The Town of Addison's value proposition for Addison Airport is to exemplify the general aviation industry's "best business practices", maintaining consistency with the Town of Addison's own "best product" value proposition emphasizing innovation and creativity. Addison Airport will provide services to its customers, prospective customers, and stakeholders that will be clearly recognized as of such quality that they will be willing to pay a premium for those services, if necessary. Addison Airport will not often be the lowest-price service provider, but it will provide services of such quality that customers will ask for it by name.

Thus, the Town's value proposition directive for Addison Airport is:

*Best Product – to be an industry-leading Reliever airport serving the needs of aviation commerce and general aviation.*

### 3.2 Vision Statement

The Town's aspiration for the airport, or vision statement, is an adaptation of the Town of Addison's corporate vision statement:

*To be a safe, thriving General Aviation Airport that delivers the "Addison Way" with superior services, an attractive appearance and enhanced sense of community, offering a high-quality experience for tenants, businesses, visitors, and all stakeholders. Addison Airport will lead the way in creativity, innovation, and environmental and fiscal responsibility within a culture of excellence and regard for others.*

Conceptual illustrations with distinctive design elements that would make Addison Airport uniquely and immediately recognizable from the airside.



### 3.3 The Vision for the Future

The value proposition and vision statement are the organizational tenets upon which the vision for the future of Addison Airport is predicated. How is this interpreted and translated into a vision for the future of Addison Airport? What does this mean in terms of what the airport is expected to look like in 20 years? While the airport will continue to accommodate a broad spectrum of general aviation users, the airport will maintain its long-established primary focus on business aviation. Ideally, the Addison Airport of the future will be an integral part of the Town of Addison, with a focus on public safety and consistent, high aesthetic standards for buildings, landscaping, and signage, and superior services. The team's consensus was that when you are in Addison – be it at the Airport or anywhere else in Town – you will know you are in Addison; there will be a strong sense of place, supported by a welcoming culture.



The images and descriptions in this vision for the future of Addison Airport are mainly aspirational, examples of what could be done and not necessarily what will be done. In this context, it is important to understand how airport development projects are typically accomplished.

Tulips bloom in front of the old Addison Airport monument sign on Airport Parkway.



Generally, the airport builds, maintains, and improves common-use infrastructure: particularly the runway, taxiways, certain navigational aids, airfield lighting and guidance signs, and perimeter fencing and access controls, but also including water, sanitary sewer, and storm drainage utilities, as well as streets for landside access. Whenever possible, the airport leverages its own capital investments with grant funding obtained from FAA, TX-DOT and any other sources that may be available. The airport usually does not build hangar facilities or the associated aircraft parking ramps, shop and office spaces, and automobile parking areas. That type of development is customarily done using private funding, most often in the context of a ground lease agreement. This does not mean that the airport could not or would not ever participate in a hangar development project, but it would be a departure from the normal manner of airport development and it would presumably require a compelling reason to do so.

In some circumstances, the airport may partner with a private developer, improving common-use infrastructure to facilitate desirable private development (as was done on at least one recent project). Another key consideration is that most airport development is necessarily market-driven: in the absence of sufficient demand for a particular project, there is little incentive to build, either for the airport or (especially) for a private developer seeking a return on an investment. On the other hand, not every project should be evaluated or executed based solely on the prospects of its financial return: if that were the case, we would have no public parks, aircraft viewing areas, or public art ... amenities of the type that have long been much valued by the Addison community. Different measures of value surely apply to these kinds of projects; return on investment is not the only measure of success.

Addison’s ideal airport of the future would accommodate a wide, diverse variety of aviation users and uses. In addition to world-class fixed-base operator services, airport businesses would provide a comprehensive range of aviation products and services. The airport would provide high quality amenities for tenants, pilots, passengers, and visitors; it would be a pleasant place to work or visit, with a strong sense of community and a professional and friendly atmosphere. Stakeholders on the airport and in the surrounding community would take great pride in the airport. The airport and Town would coordinate to promote and take advantage of local attractions, amenities, and events, particularly Addison’s special events and hospitality businesses. Addison Airport and the Town of Addison would be the destination of choice for a wide spectrum of general aviation users.

The Addison Airport of the future ideally would have an area designed to support and grow a community of aviation enthusiasts and aircraft owners. This area would feature new T-hangars and a host of amenities including a self-service fueling installation, an aircraft washing facility, public tie-down spaces for visiting aircraft, a pilot-oriented clubhouse with weather and flight planning facilities, a light maintenance facility, and covered aircraft viewing and picnic areas.

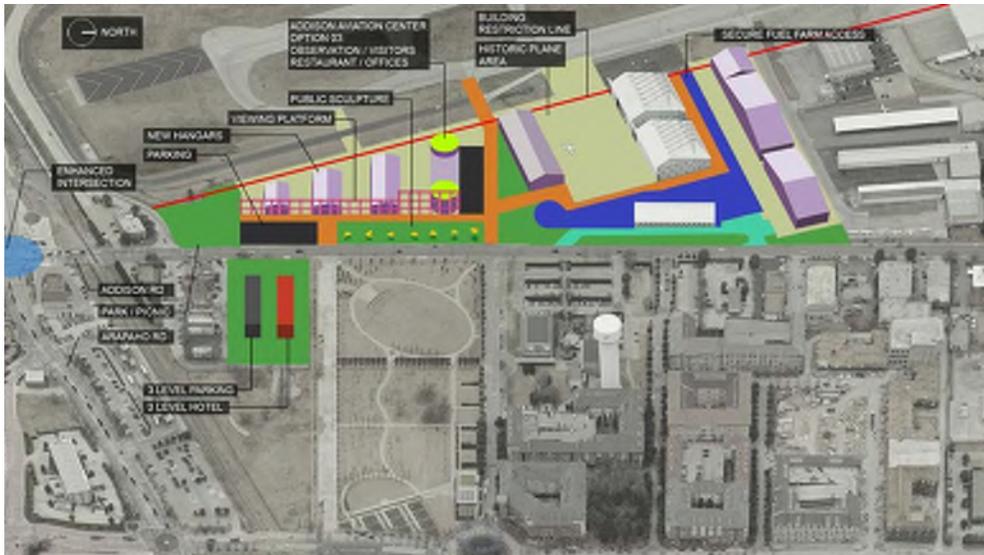
The Addison Airport of the future would have a “front door” facility serving as the gateway from the airport to the community and from the community to the airport.

(Top) A SportCruiser light sport aircraft in flight.  
(Bottom) A Gulfstream G650 business jet arrives in Addison.



(Top) Conceptual illustration of a T-hangar development on the west side of the airport, north of the toll tunnel, with amenities including self-service fuel and a public park with an aircraft viewing area. (Bottom) Conceptual illustration of a west side development for light aircraft as viewed from the adjacent park space.

(Top and Middle) Conceptual illustrations of a possible redevelopment of the southeast quadrant of Addison Airport including public art and thematic connection to Addison Circle Park. (Bottom) Street level view of the airport southeast quadrant redevelopment concept.



This “front door” facility would be distinct, uniquely recognizable, emblematic of Addison Airport and reflective of Addison’s unique culture of creativity, leading-edge innovation, and outright fun. Additional branding elements to help define the Addison Airport of the future would include way-finding signage and iconic structures that are distinct and instantly recognizable as “Addison”. The airport would also have elements that are attractive and accessible to the non-aviating public such as an abundance of public art, an aviation museum, parks, aircraft viewing areas with air traffic control radio feeds, and hospitality features such as an airport restaurant and a hotel.

The Addison Airport of the future will include more land area than it does at present. The airport will acquire adjacent properties to protect the airport, preserve or improve upon existing aeronautical uses, or to re-purpose underutilized and/or non-aviation use properties to productive aeronautical uses. The network of taxiways will be expanded. In particular, Taxiway Bravo will be extended to become a full-length parallel taxiway, and Taxiways Golf and Juliet will connect to Taxiway Bravo west of the runway. The runway and existing taxiways will be maintained or improved to meet applicable safety standards. In some areas, taxiways may be re-aligned to improve the efficiency of land utilization. The south runway safety area will be brought up to current safety standards by the installation of an Engineered Materials Arresting System (EMAS). Utility infrastructure – specifically including water, sanitary sewer, and storm water drainage – will be improved to meet codes and support redevelopment. Landside infrastructure including streets, sidewalks and walking trails, lighting, and landscaping will meet or exceed the standards set by Addison’s exceptional master-planned urban developments, Addison Circle and Vitruvian Park. There will be an emphasis on sustainability, including waste reduction and recycling programs. Application of “green” technologies will be widespread, including small-scale wind and solar power generation.

The Addison Airport of the future will have a strong international business presence. It will be an engine for economic development not just for Addison, but for the entire north Dallas region including the neighboring communities of Carrollton, Farmers Branch, Coppell, north Dallas, Richardson, Plano, Allen, and Frisco. Addison will leverage its status as a U.S. Customs User

(Top) A Canadian-registered business jet visits Addison.  
(Bottom) Wind turbine generators at Honolulu Airport.



Fee Airport to become the business gateway from the north Dallas region to China, Korea, Canada, Mexico, the Caribbean, Central America, and South America. Addison Airport will partner with the Town of Addison’s Economic Development Department to attract aviation-related business as well as mid-size corporations and regional headquarters of large corporations to Addison. Addison will partner with the Economic Development Departments of neighboring communities to support their programs to attract, retain, and grow businesses.

Addison Airport will be the national leader and model for best practices among general aviation airports. Addison Airport will be an asset in which the community will take immense pride.

(Top) Conceptual illustration of possible development on the southwest corner of Addison Road and Westgrove Drive.  
(Bottom) An MD-83 parked on the ramp at Addison.



## 4. RECOMMENDED POLICY INITIATIVES

### 4.1 Goals

Following a protracted deliberative process giving regard to and evaluating all of the strategic planning team's prior fact finding, consideration of stakeholder input, and exhaustive data collection and analyses, a consensus of the organization's desired goals, strategies, and intended tactics evolved. The planning team went through several iterations in developing goals to support the value proposition and vision, finally settling on the following three goals:

*Goal 1: Continue to enhance the airport's overall value for the benefit of stakeholders*

*Goal 2: Fully integrate the airport with the Town*

*Goal 3: Continue to promote industry-leading practices in all aspects of airport management, development, operations, and maintenance*

### 4.2 Strategies and Tactics

With the goals established, the team focused on refining the wide-ranging strategies and underlying tactics that were advanced during the strategic planning process. These broad strategies and tactics are outlined below.

#### 4.2.1 Strategies and Tactics to Achieve Goal 1: Continue to enhance the airport's overall value for the benefit of stakeholders

The following five strategies have been developed and adopted to best achieve the first goal of continuing to enhance the airport's overall value. The objective of this goal is to encourage decision makers to focus on ways to increase or generate maximum future value through informed governance, balancing demands of airport-based stakeholders (primarily airport tenants, businesses, and other users of the airport) while reaching out to and protecting the interests of community-based stakeholders (namely the Town of Addison's citizenry and community at large). This is best achieved by setting clear management priorities, using strategic plan elements to guide improved

decision making. The expected result will be balanced trade-offs between short-term, mid-term, and long-term initiatives; pursuit of value-oriented investments; improved allocation of resources; streamlined planning; and increased reliance upon quantitative analyses and effective performance measurement.

#### STRATEGY 1-1: AGGRESSIVELY PURSUE ALL FEDERAL, STATE, LOCAL AND PRIVATE GRANT FUNDING OPPORTUNITIES

While Addison Airport has historically been financially "self-sustaining" (that is, it has not required General Fund contributions or other financial support from the Town to maintain operations and make needed capital improvements) the airport can only be developed to its fullest potential with the aid of Federal, State, and Local (County) grant funding. Airport Improvement Program (AIP) grant funding in particular will continue to be pursued. However, other possible funding sources such as Dallas County funding for road improvements that have not previously been used at the airport will also be pursued. The possibility of tapping into private grant funding sources will be explored as well. This strategy will be supported through the following tactics:

*Continue to communicate regularly with TX-DOT Aviation and FAA and build on our relationships with key personnel in those agencies*

*Meet at least semi-annually with TX-DOT to review aviation issues and airport needs*

*Continue to communicate and inform Federal, State, and County officials about aviation issues and airport needs to ensure their continued support*

*Regularly attend FAA Southwest Region Airports Division's annual Fall Partnership Conference*

*Continue to pursue / apply for available grants and other sources of funding*

### STRATEGY 1-2: IDENTIFY AND PURSUE ALTERNATIVE REVENUE SOURCES CONSISTENT WITH THE TOWN'S VALUES AS ARTICULATED IN THE CITY COUNCIL'S POLICIES

Additional revenue will be needed to fund many of the desired airport improvements identified by the planning team. The airport currently has two primary revenue sources: real estate (ground leases and hangar leases) and fuel flowage. In general, real estate revenue can only be increased incrementally, as it is constrained by long-term leases and market values. Fuel flowage revenue fluctuates depending upon factors influencing the industry and economy, both being well outside the airport's control; however, fuel flowage revenue can be affected by changing fuel flowage fees. This strategy is aimed at evaluating and developing alternative sources of revenue necessary to augment and diversify existing sources of revenue. Notwithstanding the foregoing, it is understood that the pursuit of revenue optimization and diversification must be achieved in balance with the overall goal of value enhancement benefiting the airport's stakeholders. This strategy will be supported through the following tactics:

*Review fuel flowage fee policy*

*Review current fuel farm utilization and management practices*

*Consider alternative energy sources to achieve operating cost reductions and for potential resale (i.e., solar, wind, etc.)*

*Pursue advertising revenue alternatives*

*Identify and pursue potential redevelopment and expansion opportunities:*

- » Pursue acquisition of income producing properties
- » Optimize airport real estate portfolio using value-driven management techniques (including but not limited to revenue enhancement and conversion of ground lease rent to commercial rent when appropriate)

- » Sale of certain airport properties that are not well suited for aeronautical use or are underutilized
- » Use of lease guidelines to offer term extension/modifications in exchange for increased rental and other value-driven considerations

*Review other potential revenue sources*

- » Storm water utility fees
- » Proceeds from the sale of general obligation bonds, airport revenue bonds, and/or certificates of obligation
- » Other revenue sources

### STRATEGY 1-3: ACTIVELY PROMOTE THE AIRPORT

Actively marketing and promoting the airport on various levels ranging from local to international are viewed by the team as being essential. This strategy is aimed not just at growing airport business, but also at telling the airport's success stories and communicating its value in a targeted and effective manner to solidify local and regional support and protect the airport's long-term viability. This strategy will be supported through the following tactics:

*Aviation Industry involvement and participation.*

*Expand international exposure:*

- » Explore Latin American/International marketing opportunities.
- » Promote US Customs presence.

*Expand regional and State exposure:*

- » Incorporate benefits of airport in all economic development presentations to corporate prospects considering relocation or expansion
- » Meet with area real estate brokers to better educate them about the airport and the various opportunities available

- » Meet with community banks to educate and identify investment opportunities at the airport
- » Coordinate efforts with economic development & community leaders

*Promote the use of new communications technology and tools*

*Market Focus:*

- » Use resources to identify our users, transient traffic and customers
- » Identify and seek to capitalize on global industry trends
- » Promote local advantage
- » Differentiate ADS from competing airports

*Look for joint marketing opportunities that leverage the Town's other core businesses*

*Prepare a video promoting the airport experience*

**STRATEGY 1-4: SEEK INPUT FROM STAKEHOLDER GROUPS TO IDENTIFY CURRENT ISSUES AND DEVELOP ACTION PLANS**

Obtaining stakeholder input is another key to success, and it starts with identifying the various stakeholders. Some stakeholders – such as Addison residents and local business owners – may not even recognize that they have a stake in the success of the airport, but it is important to seek out and include their views as well. This is an important tool for building community support and enhancing the visibility and reputation of the airport. This strategy will be supported through the following tactics:

- Develop and maintain list of stakeholders*
- Seek input through survey instruments / focus groups (annual surveys)*
- Survey current airport business users / industry experts / key trade organizations and stakeholders (annual surveys)*

*Ensure Airport Business Retention and Expansion Program (BREP) is aligned with the Town's BREP.*

**STRATEGY 1-5: DEVELOP AND MAINTAIN A COMPREHENSIVE FINANCIAL PLAN FOR THE AIRPORT**

Long-term financial forecasting is the process of projecting revenues and expenditures over a multi-year period into the future, using assumptions about economic conditions, future spending scenarios, and other relevant variables to provide insight into future financial capacity so that strategies may be realigned or developed to achieve long-term sustainability. The long-term financial planning process stimulates discussion and engenders a long-range perspective for decision makers. It serves as a tool to highlight opportunities and otherwise unforeseen vulnerabilities. It stimulates long-term strategic thinking; it drives consensus towards a long-term financial direction; and it is useful for communicating the airport's long-term vision to its internal and external stakeholders. Tactics to be used in support of this strategy are:

- Establish and implement a comprehensive reserve fund policy*
- Develop revenue models that address changing conditions*
- Annually review and update the comprehensive financial plan*

**4.2.2 Strategies and Tactics to Achieve Goal 2: Fully integrate the airport with the Town**

Addison Airport proper encompasses 376 acres (approximately six-tenths of a square mile) in the Town of Addison's roughly 4.5 square-mile area. When off-airport aviation-use properties are included, the airport comprises between 15% and 20% of the total land area of the Town. Historically, the airport existed and operated as a separate entity for much of its 55-year existence. Even after the Town became the owner of the airport (in 1976), the airport continued to operate with minimal direction from the Town. As noted in the historical background section of this plan, that began to change around 1988, and changed dramatically in 2000 when the Town selected a new Airport

Operator. The Town and the airport have become increasingly connected since then; the airport is now viewed as a vital asset and an integral part of the Town's economic foundations. Consequently, the strategic planning team explicitly recognized the importance of aligning and integrating this Airport Strategic Plan with the Town of Addison's Strategic Plan as our second goal. Five strategies were developed to use in achieving this goal of integrating the Airport into the Town's overall strategic planning and goal-setting framework.

#### **STRATEGY 2-1: PURSUE POTENTIAL REDEVELOPMENT OPPORTUNITIES CONSISTENT WITH TOWN'S VISION**

There is very little undeveloped land remaining on or adjacent to the airport. Future airport growth and development projects will therefore be redevelopments of properties that are underutilized, beyond their useful economic life, or used for non-aviation purposes. The airport experienced rapid development in the period of 1980-84. Much of this development involved ground leases with 40-year terms, so a large number of ground leases are due to revert to airport control in 2020-24. This strategy is aimed at managing development/redevelopment opportunities and will be pursued using the following tactics:

*Identify and redirect the use of properties within or adjacent to airport that are underutilized or are not being utilized for aviation purposes*

*Develop a formal process for managing aviation corporate prospects*

*Identify additional sources of financing/revenue for development, capital investment and acquisitions:*

- » Explore tax incremental financing (TIF)
- » Explore the benefit of seeking a Foreign Trade Sub-zone
- » Consider promoting Freeport Exemptions provided under

the Texas Property and Tax Code

- » Consider promoting the use of Adjacent Property Tax Exemption
- » Use of Developer Participation in Contracts For Public Improvements

*Review and update Airport Master Plan*

#### **STRATEGY 2-2: ENSURE CHAPTER 380 INCENTIVE POLICIES PROVIDE SUPPORT TO AIRPORT REDEVELOPMENT ACTIVITIES (SEE ADOPTED CITY COUNCIL CHAPTER 380 POLICY AND PROCEDURES DOCUMENT, APPENDIX G)**

Close coordination with the Town of Addison's Economic Development Department is also considered essential by the planning team. In particular, alignment of airport economic development incentives with the Town's Chapter 380 incentive policies is a key strategy. However, it is important to acknowledge that the airport is a different environment, requiring modifications to standard incentive policies. This strategy will be pursued using the following tactics:

*Ensure that favorable incentive consideration is given to companies who receive incentives and utilize Addison Airport*

*Ensure that Chapter 380 Policies and Procedures are flexible to the needs of airport redevelopment and corporate recruitment*

#### **STRATEGY 2-3: PROMOTE STANDARDS OF EXCELLENCE IN OPERATIONS AND SERVICE DELIVERY**

The Town of Addison has long fostered a culture of exemplary service to others among its employees; this organizational culture is known as "the Addison Way". The Town also has a strong record of efficiency and innovation in operations and service delivery. All of this is part and parcel of being a "best product" organization. Integrating the Town and the airport necessarily requires encouragement of this consistent culture of service excellence, operational efficiency, and innovation at

the airport. This concept can be extended to airport businesses as well as the airport staff. Tactics to be used in support of this strategy are as follows:

*Annually review the Town's Strategic Plan*

*Develop and promote annual tenant surveys to assess needs and perceptions*

*Develop and implement an airport education program for airport/Town staff that promotes the "Addison Way" and the airport's purpose and importance*

*Ensure that airport is part of Town New Employee Orientation*

*Review and update Minimum Standards for commercial aeronautical activity*

*Regularly review and update airport rules and regulations*

*Enforcement of Code Issues*

**STRATEGY 2-4: PROMOTE A STANDARD OF AESTHETIC EXCELLENCE**

Aesthetics are an important aspect of the Town of Addison's vision and values. Notable examples where this is readily apparent are the major planned developments of Addison Circle and Vitruvian Park. Some areas and individual properties on the airport are already quite attractive: for example, the facilities on the south side of Westgrove Drive, west of Addison Road, or the recently redeveloped properties on Addison Road south of Airport Parkway. This strategy is focused on raising aesthetic standards for all airport properties. For visitors arriving by air, Addison Airport is the "front door" to the community: it is the first place that visitors see on arrival, and the last place they see on departure, which gives it a disproportionate impact on many visitors' overall impression of the Town. As a result, the planning team believes it is very important to improve the overall appearance of the airport and its (favorable) visual impression on visitors. Tactics to be employed to effect this strategy include:

*Signage:*

- » Develop signage design standards consistent with Town ordinances
- » Develop way-finding signage incorporating the airport brand, compatible with the Town's signage and branding standards
- » Implement new tenant location signage

*Develop and adopt building/facility design standards*

*Develop and adopt building/facility maintenance standards*

*Implement an ongoing program to review and improve the appearance of the airport, to include general clean-up and removal of non-airworthy aircraft*

**STRATEGY 2-5: COMMUNICATE**

Communication was identified by the planning team as a key strategy to be employed in integrating airport development and improvement strategies with those of the Town of Addison. This communication will take a variety of forms and be directed at specific segments of the spectrum of stakeholder audiences. This strategy will be supported through the following tactics:

*Develop events to promote community and business awareness of the airport*

*Develop an Addison Airport video highlighting benefits of the airport to the Town and its residents and businesses*

*Provide additional avenues for current businesses to host events*

*Develop communication plans educating airport stakeholders on the evolution and future development of the airport*

*Develop allies for business-to-business opportunities:*

- » Bring together brokers and current airport businesses
- » Support aviation programs in area colleges and universities
- » Identify and exploit business synergies in the airport's service area

### 4.2.3 Strategies and Tactics to Achieve Goal 3: Continue to promote industry-leading practices in all aspects of airport management, development, operations, and maintenance

A single strategy was selected to use in achieving the third goal of continuing to promote industry-leading practices for all aspects of airport management, development, operations, and maintenance.

#### STRATEGY 3-1: EXAMINE PHYSICAL INFRASTRUCTURE, POLICIES, PLANS AND PROCEDURES; REVIEW SAFETY AND SECURITY STANDARDS

Addison Airport was developed before current FAA standards for airport design were established; it was not designed to handle the size and types of aircraft that currently use the airport daily. This strategy will focus on employing best practices (including the use of new technologies and revised policies and procedures) to improve safety and security to meet (where it is practical to do so) current FAA and industry standards. The following tactics will be employed in support of this strategy:

*Focus on achieving Part 139 standards where applicable:*

- » Develop an Airport Operating Manual based on requirements for a FAR Part 139 Airport Certification Manual
- » Identify where Part 139 standards are not being met but could be; develop plans to meet Part 139 standards where possible and practical
- » Identify where Part 139 standards are not being met and cannot be met; identify and document the reasons why these standards cannot be met

*Code enforcement of existing standards*

*Annually review policies, plans, and procedures with Public Safety Officials (Police and Fire)*

*Conduct annual hangar inspections*

*Review and update emergency plans (annually)*

*Regularly conduct emergency exercises in cooperation with Public Safety*

*Regularly review airport rules & regulations and update as needed*

## 5. POLICY IMPLEMENTATION

The value of a strategic plan is having a coherent document to guide decision making and policy implementation. The plan has no value if it is not translated into actions. In this section, a brief discussion of how the plan will be used is provided along with some examples of how the plan might be implemented to address certain key issues. These are examples only, meant for illustrative purposes; actual implementation is likely to vary significantly in the details and circumstances. What is important in the examples is how the vision and goals are used in conjunction with strategies and tactics laid out in the preceding section as a guide to addressing a specific issue affecting development of the airport.

Also considered are time frames for addressing identified goals and issues, and procedures for review and maintenance of this Strategic Plan to ensure it remains relevant and workable through the next 20 years and beyond.

Finally, the Strategic Planning Team discussed and agreed on a number of issues that need to be addressed generally in the near term; these are covered in the section headed “Findings and Recommendations”.

### 5.1 Application of the Strategic Plan

It is the intent of the strategic planning team that this document be regularly used. More specifically, it is intended that this Strategic Plan will provide the framework for evaluating all future airport development and improvement proposals. However, while the plan does include specific activities and projects that need to be completed, it is not a detailed “road map” of everything that must or should be done to improve the airport. It allows flexibility and provides guidelines to evaluate and take advantage of changing conditions and opportunities that are not predictable (either in detail or at all) but are nonetheless consistent with the values, vision, and goals embodied in this plan.

Airport development and improvement proposals can be evaluated in the context of the Strategic Plan through a series of questions. Is the proposal consistent with the “best product” orientation of the Town and the airport? Is the proposal consistent with the Vision Statement? These are critically important considerations. Any proposal that is inconsistent with the Value Proposition and Vision Statement should trigger a serious discussion of the merits of the proposal and whether it is desirable to pursue further. Proposals must also be considered in the context of the three goals identified in Section 4 of this Plan. Which goals may be advanced by the proposal? Does the proposal give rise to a conflict with any of the goals? Can (or should) the proposal be modified to reduce or eliminate the conflict? In some cases it may be necessary to strike a balance between competing goals and interests.

For any proposal requiring approval of the City Council, staff best practices will include an analysis of the proposal in the context of this Strategic Plan, as outlined above. This analysis will be included in the Council agenda packet supporting the proposal.

### 5.2 Action Time Frames

Goals, strategies, and tactics agreed on by the strategic planning team are summarized in Appendix F. In general, the tactics represent specific tasks or ongoing activities to be executed by the airport management team in furtherance of plan goals. These activities and tasks were each assigned target time frames for execution. The action time frames are: continual/ongoing activity; near term (within 0-5 years); and intermediate term (6-10 years). Action time frames for each task and activity is noted in Appendix F.

All of the tactics identified to implement Strategy 1-1 (aggressively pursue all Federal, State, local, and private grant funding opportunities) are examples of an ongoing activities. Most of the identified tactics could plausibly be classified as “near term” tasks that should be completed within five years. Prioritization

of tasks will be necessary and the extent to which tasks are completed will depend in part on availability of resources.

### **5.3 Periodic Review of this Strategic Plan**

A strategic plan cannot be a static document and still remain useful; it must be periodically reviewed and updated to adapt to changing circumstances. In particular, since a stated goal of this plan is to integrate the airport with the Town's overall strategic plan, it is necessary to review and update this plan whenever the Town's Strategic Plan is updated.

Strategic Plan change requests may be initiated by airport management staff, Town staff, or by direct request or action of the City Council including specifically any changes to the Town of Addison Strategic Plan that have a direct effect on the airport or this Strategic Plan. Editorial and other minor changes may be approved by the Town staff responsible for airport matters. Policy and other major changes shall require approval by vote of the City Council. Council approval may be accomplished in conjunction with approval of the annual Airport Operating Budget.

As part of the regular annual review of this plan, a list of completed tasks and ongoing activities will be compiled and attached to revised (future) versions of the plan in an appendix. This appendix will constitute a record of progress towards plan goals.

It must be emphasized that the team does not envision any endpoint in the future at which the plan will be "finished" or "completed". While the aspirations embodied in the vision statement may be achieved, it is inevitable that the airport must continue to adapt to changing conditions and always seek ways to improve.

## 6. FINDINGS AND RECOMMENDATIONS

In the strategic planning process, certain key issues and themes tended to recur. These key issues and themes are discussed in this section as findings. Where appropriate, recommendations on how these issues could be addressed in the context of the Strategic Plan are included as Recommendations.

### 6.1 Airport Certification Status

As noted in Section 2.4.1, Addison Airport is a General Aviation (GA) airport and a designated Reliever for the region's two commercial service airports, Dallas-Fort Worth International (DFW) and Dallas Love Field (DAL). Addison does not have Part 139 Certification and the decision has been made not to pursue that. The strategic planning team agreed that it is essential to leave no doubt on this point. However, Part 139 and associated FAA guidance constitute the industry standard for the proper, safe operation of an airport. It is therefore a recommendation of the strategic planning team that airport management look to Part 139 standards – a tactic identified for use in support of Strategy 3-1 – and operate the airport in conformance with those standards where it is possible and practical to do so.

### 6.2 Financial Planning

Plans for the future of Addison Airport are naturally ambitious, reflecting the values of the Addison community to continually improve the level of services provided and the quality of the physical infrastructure. A key issue then is “How do we pay for all of the improvements we seek to make?” Development of a comprehensive long-term financial plan for the airport was therefore identified as a key strategy to pursue in support of achieving Goal 1 (Continue to enhance the airport's overall value for the benefit of stakeholders).

In pursuit of this goal, a long-term financial planning/modeling tool was developed. The model is linked to the real estate portfolio pro forma for projected rental income, an explicit recognition of the fact that the airport's primary source of revenue

and capital requirements is heavily dependent upon the overall performance of the real estate portfolio. This model enables objective evaluation of the financial effects of pursuing different courses of action (for example, a decision on whether to extend a ground lease in exchange for capital improvements or to allow control of the property to revert to airport control on expiration of the lease in anticipation of redevelopment).

Using the financial modeling tool, a “baseline plan” for the airport was established. The baseline incorporates “status quo” assumptions, projects modest growth, and relies on current revenue sources only. For leases that are due to expire, it incorporates assumptions of the “most likely” disposition of the property (redevelopment, lease extension, or conversion to commercial lease). Analysis of the baseline model indicates that airport revenue will grow within a limited range, with the “most likely” case being an increase from \$4 Million to \$8 Million per year over the 20-year planning horizon.

This is a key finding: in the absence of new revenue sources and/or significant new capital investment, the potential of the airport is limited and the aspirations outlined in this plan – taking the airport to the “next level” – cannot be fully achieved.

As a consequence of this finding, it is a recommendation of the strategic planning team that new sources of revenue and capital investment be aggressively pursued. While the airport has been quite successful in attracting private investment, without additional investment there is no way to “move the needle” beyond the current baseline of steady, incremental improvement and make the leap to the next level. In particular, recognizing that the airport is an asset capable of providing a return on investment, the Town of Addison should consider the business case for new capital investment in the Town's most valuable asset. Through strategic investment of public capital, the Town can stimulate additional investments of private capital.

### 6.3 Economic Development

As the primary Reliever for DFW International Airport and Dallas Love Field, Addison will continue to play a vital role in the region's economic growth. The airport serves not only the general aviation needs of Addison, but also the surrounding communities including North Dallas, Carrollton, Farmers Branch, Richardson, and Plano. These communities collectively host a wealth of diverse industries including a number of major corporate headquarters. The proximity of Addison Airport to regional corporate centers provides companies with the competitive advantage of quick, convenient access to general aviation transportation. Within a five-mile radius of Addison Airport there is nearly 50 Million square feet of quality office space and over 13 Million square feet of industrial space. Opportunities abound for new and growing companies, with Addison Airport serving as a key ancillary support asset for new growth in the region. According to the North Central Texas Council of Governments, the three primary counties served by Addison Airport – Collin, Dallas, and Denton – are expected to have employment growth of 62.1% and a population increase of 60.6% between 2005 and 2035. These increases translate to increased demand for general aviation services. To take advantage of these opportunities, it is important that Addison Airport be a focal point in the community's overall strategic plan for economic development, and to recognize the regional opportunities beyond the Town's boundaries.

It is a recommendation of the strategic planning team that the airport and the Town of Addison work with the economic development departments of the other communities in the region that are served by Addison Airport to highlight the benefits of proximity to the airport in their business development and retention efforts. It is additionally recommended that Addison's economic development efforts include identification and targeting of businesses that are aviation related, significant users of general aviation, or would otherwise contribute to the growth and development of the airport.

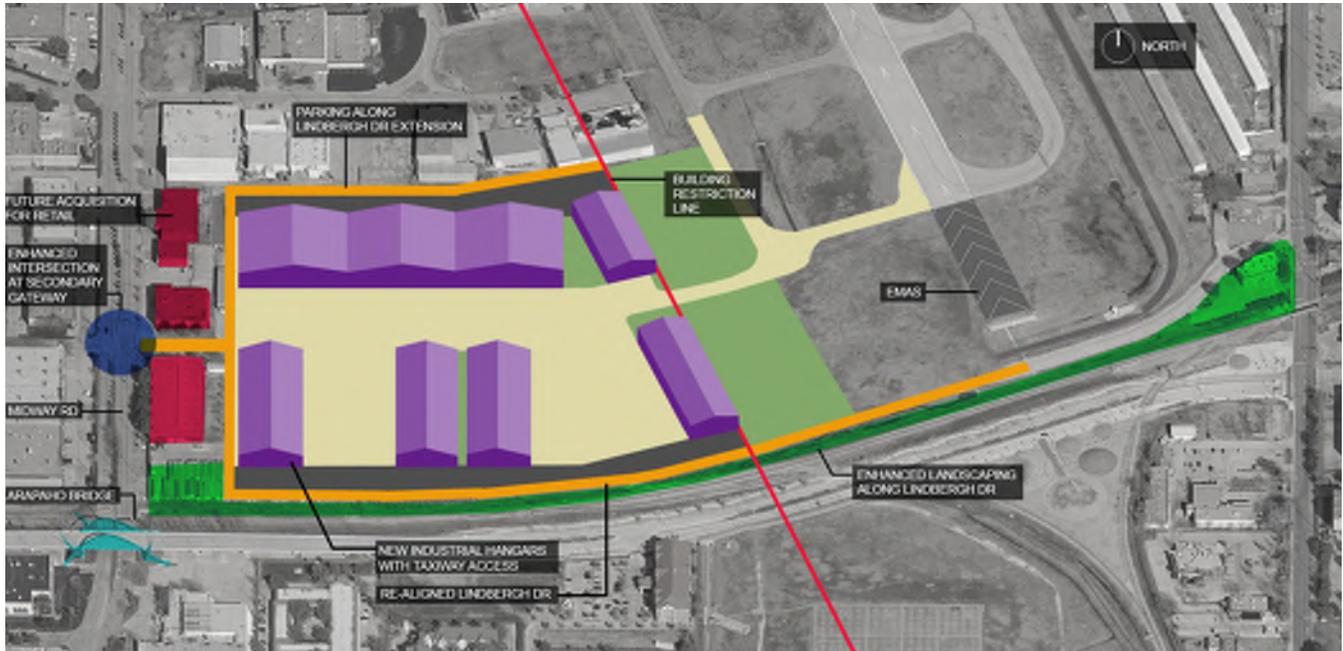
### 6.4 Redevelopment, Land Use, Infrastructure, and Aesthetics

Addison Airport is entering into a new life cycle stage wherein redevelopment of aging facilities will enable the Town to reposition the airport to meet future needs. During this process, airport management and the Town must continually strive to identify and meet the needs of the airport's users, needs and desires of the surrounding community, financial concerns of potential developers, and regulatory requirements of the FAA, all while ensuring the current and future financial and operational health of the airport. This can be difficult, particularly when these goals may be seen as being at odds with each other. Therefore, it is imperative that the Town and airport management evaluate potential financial, economic, and regulatory impacts of any proposed redevelopment strategies. While it is important to consider benefits to the community, the developer, and ultimately the tenant/user, it is equally important to remember that the financial sustainability of the Airport is a primary goal.

#### 6.4.1 Redevelopment

Along with the Strategic Plan, the Airport Master Plan – supplemented by land-use studies when appropriate – will serve as the basis to evaluate proposed redevelopment projects for desirability and impact on the airport. The Airport Master Plan will identify what land is appropriate for aeronautical and non-aeronautical uses, as well as the types of development or land uses that are appropriate to different areas of the airport. However, the Town will need to be flexible when it comes to its overall vision for future development at Addison Airport: market demands may require some deviation from the airport's land-use plans in order to secure desirable new development.

Conceptual illustration of possible expansion and redevelopment of the southwest quadrant of the airport.



Height hazard zoning is an important consideration.



Infrastructure improvements will be made, including better airport access streets and landscaping.

The spectrum for potential development includes redevelopment by: the Town; by one or more commercial developers/operators; and/or a combination of the two. There are advantages and disadvantages to each; it is a finding of the strategic planning team that all are potentially appropriate for use in redevelopment projects at Addison Airport.

### 6.4.2 Land Use

The airport is zoned I-3, which permits most light industrial-type uses. However, land uses on and adjacent to airports are re-

stricted in many ways, including by obligations incurred from accepting state and federal grant funding. There are noise compatibility requirements, height hazard zoning and Part 77 airspace and obstruction limits, building restriction lines, etc., all of which are necessary and appropriate to protect and enhance the utility of the airport. It is therefore essential – particularly given the dense development on and around Addison Airport – that land uses on the airport be driven towards highest and best uses. For example, land on the east side of the airport with frontage on Taxiway Alpha should be purposed for

high-activity, high-value uses such as Fixed Base Operations (FBOs) and Part 135 charter operations. It is a finding of the strategic planning team that the Airport Master Plan is the appropriate vehicle for specifying land uses on the airport. It is a recommendation of the strategic planning team that land uses on and near the airport be coordinated and consistent with the Town of Addison's Comprehensive Land Use Plan.

### 6.4.3 Infrastructure

Addison Airport was developed to accommodate smaller and lighter aircraft than what frequents the airport's runways and taxiways today. In addition, building codes and landscaping and aesthetic requirements have also evolved to a higher standard. Over the past ten years, there has been considerable focus on improving the aeronautical and navigational infrastructure to support current and anticipated needs, and the airport has realized enormous improvements in that area. Going forward, there will be a corresponding focus on improving supporting infrastructure including aircraft parking ramps, taxilanes, airport access streets, utilities (water, sewer, gas), off-street parking, landscaping, signage, and lighting. In order to support new development, this infrastructure will be upgraded either as part of specific projects or in advance thereof.

### 6.4.4 Aesthetics

Addison Airport often serves as a visitor's very first impression of the Town of Addison. Since the airport lies in the center of a city widely recognized for its commitment to quality urban development and lifestyle, the airport will reflect, if not enhance, this very same image. With this in mind and without compromising public safety and financial sustainability, airport management and the Town will review building maintenance and development practices and standards for all airport properties. Current leases typically require a tenant to maintain their property in "good condition repair," a vague standard which is difficult to enforce. Building maintenance guidelines will be established, with a process for identifying and addressing deferred maintenance of airport properties. A program of

routine inspections to support adherence to these guidelines will be implemented, with improved communications to better educate airport tenants of their ongoing duty to maintain their properties. This program, when implemented, will help to establish tenant/landlord expectations in advance, provide for a framework to assist tenants in meeting lease maintenance and repair requirements, and allow the Town to better plan for the maintenance of ground-leased properties upon reversion to Town ownership. Similarly, standards for new construction will be considered to encourage not only architecturally pleasing designs, but also quality construction to ensure the building improvements prolonged functional use and reduced cost of long-term maintenance.

## 6.5 Land Acquisition Strategies

In order for the airport to achieve the goals of this Strategic Plan it must find ways to increase revenue and/or offset projected revenue loss while undertaking redevelopment projects. One approach is to expand the airport through targeted property acquisitions. In May 2012, the citizens of the Town of Addison voted to approve the issuance of \$7 Million in general obligation bonds for the purpose of acquiring real properties adjacent to the airport. Land acquisition criteria have subsequently been developed. Selection criteria and priorities for such acquisitions shall be generally directed toward:

- a. *properties deemed necessary to protect the airport-at-large and its airspace in accordance with FAA regulations and grant assurances;*
- b. *properties immediately adjacent to the airport having ready access to existing airport infrastructure (e.g., taxiways and runways) without the requirement of substantial additional capital investment;*
- c. *properties adjacent to the airport or with legal access to the airport's common areas that are underutilized or where the highest and best use will be for aeronautical purposes;*

- d. properties required for strategic purposes to better protect and control other adjacent properties to the airport; and/or
- e. properties which may come available in the marketplace from time-to-time that share a common property boundary with the airport.

Land acquisitions qualify for TX-DOT/FAA assistance. Airport management and Town staff will coordinate with TX-DOT and FAA on all property acquisitions to maximize the financial participation of those agencies in the airport’s land acquisition program.

Ideally, the airport’s land acquisition and expansion plan will provide for the perpetual funding of an Airport Property Acquisition Reserve derived from net operating proceeds of properties acquired under this program.

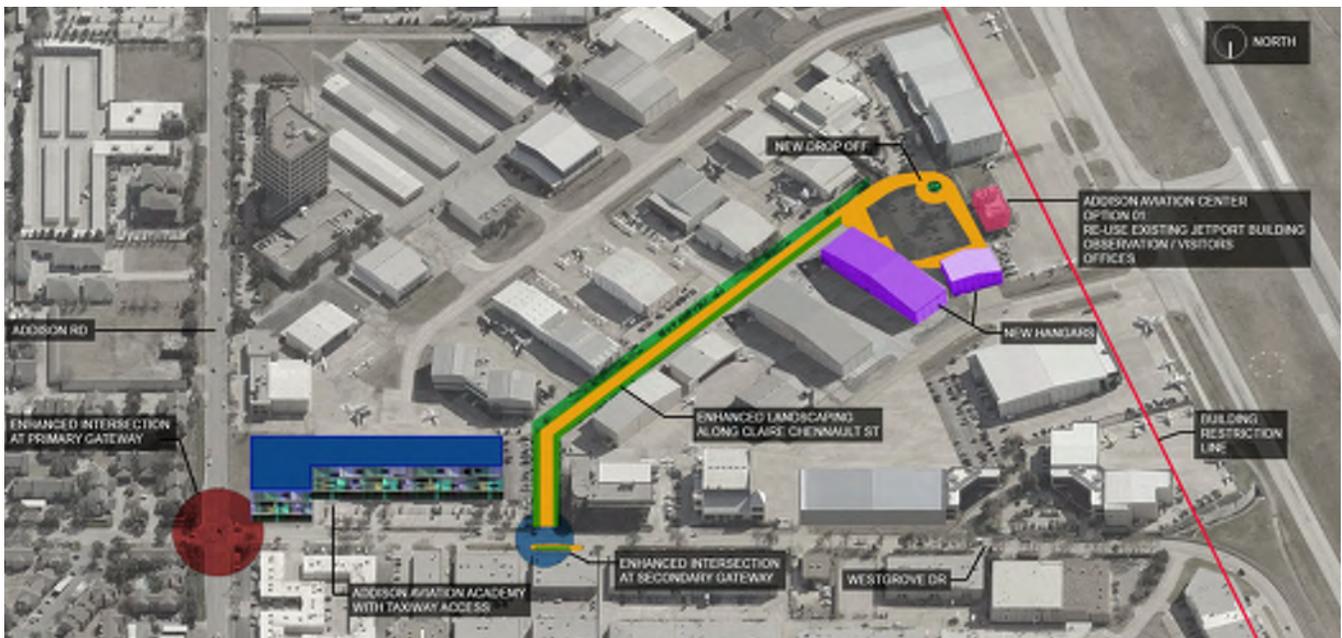
### 6.6 Airport-Community Interface

An airport is often viewed as providing a “front door” to the community for visitors arriving by air. In addition, airports that desire to build and maintain community support may benefit from

providing a “front door” for access to the airport by the general public. Airports visited and studied by the strategic planning team have a variety of terminal buildings, airport restaurants, monument signs, public parks and aircraft viewing areas that help to establish the airport’s identity and provide ways for the general public to interact with the airport. These positive interactions assist the airports in building support within their respective communities. Community support is important for the long-term viability of an airport, and it is the consensus of the planning team that Addison would benefit from the addition of amenities as described above.

#### 6.6.1 Airport Administrative Offices

Airport administrative offices should be located in a site that is accessible and convenient from both the airside and the landside. Convenient airside access would better serve tenants and facilitate the staff’s ability to keep closer contact with the day-to-day operations of the airport. The current location tends to keep the staff separated from the airport. Easy landside access – preferably in a location readily visible to the general public – would help make the airport more open and accessible



Conceptual illustration of a possible redevelopment of the ‘Jetport’ site including airport administrative offices.

to the community it serves, particularly to people who may neither own nor use general aviation aircraft. Airport administrative offices should function effectively as a “front door” both for airport tenants and members of the larger community.

### 6.6.2 Airport Maintenance Facility

The airport would also benefit from relocating the Airport Maintenance facility. Airport Maintenance currently occupies a facility that is better suited to use as a commercial hangar and could generate significant revenue were it to be leased as such. Consideration should be given to providing a purpose-built airport maintenance facility and returning the current facility to a revenue-generating aeronautical use. Ideally, a maintenance facility would be located in an area that has direct and easy vehicular access to the airside, but is either not usable or not desirable for aeronautical use. The area south of the Town of Addison’s Service Center meets these criteria, as do certain properties on the west side of the airport. Any of these might be a good location for a purpose-built maintenance facility.

### 6.6.3 An “Airport Community Building”

Addison Airport’s FBOs have excellent terminal facilities to serve pilots and passengers. What the airport needs is a facility to serve both as a focal point for the airport community and as the primary interface between the airport and the larger community of which it is an integral part. Such a facility could house airport administrative offices, airport-assigned police, and U.S. Customs and Border Patrol. It could also provide meeting spaces for tenant groups including flying clubs and the Civil Air Patrol. It might include some limited retail space for a gift shop and/or a coffee shop, or perhaps even a restaurant with a good view of the airport. It might include (or be adjacent to) an aircraft viewing area that is open and accessible to the general public. There are a number of potential additional uses for such a facility. Ideally, it will have distinctive architecture that would become an integral piece of the airport identity.

## 6.7 Small Aircraft Accommodations—T-Hangars/Patio Hangars

The bulk of the airport’s fuel flowage and ground and hangar lease revenue is derived from jet and turbo-prop operations. Jet-A accounts for 90% of fuel sold on the airport, and most of the larger hangars on the airport are occupied by jet and turbo-prop aircraft. However, approximately two thirds of the airport’s based aircraft are smaller piston-engine airplanes, and the strategic planning team recognizes that this constitutes a critically important market segment for the airport.

Surveys of the airport’s T-hangar tenants confirmed what the team already suspected: many small aircraft owners and operators believe that this segment of the market is not well served at Addison. Survey respondents cited high costs – particularly the price of fuel (100LL AvGas) – outdated T-hangar facilities, and a lack of amenities such as self-service fueling, aircraft washing facilities, and public-use aircraft tie-downs as factors that contribute to making Addison less attractive to this market segment. It is a finding of the strategic planning team that the piston-engine aircraft market segment is vital to the future of Addison Airport. It is a recommendation of the strategic planning team to provide quality facilities and amenities to retain and support small aircraft operations at Addison Airport.

The airport’s Capital Improvement Program (CIP) Plan anticipates extensions of Taxiways Bravo and Golf to the area just north of the Toll Tunnel on the west side of the airport, where the airport owns 4.2 acres of undeveloped and underutilized land. Providing taxiway access will make that land available for aeronautical development, and a T-hangar development would be a good use. The airport will consider a number of options including partnering with a private developer to construct T-hangars in that area. Ideally, new hangars and associated amenities will be developed at the same time as the Bravo/Golf taxiway extensions are constructed. The amenities will include self-service fuel, aircraft washing and light maintenance facilities, a pilot lounge and flight planning area, and an

outdoor viewing/picnic area. In the longer term, the airport will seek to acquire additional land west of this site to expand this development.

### 6.8 Aviation Fueling

A key takeaway from the survey and meetings with T-hangar and patio hangar tenants was that most of those tenants purchase very little AvGas (100 octane Low Lead aviation gasoline) at Addison because of the high cost. Addison is home to approximately 450 AvGas-burning piston-engine aircraft (compared to about 250 turbine-powered aircraft that use Jet-A fuel); however, 90% of aviation fuel sold at Addison is Jet-A. The planning team believes that there is a real opportunity to address the cost issue, better serve the piston-engine market segment, and thereby increase airport activity and fuel flowage revenue. There are a number of options for lowering the cost of AvGas at Addison that will be considered, including installation of self-service fueling facilities (operated by either an FBO or the airport) or revision of the airport's Minimum Standards to establish a new class of service provider (specifically, an "AvGas-only" FBO). A successful effort to reduce the cost of

AvGas and support increased light aircraft activity will have a positive impact on this large and important segment of Addison's tenant base.

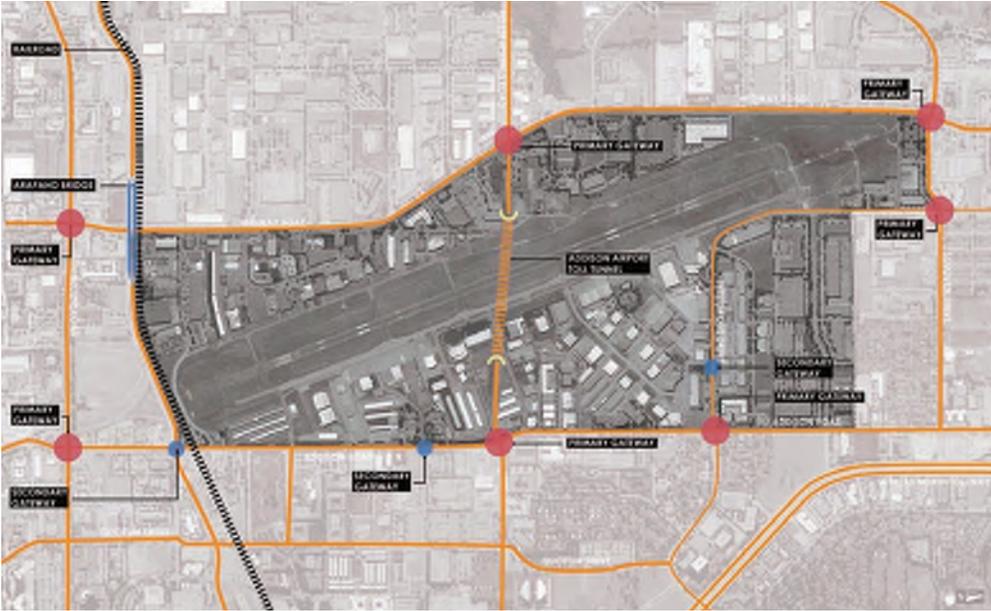
### 6.9 Airport Master Plan Update

The Federal Aviation Administration (FAA) requires any airport receiving federal Airport Improvement Program (AIP) grant funding to have a current Airport Master Plan. A good Master Plan will be guided by strategic considerations. Addison's most recent Master Plan update was conducted in 2004, with the Airport Layout Plan drawings receiving final FAA approval in January 2009. The airport will be engaging in a new Master Plan update beginning in FY2013; that effort will rely heavily on this Strategic Plan for direction. While this Strategic Plan lays out broad goals and strategies, the Master Plan will be more focused on specifics of land use planning and development.



Self-service fueling facility at Denver Centennial Airport.

(Top) The Addison Airport bulk fuel storage facility ("fuel farm"). (Bottom) Conceptual Airport District boundaries.



## 7. CONCLUSION: NEXT STEPS

This Strategic Plan is a guide for the next 20 years as Addison seeks to build on the already-considerable success of its airport. The Strategic Plan recognizes and confirms Addison Airport's status as one of the top GA Relievers in the country as well as its economic value to the North Dallas region. Key elements of the Strategic Plan are the Value Proposition, Vision Statement, and Goals. The plan also identifies strategies and tactics to explain the "how" behind achieving those goals. In summary, this Strategic Plan outlines broad policies and goals for maintaining and enhancing the value of Addison Airport for the benefit of all of its stakeholders, but particularly for the benefit of its citizen owners.

With a Strategic Plan in hand, a natural question is: what comes next? What comes next is execution of tactics identified in Section 4 in pursuit of the specified goals: turning the vision for the future of the airport into reality. In the immediate future, there are six key, high-priority tasks to be accomplished:

### 1. AIRPORT MASTER PLAN UPDATE

*The airport has accepted an FY13 AIP grant to conduct an update of its Airport Master Plan. As noted in Section 6.9, this Strategic Plan will provide context and direction for the Master Plan update.*

### 2. LAND ACQUISITIONS

*The Town of Addison is preparing to sell \$7 Million in general obligation bonds (as approved by the voters in May 2012) for the purpose of acquiring land for the airport. The airport already has one property under contract, and is pursuing acquisition of others as well. In addition, airport and Town staff are working with TX-DOT Aviation to secure the maximum participation from TX-DOT and FAA in Addison's airport land acquisition program.*

### 3. REVIEW AND REVISION OF THE MINIMUM STANDARDS FOR THE CONDUCT OF COMMERCIAL AERONAUTICAL ACTIVITIES

*More commonly referred to simply as the "Minimum Standards", this document establishes standards for commercial aeronautical service providers wishing to conduct business on the airport. Addison Airport's Minimum Standards were last revised in 2004, and are in need of review and revision. FAA Advisory Circular AC150/5190-7 provides guidance for developing Minimum Standards.*

### 4. GUIDELINES FOR PROPERTY MAINTENANCE AND DEVELOPMENT

*As discussed in Section 6.4.4, the airport will have a renewed focus on aesthetics, which will require the development of new guidelines for the maintenance of building improvements, infrastructure, and landscaping. Similar guidelines will be implemented for new development or redevelopment projects.*

### 5. FUEL FARM MANAGEMENT STRATEGY

*In 2004 when the new fuel farm was designed, the airport had four FBOs and one non-public fueler. The fuel farm was designed to accommodate the users existing at that time. At present, the airport has only two FBOs and one non-public fueler. As a result, there is a significant fuel storage capacity available and a new strategy for future utilization of this very valuable asset is needed.*

### 6. CAPITAL IMPROVEMENT PROGRAM

*Critical to the success of this strategic plan is continuing development of our comprehensive capital improvement program (CIP) for infrastructure improvements necessary to execute strategies and tactics outlined in the plan. Addison has been very successful in securing Airport Improvement Program (AIP) grant funding for airside improvement projects in recent years, and it is essential to continue these efforts. Airport and Town staff will continue to build on our good relationships with TX-DOT and FAA to support our CIP. Like this strategic plan, the CIP is neither fixed in stone nor ever complete: it must*

*be reviewed at least annually and updated as necessary to support our goals and vision. While the CIP may be changed in response to changing circumstances, it does provide the essential planning framework for needed capital improvements to ensure that funding is available when required and that improvements are made in a timely and proactive (rather than reactive) manner. Going forward, a key component of the CIP will be improvement of the landside infrastructure – particularly utilities and access streets – necessary to support redevelopment projects. Funding such improvements will be a challenge, as they are typically not eligible for AIP grant funding.*

As staff executes these tasks, an integral part of the process will be analysis of the financial impacts. There are of course additional tactics – as detailed in Section 4 – that will be pursued, but the six tasks outlined above were identified by the strategic planning team as key “next steps” in realizing the vision for the future of the airport.



**APPENDICES**



# **APPENDICES**

## **APPENDIX A**

Maps – Airport Location

## **APPENDIX B**

Airport Operational and Financial Data

## **APPENDIX C**

SWOT Analysis

## **APPENDIX D**

Airport Visits

## **APPENDIX E**

Tenant Surveys

### **APPENDIX E.1**

Airport Business Survey and Responses

### **APPENDIX E.2**

Hangar Tenant Survey and Responses

## **APPENDIX F**

Goals, Strategies, and Tactics Summary

## **APPENDIX G**

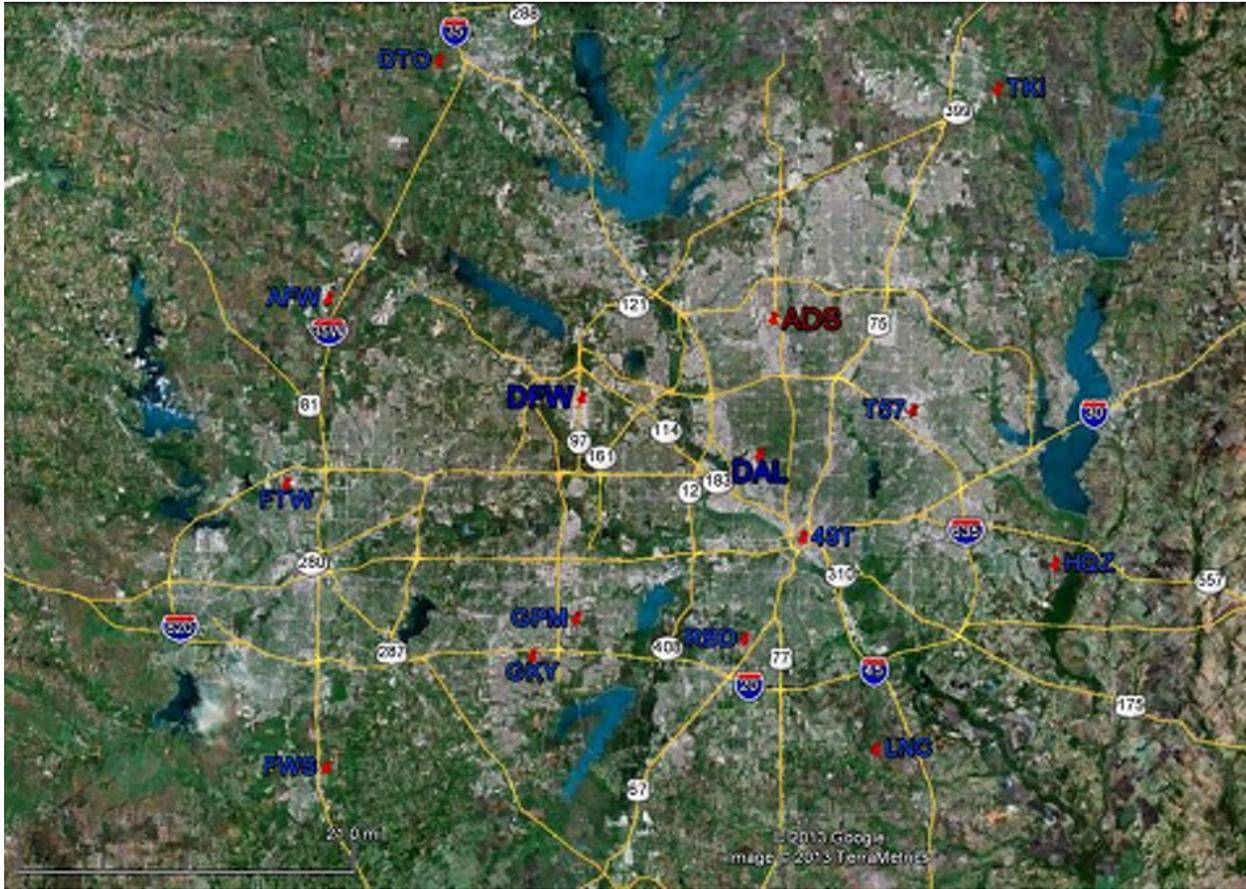
Addison City Council Chapter 380 Policy and Procedures  
Document

## **APPENDIX H**

Future Concepts for Consideration



## **APPENDIX A: MAPS-AIRPORT LOCATION**



**Figure A-1:** Aerial map of the Dallas-Fort Worth metropolitan area showing locations of Air Carrier Airports, General Aviation Reliever Airports, and Heliports (image from Google Earth).

**Air Carrier Airports:**

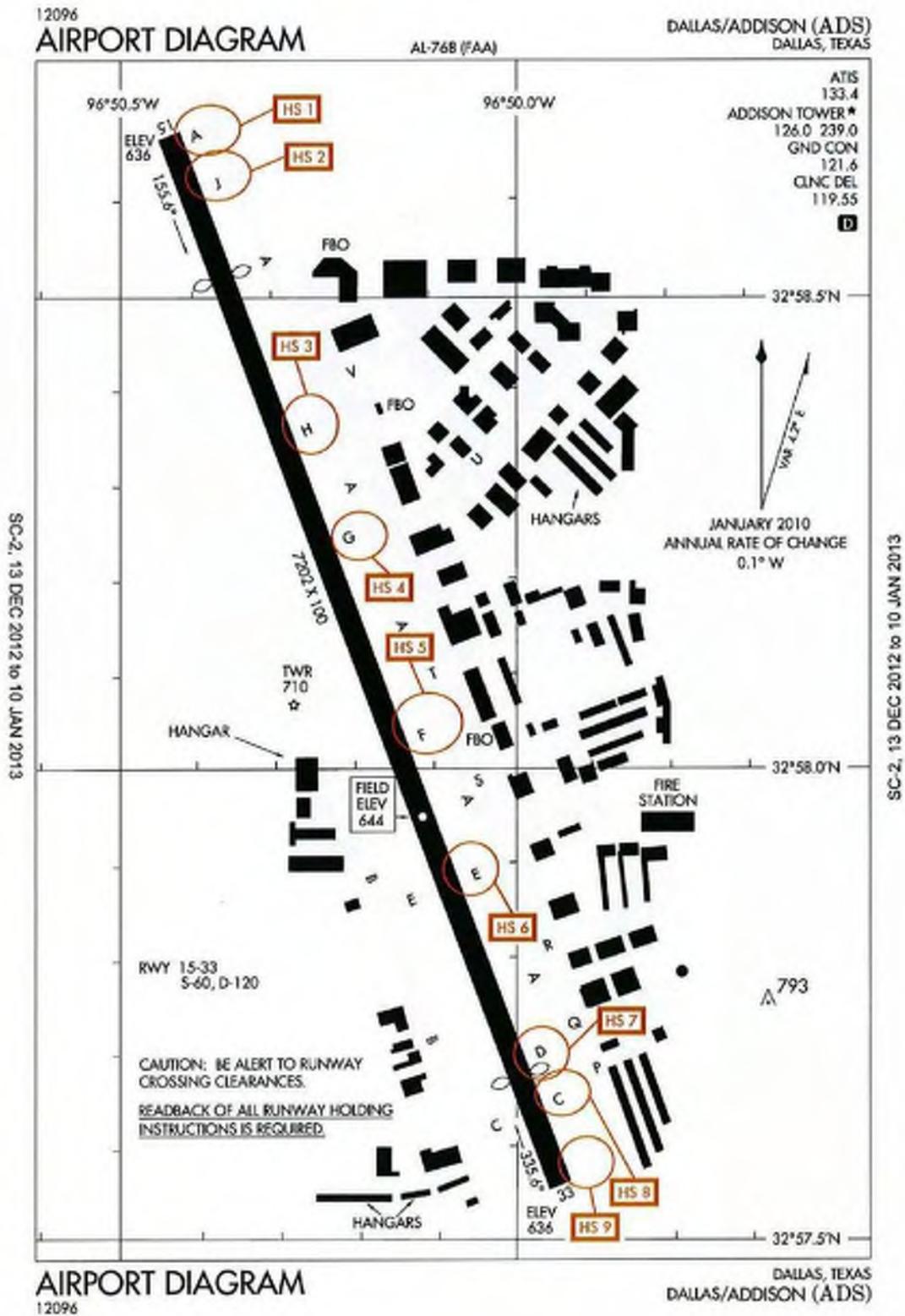
- DAL: Dallas Love Field
- DFW: Dallas – Fort Worth International

**General Aviation Reliever Airports:**

- ADS: Addison**
- AFW: Fort Worth Alliance
- DTO: Denton Municipal
- FTW: Fort Worth Meacham
- FWS: Fort Worth Spinks
- GKY: Arlington Municipal
- GPM: Grand Prairie Municipal
- HQZ: Mesquite Metro
- LNC: Lancaster
- RBD: Dallas Executive
- TKI: Collin County Regional at McKinney

**Heliports:**

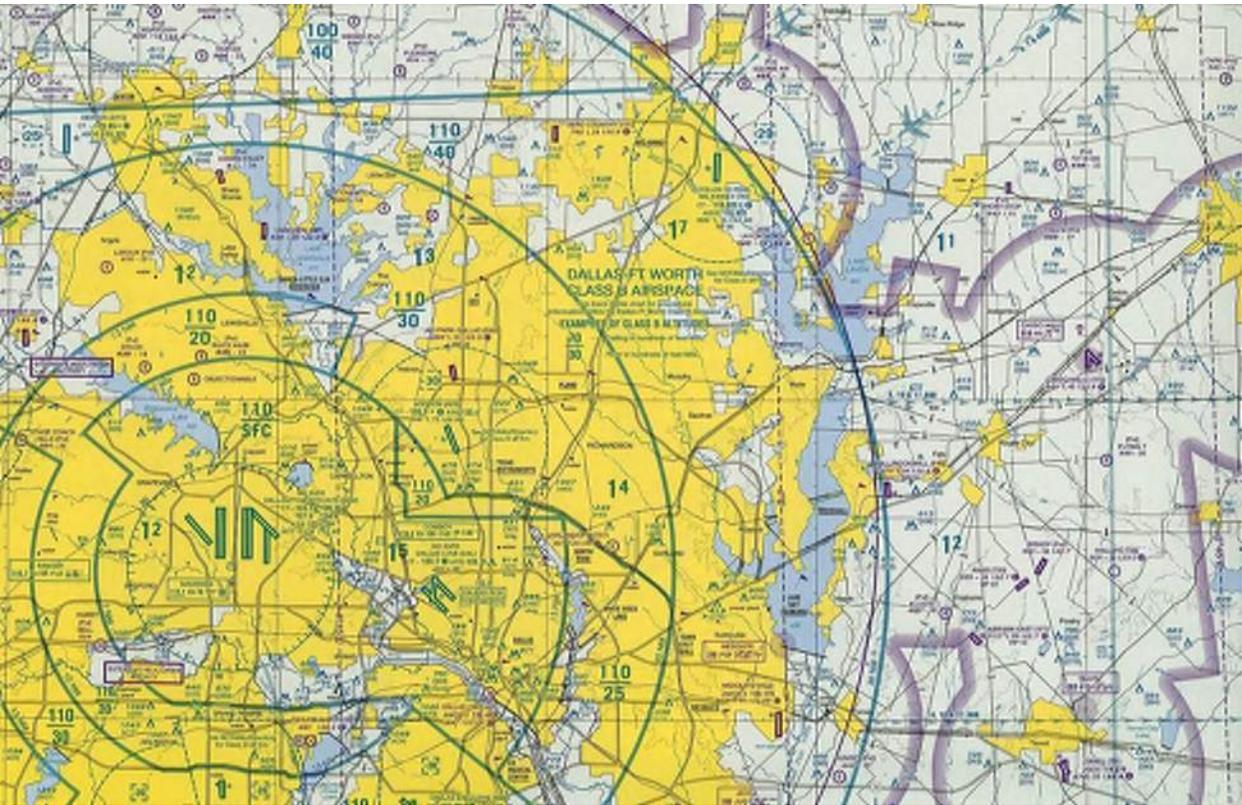
- T57: Garland Heliport
- 49T: Dallas Vertiport



**Figure A-2:** Addison Airport (ADS) – Airport Diagram.



**Figure A-3:** Aerial photo of airport (August 2, 2012 image from Google Earth).



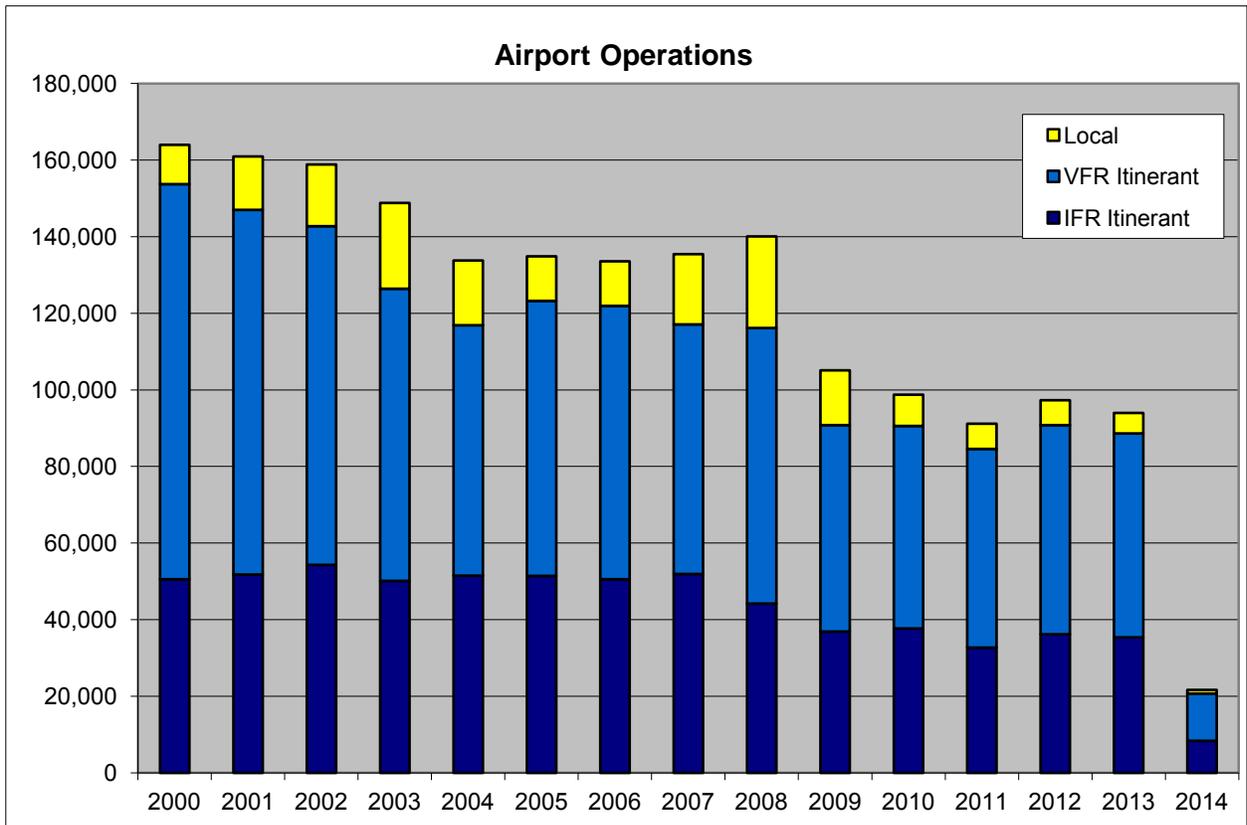
**Figure A-4:** Section of a Terminal Area Chart (TAC) showing airspace around Addison.



## **APPENDIX B: AIRPORT OPERATIONAL AND FINANCIAL DATA**

### Aircraft Operations

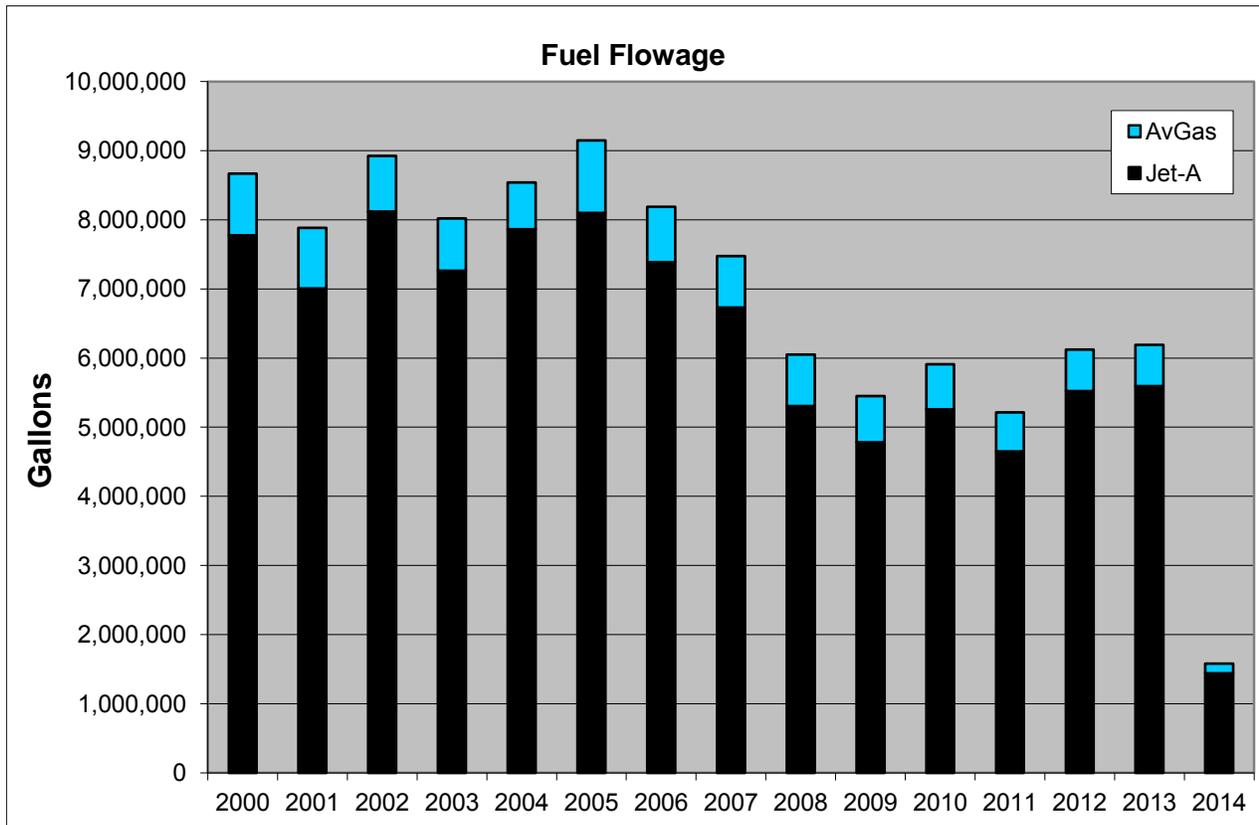
Year	Itinerant	% <i>itin</i>	Local	TOTAL	<i>IFR Itinerant</i>	% <i>IFR</i>	<i>VFR Itinerant</i>
2000	153,705	93.8%	10,239	163,944	50,574	30.8%	103,131
2001	147,002	91.4%	13,893	160,895	51,825	32.2%	95,177
2002	142,697	89.8%	16,124	158,821	54,289	34.2%	88,408
2003	126,401	84.9%	22,407	148,808	50,131	33.7%	76,270
2004	116,844	87.4%	16,912	133,756	51,531	38.5%	65,313
2005	123,251	91.4%	11,601	134,852	51,421	38.1%	71,830
2006	121,936	91.3%	11,623	133,559	50,535	37.8%	71,401
2007	117,097	86.4%	18,369	135,466	51,930	38.3%	65,167
2008	116,174	83.0%	23,866	140,040	44,186	31.6%	71,988
2009	90,828	86.4%	14,292	105,120	36,897	35.1%	53,931
2010	90,574	91.7%	8,194	98,768	37,723	38.2%	52,851
2011	84,602	92.8%	6,524	91,126	32,686	35.9%	51,916
2012	90,778	93.3%	6,505	97,283	36,177	37.2%	54,601
2013	88,632	94.3%	5,376	94,008	35,403	37.7%	53,229
2014	20,738	95.8%	920	21,658	8,403	38.8%	12,335



4/22/2014

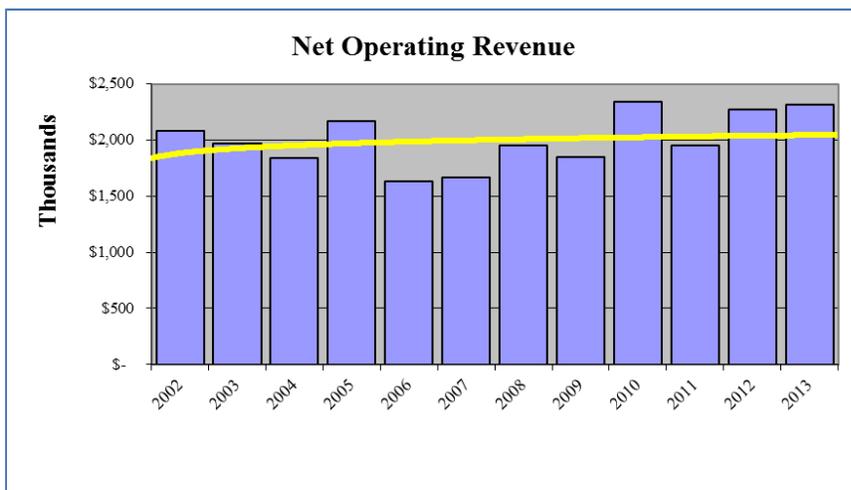
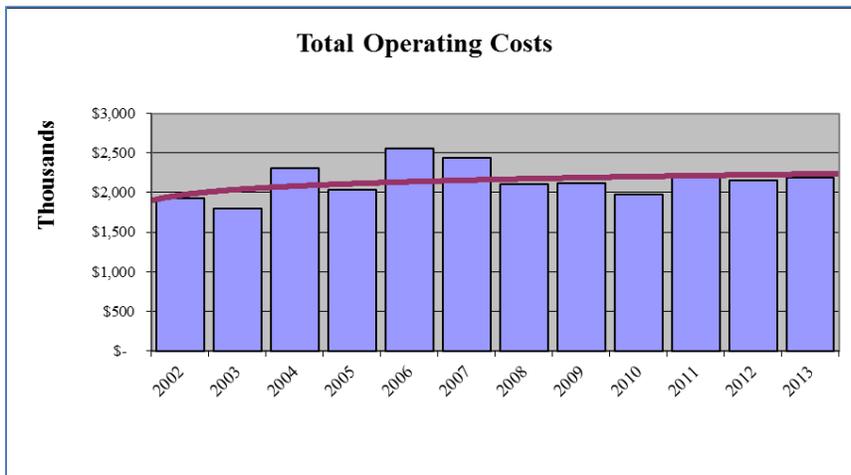
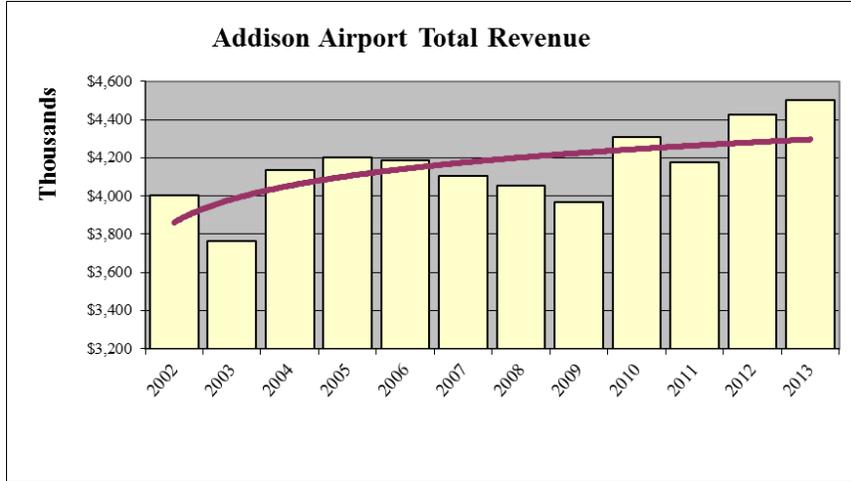
### Fuel Flowage

Year	AvGas	%AvGas	Jet-A	TOTAL	Public	%N-P	Non-Public
2000	894,627	10.3%	7,774,196	8,668,823			
2001	876,306	11.1%	7,008,490	7,884,796			
2002	803,258	9.0%	8,119,223	8,922,481			
2003	754,703	9.4%	7,262,967	8,017,670			
2004	674,908	7.9%	7,864,767	8,539,675			
2005	1,047,409	11.4%	8,100,952	9,148,361			
2006	801,976	9.8%	7,386,500	8,188,476			
2007	743,372	9.9%	6,730,221	7,473,593			
2008	743,542	12.3%	5,307,561	6,051,103			
2009	668,469	12.3%	4,780,903	5,449,372	5,440,891	0.16%	8,481
2010	652,174	11.0%	5,256,210	5,908,384	5,797,879	1.87%	110,505
2011	562,495	10.8%	4,650,451	5,212,946	5,044,484	3.23%	168,462
2012	598,818	9.8%	5,523,990	6,122,808	5,906,026	3.54%	216,782
2013	594,703	9.6%	5,595,997	6,190,700	6,075,371	1.86%	115,329
2014	142,095	9.0%	1,438,790	1,580,885	1,548,779	2.03%	32,106

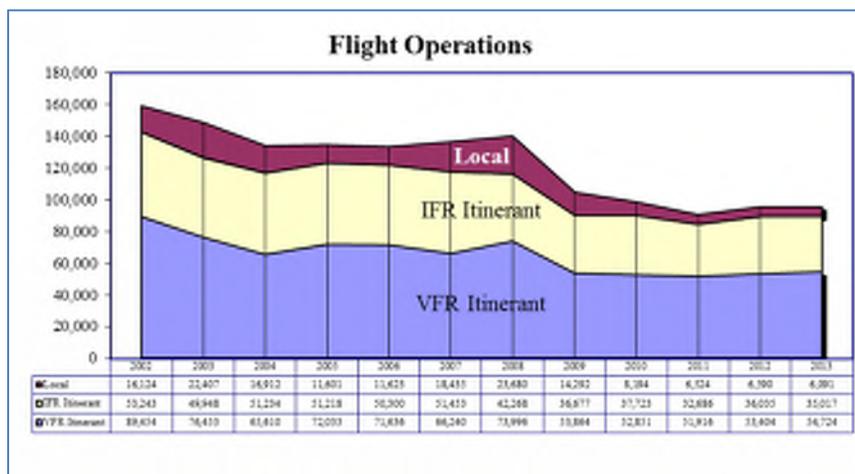
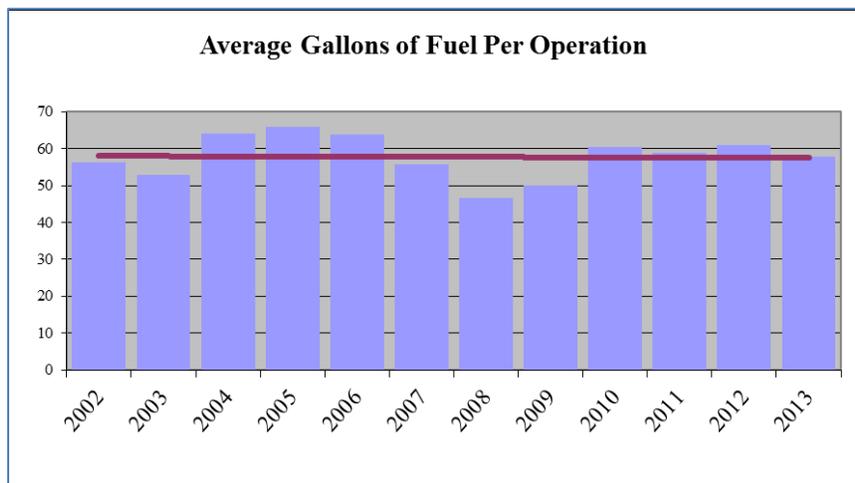
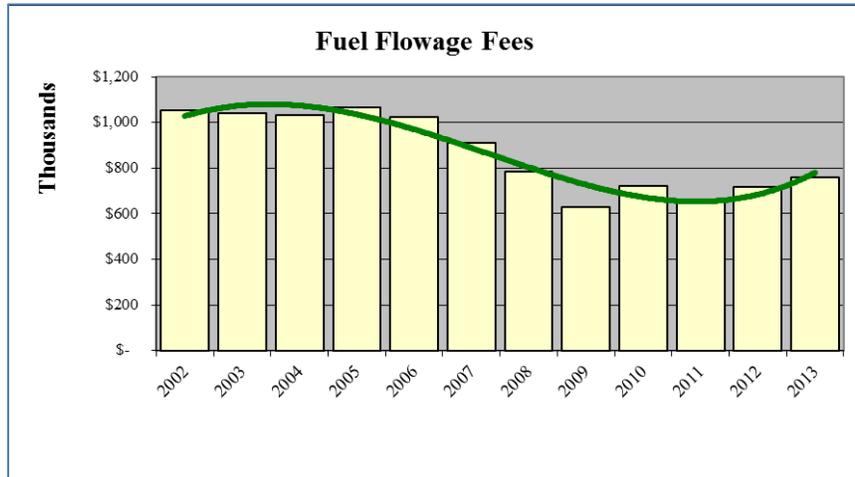


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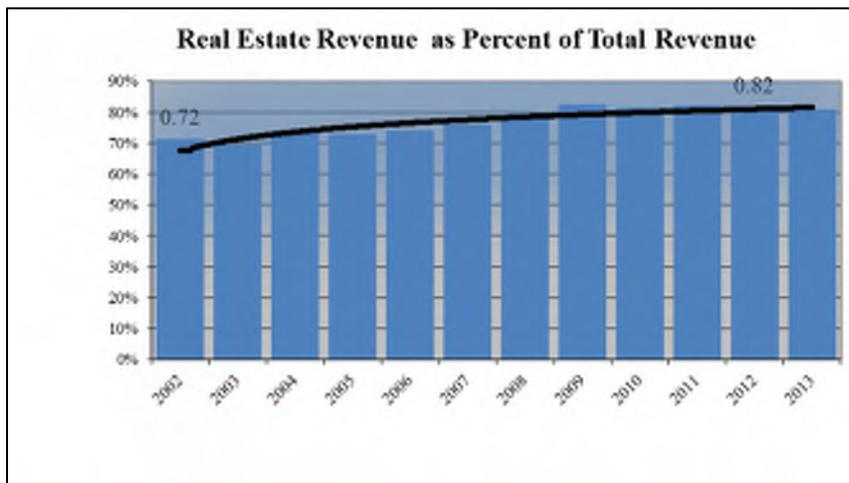
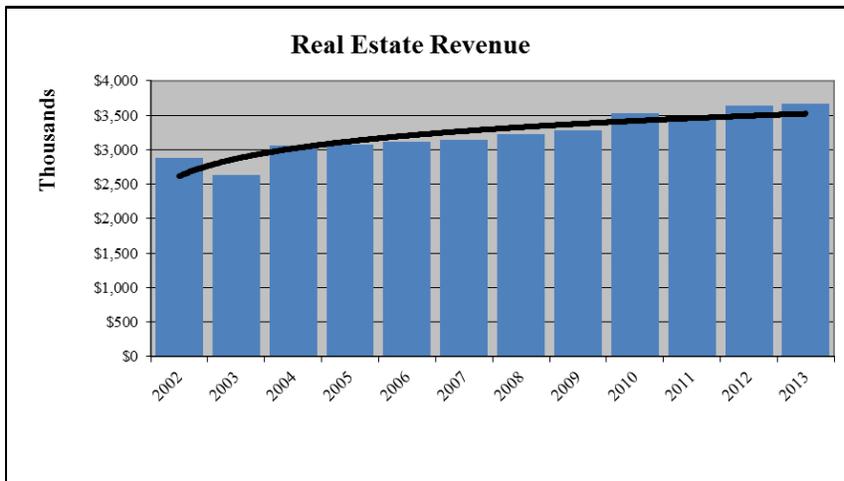
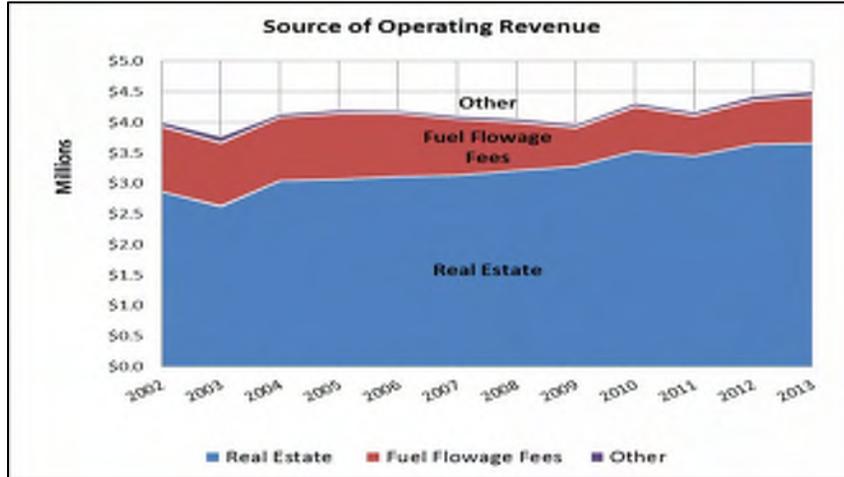
# Addison Airport Historical Operating Performance



# Addison Airport Historical Operating Performance



# Addison Airport Historical Operating Performance



## **APPENDIX C: SWOT ANALYSIS**

# Addison Airport SWOT

A SWOT (Strength/Weakness/Opportunities/Threats) analysis was performed by the strategic planning committee in order to better identify and understand the Airport operating environment. In this regard, the SWOT is not a strategy session but rather it is perform in preparation of making strategic recommendations. Thus, the information generated in the SWOT can be used to develop follow-up strategies for achieving the Airport's mission.

From a definitional standpoint, a SWOT for Addison Airport involves the following:

- **Strengths**: Internal attributes of the Airport. These can include physical/infrastructure, managerial, financial, political, brand, tenant's, and other.
- **Weaknesses**: Internal attributes of the Airport. These also can include physical/infrastructure, managerial, financial, political, brand, tenants and other.
- **Opportunities**: External conditions that may be available to the Airport. These can include such items as regional business, on-airport business, funding, aviation trends, branding, and other.
- **Threats**: External conditions that may threaten the Airport's viability. These conditions may include funding, operational activity, local, national or international political events, governmental regulations, and other.

The following is a summary of the committee's findings:

## **Strengths:**

- Having existing hangar facilities (high building to land ratio)
- Having a variety of ownership/occupancy types (e.g. conventional commercial/individual lease, ground lease, condominium, cooperative, through-the-fence)
- Cater to business owners/operators of aircraft primarily used in the course of their business.
- Location, location, location
- Having customs services on site
- Extensive based aircraft
- Strong, well regarded reputation within the industry and region
- Community assets (nearby hotels, restaurants, entertainment, retail, governance, landside access, office)
- State-of-the art air navigational systems and facilities
- Mild climate
- Town's culture of customer service orientation
- Addison police and fire on airport

## **Weaknesses:**

- Atypical airport development and design

- Landlocked in urban environment
- Under [aircraft] ramped and under [vehicle] parked
- Undersized utilities and other infrastructure necessary to support redevelopment (water mains for fire suppression)
- Narrow streets
- Marginal lighting and directional signage
- Runaway length
- Single runway
- Land necessary for expansion is expensive
- Underutilized facilities adjacent to the airport (those that could be used for aeronautical purposes)
- No landmark/community building giving airport distinct identity
- Lack of funding for expansion and redevelopment

#### **Opportunities:**

- Expiration of Wright Amendment may influence increase demand of corporate aircraft
- Opportunity to increase business aircraft demand
- Improve aircraft fleet mix
- Influence federal policy to benefit Addison Airport
- Pursue change in state funding practices
- Implement advancing technology for safety, security and efficiencies.
- Extension of educational (pilot and maintenance) services
- Increase charter and cargo traffic
- Leverage airport use with available office space in area
- Population growth with influence demand
- Weather/climate will attract more business from northern more frigid regions

#### **Threats**

- Environmental -- EPA's classification of the region as a non-attainment area for pollution and ozone
- Landlocked and limited alternatives for expansion and protection of airport
- Expensive land
- Lack of support from neighboring communities (willing to protect airport through zoning, population growth, height restrictions, etc.)
- Lack of funding to support growth and redevelopment
- Airspace configuration
- Possible implantation of user fees
- Noise mitigation
- Political changes and public policy
- Any catastrophic event (e.g. bad aircraft accident, another 9-11, earthquake, tornado, public unrest)

Overall, the SWOT analysis undertaken by the strategic planning committee highlighted key issues for the Town to consider affecting its operational environment. These results will serve as the framework for developing the goals, strategies and tactics within the strategic plan.



## **APPENDIX D: AIRPORT VISITS**

## Airports for Airport Strategic Team Visits

The Airport Strategic Team has proposed visiting other airports as part of the process of developing the Strategic Vision for Addison Airport. While criteria for airport visits are being refined, some guidance that has been suggested includes:

- ✈ to see any “best practices” that would support one or more of our proposed strategic goals (in the categories of Revenue, Customer, Internal Process, or Community); or
- ✈ to see how another airport may have approached or solved an issue that is relevant for Addison Airport.

Below are the suggested airports to visit.

APA – Centennial Airport (Denver, CO)

APF – Naples Municipal Airport (Naples, FL)

FMY – Fort Myers Page Field Airport (Fort Myers, FL)

MMU – Morristown Municipal Airport (Morristown, NJ; west of New York City)

SDL – Scottsdale Airport (Scottsdale, AZ; northeast of Phoenix)

SGR – Sugar Land Regional Airport (Sugar Land, TX; southwest of Houston)

TEB – Teterboro Airport (Teterboro, NJ; northwest of New York City)

This document begins with a section providing air traffic data for the selected airports (as well as Addison Airport) covering the calendar years 2005-2011. This is followed by sections providing information on each of the six selected airports, including a recent aerial photo and the Airport Diagram (from the FAA Airport / Facilities Directory).

# ATADS: Airport Operations: Standard Report

Facility	Calendar Year	IFR Itinerant						Itinerant						Local	
		Air Carrier	Air Taxi	General Aviation	Military	Total	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	Operations
ADS	2005	147	14,074	36,976	21	51,218	153	16,639	106,346	113	123,251	11,591	10	11,601	134,852
ADS	2006	139	14,339	35,793	29	50,300	175	17,261	104,463	37	121,936	11,616	7	11,623	133,559
ADS	2007	153	15,143	36,118	39	51,453	156	16,745	100,734	58	117,693	18,368	67	18,435	136,128
ADS	2008	104	10,436	31,553	175	42,268	153	13,361	102,546	204	116,264	23,383	297	23,680	139,944
ADS	2009	177	8,836	27,577	87	36,677	180	11,357	78,615	389	90,541	14,230	62	14,292	104,833
ADS	2010	172	8,937	28,516	98	37,723	172	11,948	78,028	426	90,574	8,183	11	8,194	98,768
ADS	2011	112	7,622	24,808	144	32,686	114	10,751	73,294	443	84,602	6,518	6	6,524	91,126
Sub-Total for ADS		1,004	79,387	221,341	593	302,325	1,103	98,062	644,026	1,670	744,861	93,889	460	94,349	839,210
APA	2005	0	32,282	43,285	697	76,264	0	56,012	132,715	1,507	190,234	155,689	1,581	157,270	347,504
APA	2006	0	32,321	44,551	859	77,731	0	52,260	130,332	1,503	184,095	134,461	1,243	135,704	319,799
APA	2007	0	31,959	46,280	1,024	79,263	0	52,051	137,110	2,386	191,547	144,078	1,426	145,504	337,051
APA	2008	3	28,030	43,422	1,182	72,637	3	44,376	129,412	2,253	176,044	143,634	1,271	144,905	320,949
APA	2009	1	21,009	36,112	1,117	58,239	1	33,065	106,804	2,594	142,464	117,356	3,206	120,562	263,026
APA	2010	2	20,019	39,721	1,360	61,102	30	31,278	119,049	3,376	153,733	124,264	5,189	129,453	283,186
APA	2011	3	24,145	37,691	1,407	63,246	68	36,191	126,112	3,482	165,853	125,025	3,713	128,738	294,591
Sub-Total for APA		9	189,765	291,062	7,646	488,482	102	305,233	881,534	17,101	1,203,970	944,507	17,629	962,136	2,166,106
APF	2005	0	13,308	32,603	49	45,960	0	13,595	92,799	113	106,507	51,892	21	51,913	158,420
APF	2006	55	11,796	32,946	43	44,840	55	11,940	89,956	84	102,035	32,718	194	32,912	134,947
APF	2007	0	11,266	31,496	24	42,786	0	11,638	86,417	46	98,101	30,335	10	30,345	128,446
APF	2008	0	10,578	28,702	47	39,327	0	11,851	81,794	84	93,729	35,515	14	35,529	129,258
APF	2009	0	6,632	23,959	58	30,649	0	6,773	67,188	96	74,057	26,849	52	26,901	100,958
APF	2010	0	7,556	21,977	69	29,602	0	7,658	56,868	107	64,633	17,708	8	17,716	82,349
APF	2011	0	7,869	22,198	84	30,151	0	8,135	57,173	238	65,546	17,617	0	17,617	83,163
Sub-Total for APF		55	69,005	193,881	468	263,315	55	71,590	532,195	768	604,608	212,634	299	212,933	817,541
FMY	2005	0	3,585	15,732	79	19,396	0	4,310	49,764	154	54,228	31,752	270	32,022	86,250
FMY	2006	05	4,399	15,893	84	20,376	2	4,940	48,701	169	53,812	24,047	38	24,085	77,897
FMY	2007	0	2,430	16,107	53	18,590	5	3,339	48,459	99	51,902	24,970	136	25,106	77,008
FMY	2008	0	1,697	14,440	34	16,171	1	2,310	40,756	47	43,114	27,911	24	27,935	71,049
FMY	2009	0	1,236	11,845	71	13,152	0	1,281	42,304	98	43,683	33,088	68	33,156	76,839
FMY	2010	11	1,334	11,060	69	12,474	13	1,375	43,165	110	44,663	33,543	70	33,613	78,276
FMY	2011	3	1,252	11,445	78	12,778	7	1,289	44,386	100	45,782	32,056	87	32,143	77,925
Sub-Total for FMY		14	15,933	96,522	468	112,937	28	18,844	317,535	777	337,184	207,367	693	208,060	545,244

Facility	IFR Itinerant						Itinerant						Local		
	Calendar Year	Air Carrier	Air Taxi	General Aviation	Military	Total	Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total	Operations
MMU	2005	0	11,839	26,647	275	38,761	0	12,990	133,580	478	147,048	68,950	274	69,224	216,272
MMU	2006	0	12,115	26,961	120	39,196	0	13,006	94,281	186	107,473	64,188	552	64,740	172,213
MMU	2007	0	12,951	26,617	157	39,725	0	14,510	85,739	219	100,468	61,960	111	62,071	162,539
MMU	2008	8	11,195	22,560	66	33,829	9	13,703	74,138	343	88,193	52,006	156	52,162	140,355
MMU	2009	15	9,681	19,599	28	29,323	16	13,088	65,721	305	79,130	49,941	270	50,211	129,341
MMU	2010	8	10,200	20,054	45	30,307	8	11,589	68,783	219	80,599	37,987	184	38,171	118,770
MMU	2011	9	9,805	18,803	45	28,662	9	10,474	59,474	193	70,150	33,528	128	33,656	103,806
<b>Sub-Total for MMU</b>		<b>40</b>	<b>77,786</b>	<b>161,241</b>	<b>736</b>	<b>239,803</b>	<b>42</b>	<b>89,360</b>	<b>581,716</b>	<b>1,943</b>	<b>673,061</b>	<b>368,560</b>	<b>1,675</b>	<b>370,235</b>	<b>1,043,296</b>
SDL	2005	0	10,181	31,647	114	41,942	0	11,816	124,783	278	136,877	75,544	8	75,552	212,429
SDL	2006	0	11,005	34,053	105	45,163	0	12,389	120,366	198	132,953	63,166	179	63,345	196,298
SDL	2007	0	11,879	35,851	208	47,938	0	13,390	119,984	363	133,737	58,129	116	58,245	191,982
SDL	2008	0	10,264	30,192	208	40,664	0	11,232	107,351	359	118,942	72,268	201	72,469	191,411
SDL	2009	9	7,770	22,730	166	30,675	9	8,168	90,933	278	99,388	67,029	27	67,056	166,444
SDL	2010	0	8,189	23,548	176	31,913	0	12,250	69,767	365	82,382	51,055	78	51,133	133,515
SDL	2011	2	9,427	24,060	301	33,790	5	12,969	73,304	580	86,858	54,620	162	54,782	141,640
<b>Sub-Total for SDL</b>		<b>11</b>	<b>68,715</b>	<b>202,081</b>	<b>1,278</b>	<b>272,085</b>	<b>14</b>	<b>82,214</b>	<b>706,488</b>	<b>2,421</b>	<b>791,137</b>	<b>441,811</b>	<b>771</b>	<b>442,582</b>	<b>1,233,719</b>
SGR	2005	0	1,930	14,804	60	16,794	0	4,462	42,347	118	46,927	43,228	112	43,340	90,267
SGR	2006	2	2,386	15,257	59	17,704	2	4,599	41,660	99	46,360	42,495	32	42,527	88,887
SGR	2007	0	2,811	20,485	40	23,336	0	5,699	46,380	76	52,155	34,894	74	34,968	87,123
SGR	2008	0	2,876	22,878	170	25,924	0	4,170	45,193	193	49,556	27,118	130	27,248	76,804
SGR	2009	166	2,661	19,446	138	22,411	166	3,215	40,204	215	43,800	25,182	46	25,228	69,028
SGR	2010	0	3,892	21,047	66	25,005	0	4,826	41,701	89	46,616	23,214	228	23,442	70,058
SGR	2011	0	4,409	20,835	64	25,308	0	5,117	41,730	88	46,935	22,662	356	23,018	69,953
<b>Sub-Total for SGR</b>		<b>168</b>	<b>20,965</b>	<b>134,752</b>	<b>597</b>	<b>156,482</b>	<b>168</b>	<b>32,088</b>	<b>299,215</b>	<b>878</b>	<b>332,349</b>	<b>218,793</b>	<b>978</b>	<b>219,771</b>	<b>552,120</b>
TEB	2005	0	73,046	98,044	102	171,192	0	76,954	135,108	142	212,204	26	10	36	212,240
TEB	2006	8	71,747	98,132	129	170,016	8	75,337	125,096	174	200,615	16	12	28	200,643
TEB	2007	6	72,908	99,037	139	172,090	6	77,182	123,799	200	201,187	49	0	49	201,236
TEB	2008	56	61,197	89,177	136	150,566	56	64,844	108,493	294	173,687	6	6	12	173,699
TEB	2009	69	48,874	75,628	263	124,834	70	52,380	92,740	447	145,637	0	0	0	145,637
TEB	2010	78	52,855	82,208	229	135,370	79	57,339	100,529	539	158,486	0	0	0	158,486
TEB	2011	117	56,949	84,761	194	142,021	118	60,482	100,043	400	161,043	0	0	0	161,043
<b>Sub-Total for TEB</b>		<b>334</b>	<b>437,576</b>	<b>626,987</b>	<b>1,192</b>	<b>1,066,089</b>	<b>337</b>	<b>464,518</b>	<b>785,808</b>	<b>2,196</b>	<b>1,252,859</b>	<b>97</b>	<b>28</b>	<b>125</b>	<b>1,252,984</b>

## APA – Denver Centennial Airport

[www.centennialairport.com](http://www.centennialairport.com)



Denver's primary GA Reliever, Centennial Airport is governed by the Arapahoe County Public Airport Authority. The airport has four full-service FBOs with a fifth FBO dedicated to providing services to helicopters only.

### Reasons to visit:

- ✈ Fuel flowage in 2011 exceeded 11 million gallons, with total operations over 300,000
- ✈ Business and industrial parks located near the airport
- ✈ Significant numbers of noise complaints / noise issues; land use management program in effect for surrounding areas
- ✈ Airport is considered to be one of the most well-run GA airports in the country; marketing tagline is "Global Reach – Local Access"™
- ✈ Estimated annual economic impact of nearly \$1 Billion



## Ownership and Governance

Centennial Airport was founded in 1968 by Arapahoe County and is currently owned by the Arapahoe County Public Airport Authority, established in 1975 as a political subdivision of the State of Colorado. The Authority is governed by a Board of Commissioners that consists of 5 voting members and 3 non-voting members. The 5 voting members are comprised of tax-paying residents of Arapahoe County and are appointed by the County Commissioners to 4-year terms. The 3 non-voting members are the Douglas County Commissioners or their designees. The Airport Authority Board meets monthly, with [agendas and minutes](#) being posted on the airport website.

## Staff (17 full-time positions)

### Administration:

Executive Director – Robert Olislagers  
Assistant Airport Director – Lorie Hinton  
Director of Administration – Gwen Balk  
Chief Financial Officer – Roxy Hahn  
Aviation Specialist – Scott Storie  
Accounting Specialist – Joseph Odhiambo

### Information Technology:

Deputy Director of Information Technology – Kelly Dymond

### Planning:

Deputy Director of Planning and Development – Mike Fronapfel  
Noise and Environmental Specialist – Todd Green

### Operations:

Deputy Director of Operations – Brian Lewis  
Operations Specialist – Chris McLain  
Operations Specialist – Sean Settle  
Operations Specialist – Cameron Hallock

### Maintenance:

Director of Maintenance – Dave Zarlengo  
Maintenance Supervisor – Mitch Aguilar  
Assistant Maintenance Supervisor – Ron Chlarson  
Assistant Maintenance Supervisor – Dan Stansbury

## Budget / Financing / Sources of Revenue

Annual fuel flowage: 11,100,000 gallons (2011)  
Fuel flowage fee: \$0.15/gallon  
Landing fees: none  
U.S. Customs: User Fee Airport ([charges](#) from \$105 to \$360 per clearance based on aircraft size, plus a \$300 overtime/after-hours charge)  
Advertising: airport accepts [advertising](#) on its website

## Amenities

Airport has a well regulated [access control system](#) with detailed requirements for access.

South Metro Fire Rescue has a station on airport property that is specially equipped with aircraft rescue and firefighting equipment.

The Arapahoe County Sheriff's Department patrols the airport regularly and provides police services.

The airport operates a significant fleet of snow removal equipment including five 22-foot snow plows, two snow blowers, two dump trucks, a de-ice trailer, and a 16-foot broom.

APA has one [ILS approach](#) (for Rwy 35R).

FAA Air Traffic Control Tower operates 24 hours.

U.S. Customs available 24 hours (User Fee Airport).

## Significant Tenants

[Denver jetCenter](#) (FBO)

[The Heliplex](#) (FBO for helicopters only)

[Signature Flight Support](#) (FBO)

[TAC Air](#) (FBO)

[X-Jet](#) (FBO)

[Denver Centennial Airport Business Directory](#)

## Based Aircraft

Aircraft based on the field:	865
Single engine airplanes:	578
Multi engine airplanes:	142
Jet airplanes:	125
Helicopters:	20

## Community Relations / Noise Issues

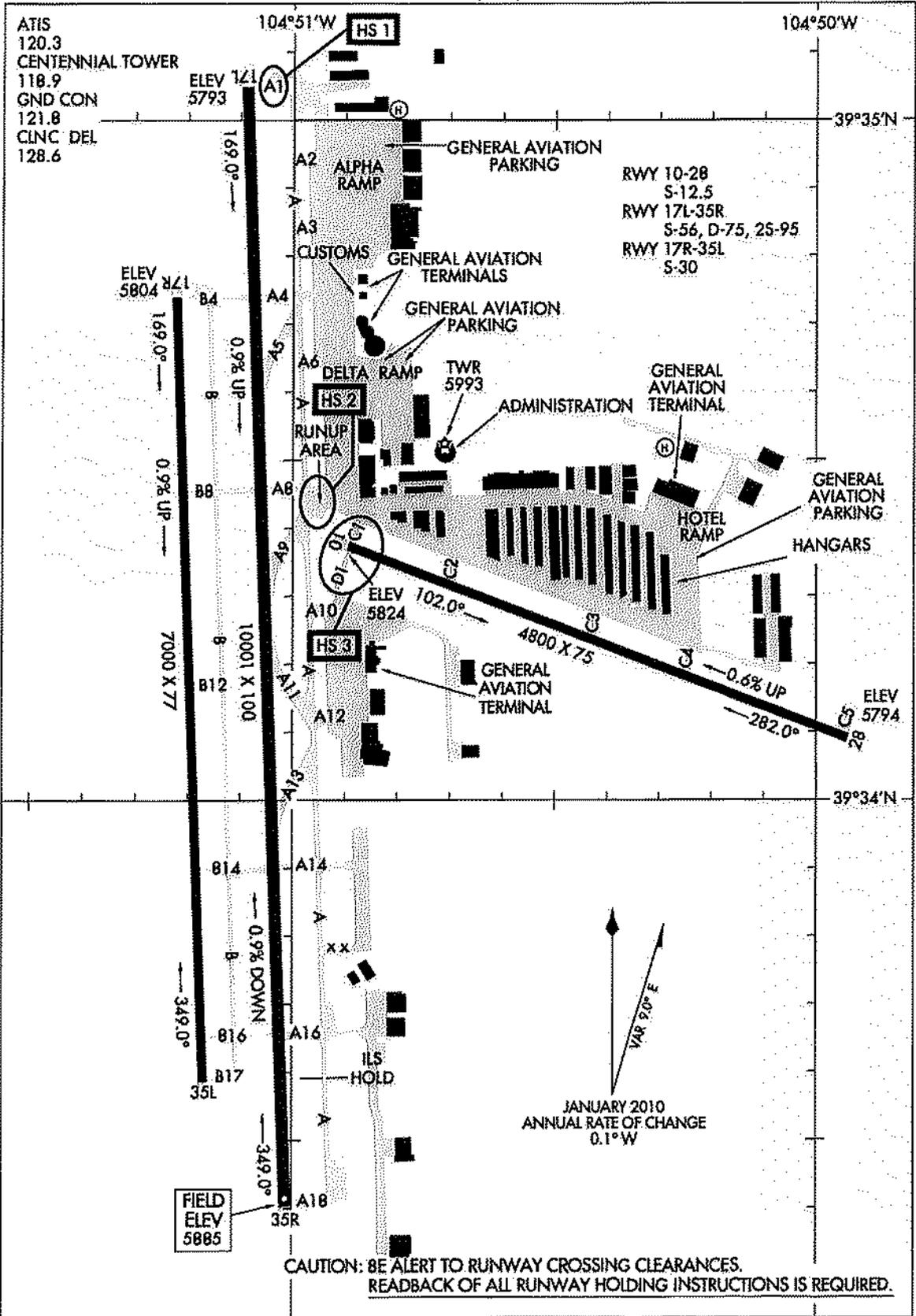
The airport began an FAR Part 150 Noise Study in 1998, which is still in process. The airport hosts a monthly airport / community [noise roundtable](#) to discuss noise issues and noise abatement procedures. The airport receives and tracks hundreds of noise complaint each month and makes [noise complaint data](#) available through its website.

1134Y

# AIRPORT DIAGRAM

AL-5715 (FAA)

DENVER/CENTENNIAL (APA)  
DENVER, COLORADO



SW-1, 09 FEB 2012 to 08 MAR 2012

SW-1, 09 FEB 2012 to 08 MAR 2012

# AIRPORT DIAGRAM

DENVER, COLORADO  
DENVER/CENTENNIAL (APA)

11340

## APF – Naples Municipal Airport

<http://flynaples.com/>



Owned and operated by the City of Naples, Florida / Naples Airport Authority.

### Reasons to visit:

- ✈ the State of Florida is known for having a strong aviation system, and it is worth visiting at least one Florida airport to learn about how the airport system is supported by the state, particularly the Florida Department of Transportation (F-DOT)
- ✈
- ✈ Naples Municipal Airport operates the only FBO, which appears to constitute the most significant source of operating income for the airport

## Ownership and Governance

Naples Municipal Airport.

**Staff** (airport personnel also operate the field's only FBO; total staff numbers not available)

Director, General Aviation – Barry Bratton

Senior Manager, General Aviation – Scott Sheets

Supervisor Customer Service – Debra Barr

Supervisor Line Service – Geoff Unger

## Budget / Financing / Sources of Revenue

Annual fuel flowage: unknown (probably less than 2,000,000 gallons)

Fuel flowage fee: N/A – airport owns FBO

Landing fees: yes; applies to all charter and revenue-producing aircraft

## Amenities

On-airport fire station

Airport Police Department

FAA Air Traffic Control Tower operates 0700-2200 daily

FMY has an [ILS approach](#) for Rwy 5

U.S. Customs available without charge; prior permission required (Landing Rights Airport).

## Significant Tenants

[Base Ops](#) (FBO operated by the Lee County Port Authority)

[Fort Myers Page Field Business Directory](#)

## Based Aircraft

Aircraft based on the field: 289

Single engine airplanes: 188

Multi engine airplanes: 59

Jet airplanes: 30

Helicopters: 12

## Community Relations / Noise Issues

Naples Municipal Airport has had significant community / noise issues.

12040

# AIRPORT DIAGRAM

AL-6020 (FAA)

NAPLES MUNI (APF)  
NAPLES, FLORIDA

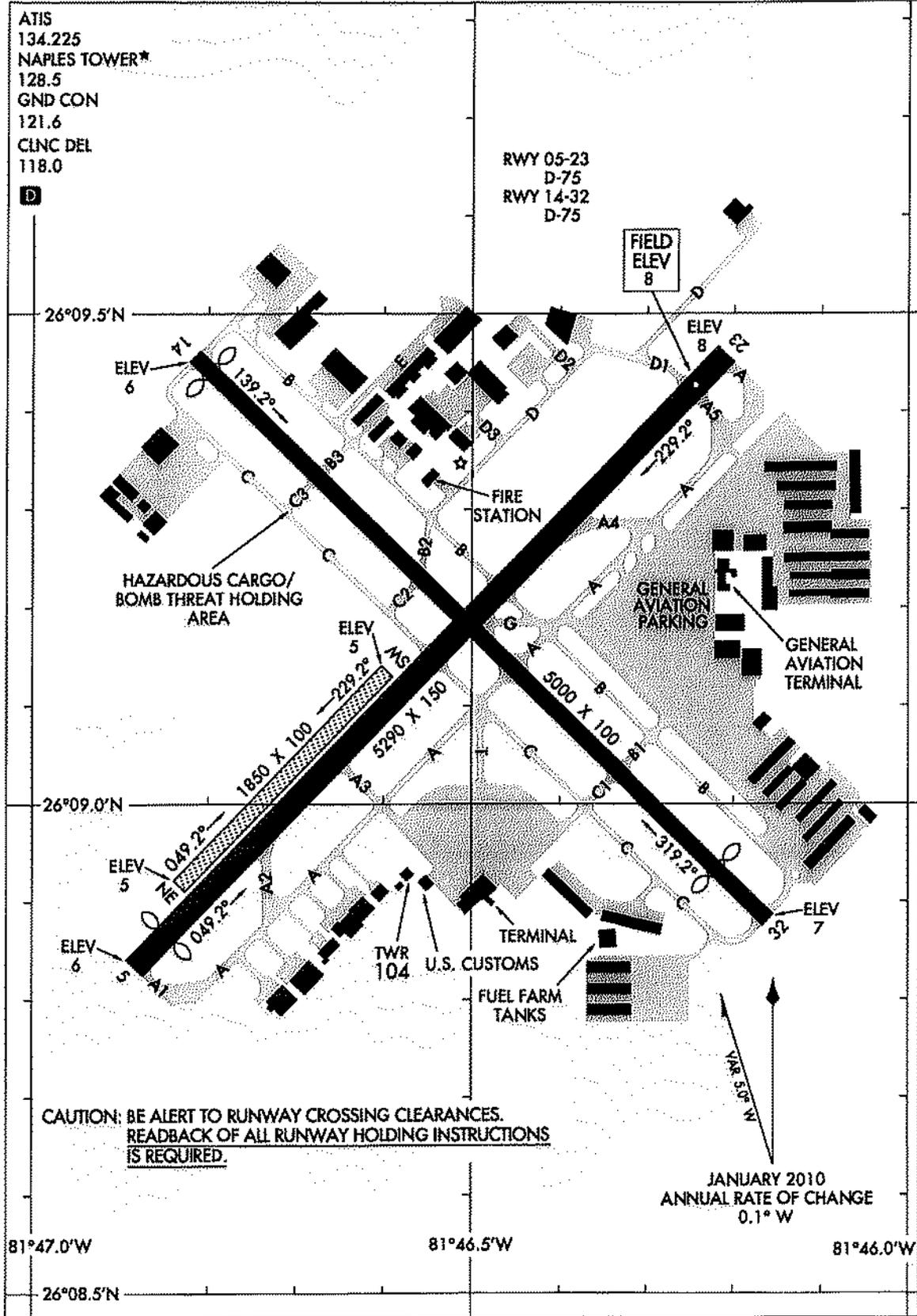
ATIS  
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 NAPLES TOWER\*  
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 GND CON  
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 CLNC DEL  
 118.0

RWY 05-23  
 D-75  
 RWY 14-32  
 D-75

**D**

SE-3. 31 MAY 2012 to 28 JUN 2012

SE-3. 31 MAY 2012 to 28 JUN 2012



# AIRPORT DIAGRAM

12040

NAPLES, FLORIDA  
NAPLES MUNI (APF)

## FMY – Fort Myers Page Field Airport

[www.flylcpa.com/fmy/](http://www.flylcpa.com/fmy/)



Owned and operated by the Lee County Port Authority (LCPA), which also owns and operates Southwest Florida International (RSW, a nearby Part 139 commercial service airport).

### Reasons to visit:

- ✈ the State of Florida is known for having a strong aviation system, and it is worth visiting at least one Florida airport to learn about how the airport system is supported by the state, particularly the Florida Department of Transportation (F-DOT)
- ✈ Airport hosts weekly “Hot Dog Fridays” to encourage local residents to stop in and visit
- ✈ LCPA operates the only FBO, “Base Ops”, which appears to constitute the most significant source of operating income for the airport

## Ownership and Governance

Fort Myers Page Field is owned and operated by the Lee County Port Authority.

The Lee County Port Authority is governed by the [Lee County Board of County Commissioners](#), sitting as the Board of Port Commissioners. The term of each Port Commissioner coincides with their regular term of office as a County Commissioner.

Each Port Commissioner appoints an individual from the business community to be a member of the [Airports Special Management Committee](#), which advises the Board of Port Commissioners on all issues and matters relating to the Lee County Airports (Southwest Florida International Airport and Page Field). The Airports Special Management Committee also has two Regional members, from Charlotte and Collier Counties.

Board meetings are held in the Airport Training and Conference Center located at the Southwest Florida International Airport, 15924 Air Cargo Lane, off Chamberlin Parkway. For a current schedule of meeting dates and times, please click on [2012 Meeting Dates](#).

**Staff** (airport personnel also operate the field's only FBO; total staff numbers not available)

Director, General Aviation – Barry Bratton

Senior Manager, General Aviation – Scott Sheets

Supervisor Customer Service – Debra Barr

Supervisor Line Service – Geoff Unger

## Budget / Financing / Sources of Revenue

Annual fuel flowage: unknown (probably less than 2,000,000 gallons)

Fuel flowage fee: N/A – airport owns FBO

Landing fees: yes; applies to all charter and revenue-producing aircraft

## Amenities

On-airport fire station

Airport Police Department

FAA Air Traffic Control Tower operates 0700-2200 daily

FMY has an [ILS approach](#) for Rwy 5

U.S. Customs available without charge; prior permission required (Landing Rights Airport).

## Significant Tenants

[Base Ops](#) (FBO operated by the Lee County Port Authority)

[Fort Myers Page Field Business Directory](#)

## Based Aircraft

Aircraft based on the field: 225

Single engine airplanes: 176

Multi engine airplanes: 44

Jet airplanes: 3

Helicopters: 2

## **Community Relations / Noise Issues**

The Page Field Users Association meets the second Wednesday of each month at 6:30 p.m. at the Base Ops FBO.

The airport does not appear to have any significant noise issues, although the nearby Southwest Florida International Airport does have a "[Fly Friendly](#)" program.

11349

# AIRPORT DIAGRAM

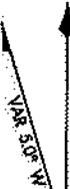
AL-154 (FAA)

FORT MYERS/PAGE FIELD (FMY)  
FORT MYERS, FLORIDA

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 PAGE TOWER\*  
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 GND CON  
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 CLNC DEL  
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D

FIELD  
 ELEV  
 17



JANUARY 2010  
 ANNUAL RATE OF CHANGE  
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168

ELEV 17

26°35.5'N

ELEV 14

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B2

B3

B4

B5

B6

B7

B8

B9

B10

B11

B12

B13

B14

B15

B16

B17

B18

B19

B20

WEST RAMP

BASE OPS/FBO

HS 2

EMS

FIRE STATION

TWR 100

NORTH RAMP

ELEV 17

C6

C5

C4

C3

C2

C1

C0

C-1

C-2

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C-28

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6406 X 150

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315.5°

26°35.0'N

ELEV 13

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G2

G3

G4

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## MMU – Morristown Municipal Airport

[www.mmuair.com](http://www.mmuair.com)



A designated GA Reliever airport for the New York Metropolitan Area, Morristown Municipal is located 27 “stoplight free” miles from downtown NYC. Owned by the Town of Morristown, NJ, MMU has been privately managed since 1982 by DM Airports, LTD.

### Reasons to visit:

- ✈ Private management with airport operations characteristics similar to Addison; airport is run as a business (by DM Airports, Ltd.)
- ✈ Airport was run-down and neglected when DM Airports assumed control in 1982
- ✈ Airport encompasses 638 acres, but much of that is not suitable for development because it is a wetland (development is constrained)
- ✈ State-of-the-art perimeter security system (Honeywell is a major corporate tenant) including ID badging, video monitoring, and interactive employee training; significant Federal (DHS) presence because of proximity to New York City
- ✈ FAA Tower with non-Federal AWOS (parallels the situation at Addison) ... MMU succeeded in getting an AWOS-ATIS Interface Unit (AAIU) installed; Addison is following MMU’s success, working on an identical AAIU installation
- ✈ First-class administration and operations facilities (at right: kitchen facilities in the Operations center)



## **Ownership and Governance**

Owned by the Town of Morristown, New Jersey, MMU has been privately managed since 1982 by DM AIRPORTS, LTD. under a 99-year contract. The airport is eligible for (and does receive) FAA Airport Improvement Program (AIP) grant funding for airfield improvements.

### **Staff (27 full-time positions)**

#### DM Airports, Ltd.:

Executive Director – William Barkhauer, A.A.E.  
Deputy Executive Director – Robert Bogan, A.A.E.  
Senior Director, Facilities and Planning – Scott McMahon, A.A.E.  
Senior Director, Operations and Government Affairs – Maria Sheridan, A.A.E.  
Director, Accounting and Financial Analysis – Maryann Farinet, CPA  
Senior Manager, Contracts and Office Administration – Suzanne Freaney, C.M.  
Manager, Environmental and Safety Compliance – Maria Haffer  
Manager, Information Systems – Christopher Azzari  
Environmental and Safety Compliance Specialist – Corey Lindeman  
Projects Administrator – Felicia Coppola  
Staff Administrative Assistant – Carolyn Pasqua  
Receptionist – Beth DiQuattro

#### Operations Department:

Manager, Operations and Security – Peter Gilchrist, A.A.E.  
West Tie-Down Administrator / Operations Coordinator II – Lee Kimble, C.M.  
Noise Abatement Officer / Operations Coordinator II – Rosemary Rizzo, C.M.  
Operations Coordinator II – Aaron Buob, C.M.  
Operations Coordinator I – Ryan Sheelen  
Operations Coordinator I – Jessica Vurginac  
Operations Coordinator I – Dustin Ramsey

#### Facilities Department:

Manager, Facilities and Projects – Darren Large, A.A.E.  
Facilities Supervisor – Scott Peterson  
Facilities Specialist – Erik Hansen  
Facilities Technician – Matthew Maitilasso  
Facilities Technician – Brian Murphy

#### Accounting Department / Human Resources:

Accounts Receivable and Payroll – Joan Schroeder  
Accounts Payable – Sarah Kaplan  
Benefits Administrator – Linda Weth

## Budget / Financing / Sources of Revenue

Annual fuel flowage:	6,300,000 gallons (2010)
Fuel flowage fee:	\$0.30 to \$0.36/gallon
<a href="#">Landing fees:</a>	transient aircraft only (charges range from \$11 to \$200)
U.S. Customs:	User Fee Airport (charges are \$25 for light piston, \$350 for large piston/turboprop/jet, or \$1,000 for based jet not a member of U.S. Customs user group; plus overtime charges if applicable)
Advertising:	airport has on-airport advertising displays (visible from the airside) from which it receives up to \$20,000/month in revenue

## Amenities

On-airport fire station with [full ARFF capabilities](#) provided by private contractor [Rural/Metro](#)  
FAA Air Traffic Control Tower operates 0645-2230 daily  
MMU has an [ILS approach](#) for Rwy 23  
Snow removal equipment  
U.S. Customs available 24 hours (User Fee Airport).

## Significant Tenants

[FTC FBO, LLC](#) (FBO)  
[Signature Flight Support](#) (FBO)  
Honeywell  
Verizon Corporate Services Group  
Collabera, Inc.  
Short Hills Aviation Services (Part 135 Charter)  
FL Aviation Corp. (Part 135 Charter)

## Based Aircraft

Aircraft based on the field:	172
Single engine airplanes:	96
Multi engine airplanes:	15
Jet airplanes:	52
Helicopters:	9

## Community Relations / Noise Issues

Voluntary [noise abatement procedures](#) are in effect. The airport also charges a \$350 departure fee for Stage I aircraft departing between the hours of 11:00PM and 6:45AM to reduce the impact of aircraft noise on the surrounding community during night time hours.

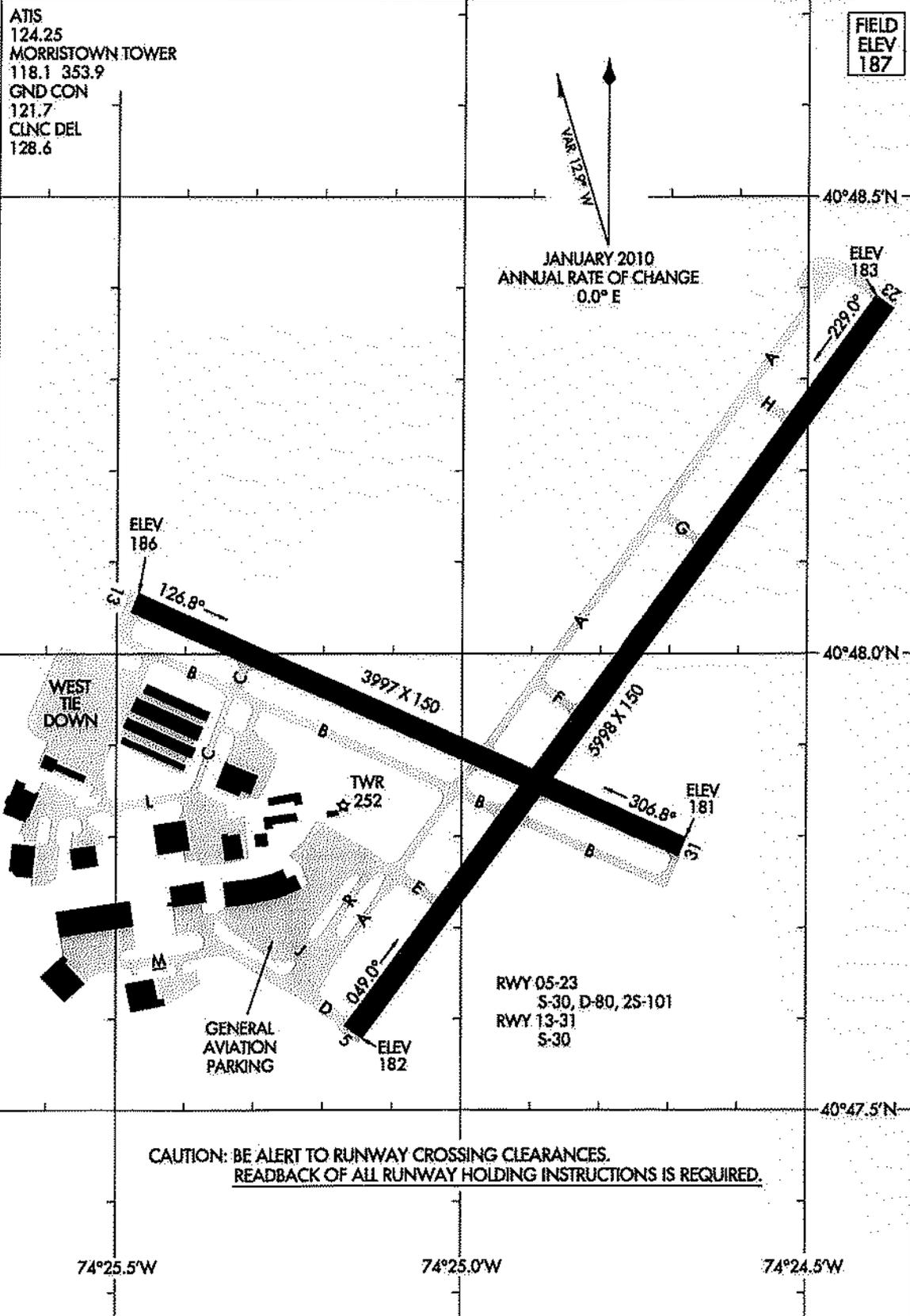
The airport periodically publishes an [online newsletter](#) and has two active airport organizations, the MAA (Morristown Aviation Association) and MAPA (Morristown Airport Pilots Association).

11293

# AIRPORT DIAGRAM

AL-931 (FAA)

MORRISTOWN MUNI (MMU)  
MORRISTOWN, NEW JERSEY



NE-2, 09 FEB 2012 to 08 MAR 2012

NE-2, 09 FEB 2012 to 08 MAR 2012

# AIRPORT DIAGRAM

11293

MORRISTOWN, NEW JERSEY  
MORRISTOWN MUNI (MMU)

## SDL – Scottsdale Airport

[www.scottsdaleaz.gov/airport](http://www.scottsdaleaz.gov/airport)



A Phoenix area GA Reliever, Scottsdale is a busy single-runway airport with a traffic mix similar to Addison. From the Scottsdale Airport website:

*“Scottsdale Airpark, the 2,600 acre commercial area which surrounds the Airport, has become a national model for airport-based business parks. This model has been achieved through the efforts of numerous City of Scottsdale civic and community leaders. Several important factors have contributed to the success of the Scottsdale Airport/Airpark - it is headquarters for over 25 national/regional corporations; home to more than 2,500 small to medium-sized businesses; workplace of more than 48,000 employees; and has easy airport access and seven miles of taxiway access. The workforce within its boundaries has tripled in the past decade, making it the third largest employment center in the Greater Phoenix region.”*

Scottsdale’s air traffic has substantial seasonal variation, increasing in winter and decreasing in summer. Runway load-bearing capacity is currently limited to 75,000 pounds (dual wheel main gear), but [an increase to 100,000 pounds](#) (necessary to accommodate larger business jets such as the Gulfstream G-V and Bombardier Global Express) is actively under consideration.

### Reasons to visit:

- ✈ Scottsdale Airpark (extensive “through-the-fence” operations)
- ✈ Separate Minimum Standards for the Airport and the Airpark; the airport provides a comprehensive listing (and links to) [airport regulatory documents](#) on its website.
- ✈ Single-runway GA airport in a densely developed urban location
- ✈ SDL is developing a [Strategic Business Plan](#)

## Ownership and Governance

SDL is owned and operated by the City of Scottsdale, AZ. The [Airport Advisory Commission](#) advises the City Council on policy matters relating to the operation of the airport, proposals for development, airport area land use, fees and safety concerns.

## Staff (14 full-time positions)

### Administration:

Aviation Director – Gary Mascaro, C.M., C.A.E.  
Aviation Planning and Outreach Coordinator – Kate O'Malley  
Management Analyst – Shannon Johnson  
Administrative Assistant – Theresa Smith

### Operations and Maintenance:

Airport Operations Manager – Chris Read, C.M.  
Airport Operations Supervisor – Ken Goucher, A.C.E.  
Maintenance Technician II – William Underbrink  
Senior Airport Operations Tech – Tim Bishop  
Senior Airport Operations Tech – Lyle Roesler  
Airport Operations Tech – Colin Walker  
Airport Operations Tech – Lindell Hendricks  
Airport Operations Tech – Ryan Millsaps  
Airport Operations Tech – Ernie Cook  
Airport Operations Tech – John Fonville

## Budget / Financing / Sources of Revenue

Annual fuel flowage: 8,100,000 gallons (2011)  
Fuel flowage fee: \$0.08/gallon  
Landing fees: none; transient aircraft fee \$1.50/1000lbs for aircraft >12.5klbs  
U.S. Customs: User Fee Airport ([charges](#) from \$50 to \$750 per clearance based on aircraft size, with a \$225 charge for after-hours services)  
Airport's [schedule of rates and charges](#) lists a variety of fees and charges

## Amenities

FAA Air Traffic Control Tower operates 0600-2100 daily  
U.S. Customs available 24 hours (User Fee Airport)  
Direct flights to DCA (Washington National Airport) available from Scottsdale Air Center  
On-airport fire station  
SDL has only RNAV (GPS) instrument approaches; no ILS

## Significant Tenants

[Landmark Aviation](#) (FBO)  
[Scottsdale Air Center](#) (FBO)  
[Scottsdale Airport Business Directory](#)

## Based Aircraft

Aircraft based on the field:	341
Single engine airplanes:	176
Multi engine airplanes:	40
Jet airplanes:	104
Helicopters:	21

## Community Relations / Noise Issues

Scottsdale Airport has an active [community outreach program](#) that provides speakers to community groups in addition to offering airport tours.

Scottsdale conducted its third [FAR Part 150 Noise Study](#) in 2005, following earlier Part 150 studies conducted in 1985 and 1997. Scottsdale Airport receives a large number of noise complaints from the surrounding communities; noise concerns are a significant issue for the airport. The airport encourages pilots to commit to a voluntary ["good neighbor" pledge](#) as a means of demonstrating concern to the community and educating pilots on noise abatement efforts and best practices. The airport website has extensive [noise information](#).



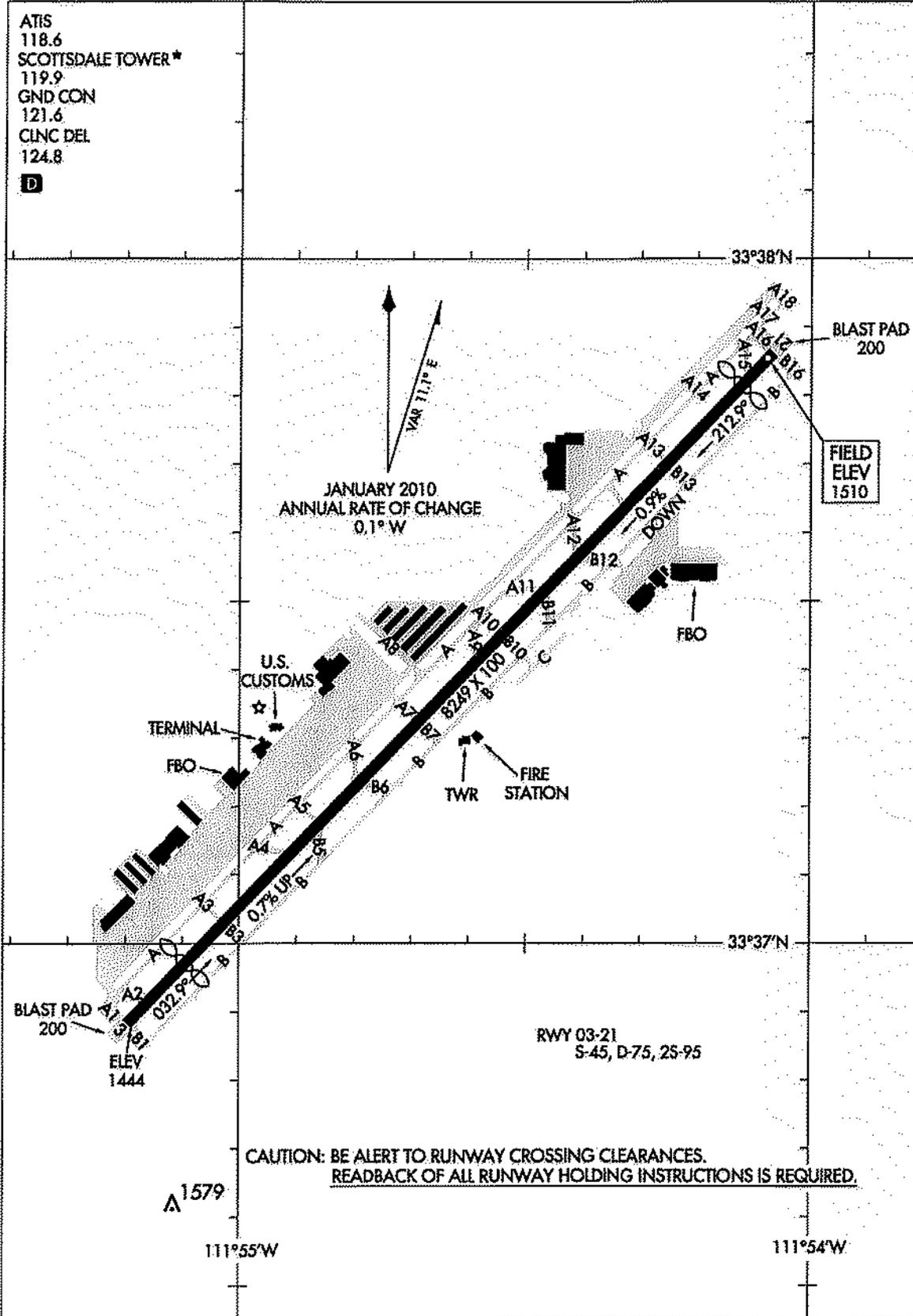
12040

# AIRPORT DIAGRAM

AL-5651 (FAA)

SCOTTSDALE (SDL)  
SCOTTSDALE, ARIZONA

ATIS  
 118.6  
 SCOTTSDALE TOWER \*  
 119.9  
 GND CON  
 121.6  
 CLNC DEL  
 124.8  
**D**



SW-4, 09 FEB 2012 to 08 MAR 2012

SW-4, 09 FEB 2012 to 08 MAR 2012

# AIRPORT DIAGRAM

12040

SCOTTSDALE, ARIZONA  
SCOTTSDALE (SDL)

## SGR – Sugar Land Regional Airport

[www.flysgr.com/index.asp](http://www.flysgr.com/index.asp)



Located approximately 20 miles southwest of downtown Houston, Sugar Land Regional Airport is a growing GA Reliever with a focus “on corporate aviation, while maintaining a balance for our community's general aviation needs.” The airport is owned by the City of Sugar Land, which also owns and operates the only FBO, recently re-branded as “Global Select”. Revenues from the FBO operation are used to support the development of the airport.

### Reasons to visit:

- ✈ New 60-acre general aviation (T-hangar) development
- ✈ 20,000 SF terminal building
- ✈ U.S. Customs User Fee Airport (NO CHARGES for services; SGR previously charged for Customs services, but stopped doing so after losing business to Houston Hobby Airport, which is a U.S. Customs Landing Rights Airport); Stand-alone U.S. Customs facility



## Ownership and Governance

On December 18, 1990, the City purchased the privately-owned airport as a self-sustaining enterprise. The airport name was changed to Sugar Land Municipal Airport. Revenue generated by the City owned / operated FBO continues to support controlled development of the airport. In 2002, the name was changed to Sugar Land Regional Airport to reflect the facility's regional role as a corporate business executive airport for the Houston Metro area. "The Sugar Land Regional Airport's focus is on corporate aviation, while maintaining a balance for our community's general aviation needs."

### Staff (7 airport positions, 20 FBO positions)

#### Airport Staff:

Director of Aviation – Phillip Savko  
Assistant Aviation Director – Anne Gaines  
Business Manager – Elizabeth Rosenbaum  
Facilities and Airfield Infrastructure Manager – Gary Hawkins  
Management Assistant II – Marissa Bazan  
Administrative Coordinator – Kimbler Johnson  
Receptionist – Krystal Benham

#### FBO Staff:

Airport Services Manager – Jodie Kaluza  
Airport Services Representatives – five (5) positions  
Line Services Manager – Pete Simons  
Line Crew Supervisor – Ron Stroud  
Line Crew Supervisor – Kedrick Smith  
Line Crew Staff – eleven (11) positions

### Budget / Financing / Sources of Revenue

Annual fuel flowage: unknown (likely around 3,000,000 gallons)  
Annual Budget: reported to be \$9 million (11/29/2010 news article), most of which is likely to be for fuel  
Fuel flowage fee: N/A – airport owns FBO  
Landing fees: none; [ramp fee](#) (from \$10 to \$550) waived with fuel purchase  
U.S. Customs: User Fee Airport (no charges for Customs services; airport used to charge \$250/clearance but stopped doing so after losing Customs business to HOU – Houston Hobby Airport)

### Amenities

FAA Air Traffic Control Tower operates 0600-2200 daily  
SGR has an [ILS approach](#) for Rwy 35  
U.S. Customs available 24 hours (User Fee Airport)

### Significant Tenants

[Global Select](#) (FBO operated by the Sugar Land Regional Airport)

## Based Aircraft

Aircraft based on the field:	114
Single engine airplanes:	67
Multi engine airplanes:	26
Jet airplanes:	18
Helicopters:	3

## Community Relations / Noise Issues

Sugar Land does not appear to have any significant noise or community relations issues.

**Note:** airport diagram (next page) has not been updated to show new GA development

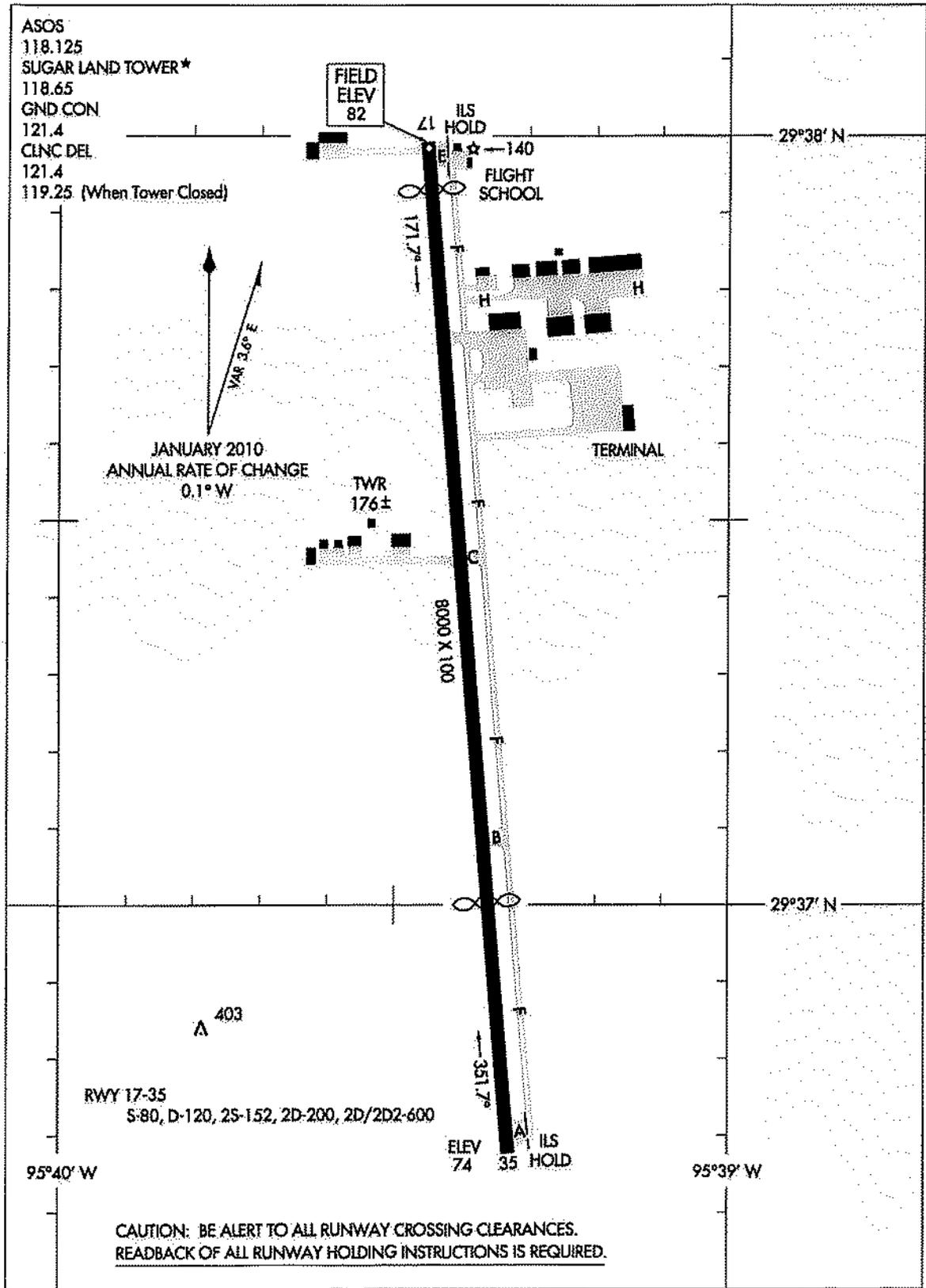
10210

# AIRPORT DIAGRAM

AL-5537 (FAA)

HOUSTON/ SUGAR LAND RGNL (SGR)  
HOUSTON, TEXAS

ASOS  
118.125  
SUGAR LAND TOWER\*  
118.65  
GND CON  
121.4  
CLNC DEL  
121.4  
119.25 (When Tower Closed)



SC-5, 09 FEB 2012 to 08 MAR 2012

SC-5, 09 FEB 2012 to 08 MAR 2012

CAUTION: BE ALERT TO ALL RUNWAY CROSSING CLEARANCES.  
READBCK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

# AIRPORT DIAGRAM

10210

HOUSTON, TEXAS  
HOUSTON/ SUGAR LAND RGNL (SGR)

## TEB – Teterboro Airport

[www.panynj.gov/airports/teterboro.html](http://www.panynj.gov/airports/teterboro.html)



As the primary GA Reliever airport for New York City (only 12 miles from Manhattan) Teterboro is the country's pre-eminent corporate airport. While Teterboro has averaged "only" 155,000 annual operations over the past three (2009-11 recession) years, 100% of TEB's traffic is itinerant and 86% is IFR. In 2010, TEB's five FBOs sold 40 million gallons of aviation fuel. Teterboro is one of five airports owned and operated by the Port Authority of New York and New Jersey (PANYNJ) which also operates several marine terminals, ferry boats, bridges, tunnels, rail lines, and industrial parks.

### Reasons to visit:

- ✈ More corporate jet traffic than any other airport in the country
- ✈ EMAS at departure end of Runway 6 constructed following overrun accident in 2005 (see photos next page); configuration similar to departure end of Addison's Runway 15
- ✈ Aviation Hall of Fame & Museum of New Jersey located on-airport



**Left:** runway overrun, February 2, 2005, prior to EMAS installation (13 injured). **Right:** October 1, 2010 overrun safely stopped by EMAS.

## Ownership and Governance

Teterboro Airport is owned and operated by the Port Authority of New York and New Jersey (PANYNJ). The governor of each state appoints six members of the agency's Board of Commissioners, subject to state senate approval. Commissioners serve as public officials without pay for overlapping six-year terms. The governors retain the right to veto the actions of the Commissioners from his or her own state. Board meetings are public.

An Executive Director, appointed by the Board of Commissioners, is responsible for managing the operation of the Port Authority in a manner consistent with the agency's policies, as established by the Board.

The Port Authority undertakes projects and activities in accordance with the Port Compact in 1921, and amendatory and supplemental legislation.

PANYNJ conceives, builds, operates and maintains infrastructure critical to the New York/New Jersey region's trade and transportation network. These facilities include America's busiest airport system, marine terminals and ports, the PATH rail transit system, six tunnels and bridges between New York and New Jersey, the Port Authority Bus Terminal in Manhattan, and the World Trade Center.

**Staff** (information not available)

## Budget / Financing / Sources of Revenue

Annual fuel flowage:	40,000,000 gallons (2010)
Fuel flowage fee:	\$0.21/gallon
Landing fees:	\$3.50/1000lbs up to 80klbs; \$6.50/1000lbs over 80klbs

## Amenities

FAA Air Traffic Control Tower operates 24 hours

Instrument approaches: [ILS Runway 6](#) and [ILS Runway 19](#)

U.S. Customs available without charge (Landing Rights Airport)

[Teterboro Airport Flight Crew Briefing](#) (promotes safe operations in busy airspace)

ARFF and security services are provided by the [Port Authority Police Department](#)

## Significant Tenants

- [Atlantic Aviation](#) (FBO)
- [First Aviation Services](#) (FBO)
- [Jet Aviation](#) (FBO)
- [Meridian](#) (FBO)
- [Signature Flight Support](#) (FBO)

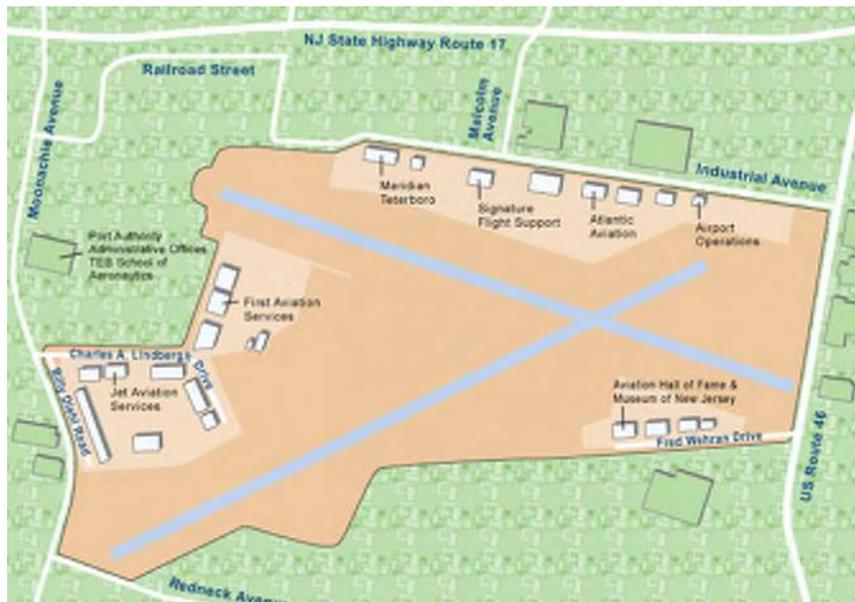
## Based Aircraft

Aircraft based on the field:	75
Single engine airplanes:	11
Multi engine airplanes:	10
Jet airplanes:	46
Helicopters:	8

## Community Relations / Noise Issues

Teterboro Airport has significant noise issues and concerns in neighboring communities. The [Teterboro Industry Working Group](#) was formed in 2006 to help address these issues.

Teterboro Airport is one of a handful of airports with an enforceable and stringent noise limitation program. Teterboro Airport's program became effective in 1987, three years before the 1990 Aircraft Noise and Capacity Act. This act severely limits an airport's ability to restrict aircraft based solely on subjective noise criteria. Under Teterboro's program, if an aircraft receives three noise violations within a two-year period, it is prohibited from using Teterboro. When the permanent noise monitoring system was installed, a unique committee, the Teterboro Aircraft Noise Abatement Advisory Committee (TANAAC), consisting of the airport operator, federal, state and local elected officials, FAA representatives and airport users, was formed to oversee noise abatement. This group has served as an example for other airports to follow, proving that airports can co-exist and be sensitive to the needs of their surrounding neighborhoods.



11293

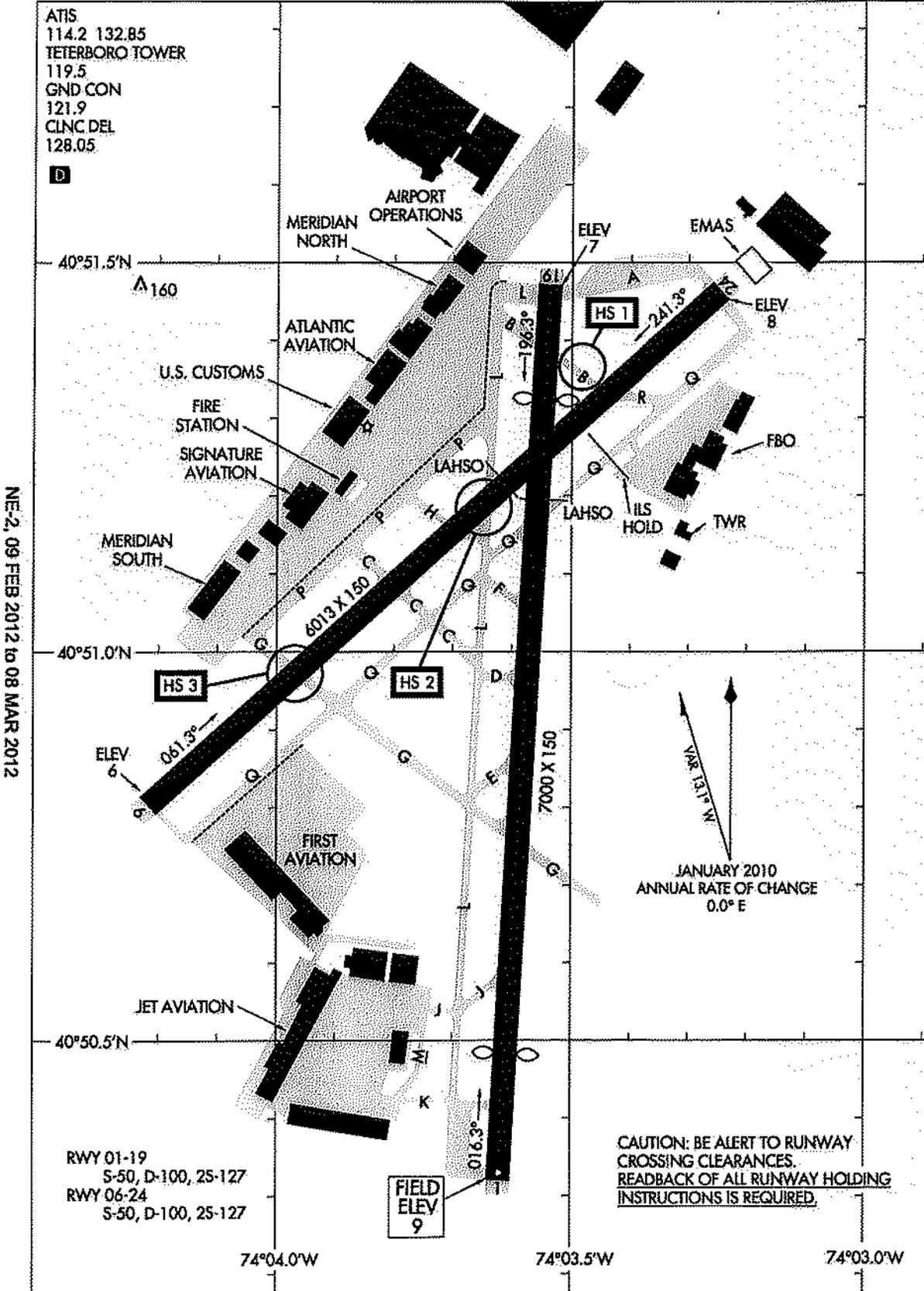
# AIRPORT DIAGRAM

AL-890 (FAA)

TETERBORO (TEB)  
TETERBORO, NEW JERSEY

ATIS  
 114.2 132.85  
 TETERBORO TOWER  
 119.5  
 GND CON  
 121.9  
 CLNC DEL  
 128.05

**D**



NE-2, 09 FEB 2012 to 08 MAR 2012

NE-2, 09 FEB 2012 to 08 MAR 2012

# AIRPORT DIAGRAM

11293

TETERBORO, NEW JERSEY  
TETERBORO (TEB)

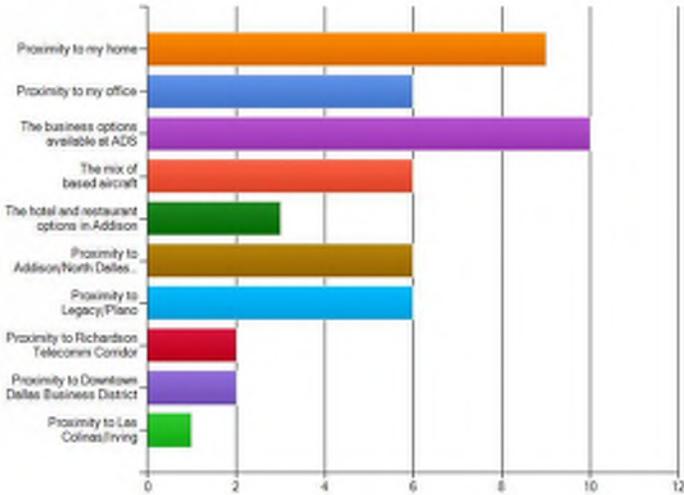
## **APPENDIX E: TENANT SURVEYS**

### **APPENDIX E.1 AIRPORT BUSINESS SURVEY AND RESPONSES**

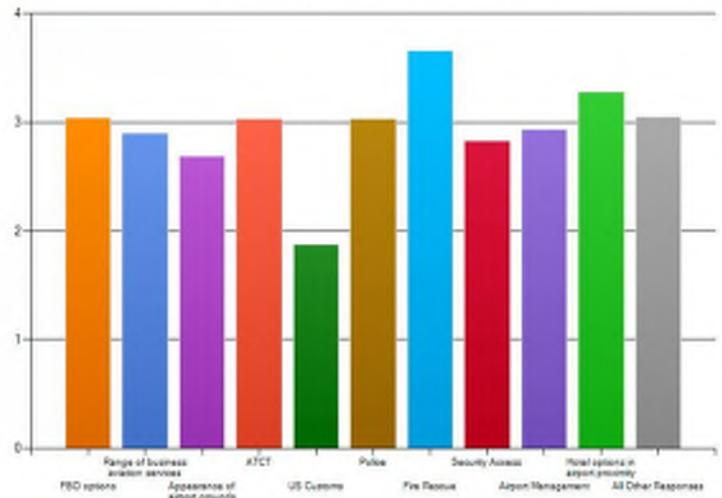
### **APPENDIX E.2 HANGAR TENANT SURVEY AND RESPONSES**

## Addison Airport Business Survey Results 2012

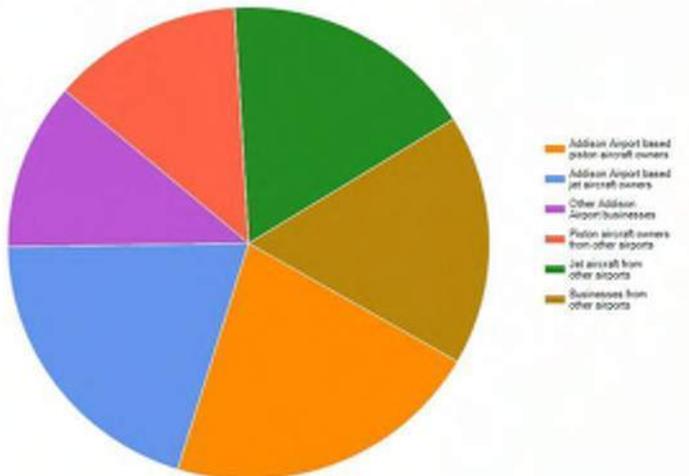
My business is at ADS because: choose all that apply



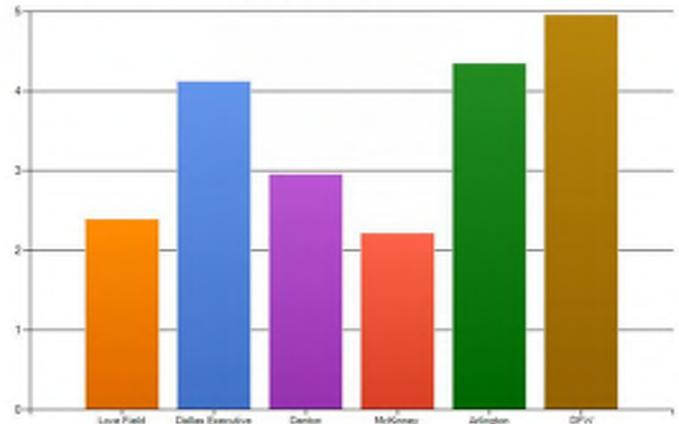
Please rate the following services at Addison Airport:



Who are your customers? check all that apply



Please rank the following airports in terms of providing competition for your business:



### What changes would most improve the airport?

- Start with cleaning up the airport. Remove all the aircraft and equipment that have become an eyesore.
- More regular two way opportunities between users and management. Clean up the junk everywhere. Is there no code enforcement that can be done?
- Maybe some clean up of outdated planes and other equipment seen. Also, more communication - is there a newsletter? Is there a monthly after hours or luncheon in which airport people are invited to come and meet and have leisure talks?
- An overrun area and approach lights on the south end.
- Consolidate city/airport equipment to open up much needed hangars for business use
- Improve communication on the field. Airport management should be more supportive of businesses wishing to base at ADS. Decent transient parking for planes. More options for leasing facilities. More public/private

partnerships for both large and small businesses. A solution to the high cost of fuel to make ADS more competitive with the area airports.

- Provide more support for those companies that are drivers of the business and airport traffic to expand their business at the airport and in turn increase the revenue to the city and the airport. There is so much wasted space and space that has sat vacant for many years while businesses that are struggling with space limitations have no options to expand.
- Improve safety. Cut time waiting to takeoff and landing
- On field eating services.
- Parallel Rwy or West side taxiway
- I would like to see less use of hangars for non related aviation activities and businesses. I do realize that the hangars are private property and that the owners/renters can use them as they wish. There are a number of the hangars that are used as storage units.
- More access gates off Victor Parking
- Longer Runway! (TORA)
- Airport needs to remove the car dealers from the hangars so that airplanes can fill those spots. Car dealers don't buy jet fuel, schedule mx, fill hotels and in general bring aviation money to the airport. They block additional aviation money from the airport by taking up valuable hangar space and artificially driving up hangar rent for those with aircraft.
- Security, too much vehicle traffic on non movement areas. Better coordination with
- Dallas departure to speed up departures. Departure delays getting larger and larger.
- Work with departure control to come up with special departure procedures like the ones at TEB to get us out faster. Runway needs to be kept at it's current length with EMAS.
- Anything shorter will impact our operations and might cause us to rethink staying at airport.
- Better Relations with Private General Aviation Owner/Business Community, 100LL Fuel highest in Metroplex on a continuous long running basis.  
departure and arrival delays
- Upgraded ARFIdx

### **What new services or businesses would improve ADS and be beneficial to your business?**

- The airport should have some basic equipment to expedite removal of an aircraft from the runway following a minor runway incident i.e. small aircraft flat tire, gear up landing.
- Parts for aircraft maintenance facilities. On airport restaurant that pilots can fly into and taxi up to instead of having to find transportation to go outside of the airport
- Also, more communication - is there a newsletter? Is there a monthly after hours or luncheon in which airport people are invited to come and meet and have leisure talks?
- More Avionics businesses.
- Addison is such a hub for so much aviation activity, it's appalling the amount of work that is sent off-field. Routine overhaul services are not available on the field and are often sent out of state. If the town could find a way to be attractive to some of those service-providers, perhaps even establish an industrial area for them, it would serve to retain quite a bit of business (read: tax revenue) in the town. Airport proximity would be important, however it doesn't need to be on airport, just near. Businesses could include engine overhaul, component overhaul (magnetos, starters, etc), interior services, paint and a wealth of other services we currently send to Love Field or even Oklahoma.
- Businesses that provide specific aviation repair services. Ex: Engine shops, accessory overhaul shops, specialized structures repair shops. Would not have to be on ADS, just in close proximity.
- None
- A Excellent Pilot Coffee Shop, GA vendor seminars supported by TOA, PR effort to let the GA pilots know that TOA really cares about the Private Pilot, Aircraft Washing Facility etc.

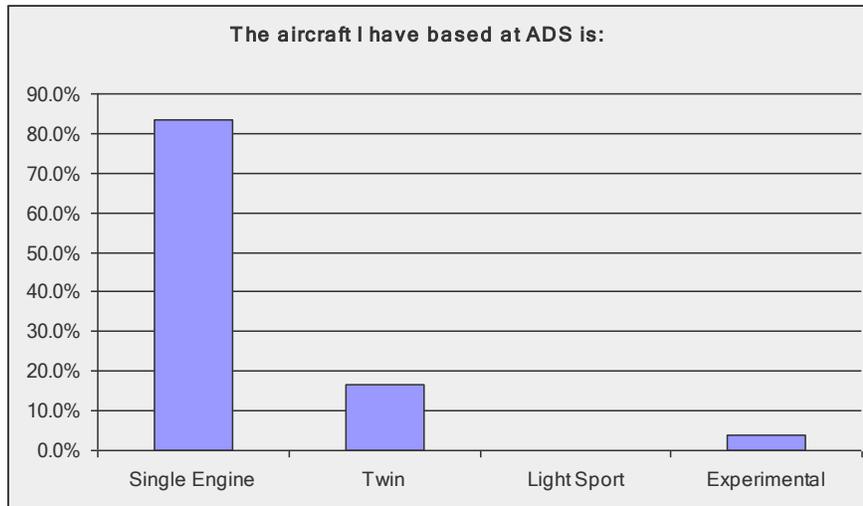
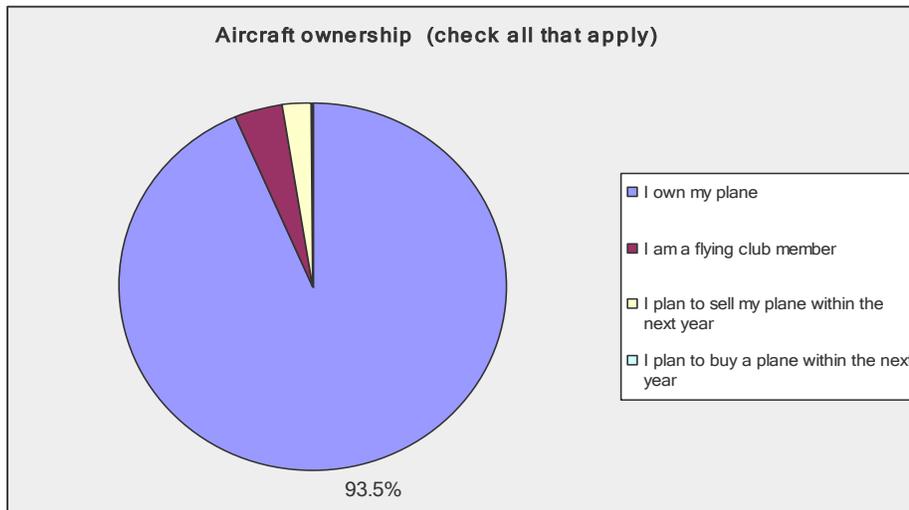
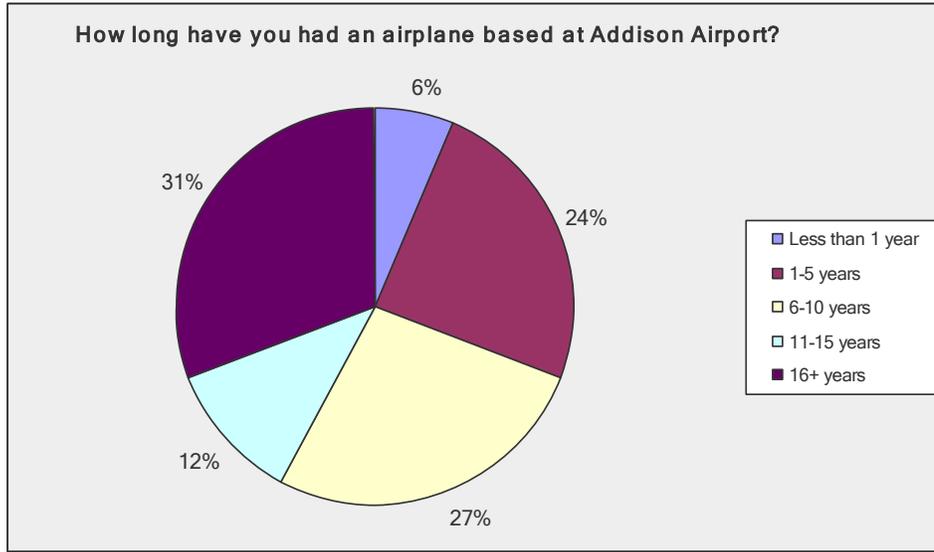
### **What do you like about Addison Airport?**

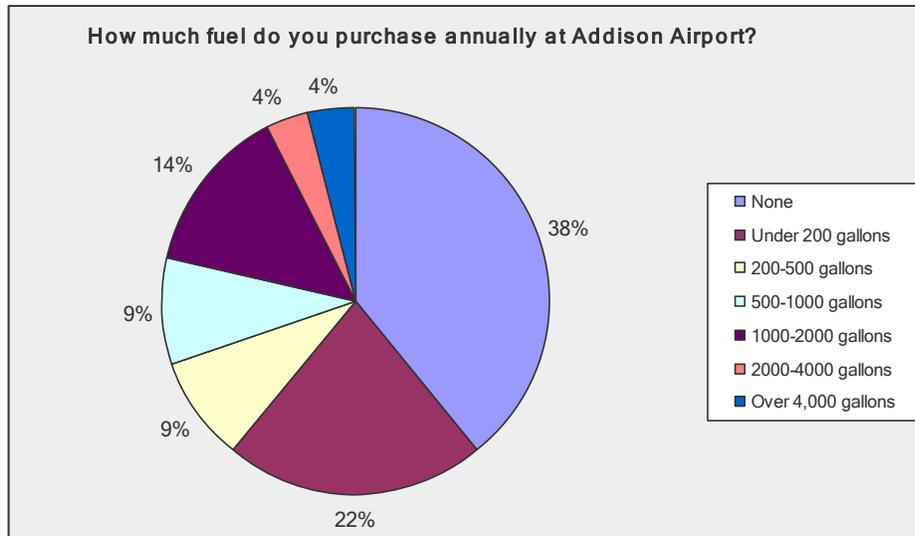
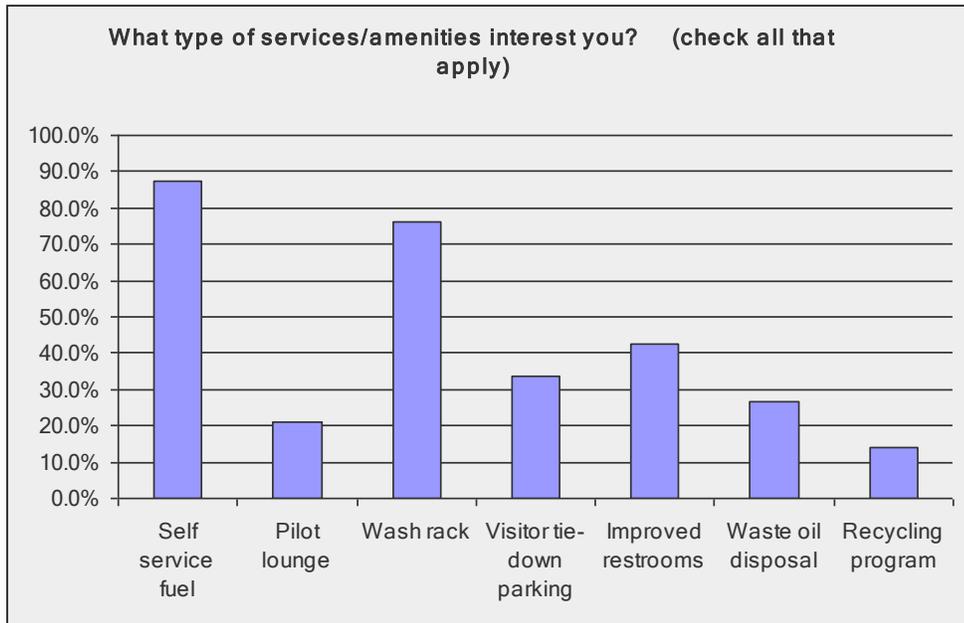
- Location. The upscale surroundings of the airport. The many different options available to guests of the airport i.e. restaurants, lodging, activities. Big business that is in the local area.
- Length of runway, Numerous approaches. Convenient to home/office.
- The accessibility to airport support and management staff. The timely response to our building maintenance needs. The services available to our customers such as rental cars, multiple fuel choices, catering, etc.
- Very proud of the airport and the town of Addison. This airport continues to be on the list of BUSIEST private airports in U.S. - therefore promoting our business and the Town's.
- Its proximity to upscale residential areas.
- Location, convenience, proximity to other town amenities
- Location, People based on ADS, ATC services and facilities
- Location
- Proximity to businesses and office area
- Love the traffic coming in and out of the airspace. Like the proximity to DFW.
- hometown feeling
- Proximity to North Dallas
- Excellence in airport management, ATC, and proximity to home residence.
- Its convenience. It does get busy at times especially around rush hour. But I can live with that.  
clean descent controllers and Millionair.
- Darcy
- Services and Friendly People
- airport location, tower ops, excellent runway install "Stop Bar Lights" to help with incursions by aircraft
- Close in to work, no airlines to deal with.
- Convince
- Location, ease of use.

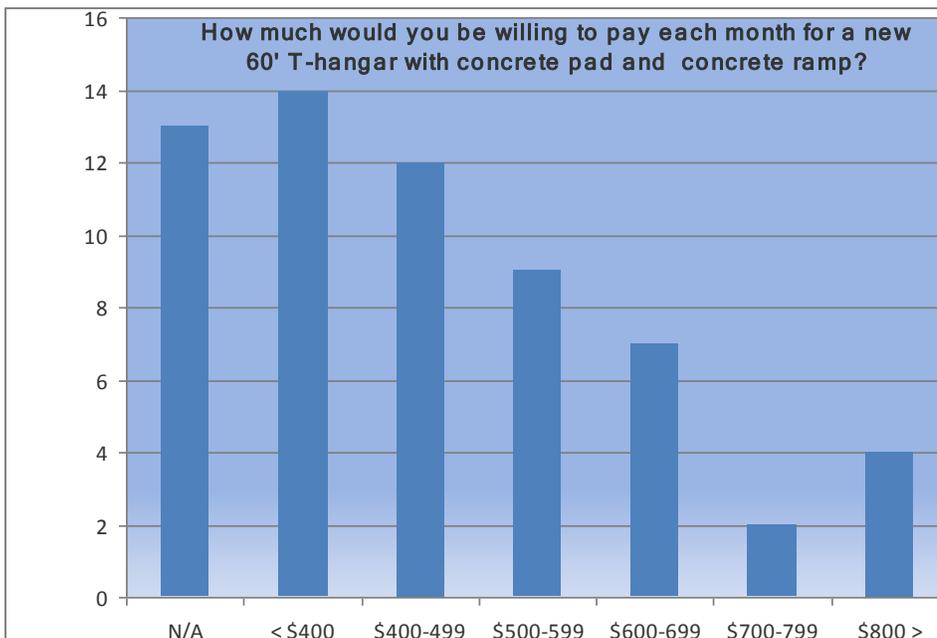
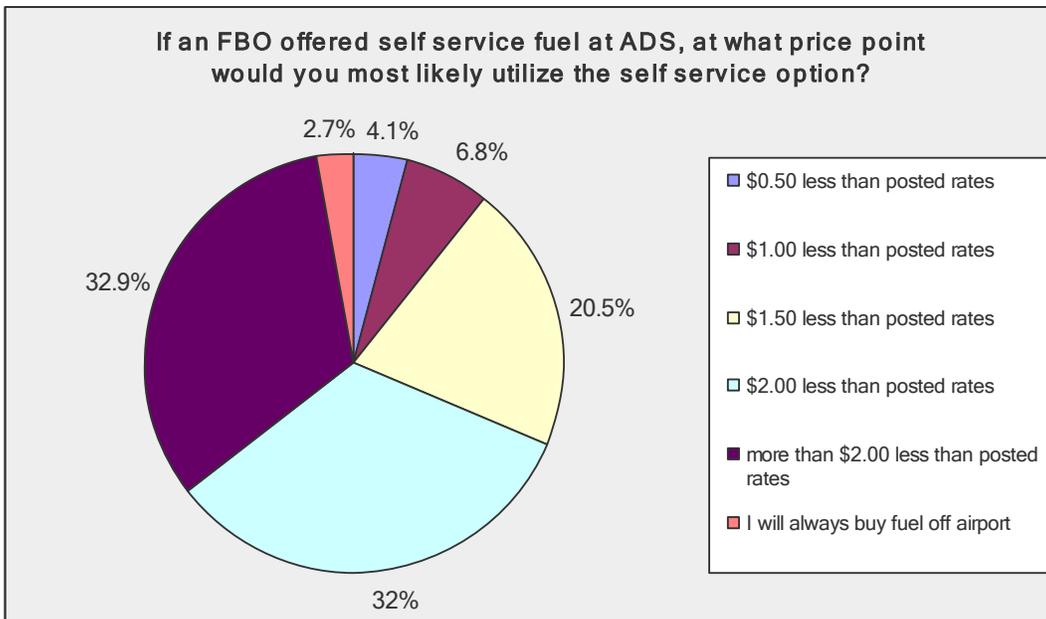
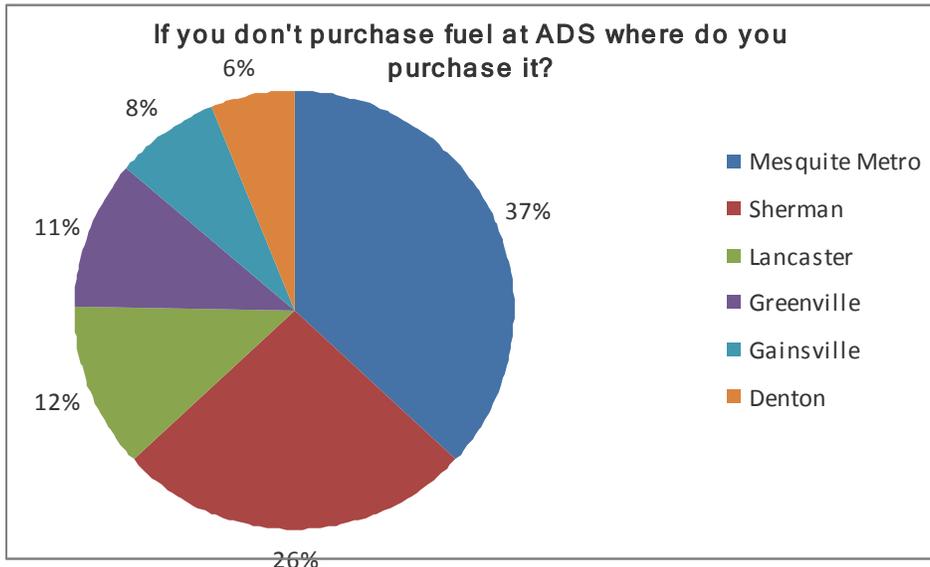
### **Do you have any other comments?**

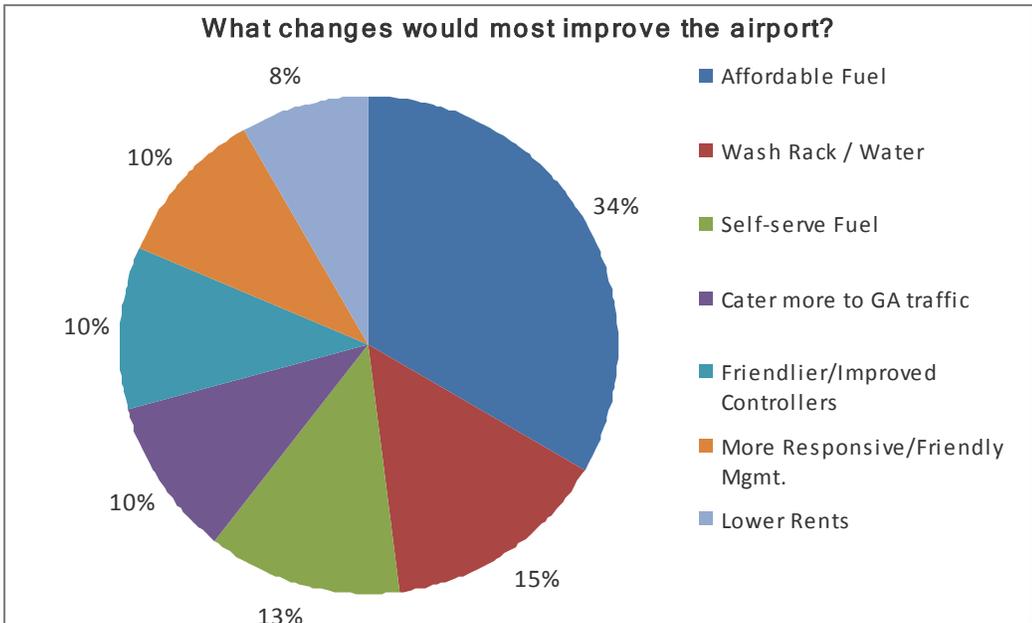
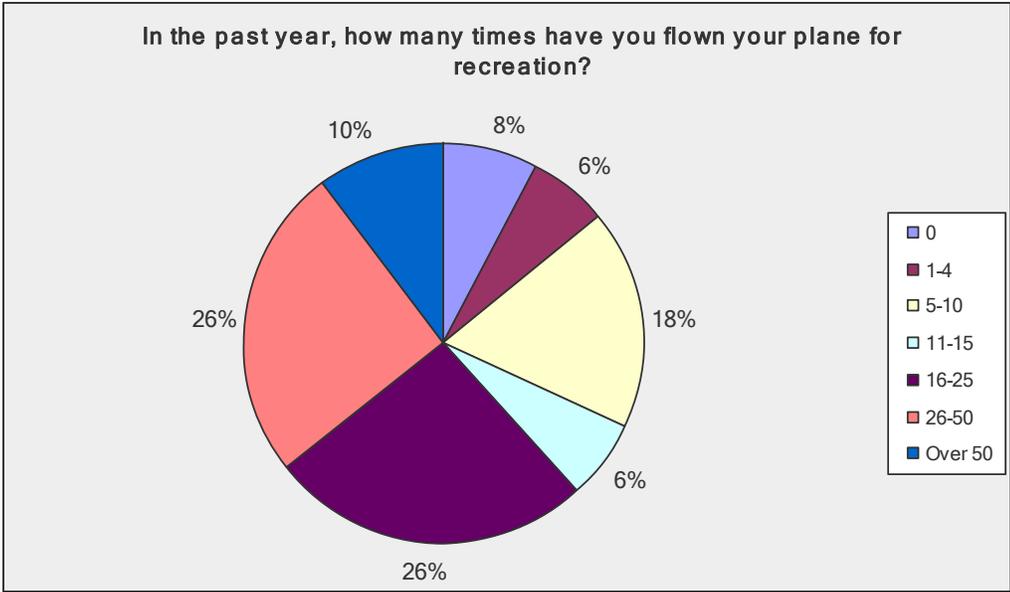
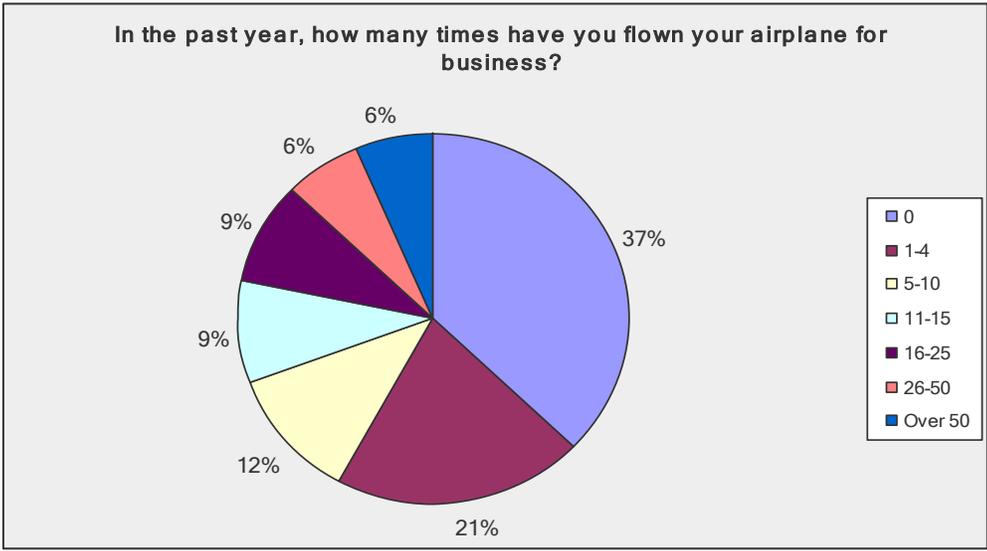
- Minimum Standards should be adhered to. Better Preplanning of major airport projects.
- Working at night. Incentives for contractors finishing early.
- Fuel prices are ridiculously high.... usually by a couple of dollars per gallon vs. other local airports.
- The high cost of doing business at ADS (rents, fuel prices, etc) puts my business at a financial disadvantage to similar businesses at other airports.
- The town would greatly benefit by having some sort of ongoing communication method for the users. Specifically, a way to meet regularly with representatives from all stakeholders.
- No.
- Cheaper fuel would be nice
- Airport needs an ASOS and an ATIS freq. The ATIS message is too long, wx conditions need to be separated to a different channel.
- Great opportunity to really make a effort to make needed changes but little hope of actually seeing any changes. Airports reputation for a very long time now is that if you don't burn Jet A don't bother us

## Addison Airport T Hangar Survey Results









## If you don't purchase fuel at ADS, where do you purchase it?

- anywhere and everywhere with better pricing
- We purchase significant amounts of fuel at significantly lower prices at SWI, LNC, HQZ, & Greenville
- million air
- any where else
- anyplace that doesn't rip me off
- kgvt, klnc
- EVERYWHERE else is cheaper. McKinney, Redbird, etc.
- nearby discount fuel airports, Sherman, Gainesville, etc.
- HQZ, LNC, GVE
- Mesquite, Sherman - anywhere but Addison - looking for less expensive fuel AND self serve
- khqz, kswi, kosa
- Sometimes at local (more or less) airports for less expensive fuel.
- KSAT khqz
- Other much less expensive nearby airports.
- SWI AND F41. SELF SERVICE FUEL AT ADS NEEDS TO BE ABOUT \$0.50 A GALLON FROM SWI
- hqz sherman I think you know the area field rates. They are generally \$2-3 below ADS & TKI
- Mesquite, Gainesville etc, etc.
- KGVT KHQZ
- HQZ,
- CLL
- Usually Mesquite (HQZ), but any airport is just about cheaper than ADS.
- panama city beach
- HQZ, RBD, F46
- SWI, HQZ
- Where it's cheaper
- KSWI or Rockwall
- Other airports
- Sherman, Cleburne, Granbury, Lancaster
- Denton or Mesquite
- sherman KSWI and mesquite KHQZ
- sherman
- For the fuel I could purchase at KADS but don't: Various locations
- area fbos are ALL much cheaper than addition. your prices are a joke.
- Sherman, Gainesville and Mesquite
- Mostly other close by airports where the price of the fuel is much less.
- Most other airports are \$2.50 less than ADS.
- My customers go off field anywhere to save up to 2\$ a gallon. Fuel prices here has run general aviation out of town.
- kgyi, kgle khqz, kswi
- I use unleaded.
- Denton, Mesquite and North Texas Regional
- KHQZ, KGYI
- HQZ, LNC
- HQZ--never purchase from ADS since its so expensive
- where we don't feel like we are getting ripped off. Usually McKinney or Mesquite are quite cheaper
- lancaster-mesquite-gainesville-sherman
- various self serve facilities around the area
- Mesquite
- Mesquite, Sherman, Bonham, Greenville, Lancaster
- HQZ, GVT or destination airport
- KDTO
- self serve KHQZ.
- Denton self serve, average \$4.50/gal
- SWI, GVT, HQZ, anywhere but ADS
- Sherman, Hillside, Lancaster, Cleburne
- Due to health haven't flown or used fuel in a few years.
- any airport cheaper

- Mesquite, Sherman, Cleburne and Clifton
- Sherman Gainesville, Airpark, Lampasas

## What changes would most improve the airport?

- low cost self serve fuel, no more lease \$ increases until we all make more money
- A toning down of the authoritarian "strictly by the book" regime run by \*\*\*\*\* in the tower. While some of that may be appropriate for training purposes, its no way to "run a railroad". If what I have heard is correct, not only do pilots avoid ADS due to \*\*\*\*\*'s authoritarian ways (e.g., demanding readbacks that no other tower requires), but his over-zealous reporting of violations of the Movement Area have resulted in FAA warnings to the Town that have resulted in the town having to install expensive and time-consuming security systems that haven't seemed to do much more than piss off even more people. While \*\*\*\*\* is usually "right", I'd rather he be "right" somewhere else. 2. A more "friendly approach" to the single engine and light twin operators at ADS. We sometimes feel (and worry) that as the Airport grows, and the Town looks for additional revenue, that we are being squeezed out (i) by newer fancier more expensive hangars replacing much more economical patio hangars and T-hangars that could use some work, but don't need to be replaced, (ii) by higher rents and (iii) by the higher cost of fuel at ADS.
- cheaper fuel
- reasonable fuel price
- Improve tower. Controllers are rude and incompetent. I often tell other pilots to use other airports because of the poor ATC at ADS. There should be a terminal where passengers could be picked up or dropped off without being ripped off by fancy FBOs.
- fuel costs need to be lower
- Better communications with management. Less BS. Quit trying to drive prop planes to other places. The best airports in Tx. are the freindly ones not the pretty ones. Get people in the control tower that know what their doing!!
- Managment that wasn't so corporate aircraft oriented. Management that executes land lease renewals without torturing the tenant.
- Much less expensive fuel...more of a community airport feel and less of a commercial airport.
- Better ATC, ie: less ATC
- Self-serve fuel.
- self serve
- As above, restrooms in the vicinity of groups of hangars.
- Reduce fuel prices (including taxes) to the least available rates. Reduce hanger rent rates to the least possible amounts. Stop redundant requirements (i.e. ATIS repeating regulations, lengthy and unnecessary).
- New T-hangars for lease at rates equal to McKinney, Mesquite, Denton, etc.
- SELF SERVICE FUEL THAT IS NO MORE THAN \$0.50/ GALLON ABOVE SWI.
- Additional T-hangers (newer) for the smaller aircraft. ADS has not kept up with the times. I would probably not build many 60' wide hangers, 40-44' wide is adequate for most singles and light twins. Improved drainage
- Better hanger facilities, level ground, replace hanger doors with bi-fold doors, remove non airplane tenants

- A public place to park for up to 3 days that doesn't involve getting charged a parking fee. If someone comes in for a visit there is no place to park without buying expensive gas or paying overnight fees at an FBO. A wash rack for aircraft based at the field would be nice also.
- A second runway for VFR operations
- more modern with lounge and BETTER HANGERS
- Realistic development and responsiveness to the tenants! Replacement of key personnel in management from another successful airport. Commercial jet traffic comes and goes and has a long history of cyclical ups and downs, but general aviation is much more steady. BOTH are important to the longevity and economic viability of KADS.
- Wash rack, restore power to Hangars
- Cheaper fuel, water supplied to t-hangar rows, cheaper rent, self serve fuel, remotes for gates
- Friendlier management/security. A new control tower manager.
- Eliminate my perception there is an inherent bias by ATC towards the heavy iron.....
- parallel taxiway on the west side of the runway, there's alot of having to wait for planes going in the opposite direction
- lower fuel prices
- Lower hangar rents and lower fuel cost
- Lower cost to operate from this airport.
- Would like very much to be able to buy fuel on the field at a price competitive with that which is available at other airports within reasonable stopping distance: HQZ, DTO, XBP, GPM just as a few examples.
- More affordable t-hangers, affordable self-serve gas, wash rack. A nice airport resturant always makes a great GA airport. Ask the people at Camerillo, CA (CMA) or VNY...
- Pricing of hangars have ran many of my customers off in the last few years. Give more attention to the General aviation community. This place is running off all of general aviation and has severly hurt the general avaiation maintenance companies.
- self-service fuel at good price
- fuel costs competitive to other airports
- A good FBO and facility for piston aircraft, with self-serve fuel, including unleaded (it's coming anyway). Better drainage of some T-hangars
- Self Service Fuel and wash rack for the GA tenants.
- New to the airport, so am just starting to use the facilities. Therefore I can't comment on it much.
- Lower 100LL fuel prices. Not trying to sound rude but the 100LL fuel price is an insult. DFW post cheaper 100LL fuel prices! I would be happy to pay more for the fuel at my home base but lets be reasonable. I know many people that won't fly in to ADS because of no tie downs and high fuel prices.
- The general consensus of my fellow airplane owners who are all single engine owners is that ADS desires us NOT to be on the field. We perceive that ADS really would like to be corporate jet only. The fuel prices are outrageous, fees for gravel floor hanger are outrageous, and so on.
- Wash rack or water hose
- A change in mgmt attitude. Stop playing real estate mogul games with land lease tenants who are asking to renew. We don't care if their building has a stone facade or some other crazy thing you guys have made up. Spend your time trying to figure out how to allow tenants to remain instead of chasing them off so you can replace them with higher paying corporate.
- More affordable fuel. Water access for the hangars.
- cheaper fuel, no threatening and harassment by police.
- Clean up and paint, new hangars, less junk, facilities for small aircraft.
- Lower price for hangar. Lower price for fuel.
- cheap fuel, self service

- strategically located restrooms in GA hanger areas. Neither of the two that I'm aware of are within walking distance of most GA hangers thus making pilots and passengers depend on FBO facilities
- Fuel at a reasonable price. I typically take on 100 gallons plus. That can mean \$200 to \$400 difference in the ADS price vs. other airports at each fill up.
- Airport needs affordable self service fuel. The FBO prices are outrageous. Also, there is nowhere on field to wash the plane. Bringing water in is not very workable.
- Put all of the important contact numbers on the back of the issued badges. Especially Security, FOD control, tower, etc.
- fuel pricing
- Affordable fuel, either FBO full service or self service. ADS fuel is one of the most expensive in the entire metroplex.
- Less police and friendlier atmosphere. Cheaper hangar and fuel.
- Pricing (fuel and Hangar) is about my only complaint. I really like Addison.
- Drainage,
- Larger runup area so Jets don't block the runway.

### **What new services or businesses would improve ADS?**

- Plane wash area 2. Self-service fuel (not necessarily associated with an FBO).
- more flight schools
- A terminal with a restaurant and self service fuel.
- an on site restaurant.
- Besides self-serve fuel, I would like to see some type of a food establishment/restaurant on field where aviation enthusiast could fly into and congregate.
- self serve @ a reasonable price
- I would gladly buy more fuel at Addison for the convenience if the price were more **competitive** and/or if there was a self serve station. Our fuel service is excellent from Landmark but price is very high compared to other airports.
- a restaurant on the field with runway view.
- A full service hotel-restaurant on the airport with views to the runway.
- Self service fuel @ rates equal to Mesquite
- #13
- Not sure but there are enough great restaurants down the street. Look at the businesses that have left over the last ten years. Those are the ones an airport needs.
- A hanger cafe - restaurant, much less expensive gas - water at hangers to clean craft etc
- Self service fuel pumps at a reasonable price.
- A restaurant with an excellent view of the active runway and the Galleria
- Self serve fuel option
- more T hangars...maybe up on the NW corner....dont take ours away!
- lower fuel prices
- City administration and airport administration with a goal of fostering aviation. it is very clear you have no interest in General aviation.
- More off airport transportation options for transit pilots.
- Full service, quality prop shop. There is no shop on field that can do prop overhauls and comply with most of the prop ADs. It is frustrating to have the significant expense to remove the prop and sent it over to KFTW to Byams for overhaul or other significant service or fly the plane over to have the work done.
- The general respect for small GA is lacking at ADS. Addison airport is run like Hobby Airport except we don't have commercial aviation. Let's get back to the basics of a friendly airport and the pleasure of flying.

- Free Tie Downs for over night guest of general aviation. Be able to run up aircraft at your facility after 5 pm.
- Lower fuel cost.
- Unleaded fuel. Rotax engine maintenance and repair.
- On airport restaurant or Deli with seating view of the runway.
- Self serve fuel (at a reasonable price) and visitor tie downs.
- Reasonably priced self-serve fuel
- an eating establishment , something small like Tyler. Not the Outer Marker.
- Self service fuel
- Place for self-service washing of aircraft.
- Be able to handle more volume of traffic during busy times
- Another avionics shop, self service gas pump, wash ramp, improved lighting in GA hanger areas on East side
- Individual security codes per tenant.
- Economical self serve 100LL.
- Self service pumps at a competitive price.
- More maintenance choices.
- Better selection of fuel sources (self service?). Wash area.
- Self serve fuel would be nice, but the price cannot be \$3 higher than nearby airports
- self serve fuel

### **What do you like about Addison Airport?**

- Location, ATC services
- Convenient location.. Generally
- location, maint. facilities,
- close to home
- Location only
- convenience, condition of the airport, Kaboom Town
- The airport people
- location
- convenience, Ka-Boom town, all aircraft services available on airport.
- Very little
- Like most people who work the tower, convenient to my home, Kaboom Town, home to CAF/hanger.
- access from home
- It has virtually everything that a pilot/plane owner needs. It's well maintained. Clean. The tower controllers are considerate and helpful. Its location allows me to fly evenings and get back at a decent time. Because of this, I fly more, and I am increasing my frequency of flying.
- convenient to my home & business. The controllers are outstanding, and the airport community is great.
- Convenience.
- Convenience. I pay a bit more, but the service is great!
- Location. Professional management.
- MONTHLY HANGER RENTAL RATES
- Location, though it is not closes time wise, and the towered controlled field and the field has some good AP/IA and other services.
- Approches, Location
- Convenience, helpful staff and helpul tenants

- Local, towered, IFR support, approach services
- Location in the city.
- Melissa Newman
- convenience
- Location. Most of the management personnel below top management.
- convenient location, some very good tower people
- Close to my office and home and city. Long runway and good taxiways, friendly tower controllers.
- It's been home base since 1959.
- ATC and airport mgt...very professional and on there game (although see #13) And of course Kaboom town
- availability of services available and hours of availability, convenience to home.
- Proximity to home.
- location
- Convenience to home
- Location within the metroplex.
- Very nice GA airport close in to the center of the metroplex with excellent runway/approach capability and has on field most of the maintenance services that I need. Well maintained. Tower and airport administration people are very nice, capable and helpful.
- Controlled airport in great condition.
- Convenience to the city. The Airshows. Security. Up keep for the most part. 4th of July Kaboom Town.
- Live in area
- Good people to deal with, Good ATC people. Close to my house.
- 8
- Location
- location.
- The active management team who keeps the runway and other grounds in such good shape and the great location to North Texas business.
- Great tower personnel, friendly management and grounds/maintenance personnel, great runway and approaches, close to home and work.
- It is close to my home. I have met two good, close friends who hanger at McKinney. My other ADS friends have moved to other airports. With the construction being nearly completed to HWY 121 and US 75, I plan to move my plane to McKinney as the drive time will be negligible.
- Convenience is the only thing that keeps me here
- its location otherwise, it is no longer the fun airport it used to be, and the reason is not all related to 9-11 security changes.
- access, great ATC, good conditions.
- Convenience to my home and office, instrument approach capabilities.
- Location, people, proximity to home, office etc.
- Airplane friendly city and state. Lots of services. Very convenient.
- close to home
- Convenience & location
- A lot of the stick is inertia. My avionics shop and A&P are at Addison - so its easier to stay than to move.
- close to home, relatively good services on field.
- Many things to like, primarily the people who work there. They are always willing to help out when there's a problem. That includes Tower, Maintenance, and Airport Management.
- good service from airport personnel, great tower personnel.
- Convenience to my home and approaches.
- Good ATC, maintenance of overall Airport.
- Professionally run, control tower for safety, and excellent service
- Close proximity to work and home.
- Convenience ILS and Tower

### **Any additional comments or suggestions:**

- Stronger visual reminder to wait before leaving exit gates. We all have shifted gears in our minds when leaving the airport, and still on occasion drive off without waiting for gates to close.

- We operate 4 planes at ADS. Our planes probably fly a total of approx. 2,000 hours a year in and out of Addison. While we've never figured it out, that activity probably equates to approx. 2,000 operations a year at ADS.
- This was a place for many years that was fun and enjoyable to come to. Now we look like a prison camp with all the threatening signs, police cars ( sometimes three or more at a time) Management driving around looking for things to call or write people up about. Go to other airports like ADS and look at their gates, see how many police cars are driving around giving out tickets like wild fire. We go there and not one airport in the country the size of ADS is like it is here.
- I think Addison Airport is a good place - would love to see the above changes to make it more small plane friendly.
- I mentioned it above, but I would like to see community trash cans positioned at each end of the T hangers.
- Block 12. Addison Flyers is not a flying club. We are owners of two airplanes. Cannot check more than one block, contrary to the instructions listed in your survey. I have answered based on my own flying, assuming the eight other owners submit inputs to this survey.
- Lower fuel prices, better hangers and less pursuit by airport police. I have flown out of Addison on and off for the better part of the last 30 years. I have never seen the airport less busy, more like dead during most times of the day. I have talked with several based pilots those that have left, and the recurring theme is cost. The bulk of pilots don't need conditioned \$100k hangers to keep their plane, much less a \$225k hanger.
- Need a place to meet other pilots on the field like a restaurant and a place to tie down the plane and pick up friends for short periods of time and on site auto parking close to hangers so can easily pull plane out and park without having to move vehicles in and out. could use a courtesy vehicle for visitor planes not affiliated with a costly FBO
- Melissa Newman is always friendly and a great help at the airport offices with any problems that come up.
- The access process is killing my ability to use the airplane at Addison. The FBO's do not provide good facilities for last minute flight planning changes. The only restroom is outside the secure area, but at least it works and it accessible.
- Keep up the good work! Refresher training for driving tag seems a bit excessive.....
- keep our P hangars!!
- Re # 16: I am not "interested" - have no need to - but would if it would be helpful. Running an airport is a business fraught with many challenges. It appears that the town made a sound short-term (and perhaps intermediate-term) decision to focus on the high-end individual and business customer; at the expense of small aircraft. As a career aviation professional, I am well aware that dealing with small airplanes can be an inconvenience; they tend to clutter the system. And they do not afford the profit margins realized with turbine powered airplanes. I am also of the opinion that, in many ways, the health of the aviation 'ecosystem' is forecast by what happens at the 'little airplane' level. If the desire is to maximize focus on turbine powered aircraft, continued investment in infrastructure to support small airplanes would seem imprudent. As a professional pilot I appreciate the amenities available at KADS - they make my job easier. As the owner of a less than smaller airplane, it feels as if the town is willing to accept my money if I am foolish enough to pay it but would really rather small airplanes would go someplace else. Re question # 9: I just checked: Airpark, Dallas Executive, Grand Prairie, Rockwall, Arlington, Denton, and Lancaster airports all have fuel priced more than \$2 per gallon implications for situations involving aircraft taxiing up and down alpha..
- the cheapest found at Addison - and some of the include full service. Presumably none of these airports are losing money selling avgas.
- your fuel prices are a huge joke nationwide. Letting that happen tells me you do not care for your customers, only your revenue and profits.

- Addison Airport very much needs to address the problem of the inadequate space available beyond the runway OFZ and before taxiway Alpha. This would increase safety, reduce incursions and remove what is an absolutely bizarre situation of having to taxi out into and blocking Alpha to be able to clear the runway after landing. This also has
- I have lost over twenty customers due to the economy, fuel prices and hanger rent. Some customers have sold out ,others have moved or go to other facilities for cheaper maintenance to make up for expenses at Addison. Every expense is high in Addison and anyone can go around the corner and get the same product for half the price including Maintenance Hanger Facilities. This airport community used to be a tight niche group or family that all enjoyed sharing in aviation together but has been stripped of that by the city and the airport. You can no longer find anyone hanging out for the sake of aviation and the love of aircraft like you used to be able to.
- I haven't flown my plane for a while since it is down for maintenance, but I do fly company I fly for aircrafts on a regular basis.
- I have 30 years of commercial real estate development experience, so I understand economics. But I do not understand quite a lot of things I see coming from Management.
- For the most part, airport facilities are clean and well maintained. Airport staff is friendly, courteous and responsive. I don't believe that the quality of the hanger, tie down and other GA facilities have improved at the same rate that the fees have increased in the 14 years that I have been a tenant, The hanger that I currently rent at \$440/month was \$90/month 14 years ago. The floor is rough, the doors are hard to open, the roof leaks and water (runoff) runs across the floor like a river when it rains.
- self service fuel please (think \$5.50 max)
- Hope you can still keep support for private pilots as a priority for the future of ADS.
- I have considered moving and the only reason I haven't is location. Cost is high and it is over policed. I will continue to upgrade airplanes and as I do, I will have to look closer at expenses to see if the location is enough benefit.
- Thanks for the remodel on the West side. I do think you went a little overboard on the security compared to other airports that I have been, but I do understand why. July 4th could be organized better for those of us inside the airport.

## **APPENDIX F: GOALS, STRATEGIES, AND TACTICS SUMMARY**

# Goal, Strategy and Tactic Matrix

Goal	Strategy	Tactic	Goal, Strategy or Tactic Description	Region	Issue
1300	1	1	0	Goal: <b>Continue to enhance the airport's overall value for the benefit of its stakeholders</b>	
1300	1	1	0	<b>Aggressively pursue all Federal, State, Local and private grant funding opportunities.</b>	
1310	1	1	0	Continue to communicate regularly with TADOT/AA and build on our relationships with key personnel in those agencies	
1320	1	1	0	Meet at least semi-annually with TADOT to review aviation issues and airport needs	
1330	1	1	0	Continue to communicate and inform Federal, State, and County officials about aviation issues and airport needs to ensure their continued support	
1340	1	1	0	Regularly attend FAA Southwest Region Airports Division's annual Fall Partnership Conference	
1350	1	1	0	Continue to pursue/grant for available grants and other sources of funding	
1360	1	2	0	<b>Identify and pursue alternative sources of revenue consistent with the Town's values as articulated in the City Council's policies</b>	
1370	1	2	0	Review fuel storage fee policy	
1380	1	2	0	Review current fuel farm management practices	
1390	1	2	0	Consider alternative energy sources to achieve operating cost reductions and for potential resale (i.e. solar wind, etc.)	
1400	1	2	0	Pursue advertising revenue alternatives	
1410	1	2	0	Identify and pursue potential redevelopment and expansion opportunities	
1420	1	2	0	Pursue the acquisition of income producing properties	
1430	1	2	0	Conversion of ground rent to commercial rent upon ground lease expiration	
1440	1	2	0	Sale of certain airport properties that are not well suited for aeronautical use or are underutilized	
1450	1	2	0	Use of lease guidelines to offer term extensions/modifications in exchange for increased rental and other considerations	
1460	1	2	0	Review other potential revenue sources	
1470	1	3	0	<b>Actively promote the airport</b>	
1480	1	3	0	Aviation industry involvement and participation	
1490	1	3	0	Expand international exposure	
1500	1	3	0	Explore Latin American/International marketing opportunities	
1510	1	3	0	Promote US Customs presence	
1520	1	3	0	Expand regional and State exposure	
1530	1	3	0	Incorporate benefits of airport in all economic development presentations to corporate prospects considering relocation or expansion	
1540	1	3	0	Meet with area real estate brokers to better educate them about the airport and the various opportunities available	
1550	1	3	0	Meet with community banks to educate and identify investment opportunities at the airport	
1560	1	3	0	Coordinate efforts with economic developers & community leaders	
1570	1	3	0	Promote the use of new communication & technology tools	
1580	1	3	0	Market Focus	
1590	1	3	0	Use resources to identify our users, transient traffic and customers	
1600	1	3	0	Identify and seek to capitalize on global industry trends	
1610	1	3	0	Promote local advantage	
1620	1	3	0	Differentiate ADS from competing airports	
1630	1	4	0	<b>Seek input from stakeholder groups to identify current issues and future action plans</b>	
1640	1	4	0	Develop and maintain list of stakeholders	
1650	1	4	0	Seek input through survey instruments/focus groups	

# Goal, Strategy and Tactic Matrix

Goal	Strategy	Tactic	Sub-tactic	Goal, Strategy or Tactic Description	Team	Priority
1430	1	4	3	0		
1440	1	4	4	0		
1500	1	5	0	0		
1510	1	5	1	0		
1520	1	5	2	0		
1530	1	5	3	0		
2000	2	0	0	0		
2100	2	1	0	0		
2110	2	1	1	0		
2120	2	1	2	0		
2130	2	1	3	0		
2131	2	1	3	1		
2132	2	1	3	2		
2133	2	1	3	3		
2134	2	1	3	4		
2135	2	1	3	5		
2140	2	1	4	0		
2200	2	2	0	0		
2210	2	2	1	0		
2300	2	3	0	0		
2310	2	3	1	0		
2320	2	3	2	0		
2330	2	3	3	0		
2340	2	3	4	0		
2350	2	3	5	0		
2360	2	3	6	0		
2370	2	3	7	0		
2400	2	4	0	0		
2410	2	4	1	0		
2411	2	4	1	1		
2412	2	4	1	2		
2413	2	4	1	3		
2420	2	4	2	0		
2430	2	4	3	0		
2500	2	5	0	0		
2510	2	5	1	0		
2520	2	5	2	0		

# Goal, Strategy and Tactic Matrix

Goal	Strategy	Tactic	Sub-tactic	Goal, Strategy or Tactic Description	Term	Priority
2530	2	5	3	0	Provide avenue for carrier businesses to file events	
2540	2	5	4	0	Develop communication plan educating the airport stakeholders about the evolution of the airport	
2550	2	5	5	0	Develop allies for business to business opportunities	
2551	2	5	5	1	Bring together brokers and current airport businesses	
2552	2	5	5	2	Support aviation programs in area colleges and universities	
2563	2	5	5	3	Identify synergies near the airport	
2000	3	3	3	0	<b>Continue to promote industry-leading practices for safety and security</b>	
3100	3	4	3	0	<b>Examine physical infrastructure, policies, plans and procedures; review safety and security standards</b>	
3110	3	1	1	0	Focus on achieving Part 139 standards where applicable	
3111	3	1	1	1	Develop an Airport Operating Manual based on requirements for a FAR Part 139 Airport Certification Manual	
3112	3	1	1	2	Identify where Part 139 standards are not being met but could be; develop plans to meet Part 139 standards where possible and practical	
3113	3	1	1	3	Identify where Part 139 standards are not being met and cannot be met; identify and document the reasons why these standards cannot be met	
3120	3	1	2	0	Code enforcement of existing standards	
3130	3	1	3	0	Periodically review policies, plans, and procedures with Public Safety Officials (Police and Fire)	
3140	3	1	4	0	Conduct hangar inspections	
3150	3	1	5	0	Conduct Access Control Study	
3160	3	1	6	0	Review and update emergency plans (annually)	
3170	3	1	7	0	Regularly conduct emergency exercises in cooperation with Public Safety	
3180	3	1	8	0	Regularly review airport rules & regulations and update as needed	
					Count of Ongoing Tasks "0" 0	
					Count of Short-term (0-3 Years) "3" 0	
					Count of Mid-term Tasks (3-10 Years) "M" 0	
					Count of Long-term Tasks (10-20 Years) "L" 0	
					Count of Priority 1	0
					Count of Priority 2	0
					Count of Priority 3	0
					Count of Priority 4	0
					Count of Priority 5	0

**APPENDIX G: ADDISON CITY COUNCIL CHAPTER 380 POLICY AND  
PROCEDURES DOCUMENT**

**TOWN OF ADDISON, TEXAS**

**RESOLUTION NO. R11-011**

**A RESOLUTION OF THE CITY COUNCIL OF THE TOWN OF ADDISON, TEXAS APPROVING POLICIES AND PROCEDURES FOR AN ECONOMIC DEVELOPMENT PROGRAM PURSUANT TO AND IN CONNECTION WITH POTENTIAL ECONOMIC DEVELOPMENT INCENTIVES UNDER CHAPTER 380, TEXAS LOCAL GOVERNMENT CODE; PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, the Town of Addison, Texas ("City") is a home rule municipality possessing the full powers of local self government pursuant to Article 11, Section 5 of the Texas Constitution and its Home Rule Charter; and

**WHEREAS**, Chapter 380 of the Texas Local Government Code ("Chapter 380"), in accordance with Article 3, Section 52-a of the Texas Constitution, authorizes municipalities to establish and provide for the administration of one or more programs, including programs for making loans and grants of public money and providing personnel and services of the municipality, to promote state or local economic development and to stimulate business and commercial activity in the municipality; and

**WHEREAS**, the City Council of the City desires to establish a program by which the City might, in its sole discretion, provide incentives to promote economic development and to stimulate business and commercial activity within the City as authorized by Chapter 380, including guidelines for the making of grants and loans by the City.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE TOWN OF ADDISON, TEXAS:**

Section 1. Incorporation of Recitals. The above and foregoing recitals are true and correct and are incorporated herein and made a part of this Resolution for all purposes.

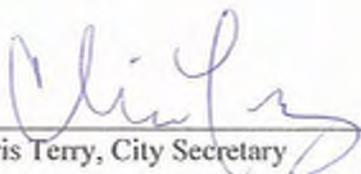
Section 2. Chapter 380 Program Policies. The "Chapter 380 Economic Development Program Policies and Procedures," attached hereto as Exhibit A (the "Chapter 380 Policies"), is hereby approved and adopted. The Chapter 380 Policies are subject to applicable provisions of the Texas Constitution, State law, and the City Charter. The Town of Addison, Texas ("City") is not obligated, and nothing in the Chapter 380 Policies shall imply or suggest, that the City is under any obligation to provide any incentive to any person, entity, or applicant. The purpose of the Chapter 380 Policies is to establish guidelines for providing economic development incentives; notwithstanding, however, the City Council retains the right to take any action allowed by law without the necessity of amending the Policies. The Chapter 380 Policies shall superseded any general policies regarding Chapter 380 incentives previously adopted by the City Council.

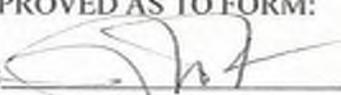
Section 3. Documents. The City Staff is authorized to create and develop such applications, forms, and other documents and information as may be needed to implement the Chapter 380 Policies.

Section 4. Effective Date. This Resolution shall take effect upon its passage and approval.

**PASSED AND APPROVED** by the City Council of the Town of Addison, Texas this the 9th day of August, 2011.

  
\_\_\_\_\_  
Todd Meier, Mayor

ATTEST:  
By:   
\_\_\_\_\_  
Chris Terry, City Secretary

APPROVED AS TO FORM:  
By:   
\_\_\_\_\_  
John Hill, City Attorney

## EXHIBIT A TO RESOLUTION NO. R11-011

### Town of Addison, Texas Chapter 380 Economic Development Program Policies and Procedures

#### General Overview

Chapter 380 of the Texas Local Government Code ("Chapter 380") authorizes the Town of Addison, Texas ("City") to establish and provide for the administration of one or more programs, including programs for making loans and grants of public money and providing personnel and services of the municipality, to promote state or local economic development and to stimulate business and commercial activity in the City. These Chapter 380 Economic Development Program Policies and Procedures ("Policies") are established in accordance with Chapter 380.

The City desires to promote and retain high quality development and to improve the quality of life for its citizens. These Policies are established in an effort to develop and expand the local economy by promoting and encouraging development and redevelopment projects, including promoting employment opportunities, that enhance the City's economic base and have a positive impact on the strategic economic development of the community. The ultimate goal and public purpose of programs established hereunder is to protect and enhance the City's fiscal ability to provide high quality municipal services for the safety, comfort and enjoyment of the City's residents.

In connection with these objectives, the City may, on a case-by-case basis, give consideration to providing incentives, including grants and loans of monies and lending of personnel and services, to promote economic development in the City in accordance with the procedures and criteria outlined herein. Incentives will be evaluated based on the type of industry, job creation, wages and benefits to be provided to new employees, capital investment, potential for growth, and strength of the applicant. Nothing herein shall imply or suggest that the City is under any obligation to provide any incentive to any applicant, and the City has full and absolute discretion whether or not to provide a loan, grant or other incentive under these Policies. All applicants pursuant to these Policies shall be considered on a case-by-case basis. These Policies shall serve as a guide for Chapter 380 incentives that may be considered by the City.

Each applicant granted an economic incentive pursuant to these Policies must enter into an agreement with the City containing all terms required by these Policies, by state law, and by such other terms as the City may require, to protect the public interest of receiving a public benefit in exchange for public funds, assets and services invested to stimulate economic development in the City.

#### Incentive Criteria

- A. *Minimum Criteria for Business Relocation, Retention, and Expansion Projects.*

1. In addition to other provisions of these Policies, a proposed project under these Policies that involves the relocation, retention, or expansion of a business must meet the following minimum criteria:

- Create a minimum of 20 new full-time jobs within the first year of operation.
- If the business will lease premises in connection with a project, the lease must be of a minimum of 10,000 square feet of class A or class B space.
- The business must make a minimum \$1,000,000 capital investment in real property or in business personal property (or combination of real property and business personal property).
- Average wages paid to all employees whose employment is at the site of the project must be greater than the average wage for Dallas County for all industries during the term of an agreement hereunder.
- The business must provide a competitive employee benefits program.
- The business must be within one of these targeted areas:
  - Headquarters for small and/or medium size enterprises
  - Creative Services (marketing, media production, architectural firms, etc.)
  - Information Technology
  - Back office for administrative and professional services
  - Aviation-related industries
  - Healthcare
  - Small, fast-growing firms (entrepreneurship across sectors)
- The business must demonstrate strength (years in business, growth sector, Fortune magazine rankings), and promote positive business ethics.

2. In addition to the criteria listed above, the City will give consideration to projects where the business will commit to utilize the Addison Airport by establishing the business's flight department (if any) at the Airport or commit to utilize services provided by tenants of the Airport.

3. Business Retention and Expansion Projects will be evaluated on a case by case basis taking into account the investment a business has made in the community, strength of the company, and categorical determination of targeted industry sector.

4. Businesses seeking to tap into incentives for expansion, must demonstrate that the actual incentive is a catalyst for their expansion and/or that the incentive will help maintain their presence in Addison.

5. Expansion projects will only be considered if such expansion is within the business's existing location or additional space is acquired elsewhere in the community in addition to the existing space, unless (i) in instances where the business leases its existing location, the landlord cannot accommodate the planned space expansion with space that is reasonably adjacent to the existing location, or (ii) in instances where the business owns fee simple title to its existing location, the expansion cannot be reasonably accommodated within the existing location. If a relocation is necessary as a result, the business must lease or otherwise acquire space that is larger and of the same or of higher quality than its existing space.

B. *Minimum Criteria for Redevelopment Projects*

1. In connection with and as part of a proposed project under these Policies that involves the relocation, retention, or expansion of a business, the City will consider support to such businesses where the business's investment focuses on the redevelopment of aged buildings or structures or land sites with existing buildings or structures. The intent is to increase the value of the property, the overall aesthetics, and to optimize land-use.

A redevelopment project under these Policies will focus on the potential impact as described in part A of this Incentive Criteria above in addition to the total capital investment proposed by the project to address financing gaps. The City, through the City Manager and the Director of Economic Development, may negotiate (subject to City Council approval) reimbursement to a business of up to 50% of a business's capital costs of such redevelopment if a project meets a majority of the following criteria:

- The project will result in an increase of a minimum 10% of real property taxes annually.
- The project addresses a public nuisance.
- The project will help attract higher quality tenants.
- The project developer agrees to pass savings to future tenants through competitive market lease rates.
- The project enhances overall aesthetics of the immediately surrounding area.
- The project results in major transformation which results in abiding to current building codes.
- The project results in Leadership in Energy and Environmental Design (LEED) (or LEED equivalent) certification.

C. *Other Criteria*

In addition to the criteria set forth above and other provisions of these Policies, the following are applicable to a proposed project and will be considered by the City in connection therewith:

1. Company History. The City strongly believes in fostering a local business community that upholds a strong business ethical culture. Business looking at securing financial support from the City must demonstrate that they are in good standing with the Texas Secretary of State, the Texas Comptroller of Public Accounts, and are current on payment of business property and real property taxes. A company must also demonstrate a positive historical trend in these areas over the last five years.

2. Job Creation. To be considered for an incentive from the City under these Policies, a business must create a minimum of 20 new full-time equivalent jobs in the City. Redevelopment projects must indicate and establish how the project will lead to such increased jobs.

3. Average Wages. The City desires the creation of quality jobs in the community. For this reason, in evaluating a proposed project, the City will consider whether or not the project will create good-paying jobs with competitive benefit packages. In addition to creating a minimum of 20 new full-time jobs, a business's average wage for such new jobs must be above

the average Dallas County wage for all industries. For headquarter locations, the wage of the company's principal (e.g., chief executive officer) will not be taken into consideration in calculating the average wage unless the principal maintains full-time residence in Addison.

4. Capital Investment. To be considered for an incentive hereunder, a project must include an investment of a minimum of \$1,000,000 in business personal property or real property within the City (or a combination of business personal property or real property). If a project includes a capital investment of over \$5,000,000 in business personal property or real property (or a combination of business personal property and real property), the City may consider waiving some of the other criteria requirements listed above.

5. Discretionary Evaluation: At the City Council's discretion, the City may waive some of the criteria described in parts A and B of this Incentive Criteria above if a project not only generates a positive economic impact in the community but also has a credible impact on the quality of life of the citizens.

### **Incentive Calculation**

An incentive pursuant to these Policies may only be made in one or more of the following categories:

- Relocation assistance: assistance for every 1,000 square feet of leased with a minimum of 10,000 square feet.
- Job creation assistance: incentive only for full-time equivalent jobs with higher than average wages above the Dallas County wages for all industries.
- Capital investment assistance: a minimum of \$1,000,000 investment in real property or business personal property (or a combination of real property and business personal property) must be made.

An agreement entered into pursuant to these Policies will include a full reimbursement or "claw-back" clause in the agreement for the first three years of the agreement. The reimbursement or claw-back may cease following the first three years of operation or may be extended depending on the level of award, proposed corporate investment, and job creation schedule.

### **Process: Miscellaneous**

A. In order to be considered for an incentive pursuant to these Policies, a business must submit a completed Incentive Request Form (to be prepared by City Staff). The City may require such information in connection with such Form as the City may deem appropriate or necessary.

B. An initial offer or offers to provide an incentive to a business will be for discussion and negotiation purposes only. The same is and will be only an offer and an agreement to negotiate, and is expressly conditioned upon and subject to the City and a business entering into a definitive written agreement regarding the incentive and related matters. All such agreements must be approved by the City Manager and City Council upon a recommendation by the Director of Economic Development.

### **Exhibit A to Resolution No. R11-011**

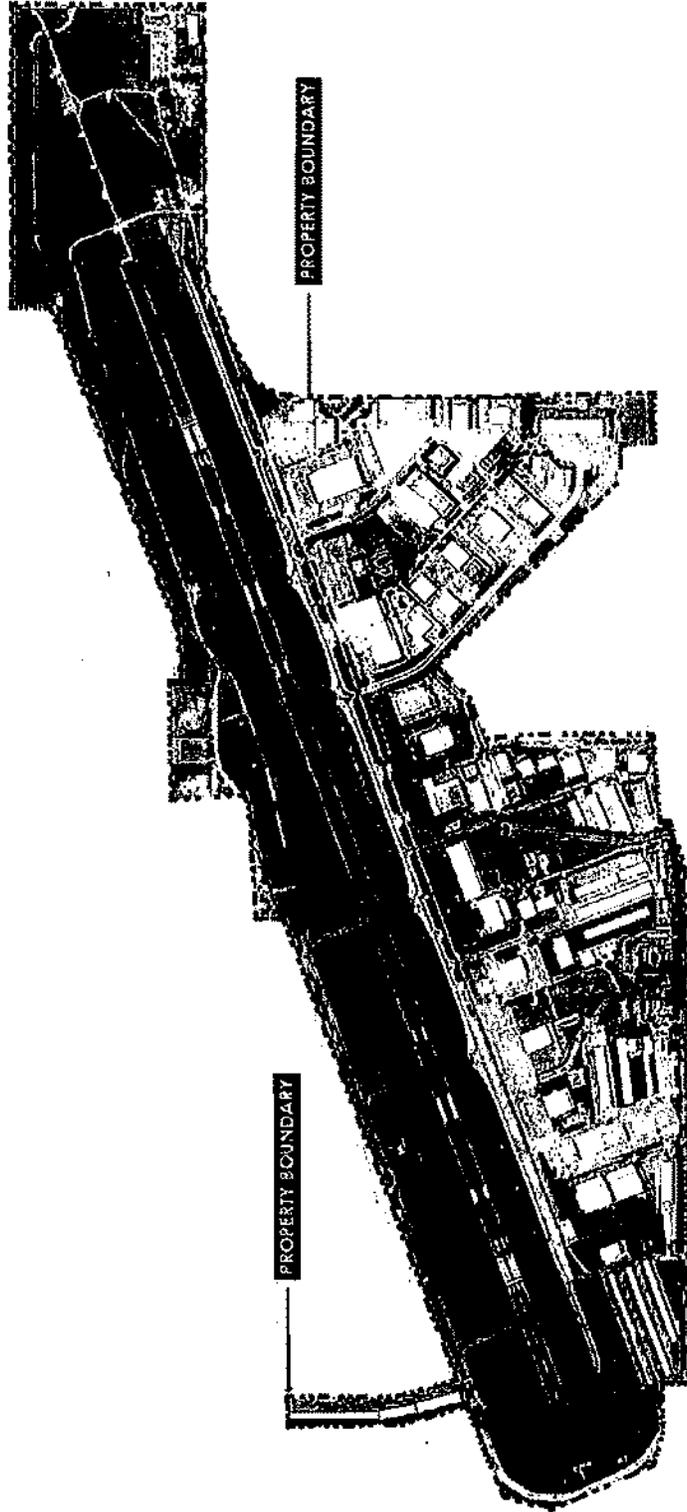


C. The City Council may consider a proposed agreement pursuant to these Policies and may take action on the proposal as it deems appropriate in its sole and absolute discretion. Nothing in these Policies and nothing in the application form and process shall create any property, contract, or other legal right in any person or entity to have the City Council consider or grant any incentive.

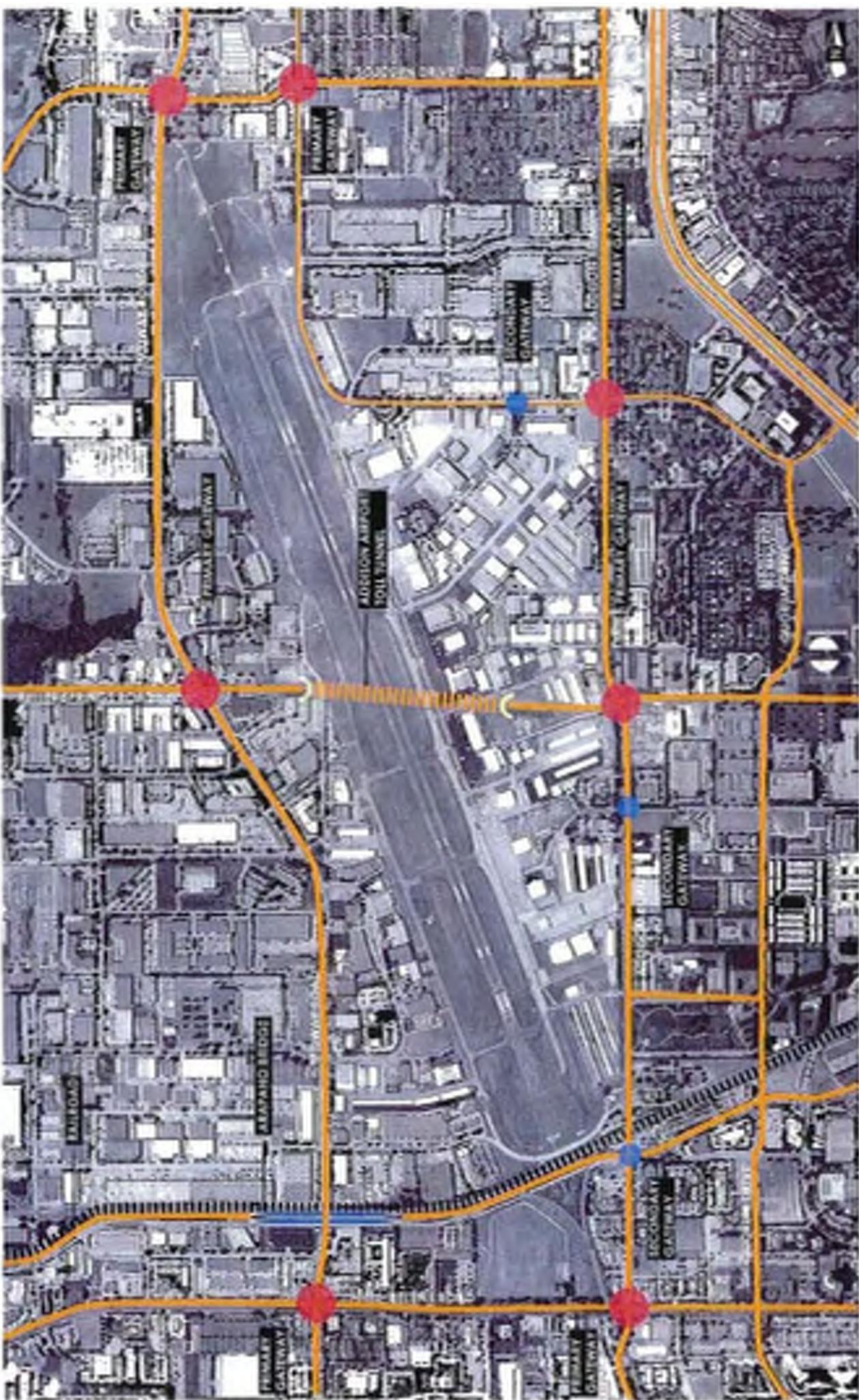
D. A project is not eligible for an incentive under these Policies if a building permit has been issued for the project prior to making application in accordance with these Policies.

E. The City may include and require in any agreement with a business pursuant to these Policies such other conditions, terms and provisions as the City may determine are appropriate or necessary.

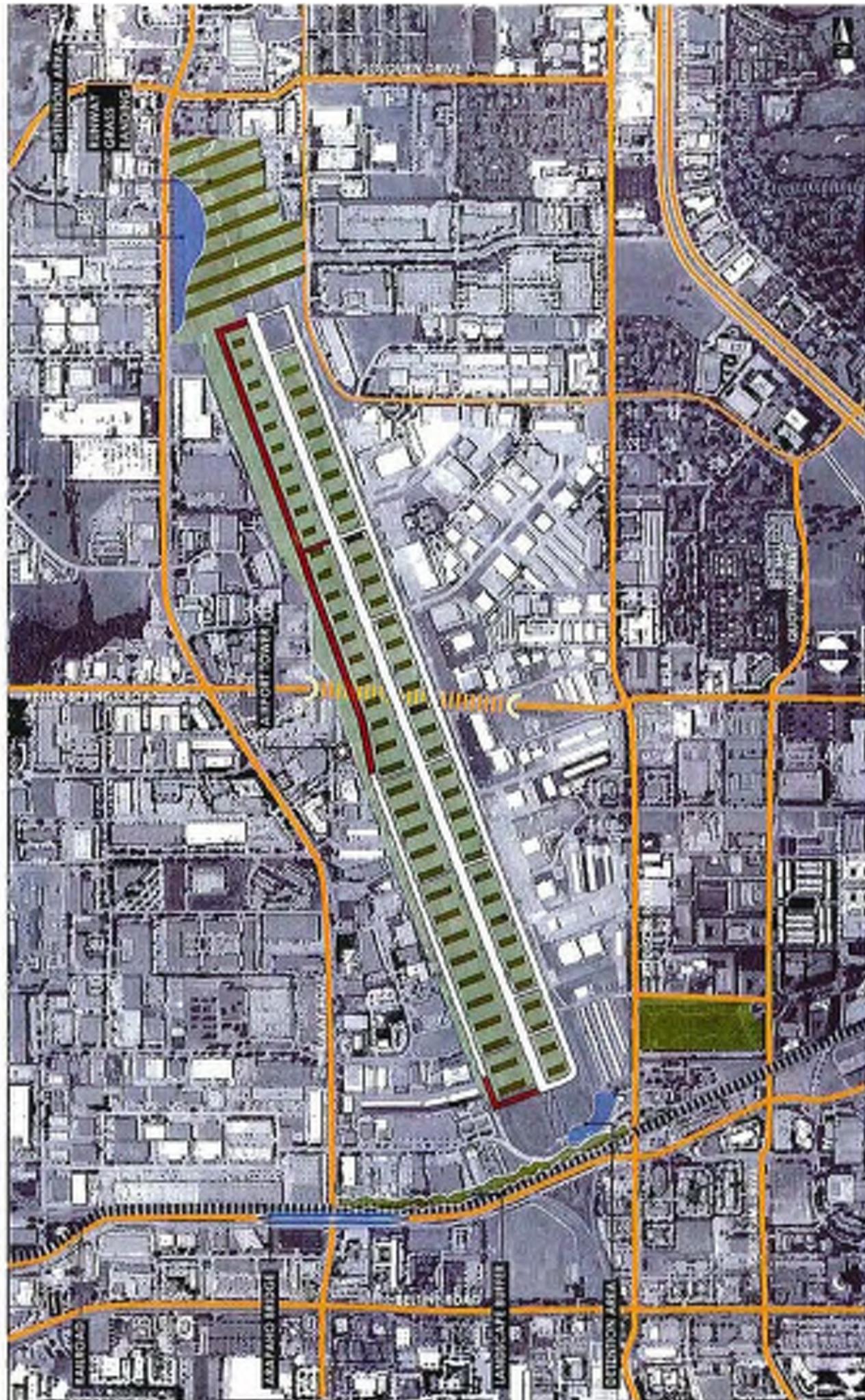
## **APPENDIX H: FUTURE CONCEPTS FOR CONSIDERATION**



ADDISON AIRPORT PROPERTY BOUNDARY

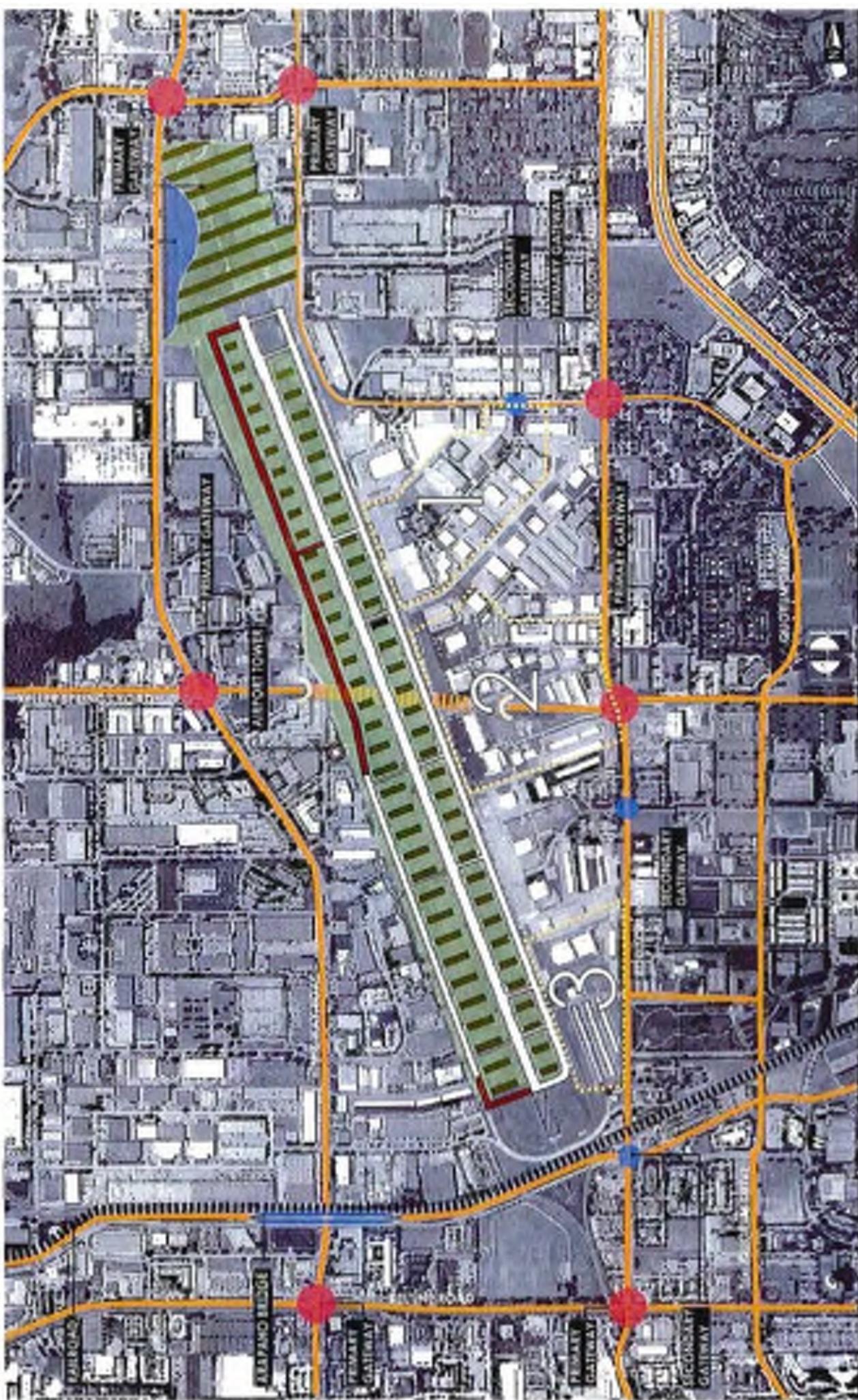


DISTRICT NODES



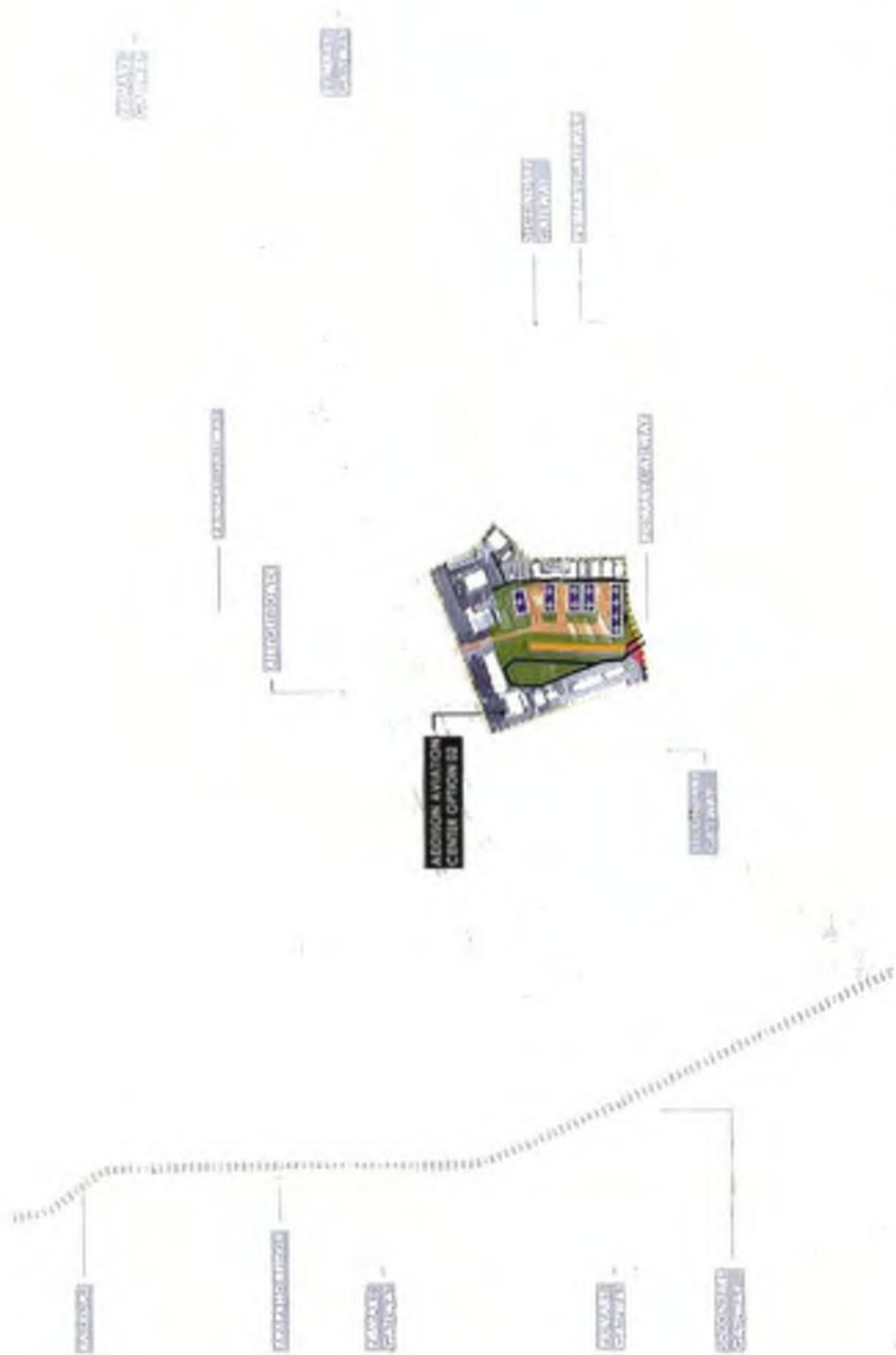
ENVIRONMENTAL LANDING AREA GRAPHIC "GRASS BANDING"





AVIATION CENTER OPTIONS OVERVIEW





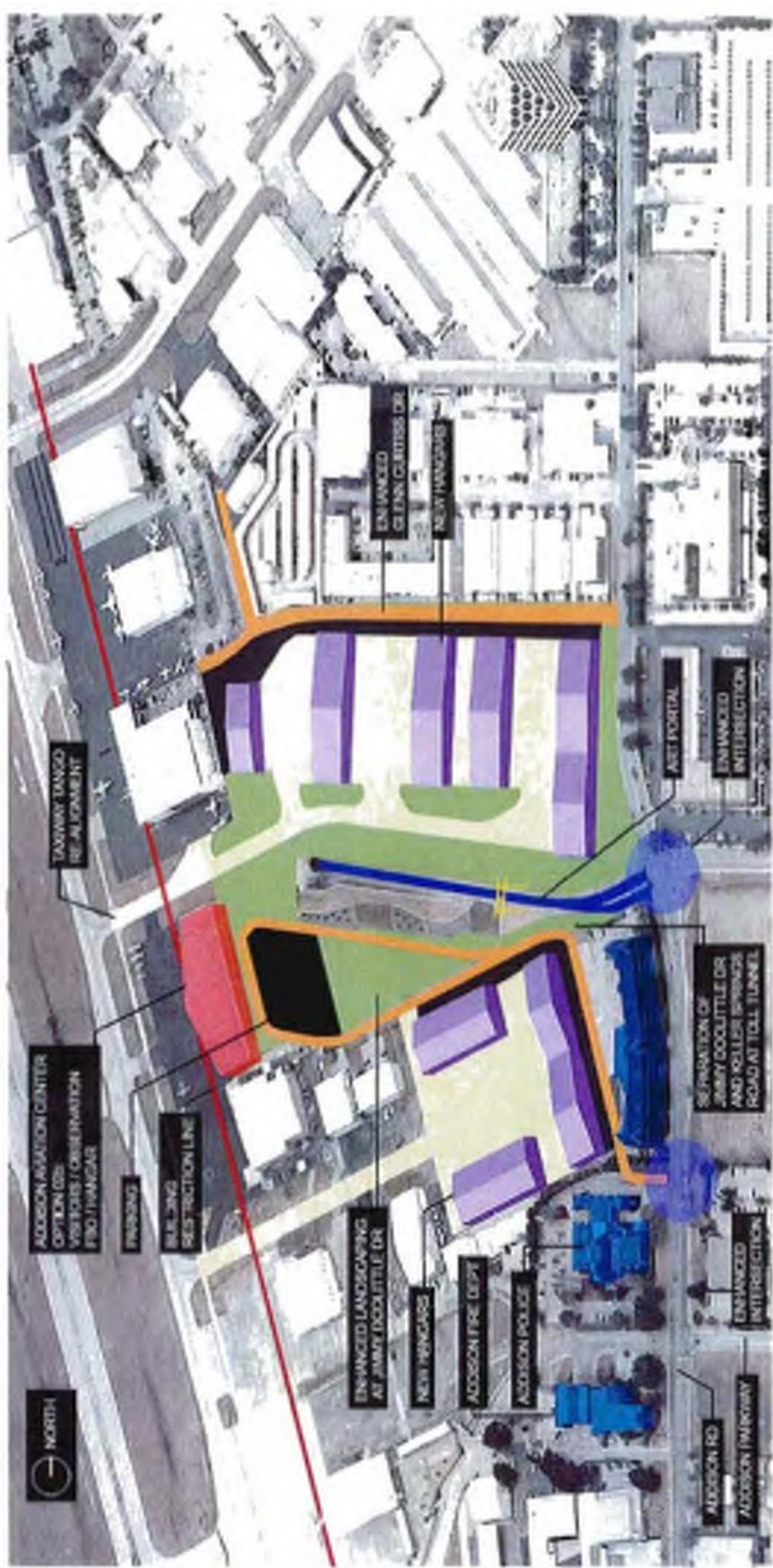
ADDISON AVIATION CENTER: OPTION 02



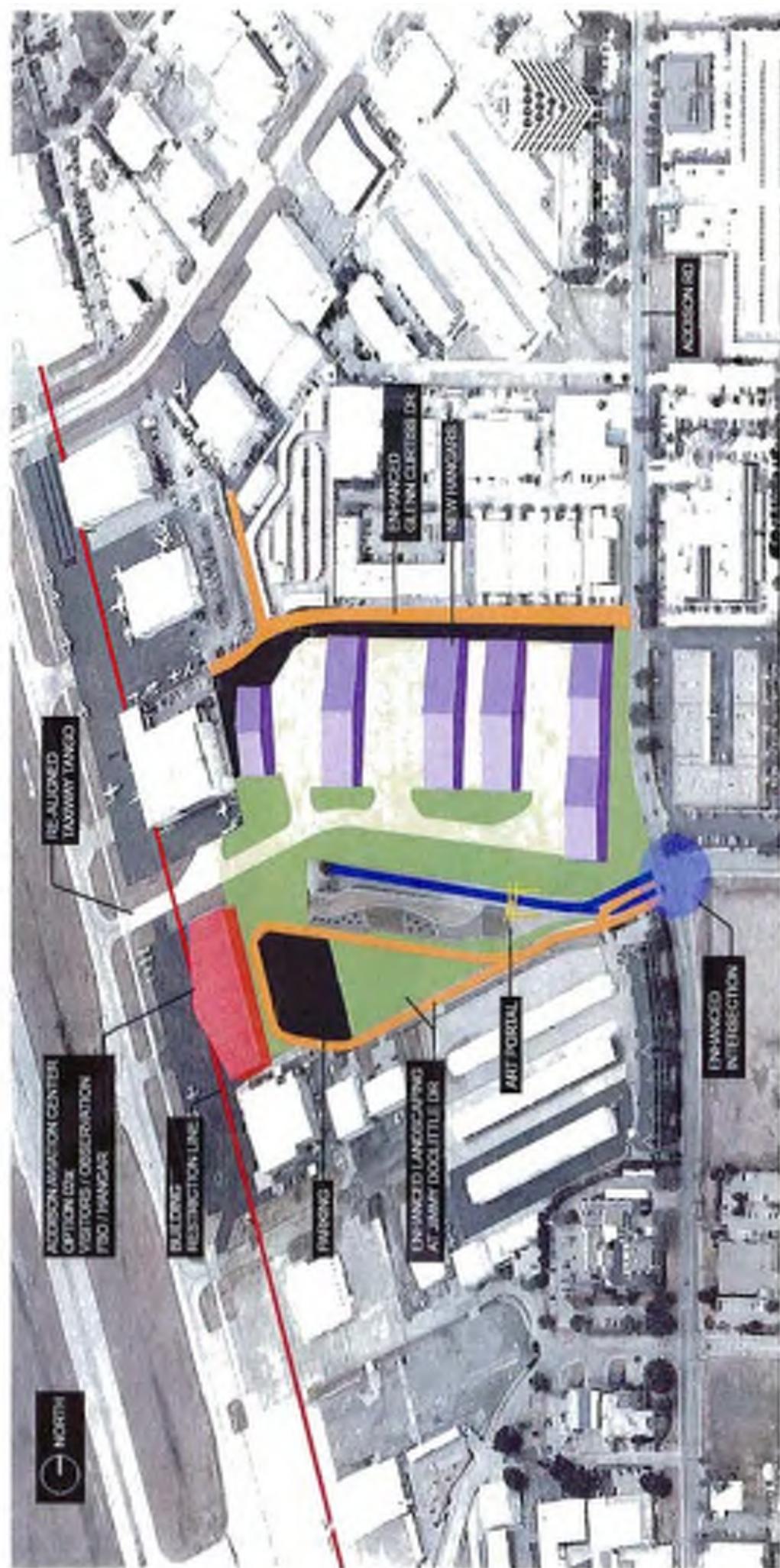
ADDISON AVIATION CENTER: OPTION 03



RUNWAY VIEW FROM NORTH END



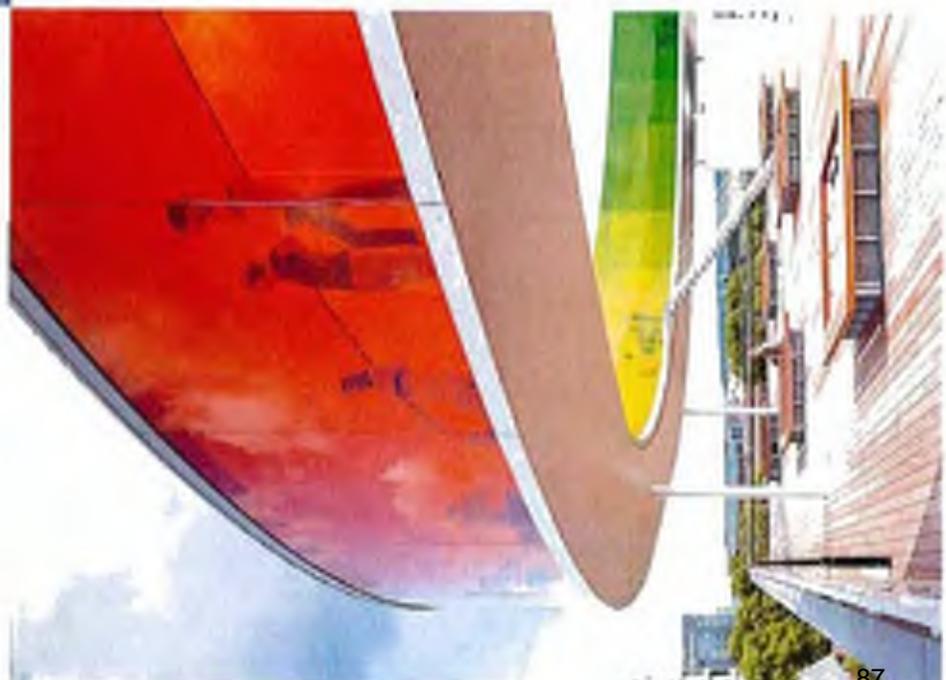
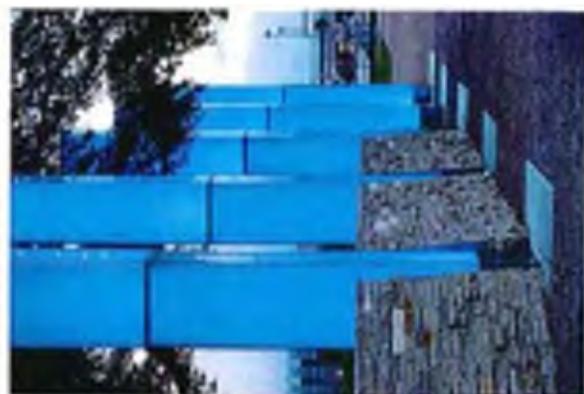
ADDITION AVIATION CENTER - OPTION 02b



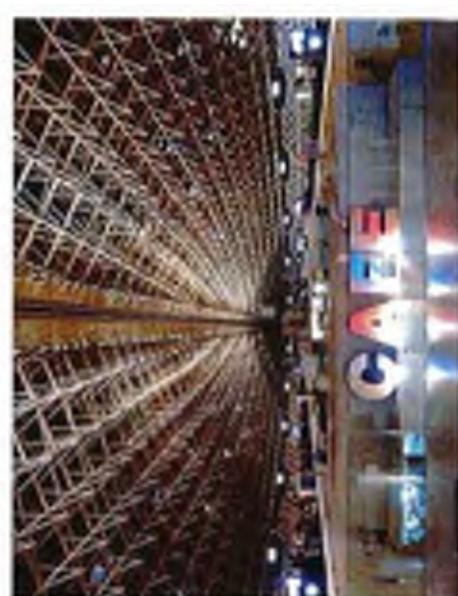
ADDISON AVIATION CENTER - OPTION 02a



ADDISON HELIPORT AT NORTHWEST RUNWAY END







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**Appendix C**  
**Wildlife Hazard Assessment**

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Addison Airport (ADS)



January 2014

## SIGNATORIES

The following Wildlife Hazard Management Plan for the Addison Airport has been reviewed and accepted by TxDOT AVN. This document will become effective with the following signatures:

---

Robert W. Jackson  
Environmental Specialist  
Texas Department of Transportation, Aviation Division

Date

---

Joel Jenkinson  
Airport Director  
Addison Airport (ADS)

Date

---

Russell P. DeFusco, PhD, USAF (ret)  
Vice President, BASH Incorporated  
FAA Qualified Airport Wildlife Biologist

Date

# 1 TABLE OF CONTENTS

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<b>TABLE OF CONTENTS</b> .....	<b>3</b>
<b>1.0 EXECUTIVE SUMMARY</b> .....	<b>1</b>
<b>2.0 INTRODUCTION</b> .....	<b>3</b>
2.1 OVERVIEW .....	3
2.2 SCOPE AND PURPOSE .....	3
2.3 PROBLEM SPECIES .....	3
2.4 AOA WILDLIFE HABITAT .....	4
2.5 WILDLIFE HABITAT OUTSIDE OF AOA .....	4
2.6 WILDLIFE HAZARD MANAGEMENT PLAN LAYOUT .....	5
<b>3.0 ROLES &amp; RESPONSIBILITIES FOR WHMP</b> .....	<b>6</b>
3.1 WILDLIFE HAZARD WORKING GROUP .....	6
3.2 ADS STAFF ROLES AND RESPONSIBILITIES .....	6
3.2.1 Airport Director .....	6
3.2.2 Wildlife Coordinator .....	7
3.2.3 Operations Personnel .....	8
3.2.4 Air Traffic Control Tower Staff .....	8
3.2.5 Airport Tenants and Pilots .....	8
3.3 CITY OF ADDISON .....	9
3.3.1 Addison Police .....	9
3.3.2 Addison Fire Department/ Aircraft Rescue and Fire Fighting (ARFF) .....	9
3.3.3 Addison Animal Control .....	9
3.4 TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND FEDERAL AVIATION ADMINISTRATION (FAA) .....	<b>Error! Bookmark not defined.</b>
3.5 QUALIFIED AIRPORT WILDLIFE BIOLOGIST .....	9
<b>4.0 WHA RESULTS &amp; RECOMMENDATIONS</b> .....	<b>11</b>
4.1 CURRENT WILDLIFE MANAGEMENT PROCEDURES .....	11
4.2 WHA RECOMMENDATIONS & TIMELINES .....	11
<b>5.0 STATE &amp; FEDERAL LAWS, REGULATIONS &amp; PERMITS</b> .....	<b>13</b>
5.1 FAA ADVISORY CIRCULARS AND CERTALERTS .....	13
5.2 TEXAS WILDLIFE REGULATIONS .....	13
5.3 FEDERAL REGULATIONS .....	13
5.4 WILDLIFE CATEGORIES AND PERMITS .....	14
5.5 BIRD REGULATIONS .....	16
5.5.1 Resident Game Birds .....	16
5.5.2 Migratory Game Birds .....	16
5.5.3 Migratory Nongame Birds .....	16
5.5.4 Migratory Bird Depredation Permit for ADS .....	16
5.5.5 Depredation Order for Blackbirds, Cowbirds, Grackles, Crows, and Magpies .....	17
5.5.6 Species Exempt from the Migratory Bird Treaty Act .....	17
5.6 MAMMAL REGULATIONS .....	17

5.6.1	Game Mammals .....	17
5.6.2	Furbearers.....	17
5.6.3	Nongame Mammals.....	18
5.7	PROTECTED WILDLIFE .....	18
5.7.1	Federal Threatened and Endangered Species.....	18
5.7.2	State Threatened and Endangered Species .....	18
5.7.3	CertAlert 06-07 .....	19
5.7.4	Avoiding Impacts to Threatened and Endangered Species.....	19
5.8	PESTICIDE APPLICATOR LICENSE .....	19
<b>6.0</b>	<b>RESOURCES TO IMPLEMENT THE WHMP .....</b>	<b>21</b>
6.1	AUTHORIZED AIRPORT SUPPLIES .....	21
6.2	OPERATIONS PERSONNEL .....	22
6.3	BUDGET ALLOCATIONS.....	22
<b>7.0</b>	<b>MANAGEMENT STRATEGY .....</b>	<b>23</b>
7.1	OVERVIEW .....	23
7.2	COMMUNICATION BETWEEN WILDLIFE CONTROL PERSONNEL AND AIR TRAFFIC CONTROL TOWER.....	24
7.3	WILDLIFE INSPECTIONS.....	24
7.3.1	Responding to Imminent Hazards.....	25
7.3.2	Reporting.....	25
7.4	MANAGEMENT STRATEGIES .....	26
7.5	HABITAT MODIFICATIONS .....	26
7.5.1	Mowing Regime.....	27
7.5.2	Surface Water Drainage Channel .....	27
7.5.3	Shrubs and Trees around the Security Perimeter Fence .....	28
7.6	PASSIVE EXCLUSION .....	29
7.6.1	Security Perimeter Fence Maintenance .....	29
7.6.2	Update Security Perimeter Fence.....	30
7.6.3	Culvert and Surface Water Drainage Grates.....	31
7.6.4	Anti-Perching Equipment .....	31
7.7	ACTIVE HARASSMENT .....	32
7.8	POPULATION MANAGEMENT .....	33
7.8.1	Black-tailed Jackrabbits .....	33
7.8.2	Monitor Wildlife Populations.....	35
<b>8.0</b>	<b>WHMP EVALUATION.....</b>	<b>36</b>
8.1	MEETINGS .....	36
8.2	WILDLIFE STRIKE DOCUMENTATION.....	36
8.3	TXDOT/FAA INVOLVEMENT .....	36
<b>9.0</b>	<b>TRAINING.....</b>	<b>37</b>
9.1	WILDLIFE HAZARD TRAINING .....	37
<b>10.0</b>	<b>AGENCY DIRECTORY .....</b>	<b>37</b>
<b>APPENDICES.....</b>	<b>Error! Bookmark not defined.</b>	

## **APPENDICES- LOCATED ON ACCOMPANIED CD**

**APPENDIX A** PART 139.337

**APPENDIX B** ADS WILDLIFE LOG

**APPENDIX C** MIGRATORY BIRD DEPREDATION PERMIT APPLICATION

**APPENDIX D** ANNUAL DEPREDATION REPORT FOR BLACKBIRDS, GRACKLES, MAGPIES  
AND CROWS

**APPENDIX E** SMITHSONIAN INSTITUTE BIRD/OTHER WILDLIFE STRIKE REPORT: FORM  
5200-7

**APPENDIX F** AIRPORT COOPERATIVE RESEARCH PROGRAM SYNTHESIS 52: HABITAT  
MANAGEMENT TO DETER WILDLIFE AT AIRPORT

**APPENDIX G** AIRPORT COOPERATIVE RESEARCH PROGRAM SYNTHESIS 23: BIRD  
HARASSMENT, REPELLENT, AND DETERRENT TECHNIQUES FOR USE ON  
AND NEAR AIRPORTS

**APPENDIX H** AIRPORT COOPERATIVE RESEARCH PROGRAM SYNTHESIS 39: AIRPORT  
WILDLIFE POPULATION MANAGEMENT

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# 1 EXECUTIVE SUMMARY

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Pursuant to CFR Title 14 FAR part 139.337(e), the Addison Airport (ADS) developed this Wildlife Hazard Management Plan (WHMP) in cooperation with Texas Department of Transportation (TxDOT). This plan will be reviewed periodically by the Wildlife Hazard Working Group and will be updated if changing circumstances merit. All changes made to the WHMP will be sent to TxDOT for approval.

This plan places an emphasis on identification and abatement of wildlife hazards within the air operation area (AOA). Habitat on and around the airfield will be managed in a manner that is unattractive to hazardous wildlife, and this plan outlines priorities for habitat management, including target dates for completion. Additional wildlife attractants (e.g., lakes, ponds, golf courses, etc.) within 5 miles of the airfield are also addressed as they could potentially attract wildlife in a manner that could jeopardize safety of air traffic operating into and out of ADS. ADS will take immediate measures to identify and mitigate wildlife hazards whenever they are detected or whenever airport management has been advised that hazardous conditions exist. This plan outlines steps for monitoring, documenting, reporting and preventing potential wildlife hazards and strikes at ADS. Protocols for responding to hazardous wildlife situations are presented, including roles and responsibilities of airport personnel and wildlife control procedures are discussed. Five goals and associated sub-goals, as well as methods/techniques to mitigate wildlife hazards at ADS are discussed throughout this plan and include:

1. Develop a WHMP and Wildlife Hazard Management Program that includes a management structure and dedicated staff.
  - a. Designating a Wildlife Coordinator;
  - b. Establishing a Wildlife Hazard Working Group;
  - c. Obtaining federal and state-issued permits and supplies necessary for wildlife hazard management activities;
  - d. Develop a communication protocol between ADS Operation Staff, ATCT personnel, FBOs, and pilots regarding wildlife threatening aircraft or personnel;
  - e. Standardize wildlife observations, harassment, or lethal control documentation procedures to be used by all personnel at ADS;
  - f. Establish an action plan to be used among the Operations Personnel when wildlife possess a threat to aviation safety;
  - g. Incorporating wildlife hazard management activities into airport planning, design and construction activities; and
  - h. Monitoring changes in land use on or near the airport.
2. Implement site-specific habitat modifications, to minimize attractiveness to hazardous wildlife.
  - a. Turf Management
  - b. Surface Water Drainage Channel and Vegetation

- c. Trees and Shrubs
- 3. Improve security by updating the security perimeter fence, minimizing access through off-site culverts, and utilizing wildlife deterring equipment.
  - a. AOA Access Integrity
  - b. Anti-Perching Equipment
- 4. Implement species-specific management techniques.
  - a. Harassment
  - b. Lethal Management
  - c. Relocation
- 5. Develop and follow a communication protocol between the air traffic control tower, wildlife Operations Personnel, pilots, FBOs, and other ADS individuals.
  - a. Prior to initiation, Operations Personnel will coordinate all wildlife control activities with the ATCT to ensure actions to don't affect flight safety.
  - b. Operations Personnel will notify the Wildlife Coordinator of pertinent wildlife-related information for inclusion in NOTAM and ATIS communications when persistent wildlife cannot be removed or otherwise mitigated.
  - c. The Wildlife Coordinator will communicate with FBOs regarding any wildlife strikes or observations of wildlife activity at the airfield.
  - d. Operations Personnel will provide the FBOs with important information that may be posted within their buildings.

Most wildlife is afforded some type of protection under state or federal regulations; therefore, special permits may be required for their control. The plan outlines laws and regulations governing the harassment or take of various types of wildlife. ADS will maintain an adequate supply of resources for dispersing and controlling wildlife. ADS personnel will be trained to properly identify wildlife and apply wildlife deterrent equipment in a safe and efficient manner.

## **2 INTRODUCTION**

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### **2.1 OVERVIEW**

A Wildlife Hazard Management Plan (WHMP) is a working document that is used as a foundation to establish mitigation procedures for wildlife and habitat that are perceived to be a threat to the safety of aviation on or near a specific airport. Within the WHMP, the roles and responsibilities of airport and non-airport individuals are identified to ensure wildlife hazards are correctly identified and the proper corrective action is taken to minimize potential threats. Airport specific policies, resources, and procedures are established and adapted accordingly to reduce wildlife hazards at a given airport.

### **2.2 SCOPE AND PURPOSE**

Enhancing safe air operations is a primary objective of the WHMP process. Accomplishing this objective entails careful monitoring of all aspects of arriving and departing aircraft in the vicinity of ADS, including potential wildlife hazards on and around the airport. As part of its on-going safety efforts, ADS intends to implement and maintain a WHMP following CFR Title 14 FAR part 139.337 to address potential wildlife hazards at ADS and surrounding areas, with a particular emphasis on hazards and wildlife attractants within the 10,000 foot separation criteria from the AOA. In addition to addressing general wildlife hazards, this plan discusses habitat modifications, operation procedures, communication procedures, wildlife monitoring procedures, and wildlife management and control response on the airport.

It is important to note that Part 139.337(f) underscores the need for a flexible plan that can be quickly adapted to changing circumstances. In some rare cases, however, immediate actions may be necessary that are not addressed in this plan to ensure the safety of everyone on the airport. This plan provides ADS with the discretion and capability to respond to these situations, while providing guidance for compliance with applicable federal, state, and municipal laws or regulations.

### **2.3 PROBLEM SPECIES**

According to the FAA, over 97% of wildlife/aircraft strikes occur with birds, with only 2.2% occurring with terrestrial mammals. Considering ADS's urban location, the majority of hazardous terrestrial mammals do not occur in the area; thus, birds are considered the greatest threat to aviation at ADS. Flocking/gregarious species such as European Starlings, Rock Pigeons, and doves were observed in exceptionally high numbers compared to other observed bird species at ADS. American Kestrels were also observed in high numbers on ADS. Coyotes, domestic dogs, and Black-tailed Jackrabbits are also potential hazards, but unlike most birds, they can often be kept off the active surfaces using a well maintained security perimeter fence and active management as a deterrent.

## 2.4 AOA WILDLIFE HABITAT

Wildlife is attracted to airports because of the availability of water, food, and/or cover. Water sources include streams, ditches, or ponds; while food sources include rodents, insects, earthworms, seeds, or trash. Desirable cover varies between species, but typical habitat attractants include tree stands, exceptionally tall or short grass, and open buildings. While it is not realistic to completely eliminate all desirable habitat for wildlife species, a reduction of any of these components will inherently reduce the overall wildlife attraction on ADS. In general, the majority of habitat at ADS is not considered highly desirable to most wildlife; however, some characteristics are inherently attractive to wildlife.

The most highly desirable habitat identified on ADS property included:

1. Infield turf
  - a. Short height (< 6 inches)
  - b. Bare patches
2. Surface water and associated vegetation
  - a. Detention pond
  - b. Drainage channel and vegetation

## 2.5 WILDLIFE HABITAT OUTSIDE OF AOA

Areas of concern outside of the AOA are separated into three general categories: General Zone, Critical Zone, and Transitional Zone.

### *General Zone:*

The general zone is the area within a 5-mile radius of ADS as measured from the AOA. Wildlife attractants in this area, especially those that lie within the approach and departure airspace, have the potential to affect aircraft safety. The objective of this WHMP is to actively reduce attractive wildlife habitat on airport property and work cooperatively with other property owners/managers in the general zone to reduce or discourage land-use practices that might contribute to potential wildlife hazards.

### *Critical Zone:*

The critical zone is the area within 10,000-feet of ADS as measured from the AOA. The management measures presented in this WHMP will focus on the critical zone because aircraft typically operate within this area during approaches and departures at altitudes of less than 1,000 feet. Approximately 75 percent of all civil bird-aircraft strikes occur within 10,000 feet of the airfield from which they depart or arrive. All documented strikes in the FAA Wildlife Strike Database at ADS were within the Critical Zone.

### *Transitional Zone:*

The transitional zone is the area within 5,000-feet of ADS as measured from the nearest AOA.

Aircraft within this area are highly susceptible to wildlife interaction due to low altitude and speed associated with approaching and departing. Due to the fairly ubiquitous urban environment surrounding ADS, attractants within this area are similar to the critical zone.

## **2.6 WILDLIFE HAZARD MANAGEMENT PLAN LAYOUT**

Within this WHMP, seven components are addressed.

1. The authority and responsibility of personnel for implementing the plan (Section 3.0).
2. Prioritization for wildlife population management, habitat modification, and land use changes identified in the Wildlife Hazard Assessment, with target dates for completion (Section 4.0).
3. Requirements for and where applicable, copies of local, state, and Federal wildlife control permits (Section 5.0).
4. Identification of resources to be provided by the certificate holder for implementation of the plan (Section 6.0).
5. Procedures to be followed during air carrier operations (Section 7.0), including at least:
  - a. Assignment of personnel responsibilities for implementing the procedures;
  - b. Conduct of physical inspections of the movement area and other areas critical to wildlife hazard management sufficiently in advance of air carrier operations to allow time for wildlife controls to be effective;
  - c. Wildlife control measures; and
  - d. Communication between the wildlife control personnel and any air traffic control tower in operation at the airport.
6. Evaluation and review of the wildlife hazard management plan at least every 12 consecutive months, or following an event described in 14 CFR 139.337 (b)(1), (b)(2), and (b)(3) (Section 8.0) for-
  - a. Effectiveness in dealing with the wildlife hazard on and in the airport's vicinity; and
  - b. Indications that the existence of the wildlife hazard, as previously described in the Wildlife Hazard Assessment, should be reevaluated.
7. A training program conducted by an FAA Qualified Airport Wildlife Biologist to provide airport personnel with the knowledge and skills needed to carry out the wildlife hazard management plan (Section 9.0).

The WHMP is a living document that can and should be updated as new situations or circumstances emerge. FAR Part 137.337 can be found in Appendix A on the accompanied CD.

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### 3 ROLES & RESPONSIBILITIES FOR WHMP

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**FAR Part 139.337(f)(1):** The individuals having authority and responsibility for implementing each aspect of the plan.

**FAR Part 139.337(f)(5i):** Designation of personnel responsible for implementing the procedures.

The Airport Director is responsible for designating a Wildlife Coordinator to implement and oversee the WHMP; other ADS personnel will communicate resource needs, recommendations, and progress to the designated Wildlife Coordinator. The Airport Director will ensure that the WHMP is approved by TxDOT and that the WHMP and amendments comply with federal, state, and local laws and regulations.

#### 3.1 WILDLIFE HAZARD WORKING GROUP

The Wildlife Hazard Working Group (WHWG) is composed of individuals associated with ADS, and is responsible for reviewing and updating the WHMP. The WHWG meets at least once a year, or following a triggering event to discuss issues and make recommendations regarding the WHMP. Not all members of the WHMG have a direct responsibility in the implementation of the WHMP, but their input is vital to the success of the WHMP. The WHWG may include persons or representatives of the following airport departments or groups:

1. Airport Director
2. Wildlife Coordinator
3. Operations Personnel
4. Air Traffic Control Tower Staff
5. City Animal Control, Aircraft rescue and Firefighting (ARFF), and Police/Security
6. Airport Tenants (i.e. FBO representative) and Pilots
7. Qualified Airport Wildlife Biologist (if available)

Each re-evaluation effort should consider the duties and activities performed by each member of the group, and the status of the recommendations or efforts described in the WHMP. The WHWG will present proposed WHMP recommendations or revisions to the Wildlife Coordinator, who will consider the recommendation and approve proposed revisions to the WHMP.

#### 3.2 ADS STAFF ROLES AND RESPONSIBILITIES

##### 3.2.1 Airport Director

The Airport Director provides the decision-making authority for major program decisions, controversial issues, or conflict resolution in support of the aviation mission. Specific duties associated with WHMP implementation include:

1. Involve the Wildlife Coordinator with project proposals that could potentially result in hazardous wildlife attractants within 5 miles of ADS.
2. Involve the Wildlife Coordinator with land use planning and mitigation efforts.
3. Involve the Wildlife Coordinator in evaluating permit requirements and agency coordination for activities in wetlands, streams, or on mitigation sites.

### 3.2.2 *Wildlife Coordinator*

The Wildlife Coordinator is responsible for implementing the Wildlife Hazard Management Program and carrying out the measures identified in the WHMP, and for ensuring that staff receives appropriate training to carry out their responsibilities as described in the WHMP. The Wildlife Coordinator is also responsible for maintaining an ongoing record of all management activities. Specific duties associated with WHMP implementation include:

1. Oversee the implementation and direction of the WHMP policies, protocols, management decisions, and guidelines
2. Implement appropriate wildlife management procedures, including harassment, deterrence, and habitat modifications. The Wildlife Coordinator acts as the wildlife management program supervisor at all times.
3. Participate in or supervise procedures to alleviate wildlife activities deemed an immediate hazard to aircraft or personnel.
4. Issue Notice to Airmen (NOTAM) and ATIS coordination and/or communicate instructions regarding potential runway closures with the ATCT if a wildlife situation requires it.
5. Encourage airlines and pilots to issue pilot reports (PIREPs) relating to wildlife hazards on or near the airport.
6. Conduct routine inspections of areas critical to wildlife hazard management and maintain a record of the action.
7. Evaluate issues to the Airport Director and budget appropriately.
8. Establish and chair the WHWG.
9. Ensure only properly trained wildlife management personnel operate on the AOA in accordance with FAA regulations. Such training includes radio communication, driving on the AOA, and appropriate use of methods and techniques (e.g. pyrotechnics) to resolve wildlife risks.
10. Ensure all individuals associated with ADS are aware of the requirements and procedures of reporting wildlife strikes and ensure wildlife strike report forms (FAA Form 5200-7) are readily available.
11. Keep a log of all wildlife strikes (FAA Form 5200-7) and control actions and forward reports to FAA as necessary. Upload strike data to the FAA's Wildlife Strike Database.

12. Obtain and maintain wildlife depredation permits, harassment, capture, marking, and relocation from federal and/or state wildlife agencies to control MBTA protected birds and game animals.

### *3.2.3 Operations Personnel*

The Operations Personnel are responsible for assisting the Wildlife Coordinator. Duties include the following tasks:

1. Alleviate all attractants deemed an immediate hazard and, if necessary, coordinate a runway closure to remedy wildlife hazards.
2. Inform pilots of imminent wildlife hazards.
3. Inspect critical areas for wildlife activity and wildlife strikes and maintain a record of the action, even if no wildlife was present, in the Wildlife Log (Appendix B on accompanied CD).
4. Reduce wildlife hazards from critical areas when appropriate.
5. Conduct inspections of the AOA and document any wildlife activity or wildlife strikes if found.
6. Inspect airport property to ensure refuse that would attract potentially hazardous wildlife does not accumulate in fields, ditches, etc.
7. Assist with, maintain, or identify resources to implement habitat modification measures identified in the WHMP, such as vegetation maintenance and brush removal.
8. Maintain the security perimeter fence line to exclude large mammals such as Coyotes and Feral Dogs.
9. Reduce rodent access to buildings, dumpsters, and other refuse containers to the extent feasible.

### *3.2.4 Air Traffic Control Tower Staff*

1. Report any hazardous wildlife activity to the Wildlife Coordinator as it is being observed.
2. Coordinate non-lethal and lethal control efforts with Operations Personnel to identify the location of wildlife and direct air traffic accordingly.
3. Communicate hazardous wildlife activity and issue advisories to approaching or departing pilots. Coordinate movements as necessary to mitigate potential issues.

### *3.2.5 Airport Tenants and Pilots*

1. Inform pilots and other personnel of reporting all wildlife strikes to the Wildlife Coordinator.
2. Issue a pilot report (PIREP) if a potential strike hazard occurs.
3. Notifying the Wildlife Coordinator of any hazardous wildlife or attractants.

### **3.3 TOWN OF ADDISON**

Although not directly a member of the ADS staff, several additional city employees are also involved in the overall safety and security of ADS.

#### *3.3.1 Addison Police*

1. Provide assistance to the Wildlife Hazard Management Program by acting as the central contact point for the Airport Director and other police agencies having jurisdiction near ADS for times when pyrotechnics and live rounds are planned or in use.
2. Patrol the airport property and report any hazardous wildlife to the Wildlife Coordinator, ATCT, or Addison Animal Control.

#### *3.3.2 Addison Fire Department/ Aircraft Rescue and Fire Fighting (ARFF)*

1. Provide assistance to the Wildlife Hazard Management Program by acting as the central contact point for the Airport Director and other rescue agencies having jurisdiction near ADS in times of emergency.
2. Act in an advisory role during training or use of pyrotechnics.

#### *3.3.3 Addison Animal Control*

1. Assist with training airport personnel in the safe handling and proper use of wildlife dispersal methods and equipment.
2. Provide operational assistance to ADS to control Coyotes, Domestic Dogs, Skunks, Black-tailed Jackrabbits, and other avian or terrestrial wildlife deemed hazardous at ADS.

### **3.4 TEXAS DEPARTMENT OF TRANSPORTATION- AVIATION DIVISION (TXDOT AVIATION)**

TxDOT Aviation staff provides the following support to wildlife hazard management efforts:

1. Provides information related to aircraft-wildlife strikes and other wildlife incidents to the Wildlife Coordinator.
2. Assists ADS in reviewing proposed land use changes, construction plans, and mitigation projects for potential wildlife hazards to aircraft as necessary.
3. Reviews changes or edits to the WHMP.

### **3.5 QUALIFIED AIRPORT WILDLIFE BIOLOGIST**

The Qualified Airport Wildlife Biologist is responsible for providing ongoing assistance to ADS staff during the preparation and implementation of its Wildlife Hazard Management Program. Specific duties include:

1. Train airport personnel about wildlife hazard awareness.

2. Instruct airport staff in the safe handling and proper use of wildlife dispersal equipment and techniques.
3. Assist ADS in reviewing proposed land use changes, construction plans, and mitigation projects for potential wildlife hazards to aircraft.
4. Provide ongoing consultation regarding wildlife hazard management issues as they arise.

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## 4 WHA RESULTS & RECOMMENDATIONS

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**FAR Part 139.337(f)(2): A list prioritizing the following actions identified in the Wildlife Hazard Assessment and target dates for their initiation and completion**

### 4.1 CURRENT WILDLIFE MANAGEMENT PROCEDURES

Addison staff has not been formally trained by a Qualified Airport Biologist in the use of non-lethal or lethal management methods. ADS Operations Personnel perform at least one runway check in the morning, during which they actively monitor the area for hazardous wildlife, carcasses, or other unusual activity. Any hazard that poses an immediate threat to aircraft by Operations Personnel is immediately reported to the ATCT and proper mitigation management procedures are initiated. Vehicles, horns and flashing lights are the preferred method for harassing wildlife out of the area. Pyrotechnics are onsite, but have never been used. All strikes are recorded in the FAA Wildlife Strike Database by the Operations Manager, but harassment methods are not currently documented.

The ATCT actively monitors for wildlife hazards as well. In the event of a hazardous situation, the ATCT directs all arriving and departing aircraft accordingly. If necessary, the ATCT will issue an ATIS advisory or NOTAM until the hazard can be managed. Pilot observations of notable hazards are relayed to the ATCT via Pilot Reports (PIREPs), which the ATCT may use to detail outgoing ATIS advisories. Currently, the ATCT does not keep a record of observed wildlife.

Addison City police and Animal Control take an active role in wildlife management at ADS. One police officer patrols the airport at all times for any security threat (person or wildlife). A security perimeter fence check is conducted at least weekly by the police officer. The police officer will also participate in wildlife harassment (via vehicle and flashing lights) when necessary. Addison Animal Control is always on call to assist with wildlife management when necessary including Feral Dog trapping, Coyote management, or other situations which ADS personnel are not qualified to safely handle. Animal Control also occasionally monitors wildlife activity and movement through game cameras and night vision goggles.

### 4.2 WHA RECOMMENDATIONS & TIMELINES

In an effort to establish a wildlife management procedure immediately and proactively, the WHA recommended ADS adopt and customize new policies and procedures to address issues and hazardous species identified during surveys.

A summary table of each recommendation and estimated completion date is provided in Table 1. Section 6.0 provides further details regarding these recommendations.

**Table 1:** Initial Recommendations and Timelines as a result of the 12-month WHA



## 5 STATE & FEDERAL LAWS, REGULATIONS & PERMITS

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**FAR Part 139.337(f)(3) requirements for and, where applicable, copies of local, state, and federal wildlife management permits.**

Federal, state and local governments administer laws and regulations that protect wildlife and their habitat. A number of laws affect wildlife control at airports including ADS. Staff with wildlife management responsibility should be educated about these regulations to ensure compliance. In general, harassing and/or taking most types of wildlife is regulated through a permit process overseen by federal or state agencies. Permits will be obtained by the Wildlife Coordinator on an annual basis through the assistance of a qualified airport wildlife biologist and will be included within the WHMP. Currently, ADS does not hold any permits.

### 5.1 FAA ADVISORY CIRCULARS AND CERTALERTS

The FAA is the federal agency responsible for developing and enforcing air transportation safety regulations. Many of these regulations are codified in the FARs. The FAA also publishes a series of guidelines for airport operators to follow called Advisory Circulars (ACs). FAA ACs in the 150-series deal with airport safety issues, including wildlife hazards. In addition to FARs and FAA ACs, the FAA periodically issues CertAlerts for internal distribution and to provide recommendations on specific issues for inspectors and airport personnel. All of the above-mentioned regulations, ACs, and CertAlerts are frequently changed or updated, and their current status should be verified on a regular basis. This may be accomplished visiting the FAA website: [www.faa.gov](http://www.faa.gov).

### 5.2 TEXAS WILDLIFE REGULATIONS

State wildlife laws involving resident birds, mammals, reptiles, and amphibians, as well as state listed threatened and endangered species generally are administered by the Texas Parks and Wildlife Department (TPWD) and pesticide use by the Texas Department of Agriculture. Regulations can be reviewed via the following websites:

Texas Parks and Wildlife:

<http://www.tpwd.state.tx.us/>

Texas Department of Agriculture:

<http://texasagriculture.gov/RegulatoryPrograms/Pesticides/PesticideApplicatorInformation.aspx>

### 5.3 FEDERAL REGULATIONS

Several Federal regulations, including the Migratory Bird Treaty Act (MBTA), the Endangered Species Act, Bald and Golden Eagle Protection Act, the Clean Water Act, and the Federal Insecticide, Fungicide, and Rodenticide Act, regulate various aspects of ADS's wildlife management activities. Additional regulations that may affect wildlife management activities at

ADS are found in the Code of Federal Regulations (CFR), and several Federal agencies may be responsible for their implementation. Federal wildlife laws are typically administered by the U.S. Fish and Wildlife Service (USFWS) and involve primarily migratory birds and federally listed threatened and endangered species. Laws and regulations pertaining to wildlife management activities can be reviewed via the following websites:

U.S. Fish and Wildlife Service-Texas Ecological Services Field Office:

<http://www.fws.gov/southwest/es/ArlingtonTexas/>

Environmental Protection Agency- Clean Water Act:

[http://cfpub.epa.gov/npdes/cwa.cfm?program\\_id=45](http://cfpub.epa.gov/npdes/cwa.cfm?program_id=45)

Environmental Protection Agency- Federal Insecticide, Fungicide, and Rodenticide Act:

<http://www.epa.gov/agriculture/lfra.html>

#### **5.4 WILDLIFE CATEGORIES AND PERMITS**

Federal (CFR Title 50) and TPWD Regulations define the categories of wildlife and regulations related to their management. For the purposes of this document, feral and free ranging dogs, cats, and other domestic animals are considered "wildlife" because of the hazards they may pose to aircraft, but they are mostly regulated under other municipal laws. Wildlife categories (Table 2) include migratory and resident, game and non-game, and threatened and endangered species. Wildlife management personnel should know the category for the species that they intend to manage, so that they can determine the relevant laws and necessary permits.

Several regulations and permits apply to wildlife management activities at airports in Texas. Many of these regulations relate to safety, methods, and special considerations or restrictions that are usually specified on the depredation permits. A state hunting license is required to lethally take any species in Texas, except for the species and special considerations listed below.

1. Coyotes - If the Coyote(s) are attacking, about to attack or have recently attacked livestock, domestic animals or fowl.
2. Feral Hogs - If Feral Hogs are causing depredation on a landowner's land.
3. Fur-bearing Animals - If the hunter possesses a trapper's license or if the fur-bearing animals are causing depredation.

**Table 2.** Wildlife Categories in Texas, permits or endorsement necessary for lethal management as required by federal and state wildlife agencies. The table also shows whether ADS has current federal or state permits for each category.

Category	Species	State Permit or Endorsement Required	State Permit or Endorsement Obtained	Federal Permit or Endorsement Required	Federal Permit or Endorsement Obtained
Resident Game Birds	quail, wild turkeys, pheasants, or chachalacas	Endorsement	No	No	N/A
Migratory Game Birds	wild ducks and geese, coots, gallinules, snipes, rails, moorhens, woodcocks, and Mourning Doves	Endorsement	No	Endorsement	No
Migratory Nongame Birds	All species except game birds, resident nongame birds, and domestic and exotic birds (including hawks, gulls, vultures, herons, egrets)	No	N/A	Permit	No
Depredation Order Birds <sup>(1)</sup>	American Crows, magpies, blackbirds, cowbirds	No	N/A	No	N/A
Game Mammals	deer, rabbits, hares, American Alligators, Javelinas, Pronghorns, and squirrels	No	N/A	No	N/A
Furbearers	Badgers, Beavers, Red Foxes, Minks, Muskrats, Nutrias, Opossums, Otters, Raccoons, Ring-tailed Cats, and Striped Skunks	No	N/A	No	N/A
Nongame Mammals	Armadillos, Bobcats, Coyotes, Flying Squirrels, frogs, Mountain Lions, Porcupines, prairie dogs, turtles	No	N/A	No	N/A
Feral Domestic Mammals	Dogs, cats, livestock	No - Call Addison Animal Control Department	N/A	No	N/A
Fully Protected Wildlife <sup>(2)</sup>	Threatened and Endangered Species	Yes	No	Permit	No

Notes:

- <sup>1</sup> May be taken without permits "when concentrated in such numbers and manner as to constitute a health hazard or other nuisance" (50 CFR §21.43).
- <sup>2</sup> Any person may take threatened or endangered wildlife in defense of his life or the life of others.

Original Date: \_\_\_\_\_

TxDOT Approval: \_\_\_\_\_

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## **5.5 BIRD REGULATIONS**

### *5.5.1 Resident Game Birds*

Resident game birds (quail, wild turkeys, pheasants, and chachalacas) are non-migratory. They are protected by state law and a Texas Upland Game Bird Stamp Endorsement is required to lethally manage them.

### *5.5.2 Migratory Game Birds*

Migratory game birds (wild ducks and geese, coots, gallinules, snipes, rails, moorhens, woodcocks, and Mourning Doves) are regulated under Federal law by the USFWS through the regulations contained within the MBTA. These regulations allow harassment without a permit of migratory birds when the birds are damaging property (e.g. harassing Canada Geese and Mallard ducks), but a permit is required for lethal take. Migratory bird permits are not valid for threatened and endangered species that require separate permits for harassment and lethal take. Although states can impose more restrictive regulation than Federal law on migratory birds, Texas currently does not require additional permits for migratory birds that are already regulated under Federal law, although the state will review USFWS permits.

### *5.5.3 Migratory Nongame Birds*

Migratory nongame birds (including hawks, gulls, vultures, herons, egrets, etc.) are all species protected under Federal law by the USFWS through the regulations contained within the MBTA. These regulations allow harassment of migratory birds when the birds are damaging property, but a permit is required for lethal take. Migratory bird permits are not valid for threatened and endangered species that require separate permits for harassment and lethal take. Although states can impose more restrictive regulation than Federal law on migratory birds, Texas currently does not require additional permits for migratory birds that are already regulated under Federal law, although the state will review USFWS permits.

### *5.5.4 Migratory Bird Depredation Permit for ADS*

ADS has not obtained a depredation permit to legally take migratory birds protected by the MBTA. TPWD allows the take of these species under the Federal permit (CFR 50 Part 21.41) without obtaining an additional state permit. The Wildlife Coordinator will be responsible for applying for and the required annual renewal of the depredation permit, and will submit a report to the USFWS within 10 days of the expiration date detailing the species and number of animals taken under the permit.

ADS will receive a Federal depredation permit annual report form from the USFWS by January of each year. ADS shall complete and submit a report of the animals taken to USDA-Wildlife Services (WS) to fulfill the requirements of this section and the Federal permit. WS will complete a Migratory Bird Damage Report and forward it along with ADS's annual report to the USFWS. This report could be generated from a computerized database containing all wildlife management actions on ADS.

A Migratory Bird Depredation Permit Application can be found in Appendix C on accompanied CD.

#### *5.5.5 Depredation Order for Blackbirds, Cowbirds, Grackles, Crows, and Magpies*

Blackbirds, cowbirds, grackles, crows, and magpies are protected under the MBTA but may be taken when they are concentrated in such numbers and manner as to constitute a health hazard or other nuisance. Under the Depredation Order (50 CFR § 21.43), no federal permit is required to control the species listed below if they are committing or about to commit depredations on ornamental or shade trees, agricultural crops, livestock, or wildlife, or when concentrated in such numbers and manner that they are a health hazard or other nuisance. The State of Texas recognizes the Federal regulations and does not require a state permit under these conditions. Any lethal take of birds must be documented and submitted in the annual depredation report, regardless of permit requirements.

An Annual Depredation Report for Blackbirds, Cowbirds, Grackles, Crows, and Magpies can be found in Appendix D on accompanied CD.

#### *5.5.6 Species Exempt from the Migratory Bird Treaty Act*

Several non-native bird species are exempt from the protection provided by the MBTA. Species identified at ADS that fall into this category include European Starlings, House Sparrows, Eurasian Collard Doves, and Rock Pigeons. These birds are afforded no state or federal protection, and may be harassed or lethally managed at any time without a permit. Management methods must follow pertinent state and federal laws (e.g. laws relating to firearms, toxins, etc.).

### **5.6 MAMMAL REGULATIONS**

Addison Animal Control should be altered when any lethal management or trapping is required for terrestrial wildlife. Addison Animal Control will have all the required permits or licenses to control or trap State managed terrestrial wildlife.

#### *5.6.1 Game Mammals*

Game mammals are defined primarily as those species that are hunted for recreation or meat (deer, rabbits, etc.). Black-tailed Jackrabbits and Eastern Cottontails were the only game mammals observed on ADS; however they were observed in high concentrations. ADS shall be prepared to manage Black-tailed Jackrabbits other game mammals through both lethal and non-lethal practices. A state issued hunting license is required to lethally take any game mammal in Texas.

#### *5.6.2 Furbearers*

Striped Skunks were the only furbearer observed on ADS. The most efficient method of managing Striped Skunks to fully secure airport property by closing all gaps in the fence, grating culverts, and removing all vegetation from the fence. Additional trapping or lethal control may be required,

if habitat modification and fence maintenance do not eliminate the presence of Striped Skunks at ADS. A license from the state prior to trapping or lethal action is required for furbearers, except when protecting private property.

### 5.6.3 Nongame Mammals

Coyotes were periodically observed on ADS and shall be managed for immediately following an observation. The ATCT should be notified immediately to direct air traffic accordingly. Additional management procedures are detailed in Sections 6.0. Permits are not required to take these species if firearms or lethal traps are used.

## 5.7 PROTECTED WILDLIFE

Many species of animals in Texas are listed as threatened, endangered, candidate, or sensitive by the federal and/or state government. Due to the dynamic nature of listed species, with new species being added or removed periodically, the TPWD and USFWS threatened and endangered species websites will be reviewed at least annually, to ensure compliance with federal and state wildlife regulations.

Texas Parks and Wildlife Department- Threatened and Endangered List:

<http://www.tpwd.state.tx.us/gis/ris/es/>

USFWS- Threatened and Endangered List

<http://www.fws.gov/endangered/>

### 5.7.1 Federal Threatened and Endangered Species

The Federal Endangered Species Act (Sec. 2 [16 U.S.C. 1531]) and TPWD protect animal and plant species potentially threatened with extinction. These acts classify species as endangered or threatened. An "Endangered Species" is defined as "any species or subspecies that is in danger of extinction throughout all or a significant portion of its range." A "Threatened Species" is defined as "any species or subspecies that is in danger of becoming an endangered species within the foreseeable future throughout or over a significant portion of its range." Once listed, a threatened or endangered species cannot be taken or harassed without a special permit.

No federally listed threatened or endangered species was observed during the WHA 12-month monitoring period and it is unlikely that any of the federally listed species would be present at ADS. If a federally listed species is observed on ADS, the Wildlife Coordinator will contact the USFWS to seek further advice or instruction.

### 5.7.2 State Threatened and Endangered Species

In Texas, several additional species are given special protection by being listed as state threatened or endangered species. No state listed species were observed in or around ADS during the 12 month WHA. ADS will contact the Texas Parks and Wildlife Department to seek further advice or instruction. Additional details regarding state listed species can be found on

the Texas Parks and Wildlife Department website:  
[http://www.tpwd.state.tx.us/gis/ris/es/ES\\_Reports.aspx?county=Dallas](http://www.tpwd.state.tx.us/gis/ris/es/ES_Reports.aspx?county=Dallas)

### 5.7.3 *CertAlert 06-07*

The airport's AOA is an artificial environment that has been created and maintained for aircraft operations. Because an AOA can be markedly different from the surrounding native landscapes, it may attract wildlife species that do not normally occur, or that occur only in low numbers in the area. Some wildlife species may occur on the airport in higher numbers than occur naturally in the region because the airport offers habitat features the species prefer. Some of these wildlife species could be state-listed threatened and endangered species or have been designated by state resource agencies as species of special concern.

Many state wildlife agencies have requested that airport operators facilitate and encourage habitat on airports for state-listed threatened and endangered species or species of special concern. State-listed threatened and endangered species and species of special interest are not afforded the same level of protection as federally-listed species. These species, or the habitat needed to support them should not be allowed on airport property if direct or associated hazards are caused by their promotion in the airfield environment. Managing the on-airport environment to facilitate or encourage the presence of hazardous wildlife species can create conditions that are incompatible with, or pose a threat to, aviation safety. CertAlert 06-07 encourages airports to adhere to turf, landscaping, and habitat management practices described in this WHMP and AC 150/5200-33B. ADS will not purposefully develop attractive habitat for any species.

### 5.7.4 *Avoiding Impacts to Threatened and Endangered Species*

All WHMP measures must be examined to identify and alleviate wildlife hazards that threaten human health and safety or aircraft operations. The proposed actions outlined in the WHMP would involve application of the most appropriate, effective, and biologically sound wildlife management methods available. This approach is known as *Integrated Wildlife Damage Management*, and includes both habitat management and direct control.

Management methods at ADS would not affect federal or state-listed endangered, threatened, or special concern species. If deemed necessary, the capture and removal of hazardous species would employ highly selective methods that minimize non-targeted take allow for positive identification of animals creating hazardous conditions. No federal or state listed threatened or endangered species were observed during the WHA 12-month monitoring period. The TPWD or a Qualified Airport Wildlife Biologist should be consulted if any federal or state listed species are observed on ADS property.

## **5.8 PESTICIDE APPLICATOR LICENSE**

Authorization to use restricted-use pesticides or herbicides for the removal of hazardous wildlife or prey-base (e.g., insects, earthworms, and weeds) is limited to Certified Pesticide Applicators. Information on how to obtain a pesticide applicator license from the Texas Department of Agriculture can be found at the website below. Use of all pesticides should

strictly adhere to the pesticide label and should follow U.S. Environmental Protection Agency and CDA guidelines.

Texas Department of Agriculture-Private Pesticide Applicator License

<http://www.texasagriculture.gov/RegulatoryPrograms/Pesticides/PesticidePrivateApplicatorLicense.aspx>

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## 6 RESOURCES TO IMPLEMENT THE WHMP

FAR Part 139.337(f)(4) Identification of resources to be provided by the certificate holder for implementation of the plan.

### 6.1 AUTHORIZED AIRPORT SUPPLIES

Habitat management and wildlife management supplies can be purchased from several companies. The Wildlife Coordinator and Airport Director are responsible for ensuring adequate supply of equipment will be kept on hand at ADS for use by trained personnel.

**Table 3:** Wildlife hazard materials that will always be available at the airport.

Supply	Description and Quantity
Pyrotechnic Supplies	<b>Pistol Launchers.</b> One pistol launcher shall be available in each vehicle that does airfield inspections, and one spare launcher should be available.
	<b>Screamers and Whistlers.</b> Screamers/whistlers shall be available in each vehicle used for airfield inspections, and additional ones should be available in storage.
	<b>Bird Bangers.</b> Bird bangers shall be available in each vehicle used for airfield inspections, and additional ones should be available in storage.
	<b>Personnel Safety Equipment.</b> Eye and hearing protection will be maintained in each vehicle used for airfield inspections. Two set of protective eye goggles and ear protectors will be included in each vehicle, and extras should be maintained at all times.
Monitoring Equipment	<b>Binoculars.</b> One pair of binoculars will be available to perform airfield inspections.
	<b>Bird and Mammal Identification Guides.</b> A copy of each guide shall be kept in all vehicles used to inspect the airfield, and an additional copy should be kept in the Airport Director's office.
	<b>Monitoring Log.</b> A logbook/computer file shall be available to document daily observations pertaining to wildlife hazards and all management activities.
Air Rifle & Pellets	<b>Air Rifle &amp; Pellets.</b> Lethal control of certain species is highly recommended (i.e. Black-tailed Jackrabbits); however the urban environment makes high powered rifles, hand guns, or shot guns unsuitable. Properly powered air rifles have the capability to lethally control several types of hazardous species while remaining relatively safe for the surrounding area. Air rifle power between 850 and 1000 fps is capable of killing a Black-tailed Jackrabbit out to 75 feet, but quickly loses velocity beyond that range. Any form of lethal management shall only be used when it is deemed appropriate and only then by trained, airport employees in addition to the Wildlife Coordinator. Air rifle use will be used cautiously and only when no people, structures, or equipment are in the line of fire.
Strike/Carcass Equipment & Forms	Zip-lock Bags, Garbage Bags, Smithsonian Institute's Necropsy Supplies and Forms, Latex Gloves, and FAA Strike Report Forms.

## **6.2 OPERATIONS PERSONNEL**

The Operations Personnel will be the primary party responsible for dispersing wildlife from the runways and surrounding airport property. The airport operations vehicles will be stocked with the supplies listed above to facilitate an immediate response to wildlife hazards. When responding to emergency calls, inspections must operate within the air operations areas according to FAA guidelines.

## **6.3 BUDGET ALLOCATIONS**

The operating and maintenance budget allocations would initially include funding for equipment, materials and supplies, along with contracted pest management and permitting. Many items are one-time expenses and others reoccurring. A review of current wildlife management expenses and inventory of resources is necessary to determine the appropriate level to minimally equip staff and vehicles. The Wildlife Coordinator will be responsible for monitoring expenses and developing an annual budget for wildlife hazard management expenses. This budget will be submitted to the Airport Director, and be available upon request.

## 7 MANAGEMENT STRATEGY

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**FAR Part 139.337(f)(5)(i) Assignment of personnel responsibilities for implementing the procedures;**

Personnel responsibilities are described in Section 2.0.

**FAR Part 139.337(f)(5)(ii) Conduct of Physical inspections of the movement areas and other areas critical to wildlife hazard management sufficiently in advance of air carrier operations to allow time for wildlife controls to be effective;**

**FAR Part 139.337(f)(5)(iii) Wildlife control measures;**

**FAR Part 139.337(f)(5)(iv) Communication between wildlife control personnel and any air traffic control tower in operation at the airport;**

### 7.1 OVERVIEW

A properly formulated wildlife management plan should be based upon a comprehensive biological evaluation. A primary key to successful wildlife control is persistence, innovation, and a clear understanding of the risks associated with certain species, that either by their location, size, behavior, and/or number create a hazardous situation for the current state of the airfield.

As a wildlife population near or on the airfield increases in abundance, so does likelihood that individual members of the population will enter critical airspace used by arriving and departing aircraft. However, wildlife abundance is not the sole indicator for assessing the strike hazards, rather the entire dynamic of the animals' abundance, body size, and behavioral attributes must be evaluated in combination. Notable attributes of wildlife behavior that should be examined to properly assess the risk to aircraft include direction and altitude of wildlife movements in relation to aircraft, flocking characteristics, frequency of visits to a given site, duration of visit, and activity while on site (e.g., nesting, loafing, feeding, soaring, etc.). Determining the potential risk associated with various wildlife requires the consideration of two variables; likelihood of conflict and severity of impact if struck. Common or highly mobile species have a higher likelihood of being struck than rare species. Additionally, the size and social nature (flocking vs. individualists) of species have a significant influence on the severity of impact to an aircraft. Chart 1 illustrates how these variables are used to determine the potential risk posed by wildlife species.

**Chart 1: General Risk Assessment Matrix Potential Hazard.**

<b>Likelihood of Conflict:</b>	High	Moderate	High	Critical
	Moderate	Low	Moderate	High
	Low	Low	Low	Moderate
		Low	Moderate	High
<b>Severity of Impact:</b>				

## 7.2 COMMUNICATION BETWEEN WILDLIFE CONTROL PERSONNEL AND AIR TRAFFIC CONTROL TOWER

Effective communication between airport wildlife control personnel and air traffic is vital to the success of the WHMP. All personnel conducting wildlife control and management will carry radios and actively communicate pertinent wildlife observation to the ATC when necessary. If an immediate wildlife hazard exists that may affect the safety of air traffic, the ATC will coordinate procedures with arriving and departing aircraft. If necessary, the ATC may delay arriving or departing air traffic until the threat is removed. Advisories will be issued by ATC in accordance with FAA Order 7110.65 through direct voice communications, Automated Terminal Information System (ATIS), or other networks. Generic or blanket advisories concerning wildlife shall not be issued in lieu of specific hazard advisories, including the type of bird, location, and direction of movement, if known. Pilot Reports (PIREPS) of identified hazards will be communicated through ATC to affected aircraft in the ADS airport and airspace.

Additional communication procedures at ADS include:

1. Prior to initiation, Operations Personnel will coordinate all wildlife control activities with the ATCT to ensure that such actions do not affect flight safety.
2. Operations Personnel will notify the Wildlife Coordinator of pertinent wildlife-related information for inclusion in specific NOTAMs and ATIS when persistent wildlife cannot be removed or otherwise mitigated.
3. The Wildlife Coordinator will communicate with FBOs regarding any wildlife strikes or observations of wildlife activity at the airfield.
4. Operations Personnel will provide the FBOs with important information that may be posted within their buildings.

## 7.3 WILDLIFE INSPECTIONS

ADS's wildlife inspection crew will consist of Operations Personnel, the ATCT, and the on duty Addison police officer (passively). The Inspector will monitor and respond to wildlife hazards on the airfield and will coordinate their activities through the Wildlife Coordinator. All staff responsible for performing wildlife inspections will be trained in radio communication, and will be trained in wildlife identification, proper wildlife control and management techniques, and safe airport

operations as outlined in Section 8.

### 7.3.1 Responding to Imminent Hazards

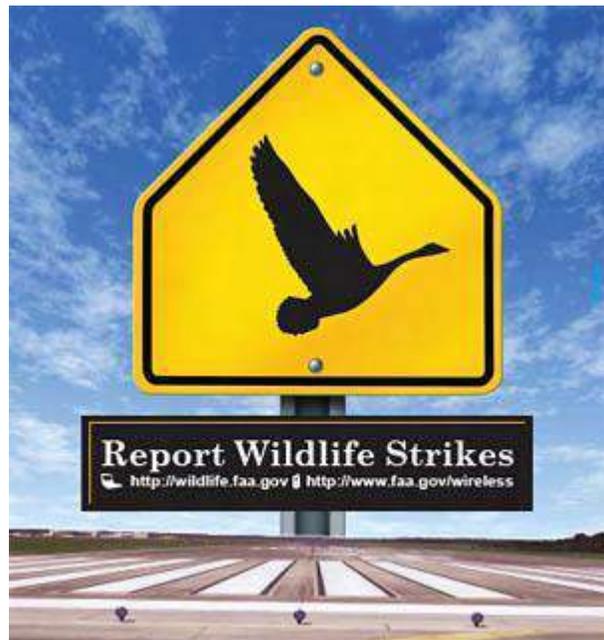
If a hazard is observed that might compromise the immediate safety of air traffic, ADS staff will relay the information to the ATCT, so they may properly alert or direct traffic accordingly. The Operations Personnel will likely be better trained in regards to quantifying the hazards presented by wildlife; therefore, it is important the staff relay as much detail about the situation as possible. If necessary or appropriate, the Operations Personnel will provide advice to the ATCT as to how to direct incoming/outgoing traffic until the hazard can be handled. In extreme cases, the runway may need to be closed temporarily at the discretion of the ATCT and Wildlife Coordinator. Airport condition reports, ATIS reports, and/or a NOTAMS will be issued when appropriate. Generic or blanket advisories without specific details will not be issued.

Wildlife management activities, either hazing or lethal, can potentially create a temporarily increased hazard (e.g. flocks departing after management efforts) from the wildlife until it is moved/removed from the airfield; thus, constant communication with the ATCT is extremely important and of the highest priority.

### 7.3.2 Reporting

All individuals on ADS property shall report significant or unusual observations of wildlife activity to the Wildlife Coordinator. Documentation of these observations will be recorded in the Wildlife Log (Appendix B on accompanied CD). Completed forms will be maintained and stored for frequent review. Routine runway sweeps will be conducted at least once per day and recorded on the Airport Daily Log. The presence of any dead animals found from a strike or within 250 feet of the runways will be documented and reported to the FAA Strike Database.

Other wildlife-related activities (e.g., notable hazards, animals killed or dispersed, unusual wildlife behavior, etc.) shall be documented on the Wildlife Log. Any unidentifiable bird remains that are found will be bagged, labeled (e.g., time and date found, location on runway, person who found remains, etc.), and submitted to the Smithsonian Institution, Feather Identification Lab. A Smithsonian Institution Bird Strike Report and directions for its use can be found in Appendix E on accompanied CD, or via the link below.



Wildlife strikes may be submitted electronically to the FAA via the link below. A printout of the strike report must also be immediately submitted to the Wildlife Coordinator so that the situation can be assessed. The shipping address for strike remains is provided below.

Smithsonian Institute- Bird/Other Wildlife Strike Report and Identification Lab:

<http://www.faa.gov/documentLibrary/media/form/faa5200-7.pdf>

Feather Identification Lab  
E600, MRC 116  
10<sup>th</sup> & Constitution Ave., NW  
Washington, DC 20560

FAA- Bird Strike Database:

[http://wildlife-mitigation.tc.faa.gov/public\\_html/index.html](http://wildlife-mitigation.tc.faa.gov/public_html/index.html)

## 7.4 MANAGEMENT STRATEGIES

There are six basic strategies to manage hazardous wildlife at or near airports:

1. **Habitat modification:** Elimination or reduction of food, water, or shelter attractive to wildlife at or near the airport.
2. **Exclusion:** Use of physical barriers to stop wildlife from gaining access to food, water, or shelter at or near the airport.
3. **Passive repelling techniques:** Use of various audio (e.g. propane canons), visual (e.g. effigies), or chemical repellents to repel problem wildlife. A Qualified Airport Biologist should be contacted if ADS would like additional details or as outlined in the WHA.
4. **Active harassment:** Temporarily removing wildlife from an area through aggressive, non-lethal startling techniques such as pyrotechnics or vehicle horns. If used correctly, this technique can be effective at reducing or eliminating a wildlife hazard in the long term.
5. **Population management:** Reduction or elimination of wildlife populations that are posing a hazard to aircraft at or near the airport by either capturing (live capture and relocation) or killing the problem animals.
6. **Notices to Airmen (NOTAM), Automated Terminal Information Services (ATIS), Pilot Reports (PIREPS), and/or real time advisories to pilots of potential wildlife hazards:** Delaying or advancing takeoff and landing times; changing or closure of active runways. Communication with pilots, ADS wildlife operations, ATCT, and appropriate FBOs is the final precautionary step taken when wildlife pose an immediate hazard to active aircraft.

## 7.5 HABITAT MODIFICATIONS

Habitat modifications are the first priority for ADS for managing wildlife hazards. Table 4 below summarizes habitat modifications recommended for ADS and associated target completion dates. Recommendations will likely require continued monitoring or maintenance. Habitat modification

and maintenance recommendations have been summarized from the Airport Cooperative Research Program (ACRP) Synthesis 52. More extensive details regarding proper habitat maintenance on and around airports can be found in Appendix F on the accompanied CD.

**Table 4:** Proposed Habitat Modification Measures.

Proposed Measure	Target Date	Date Completed
Mow and maintain grasses between 6 and 12 inches for the entire airport	Fall 2013	Ongoing
Remove vegetation around the surface water drainage channel in the northwest corner of the AOA and continue the concrete foundation for the channel.	Spring 2015	
Remove shrubs around or on the security perimeter fence and remove or thin trees around the AOA	Winter 2015	

### 7.5.1 Mowing Regime

The airport will maintain a grass height between 6 and 12 inches. Grasses maintained within these heights minimize foraging and communication opportunities for species attracted to short grass such as European Starlings, doves, and grackles, while also minimizing cover for larger mammals and birds. ADS has already adopted this practice for most of the airport property, especially the AOA.



### 7.5.2 Surface Water Drainage Channel

Surface water and associated vegetation can attract many hazardous wildlife species, such as Red-winged Blackbirds, doves, and waterfowl. Several species of birds have been observed utilizing the vegetation or loafing around stagnant water. Vegetation shall be periodically removed from the banks of the channel and the security perimeter fence. Additionally, lining the surface water drainage channel with concrete will prevent new growth from taking root along the banks and assist with proper drainage.

Wetland and waterways of the US are federally protected; therefore any habitat modifications to

these areas require consultation with the US Army Corps of Engineers (COE). Modifications under 0.1 acres still require coordination/approval from the COE, but do not typically require any formal permit. Impacts between 0.1 and 0.49 acres require an application for a Nationwide Permit (NWP). Addison conducted formal delineations and mitigation discussions with COE for the drainage in question; however, COE permits are typically valid for only 2-5 years.



### 7.5.3 *Shrubs and Trees around the Security Perimeter Fence*

Shrubs and trees along or on the security perimeter fence provides perching and nesting opportunities for a variety of birds, as well as hides burrows and/or gaps in the fenceline. The removal of this vegetation would eliminate attractive cover and force wildlife species utilizing the area away from the AOA. Areas of particular concern include the shrubs in the northeast corner and western side of the airport property, as well as the trees immediately of the property on the western side. The trees on the western side of the airport are not located on ADS property; thus, ADS does not have the authority to alter these trees without permission from the business owner. These areas should be closely monitored for raptors and flocking birds. If the trees attract an above-baseline-number of birds, then a dialog should be initiated with the property owners to discuss potential management of the trees.



## 7.6 PASSIVE EXCLUSION

**Table 5:** Passive Exclusion Actions

Proposed Measures	Target Date	Date Completed
Maintain security perimeter fence for gaps or necessary repairs.	Ongoing	Ongoing
Update western side of security perimeter fence.	Fall 2015	
Install grates or other forms of barriers on all culverts or drains extending beyond the airport property.	Fall 2015	
Install anti-perching equipment on structures inside or adjacent to the operating surface	Spring 2015	

### 7.6.1 Security Perimeter Fence Maintenance

Several Coyotes and domestic dogs were observed or reported on the AOA. While no strikes have been reported with large terrestrial mammals in the past, both species pose a significant threat to aviation. Small gaps under or between the fence provide opportunity for terrestrial wildlife to access the AOA; therefore, fence integrity is critical to ensure the ongoing exclusion of these species from the AOA. Burrows or wash out areas under the security perimeter fence where a mow strip is not present should be filled with heavy material (i.e. rocks, concrete refuge, etc.) until a permanent fix can be made. Several gaps under the fence were observed on the western side of the security perimeter fence.



Gates shall remain closed and locked when not in use. Open or unsupervised gates void the integrity of the security perimeter fence and should remain closed when not in use. Gaps to allow for ground clearance and attachment to posts should be no greater than 3 inches. Weekly fenceline checks will continue to identify and fill/repair any gaps.



### 7.6.2 Update Security Perimeter Fence

The majority of the security perimeter fence has been updated in the last several years. Concrete mow strips and three-strand barbed wire increase the effectiveness of the security perimeter fence; however a large section on the western side and northeast corner of the AOA requires new fencing. Defective issues include gaps, ineffective barbed-wire, and heavy vegetation. These areas will be updated with fencing comparable to the newer sections of security perimeter fence. FAA CertAlert 04-16 recommends a minimum fence height of 8-feet with 3-feet angled barbed wire, and buried to prevent deer access. The current security perimeter fence is all 6-foot high chain-link. No deer have ever been reported on or around ADS; thus, a 6-foot high security perimeter fence is adequate for the circumstances, but is not ideal as a wildlife barrier.



*7.6.3 Culvert and Surface Water Drainage Grates*

Culverts and stormwater drainages are routinely used as a means of access onto airports. Several large, un-grated culverts exist throughout the airport and are believed to be a well-used access points for Coyotes and domestic dogs. Surface water drainage channels are typically lined by dense vegetation or are low lying areas obscured from the view or interference of humans; therefore, wildlife tend to use these areas as corridors for traveling in urban areas. All culverts will be grated with gaps no greater than six inches to prevent large mammals from enter in the AOA. Vegetation, trash and other debris may get trapped by the grates during heavy flow events; Operations Personnel shall monitor these areas to ensure the surface water drainage channels remain free of buildup. Stormwater drains on the southern end of the AOA must also have barriers installed. Metal or heavy plastic bristle strips can be easily installed to cover these gaps while still allowing stormwater to flow freely.



*7.6.4 Anti-Perching Equipment*

Airfield structures, such as runway lights, ramp and taxiway signs, ILS towers, and light poles, can be used as hunting and loafing perches for birds such as raptors. An excessive number of American Kestrels were routinely observed perching on such equipment. Structures found to routinely attract birds in a hazardous manner will be fitted with anti-perching wire. Sensitive equipment can be fitted with plastic anti-perching equipment or some other material that will not interfere with the instrument’s intended purpose. Wooden golf tees can be glued to structures that may not fit or allow anti-perching wire (i.e. small runway lights) or to save costs.



## 7.7 ACTIVE HARASSMENT

**Table 6:** Active Harassment Measures

Proposed Measures	Target Date	Date Completed
Develop harassment techniques for the most hazardous and/or commonly seen wildlife at ADS. Potential harassment methods include: <ol style="list-style-type: none"> <li>1. Pyrotechnics               <ol style="list-style-type: none"> <li>a. Bangers, Screamers, Shell Crackers, etc.</li> </ol> </li> <li>2. Bioacoustics</li> <li>3. Propane Cannons</li> <li>4. Car Sirens and Horns</li> </ol>	Spring 2015	Ongoing

Harassment techniques shall be used when a hazardous wildlife situation is observed that is an immediate threat to the safety of aircraft or personnel at ADS. If used correctly, harassment techniques should reduce the threat immediately, but can also reduce the likelihood of hazardous situations for the long term. Appropriate harassment techniques that could be used at ADS include vehicles, sirens, bio-acoustics, and pyrotechnics. Hazardous wildlife documented at ADS that should be immediately addressed if observed include:

1. Coyotes and Dogs
2. Doves and pigeons (in large flocks)
3. Grackles and European Starlings (in large flocks)
4. Large raptors and vultures
5. Gulls and shorebirds (in large flocks)

The species or guilds listed above should be considered a priority when observed in the AOA. The ATCT and ARFF will always be contacted when any form of harassment is conducted, especially pyrotechniques. The greatest effort possible should be made to prevent wildlife from moving toward the active runway or arriving/departing aircraft, and the ATCT will direct aircraft accordingly to prevent any incidents. The Airport Cooperative Research Program (ACRP) Synthesis 23 outline potential harassment tools and recommends the most effective methods for a variety of commonly observed wildlife at airports. ACRP 23 can be found in Appendix G on the accompanied CD.

### 7.7.1 Coyotes and Dogs

If a coyote or dog is identified on ADS, the ATCT and Operations Personnel will be informed immediately so proper precautions can be taken with arriving or departing aircraft. The location and behavior of the wildlife will dictate the appropriate response; however, as soon as management can be safely carried out, trained staff (ADS Operations, Addison Police, Addison Animal Control, etc.) will work together to corral the animal and push it off any active surface and if the property using a combination of lights, sirens and other stressful stimulants. If a dog appears to be calm enough to safely trap or secure with a control pole/capture noose, than Addison Animal Control will do so as quickly as possible and remove the animal from ADS.

## 7.8 POPULATION MANAGEMENT

Table 7 presents a prioritized list of species-specific population management actions. The actions will be implemented to reduce the overall presence of species that were identified as posing the greatest threats to aircraft operations at ADS. Each project is presented with a proposed target date for completion and an area in which the completion date may be recorded.

Federal and state permit details are discussed in detail in Section 5.0.

**Table 7: Active Deterrence Measures**

Proposed Measures	Target Date	Date Completed
Trap and relocate and/or lethally manage Black-tailed Jackrabbit population in AOA.	Spring 2015	
Obtain and maintain federal and state-issued depredation permits and appropriate licenses.	Spring 2015	
Continue to monitor wildlife populations and patterns during routine maintenance operations.	Fall 2014	Ongoing

### 7.8.1 Black-tailed Jackrabbits

Resident Black-tailed Jackrabbits were observed in exceptionally high numbers on the AOA, and routinely observed crossing over runways and taxiways. The ATCT reported briefly delaying

operations in April 2014 as a result of Black-tailed Jackrabbit activity. The Black-tailed Jackrabbits have become habituated to the presence of humans and aircraft; as a result, relocation and/or lethal management is deemed necessary. The urban location of ADS limits potential options for lethal control, but viable options exist.

*Relocation:*

A collaborative relocation effort for Black-tailed Jackrabbits is already underway between ADS, the University of Texas (UT), and the Lake Lewisville Environmental Learning Area (LLELA). The LLELA is located immediately northwest of Addison and has agreed to accept any Black-tailed Jackrabbits captured as part of an informal reintroduction program. A professor from UT with experience live trapping Jackrabbits has agreed to coordinate the effort on behalf of ADS.

Due to the exceptionally high reproductive capabilities of Black-tailed Jackrabbits, an intense and thorough trapping effort must be made in order to be successful. All Black-tailed Jackrabbits must be removed from ADS to ensure a long term solution to the problem.

*Air Rifle:*

If trapping and relocating proves to be unsuccessful than lethal management will be considered. The most direct, effective and efficient method for lethal control is to shoot the Black-tailed Jackrabbits with an air rifle. Air rifles utilize compressed air cartridges and pellets. The effective power and distance of the pellets is controlled by the air rifle's compression limits (feet per second-FPS). An air rifle between 850 and 1000 FPS can lethally strike an adult Black-tailed Jackrabbit up to 75 feet. Beyond 75 feet, the projectile quickly loses velocity and becomes ineffective, but also becomes relatively harmless if a shot is missed. Black-tailed Jackrabbits are active at any time, but tend to be most active at night. The ADS AOA is approximately 750 feet wide at its narrowest point, which leaves sufficient distance if a shot is missed. Currently, Addison City Officials do not permit the use of projectile lethal management. A formal discussion with the proper city officials and animal control office should be initiated to discuss options that all parties could agree on.



Air rifle designs vary considerably from toy-like to mimicking traditional rifles. To prevent any mistaken identities and/or public concern for what may look like a rifle on an airfield, ADS should purchase a design that meets the required "fire power", but also looks unlike a traditional weapon. Additionally, the air rifle (parts or all) can be painted florescent orange.

*Toxicants:*

One alternative to firearms management is toxicant use. Toxicants have varying levels of success, but have been proven to work to a certain degree if used properly. The Texas USDA-Animal and Plant Health Inspection Services (APHIS) recommends the use of Zinc Phosphide for the lethal management of jackrabbits, but admits that better toxicants may exist. To maximize a toxicant's effectiveness and minimize attracting vultures or other carrion consumers, ADS should bait a Havahart Traps® with toxicant coated vegetables. The traps will prevent the escape



of the jackrabbits and allow an easy recovery of the carcass for disposal. The traps shall be placed in areas with high concentrations of jackrabbits, such as shaded areas near the ILS equipment on the west and north ends. Restricted-use pesticides are available but can be used only by a licensed pest control operator or a person who has an approved applicator's license.

The use of toxicants use should be considered only after careful consideration for the use of air rifles. Five downsides stand out when using passive toxicants:

1. Non-target species could potentially consume the toxicant;
2. Toxicant must typically be consumed in concentrated quantities;
3. Carcasses can attract other wildlife (i.e. vultures);
4. Jackrabbits are likely to recognize the toxicants and traps and avoid them; and
5. Traps must be baited and checked extensively.

Additional questions regarding Black-tailed Jackrabbit control through toxicants should be directed to Vivian Prothro (210-561-3806) at the Texas USDA-APHIS.

### *7.8.2 Monitor Wildlife Populations*

Wildlife abundance and use patterns can be affected by numerous variables and the data provided during WHA monitoring effort should be considered as a baseline for comparison in future years. ADS will continue to monitor general wildlife activity by recording general observations during routine maintenance operations. Results of the ongoing effort will provide general insights into wildlife use patterns over time, enable ADS to determine the effectiveness of its management efforts, and enable adaptive management strategies to be applied or updated as necessary.

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## **8 WHMP EVALUATION**

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### **FAR Part 139.337(f)(6) Periodic evaluation and review of the wildlife hazard management plan**

The Wildlife Hazard Working Group will evaluate the WHMP every 12 consecutive calendar months or following a triggering event. Topics to be reviewed include:

1. The plan's effectiveness in dealing with known wildlife hazards on and in the airport's vicinity;
2. Aspects of the wildlife hazards described in the WHA Final Report that should be reevaluated. The WHWG will determine the effectiveness of the WHMP at reducing wildlife strikes at ADS and monitor the status of hazard reduction projects, including their completion dates provided in Section 6.0, tables 4-7.

#### **8.1 MEETINGS**

The WHWG will meet at least once annually, or following a triggering event, but the group may convene more regularly if situations warrant. The need for WHWG meetings will be determined by the Airport Director. Members of the WHWG are encouraged to report observations to the Wildlife Coordinator and request a WHWG meeting as necessary.

#### **8.2 WILDLIFE STRIKE DOCUMENTATION**

The ADS Operations Personnel will document wildlife strikes and note any major or unusual wildlife observations on the airfield and surrounding areas. Information from this database will be used to identify trends and to monitor changes in wildlife hazards on the airfield. The database can be the accumulation of the Wildlife Log entries. If unacceptable increases in wildlife hazards are observed, the cause shall be determined and the WHMP modified to address the problem.

#### **8.3 TXDOT/FAA INVOLVEMENT**

FAA Regional Certification Inspectors and personnel from the Southwest Region and Texas-ADO should be invited to make comments on the WHMP.

## 9 TRAINING

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**FAR Part 139.337(f)(7): A training program to provide airport personnel with the knowledge and skills needed to carry out the wildlife hazard management plan...**

Training is essential for personnel involved in the WHMP. The Wildlife Coordinator shall ensure that all personnel that might be involved with wildlife management activities are trained in the proper selection and application of management methods as well as wildlife species identification. At a minimum, training will be conducted every 12 consecutive calendar months and will follow the training criteria outlined in the most current edition of AC 150/5200-36.

### 9.1 WILDLIFE HAZARD TRAINING

Operations Personnel will receive wildlife hazard training from a Qualified Airport Wildlife Biologist regarding mitigating wildlife hazards at airports, including an overview of laws associated with wildlife management, identification of wildlife hazards, effective use of lethal methods and non-lethal pyrotechnics, wildlife identification and dispersal techniques, and proper communications procedures. The Wildlife Coordinator will maintain records of personnel that have completed training for implementation of the WHMP.

## 10 AGENCY DIRECTORY

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### U.S. Fish and Wildlife Service (USFWS):

Region 2- Migratory Bird Permit Office  
P.O. Box 709  
Albuquerque, NM 87103  
Phone: (505) 248-7882  
Email [permitsR2MB@fws.gov](mailto:permitsR2MB@fws.gov)

Ecological Services  
(T&E Species)  
10711 Burnet Rd., Suite 200  
Austin, Texas, 78758  
Phone: (512) 490-0057

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### State of Texas:

Department of Transportation Division-  
Aviation and Airports  
150 E. Riverside  
Austin, TX 78704  
Phone: (512) 416-4500

Parks and Wildlife Department  
4200 Smith School Road  
Austin, TX 78744  
Phone: (512) 389-4800

Department of Agriculture (Pesticide  
Management)  
1700 N. Congress, 11th Floor  
Austin TX 78701  
Phone: 800-835-5832  
Email: [Pub.Info@TexasAgriculture.gov](mailto:Pub.Info@TexasAgriculture.gov)

**Federal Aviation Administration:**

Southwest Region  
Airports Division (ASW-600)  
2601 Meacham Boulevard  
Fort Worth, TX 76137-4298  
Phone: (817) 222-5600

Texas Airport Development Office  
2601 Meacham Boulevard

Fort Worth, TX 76137-4298  
Phone: (817) 222-5650

Airport Safety and Operations Division  
Staff Wildlife Biologist, John Weller  
800 Independence Ave., SW  
Washington, DC 20591  
Phone: (202) 267-8731

**U.S. Department of Agriculture (USDA):**

Wildlife Services  
P.O. Box 690170  
San Antonio, TX 78269  
Phone: (210) 472-5451

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**Municipal Agencies:**

Addison Police Department  
4799 Airport Pkwy  
Addison, TX 75001  
(972) 233-1111

Addison Animal Control  
16801 Westgrove Dr.  
Addison, TX 75001  
(972) 450-2845

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**Appendix D**  
**Airport Grant Assurances**

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## **ASSURANCES**

### **Airport Sponsors**

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#### **A. General.**

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of this grant offer by the sponsor, these assurances are incorporated in and become part of this grant agreement.

#### **B. Duration and Applicability.**

1. **Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.**

The terms, conditions and assurances of this grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.**

The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

### 3. Airport Planning Undertaken by a Sponsor.

Unless otherwise specified in this grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 25, 30, 32, 33, and 34 in Section C apply to planning projects. The terms, conditions, and assurances of this grant agreement shall remain in full force and effect during the life of the project; there shall be no limit on the duration of the assurances regarding Airport Revenue so long as the airport is used as an airport.

## C. Sponsor Certification.

The sponsor hereby assures and certifies, with respect to this grant that:

### 1. General Federal Requirements.

It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

#### Federal Legislation

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- a. Title 49, U.S.C., subtitle VII, as amended.
- b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.<sup>1</sup>
- c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
- d. Hatch Act – 5 U.S.C. 1501, et seq.<sup>2</sup>
- e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.<sup>1 2</sup>
- f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).<sup>1</sup>
- g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.<sup>1</sup>
- h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
- i. Clean Air Act, P.L. 90-148, as amended.
- j. Coastal Zone Management Act, P.L. 93-205, as amended.
- k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.<sup>1</sup>
- l. Title 49, U.S.C., Section 303, (formerly known as Section 4(f))
- m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
- n. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- o. Americans with Disabilities Act of 1990, as amended, (42 U.S.C. § 12101 et seq.), prohibits discrimination on the basis of disability).
- p. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
- q. American Indian Religious Freedom Act, P.L. 95-341, as amended.
- r. Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.<sup>1</sup>
- s. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.<sup>1</sup>
- t. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.<sup>1</sup>
- u. Copeland Anti-kickback Act - 18 U.S.C. 874.1
- v. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.<sup>1</sup>
- w. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
- x. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.<sup>2</sup>
- y. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

- z. The Federal Funding Accountability and Transparency Act of 2006, as amended (Pub. L. 109-282, as amended by section 6202 of Pub. L. 110-252).

### **Executive Orders**

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- a. Executive Order 11246 - Equal Employment Opportunity<sup>1</sup>
- b. Executive Order 11990 - Protection of Wetlands
- c. Executive Order 11998 – Flood Plain Management
- d. Executive Order 12372 - Intergovernmental Review of Federal Programs
- e. Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction<sup>1</sup>
- f. Executive Order 12898 - Environmental Justice

### **Federal Regulations**

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- a. 2 CFR Part 180 - OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement).
- b. 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. [OMB Circular A-87 Cost Principles Applicable to Grants and Contracts with State and Local Governments, and OMB Circular A-133 - Audits of States, Local Governments, and Non-Profit Organizations].<sup>4, 5, 6</sup>
- c. 2 CFR Part 1200 – Nonprocurement Suspension and Debarment
- d. 14 CFR Part 13 - Investigative and Enforcement Procedures 14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
- e. 14 CFR Part 150 - Airport noise compatibility planning.
- f. 28 CFR Part 35- Discrimination on the Basis of Disability in State and Local Government Services.
- g. 28 CFR § 50.3 - U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964.
- h. 29 CFR Part 1 - Procedures for predetermination of wage rates.<sup>1</sup>
- i. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.<sup>1</sup>
- j. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).<sup>1</sup>
- k. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).<sup>1</sup>
- l. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.<sup>3</sup>
- m. 49 CFR Part 20 - New restrictions on lobbying.
- n. 49 CFR Part 21 – Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.
- o. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.

- p. 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs.<sup>1 2</sup>
- q. 49 CFR Part 26 – Participation by Disadvantaged Business Enterprises in Department of Transportation Programs.
- r. 49 CFR Part 27 – Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.<sup>1</sup>
- s. 49 CFR Part 28 – Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities conducted by the Department of Transportation.
- t. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.
- u. 49 CFR Part 32 – Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)
- v. 49 CFR Part 37 – Transportation Services for Individuals with Disabilities (ADA).
- w. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.

### **Specific Assurances**

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Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in this grant agreement.

### **Footnotes to Assurance C.1.**

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- <sup>1</sup> These laws do not apply to airport planning sponsors.
- <sup>2</sup> These laws do not apply to private sponsors.
- <sup>3</sup> 49 CFR Part 18 and 2 CFR Part 200 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.
- <sup>4</sup> On December 26, 2013 at 78 FR 78590, the Office of Management and Budget (OMB) issued the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in 2 CFR Part 200. 2 CFR Part 200 replaces and combines the former Uniform Administrative Requirements for Grants (OMB Circular A-102 and Circular A-110 or 2 CFR Part 215 or Circular) as well as the Cost Principles (Circulars A-21 or 2 CFR part 220; Circular A-87 or 2 CFR part 225; and A-122, 2 CFR part 230). Additionally it replaces Circular A-133 guidance on the Single Annual Audit. In accordance with 2 CFR section 200.110, the standards set forth in Part 200 which affect administration of Federal awards issued by Federal agencies become effective once implemented by Federal agencies or when any future amendment to this Part becomes final. Federal agencies, including the Department of Transportation, must implement the policies and procedures applicable to Federal awards by promulgating a regulation to be effective by December 26, 2014 unless different provisions are required by statute or approved by OMB.

<sup>5</sup> Cost principles established in 2 CFR part 200 subpart E must be used as guidelines for determining the eligibility of specific types of expenses.

<sup>6</sup> Audit requirements established in 2 CFR part 200 subpart F are the guidelines for audits.

**2. Responsibility and Authority of the Sponsor.**

a. Public Agency Sponsor:

It has legal authority to apply for this grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

b. Private Sponsor:

It has legal authority to apply for this grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

**3. Sponsor Fund Availability.**

It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under this grant agreement which it will own or control.

**4. Good Title.**

- a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.
- b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

**5. Preserving Rights and Powers.**

- a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in this grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

- b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in this grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of this grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.
- c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.
- d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.
- e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.
- f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in this grant agreement and shall insure that such arrangement also requires compliance therewith.
- g. Sponsors of commercial service airports will not permit or enter into any arrangement that results in permission for the owner or tenant of a property used as a residence, or zoned for residential use, to taxi an aircraft between that property and any location on airport. Sponsors of general aviation airports entering into any arrangement that results in permission for the owner of residential real property adjacent to or near the airport must comply with the requirements of Sec. 136 of Public Law 112-95 and the sponsor assurances.

**6. Consistency with Local Plans.**

The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

**7. Consideration of Local Interest.**

It has given fair consideration to the interest of communities in or near where the project may be located.

**8. Consultation with Users.**

In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

**9. Public Hearings.**

In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

**10. Metropolitan Planning Organization.**

In projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.

**11. Pavement Preventive Maintenance.**

With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

**12. Terminal Development Prerequisites.**

For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and

has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

**13. Accounting System, Audit, and Record Keeping Requirements.**

- a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of this grant, the total cost of the project in connection with which this grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.
- b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to this grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which this grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

**14. Minimum Wage Rates.**

It shall include, in all contracts in excess of \$2,000 for work on any projects funded under this grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

**15. Veteran's Preference.**

It shall include in all contracts for work on any project funded under this grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

**16. Conformity to Plans and Specifications.**

It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved plans,

specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into this grant agreement.

**17. Construction Inspection and Approval.**

It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

**18. Planning Projects.**

In carrying out planning projects:

- a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.
- b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.
- c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.
- d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.
- e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.
- f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.
- g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.
- h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

**19. Operation and Maintenance.**

- a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal,

state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary. In furtherance of this assurance, the sponsor will have in effect arrangements for-

- 1) Operating the airport's aeronautical facilities whenever required;
  - 2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and
  - 3) Promptly notifying airmen of any condition affecting aeronautical use of the airport. Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.
- b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

#### **20. Hazard Removal and Mitigation.**

It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

#### **21. Compatible Land Use.**

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

#### **22. Economic Nondiscrimination.**

- a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.
- b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or

to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

- 1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and
  - 2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.
- c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.
  - d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.
  - e. Each air carrier using such airport (whether as a tenant, non-tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.
  - f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.
  - g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.
  - h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.
  - i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

### **23. Exclusive Rights.**

It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

- a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and
- b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport. It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

### **24. Fee and Rental Structure.**

It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

### **25. Airport Revenues.**

- a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. The following exceptions apply to this paragraph:
  - 1) If covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or

operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

- 2) If the Secretary approves the sale of a privately owned airport to a public sponsor and provides funding for any portion of the public sponsor's acquisition of land, this limitation on the use of all revenues generated by the sale shall not apply to certain proceeds from the sale. This is conditioned on repayment to the Secretary by the private owner of an amount equal to the remaining unamortized portion (amortized over a 20-year period) of any airport improvement grant made to the private owner for any purpose other than land acquisition on or after October 1, 1996, plus an amount equal to the federal share of the current fair market value of any land acquired with an airport improvement grant made to that airport on or after October 1, 1996.
  - 3) Certain revenue derived from or generated by mineral extraction, production, lease, or other means at a general aviation airport (as defined at Section 47102 of title 49 United States Code), if the FAA determines the airport sponsor meets the requirements set forth in Sec. 813 of Public Law 112-95.
- b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.
  - c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

## **26. Reports and Inspections.**

It will:

- a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;
- b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;
- c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of this grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

- d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:
  - 1) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and
  - 2) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

**27. Use by Government Aircraft.**

It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that –

- a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or
- b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

**28. Land for Federal Facilities.**

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

**29. Airport Layout Plan.**

- a. It will keep up to date at all times an airport layout plan of the airport showing
  - 1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;
  - 2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and

roads), including all proposed extensions and reductions of existing airport facilities;

- 3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon; and
  - 4) all proposed and existing access points used to taxi aircraft across the airport's property boundary. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.
- b. If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities except in the case of a relocation or replacement of an existing airport facility due to a change in the Secretary's design standards beyond the control of the airport sponsor.

### **30. Civil Rights.**

It will promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any activity conducted with, or benefiting from, funds received from this grant.

- a. Using the definitions of activity, facility and program as found and defined in §§ 21.23 (b) and 21.23 (e) of 49 CFR § 21, the sponsor will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by, or pursuant to these assurances.
- b. Applicability
  - 1) Programs and Activities. If the sponsor has received a grant (or other federal assistance) for any of the sponsor's program or activities, these requirements extend to all of the sponsor's programs and activities.
  - 2) Facilities. Where it receives a grant or other federal financial assistance to construct, expand, renovate, remodel, alter or acquire a facility, or part of a facility, the assurance extends to the entire facility and facilities operated in connection therewith.

- 3) Real Property. Where the sponsor receives a grant or other Federal financial assistance in the form of, or for the acquisition of real property or an interest in real property, the assurance will extend to rights to space on, over, or under such property.

c. Duration.

The sponsor agrees that it is obligated to this assurance for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the assurance obligates the sponsor, or any transferee for the longer of the following periods:

- 1) So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or
- 2) So long as the sponsor retains ownership or possession of the property.

d. Required Solicitation Language. It will include the following notification in all solicitations for bids, Requests For Proposals for work, or material under this grant agreement and in all proposals for agreements, including airport concessions, regardless of funding source:

“The **(Name of Sponsor)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.”

e. Required Contract Provisions.

- 1) It will insert the non-discrimination contract clauses requiring compliance with the acts and regulations relative to non-discrimination in Federally-assisted programs of the DOT, and incorporating the acts and regulations into the contracts by reference in every contract or agreement subject to the non-discrimination in Federally-assisted programs of the DOT acts and regulations.
- 2) It will include a list of the pertinent non-discrimination authorities in every contract that is subject to the non-discrimination acts and regulations.
- 3) It will insert non-discrimination contract clauses as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.
- 4) It will insert non-discrimination contract clauses prohibiting discrimination on the basis of race, color, national origin, creed, sex, age, or handicap as a

covenant running with the land, in any future deeds, leases, license, permits, or similar instruments entered into by the sponsor with other parties:

- a) For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and
  - b) For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.
- f. It will provide for such methods of administration for the program as are found by the Secretary to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the acts, the regulations, and this assurance.
- g. It agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this assurance.

### **31. Disposal of Land.**

- a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will be, at the discretion of the Secretary, (1) reinvested in another project at the airport, or (2) transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order, (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund. If land acquired under a grant for noise compatibility purposes is leased at fair market value and consistent with noise buffering purposes, the lease will not be considered a disposal of the land. Revenues derived from such a lease may be used for an approved airport development project that would otherwise be eligible for grant funding or any permitted use of airport revenue.
- b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested or transferred to another

eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order: (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund.

- c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.
- d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

**32. Engineering and Design Services.**

It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement prescribed for or by the sponsor of the airport.

**33. Foreign Market Restrictions.**

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

**34. Policies, Standards, and Specifications.**

It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated \_\_\_\_\_ (the latest approved version as of this grant offer) and included in this grant, and in accordance

with applicable state policies, standards, and specifications approved by the Secretary.

**35. Relocation and Real Property Acquisition.**

- a. It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B.
- b. It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24.
- c. It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

**36. Access By Intercity Buses.**

The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport; however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

**37. Disadvantaged Business Enterprises.**

The sponsor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract covered by 49 CFR Part 26, or in the award and performance of any concession activity contract covered by 49 CFR Part 23. In addition, the sponsor shall not discriminate on the basis of race, color, national origin or sex in the administration of its DBE and ACDBE programs or the requirements of 49 CFR Parts 23 and 26. The sponsor shall take all necessary and reasonable steps under 49 CFR Parts 23 and 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts, and/or concession contracts. The sponsor's DBE and ACDBE programs, as required by 49 CFR Parts 26 and 23, and as approved by DOT, are incorporated by reference in this agreement. Implementation of these programs is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the sponsor of its failure to carry out its approved program, the Department may impose sanctions as provided for under Parts 26 and 23 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1936 (31 U.S.C. 3801).

**38. Hangar Construction.**

If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

### **39. Competitive Access.**

- a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-
  - 1) Describes the requests;
  - 2) Provides an explanation as to why the requests could not be accommodated; and
  - 3) Provides a time frame within which, if any, the airport will be able to accommodate the requests.
- b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date.

**Appendix E**  
**Addison Airport Rules and**  
**Regulations**  
**and Minimum Standards**

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# **Rules and Regulations**

***Adopted by the Town of Addison City Council***

December 14, 2010



# **ADDISON AIRPORT RULES AND REGULATIONS**

Contact Information:  
Addison Airport Management  
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Addison, Texas 75001

Addison Airport Management Office – (972) 392-4850  
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## ***Definitions***

<b>SECTION 1: GENERAL USE OF AIRPORT</b>	<b>7</b>
Section 1-1. Purpose of Rules and Regulations.....	7
Section 1-2. Conflicting laws, ordinances, regulations and contracts.....	7
Section 1-3. Penalty for Violations.....	7
Section 1-4. Minimum Standards.....	7
Section 1-5. Accessing the Airport.....	7
Section 1-6. Responsible party.....	7
Section 1-7. Closing of Airport.....	7
Section 1-8. Smoking areas.....	7
Section 1-9. Self-services.....	7
Section 1-10. Aircraft washing and polishing.....	8
Section 1-11. Waste containers, trash and disposal.....	8
Section 1-12. Painting of aircraft.....	8
Section 1-13. Storm Water Pollution Prevention and training.....	8
Section 1-14. Access codes/devices.....	8
Section 1-15. Model aircraft, kites, balloons, etc.....	9
Section 1-16. Signs and Advertisements.....	9
Section 1-17. Animals.....	9
Section 1-18. Feeding of Wild Animals.....	9
Section 1-19. Maintenance and cleanliness of premises.....	9
Section 1-20. Storage, transfer and cleanup charges.....	9
Section 1-21. Property damage, injurious or detrimental activities.....	9
Section 1-22. Alteration of Airport property.....	10
Section 1-23. Responsibility of Property under Care and Custody.....	10
Section 1-24. Aircraft Accidents and other emergencies on the Airport.....	10
Section 1-25. Through the Fence Operations.....	10
Section 1-26. Applicable Requirements of the Rules and Regulations for Through-the-Fence Operators.....	10
Section 1-27. Airport Fence and Gate Management - Responsibility of Owners and Operators.....	10
<b>SECTION 2 AIRCRAFT RULES.....</b>	<b>12</b>
Section 2-1. Applicability of this section.....	12
Section 2-2. General operating rules for aircraft.....	12
Section 2-3. Aircraft parking.....	12
Section 2-4. Removal of Disabled aircraft.....	12
Section 2-5. Aircraft engine operation.....	12
Section 2-6. Aircraft engine run-ups.....	12
Section 2-7. Exhaust and propeller blast.....	13

Section 2-8. Aircraft Noise Abatement procedures.....	13
Section 2-9. Common air traffic advisory frequency.....	13
Section 2-10. Aircraft accident reports.....	13
Section 2-11. Reporting of Incursions and Surface Incidents caused by a Pilot Deviation.....	13
Section 2-12. Helicopter Operation.....	13
<b><u>SECTION 3 VEHICLES, PEDESTRIANS, ETC.....</u></b>	<b>14</b>
Section 3-1. Applicability of this section.....	14
Section 3-2. Vehicle operations.....	14
Section 3-3. Reporting of Incursions or Surface Incidents caused by a Vehicle or Pedestrian.....	14
Section 3-4. Parking restrictions.....	14
Section 3-5. Authority to remove vehicles.....	14
Section 3-6. Bicycles.....	14
Section 3-7. Scooters and miscellaneous vehicles.....	14
Section 3-8. Motor homes, boats and recreational vehicles.....	15
Section 3-9. Vehicle repair.....	15
Section 3-10. Pedestrians in the Common Areas of the AOA.....	15
<b><u>SECTION 4 HANGARS OWNED AND/OR OPERATED BY THE AIRPORT.....</u></b>	<b>16</b>
Section 4-1. Applicability of this section.....	16
Section 4-2. Aircraft hangars.....	16
Section 4-3. Aircraft T-hangars.....	16
Section 4-4. Aircraft patio hangars and tie-downs.....	17
<b><u>SECTION 5 FUELING, FLAMMABLE FLUIDS, AND SAFETY.....</u></b>	<b>18</b>
Section 5-1. Fuel safety.....	18
Section 5-2. Unauthorized fuel possession and storage.....	18
Section 5-3. Storage of aircraft fuel trucks, trailers and other aircraft refueling devices.....	18
Section 5-4. Aircraft fueling locations.....	18
Section 5-5. Maintenance of fuel servicing vehicles.....	18
Section 5-6. Removal of gas, oil, grease, etc.....	18
Section 5-7. Fire extinguishers.....	19
Section 5-8. Moveable fuel storage tanks.....	19
Section 5-9. Self-fueling.....	19
Section 5-10. Vehicle fuel.....	19
<b><u>SECTION 6 SPECIAL EVENTS.....</u></b>	<b>20</b>
Section 6-1. Applicability of this Section.....	20
Section 6-2. Special Events Permit.....	20
Section 6-3. Requirements for a Special Events Permit.....	20
Section 6-4. Notice of Airport Special Events to Affected Parties.....	20
Section 6-5. Responsibility at Special Events.....	20
<b><u>SECTION 7 NOTICE OF VIOLATION.....</u></b>	<b>21</b>
Section 7-1 Applicability.....	21
Section 7-2 Purpose.....	21
Section 7-3 Procedure.....	21

## **DEFINITIONS**

The following words and phrases, whenever used in these rules and regulations, shall be construed as defined in this article unless from the context a different meaning is intended, or unless a different meaning is specifically defined and more particularly ascribed to the use of such words or phrases. All definitions contained in 49 U.S.C. §40101 *et seq.* (previously known as the Federal Aviation Act of 1958, hereinafter cited as "FAA Act") and all amendments thereto shall be considered as included herein; and all definitions shall be interpreted on the basis and intention of the FAA Act and amendments thereto unless from the context a different meaning is intended, or unless a different meaning is specifically defined and more particularly ascribed to the use of such words or phrases.

**Abandoned property or vehicles** shall hold the equivalent definition as defined by the Texas State Law. No person shall abandon any property on Airport property or in any building on the Airport without prior permission from the Airport Director.

**Abandoned aircraft** shall be defined under the same terms as are stated under the current regulations published by the Federal Aviation Administration.

**Aeronautical activity** means any activity or service which involves, makes possible, or is required for the operation of aircraft, or contributes to, or is required for, the safety of such operations. "Aeronautical activities" include, but are not limited to, charter operations (under either Federal Aviation Regulation (FAR) Part 121 or 135), charter brokerage, aircraft hangar leasing, pilot training, aircraft rental and sight-seeing, aerial photography, crop dusting, fire suppression, aerial advertising and surveying, aircraft sales, leasing and servicing, aircraft management, aircraft washing, and sale of aviation petroleum products, whether or not conducted in conjunction with other included activities which have a direct relationship to the operation of aircraft, repair and maintenance of aircraft, sale of general aviation aircraft parts, and any other activities which because of their relationship to the operation of aircraft can appropriately be regarded as an "aeronautical activity."

**Aircraft parking and storage areas** means those hangar and apron locations of the Airport designated by the Airport Director for the parking and storage of aircraft, and such areas of the Airport designated for aircraft maintenance, and self-fueling.

**Airport** means in this document the physical boundaries of Addison Airport.

**Airport Director** in this document shall pertain to the person designated and given authority as the Director of Addison Airport or any designee.

**Airport Fence** meaning that fence, gate, building, structure or some other form of barrier used to distinguish the Airport's property boundary limits or to serve as a physical barrier restricting the general public from having direct access to the Airport Operating Area. The Airport Fence may be owned and/or maintained by the Town of Addison, a ground tenant or off-Airport property owner.

**Air Operations Area (AOA)** means the portion of the Airport, paved and unpaved, specifically reserved for the use of the actual operators of licensed aircraft, the aircraft crews, passengers of the aircraft, employees of the Town, Airport management and of the Airport operators, and such other persons as may be authorized to enter thereon by reason of their official duties in connection with the maintenance, inspection and operation of the aircraft and Airport. Generally the Air Operating Area ("AOA") is that portion of the Airport which lies inside the Airport Fence giving direct access to any aircraft and its movement area.

**Common Areas** means that portion of Airport property not bound by exclusive-use agreements including, but not limited to, all Common Areas, improvements, equipment and services which may now exist or may hereafter be provided by Airport Management

for the accommodation and convenience of Airport customers and tenants, including landing and take-off facilities, means of ingress and egress to Leased Premises, other Airport installations and all other reasonable services which may be provided without charge from time to time by Airport Management. All such Common Areas shall be at all times under the exclusive control and management of Airport Management and may be rearranged, modified, changed or terminated at Airport Management's sole discretion.

**Force Majeure** is an Act of God, strike, lockout, shortage of material or labor, restriction by any governmental authority, civil riot, flood or any other cause not within the control of Landlord.

**Fuel handling** means the transportation, delivery, fueling, and draining of fuel or fuel waste products, and the fueling of aircraft.

**Ground Vehicle Training Program** shall mean the current training class or course offered (by whatever name) by the Airport Director to provide awareness and teach how a person shall access the Airport safely and correctly. Completion of this course or class is required for any person desiring unescorted access to AOA Common Facilities.

**Hazardous Materials** include, but are not limited to, asbestos in any form, urea formaldehyde foam insulation, any other chemical, material, air pollutant, toxic pollutant, waste or substance which is regulated as toxic or hazardous or exposure to which is prohibited, limited or regulated by the Resource Conservation Recovery Act, the Hazardous Materials Transportation Act, the Toxic Substances Control Act, the Clean Air Act and /or Clean Water Act or any other federal, state, county, regional, local or other governmental authority's laws, rules, orders, standard, policies or regulations.

**Major aircraft alterations and repair** means major alterations and/or repairs of the parts or of the types listed in FAR Part 43x.A.a and 43x.A.b.

**Minimum Standards** means the minimum standards set by the Airport Management for permitted commercial aeronautical activities at the Airport.

**Movement Area** means the area of the Common Area of the AOA which is used for take off, landing, taxiing and maneuvering of aircraft and requires prior permission from the Addison Air Traffic Control Tower to enter and access.

**Non-Movement Area** means the area of the Common Area of the AOA which is used for provide a path for taxiing and maneuvering of aircraft to a taxiway and does not require prior permission from the Addison Air Traffic Control Tower to enter and access.

**Permitted Use of Premises** is clearly defined in Exclusive-use Agreements. Any other use outside the stated permitted use is strictly prohibited without the prior written consent of Airport Management

**Premises (Leased Premises, Demised Premises)** means that portion of Airport property that is not Common Area, and is subject to a binding exclusive-use agreement with Airport Management

**Preventative aircraft maintenance** means maintenance that is not considered a major aircraft alteration or repair and does not involve complex assembly operations as listed in the most current FAR Part 43x.A.c.

**Public entry point** means any gate (vehicle or pedestrian) that is managed and operated by Addison Airport that gives access to any Common Area of the Airport.

**Runway incursion** as defined by the FAA, will mean, any occurrence in the Airport runway environment involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in a loss of required separation with an aircraft taking off, intending to take off, landing, or intending to land.

**Service Provider** is any person, operator or business on the Airport that offers a public service to other aeronautical users for a fee and has met the requirements of the *Minimum Standards*.

**Shared Easement** means the non-exclusive use of a portion of the Common Area of the Airport for the purpose of providing pedestrian and motor vehicular (excluding aircraft) ingress and egress by specified person(s).

**Special Event** is defined as any event or activity at the Airport or at a business or location at the Airport that is outside the normal operation of that facility.

**Surface incident** as defined by the FAA, will mean those incidents where a vehicle, pedestrian or an aircraft, operated by a pilot or maintenance technician, enters a runway safety area or taxiway without a clearance but another aircraft was not present.

**Taxilane** means any Common Area of the AOA, or any other area, used for access between taxiways and aircraft parking and storage areas. A taxilane shall be designated as part of the non-movement area.

**Taxiway** means a defined path established for the taxiing of aircraft from an aircraft parking and storage area or a taxilane to a runway. A taxiway shall be designated as part of the movement area.

**Town of Addison** shall be defined in this document as any employee, or elected official of the Town of Addison.

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## **SECTION 1 GENERAL USE OF AIRPORT**

### ***Section 1-1. Purpose of Rules and Regulations.***

Rules and regulations provided in this document and any other amendments, adopted pursuant to Article 14 of the Addison Code of Ordinances or other documents referenced here, are intended for the safe, orderly and efficient operation of the Airport, and apply to all persons using the Airport for any reason.

### ***Section 1-2. Conflicting Laws, Ordinances, Regulations and Contracts.***

In any case where a provision of the *Rules and Regulations* is found to be in conflict with any other provision of these regulations or in conflict with a provision of any zoning, building, fire, safety, health or other ordinance, code, rule, or regulation of the Town of Addison, the provision which establishes the higher standard for the promotion and protection of the health and safety of the people shall prevail.

### ***Section 1-3. Penalty for Violations.***

The Airport Director may deny use of the Airport or issue a warning for any person violating or refusing to comply with any of the *Rules and Regulations* or any supporting document referenced in the *Rules and Regulations* through the *Notice of Violation* (NOV) procedure. Some violations may also be considered misdemeanors and be subject to monetary fines in accordance with Chapter 14, Article III, Division 1 of the Town of Addison Code of Ordinances.

### ***Section 1-4. Minimum Standards.***

Prior to commencing any commercial aeronautical activity at the Airport, all persons shall comply with all applicable requirements concerning such activities as are set forth in the Addison Airport *Minimum Standards* and the *Rules and Regulations*.

### ***Section 1-5. Accessing the Airport.***

Only persons and vehicles given prior authorization through terms of a lease, agreement or permit with the Airport may access the Airport and only under all other conditions of this document. No person shall gain unauthorized access to the Airport by any means. Unauthorized access will be construed as trespassing.

### ***Section 1-6. Responsible Party.***

Any person being given access to the Airport, whether by means of a lease, agreement or permit with the Airport, shall be responsible for any person or vehicle that has gained access, authorized or unauthorized, through conditions, means or physical access that the lease, agreement or permit gives. The aforementioned are responsible for access gained through the privileges granted in any lease, agreement or permit.

### ***Section 1-7. Closing of the Airport.***

In the event the Airport Director believes the conditions of the Airport are unsafe for landing or takeoffs or for means of construction or repair, it shall be within the Airport Director's authority to close the entire Airport or portions of the Airport at any given time.

### ***Section 1-8. Smoking Areas.***

Smoking is prohibited:

- (a) Within fifty (50) feet of an aircraft, fuel truck and/or fuel storage area;
- (b) Within two hundred (200) feet of the bulk fuel storage facility.

**Section 1-9. Self-services.**

- (a) Persons are permitted to fuel, wash, repair, or otherwise service their own based aircraft, provided there is no attempt to perform such services for others for compensation without satisfying the requirements of the *Minimum Standards* and provided that such right is conditioned upon compliance with these regulations and all applicable laws.
- (b) An aircraft owner may hire an individual to provide, under the direction and supervision of the aircraft owner, services only on the owner's based aircraft as long as that person hired has satisfied the requirements of the *Minimum Standards* and provided that such right is conditioned upon compliance with these regulations and all applicable laws. Such services may also be provided by a direct employee of the aircraft owner.

**Section 1-10. Aircraft Washing and Polishing.**

Washing of aircraft must be done without the use of soaps, solvents or degreasers unless those previously listed are biodegradable. Runoff shall be contained as to not enter any storm drain, collected and properly disposed of in a manner acceptable to the Airport Director, in accordance with all federal, state, county and local law. Aircraft washing shall follow all guidelines as expressed in the Airport's *Storm Water Pollution Prevention Plan*. Aircraft may be washed inside a hangar if the hangar is equipped with a drain that drains to the sanitary sewer and as long as the washing of that aircraft in the hangar does not cause flooding to an adjacent hangar.

**Section 1-11. Waste Containers, Trash and Disposal.**

All Airport tenants, users, or visitors shall be responsible for the disposal of their own waste and trash and in the appropriate waste containers. No petroleum products, industrial waste matter or other hazardous materials shall be dumped or otherwise disposed of except in accordance with local, county, state and federal law. Any hazardous material, industrial waste, or petroleum products shall be the responsibility of the originator under all applicable laws.

**Section 1-12. Painting of Aircraft.**

Any person wishing to conduct any painting of aircraft or parts of an aircraft at the Airport shall comply with all applicable environmental regulations and Town of Addison Fire Department regulations. The Town of Addison Fire Department limits the size of the object being painted to nine (9) square feet. The Airport Director shall have the right to terminate any painting operations that interfere with the operation or disrupt normal operations of any other tenant or operator.

**Section 1-13. Storm Water Pollution Prevention and Training.**

The Airport is subject to federal storm water regulations, 40 C.F.R. Part 122 for "vehicle maintenance shops" (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and/or deicing operations that occur at the Airport as defined in these regulations and, if applicable, state storm water regulations. Each Service Provider shall become familiar with these storm water regulations if it conducts or operates "vehicle maintenance" (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations and/or deicing activities as defined in the federal storm water regulations; and is advised that there are significant penalties for submitting false information, including fines and imprisonment for known violations. Training, provided by the Airport Director, is required for Service Providers before performing any of the above mentioned operations.

**Section 1-14. Access Codes/Devices.**

Access codes and devices, used for accessing any public entry point, shall only be utilized by persons authorized to access those gates. Successful completion of the *Ground Vehicle Driving Program* is required before being given any access code or device. Persons, who have been provided either a code or device for the purpose of obtaining access to the Airport through a public entry point, shall not duplicate, or otherwise distribute the same to any other person, unless otherwise approved in writing by the Airport Director. Violation of this regulation may result in the loss of access privileges. It is not a violation of this section to provide the access code to the employees of the person to whom the access code has been given and who have successfully completed the *Ground Vehicle Driving Program* as required.

**Section 1-15. Model Aircraft, Kites, Balloons, etc.**

No person shall fly or release a model aircraft, rocket, kite, balloon, parachute, etc, on the Airport unless prior permission is granted through the Airport Director.

**Section 1-16. Signs and Advertisements.**

No person shall post or display signs of any kind in or on a fence or gate owned and maintained by the Airport. No person shall post or display signs of any kind on the exterior of an Airport owned or managed building or hangar without prior written permission from the Airport Director. All outdoor signs, posted or displayed, must meet the requirements set forth by the Town of Addison ordinances. No person shall distribute advertisements, circulars, printed or written matter to any person, business or property on the Airport.

**Section 1-17. Animals.**

No person shall enter the Airport with a dog or other animal unless the animal is restrained by a leash no longer than six feet in length or properly confined as determined by the Airport Director. No person in charge of a dog or other animal shall permit the animal to wander unrestrained on any portion of the Airport. All pet waste must be collected and disposed of appropriately.

**Section 1-18. Feeding of Wild Animals.**

No person may intentionally feed a wild or stray animal or bird at the Airport either inside the fence or outside.

**Section 1-19. Maintenance and Cleanliness of Premises.**

All persons using the Airport shall maintain their premises, inside and outside the AOA, in a condition of repair, cleanliness and general maintenance. All persons having possession, control or use of any portions of the Airport shall at all times maintain such premises in clean, serviceable, safe and operable condition and repair. No person shall store or stock materials or equipment in such a manner as to be unsightly or constitute a hazard to personnel or property, as determined by the Airport Director. The definition of cleanliness is at the discretion of the Airport Director, but shall be equal to a community standard and shall not create a nuisance to the community.

**Section 1-20. Storage, Transfer and Cleanup Charges.**

The Town of Addison or Airport Director may remove and impose storage, removal and transfer charges upon any property abandoned or unlawfully located at the Airport. The Town of Addison or Airport Director may clean up any material unlawfully spilled, placed or otherwise deposited at the Airport and may charge the responsible person(s) for the cost of the cleanup, and for any required environmental remediation, and any expenses

incurred by, or fines or damages imposed on, the Town of Addison or Airport as a result of the clean up. Abandoned or unlawful property located on the Airport refers to property stored in any manner contrary to the rules presented in this document and anywhere on Airport, whether inside the AOA fence or outside.

***Section 1-21. Property Damage, Injurious or Detrimental Activities.***

No person shall destroy, deface, injure or disturb in any way Airport property or conduct activities at the Airport that is injurious, detrimental or damaging to Airport property or to activities and business of the Airport. Any person causing or liable for any damage shall be required to pay the Town of Addison the full cost of repairs. Any person failing to comply with this section shall be in violation of these regulations and may be refused the use of any Airport facility until the Town of Addison has been fully reimbursed for damage done.

***Section 1-22. Alteration of Airport Property.***

No person shall make any alterations to any signs, buildings, aircraft parking and storage areas, leased areas or other Airport property, nor erect any signs, buildings or other structures, that would normally require a building permit, without prior written permission of the Airport Director and without first obtaining the proper permits. Interior work which would not require a building permit such as painting or the installation of carpet does not need to be approved by the Airport Director. Such persons shall comply with all building codes and permit procedures of the Town of Addison and shall deliver to the Airport Director as-built plans upon completion.

***Section 1-23. Responsibility for Property under Care, Custody and Control.***

Property, including, but not limited to, aircraft, airframes, and parts of aircraft, that is under the care, custody and control of a person shall not be abandoned, neglected or relocated without consent from another person to take care, custody and control of said property.

***Section 1-24. Aircraft Accidents and Other Emergencies on the Airport.***

Persons should remain clear and away from all Airport emergencies unless authorized by law or otherwise requested or with consent of the Airport Director.

***Section 1-25. Through-the-Fence Operations.***

No private individual, partnership, FBO, Service Provider, company, or corporation shall be permitted direct access to or from the Airport by their aircraft, their customers' aircraft, or a private vehicle from property adjacent to or in the immediate vicinity of the Airport without a valid access permit being issued by the Airport Director and approved by the Town of Addison.

***Section 1-26. Applicable Requirements of the Rules and Regulations for Through-the-Fence Operators.***

Through-the-Fence operations are governed by Chapter 14 of the Town of Addison Code of Ordinances

The following parts of the *Rules and Regulations* do not apply to a holder of a Through-the-Fence Access Permit:

*Section 1-9. Self-services.*

*Section 1-10. Aircraft Washing and Polishing.*

*Section 1-11. Waste Containers, Trash and Disposal.*

*Section 1-12. Painting of Aircraft.*

Section 1-13. Storm Water Pollution Prevention and Training.

**Section 1-27. Airport Fence and Gate Management - Responsibility of Owners and Operators.**

At all times it is the responsibility of any tenant, through-the-fence access permit holder or Service Provider authorized to conduct commercial operations at the Airport to properly maintain and manage all fences and pedestrian/vehicular gates on their property restricting direct access to the Airport Operating Area (unless the Town of Addison or the Airport Director have otherwise accepted responsibility for maintaining and managing such fence or gate).

- (a) All gates leading to or from the Airport Operating Area (AOA) must be posted at all times as follows with the following information with letters at least 3 inches high and on a contrasting background as to make the information visible:

<p>This is Gate # _____</p> <p>POSTED: It is unlawful to trespass beyond this point without valid authority - TOA Ordinance Article III. Div 1, Section 14-63.</p> <p>In the event of emergency or if this gate is found unsecured contact _____ (name) at _____. (phone).</p>
--

- (b) All pedestrian and vehicles access gates shall be controlled at all times using automated controlled-access devices, gate operators, closers with automatic locks or other such reliable devices, or any other means of affirmative control acceptable to the Airport Director, that serves to continually safeguard the Airport from unauthorized access on to the Airport Operating Area.
- (c) The Airport Director or any other authority responsible for the operation and safety of the Airport is hereby authorized to take appropriate action to ensure the Airport is safeguarded at all times, including the temporary override of gates, closers and locks of damaged or otherwise found inoperable gates and/or doors, or the placement of blockades or other types of barriers of fencing material as needed should the gate or fence be found unsecured or the Airport safety is at risk of being breach or, the privilege of access onto the Airport Operating Area (AOA) is, in the sole discretion of the Airport Director, being abused. Such safeguards, when taken, shall be clearly posted and not removed by the tenant, off-Airport property owner, business operator or any other person until expressly authorized by the Airport Director.

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## **SECTION 2 AIRCRAFT RULES**

### ***Section 2-1. Applicability of this Section.***

The following *Rules and Regulations* apply to all aircraft, whether being operated or moved by a pilot, mechanic, or line service employee while at the Airport.

### ***Section 2-2. General Operating Rules for Aircraft.***

All aircraft should be operated under and comply with all applicable Federal Aviation Regulations.

### ***Section 2-3. Aircraft Parking.***

- (a) No person shall park, leave parked, or allow to remain stationary any aircraft at the Airport except within the designated aircraft parking and storage area assigned to them and outside of any common area. No part of any aircraft should be parked on or hang over the extent of their designated aircraft parking and storage area.
- (b) If any aircraft is parked in violation of this section or, in the determination of the Airport Director, presents an operational or safety concern in any area of the Airport or interferes with the ability of the Airport to maintain the premises or any part of the Airport, the Airport Director may have the aircraft, at the owner's/operator's expense, moved. The Town of Addison or the Airport shall not be liable for any damages which may result from the relocation of the aircraft.
- (c) The owner of the offending aircraft shall be solely responsible for any damages which may result from the relocation of their aircraft and any Service Provider that assists the Airport in the moving of the aircraft will not be liable for any damage unless such damage is the result of gross negligence.

### ***Section 2-4. Removal of Disabled Aircraft.***

The owner and/or pilot of any disabled aircraft on the Airport shall have the responsibility to remove the aircraft from any Common Area at their own expense and in a reasonable timeframe unless required or directed by the Airport Director, the FAA, or the NTSB to delay such action pending an investigation of an accident. In the event of failure to promptly remove such disabled aircraft, the Airport Director may cause the aircraft to be removed and bill the owners thereof for all charges incurred in the removal of same. The Town of Addison or the Airport shall not be responsible for damage to the disabled aircraft when removed by the Town of Addison or persons acting on behalf of the Town of Addison.

If the aircraft is subject to an investigation, no portion of the cargo or baggage may be removed until the aircraft is released by the FAA or NTSB.

### ***Section 2-5. Aircraft Engine Operation.***

Aircraft engines shall only be operated at idle except as may be necessary for safe taxiing operations, take off, landing, preflight testing, and maintenance testing. At no time shall any aircraft engine be operated while the aircraft is in a hangar or covered tie-down space. This includes the action of taxiing an aircraft into or out of a hangar.

### ***Section 2-6. Aircraft Engine Run-ups.***

All aircraft maintenance engine run-ups shall be conducted between the hours of 6:00 a.m. and 10:00 p.m. at the run up areas located at the north and south ends of Taxiway Alpha or as advised by the Addison control tower. Under certain circumstances, run-ups may be permitted at other locations as authorized by the Airport Director on a case by case basis.

***Section 2-7. Exhaust and Propeller Blast.***

No aircraft engine shall be started or aircraft taxied where the exhaust or propeller blast may cause injury to persons, do damage to property or spread debris on the Airport.

***Section 2-8. Aircraft Noise Abatement Procedures.***

When departing from the Airport, all aircraft should follow NBAA standards unless otherwise directed by ATC.

***Section 2-9. Common Traffic Advisory Frequency.***

During hours when the Addison air traffic control tower is not in operation, any aircraft (being operated by a pilot or mechanic), vehicle or pedestrian operating within the movement area of the Airport shall utilize the common air traffic advisory frequency (CTAF), 126.0 MHz, and are required to broadcast their intentions as advised in the Aeronautical Information Manual (AIM).

***Section 2-10. Aircraft Accident Reports.***

All Airport property damage must be reported. Any persons involved in an aircraft accident in which Town of Addison property is damaged or which occurs on the movement area and for which a report is required by a regulatory agency, shall contact the Airport Director as soon as practical but no later than forty-eight (48) hours of the accident and if requested, make a full written report of the accident to the Airport Director. The report shall include, at a minimum, the names and addresses of the persons involved, a description of the accident and its cause as well as the property, if any, that was damaged.

***Section 2-11. Reporting of Incursions and Surface Incidents Caused by a Pilot Deviation.***

If a pilot or mechanic operating an aircraft for maintenance purposes causes an incursion, as defined by the FAA and this document, that pilot or mechanic shall contact the Airport Director to make a full report listing the reason and cause of the incursion and any other information requested.

***Section 2-12. Helicopter Operations.***

All helicopters, whether based or transient, shall not operate closer to any building, hangar, or aircraft within the Final Approach and Takeoff Area (FATO) as described for that helicopter in the current version of FAA Advisory Circular 150/5390-2, plus an additional 25 feet. Helicopters shall not, as much as possible, fly over or hover over persons, vehicles, other aircraft (parked or not), or buildings within the Airport.

## **SECTION 3 VEHICLES AND PEDESTRIANS.**

### ***Section 3-1. Applicability of this Section.***

This section applies to any person or vehicle accessing the Common Area of the AOA.

### ***Section 3-2. Vehicle Operations.***

The privilege of operating a vehicle in any Common Area of the AOA is at the sole discretion of the Airport Director and can be revoked at any time. The means of granting that privilege is through the successful completion of the applicable Addison Airport *Ground Vehicle Driving Program* offered by the Airport and by no other means. Penalties for violations of rules described in the *Ground Vehicle Driving Program* will be assessed in accordance with Chapter 14, Article III, Division 1 of the Town of Addison Code of Ordinances and Section 1-3 of these Rules and Regulations.

### ***Section 3-3. Reporting of Incursions or Surface Incidents Caused by a Vehicle or Pedestrian.***

Any pedestrian or person operating a vehicle who causes an incursion or surface incident, as defined by the FAA and this document, shall contact the Airport Director within forty-eight (48) hours and if requested, shall make a full report listing the reason and cause of the incursion or incident and any other information requested.

### ***Section 3-4. Parking Restrictions.***

- (a) No person shall park or leave any vehicle standing, whether occupied or not, except within a designated vehicle parking area. There are no designated parking areas in any unpaved, grass or turf areas within the common area.
- (b) Aircraft owners shall only park their vehicle in the aircraft storage and parking space designated for their aircraft unless other parking is provided.
- (c) Vehicles parked in an aircraft parking and storage area shall be parked in a manner so as to be completely contained in the aircraft parking or storage space and not obstruct adjacent aircraft parking and storage areas, or taxiways unless for the purposes of immediate and temporary loading, unloading, or staging of an aircraft.
- (d) Exceptions may be made for certain special events.

### ***Section 3-5. Authority to Remove Vehicles.***

The Airport Director may cause to be removed from any area of the Airport any vehicle which is determined to be disabled, abandoned, parked in violation of these regulations, or which presents an operational problem to any area of the Airport. The removal shall be at the operator's expense and the Airport shall remain without liability for damage which may result in the course of such movement.

### ***Section 3-6. Bicycles or Other Non-Motorized Cycles.***

The operator of any bicycle or other non-motorized cycle shall follow all requirements set forth for vehicle operations on the Airport, including but not limited to the requirement of successfully completing the *Ground Vehicle Driving Program*.

### ***Section 3-7. Scooters and Miscellaneous Vehicles.***

No person shall use at the Airport any go-cart, scooter, skateboard, rollerblade, all terrain vehicle, motorized ice chest, motorized bar stool, or any other non-street legal moped, motorcycle or any other vehicle not licensed or otherwise permitted by state law for operation on a public street or highway. This section does not apply to vehicles used solely for tugging, marshalling, or refueling of aircraft. The requirement for successfully

completing the *Ground Vehicle Training Program* applies to the use or operation of any vehicle within the Common Areas of the AOA.

***Section 3-8. Motor Homes, Boats and Recreational Vehicles.***

Motor homes, boats, and recreational vehicles shall not be stored anywhere on the Airport (inside the fence or outside) without the consent of the Airport Director.

***Section 3-9. Vehicle Repair.***

No person shall clean or make any repairs to vehicles anywhere on the Airport except those minor repairs necessary to remove such vehicles from the Airport. This provision does not apply to ground support equipment or vehicles used in the sole operation of a Service Provider's operation, and are owned or leased by the Service Provider.

Service Providers shall not conduct any form of repairs on any vehicle, whether for payment or not, that is not associated with that Service Provider's normal daily operation or is not consistent with the permitted use of the property.

***Section 3-10. Pedestrians in the Common Area of the AOA.***

Pedestrians shall at no time be authorized to be present in any part of the Common Area of the AOA unless they have successfully completed the *Ground Vehicle Driving Program* or are under proper escort by a person who has successfully completed the *Ground Vehicle Driving Program*. Penalties for violations of rules and regulations will be assessed in accordance with Chapter 14, Article III, Division 1 of the Town of Addison Code of Ordinances and Section 1-3 of these Rules and Regulations.

## **SECTION 4 HANGARS OWNED AND/OR OPERATED BY THE AIRPORT**

### ***Section 4-1. Applicability of this Section.***

This section shall be applicable to any hangar, T-hangar, patio hangar, or tie-down owned and/or operated by the Airport.

### ***Section 4-2. Commercial or Conventional Hangars other than T-Hangars.***

- (a) Aircraft storage hangars shall only be used for the following purposes:
  - 1. Storage and parking of aircraft and associated aircraft equipment and supplies as permitted in the tenant's lease agreement. Aircraft parked in or at hangars shall be parked in a manner so as to be wholly within the leased premises and not obstruct adjacent aircraft parking and storage areas or taxilanes, except for purposes of immediate and temporary staging and fueling of such aircraft.
  - 2. Parking of vehicles while the operator's aircraft is in operation.
- (b) Use of aircraft storage hangars shall be subject to the following restrictions:
  - 1. No preventative maintenance nor major aircraft alterations and repairs shall be performed in hangars except by the owner of the aircraft, unless otherwise approved by a lease with the Town of Addison.
  - 2. Oily rags, oil wastes, rags and other rubbish and trash may only be stored in containers with self-closing, tight-fitting lids as approved by the Airport Director or Town of Addison fire department.
  - 3. Oxygen or any combustible compressed gas in a cylinder or portable tank must be secured to a fixed location or secured to a portable cart designed for the cylinder(s) or tank(s). Compressed gas cylinders or tanks must have pressure relief devices installed and maintained. Cylinders or tanks not in use shall have a transportation safety cap installed.
  - 4. Batteries shall only be charged while the owner, Service Provider or tenant is in attendance. Aircraft batteries shall not be connected to a charger when installed in an aircraft located inside or partially inside a hangar.
  - 5. All flammable and/or combustible fluids shall be properly stored in approved containers and fire proof cabinets.
- (c) Any construction that involves moving walls or changing the structure of the building must be approved in writing by the Airport Director.
- (d) Aircraft hangars shall be subject to annual and periodic inspections at the sole discretion of the Airport Director and Town of Addison fire department or any regulatory authority to ensure compliance with all laws, ordinances and these regulations.

### ***Section 4-3. Aircraft T-hangars.***

- (a) Aircraft T-hangars shall only be used for the following purposes:
  - 1. Storage and parking of aircraft and associated aircraft equipment and supplies as specified in the tenant's lease agreement. Aircraft parked in hangars shall be parked in a manner so as to be wholly within their leased premises and not obstruct adjacent aircraft parking and storage areas or taxilanes, except for purposes of immediate and temporary staging and fueling of such aircraft.
  - 2. Parking of vehicles while the operator's aircraft is in operation.
- (b) Use of aircraft T-hangars shall be subject to the following restrictions:
  - 1. No preventative maintenance nor major aircraft alterations and repairs shall be performed in hangars except by the owner of the aircraft unless otherwise approved by a lease with the Town of Addison.

2. Maintenance shall not be performed with such tools or equipment as would disrupt or interrupt service of utilities by using those tools or equipment due to the power required.
  3. Oily rags, oil wastes, rags and other rubbish and trash may only be stored in containers with self-closing, tight-fitting lids as approved by the Airport Director or Town of Addison fire department.
  4. Oxygen or any combustible compressed gas in a cylinder or portable tank must be secured to a fixed location or secured to a portable cart designed for the cylinder(s) or tank(s). Compressed gas cylinders or tanks must have pressure relief devices installed and maintained. Cylinders or tanks not in use shall have a transportation safety cap installed.
  5. Batteries shall only be charged while the owner, Service Provider or tenant is in attendance. Aircraft batteries shall not be connected to a charger when installed in an aircraft located inside or partially inside a hangar.
  6. All flammable and/or combustible material shall properly stored in appropriate containers. The storage of such material shall be limited to a total of 5 gallons.
- (c) No commercial maintenance activities shall be conducted by Lessee in the T-hangar. This does not preclude the Lessee from inviting certified maintenance personnel to perform maintenance work in the T-hangar. Any such work must be performed within the confines of the lease site and not interfere with the operation of adjacent leaseholders. Any certified maintenance personnel conducting work for compensation on the aircraft of the Lessee shall comply with the *Minimum Standards*.
- (d) Any construction that involves moving walls or changing the structure of the building must be approved in writing by the Airport Director.
- (e) Aircraft T-hangars shall be subject to annual and periodic inspections at the sole discretion of the Airport Director and Town of Addison fire department or any regulatory authority to ensure compliance with all laws, ordinances and these regulations.

#### **Section 4-4. Aircraft Patio Hangars and Tie-downs.**

Aircraft patio hangars and tie-downs shall only be used for the following purposes:

- (a) Storage and parking of the aircraft listed on the aircraft storage agreement for that patio hangar or tie-down and parked in a manner so as to be wholly within their leased premises and not obstruct adjacent aircraft parking and storage areas or taxilanes, except for purposes of immediate and temporary staging and fueling of such aircraft.
- (b) Conducting preventative aircraft maintenance on the aircraft listed on the aircraft storage permit for that patio hangar or tie down and in accordance with applicable regulations as long as all maintenance activities can be contained within the space leased or rented.
- (c) All flammable and/or combustible material shall be properly stored in appropriate containers. The storage of such material shall be limited to a total of 5 gallons.
- (d) Any construction that involves moving walls or changing the structure of the building must be approved in writing by the Airport Director.

## **SECTION 5 FUELING, FLAMMABLE FLUIDS, AND SAFETY**

### ***Section 5-1. Fuel Safety.***

All transportation, storage and other handling of aircraft and vehicle fuel within the Airport shall comply with the Uniform Fire Code, as amended, the National Fire Protection Association (NFPA) codes and standards, particularly, but not limited to NFPA 407 and 409, as amended, FAA Advisory Circular 150/5230-4 or current version, as amended, all requirements of these regulations, and all other applicable law.

### ***Section 5-2. Unauthorized Fuel Possession and Storage.***

Except as expressly permitted by these regulations, no person shall possess fuel of any kind at the Airport.

### ***Section 5-3. Storage of Aircraft Fuel Trucks, Trailers and other Aircraft Refueling Devices.***

- (a) Aircraft refueling vehicles, other moveable aircraft fuel containers and refueling devices shall be stored outside and not less than fifty (50) feet from a building or such other distance as shall be approved by Airport Director and Town of Addison fire department.
- (b) Aircraft refueling vehicles shall be parked in a manner which provides a minimum of ten (10) feet of separation between said vehicles and any other vehicle or aircraft refueling device.
- (c) No aircraft refueling vehicle, aircraft fuel container, or other aircraft refueling device, empty or otherwise, shall be brought into, kept or stored within any building at the Airport unless the building is used exclusively for that purpose. This section does not apply to vehicle fuel cans with a capacity of not more than five (5) gallons, provided no more than one such can may be located within a single vehicle, and not more than two such cans in any hangar.
- (d) Aircraft fuel trucks shall only dispense fuel into an aircraft unless prior permission is granted by the Airport Director.

### ***Section 5-4. Aircraft Fueling Locations.***

All aircraft fueling shall be performed outdoors. All parts of any aircraft shall not be under or in any hangar, T-hangar or patio hangar during any fueling operation.

### ***Section 5-5. Maintenance of Fuel Servicing Vehicles.***

Maintenance and servicing of aircraft fuel servicing vehicles shall be performed outdoors or in a building approved for that purpose by the Town of Addison fire department. Aircraft refueling vehicle, aircraft fuel container, or other aircraft refueling device shall be kept to the standards listed in NFPA 407.

### ***Section 5-6. Removal of Gas, Oil, Grease, etc.***

All spills are required to be reported immediately to the Airport Director.

In the event of spillage of gasoline, oil, grease or any material which may be unsightly or detrimental to the Airport, the same shall be removed immediately. The responsibility for the immediate removal of such gasoline, oil, grease or other material shall be assumed by the Service Provider or owner of the equipment causing the spill or by the tenant or concessionaire responsible for the spill.

In the event of any spill that the Service Provider, owner, tenant or concessionaire fails to properly restore the area to its original safe and environmentally sound status, the Town of Addison may clean up any material unlawfully spilled, placed or otherwise

deposited at the Airport and may charge the responsible person(s) for the cost of the cleanup, any required environmental remediation, and any expenses incurred by, or fines or damages imposed on, the Town of Addison as a result thereof. Such an event may constitute grounds for denying access to the Airport.

***Section 5-7. Fire Extinguishers.***

All tenants, lessees, licensees, and sub-lessees shall supply and maintain such adequate and readily accessible fire extinguishers as may be required by the Town of Addison fire department or recommended in NFPA 407. Each fire extinguisher shall carry a suitable tag showing the date of most recent inspection.

***Section 5-8. Moveable Fuel Storage Tanks.***

Unless otherwise approved by the Airport Director, moveable fuel storage tanks are prohibited at the Airport except for:

- (a) Fuel trucks constructed, operated and maintained in all respects as required by law.
- (b) Fuel tanks in an operable aircraft.
- (c) Tanks not exceeding a one-gallon capacity used solely for sampling and testing fuel, engines and fuel handling apparatus.
- (d) Tanks lawfully transporting fuel for immediate dispensing into a fuel storage tank permitted by the Town of Addison. Such vehicles shall access the Airport at a point approved by the Airport Director and remain under escort by a representative of the company receiving the fuel.
- (e) Two (2) fuel tanks with a maximum capacity of five (5) gallons each stored in a hangar or T-hangar.

***Section 5-9. Self-Fueling.***

Except as may be prohibited by other provisions of these regulations and any other applicable law, owners of an aircraft based at the Airport who desires to self-fuel their aircraft, shall apply for a self-fueling permit from the Airport Director. The preceding sentence does not apply to the use of a self-service fuel facility provided by a Service Provider.

***Section 5-10. Vehicle Fuel.***

No person shall possess vehicle fuel on the Airport except:

- (a) Within the Airport bulk fuel storage area, also known as the Fuel Farm;
- (b) Within the permanently installed fuel tank of a vehicle for use only by that vehicle;
- (c) Within a moveable container designed for storage of vehicle fuel and having a capacity of not more than five (5) gallons. No more than one moveable container containing vehicle fuel shall be located in a single vehicle. No more than two such containers shall be located in any hangar.

## **SECTION 6 SPECIAL EVENTS**

### ***Section 6-1. Applicability of this Section.***

This section applies to any person who has a ground lease, Through-the-Fence Permit or rental agreement with the Airport that wishes to conduct an activity that is outside the normal daily operations or the permitted use of that facility.

### ***Section 6-2. Special Events Permit.***

All Special Events at the Airport shall be required to apply for and obtain a permit from the Airport Director or as adopted by the Town of Addison. All parts of the *Rules and Regulations* apply to Special Events unless prior written permission is granted.

### ***Section 6-3. Requirements for a Special Events Permit.***

A Special Events Permit is required if:

- (a) The general public will be invited.
- (b) Alcohol is served.
- (c) Parking is predicted to exceed the current parking allotted for facility and other arrangements must be made, *i.e.*, borrowing parking.
- (d) The general public will have access to the AOA.
- (e) An admission, fee, payment, or donation is requested.
- (f) Any time there is a charge for food, drinks, services, or attendance.

### ***Section 6-4. Notice of Airport Special Events to Affected Parties.***

The Airport will give proper notice of any Airport or Town of Addison sponsored Special Events that might impact the operation of air traffic or the operations of any part of the Airport.

### ***Section 6-5. Responsibility at Special Events.***

The actions and consequences of all guests invited by the lease holder, tenant, or other authorized party at a Special Event is the responsibility of the lease holder, tenant, or other authorized party as is stated in *Section 1-5 Responsible party*.

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## **SECTION 7 NOTICE OF VIOLATION**

### ***Section 7-1. Applicability.***

This policy shall be applicable to any person accessing the Airport for any reason.

### ***Section 7-2. Purpose.***

The purpose of a Notice of Violation (NOV) is to inform a person, business, or permit holder that there has been a violation of the *Rules and Regulations* or any supporting document and to prescribe a means of correction. A NOV is issued when a violation is observed or discovered.

### ***Section 7-3. Procedure.***

- (a) The NOV will be given in the form of a letter. The letter will be sent to the offending party detailing the violation, the means of correction and the compliance date. A copy will be kept on file for the three (3) years. At the end of the three (3) years, the violation will be removed from the file.
- (b) A NOV may be issued for any violation of any part of the *Rules and Regulations* or any supporting document referenced in the *Rules and Regulations*. Failure to correct a noted violation shall result in an additional NOV.
- (c) If at anytime a person, business or permit holder accumulates more than five (5) such NOVs in their file, that person, business, or permit holder shall be required to attend a formal meeting with the Airport Director to discuss the means of correction.
- (d) If a serious violation occurs in which there was gross negligence for safety, that person, business, or permit holder may have certain privileges taken away immediately as may be appropriate to the seriousness of the offense.
- (e) If the violation of a part of the *Ground Vehicle Driving Program*, the offending person shall be required to attend the *Ground Vehicle Driving Program* and may have driving privileges suspended for the appropriate time specified in the *Ground Vehicle Driving Program*.
- (f) Continued failure to correct a violation may result in the Airport's decision to exercise all available rights and legal remedies.
- (g) Copies of any NOV issued shall be sent to the Addison Police Department.

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# **Minimum Standards and Requirements for Commercial Aeronautical Service Providers**

**Adopted March 1, 2004**



## **Addison Airport Minimum Standards**

### **Table of Contents**

I. Applicability .....	4
II. Statement of Policy .....	5
III. Application Requirements .....	7
IV. Requirements Applicable to all Operators .....	8
V. Requirements Applicable to Fixed Base Operators.....	16
VI. Requirements Applicable to Non-Public Aircraft Fuels.....	18
VII. Requirements Applicable to Specialized Aeronautical Service Operators .....	20

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**ADDISON AIRPORT  
MINIMUM STANDARDS AND REQUIREMENTS  
FOR COMMERCIAL AERONAUTICAL SERVICE PROVIDERS**

**I. APPLICABILITY**

Purpose: These regulations prescribe minimum standards for the conduct of commercial aeronautical activities at Addison Airport and specify certain clauses which will be acquired and maintained in the operation of all lease agreements permitting the conduct of such activities.

The Town of Addison (hereinafter referred to as “the Town”) owns Addison Airport and contracts with a private management firm for the operation of the Airport. To encourage growth and development of the Airport and to facilitate the development of adequate aeronautical services and facilities for Airport users, the Town has established these standards and requirements (the "Minimum Standards") for provision of certain commercial aeronautical services at the Airport. These Minimum Standards may be amended as conditions require, or for additional aeronautical services, in accordance with Town of Addison Code of Ordinances Chapter 14. No person may conduct or operate a business at the Airport except as authorized by the Airport Director. These Minimum Standards establish the criteria by which the Airport Director shall consider requests from prospective commercial aeronautical service providers to do business at the Airport. These Minimum Standards shall apply to all Fixed Base Operators Lease Agreements, Ground and Jet Hangar Lease Agreements, T-Hangar, Patio Hangar, and Tie-Down agreements granted or renewed after the effective date of these rules. The provisions of any new Lease will be compatible with the Minimum Standards herein contained and will not change or modify the Minimum Standards themselves.

These Minimum Standards shall apply to all new agreements and any extension of the term of existing agreements. The implementation of these Minimum Standards is not intended to cause any existing Service Provider to retrofit its facilities in order to comply. To the extent, however, that compliance can be obtained without undue hardship such is required. Additionally, if an Airport Service Provider desires to modify the terms of services within an existing agreement, the Town shall as a condition of its approval, require compliance with these Minimum Standards. These Minimum Standards shall not modify an existing agreement, which is required to exceed these Minimum Standards, nor shall they prohibit the Town from entering into an agreement that requires an entity to exceed these Minimum Standards.

These Minimum Standards are not intended to be all-inclusive. The Service Provider will be subject additionally to applicable federal, state and local laws, codes, ordinances, and other similar laws or regulations including Airport Rules and Regulations pertaining to all such services. It is the responsibility of the Service Provider to be familiar with all federal, state, and local laws, regulations, codes, or rules that may pertain to the service that is being provided. It is not an affirmative defense against non-compliance that the Airport did not supply the Service Provider with or notify the Service Provider of a pertinent law, regulation, code, or rule.

By publication and adoption of these Standards, all persons shall be deemed to have knowledge of its contents. Copies of these Minimum Standards will be available at all times in the Airport Director's office, and copies shall be furnished to all Service Providers at the Airport. If and where there are conflicts in the Minimum Standards prescribed herein and the FAA's Federal Aviation Regulations (FAR), the FARs shall prevail. If and where there exists a conflict between any of the Minimum Standards prescribed herein and any Airport Rule or Regulation applicable to the same area, the more stringent limitation or requirement shall govern and prevail.

## II. STATEMENT OF POLICY

In establishing these Minimum Standards, the Town's goal is to assure an adequate minimum level of quality of service to General Aviation users, to foster competition at the Airport, and to avoid unfair or prohibited discrimination among similar Commercial Aeronautical Service providers. The Minimum Standards shall be applied objectively and uniformly. The standards and requirements in this policy are minimums; all Service Providers are encouraged to exceed the minimum.

Contingent upon its qualifications, its meeting the Minimum Standards, the approval of the prospective Service Provider's application by the Airport Director, the execution of a Lease, and the payment of the applicable rentals, fees, and charges, the Service Provider shall have the right and privilege of providing the Commercial Aeronautical Service(s) for which it made application on the Airport, as specified in its Lease. The Service Provider may not provide any Commercial Aeronautical Service other than that authorized in its Lease.

The Airport is prohibited from granting an exclusive right to a single Service Provider with a few exceptions. The FAA acknowledges several business situations and circumstances that meet the definition of an exclusive rights violation but are necessary to support the operation and public use function of the Airport. These exceptions are:

*Restrictions Based on Safety:* The Airport may restrict or deny a commercial Service Provider from conducting any type of aeronautical activity on the airport that threatens the safety of the public, tenants, users, or Service Provider conducting such activity.

*Restrictions on Self-Service:* Aircraft owners may refuel, maintain, repair, store, secure, clean, and service their own aircraft provided that the owner or their employees perform the service and provide the resources. All self-service activities must comply with local, State, and Federal regulations, especially environmental and fire safety laws.

The Airport is not obligated to lease facilities to aircraft owners in order to conduct self-service activities; however, the Airport may designate specific locations for fueling, maintenance, washing, and storing of aircraft to promote the safe and efficient operation of the Airport. The granting of such right and privilege, however, shall not be construed in any manner as affording the Service Provider any exclusive right of use of the premises and facilities and the Airport, other than those premises which may be leased exclusively to it, and then only to the extent provided in a written agreement. The Airport reserves and retains the right for use of the Airport by others who may desire to use the same, pursuant to applicable federal, state and local laws, ordinances, codes, minimum standards and other regulatory measures pertaining to such use. The Airport further reserves the right to designate the specific Airport areas in which the specific aeronautical services may be conducted. Such designation shall give consideration to the nature and extent of the operation and the land and improvements available for such purpose, consistent with the orderly and safe operation of the Airport.

If at any time, there are more applicants to provide a particular Commercial Aeronautical Service than there is space or demand at the Airport for such service, the Town may select the Commercial Aeronautical Service provider through a competitive solicitation or request for proposals. This provision applies only in the case of new applicants and will not effect current service providers on the Airport.

These Minimum Standards are subordinate and subject to the provisions of any agreement between the Town and the United States Government relative to the operation or maintenance of the Airport, the execution of which has been, or may in the future be, required as a condition precedent to the expenditure of federal funds for the development of the Airport, including the

expenditure of federal funds for the development of the Airport in accordance with the provisions of the Federal Aviation Act of 1958, as amended. The issuance of a Final Agency Order finding a provision of these Minimum Standards inconsistent with such agreement shall operate to invalidate such provision. The invalidity or unenforceability of any provision of these Minimum Standards shall not affect validity or enforceability of any other provision of these Minimum Standards, and the remainder shall be construed and enforced as if the invalid or unenforceable provision were never included in the Minimum Standards. By publication and adoption of these Standards, all persons shall be deemed to have knowledge of its contents. Copies of these Minimum Standards will be available at all times in the Director's office, and copies shall be furnished to all Service Providers at the Airport.

### III. APPLICATION REQUIREMENTS

In order to lease property from the Airport to operate a Commercial Aeronautical Service, a Person shall submit a written application to the Airport Director, which shall include the following information and, thereafter, shall provide such additional information as may be requested by the Airport Director. This application process does not apply to businesses that sublease property from the Airport's lessees. In those cases, the Lessee will be held responsible for ensuring that their lease agreements comply with all applicable standards, rules, and regulations. The following information is required:

#### 1. Intended Scope of Services

The prospective Service Provider must submit a detailed description of the scope of the proposed operation and the means and methods to be employed to accomplish the contemplated operation, including, at a minimum, the following:

- a) The name, address, and telephone number of the applicant. If the applicant is a corporation, the name, address, and telephone number of the corporation's officers must be included. If the applicant is a partnership, the name, address, and telephone number of all general partners must be provided. Also the name, address, and telephone number of any person that holds a controlling interest, directly or indirectly, in the applicant must be included. The applicant must disclose if any officer, director, partner, or person having a controlling interest in applicant is also an officer, director, partner, or a person holding a controlling interest in another commercial aeronautical service provider at the Airport.
- b) The requested or proposed date for commencement of the service.
- c) The services to be offered.
- d) The amount, size, and location of land required.
- e) The size, type, and location of the building(s) to be constructed or leased.
- f) The number and type of aircraft to be parked, serviced, or provided (as applicable).
- g) The number of persons to be employed (including the names, titles and qualifications of key employees).
- h) The hours of proposed operation.
- i) A list of material assets, goods and equipment necessary or required to perform the proposed services that owned, leased, or are under purchase contract by the applicant. Copies of such leases and contracts shall be provided to the Airport Director if requested.
- j) Such other or additional information as may be required under the Fixed Base Operator and Specialized Aeronautical Service Provider sections of these Minimum Standards, or that the Airport Director may reasonably require to evaluate the application.
- k) Evidence of its financial responsibility from a recognized financial institution or from such other source that may be acceptable to the Town and readily verified through normal banking channels. The prospective Service Provider must also demonstrate financial capability to initiate operations, to construct proposed improvements, and to provide working capital to carry on the contemplated operations. The demonstration of financial and managerial capability shall include a cash flow and a profit and loss projection for the first five years of the proposed operation. This is not required in the annual reporting for existing Service Providers as outlined in Section 2 below. To the extent allowed by law, this information will be considered to be confidential and will not be released to other parties without the permission of the Service Provider.
- l) The prospective Service Provider shall furnish to the Town a statement of its qualifications and past experience in providing the proposed aviation services, together with a statement that it or its principals have the managerial ability to perform the

selected services. If the proposed business is new, the pertinent experience of the key employees must be provided in the résumés of its key employees engaged in the management and operation of the proposed aeronautical services at the Airport.

## 2. Annual Reporting Requirement and Notification of Changes

Service Providers shall report annually, by the anniversary date of the Effective Date of their Lease, the name, address, and telephone number of the Service Provider, services that are offered, hours of operation, and shall provide the Airport Director with three weeks advance notice of its intention to start up or discontinue an authorized commercial aeronautical service.

## 3. Grounds for Denial of an Application

The Airport Director shall consider the application once the prospective Service Provider has submitted a complete application. The Airport Director shall not unreasonably deny or delay consideration of an application. A delay to implement a competitive process to select an Service Provider is not unreasonable. Grounds for denial of an application include the following:

- a) The applicant does not, for any reason, fully meet the qualifications, standards, and requirements established in these Minimum Standards.
- b) The applicant's proposed operation or construction would create a safety hazard on the Airport.
- c) The granting of the application will require the Airport to expend funds, or supply labor or materials, in connection with the proposed activity or operation that the Airport is unwilling to spend or supply, or the proposed activity or operation will result in a financial loss to the Airport.
- d) No appropriate, adequate, or available land, space, or building exists at the Airport to accommodate the entire operation of the applicant at the time of application, and none is contemplated to be available within a reasonable time thereafter.
- e) The proposed operation, development, or construction does not comply with the FAA approved Airport Master Plan or Airport Layout Plan.
- f) The proposed operation, development, or construction will result in congestion of aircraft or buildings, or will result in undue interference with the operations of any present Service Provider at the Airport, or with adequate access to a present Service Provider's leased premises.
- g) The applicant has intentionally or unintentionally misrepresented or omitted any material fact in the application or supporting documents, or has failed to make full disclosure in the application or supporting documents.
- h) The applicant, or any officer, director, key employee, or person having a controlling interest in the applicant, has a record of (a) violating the laws, rules and regulations applicable to the Airport or any other Airport, including but not limited, to civil air regulations and FAA regulations, (b) having defaulted in the performance of a lease, license, permit, or similar agreement at the Airport or any other Airport, or (c) having been convicted of any felony or misdemeanor involving moral turpitude.
- i) The applicant, in the opinion of the Airport Director, has not provided verified evidence of adequate financial responsibility or does not exhibit the experience to undertake the proposed operation or activity based on the information provided with the application.
- j) The applicant cannot provide the required performance and other bonds, security deposits, or other acceptable surety in the amount required by the Airport for the proposed operation, activity or construction.
- k) The applicant is unwilling or unable to provide the required insurance coverages.

#### **IV. REQUIREMENTS APPLICABLE TO ALL SERVICE PROVIDERS**

The following standards apply to all Fixed Base Operators (FBO) and Specialized Aeronautical Service Providers (SASP), unless otherwise explicitly provided. Additional standards specific to each type of operation can be found in Sections V and VII of these Minimum Standards.

##### **1. Requirement of a Written Agreement**

- a) Before beginning operations, the prospective Service Provider must enter into a written Lease with the Town reciting the terms and conditions under which it will do business on the Airport, including but not limited to, the term of agreement, the rentals, fees, and charges, the rights, privileges and obligations of the respective parties, and other relevant provisions. Such agreement shall be consistent with these Minimum Standards.
- b) Such Lease shall contain, or adopt by reference, all provisions required by the applicable law, including, without limitation, regulations promulgated by the FAA, and assurances or agreements entered into by the Town as a condition of any federal grant to the Town for the Airport. The Lease shall be subordinate to any existing or future Federal grant assurances.
- c) The Lease shall provide that, at or before execution, the Service Provider shall deliver to the Airport Director a security deposit in an amount not less than one month's fees and charges owed to the Town under such agreement. The security deposit shall not be considered an advance payment of such fees and charges, or a measure of damages in the event of default by the Service Provider. If the Town uses the security deposit, in whole or in part, the Service Provider shall promptly restore the security deposit to its original amount upon request of Town. Provided that the Service Provider is not in default, the security deposit, or any unused balance thereof, shall be returned to Service Provider within thirty (30) days following termination of the Lease without interest.

##### **2. Site Development Standards**

- a) Location. FBOs and SASPs may be situated only in those areas of the Airport specified for such use in the Airport Layout Plan (ALP) and the Airport Master Plan.
- b) Space Requirements. The minimum space requirements as provided in Sections V and VII of these Minimum Standards shall be satisfied. The Town will consider reduction in minimum space requirements for combined operations in a common location (e.g., an SASP that wishes to operate a flight training school and aircraft rental facility need have only one office, one set of restrooms, one customer lounge, etc.). An applicant who proposes combined operations in a common location shall provide a building layout or similar plan that demonstrates functional compliance with the applicable Minimum Standards.
- c) Airport Design Criteria. All construction of Improvements and infrastructure must conform to the applicable statutes, ordinances, building codes, rules and regulations of Town and the FAA, and such other authorities as may have jurisdiction over the Airport, the Premises or Service Provider's operations herein. The height of any structure on the Premises must be within the limits of the FAA regulations governing objects affecting airspace, as set forth in 14 C.F.R., Part 77 and the Town's Chapter 14, Article IV Airport Zoning Ordinance. The Airport Director will have the right to review all plans and specifications for any Improvements to be constructed on the Premises to determine compliance with such regulations. The approval by the Airport Director shall not constitute a representation or warranty as to such conformity or compliance, but responsibility therefore shall at all times remain with the Service Provider.
- d) Design/Construction Review. Service Provider shall not construct, install, remove, or modify any Improvements on the Premises without the prior written approval of the Airport Director, or designated representative, of Service Provider's plans and specifications for the proposed project. All plans shall be complete and submitted in

accordance with the Town of Addison Code of Ordinances, and the applicable provisions of the Lease or Permit. This does not apply to cosmetic changes that do not require a building permit.

e) Bonds and Insurance. Service Provider shall provide, or cause to be provided, to the Town prior to the commencement of any construction of any Improvements, a valid performance bond and payment bond, each in the amount of the maximum estimated hard construction costs, for the successful construction of its Improvements. Said bonds shall be maintained and kept in full force and effect until work items called for in the Service Provider's agreement with the Town are complete. The bonds shall be conditioned to ensure performance and payment by the Service Provider and its construction contractor of all Improvements required and proposed by the Service Provider, and to stand as security for the successful completion of the built Improvements on the Premises and for payment of any valid claim by the Town against the Service Provider or its Contractor associated with the construction of the improvements. The bonds shall be in a form acceptable to the Town and shall be issued by a surety that complies with the requirements of the Texas Insurance Code, as amended. If Service Provider engages any contractors and/or subcontractors to construct Improvements on the Premises, the contractors and subcontractors must carry appropriate builders risk and commercial general liability policies as is required at that time by the Town Risk Manager for construction projects on Town property.

f) Other Facilities. The Service Provider shall provide a paved walkway within the leased area to accommodate pedestrian access to the Service Provider's office; a paved aircraft apron with tie-down facilities within the leased area sufficient to accommodate its services and operations, and telephone facilities.

g) Landscaping. Landscaping of facilities that are visible along any off-Airport public street or roadway is required. Each FBO or SASP will be required to provide a plan for landscaping its area to be approved by the Town and maintained by the FBO or SASP in a neat, clean and aesthetically pleasing manner, all in accordance with the Addison Landscaping Ordinance.

h) Ownership of Improvements. All right, title, and interest in any Improvements constructed by or for an Service Provider on the Airport shall fully vest in the Town upon the end of the term of the Service Provider's Lease. The Service Provider shall execute and deliver to the Town such documents as may be required to evidence the Town's ownership of such Improvements.

### 3. Maintenance Responsibilities.

Unless otherwise provided for in the Lease Agreement, Service Provider shall, at its sole cost and expense, maintain, repair, and keep in good condition all of its Improvements on the Premises, as hereinafter described:

a) Service Provider shall maintain pavement, landscaping, greenbelts, lighting and all equipment on the Premises.

b) Service Provider shall maintain the interior and exterior of all Improvements, to include electrical, mechanical, plumbing, fire protection system(s), roof, floors, load-bearing and exterior walls, utilities, and HVAC system(s).

c) Service Provider shall clean debris and trash from driveway, taxiways, aprons, greenbelts, and sidewalks to maintain safe, clear, unobstructed access to the Improvements at all times for authorized users and emergency vehicles.

d) Service Provider shall maintain all hangar and overhead doors and door operating systems, including weather stripping and glass replacement.

e) Service Provider shall maintain electric loads within the designed capacity of the system. Any change to such designed capacity will require the prior written consent of the Airport Director.

- f) Service Provider shall install and maintain hand-held fire extinguishers in the interior of all buildings, aircraft shops, aircraft parking and tie-down areas, and fuel storage areas, pursuant to fire and safety codes.
- g) Service Provider shall have the necessary utility meters installed, as required by the utility company(s), at Service Provider's expense. Service Provider shall pay all utility charges, including, but not limited to, electricity, water, wastewater, natural gas, and telephone. Service Provider shall maintain and repair all utility service lines and fixtures, including lighting fixtures, within the Premises to the extent the utility company providing such utility service does not perform such maintenance or repair.
- h) Service Provider shall provide, at its sole cost and expense, necessary arrangements for adequate sanitation, handling and disposal from the Airport of all trash, garbage and other refuse which results from Service Provider's business operations, including receptacles for the deposit of such trash, garbage, and other refuse. All such receptacles shall be placed on the leasehold so as not to be seen from an off-Airport public street or roadway.
- i) Service Provider will not permit any action on the Premises that has an adverse effect, or interferes with the proper function of any drainage system, sanitary sewer system, or any facility provided for the operation or protection of the Airport.
- j) The Service Provider shall install fire alarm devices within the Premises and such devices shall be audible to all persons in the facility.

#### 4. Personnel.

The Service Provider shall employ a fully qualified, competent, experienced full-time on-site manager who shall supervise and direct the performance of all Commercial Aeronautical Services provided by the Service Provider, and one or more qualified assistant managers to act for the manager in his or her absence. During all operating hours, the Service Provider shall employ and have on duty trained personnel in such numbers and with such certificates and ratings as are required to meet the Minimum Standards, in an efficient manner, for all Commercial Aeronautical Services being provided by the Service Provider. Service Provider's employees shall, at all times, be neat and courteous, and shall wear an identification badge that displays the employee's name and the name of the Service Provider. Service Provider's employees may not use or possess alcohol, illegal drugs, controlled substances, or firearms at the Airport. Service Provider shall closely monitor its employees to insure consistent, high quality service. If permitted by law, the Airport Director may direct Service Provider to remove from employment at the Airport any employee who violates Airport rules and regulations, or the terms of Service Provider's Lease.

#### 5. Security.

Service Provider shall control the Premises so as to prevent unauthorized access to the airside. The Town reserves the right to install security devices in or on the Premises as it deems necessary at Town's cost. Any devices installed by the Town will in no way deny access to the employees of that facility without the concurrence of the Service Provider. Likewise, the Service Provider will in no way deny access to the Airport staff in order for the devices to be installed. Such installation will be scheduled in advance with the Service Provider at a time that is convenient to the Service Provider to as reasonable an extent as possible.

#### 6. Indemnification.

Service Provider shall defend (with counsel acceptable to the Town of Addison), indemnify and hold harmless the Town of Addison, Texas and its officials, officers, employees, agents, representatives, successors and assigns (collectively, the "Indemnified Parties"), from and against all costs, expenses (including, without limitation, reasonable attorneys' fees, expenses of investigation and litigation, all court or arbitration or other dispute resolution costs, and court costs), liabilities, damages, claims, suits, judgments, harm, penalties, fines, actions, and causes

of actions whatsoever (collectively, "Claims") for personal injury (including, without limitation, sickness, emotional and psychological injury, disease, or death), property damage or destruction (including, without limitation, loss of use of property not otherwise physically injured), breach of contract, breach of any insurance requirements contained within these Minimum Standards, or any other harm for which recovery of damages or any other type of recovery or relief (whether at law, in equity, or otherwise) is sought, by any person, entity, or organization of any kind whatsoever, resulting from, arising out of, concerning, or in connection with, directly or indirectly, in whole or in part, (a) any failure of the Service Provider or of any Service Provider Parties to comply with these Minimum Standards, (b) any breach of the lease by Service Provider or by any Service Provider Parties, (c) any false representation or warranty made by Service Provider or any Service Provider Parties in making application to conduct business or to perform any activity on the airport or in the Lease, (d) any act or omission of Service Provider or of any Service Provider Parties, and (e) the negligent acts and omissions of the Indemnified Parties. Service Provider shall assume on behalf of the Indemnified Parties and conduct with due diligence and in good faith the defense of all claims against any of the Indemnified Parties. Service Provider may contest the validity of any Claims, in the name of Service Provider or the Indemnified Parties, as Service Provider may in good faith deem appropriate, provided that the expenses thereof shall be paid by Service Provider. For purposes hereof, "Service Provider Parties" means Service Provider, its directors, officers, employees, agents, representatives, successors, assigns, contractors, subcontractors, concessionaires, guests, invitees, or anyone directly or indirectly employed by any of them or any person or entity for whose acts or omissions any of them is or may be liable.

#### 7. Insurance.

The following requirements pertain to all Service Providers. See Sections V, VI, or VII for specific insurance requirements applicable to the specific FBOs and SASPs on the Airport.

a) General Requirements. Service Provider shall not commence operations or construction until Service Provider has obtained the types and amounts of required insurance indicated below and until such insurance has been reviewed by the Town or a Certificate of Insurance is received indicating required coverage. If the coverage period ends during the Term of Service Provider's Lease, Service Provider must, prior to the end of the coverage period, forward a new Certificate of Insurance to Town as verification of continuing coverage for the duration of the Term of the Lease. Service Provider must submit certificates of insurance for all subcontractors to the Town prior to their commencing work on the project.

1) Approval of insurance by the Town and the required minimums shall not relieve or decrease the liability or responsibility of the Service Provider hereunder and shall not be construed to be a limitation of liability on the part of the Service Provider.

2) Service Provider's and all subcontractors' insurance coverage shall be written by companies licensed to do business in the State of Texas at the time the policy is issued and shall be written by companies with an A.M. Best rating of B+VII or better. Hazardous materials insurance, if required, shall be written by companies with A.M. Best ratings of B+VII or better.

3) All endorsements naming the Town and its managers as additional insureds, waivers of subrogation, and notices of cancellation endorsements as well as Certificates of Insurance shall include the Town of Addison and its Manager.

4) The "other" insurance clause shall not apply to the Town or the manager where the Town of Addison and the manager are additional insureds shown on any policy. It is intended that policies required in this Agreement covering the Town and the Service Provider, shall be considered primary coverage as applicable.

- 5) The Town shall be entitled, upon request and without expense, to receive certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.
- 6) The Town reserves the right to review insurance requirements set forth during the term of the agreement and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by the Town based upon changes in statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as the Service Provider. The Service Provider shall comply with any changes to insurance requirements.
- 7) The Service Provider shall not cause any insurance to be canceled nor permit any insurance to lapse during the Term of this Agreement or as required in the Agreement.
- 8) Service Provider shall provide all deductibles and self-insured retentions, if any, stated in policies. All deductibles or self-insured retentions shall be disclosed on the Certificates of Insurance.
- 9) Insurance provided by an Service Provider pursuant to this Minimum Standards shall cover and protect the Town and its manager, as their interests may appear.

b) Specific Insurance Requirements. The Service Provider shall obtain, and maintain throughout the term of its Lease, the following insurance coverages, and furnish certificates of insurance and policy endorsements as evidence thereof:

1) Workers' Compensation and Employers Liability coverage with limits consistent with statutory benefits outlined in the Texas Workers' Compensation Act. The following endorsements shall be added to the policy:

- a) A Waiver of Subrogation in favor of the Town of Addison
- b) A thirty (30) day Notice of Cancellation/Material Change in favor of the Town;

2) Property insurance coverage on an "All Risk of Physical Loss" form for 100% of the replacement value of all improvements leased from the Town, or constructed by or for Service Provider on the Airport. Coverage shall include, but not be limited to, fire, wind, hail, theft, vandalism, and malicious mischief. The coverage shall be written on a replacement cost basis. The proceeds from such insurance shall be used to restore the improvements to their original condition in the event of a covered loss.

3) Liability insurance in the specific types and amounts specified in Sections V (FBO) or VII (SASP), as applicable for the proposed Commercial Aeronautical Service. Where more than one Commercial Aeronautical Service is proposed, the minimum limits will vary (depending upon the nature of individual services in such combination) but will not necessarily be cumulative in all instances. Because of these variables, the applicable minimum insurance coverage on combinations of services will be finalized with the prospective Service Provider at the time of its application or otherwise during lease negotiations.

## 8. Environmental Compliance.

a) Compliance. In its operations at the Airport, Service Provider shall strictly comply with all applicable environmental laws, the airport environmental polices and procedures (including without limitation, the Storm Water Pollution Prevention Plan ("SWPPP") and Spill Response Plan), and generally accepted industry environmental best management

practices and standards. Without limiting the generality of the foregoing provision, Service Provider shall not use or store Hazardous Materials on or at the Airport except as reasonably necessary in the ordinary course of Service Provider's permitted activities at the Airport, and then only if such Hazardous Materials are properly labeled and contained. Service Provider shall not discharge, release, or dispose of any Hazardous Materials on the Airport or surrounding air, land, or water. Service Provider shall promptly notify the Town of any Hazardous Material spills, releases, or other discharges by Service Provider at the Airport and promptly abate, remediate, and remove same. Service Provider shall provide the Town with copies of all reports, complaints, claims, citations, demands, inquiries, or notices relating to the environmental condition of the Airport, or any alleged material noncompliance with Environmental laws by Service Provider at the Airport within ten (10) days after such documents are generated by or received by Service Provider. If Service Provider uses, handles, treats or stores Hazardous Materials at the Airport, Service Provider shall have a contract in place with an Environmental Protection Agency or Texas Commission for Environmental Quality approved waste transport or disposal company, and shall identify and retain spill response contractors to assist with spill response and facilitate waste characterization, transport and disposal. Complete records of all disposal manifests, receipts and other documentation shall be retained by the Service Provider and made available to Town for review upon request. Landlord shall have the right at any time to enter the Premises to inspect, take samples for testing, and otherwise investigate the Premises for the presence of Hazardous Materials. Such inspections shall be scheduled during regular business hours if possible. Such schedules will be coordinated with the Service Provider.

b) Responsibility. Service Provider's Hazardous Materials shall be the responsibility of Service Provider. Service Provider shall be liable for and responsible to pay all Environmental Claims that arise out of, or are caused in whole or in part, from Service Provider's use, handling, treatment, storage, disposal, discharge, or transportation of Hazardous Materials on or at the Airport, the violation of any Environmental Law by Service Provider, or the failure of Service Provider to comply with the terms, conditions and covenants of this article. If the Town incurs any costs or expenses (including attorney, consultant and expert witness fees) arising from Service Provider's use, handling, treatment, storage, discharge, disposal, or transportation of Hazardous Materials on the Airport, Service Provider shall promptly reimburse the Town for such costs upon demand. All reporting requirements under environmental laws with respect to spills, releases, or discharges of Hazardous Materials by Service Provider at the Airport under any law are the responsibility of Service Provider.

#### 9. Certifications.

The Service Provider shall obtain and maintain in full force and effect all FAA and other certificates and licenses necessary for the work being performed at the Airport, and shall provide a copy of such certificates to the Airport Director upon request.

#### 10. Motor Vehicles on Airport.

The Service Provider shall control the on-Airport transportation of pilots and passengers of transient general aviation aircraft using the Service Provider's facilities and services. Customer motor vehicles are not permitted on the airside except on the ramp area, under the supervision of the Service Provider. The Service Provider-owned or operated motor vehicles driven on the airside shall do so only in strict accordance with Airport Rules and Regulations, applicable federal, state and municipal laws, ordinances, codes or other similar regulatory measures now in existence or as may be hereafter modified or amended. The vehicles will not be allowed any point west of the Vehicle Access Road and at no time will be allowed onto Taxiways Alpha and Bravo, the runway, or on the Vehicle Access Road south of Taxiway Papa without tower

permission. The Service Provider shall be required to equip each of these motor vehicles with a functioning aeronautical utility mobile station two-way radio and with an operating rotating beacon, or such other equipment as FAA or the Town shall require. The Airport may impose training and licensing requirements and charge a fee for airside driving privileges.

#### 11. Waiver.

The Airport Director may (but in no event shall be obligated to) waive one or more of the Minimum Standards applicable to an Service Provider for good cause shown upon written request of the Service Provider, provided that such waiver would not adversely affect public health or safety, the quality of service provided by the Service Provider to the public, or Airport finances or operations, or would violate any Federal, State, Town or other law, statute, ordinance, rule, regulation, or Airport grant assurance.

## V. REQUIREMENTS APPLICABLE TO FIXED BASE OPERATORS

The following standards apply to Fixed Base Operators:

### 1. Minimum Services.

**Aircraft Fueling Services.** Each FBO shall provide into-aircraft retail delivery of a recognized brand of aviation fuel (including, but not limited to, AV gas and jet fuel), motor oil, and lubricants as required by the types of aircraft normally utilizing the Airport. The FBO shall provide proper fuel dispensing equipment to service aircraft, including mobile fuel dispensing trucks to service commercial passenger and cargo aircraft operating at the Airport. Separate dispensing pumps for each grade of fuel are required. All fuel handling and storage facilities, equipment and procedures shall strictly comply with all applicable federal, state, and local laws, rules and regulations, including without limitation, the most current rules and regulations promulgated by the US Department of Transportation and the FAA. Fueling personnel shall be properly trained and qualified to perform their assigned duties. The FBO shall ensure that only clean fuel, free of water or other contaminants, is delivered into the aircraft serviced. The FBO shall maintain current fuel reports on file and available for review at anytime by the Airport Director. Fueling service by the FBO shall be in full compliance with all applicable federal, state, and local safety laws and regulations, including proper fire protection and electrical grounding of aircraft during fueling operations. All FBO fueling services and systems shall be subject to inspection for fire and other hazards by the Airport Director or other Airport representative and by the appropriate State and Town fire officials. The FBO shall maintain a spill prevention and control plan in accordance with applicable federal, state, and local laws, rules and regulations.

### 2. Aircraft Line Services.

- a) Suitable hard surface aircraft parking, tie-down, and hangar storage facilities; adequate tie-down facilities and equipment, including ropes, chains, and other types of restraining devices, and wheel chocks for the typical number and type of aircraft simultaneously using the FBO during a peak period; and adequate loading, unloading, and towing equipment to safely and efficiently move aircraft and store them in times of all reasonably expected weather conditions.
- b) Adequate ground equipment, including but not limited to, ground power and starting equipment, fire extinguishers, oxygen carts, portable compressed air, towing equipment, disabled recovery equipment, washing and cleaning facilities, and such other equipment, supplies and spare parts as may be reasonably required to service all general aviation aircraft at the Airport in accordance with manufacturers recommendations, including such services as repairing and inflating aircraft tires, servicing struts, changing engine oil, servicing oxygen systems, washing and cleaning of the interior and exterior of aircraft and aircraft windows, and recharging or energizing discharged aircraft batteries and starter.
- c) Adequate waiting lounge(s), briefing room(s), restrooms, telephone facilities, etc.

### 3. Minimum Staffing.

During all operating hours, the FBO shall employ and have on duty trained personnel in such numbers and with such certificates and ratings as are required to meet the Minimum Standards, in an efficient manner, for all Minimum and Optional Services being provided by the FBO, including appropriate supervisory and managerial personnel.

4. Minimum Space Requirements:

- a) Leased Premises. The minimum amount of land to be leased for a Fixed Base Land Operation shall be four contiguous acres.
- b) Aircraft Parking. The FBO must provide a minimum of 60,000 square feet of paved apron parking for aircraft parking and tie-downs with taxi-out capability, including sufficient taxi clearance, in accordance with applicable FAA regulations.
- c) Hangars. The FBO shall provide a minimum of 25,000 square feet of hangar space. Excluding T-Hangars, FBO hangars must be not less than 8000 square feet in area, and able to accommodate, at a minimum, FAA Airport Design Group I Aircraft.
- d) Automobile Parking. The FBO must provide sufficient paved and striped parking to accommodate FBO, and FBO subtenant customers, passengers, and employees on a daily basis, in accordance with applicable Town requirements and the Town of Addison Code of Ordinances.
- e) Terminal/Office Space. The FBO shall have a permanent terminal and office space designed and constructed in accordance with the Town of Addison Code of Ordinances consisting of at least 2,000 square feet of air conditioned space for crew and passenger lounge facilities, public restrooms, training, flight planning, and office space. Restrooms shall be conveniently located, free of charge, accessible to passengers and crews, and maintained in a clean and sanitary manner. At least one working telephone shall be provided for public use.

5. Term.

The term of a Lease with an FBO shall be as agreed between the Town and the FBO up to a maximum of forty years

6. Liability Insurance.

FBOs shall carry and maintain throughout the term of their Lease the following coverages:

- a) Commercial General Liability Insurance with a minimum bodily injury and property damage per occurrence limit of \$10,000,000 for Coverage A (Bodily Injury and Property Damage), and Coverage B (Personal and Advertising Injury); and \$10,000,000 product/completed operations limit of liability.

The policy shall contain:

- 1) Independent Contractors coverage
- 2) Ground Hangarkeepers Liability with a limit of \$2,000,000
- 3) Town of Addison and manager listed as additional insured
- 4) Thirty (30) day Notice of Cancellation in favor of the Town of Addison

- b) If the FBO operates any motor vehicle on the airside of the Airport, Business Automobile Liability Insurance for all owned, non-owned and a minimum combined single limit of \$5,000,000 for bodily injury and property damage.

The policy shall contain:

- 1) Town of Addison and its manager named as additional insured
- 2) Thirty (30) day Notice of Cancellation in favor of the Town of Addison

- c) Aircraft Liability Insurance for all FBO owned or operated aircraft with a minimum bodily injury and property damage per occurrence limit of \$1,000,000 for coverage Bodily Injury and Property Damage, and \$1,000,000 for Personal and Advertising Injury.

The policy shall contain:

- 1) Non-Owned Aircraft Liability with a minimum limit of \$1,000,000
- 2) Medical expense coverage with a limit of \$5,000 any one person
- 3) Town of Addison and the manager as additional insured
- 4) Thirty (30) day Notice of Cancellation in favor of the Town

## **VI. REQUIRMENTS APPLICABLE TO NON-PUBLIC AIRCRAFT FUEL SERVICE PROVIDERS**

Lessee holding non-public aircraft fuels dispensing permits shall not sell or deliver aircraft fuels to anyone other than Lessee. Fueling of any aircraft not owned or leased by Lessee shall result in immediate revocation of the right to bring fuel upon, or store fuel on, Airport property. Upon request by the Director, Lessee shall provide evidence of ownership or Lease of any aircraft being fueled. A corporation may not be formed for the expressed purpose of providing fuel services under this standard. Personnel engaged in dispensing aircraft fuels shall be properly trained and qualified with regard to safety procedures. Lessee shall provide only the type or grade of fuel required to service Lessee's aircraft.

### **1. Minimum Equipment Required:**

One metered and filter equipped dispenser for dispensing each separate type of fuel used. Fuel storage tanks must be located in the Airport's fuel farm area and must be above-ground. All installations shall comply with applicable Town of Addison Code of Ordinances and the National Fire Protection Association and the International Fire Code requirements. All maintenance, repair and upkeep shall be the sole responsibility of the Lessee.

### **2. Minimum Safety Equipment Required:**

a) Fire extinguishers will be readily available during all refueling or defueling. Personnel will be trained in the use of such equipment.

b) Static discharging ground wires will be attached to the aircraft, the fuel tank or refueling vehicle, and to zero potential ground before and throughout any fueling operation. Adequate fuel filters and water taps will be installed on all fuel handling equipment, and a suitable program for periodically conducting water contamination checks will be established and followed.

c) The standards for "Aircraft Fuel Servicing" published by the National Fire Protection Association, and as amended from time to time, are hereby incorporated herein as mandatory standards as though set forth verbatim.

### **3. Minimum Insurance Requirements:**

Non- Public Fuelers must provide the following minimum insurance coverages:

a) Commercial General Liability Insurance with a minimum bodily injury and property damage per occurrence limit of \$1,000,000 for Coverage A (Bodily Injury and Property Damage), and Coverage B (Personal and Advertising Injury); and \$1,000,000 product/completed operations limit of liability.

The policy shall contain:

- 1) Independent Contractors coverage
- 2) Ground Hangarkeepers Liability with a limit of \$1 million if third party aircraft are stored in the hangar
- 3) Town of Addison and manager listed as additional insured
- 4) Thirty (30) day Notice of Cancellation in favor of the Town of Addison
- 5) Medical expense coverage with a limit of \$5,000 any one person
- 6) Town of Addison and its manager listed as additional insured
- 7) Thirty (30) day Notice of Cancellation in favor of the Town of Addison
- 8) Waiver of Transfer of Right of Recovery Against Others in favor of the Town of Addison

b) If the Non-Public Fueler operates any motor vehicle in the Aircraft Movement, Business Automobile Liability Insurance for all owned, non-owned and hired vehicles with a minimum combined single limit of \$1,000,000 for bodily injury and property damage is required.

The policy shall contain:

- 1) Town of Addison and its manager named as additional insured
- 2) Thirty (30) day Notice of Cancellation in favor of the Town of Addison

c) Aircraft Liability Insurance for all Service Provider owned or operated aircraft with a minimum bodily injury and property damage per occurrence limit of \$1,000,000 for coverage Bodily Injury and Property Damage and \$1,000,000 for Personal and Advertising Injury.

The policy shall contain:

- 1) Contractual liability coverage for liability assumed under the Lease or Permit
- 2) Town of Addison and its manager as additional insured
- 3) Thirty (30) day Notice of Cancellation in favor of the Town
- 4) Non-owned aircraft liability with a minimum limit of \$1,000,000.

## **VII. REQUIREMENTS APPLICABLE TO SPECIALIZED AERONAUTICAL SERVICE PROVIDERS**

The following standards apply to Specialized Aviation Service Providers (SASP). SASPs provide one or more of the following services and shall comply with the Minimum Standards described in this section. A SASP is defined as a person or business engaged in any aeronautical activity except public fueling. This shall include, but not be limited to, aircraft repair, avionics, airframe, and powerplant services. The term of a lease with an SASP shall be as agreed between the Town and the Service Provider up to a maximum of forty years.

1. Aviation Shop Repair Services, Aircraft Airframe and Powerplant Repair and Maintenance. An Aviation Shop Repair Services Provider is one that is engaged in the operation of a shop, or a combination of FAA certified shops for the repair of aircraft radios, propellers, instruments, and accessories for general aviation aircraft.

An Aircraft Airframe and Powerplant Repair and Maintenance business is one that is engaged in the business of providing aircraft airframe and powerplant repair and maintenance services, including the non-exclusive right to sell aircraft parts and accessories.

These Service Providers may furnish one, or if desired, any combination of these services. This category includes sale of new and/or used aircraft radios, propellers, instruments and accessories.

### **Minimum Space Requirements.**

- a) hangar or shop space for aircraft maintenance and repair and parts and equipment storage,
- b) air conditioned space for office, restrooms,
- c) paved aircraft apron space to accommodate the maximum number and type of aircraft that Service Provider can service at any one time, and
- d) paved motor vehicle parking facilities to accommodate Service Provider's customers and employees on a daily basis.
- e) If painting operations are contemplated, the Service Provider shall provide a separate paint shop that meets all applicable safety and air quality and other environmental requirements.

### **Liability Insurance Requirements.**

- a) Commercial General Liability Insurance with a minimum bodily injury and property damage per occurrence limit of \$1,000,000 for coverage A (Bodily Injury and Property Damage) and coverage B (Personal and Advertising Injury); and \$1,000,000.

The policy shall contain:

- 1) Independent Contractors Coverage
- 2) Blanket contractual liability coverage for liability assumed under the Lease
- 3) Medical expense coverage with a limit of \$5,000 any one person
- 4) Ground Hangarkeepers Liability with a limit of \$1,000,000
- 5) Town of Addison and its manager listed as additional insured
- 6) Thirty (30) day Notice of Cancellation in favor of the Town of Addison
- 7) Waiver of Transfer of Right of Recovery Against Others in favor of the Town of Addison

b) If Service Provider operates any motor vehicle on the airside of the airport, Business Automobile Liability Insurance for all owned, non-owned and hired vehicles with a minimum combined single limit of \$1,000,000 for bodily injury and property damage.

The policy shall contain:

- 1) Town of Addison and Airport Management named as additional insured
- 2) Thirty (30) day Notice of Cancellation in favor of the Town of Addison

c) Aircraft Liability Insurance for all Service Provider owned or operated aircraft with a minimum bodily injury and property damage per occurrence limit of \$1,000,000 for coverage Bodily Injury and Property Damage and \$1,000,000 for Personal and Advertising Injury.

The policy shall contain:

- 1) Contractual liability coverage for liability assumed under the Lease
- 2) Medical Expense coverage with a limit of \$5,000 any one person
- 3) Town of Addison and its manager as additional insured
- 4) Thirty (30) day Notice of Cancellation in favor of the Town
- 5) Waiver of Transfer of Rights of Recovery Against Others in favor of the Town of Addison
- 6) Non-owned aircraft liability with a minimum limit of \$1,000,000 manufacturer's recommendations and applicable FAA regulations.

2. Flight Training and Ground School. A flight training and ground school Service Provider is one that is engaged in the business of instructing pilots in solo and dual flight operations, in fixed and/or rotary wing aircraft, and such related ground school instruction as is necessary to prepare persons for taking a written examination and flight check for the category or categories of pilots' licenses and rating involved.

Minimum Standards.

The Service Provider shall obtain and maintain an FAA certificate as applicable to its operation. The Service Provider shall own or lease and have available for use in flight training at least one properly certified aircraft appropriate to the type of flight instruction offered. The Service Provider shall have appropriate training equipment and instructional materials to provide proper and effective flight training, including adequate mock-ups, pictures, slides, films or other visual aids. All equipment and materials must comply with applicable FAA requirements for the training offered.

Minimum Space Requirements.

The Service Provider shall lease or sublease (a) a sufficient amount of hangar or tie-down space for all aircraft used for flight instruction at the Airport, (b) air conditioned space for classroom, office, briefing room, restrooms, and telephone facilities for customer use.

Minimum Liability Insurance Requirements.

a) Commercial General Liability Insurance with a minimum bodily Injury and property damage per occurrence limit of \$1,000,000 for coverage A (Bodily Injury and Property Damage) and coverage B (Personal and Advertising Injury); and \$1,000,000 product/completed operations limit of liability.

The policy shall contain:

- 1) Independent Contractors Coverage
- 2) Blanket contractual liability coverage for liability assumed under the Lease
- 3) Medical expense coverage with a limit of \$5,000 any one person
- 4) Ground Hangarkeepers Liability with a limit of \$1,000,000
- 5) Town of Addison and its manager listed as additional insured

- 6) Thirty (30) day Notice of Cancellation in favor of the Town of Addison
- 7) Waiver of Transfer of Right of Recovery Against Others in favor of the Town of Addison

b) If Service Provider operates any motor vehicle on the airside of the Airport, Business Automobile Liability Insurance for all owned, non-owned and hired vehicles with a minimum combined single limit of \$1,000,000 for bodily injury and property damage.

The policy shall contain:

- 1) Town of Addison and its manager named as additional insured
- 2) Thirty (30) day Notice of Cancellation in favor of the Town of Addison

c) Aircraft Liability Insurance for all Service Provider owned or operated aircraft with a minimum bodily injury and property damage per occurrence limit of \$1,000,000 for coverage Bodily Injury and Property Damage, and \$1,000,000 for Personal and Advertising Injury.

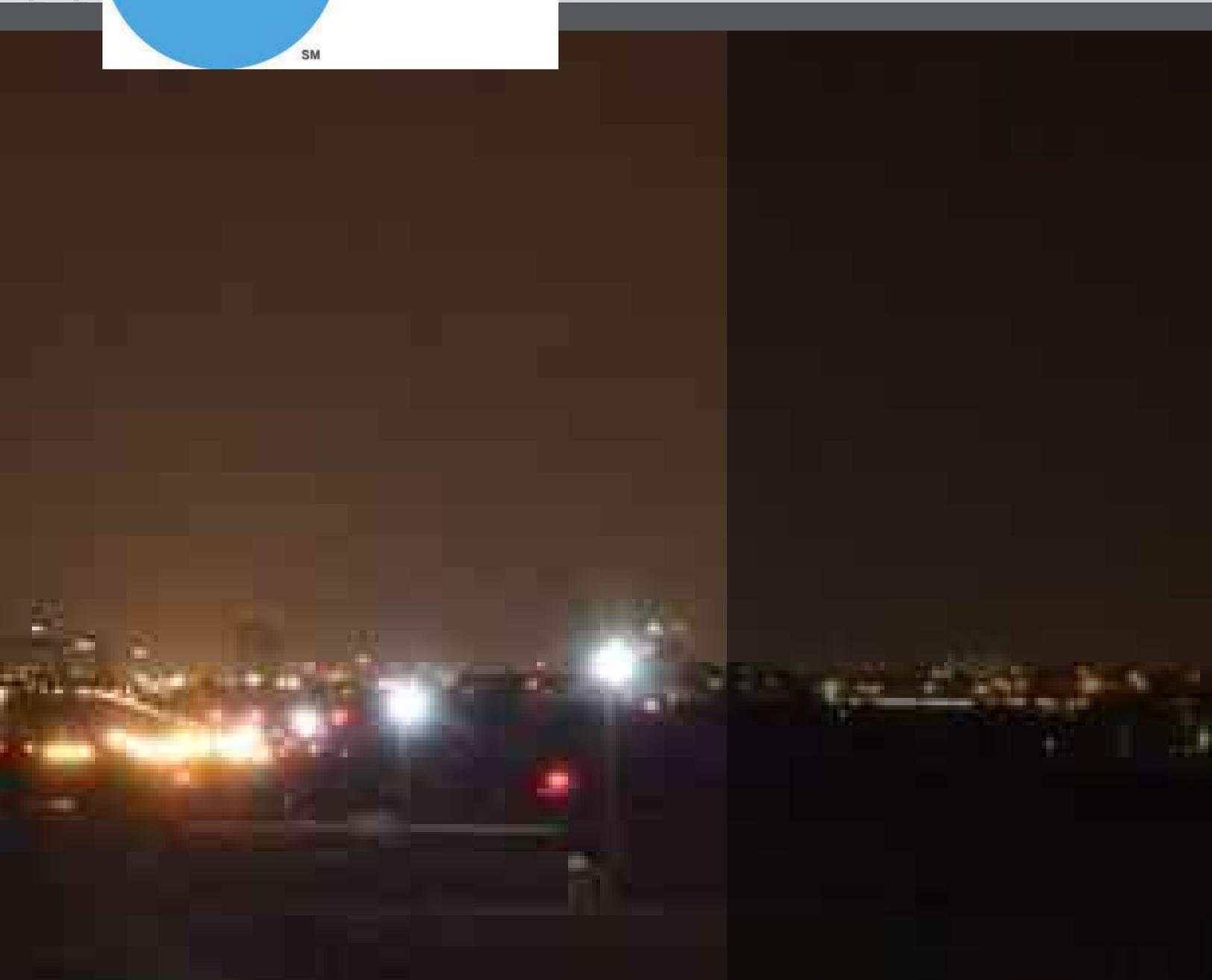
The policy shall contain:

- 1) Contractual liability coverage for liability assumed under the Lease
- 2) Town of Addison and its manager as additional insured
- 3) Thirty (30) day Notice of Cancellation in favor of the Town
- 4) Non-owned aircraft liability with a minimum limit of \$1,000,000

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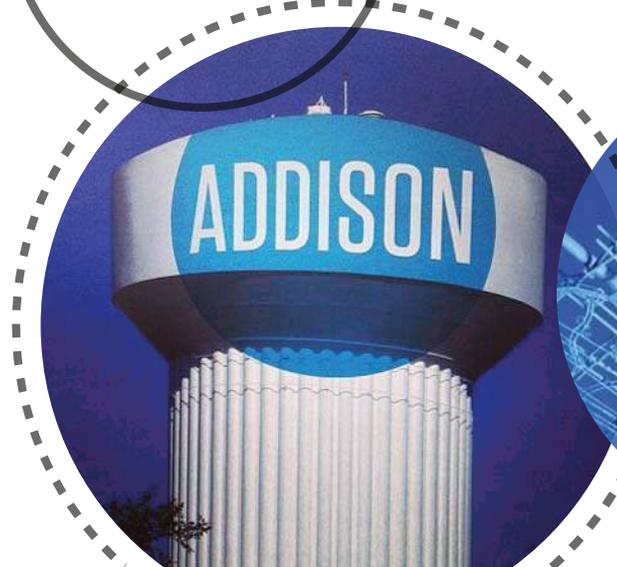
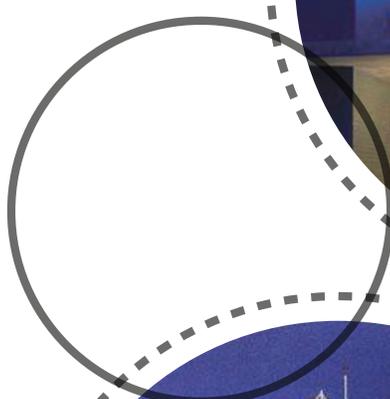
**Appendix F**  
**Airport Development Standards**  
**(Corgan)**

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# AIRPORT MASTER PLAN





# AESTHETIC REPORT

## OUTLINE

### ELEMENT 04 - TASK 03

#### THE TOWN OF ADDISON:

Scope & Vision

Executive Summary

Addison Overview

- Addison Boundary

- Parks / Public Spaces

- Civic Institutions / Amenities

- Addison Architecture

- Addison Artwork

- Addison Signage

#### THE ADDISON AIRPORT:

Airport Transportation

Zoning

Zoning Description

Addison Airport Strategic Plan

#### TOWN / AIRPORT LINK:

Aesthetic Goals

- Lighting

- Finishes

- Landscaping

- Signage

- Furniture

- Artwork

- Parking



# SCOPE & VISION

## ELEMENT 04

### TASK 03

Corgan will work with the Town of Addison and committee members to develop a strategy to blend the aesthetic goals of the town's Comprehensive Plan with the airport's Master Plan. This task will be accomplished through a workshop setting where goals are established and an aesthetic description is agreed upon that may influence existing facilities and zoning requirements.

Corgan will help with the development of a working paper relative to the items within our scope for Element 4.

## TOWN'S VISION STATEMENT FOR THE AIRPORT

### ADDISON AIRPORT STRATEGIC PLAN

To be a safe, thriving General Aviation Airport that delivers the "Addison Way" with superior services, an attractive appearance and enhanced sense of community, offering a high-quality experience for tenants, businesses, visitors, and all stakeholders. Addison Airport will lead the way in creativity, innovation, and environmental and fiscal responsibility.

The Town's three primary goals for the airport are:

#### Goal 1

Continue to enhance the airport's overall value for the benefit of stakeholders.

#### Goal 2

Integrate the airport with the Town of Addison.

#### Goal 3

Continue to promote industry-leading practices in all aspects of airport management, development, operations, and maintenance.



# EXECUTIVE SUMMARY

Garver and Corgan were awarded the opportunity to develop design standards with the stated goal of blurring the boundaries between Addison the Town and Addison the Airport.

To better understand Addison the Town, we explored various aspects that make up its unique culture and help define its sense of place in North Texas. Addison is known by its residences and surrounding neighbors for its entertainment offerings which draw people together providing a large sense of community. There are parks, restaurants and annual festivals, each designed to serve the public. Immediately adjacent to the Airport is Addison Circle with its strong sense of place anchored by public art and open spaces. The primary goal of the design development standards is to propose aesthetic solutions to expand this strong sense of Addison's community into the Airport, linking Addison the Town to Addison the Airport.

The willingness of the Airport and Town of Addison to engage in the planning and design process was crucial to a successful development of design standards. The following pages of Appendix XX include:

- We reviewed existing buildings, wayfinding and street lighting in Addison to better recognize the aesthetic goals of the Town's Comprehensive Plan.
- We inventoried the existing conditions inside Addison Airport and existing zoning ordinances to assess the current state.
- We provided recommendations of aesthetic approaches to best accommodate the goal of blending the Town's comprehensive plan and the Airport Master Plan. The aesthetic goals are also indicated graphically in the Area Development Plans.

We have included design decisions made during meetings with the Executive Committee in various portions of the Aesthetic Goals.



# ABOUT ADDISON

## ADDISON OVERVIEW

### CONNECTIONS & HIGHLIGHTS

Addison Boundary

Parks / Public Spaces

Civic Institutions / Amenities

Addison Architecture

GENERAL TRENDS

OFFICES

APARTMENTS

COMMUNITY SPACES

ENTERTAINMENT

Addison Artwork

Addison Signage



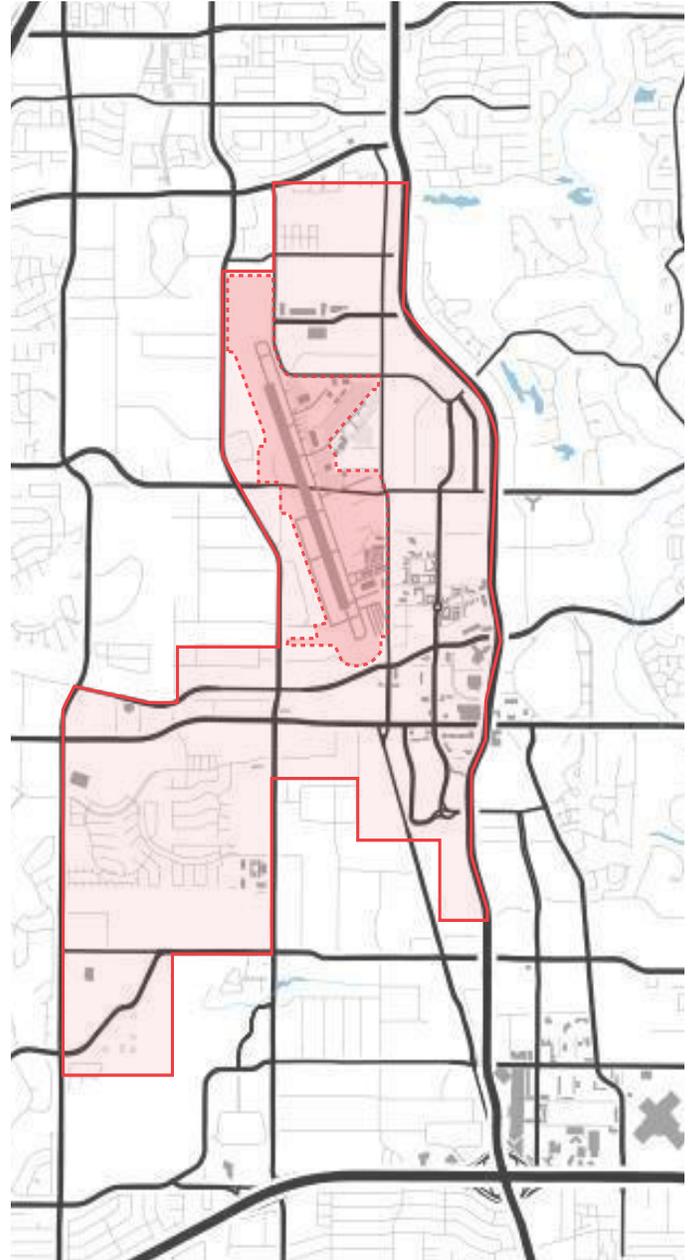
# ADDISON BOUNDARY

## BOUNDARIES OF ADDISON

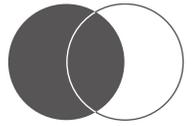
The Town of Addison is bound by the Addison Airport and Midway Road to the west, the Dallas North Tollway Road to the east with looser boundaries to the north and south. The Addison Airport makes up a large percentage of the town area and is surrounded by many attractive amenities and public spaces, busy roadways and major business corridors. Each of these factors impact the likelihood of success for additions and improvements at the airport, and should be carefully considered to maximize the impact on airport revenue, interaction with visitors, and improvement of public areas for not only the Airport but also the Town of Addison.

These factors include:

- Transportation/High traffic areas & intersections
- Existing parks and public areas
- Civic institutions, Facilities, and Artwork
- Projected areas of growth in the Town of Addison Comprehensive Plan



TOWN OF ADDISON BOUNDARIES



# PARKS/PUBLIC SPACES

## AMENITIES AND PUBLIC DESIGN

The Town of Addison has many beautiful public parks and centers for residents and visitors to enjoy. The Addison Airport would benefit greatly from taking advantage of the “public corridors” created by the proximity of Addison Circle Park, the Water Tower Theater, and the three yearly events that occur in that area of Addison.

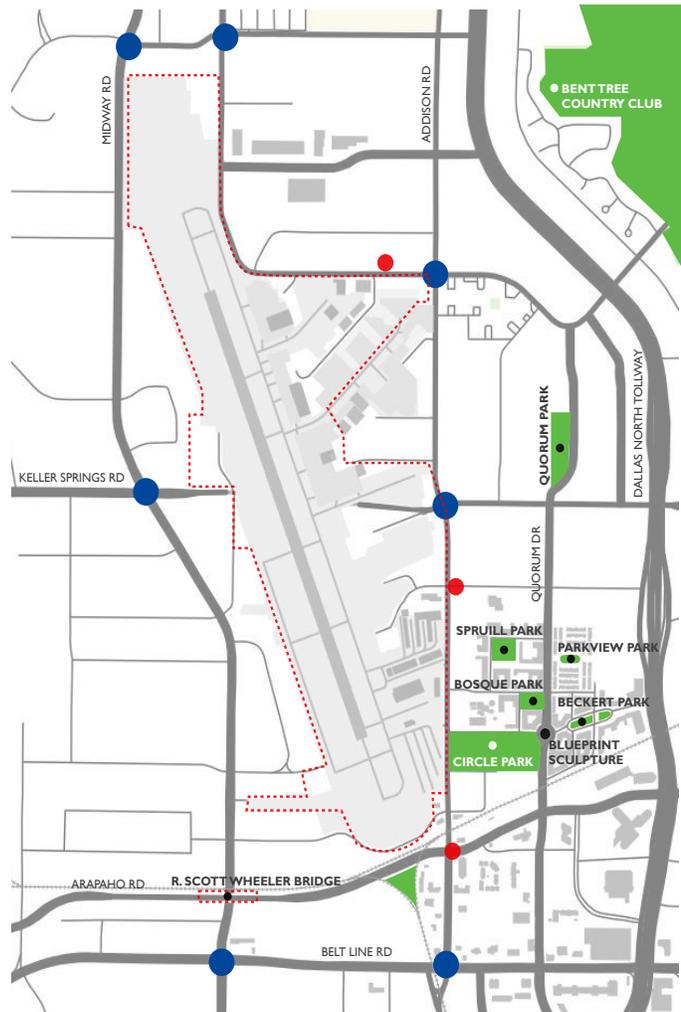
The Addison Airport could provide a dog park as part of it’s outreach to the community and its Welcome Center. This would make it an even more often frequented area and provide opportunities for a unique relationship with residents. They could also provide more walkable and sit-friendly areas along this corridor to encourage visitors to view the Addison Airport as another civic amenity.

### Parks

- Addison Circle Park
- Bosque Park
- Spruill Park
- Quorum Park

### Public Landmarks

- Arapaho Bridge
- Blue Print
- Addison Water Tower



EAST SIDE PARK NEAR THE AIRPORT

# CIVIC INSTITUTIONS/AMENITIES

## ADDISON ENTERTAINMENT & BUSINESS

Concentrated on the South East quadrant of the Town of Addison.

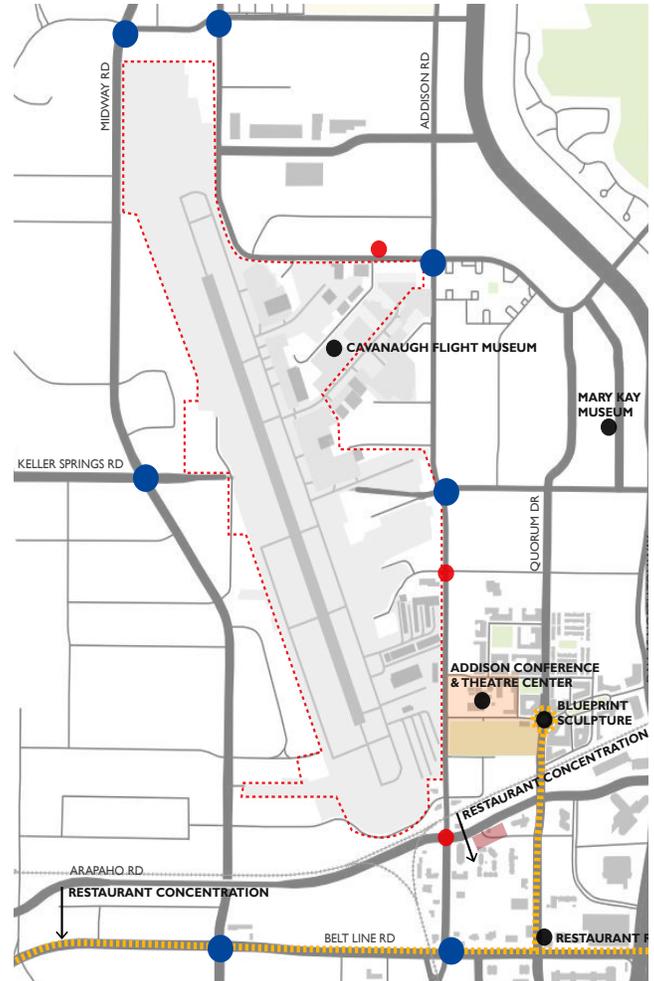
Cavanaugh Flight Museum

Addison Conference and Theatre Centre

Addison Circle

Restaurant Row

Mary Kay Museum



MAJOR CIVIC INSTITUTIONS & PUBLIC AMENITIES

# ADDISON ARCHITECTURE

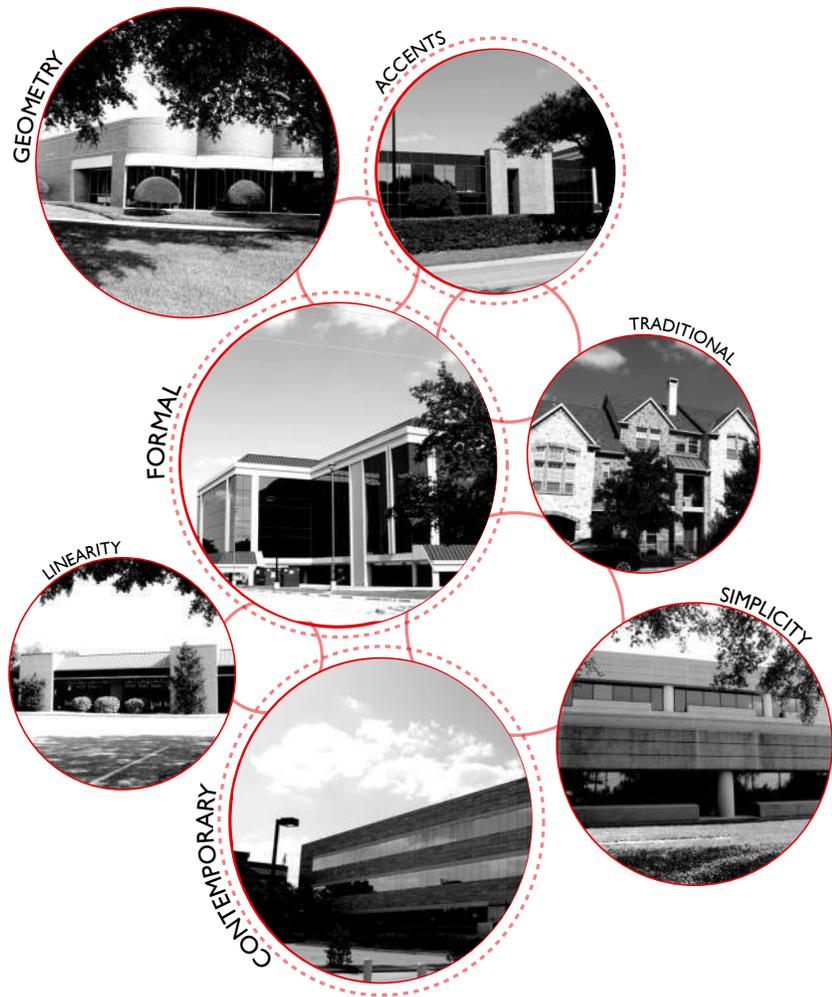
## ADDISON ARCHITECTURE GENERAL TRENDS

Common Materials: brick, glass, concrete

Traditional vs contemporary

Linearity, vertical accents

Landscaping



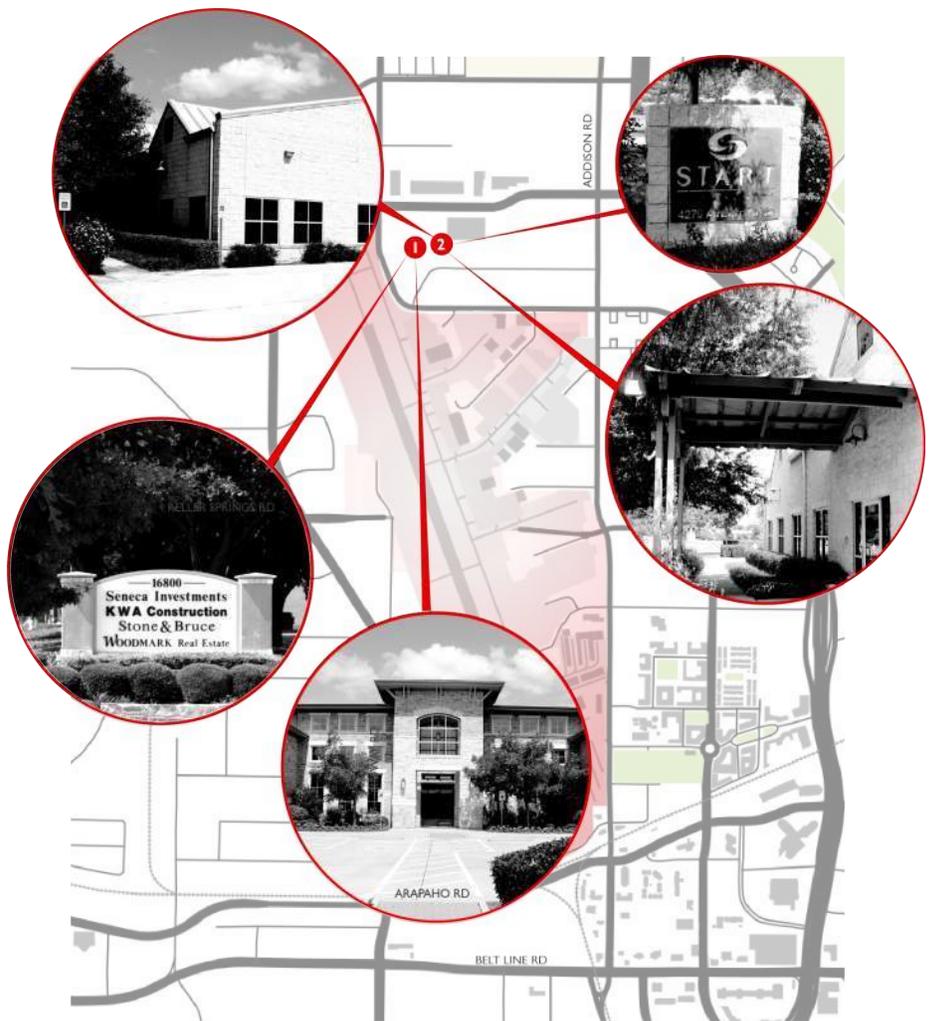
## ADDISON OFFICES

### 1. Seneca Instruments

- Brick & stone patterning
- Large signage
- Lots of landscaping

### 2. Start

- CMU and metal signage with lighting
- Covered entry with metal awning
- Landscaped entry



MAP OF ADDISON OFFICES

# ADDISON APARTMENTS

- 1. Addison Keller Spring Apartments
  - High density residential along Addison Road
  - High-visibility signage, metal materials
- 2. Addison Circle Apartments
  - Brick and stone materials
  - Striped and alternating color bricks with large glazing and corner focal point



MAP OF ADDISON APARTMENTS

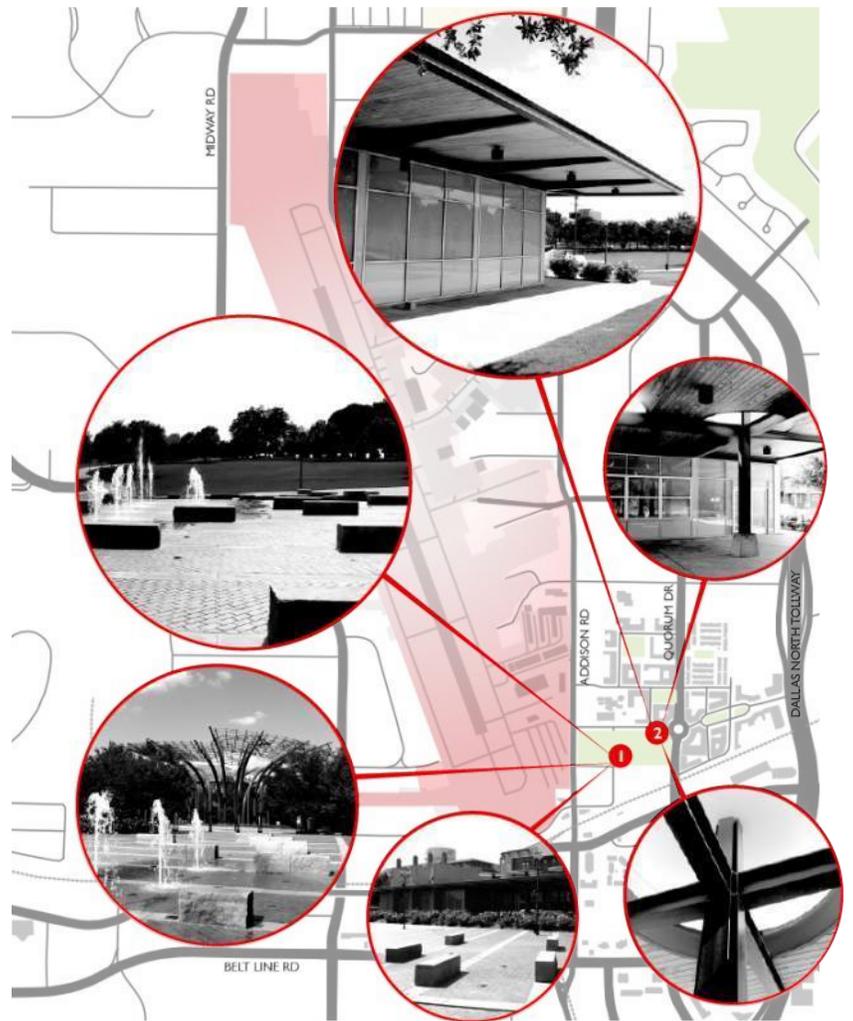
## ADDISON COMMUNITY

### 1. Addison Circle Park Landscape

- Water Feature
- Seating
- View to Blueprint Sculpture

### 2. Addison Circle Park Visitor Center

- Wood Ceiling
- Exposed Metal Structural Elements
- Opaque Curtain Wall
- Circular Skylights with floating structural system



MAP OF ADDISON COMMUNITY SPACES

# ADDISON ENTERTAINMENT

## 1. Water Tower Theatre & Conference Center Entry

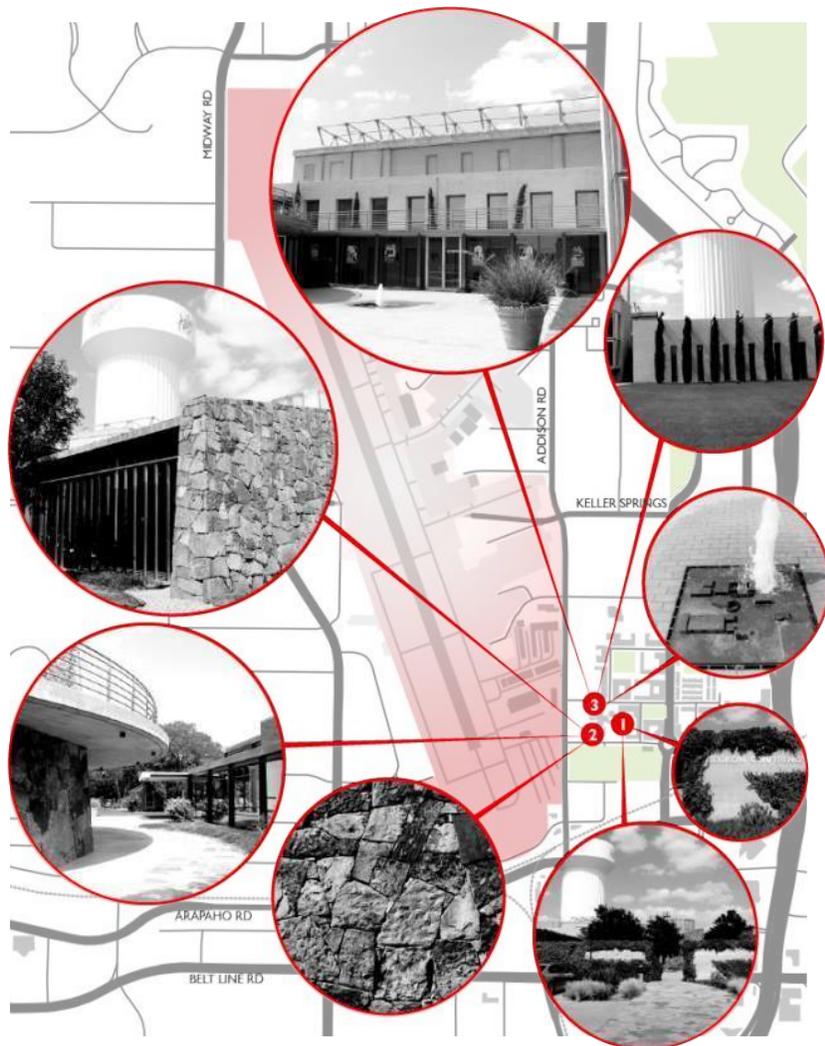
- CMU, metal, and greenery signage
- Articulated and paved Entry
- Regional landscaping

## 2. Water Tower Theatre

- Mixed stone
- Curtain wall
- Lit Focal wall
- Overhangs and trees for shading

## 3. Water Tower Conference Center

- CMU and metal construction
- Large glazing
- Repetition in landscaping
- Interior Courtyard



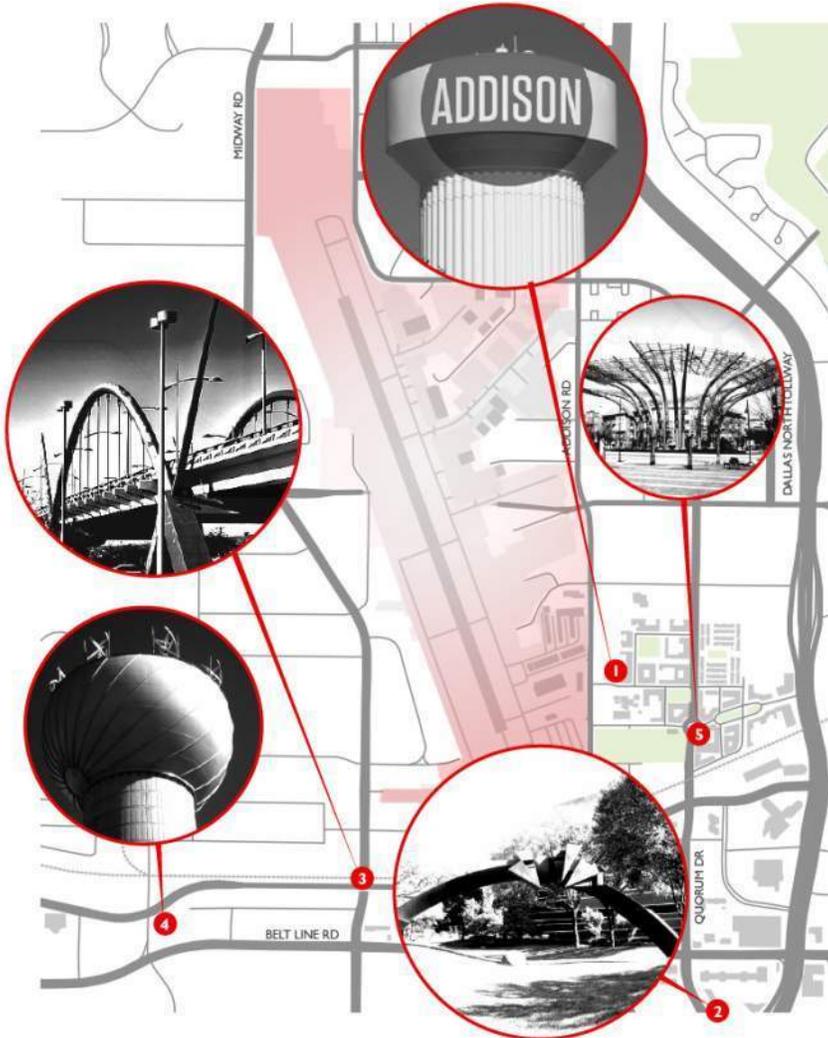
MAP OF ADDISON ENTERTAINMENT

# ADDISON ARTWORK

## ARTWORK

The Town of Addison has many beautiful public parks and centers for residents and visitors to enjoy. The Addison Airport would benefit greatly from taking advantage of the “public corridors” created by the proximity of Addison Circle Park.

- 1. Town of Addison Water Tower
- 2. Town of Addison Sculpture
- 3. R. Scott Wheeler Bridge
- 4. Addison Circle Park Water Tower
- 5. Circle Blue Print



MAP OF ADDISON ARTWORK MONUMENTS

# ADDISON SIGNAGE

## ADDISON SIGNAGE

- Common materials: stone, brick or metal
- Hierarchy of lettering
- Traditional vs contemporary design
- Contrasting lettering with background
- Statement vs blend



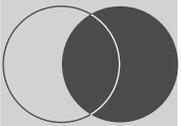
# ADDISON AIRPORT

## THE ADDISON AIRPORT

TRANSPORTATION/TRAFFIC

ZONING

ZONING DESCRIPTION



# TRANSPORTATION/TRAFFIC

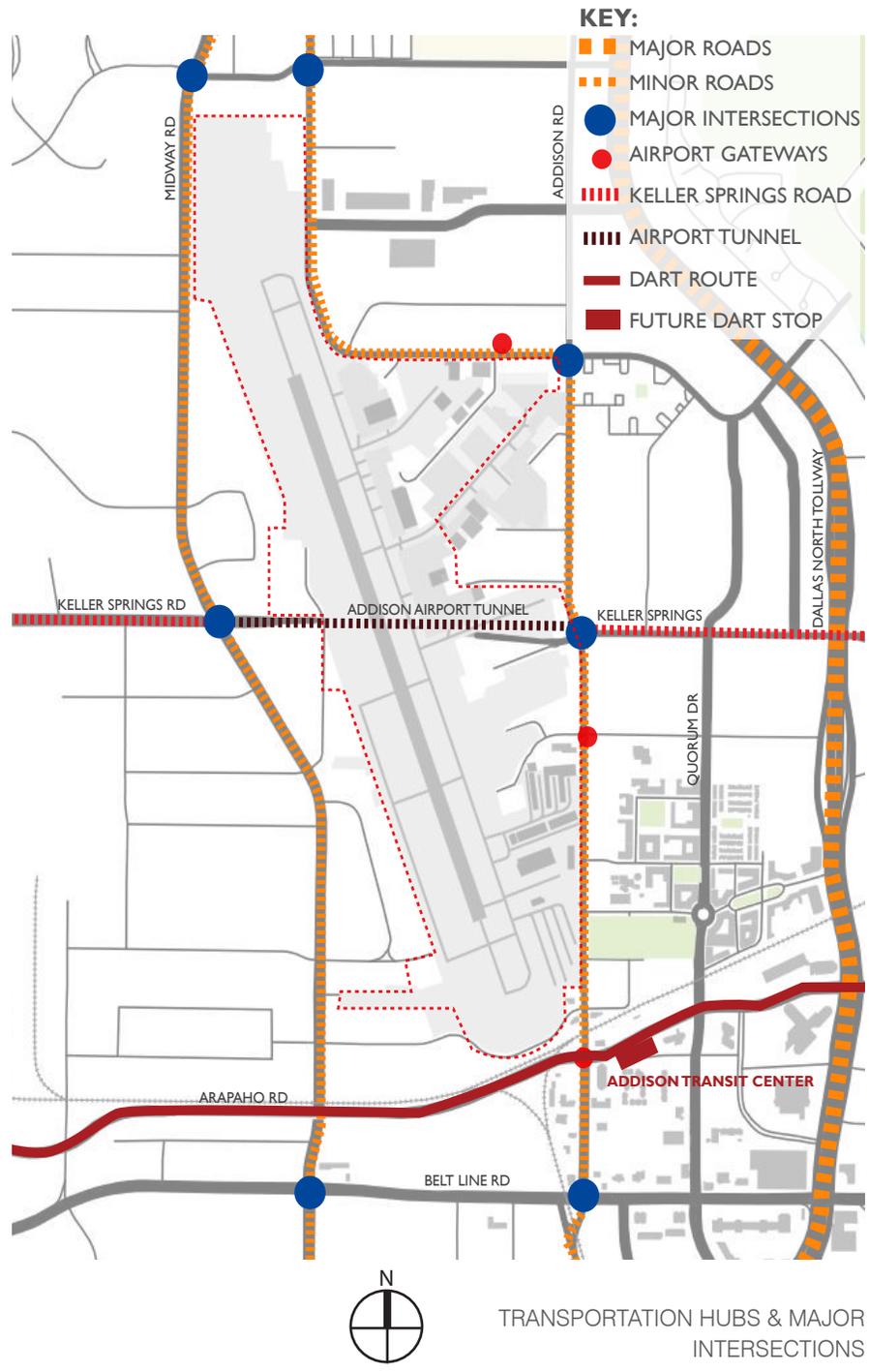
## THE AIRPORT AND ITS CONTEXT

Entry into the area around the Addison Airport is predominantly from the Toll Road to the east and from the south coming up from Restaurant Row and the Addison Transit Center. Addison Road and Midway Road are the major north/south running feeder roads that branch into the airport. Addison Road is also the major artery into many of the business and park areas to the east.

There is no direct rail line to Addison, but the DART system does serve the area through several major bus line routes, as well as the Addison Transit Center at Arapaho Road. The Transit Center sits near one of the major entries into the Airport. The DART system has future plans for a rail station at Addison Transit Center on Addison Road.

Industrial transportation appears to be heavily oriented to the west side of the Airport, with visitor and retail traffic being predominantly to the east.

In terms of visibility, the south approach on Addison road provides the greatest oncoming visibility due to the proximity of open park spaces and the lack of taller buildings on Airport property. The south approach also has the closest proximity to major landmarks and art pieces that the Town of Addison is known for. These are the Arapaho bridge on Midway and Arapaho, and the Addison Circle Park along Addison Road.



TRANSPORTATION HUBS & MAJOR INTERSECTIONS

# ZONING

## CURRENT LAND USE/ZONING

The airport is zoned I-3, which permits most light industrial-type uses. However, land use on and adjacent to airports are restricted in many ways, including obligations incurred from accepting state and federal grant funding. There are noise compatibility requirements, height hazard zoning and Part 77 airspace and obstruction limits, building restriction lines, etc., all of which are necessary and appropriate to protect and enhance the utility of the airport. It is therefore essential -- particularly given the dense development on and around Addison Airport -- that land uses on the airport be driven towards highest and best uses. For example, land on the east side of the airport with frontage on Taxiway Alpha should be re-purposed for high-activity, high-value uses such as Fixed Base Operations (FBOs) and Part 135 charter operations. It is a finding of the strategic planning team that the Airport Master Plan is the appropriate vehicle for specifying land uses on the airport. It is a recommendation of the strategic planning team that land uses on and near the airport be coordinated and consistent with the Town of Addison's Comprehensive Land Use Plan.

# ZONING DESCRIPTION

## LAND USE - COMMERCIAL/INDUSTRIAL

### GOAL

Maintain the Town's existing commercial and industrial neighborhoods through Code Enforcement, and consider branding and marketing effort to develop Midway Road as a destination for automotive users and their customers.

## COMMUNITY FACILITIES, PUBLIC ART

### GOAL:

Incorporate public art into the community in a way that is strategic, selective, and impactful.

Strategy: Take advantage of the Town's many venues, both indoors and out, for the hosting of temporary and traveling art exhibits.

Strategy: When the opportunity for a public art piece arises, seek well-known artist with national reputations for the commission. Develop impactful and significant art works, not just decorative pieces.

Strategy: The Addison Legacy Foundation shall contact the owners of public art pieces throughout the Town and let them know the Town would accept a tax-deductible donation of an art piece in order to keep it from being scrapped or destroyed.

Strategy: Evaluate the Town-owned art pieces on an annual basis to determine if maintenance or repainting is needed, and if so, provide funds for maintenance.

## ARTICLE XIV.I-3 INDUSTRIAL-3 DISTRICT REGULATIONS

### REFERENCE ARTICLE XIII. I-2 INDUSTRIAL-2 DISTRICT REGULATIONS

#### Section 1. Use regulations.

In an I-3 district, no land shall be used and no building shall be erected for or converted to any use other than permitted in the I-2 district.

*In an I-2 district, no land shall be used and no building shall be erected for or converted to any use other than legal manufacturing and industrial plant operations including all uses permitted in the commercial districts, with the exception of sexually oriented businesses and pawn shops, which shall be allowed in the C-2, commercial-2 district only, except airports, airplane motor shops or motor test blocks, acetylene gas manufacturer or gas storage, slaughterhouses, animal fertilizer factories, manufacturer or storage of gun powder, fireworks, or other explosives, production or storage of garbage, dead animals or refuse, stockyards, foundry, smelter, batching plant, junkyard, used auto parts or any other use which is obnoxious or offensive by reason of odor, dust, smoke, gas or noise. No building shall be erected or converted for dwelling purposes; provided, however, that dwelling quarters may be established in connection with any industrial plant for watchmen and caretakers employed on the premises and provided further any existing dwelling within any I district.*

#### Section 2. Height regulations

No building shall exceed six standard stories in height unless set back from all lot lines one foot for each one foot above such height limit. When a building is located on a lot adjoining a single-family, or any apartment district, it shall not exceed three standard stories in height unless it is set back one foot from all required yard lines for each one foot of additional height above such height limit. Height of structures are further limited by the airport section of this appendix.

#### Section 3. Area regulations

- 1.Front yard. Same as article IX, LR local retail district.
2. Side yard. Same as article IX, LR local retail district.
- 3.Rear yard. Same as article IX, LR local retail district.

#### Section 4. Parking regulations

(A) The parking regulations for industrial district uses are the same as those in the C district.

(B) Manufacturing, industrial and processing establishments, repair shops, warehouses, storage buildings, lumber and supply yards shall provide off-street parking space at a ratio of one space for each five employees. The maximum number of employees on duty at any time, day or night, shall be the basis for determining parking requirements for any establishment. Where the number of employees is indeterminate, off-street parking space shall be provided in a ratio of one space for each 1,000 square feet of floor area.

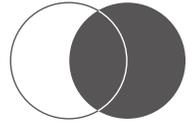
#### Section 5. Type of construction

No minimum requirements.

All buildings facing upon a dedicated street shall have the exterior walls adjacent to the street constructed of brick or stone. Side walls extending back 20 feet from the front shall be constructed of the same materials as the front. Buildings located upon a corner lot shall have exterior front wall and side wall adjacent to the street constructed of the same type of brick or stone; also, the other walls extending back 20 feet shall be constructed of the same materials.

The remaining exterior walls may be constructed of brick, stone or masonry, or may be constructed of prefabricated type metal. Prefabricated metal buildings, or other similar type of metal wall buildings, shall be permitted.

Exterior walls shall not be constructed of wood or of corrugated metal.



#### Section 6. Outside sales and/or commercial promotions.

1. Any outside sales and/or commercial promotion shall be required to obtain a permit.
2. The above outside sales and/or commercial promotion may be permitted for a period of 14 days each calendar year with a maximum of two permits per business per year, providing such goods, products or merchandise is displayed on a sidewalk within ten feet of the business building.
3. The above outside sales and/or commercial promotion shall be construed to apply to merchandise dispensing units placed adjacent to and outside of a business building.
4. The above outside sales and/or commercial promotion shall not be construed to prohibit the display of merchandise normally placed on gasoline pumps and/or gasoline pump islands.
- 5a. Outside sales and/or commercial promotions related to existing businesses shall be allowed during special events, provided that the sponsors of such sales or promotions obtain a permit from the planning and zoning office at least ten days prior to the event. Such outside sales and commercial promotions may involve the use of tents and the provision of food, alcohol and entertainment if the sponsors comply with the terms of this appendix set forth in this section.
- 5b. In order to qualify for a permit, the applicant must:
  1. Provide the planning and zoning office with a flammability certificate for each tent to be used.
  2. Provide a map, plan, or drawing to indicate adequate off-street parking for patrons, employees and delivery trucks; such map, plan or drawing should also indicate that no fire lanes, streets or other public rights-of-way will be blocked as a result of the sale or promotion.
  3. If the event chooses to serve food, provide food service facilities in accordance with the Addison food establishments ordinance.
  4. Provide for adequate trash and waste removal and cleanup of the area.
  5. Comply with all requirements of the Addison noise ordinances.
  6. Submit a check in the amount of \$50.00 to the planning and zoning office.
  7. Comply with all other reasonable conditions imposed by the planning and zoning office.
- 5c. The duration of the outside sales and commercial promotions allowable under this section shall be limited to the actual days and times of the event, with a time period of 48 hours allowed before the event and 24 hours after the event for setting up, removing and cleaning the area, tents and other items used during the sale or promotions.

#### Section 7. Outside storage

1. Except for the equipment and/or the materials stored on a construction site and used for a temporary construction project, the longterm outside storage of equipment, building and/or other materials, goods and products shall be permitted provided that the storage area is properly maintained and is screened by a solid fence or wall of at least six feet in height. No stored material shall extend above the height of the screening fence or wall.

#### Section 8. Mechanical equipment

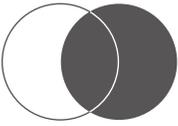
Mechanical equipment shall be constructed, located, and screened so as not to interfere with the peace, comfort and repose of the occupants of any adjoining building or residence and shall not be visible from any public street.

#### Section 9. Refuse containers

Same as article XII, I-1 Industrial-1 district regulations.

#### Section 10. Site landscaping

All landscaping within the I-2 district shall conform to the standards contained in article XXI, landscaping regulations of this appendix.



## ADDISON AIRPORT STRATEGIC PLAN

Aesthetics are an important aspect of the Town of Addison's vision and values. Notable examples where this is readily apparent are the major planned developments of Addison Circle and Vitruvian Park. Some areas and individual properties on the airport are already quite attractive; for example, the facilities on the south side of Westgrove Drive, west of Addison Road south of Airport Parkway. This strategy is focused on raising aesthetic standards for all airport properties. For visitors arriving by air, Addison Airport is the "front door" to the community: it is the first place that visitors see on arrival, and the last place they see on departure, which gives it a disproportionate impact on many visitors' overall impression of the Town. As a result, the planning team believes it is very important to improve the overall appearance of the airport and its (favorable) visual impression on visitors.

Tactics to be employed to effect this strategy include:

### Signage

Develop signage design standards consistent with Town ordinances

Develop wayfinding signage incorporating the airport brand, compatible with the Town's signage and branding standards.

Implement new tenant location signage

Develop and adopt building/facility design standards

Develop and adopt building/facility maintenance standards

Implement an ongoing program to review and improve the appearance of the airport, to include general clean-up and removal of non-airworthy aircraft.

## NEW ZONING VS LEASING AGREEMENT CHANGES

The Addison airport requires further definition of its building and maintenance standards, both internally and in the zoning requirements of the Municipal Code for the Town of Addison.

This includes specifically making adjustments to the following areas for I-3:

### Section 5: Type of Construction

Further defining color, material, and formal requirements for new construction, and different types of buildings.

Defining a repair schedule and minimum standards for additions and repair quality. Identifying an inspection system and standards for enforcement.

### Section 11: Wildlife Management

### Section 12: Wayfinding

Graphic, color, and visibility requirements.

Height and size designations for ergonomics and maximum impact on wayfinding usage and aesthetics.

### Section 13: Airport Lighting

# LINKED

## THE TOWN & AIRPORT OF ADDISON

### LINKING THE COMMUNITY WITH THE AIRPORT

- LIGHTING
- MATERIALS
- ARCHITECTURE
- LANDSCAPE
- WAYFINDING
- EXTERIOR FURNITURE

# AESTHETIC GOALS

## SELF-IDENTIFIED AESTHETICS

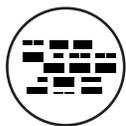
### ADDISON AIRPORT STRATEGIC PLAN

Addison Airport often serves as a visitor's very first impression of the Town of Addison. Since the airport is a very visible part of the Town widely recognized for its commitment to quality urban development and lifestyle, the airport should reflect, if not enhance, this very same image. With this in mind and without compromising public safety and financial sustainability, airport management and the Town will review building maintenance and development practices and standards for all airport properties. Current leases typically require a tenant to maintain their property in "good condition repair." A vague standard which is difficult to enforce. Building maintenance guidelines will be established, with a process for identifying and addressing deferred maintenance of airport properties. A program of routine inspections to support adherence to these guidelines will be implemented, with improved communications to better educate airport tenants of their ongoing duty to maintain their properties. This program, when implemented, will help to establish tenant/landlord expectations in advance, provide for a framework to assist tenants in meeting lease maintenance and repair requirements, and allow the Town to better plan for the maintenance of ground-leased properties upon reversion to Town ownership.

Similarly, standards for new construction will be considered to encourage not only architecturally pleasing designs, but also quality construction to ensure the building improvements prolonged functional use and reduced cost of long-term maintenance.



LIGHTING



FINISHES



LANDSCAPE



SIGNAGE



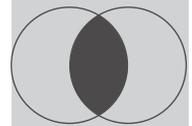
FURNITURE



ARTWORK



PARKING





# LIGHTING



# LIGHTING

## AIRPORT LIGHTING REQUIREMENTS

Lighting found in the airport boundary should be complimentary to the image and brand created by existing street lighting found in Addison.

All vertical lighting must take precautions against encouraging wildlife to perch or roost. This includes providing few to no horizontal surfaces, but rather encouraging smooth and rounded forms, and as a last resort standard bird deterrent devices.

There should be a controlled range of diversity in lighting fixtures to encourage overall cohesion of the design. Where there is a diversity of lighting fixtures, this can be a helpful strategy to help with intuitive wayfinding. Different fixtures can be used to determine major and minor routes.

Important lighting considerations:

- Light and glare control
- Vulnerability to vandalism
- Operating costs
- Energy use
- Durability, with manufacturer guarantees of a three year minimum

NOT acceptable lighting techniques:

- Wall pack light fixtures (mounted over 30 feet above grade)
- Colored flood lighting
- Open globe street lighting fixtures without cut-off
- Strobing or blinking light sources
- Incandescent lamps



# PRECEDENT: Ashford



## INTEGRATING LIGHTING

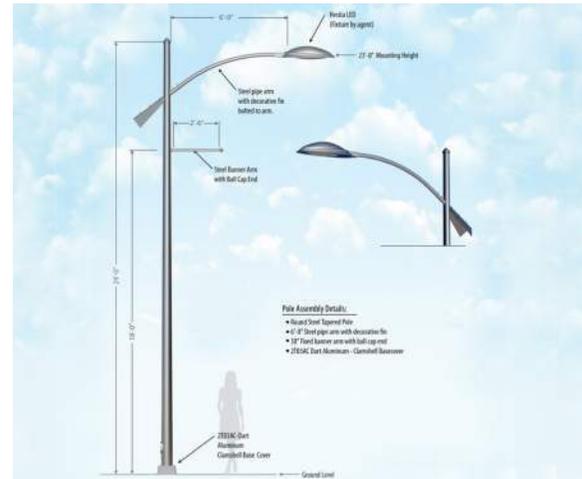
Daylight, along with electric lighting, must be cohesive and considered in design. The lighting design in the Ashford Ring Project was designed by lighting artist Nayan Kulkarni. This project demonstrates innovative lighting that has a contemporary curved shape.



ASHFORD ELECTRIC LIGHTING DEMONSTRATING COHESIVE LIGHTING DESIGN



# Street Lights



VALMONT STRUCTURES HESTIA

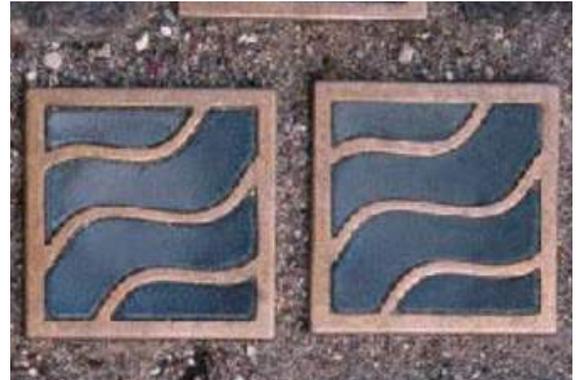
## STREET LIGHTS STANDARD

Street Lights should be used to articulate the difference between major and minor routes. The lights should be designated to their purpose and kept consistent in that application. The street lamps should emit 'white light' which increases visual comfort and creates a more accurate perception of color, size and shape, enhancing safety.

These lights are complimentary to the existing aesthetic of street lights found along the Addison Airport's surrounding boundaries. The lighting will be divided into two categories, major and local according to the scale of the street. A taller street light will be located on the major through roads carrying large volumes of traffic at the boundaries of the Airport. Shorter lights will be positioned on the smaller, local roads with traffic traveling to a specific destination. The light fixture should include LED lighting for sustainability and to reduce maintenance.

The image above exemplifies a contemporary street light by Valmont Structures. The curved body mimics the curved body of an aircraft, relating to the Airport.

# Pedestrian



## PEDESTRIAN LIGHTS STANDARD

Pedestrian ways shall be lighted in order to enhance the nighttime effect of the landscape scheme and provide a sense of security and safety for the user.

In cases where pedestrian ways cross the landscape outside of the coverage of parking lot lighting, it is recommended that short pole-mounted lighting (16 feet maximum height) or bollards (42 inches maximum height) be provided.

The image below is a product called LED Paving Stones and they were designed by Alfred Priess. This product is made of cast glass, with solid bronze molding and light emitting diode (LED). This lighting design helps to designate pathways at night for pedestrians and creates a unique user experience.

In narrow streets and lane-ways, wall-mounted lights should be used. These are recommended to keep footpath clear for circulation. In these circumstances, light poles are susceptible to damage due to tight vehicle access.





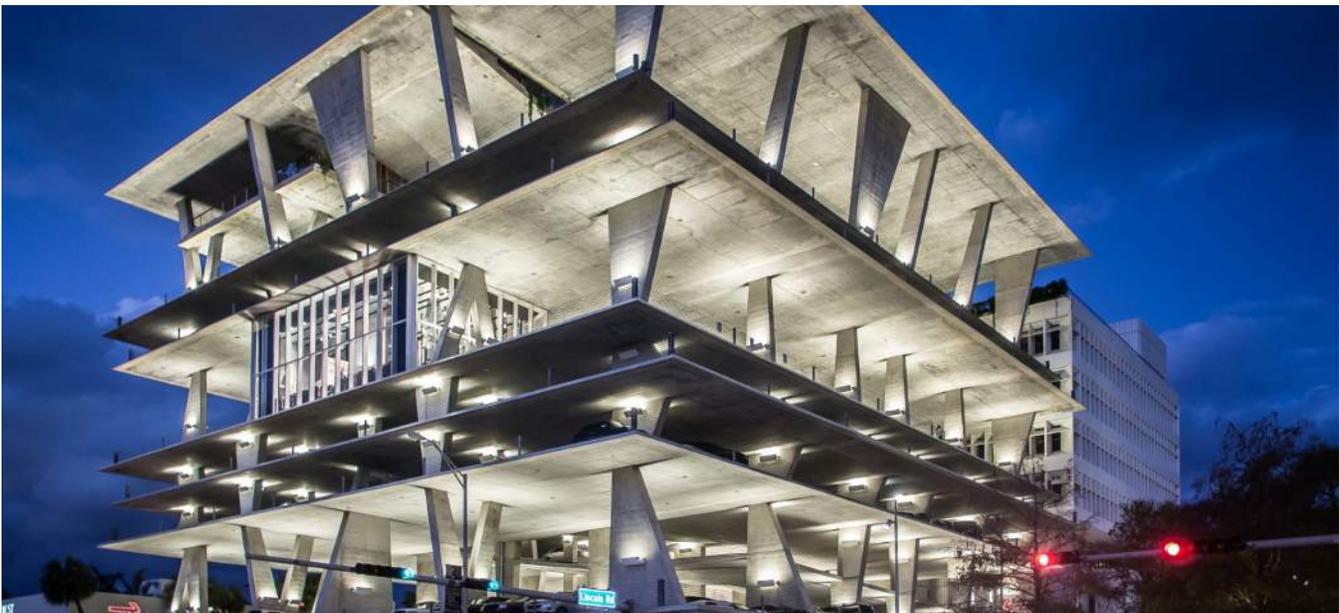
# Parking

## PARKING LIGHTS STANDARD

It is mandatory that the exterior lighting design shall be engineered to provide zero-foot-candle “spill over” at the lease line. The site light pole height is restricted to 30 feet in open paved areas. Cut-over shielding for general site lighting will be required to reduce the effects of light pollution.

The site lighting fixture shall be a 25-inch diameter dome head equal to “Concord” Sterner (or equal design by Spaulding, McGraw Edison, or others). Factory painted gray finish to match pole with energy efficient high-pressure sodium lamps. The pole shall be square steel or aluminum with light-gray finish (galvanized, anodized, and painted).

The image below is 1111 Lincoln Road by Herzog & de Meuron. It shows the effect and importance of lighting in relation to a parking garage.



# Exterior Building



## EXTERIOR BUILDING LIGHTS STANDARD

Buildings shall be lighted in a manner that emphasizes internal glow and transparency. Entire facades should NOT be floodlit, but lighted to accent architectural features or modules. Building lights shall be oriented so that light is not directed towards streets or adjacent properties. Building entries shall be illuminated and highlighted. Light sources shall be shielded from streets and adjacent properties. Exterior architectural accent lighting shall be “white” light including florescent, metal halide, or halogen.

The image below shows the DeltaLight product called the Momba Down-Up LED WW. This product is an example of how to light exterior buildings. It can be used near entries to distinguish them along the facade. It is a simple design, so it will not compete with the exterior architecture.



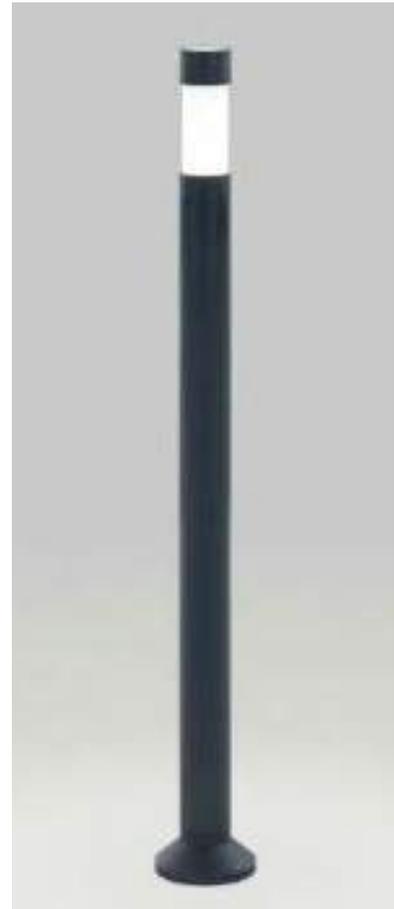


# Landscape

## LANDSCAPE LIGHTS STANDARD

Landscape illumination is discouraged for the majority of land uses, such as, distribution and warehouse, freight forward, flex office, and showrooms. Although, the Airport may consider landscape illumination for hospitality, retail or mixed uses.

The image to the right shows a garden bollard by DeltaLight called Cityscan. This item can be used to light both pedestrian paths as well as highlight landscaping.



# Artistic

## ARTISTIC LIGHTING STANDARD

Another function for lighting is to add to the aesthetics of the site. Artistic lighting should be used to highlight an existing landmark at the Airport. LED lighting can function as extra security and safety along the building's edge. The use of LED will limit the amount of upward light spillage as well as reduce energy and maintenance costs.





# Controls

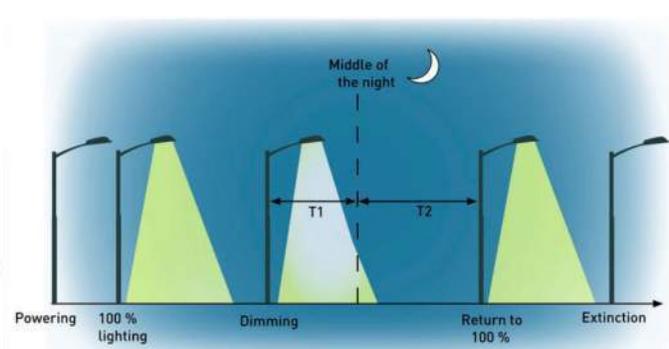
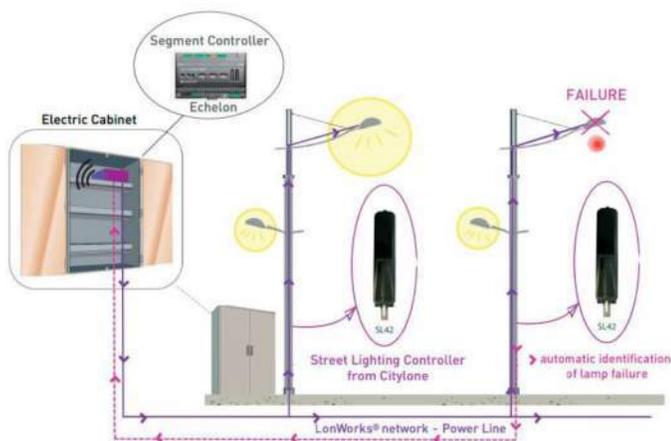
## LIGHTING CONTROLS STANDARD

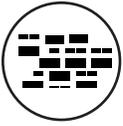
The design professional is urged to provide controls that automatically limit the hours of operation according to seasonal changes in the length of daylight. In addition, it is desirable that these controls provide separation between the various types of site lighting so that lighting components not needed may be shut down at different times to conserve energy.

The image below is taken from Citylone. This system serves as precise and complete management of public lighting. The control modulates different parameters, including history and functioning of each luminaire to avoid insecure areas and provide constant service. Citylone makes each pole equipped with a controller (SL42, SL31, SL21 for magnetic system (patented system) or electronic system). Each controller receives orders and sends information to the segment controller placed in the electrical cabinet. Information is then downloaded into a website, accessible from any kind of device. Each lighting point can be managed in real time from anywhere. Management includes tracking energy savings, maintenance cost, management of additional elements (video cameras), and switching on, off and dimming of lighting.

## SECURITY LIGHTS STANDARD

Where security or safety lighting is deemed necessary, it should be localized as much as possible to avoid floodlighting large areas. The design of the light source should be directed on the immediate area of security concern and wherever possible should be automatically triggered by sensors or remote control.





# FINISHES

## NEW CONSTRUCTION

New construction at the airport requires greater control over material and color selection to ensure the high aesthetic standards of the Airport and the Town of Addison are maintained. As the land area available at the airport is limited, it is of even greater importance to invest in higher quality materials that are easy to maintain and have a greater aesthetic impact on the facility overall.

### Materials:

Brick: Match the surrounding building aesthetics.

Stone: Regional stone materials are preferred.

Metal: Corrugated and perforated metals provide an industrial contrast to the stone.

Colors: Recommend vibrant colors to match the area, blues, reds, etc for paint, signage, and highlights. These colors should be vibrant to contrast with the predominant warm tones, taupes, and greys of the natural building materials.

### Material Allocation:

The new construction shall have two standards for the brick and stone. Buildings with offices located at the edge of the building are designated to have a full wall of brick and/or stone. Buildings with only hangar space shall have brick or stone 4'-0" above the finish floor.



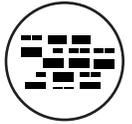
# PRECEDENT: Templeuve



## MATCHING THE SITE MATERIALS

It is important to consider the entire airport space as a whole when determining the materials. As is shown in the Templeuve precedent, the site materials fit together to create an overall aesthetic for the area. The path on the site matches the exterior furniture, and the landscaping blends into the paths. The brown color of the lights also match the path color. The combination of the different gray tones and brown along the path compliment the surrounding buildings and also create a more dynamic space.





# PRECEDENT: Tyler



## MATCHING NEW AND OLD

The Tyler, Texas Airport is an example of both materiality and architecture. It serves to enhance its surroundings and create a pedestrian friendly destination. In Addison Circle, brick is a prominent building material. To blend the new airport buildings with the existing aesthetic of Addison, brick would be a successful material choice.



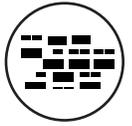
# Surface

## SURFACE AND PAVING STANDARD

Paving shall be stamped concrete. All drives and roadways shall be provided with integrally formed concrete curb and gutter. All paving shall be placed on prepared sub-grades adequately designed for the existing soil type and expected loads to be imposed. Stamped color concrete patterns simulating pavers or stonework is encouraged. The use of pavers will NOT be permitted. For pedestrian areas, asphalt paving is NOT permitted.

Impervious surfaces increase storm water runoff and ambient air temperatures. When impervious paving surface is employed, concrete shall be utilized that has proper thickness, strength, jointing and drainage. Porous/pervious pavement materials are encouraged whenever possible to reduce storm water runoff and provide cooler surfaces at the site.





# Hardscapes

## HARDSCAPE MATERIALS STANDARD

### MULCH:

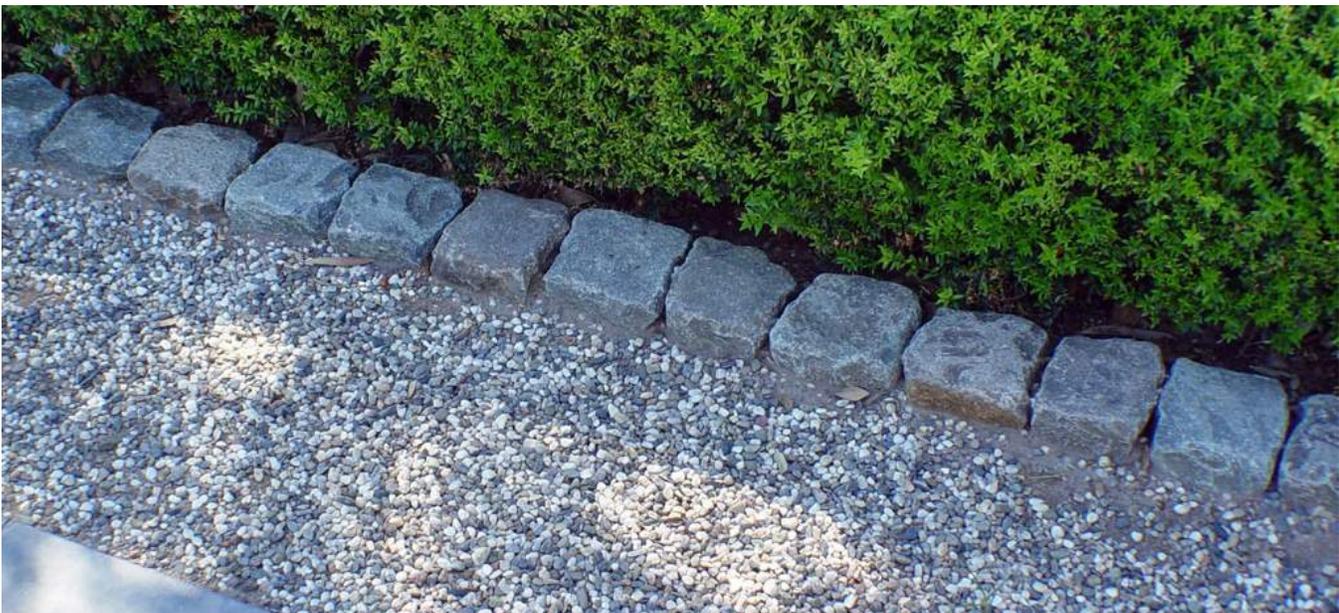
Made of shredded bark from hardwood trees such as maples and oaks, mulch compacts over time so it resists blowing or washing away. Because of its staying power, hardwood mulch is ideal for sloped beds. Mulch controls weed growth, erosion, and enables the planted area to retain moisture.

### DECOMPOSED GRANITE (DG):

Naturally occurring DG is solid granite rock that over millions of years has compressed and broken down resulting in natural gravel. Crushed stone screening is solid quarry rock that is crushed and screened to size creating the same material as naturally occurring DG. Most manufacturers offer both and they are completely organic and environmentally safe. This material packs well and creates a firmer surface than many other granite materials, but allows water to permeate.

### PEA GRAVEL:

Pea gravel consists of small, smooth, rounded stones about the size of a pea. Pea gravel may be used to accent an area of the landscape. It allows water to freely seep into the ground below, and is low maintenance when applied over a walk block.



# Pedestrian

## PEDESTRIAN ENVIRONMENT STANDARD

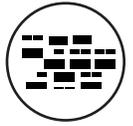
Pedestrian circulation shall be denoted clearly with landscape edges and protected from vehicle traffic. Pedestrian crosswalks should be located at locations to link pedestrians from the Town of Addison to the Airport. For instance, pedestrian crosswalks should be placed at either side of Addison Circle for pedestrians to access the new pedestrian friendly paths in the green space at the Airport. Pedestrian routes, paths or walks need to be lighted to enhance the landscape scheme and increase the sense of security and safety of the user.

Sidewalks and pedestrian paving at the main visitors' entry(s) shall be enhanced with sandblasted concrete, exposed aggregate, stamped concrete, stone, or other such materials, with a gridded joint pattern no larger than 30 inches.

Plazas or public gathering areas shall be pedestrian friendly. In more-dense or in pedestrian-oriented developments, hardscape features shall be appropriately enhanced and compliment the human scale.

Circulation for pedestrians shall be clearly denoted with landscape edges and protected from vehicle traffic. Pedestrian routes, paths, and walks shall be of reinforced concrete. Artwork shall be placed along the paths to enhance the pedestrian environment.





# Screening

## SCREENING MATERIALS STANDARD

An important consideration should be shielding certain features such as utility components (transformers, meters, valves, etc.), trash collection areas, material storage, trailers, above ground tanks, mechanical equipment, and loading docks away from the public view. The approach to screening these objects include landscaping, berms and/or screening walls.

Loading docks should not be placed on the front of buildings or facing roadways unless it is the last resort due to site orientation. In such circumstances, screening and/or landscaping will be provided to obstruct the view from the road. Corner lot loading docks shall face the secondary road if unable to be placed facing the adjoining property with additional screening and/or landscaping to obstruct the view from the road.

Screening walls shall be constructed of materials used in the construction of the building. These walls shall have a minimum height of six feet and maximum height of 12 feet (applicable for storage that exceeds six feet). Screening walls shall not be placed outside a paving setback line.

Parking areas shall be screened from adjacent property with continuous berms along the length of the parking area with range of height from three to four feet.





# LANDSCAPING



# LANDSCAPING

## AIRPORT LANDSCAPING REQUIREMENTS

There are several Addison Parks in close proximity to the airport. It is important to understand their relationship to the airport. The new airport landscaping should respond to the existing parks and compliment their design.

Ensure a maintenance program in which monitoring of vegetation, irrigation and drainage systems are frequently managed. Overall, existing natural character and features shall be preserved from the existing landscape whenever possible.

Important landscaping considerations:

- Soil profile
- Irrigation system
- Plant species
- Waterproofing and drainage systems
- Predicted lifespans of all plants used and replacement strategy
- Maintenance of plantings, drainage system, irrigation

Airport Landscaping Standards are based on four landscaping fundamental for “sustainable landscaping”:

- Use the right plants: select hardy plants that are compatible with North Texas soils, temperatures and rainfall
- Install plants to minimize maintenance: use natural groupings and reduce turf areas.
- Supplement planting with appropriate hardscape: use mulch and pervious ground materials.
- Incorporate smart irrigation: support water conservation



# PRECEDENT: Madrid Rio



## LANDSCAPING FOR ALL SCALES

The landscaping should match the different scales of use and function. As shown in the Madrid Rio Project, the landscaping caters to the master plan needs as well as the human scale of use. The seating, paving, and lighting complement the landscaping so they work together to make a comprehensive design.





# Irrigation



## IRRIGATION STANDARD

Landscapes should be designed with efficient irrigation. This includes access to both potable water and storm-water where practical. Passive Irrigation should be used where possible. This includes rainwater runoff into planting areas and by maximizing the extent of permeable ground surfaces. For sustainability and low life cycle costs, landscaped spaces should incorporate storm-water collection and re-use systems.

Water Conservation and reduced operation and maintenance (O&M) costs are achieved by:

- Incorporating drought resistant plants and using mulch and ground covering
- Incorporating practical turf areas that are a manageable and usable size and include water saving grasses adapted to the regional environment
- Implement efficient drip-irrigation systems

Water detention or retention areas and other water features should incorporate active water and "hard" (non-vegetated) edges in order not to attract birds or create habitats.

Identify the conditions that will influence water use, such as, exposure to the elements (sun and wind) and drainage associated with the topography

Group plants with similar watering requirements together - plants that require more water are grouped together so that only limited portions of the landscape need extra water.

# Garden Beds



## GARDEN BED STANDARD

Plant in areas with the greatest potential for growth and protection from damage all planted areas must have adequate mulching.

## PLANTERS STANDARD

Movable planters are not appropriate for public spaces. To facilitate maintenance, trees, shrubs, native grasses and rocks shall be grouped within large planting beds. Planting beds shall be mulched and separated from turf areas with commercial grad steel edging. Mulches are applied to the soil surface to reduce evaporation, moderate soil temperature, and help control weed growth and soil erosion. Dress all plant areas with wood mulch, gravel or other appropriate ground cover. Use local rocks and gravel when possible.

The image above is a product by Victor Stanley, INC called S-24. It is important that the planters' aesthetic matches the other exterior furniture and materials. It should be stainless steel like the tree guard, water fountain and garbage bin.

## TREE GUARD STANDARD

Tree guards are important to extend the life of trees, by protecting them from damage by weather, animals and equipment (i.e. lawn mowers weed trimmers, and other equipment that can damage tree trunks). It is important when installing a tree guard to leave enough room for the tree to grow and air to circulate.

The image above is a Tree Guard product by Victor Stanley, INC that is called S-6. This is a Ironsites tree guard and this product is beneficial because it complements the other Ironsites products. On the left it is next to a planter, and the two products work together in one cohesive design.



# Plants

## LANDSCAPE PLANTS STANDARD

Landscape concepts shall use plants that are drought-tolerant and suitable to the weather and soil conditions of North Texas to reduce both water consumption and maintenance. Plants that convey a Texas character such as mesquite, wax myrtle, yucca, sage, pampa grass and fountain grasses shall be used in all landscape designs as the unifying plant elements, in addition to plants from the Airport’s established plant list. A single plant type should not dominate the landscaping to reduce the spread of plant disease or insects. Plants chosen shall not attract wildlife, especially birds.

<b>Part Shade Plants:</b>	<b>Full Sun Plants:</b>	<b>Full Sun Plants Continued:</b>
Windmill Palm	Live Oak	Century Plant Agave
Retama	Crape Myrtle	Parry's Agave
Desert Willow	Desert Willow	Queen Victoria Agave
Texas Mountain Laurel	Windmill Palm	Prickly Pear Cactus
Mock Orange	Retama	Red Yucca
Flame Acanthus	Texas Mountain Laurel	Mexican Feathergrass
Turk's Cap	Bottlebrush	Bamboo Muhly
Trailing Lantana	Mock Orange	Crossvine
Dwarf Yaupon Holly	Flame Acanthus	Confederate Jasmine
White Mistflower	Turk's Cap	Leadwort Plumbago
Skyflower	Trailing Lantana	Purple Heart
Black Eyed Susan	Dwarf Yaupon Holly	Trailing Rosemary
Calylophus	White Mistflower	Sedum
Batface Cuphea	Texas Sage	Silver Ponyfoot
Fall Aster	Flowering Senna	Leadwort Plumbago
Firecracker Fern	Skyflower	Liriope
Mexican Oregano	Golden Showers Thryallis	Sedum
Plumbago	Artemisia	Cherry Sage
Purple Coneflower	Black Eyed Susan	Jerusalem Sage
Pink Skullcap	Bulbine	Mexican Bush Sage
Winecup	Calylophus	Pink Skullcap
Century Plant Agave	Batface Cuphea	Winecup
Parry's Agave	Blackfoot Daisy	Big Muhly
Queen Victoria Agave	Esperanza	Deer Muhly
Red Yucca	Fall Aster	Gulf Muhly
Inland Sea Oats	Firecracker Fern	Pine Muhly
Mexican Feathergrass	Bearded Iris	
Bamboo Muhly	Lamb's Ear	
Gulf Muhly	Texas Lantana	
Crossvine	Lion's Tail	
Confederate Jasmine	Mexican Oregano	
	Pride Of Barbados	
	Purple Coneflower	



**BULBINE FULL SUN TEXAS NATIVE PLANT  
INFORMATION COURTESY OF XERISCAPE**

# Natural Grouping

## LANDSCAPING NATURAL GROUPING STANDARD

Groupings of plant materials in natural arrangements with rolling landscaped berms, gravel areas, rocks and stones are encouraged. The natural shape of vegetation and grouping is required in lieu of manicured forms.

To preserve a natural character, the development shall emphasize natural features such as creeks, swales, ponds, groves or mature trees, significant geologic outcroppings, and the general natural flow of topography. The preservation of existing plant specimens or groupings is encouraged. New trees and shrubbery shall typically be installed in groupings in lieu of straight rows with uniform spacing. In turf areas, plantings shall preserve a minimum spacing of 36 inches from obstacles to allow for the circulation of a mower.





# Turf

## LANDSCAPE TURF STANDARD

Reduce areas of traditional mowed turf and replace with native grasses that require less mowing and watering (buffalo grass, love grass, etc.) Turf areas are to be large and unobstructed to accommodate mowers. Ensure that all turf areas are at least 36 inches wide to allow for push mower access. Do not use turf in areas that are impractical or difficult to maintain, such as narrow strips or grass on steep slopes. Locate the mowed turf areas along the back of the curb. Obstructions within a mowed turf area shall be contained within a concrete mow strip, gravel area or planting area to facilitate maintenance. Use sod in lieu of seed which can attract birds and are subject to erosion.



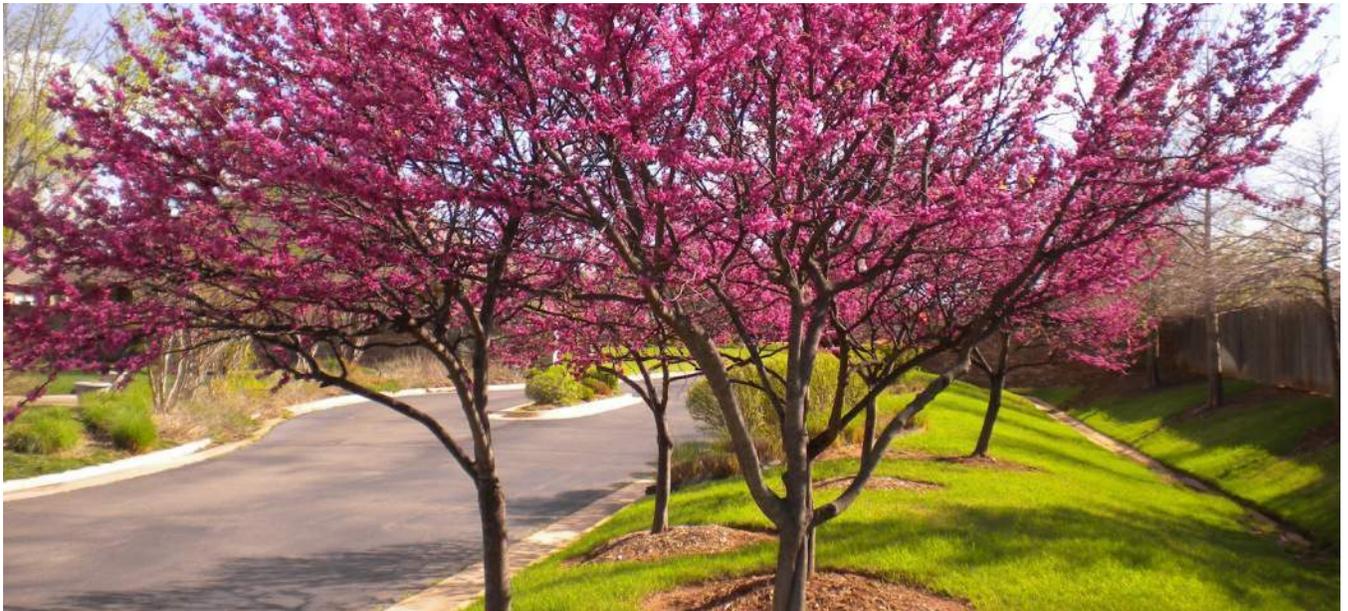
# Corridor

## LANDSCAPING CORRIDOR STANDARD

A landscaping corridor is defined as a natural buffer located between the back-of-curb of a street and the lease line. This provides an area for natural North Texas black land prairie landscape features and is a component of the streetscape, utilized to form the street's character. The lease holder will provide and maintain the landscaping and other improvements located within the landscaping corridor. The airport has developed a typical planting template for the landscaping corridor. Depending on the location of the development site, this template may be required or used as a guide. This template provides for 20 trees for every 400 linear feet of the lease line along the right-of-way. Of these 20 trees, four shall be Crape Myrtle trees, six Mesquite trees, four Red Oak trees, and three Wax Myrtle trees and three Red Bud trees.

Landscaping should be consistent in design and density on all sides of the property. Tenants may enhance the landscaping at visitor driveway(s) but are required to transition back to the baseline planting within 100 feet each way. Tenant landscape design shall provide smooth transition and continuation of existing landscaping in the setbacks and from existing adjacent properties.

Where driveways intersect public roadways or roadway intersections occur, a visibility triangle complying with American Association of State Highway and Transportation Officials (AASHTO) shall be provided whereby landscaping, retaining walls and signage shall not infringe upon the ability of vehicle operators to see approaching vehicles from either roadway or driveway.





# Trees

## TREE STANDARD

Tree standards must require that trees are robust species. They must have a high tolerance to drought, extreme temperatures, and high winds.

Trees should be incorporated to help mitigate the heat island effect. 40+% of paved areas should be shaded. Larger growing trees lining the streets will mature into broad tree canopies to span roadways. Trees should be planted towards the center of roadways in parking panes or medians to maximize the shading potential over pavements.

Trees' interference with pedestrian and vehicular access should be kept at a minimum.

Trees should also have adequate clearance from overhead services and canopies.

In order to promote a sense of variety and acknowledge the different seasons, coordinate with the Town of Addison. Certain plants will be suggested along the streetscape and in front yards to provide seasonal color.



# Quantities

## LANDSCAPING QUANTITIES STANDARD

The following minimum quantities shall be provided within the leased area in addition to the planting requirements of any landscaping corridor(s). All landscape materials shall be placed in accordance with standards that support the continued good health of the plant materials.

1. Trees: 12 per acre of leased area with a minimum of 80% from Shade tree list.
2. Trees: 50% minimum of all required trees shall be multiple trunk plants.
3. Additional front yard Ornamental Trees: One full sized Crepe Myrtle (watermelon red) tree per 100 linear feet of site frontage, (measured from lease line to lease line) shall be planted in the respective front yard in addition to the Crepe Myrtle located in the streetscape.
4. Shrubs: Minimum of 25% of the total landscaped area shall be shrub or groundcover beds.
5. Lawn: All other areas not paved or planted as shrub beds shall be turf grass as specified (Maximum of 75% of landscape area).





# Hardscape



## HARDSCAPE STANDARD

Provide hardscape to allow for access to the planted area and reduce the amount of turf needing irrigation. Hardscape helps to define traffic patterns, separate areas in the landscape and add visual interest, especially in the winter months and early months before herbaceous plants reach mature size. Hardscape elements typically are put in place in the early stages of a landscape installation and must be carefully considered. Utilize pervious hardscape products as much as possible as opposed to impervious. Pervious hardscaping reduces excessive storm water runoff.





**WAYFINDING**



# WAYFINDING

## AIRPORT WAYFINDING REQUIREMENT

Signs need to be provided in public streets and spaces to convey important information.

Important wayfinding requirements:

- Create a cohesive character between different types of signage
- Provide information where necessary
- Place directional signs where there is route options
- Sign type, size, graphics, and content should be easily legible
- Avoid unnecessary signage at busy traffic areas
- Use concise, clear, and direct wayfinding
- Adequately lighted for visibility at all traffic times



# Galleria



## SIGNAGE THAT IS DISTINCT & CLEAR

Glendale Galleria successfully implements signage through the use of branding, hierarchy, contrast and scale. RSM Design updated the Galleria signage to create a new identity that made circulation and access easier. The goal was to incorporate the Galleria shopping center into the city.



# Legibility



## SIGNAGE LEGIBILITY DESIGN STANDARD

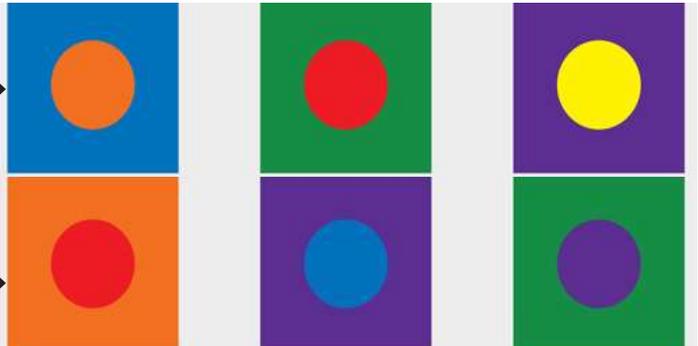
The lettering of signage should contrast the background of the sign. This makes reading the sign easiest. The colors should consider the brand of Addison Airport and also the brand of the occupant. When colored text comes on a colored background, it is best to consult a color wheel to pick colors with the greatest contrast. Color wheels organize colors according to primary colors (red, yellow, blue) and secondary colors (green, orange, purple). The color wedges opposite each other, known as complementary colors, have the greatest contrast.

A legible font is also crucial to the signage functionality. When signage is for pedestrians, it should be kept at eye level. This limits its height to between 3 - 6 feet from the ground.

The less text, the easier it is to get a message across. Use concise text.

Black, blue, brown, and green exterior signage all comes in a vinyl reflective color so when it is hit with car headlights it reflects for legibility at night. Green is not recommended for Addison because it will match freeway signage and will not stand out. Black in the vinyl reflects white, which is not recommended due to no contrast with the white colored lettering at night. For Addison Airport we recommend, blue for the vinyl reflective face. This would match the town's logo and allow the white lettering to contrast and be readable at all hours.

GOOD EXAMPLES OF CONTRASTING COLORS



POOR EXAMPLES OF CONTRASTING COLORS



# Primary Level



## SIGNAGE PRIMARY LEVEL DESIGN STANDARD

Signage on the site will be divided into a hierarchy to distinguish the appropriate message for different locations on the site. The primary level serves as wayfinding to Addison Airport as an entity. This signage type will let visitors know that they are on the airport premises. The recommended signage for the primary level is a monumental sign. The monumental sign is free standing and should be visible from the furthest distance, usually 50-100 feet away. The signage will serve as the introduction to the site. At Addison, it should read 'Addison Airport' and should match the current brand identity for the Airport including the Airport's logo.



# Monumental



## MONUMENTAL SIGNAGE DESIGN STANDARD

Monumental signs are generally more permanent than post and panel signage. They have a different base than structural steel tubing. They typically include names, logos and sometimes addresses.

For single tenant monument signage, the maximum height is 6' and face is 48 SF per ordinance. For multitenant the height is 8' and the area of the face is 72 SF. Monument signs can be double sided.

Alternatively, the airport could be designated as a special district by the City Council with design standards different than those listed above. The image below of Vitruvian Park is an example of monumental signage from a special district.



# Secondary Level

## SIGNAGE SECONDARY LEVEL DESIGN STANDARD

The secondary level of signage serves as wayfinding directing visitors to the site to navigate towards their desired destination. It is usually visible from 10 - 50 feet away. This signage at Addison Airport will include the direction to specific tenants and other airport buildings. The Airport should seize a revenue generating opportunity and include the secondary signage as option on the Tenant's Lease Agreement. The Secondary Level of signage shall be designed to allow for flexibility with interchangeable tenant names and/or logos and low maintenance.



# Post Signage

## POST SIGNAGE DESIGN STANDARD

Post signage directs pedestrians and vehicles and shall be visible to oncoming traffic.

Post signage is often in the form of a detached sign. Detached signs can have lettering no more than 4" and the spacing must be 300 ft between signs. With single tenants the signs can only be 36 SF in area and the multitenant signage must be 72 SF in area and exactly 20' in height. Detached signage must be setback 15' from the back of the curb to the public street for signs greater than 10 SF in area for 10' height and setback 20' for all signs exceeding 20 SF in area for 15 ft in height.

Post signage will include a standard base made of solid immobile materials and a break away pole in the case of an vehicular accident. The signage materials shall be made of sturdy resin or perforated metal. The sign will include slatted inserts that are interchangeable.

When attaching signage to light poles it is crucial not to penetrate the skin of the post. Harming the skin of the post will ruin the warranty. Without additional engineering to attach signage to a light pole, the sign is very limited by weight. The only possibility is banners, which generally only last for a year and perforated metal. Therefore it is generally best to have signage separate from lighting.



# Tertiary Level

## SIGNAGE TERTIARY LEVEL DESIGN STANDARD

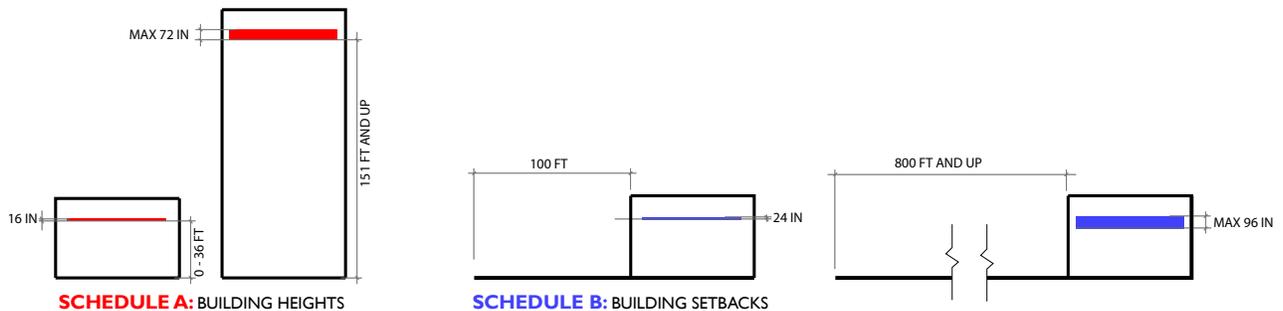
The tertiary level is the final level of signage. It should be visible from 10 feet away and identify the individual buildings at Addison Airport. In the tertiary level of signage, the building shall be identified by the street address. This level of signage is referred to as 'attached signage' when the wayfinding is attached to the building facade

For attached signage up to 36 feet in height, the effective area of the signage is limited to one square foot of sign area for each linear foot of building frontage, not to exceed 100 square feet. An attached sign located at or exceeding a height of 36 feet shall be permitted an increase in maximum effective area. Such increases shall not exceed four square feet in effective area for each additional one foot in height above 36 feet. The height is measured from the base of the sign to the building grade.

Maximum letter/logo height of attached signs should be determined by Schedule A or Schedule B as follows:

Schedule A:		Schedule B:	
Sign Height (FT)	Maximum Letter Height (IN)	Horizontal Distance of Sign from street curb (FT)	Maximum Letter Height (IN)
0 - 36	16	100 - 149	24
37 - 48	36	150 - 199	27
49 - 100	48	200 - 249	30
101 - 150	60	250 - 299	33
151 and up	72	300 - 349	36
		350 - 399	42
		400 - 449	48
		450 - 499	54
		500 - 549	60
		550 - 599	66
		600 - 649	72
		650 - 699	78
		700 - 749	84
		750 - 799	90
		800 and up	96

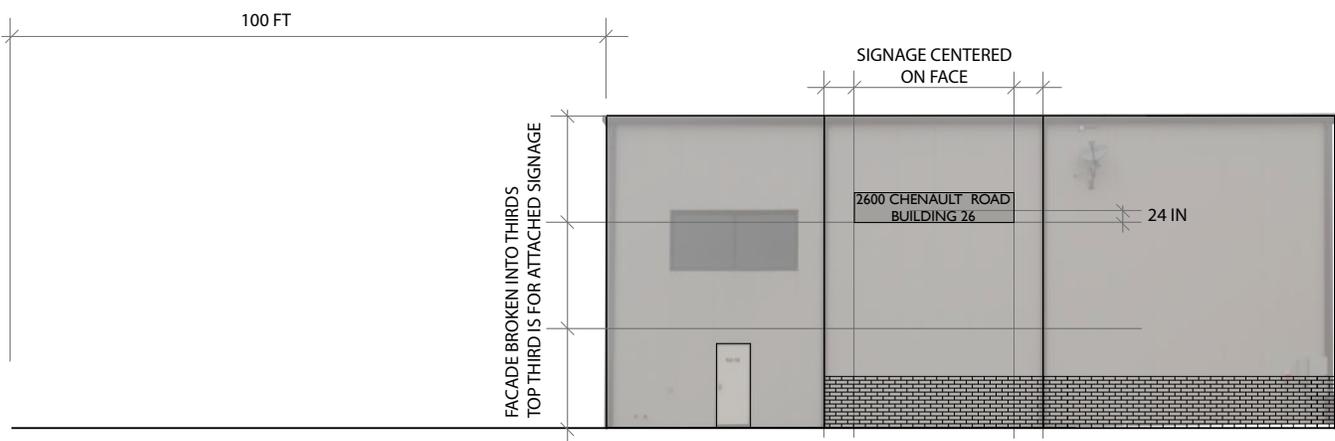
Any letters that are in excess of 96 inches must be approved by the City Council. No more than 50 percent of the letters in each individual sign height category in Schedule A may be 25 percent taller than the specified maximum letter/logo height.



# Building

## BUILDING SIGNAGE DESIGN STANDARD

Building signage should be used in the tertiary level of signage. The building signage on the landside shall be consistently sized and located on the facade of the Airport's buildings. The signage shall include both the building number and street address to quickly indicate location for the Airport visitors and emergency responders. On the airside of the buildings, the existing building numbering system will continue with revisions as needed when developments like those proposed in the Taxilane Papa and Quebec areas come to fruition. Tenants shall use Single post signs or attached signage to incorporate logos and tenant names to allow for tenant branding. The tenant specific signs will be adhered to the building by mechanical fasteners that can be easily changed for when tenant moves or relocates.



SCHEDULE B: EXAMPLE OF BUILDING SIGNAGE



# FURNITURE



# FURNITURE

## FURNITURE DESIGN REQUIREMENT

Seating is important along pedestrian routes to allow resting places. As the terrain gets more difficult (i.e. hills) more seating is necessary. Street, park and pathway furniture enables visitors of the airport to spend more time using the public realm. Seating, drinking fountains, toilets, bike racks, and other furniture features improve the visitor experience.

Of greatest importance is the consistency maintaining a cohesive design between all the different exterior furniture pieces used in the project. All the exterior furniture should flow together and look like one set that compliments each other.

Important exterior furniture considerations:

- Location of seating and furniture
- Type of seating to maximize physical and social comfort
- Seating can be used to distinguish passive and active zones
- Variety of seating arrangements provides greater flexibility
- Avoid fixed single seats
- Build to line.

The build-to line for primary buildings, structures, walls and fences shall be ten feet on all public street frontages except along residential streets (category C) and residential mew streets (category D), which shall have build-to lines as established later in this section. Up to 25 percent of any street frontage of a building may vary from this build-to line, but shall not be less than five feet, nor more than 25 feet.

The build-to line for residential streets (category C) shall be five feet where a building or structure fronts public open space. In all other cases along residential streets, a maximum of 75 percent of any block face may be constructed to the five-foot build-to line with the remainder of the block face being constructed no closer than eight feet, nor more than 25 feet from the R.O.W.

The build-to line for residential mew streets (Category D) shall be contiguous with the R.O.W. A minimum of 70 percent of the build-to line of any block or parcel must be occupied by buildings or parking structures.

The zone between the R.O.W. line and the build-to line shall be landscaped in accordance with subsection K of this section.

There shall be no build-to line/setback for temporary buildings, structures or tents erected for special events.



# PRECEDENT: High Line



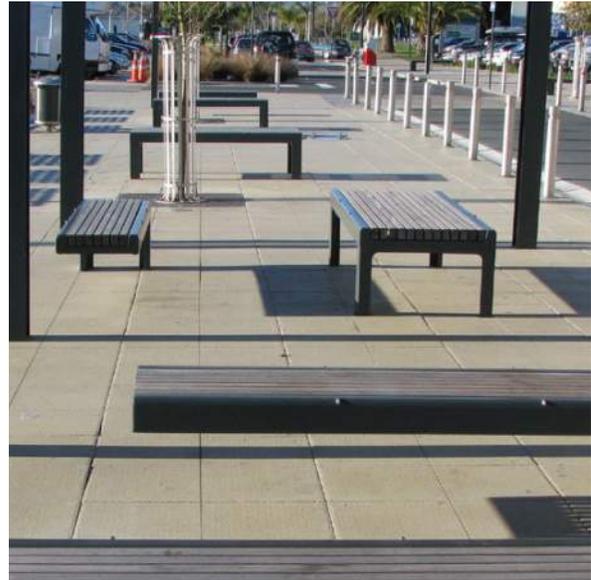
## INTEGRATING FURNITURE TO LANDSCAPE

The high-line is a prime example of integrating exterior furniture into a holistic design. There are a variety of seating options, providing a diverse experience in the space. The different furniture options compliment one another. They are integrated into the landscaping and surface finishes. The image above shows a lounge chair that moves on a track, providing customization for individual users. The image below shows a different seating option which is pulled from the paving surface and matches nicely with the paving below.





# BENCH

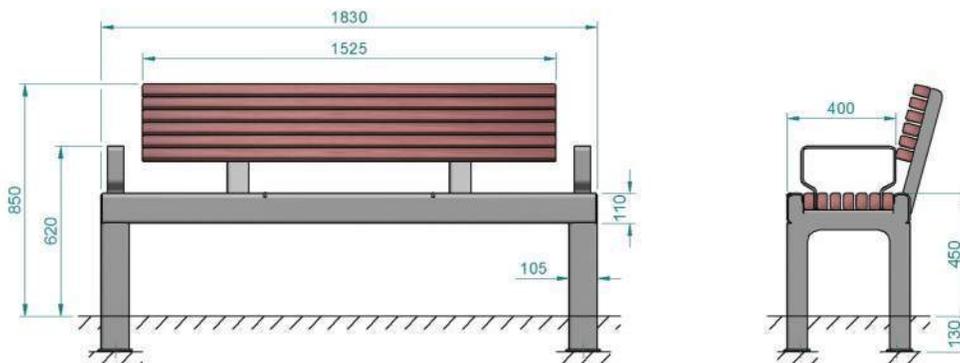


## BENCH STANDARD:

Seats with backs and armrests are better where people need to sit for longer periods of time. It is also beneficial for people with disabilities and the elderly.

There should be a diversity of seating types used in the overall design. This allows for a variety of uses. Long term seating should include backs and armrests, while backless benches can provide a quick break along a path where people would not need to stay for longer periods.

Image to below shows an example of a possible seating product. The product is called Rubix (B) and includes important components: skateboard deterrents, epoxy painted for lasting finish, sub-surface mounted, and HD-Galvanized Steel. The wooden gum slots also include optional species for the wood to match other furniture pieces. The image above is similar without the armrests and backs.



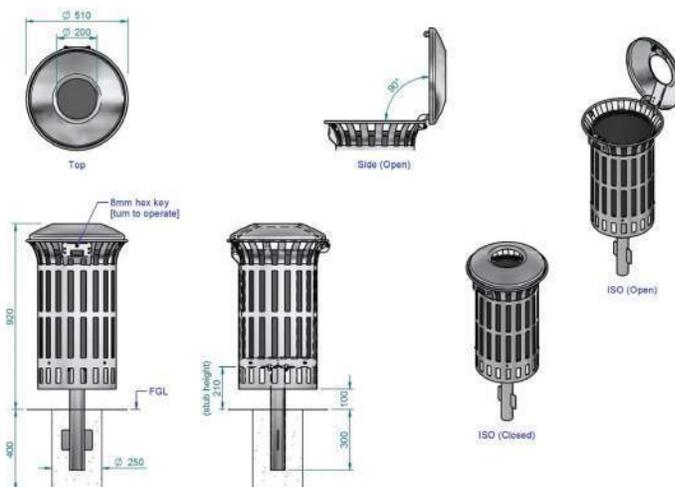
# Litter Bins



## LITTER BINS STANDARD

Litter Bins should hold a wheeled plastic liner. Bins should be kept at regular intervals along footpaths with high pedestrian crossings. In particular they should be in areas were people are likely to consume food and drinks. They should not detract from the overall design. Pest populations should be considered when determining the best location for litter bins. Bins should be located near a road or path that allows garbage trucks to access.

The image below shows an example of a possible solution for the litter bin. This product is called Prelude found through Streetscape. Key features of this product include: lockable, in-ground planted or surface mounted, lasting maintainable material of HD-Galvanized Steel or stainless steel, and 60 liter capacity with 100 liter capacity option.



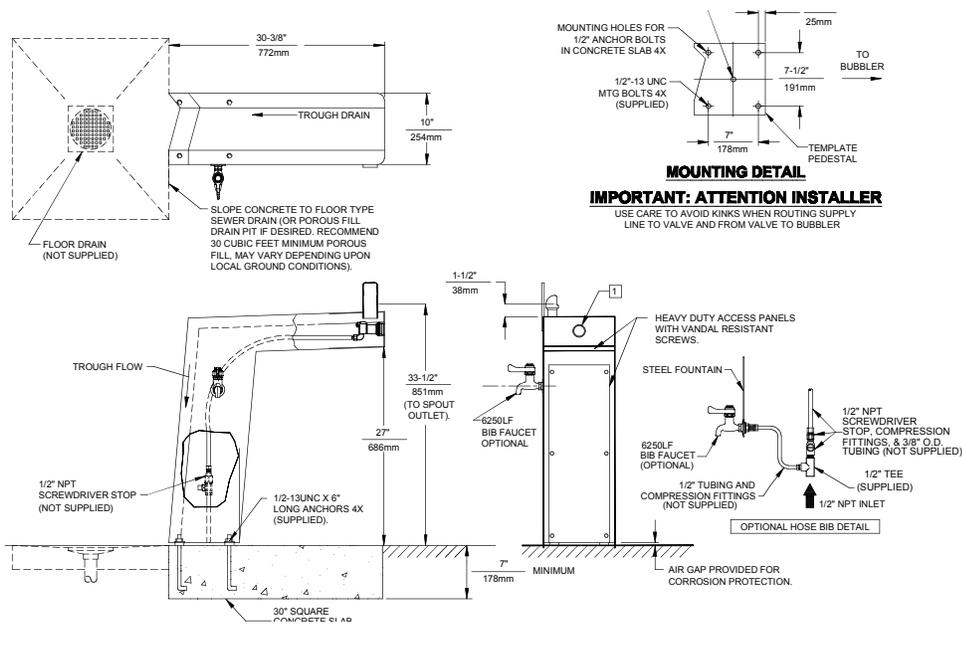


# Drinking Fountain



## DRINKING FOUNTAIN STANDARD

The image below shows an example of a drinking fountain solution. It is secured into the pavement and shows a more artistic and contemporary solution to the traditional drinking fountain solution. The important characteristics of this product are that it is surface mounted, accessibility compatible and is a lasting material so that it won't weather and can withstand abuse.



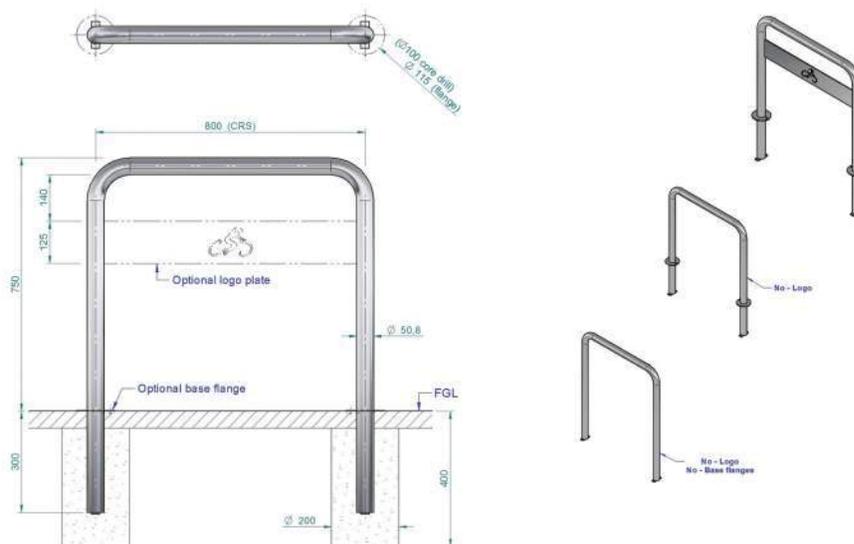
# Bike Rack



## BIKE RACK STANDARD

Bike Racks should be designed to match the other exterior furniture and should be provided along roadways where bike traffic is popular. More bike parking encourages bike users to take bikes.

The image below is an example of a possible bike rack. This product is called Olympus found through StreetScape. This is a nice bike parking option because it is useful for any type of bike to be parked and locked at it. The durable HD-galvanized steel is the material used here and it has a simple, practical design.





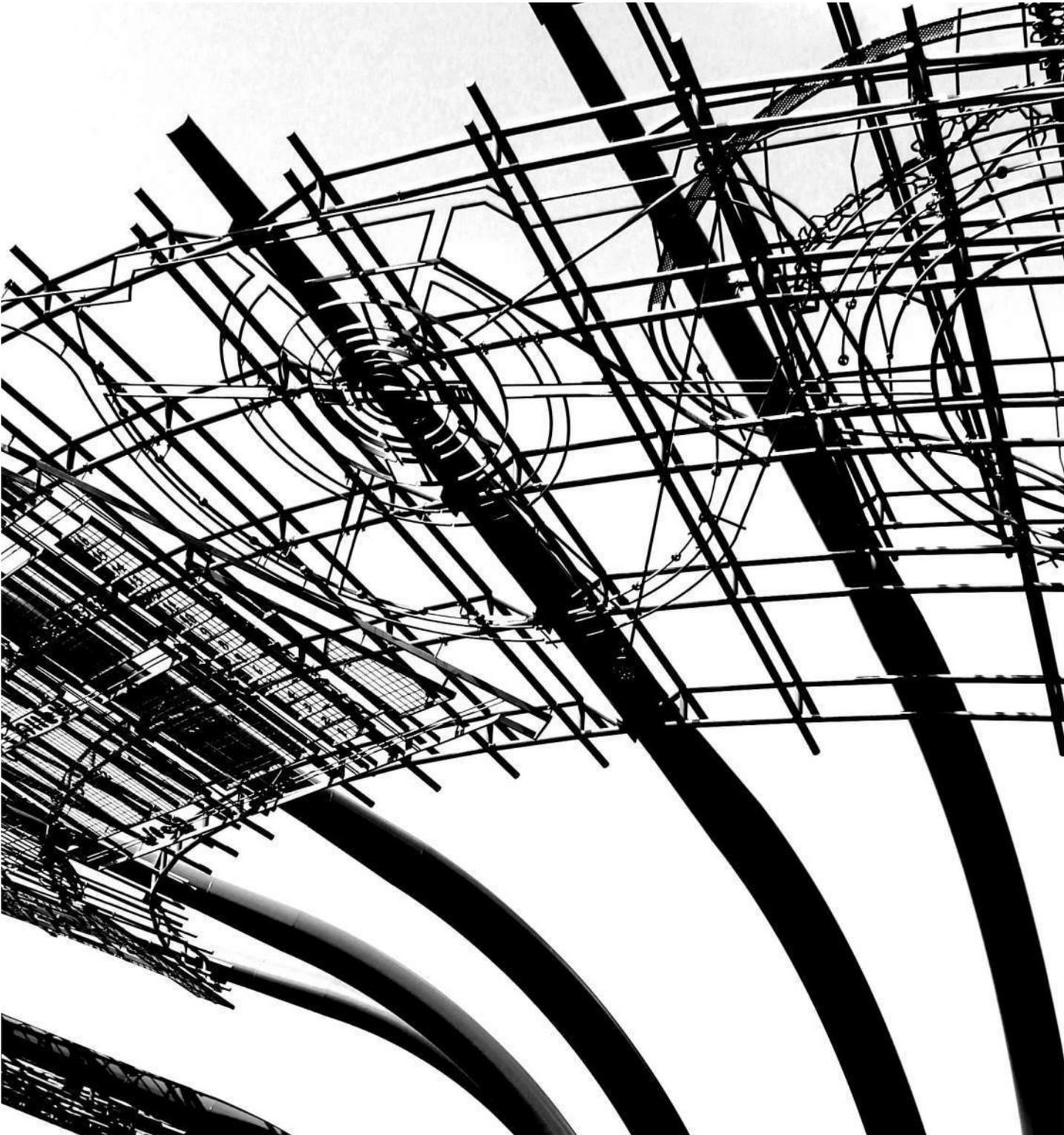
# Bollard



## BOLLARD STANDARD

Bollards are important in separating the car from the foot traffic. The image below is an example of an acceptable bollard by Gonzalo Mila called Rama. The product lights up providing pedestrian lighting in the evening.





# ARTWORK

## USING EXISTING TO INSPIRE NEW DESIGN

The Town of Addison has an initiative to bring in more artwork to public areas. The Addison Airport can capitalize on new investment to bring artwork to the Town. New construction should include a budget for bringing in artwork to the public areas of the airport as well as signage and wayfinding.

Art can be integrated into functional pieces such as signage or lighting, and it can also serve as wayfinding or landmark devices. Artwork should follow the standards set forth by the Town of Addison.



# PRECEDENT: Forms

## ART ABOVE KELLER SPRINGS TUNNEL

The artwork can represent several mediums and inspire several aspects of the Airport. The artwork can be organic, iconic, freestanding or all the above.

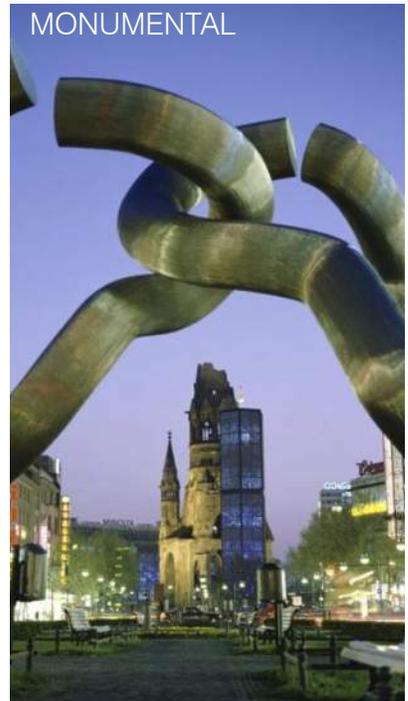
ICONIC



MOUNTED

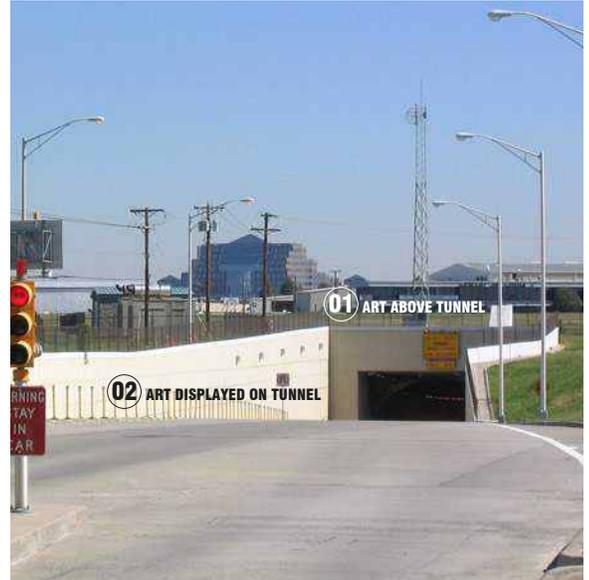


MONUMENTAL





# Keller Springs Tunnel



## DISPLAYING ART ABOVE KELLER SPRINGS TUNNEL

The tunnel that goes below Addison Airport presents a great opportunity to display artwork to incoming and outgoing traffic.





# Pedestrian Path



## PEDESTRIAN PATH ARTWORK STANDARD

The revisions to the Addison Airport design standard integrate landscaping and artwork into the airport zoning. Beyond the artwork which will serve as a landmark to the airport, artwork should also be incorporated along the pedestrian paths. This artwork will relate to the human scale and use. It will liven up the paths and provide locations of interest and intrigue relating to the airport.





# PARKING



# PARKING

## PARKING DESIGN REQUIREMENT

Parking requirements and capacity will be designated on a case by case basis. Parking areas should have a minimal visual impact on the site. Parking and circulation should be subdivided into smaller zones. These zones will be separated from one another by landscaped areas. Pedestrian routes in the parking area shall consist of reinforced concrete. The landscaping and pedestrian routes need to include the site lighting system to enhance nighttime safety and security for pedestrians.

Important parking considerations:

- Pedestrian routes
- Landscaping zones
- Security and safety within the lots



# WORK CITED

**PAGE 2:**

Image courtesy of Garver

**PAGE 3:**

Image courtesy of Corgan

**PAGE 9:**

Image courtesy of Corgan

**PAGE 10:**

Image courtesy of Corgan

**PAGE 11:**

Image courtesy of Corgan

**PAGE 12:**

Image courtesy of Corgan

**PAGE 13:**

Image courtesy of Corgan

**PAGE 14:**

Image courtesy of Corgan

**PAGE 15:**

Image courtesy of Corgan

**PAGE 16:**

Image courtesy of Corgan

**PAGE 17:**

Image courtesy of Corgan

**PAGE 18:**

Image courtesy of Corgan

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Image courtesy of Corgan

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**Appendix G**  
**Landside Alternatives Analysis**

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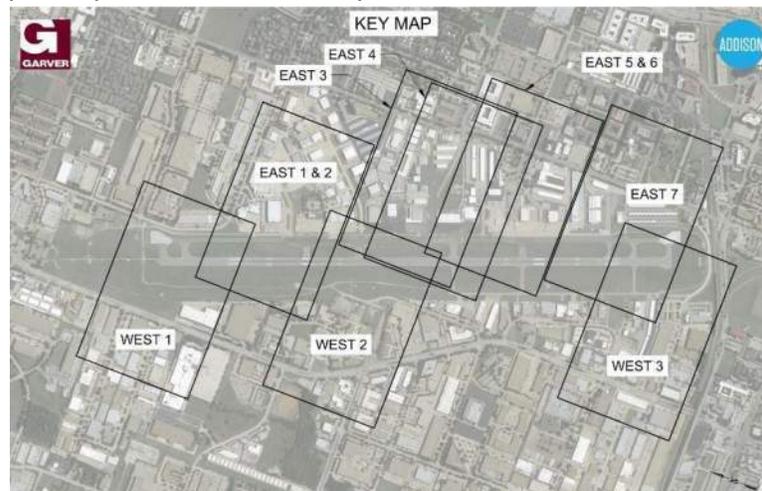
## **LANDSIDE DEVELOPMENT CONCEPTS**

With the framework of the Airport’s ultimate airside development identified, concepts involving the placement of landside facilities can now be analyzed. The overall objective of the ADS landside development is to identify and illustrate the highest and best use of areas on or adjacent to the airfield for new development but more specifically for redevelopment of this mature urban general aviation (GA) reliever airport.

Concepts for the development of aviation use areas at ADS include considerations for the various types of GA and corporate aircraft storage facilities and aircraft maintenance operations. Facilities to accommodate and better serve the existing and future fixed base operators (FBO) and specialized aeronautical service organizations (SASO) is the focus for much of the regrowth and reenergizing within the ADS landside.

### **ADS Landside Development Area Concepts**

Seven areas on the east side and three on the west side of ADS were identified for new development or regrowth/redevelopment. Three options for area were developed to reflect the broad range of potential options. **Figure 4-2, Development Concepts Key Map**, illustrates the location of each development/regrowth area on the airfield. The following narratives and graphics describe and depict each option/concept. The overall goal of the information presented is to provide guidance and direction towards the selection of a preferred concept or option in each development area.



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**ADDISON, TEXAS**

**East-side Area 1**

The development area entails less than one acre of available area with limited use for apron expansion, fuel truck parking, and overflow automobile parking. This area is immediately north of the Million Air Dallas main hangar and apron between Westgrove Road and Taxiway Alpha. Based on the proposed layout of East-side Area 1 the following concepts/options are presented. **Figures 4-3** through **4-5**, depict each option for East-side Area 1.

***Option 1:***

Total Apron/pavement expansion: 13,100 square feet  
Estimated Fuel Truck Parking/Maneuvering Space: 10,500 square feet  
Estimated Auto Parking: 2,600 square feet

***Option 2:***

Total Apron/pavement expansion: 24,200 square feet  
Estimated Fuel Truck Parking/Maneuvering Space: 11,800 square feet  
Estimated Apron: 1,100 square yards  
Estimated Auto Parking: 2,500 square feet

***Option 3:***

Total Apron/pavement expansion: 14,800 square feet  
Estimated Fuel Truck Parking/Maneuvering Space: 8,300 square feet  
Estimated Auto Parking: 6,500 square feet

**East-side Area 2**

The development area entails approximately 5.75 acres of available area within which to construct various aircraft storage facilities or to retain existing facilities and make improvements on the remaining property. Currently this area is home to the JetPort, apron, and a temporary shade hangar to support large corporate aircraft. The options in this area are dependent on retention of the JetPort or redevelopment for the entire area. This area is suited for FBO/maintenance/avionics type uses or with retention of the JetPort repurposing for airport management offices. As such, these options reflect a variety of hangar options to accommodate Design Group B-II to D-III aircraft. Based on the proposed layout of East-side

**ADDISON, TEXAS**

Area 2 the following concepts/options are presented. **Figures 4-6** through **4-8**, depict each option for East-side Area 2.

***Option 1: (Redevelopment of JetPort Site)***

Estimated Total Hangar Space: 75,600 square feet

Estimated Total Office Space: 22,500 square feet

Estimated Auto Access and Parking: 32,500 square feet

Estimated Auto Parking: 95 spaces

Estimated Roadway: 510 linear feet (standard 25-foot width) 12,750 square feet

***Option 2: (Redevelopment of JetPort Site)***

Estimated Total Hangar Space: 55,000 square feet

Estimated Office Space: 9,000 square feet (fronts towards Taxiway Alpha)

Estimated Apron: 11,300 square yards

Estimated Auto Access and Parking: 55,800 square feet

Estimated Auto Parking: 146 spaces

***Option 3: (Retains JetPort repurposing for airport management, police department, customs, and other tenants as space permits.)***

Estimated Total Hangar Space: 49,000 square feet

Estimated Total Office Space: 11,000 square feet (JetPort)

Estimated Taxilane: 250 linear feet (50 feet wide)

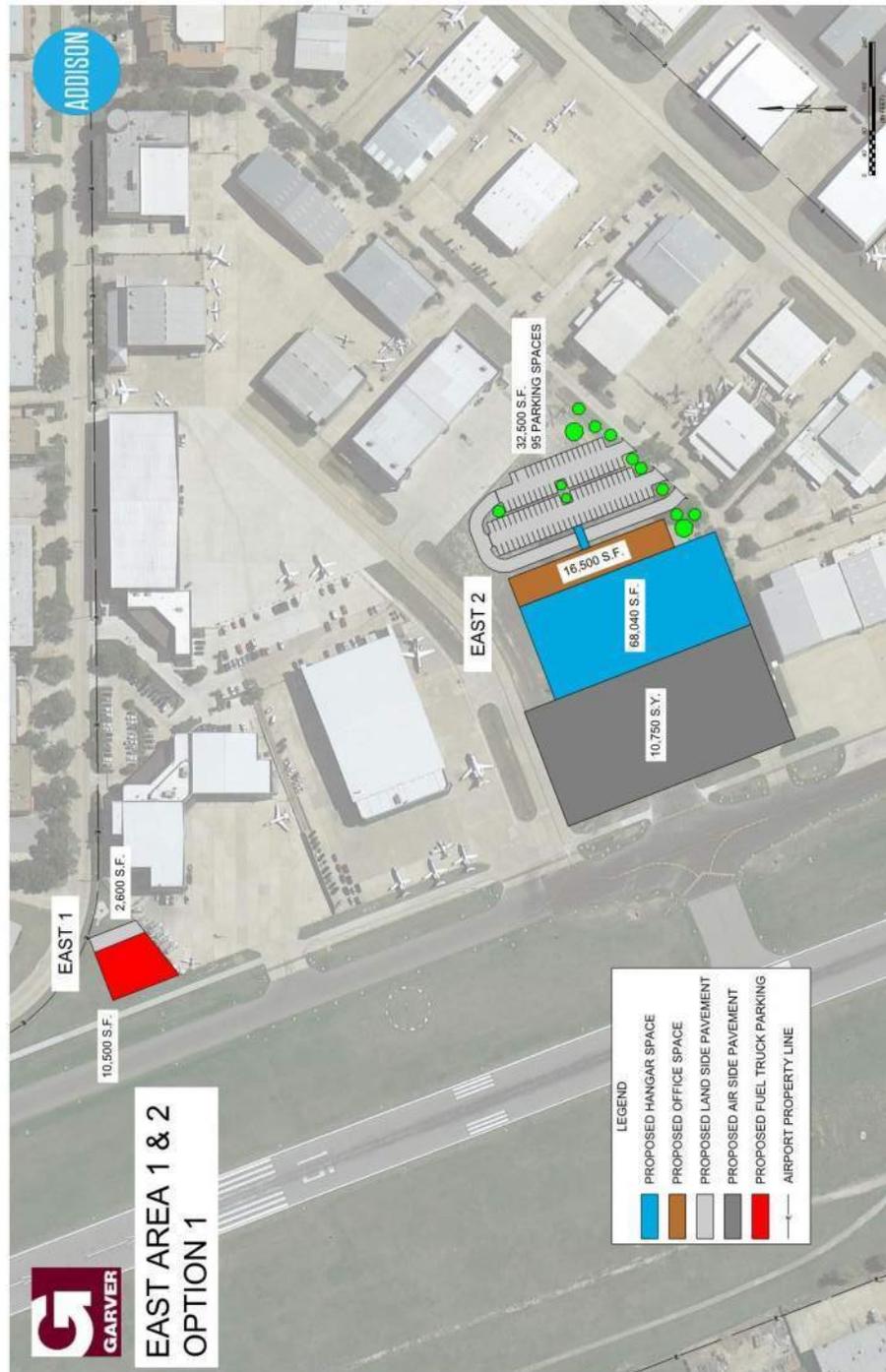
Estimated Auto Access and Parking Space: 35,500 square feet

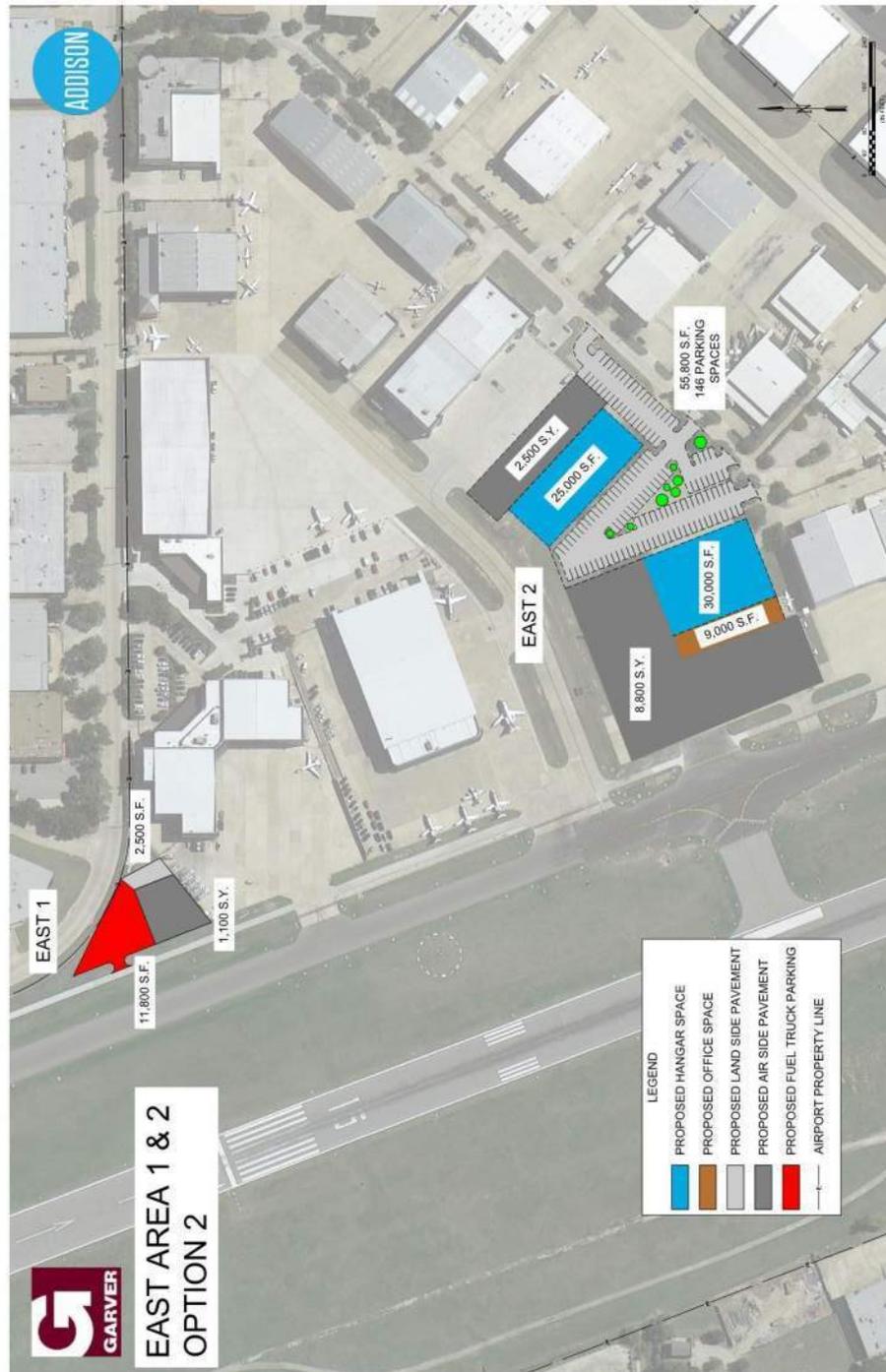
Estimate Auto Parking Spaces: 80 additional spaces (some existing spaces are lost due to the taxilane turnaround from the apron that could accommodate a customs facility).

# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS

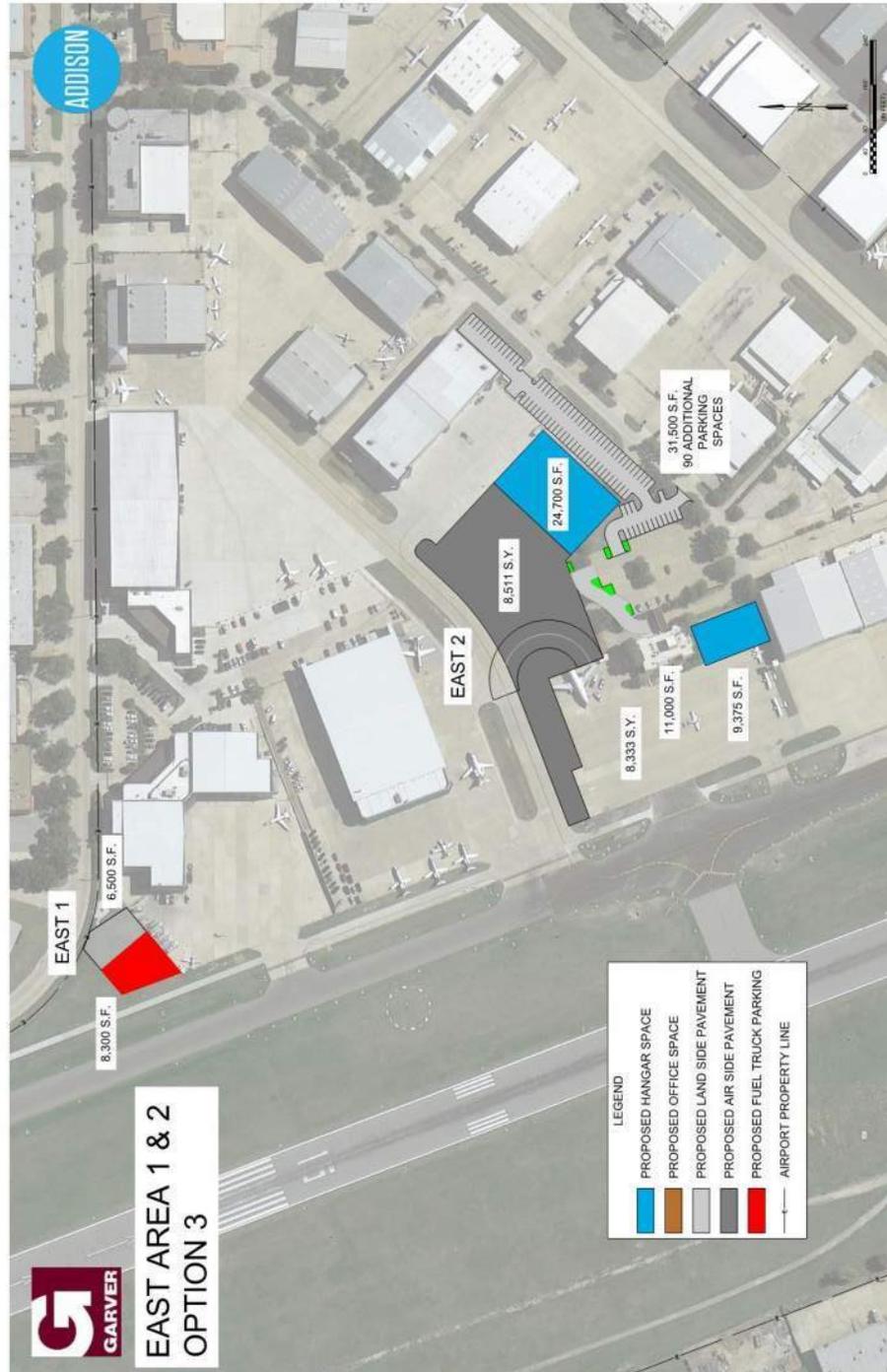




# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS



**East-side Area 3**

The development area entails approximately 14.7 acres of available area within which to construct various FBO/SASO and aircraft storage facilities. This area is currently occupied by an FBO main hangar, two T-hangars, a shade hangar and multiple box/common hangars. Businesses located in this area include Atlantic Aviation, Baker Aviation, Jackson/Shaw, and American Flyers. This area remains most suited for FBO/SASO type uses and, as such, reflects various size hangar options to accommodate Design Group A-I/B-I to D-III aircraft. Based on the proposed layout of East-side Area 3 the following concepts/options are presented. **Figures 4-9** through **4-11**, depict each option for East-side Area 3.

***Option 1:***

Estimated Total Hangar Space: 174,250 square feet  
Estimate Office Space Outside of Hangar: 15,900 square feet  
Estimated Apron Space: 28,900 square yards  
Estimated Taxilane: 700 linear feet  
Estimated Auto Access and Parking: 77,800 square feet  
Estimated Auto Parking: 224 spaces

***Option 2:***

Estimated Hangar Space: 136,200 square feet  
Estimate Office Space Outside of Hangar: 17,300 square feet  
Estimated Apron and Taxilane: 30,300 square yards  
Estimated Taxilane: 2,800 linear feet  
Estimated Auto Access and Parking: 133,750 square feet  
Estimated Auto Parking: 250 spaces

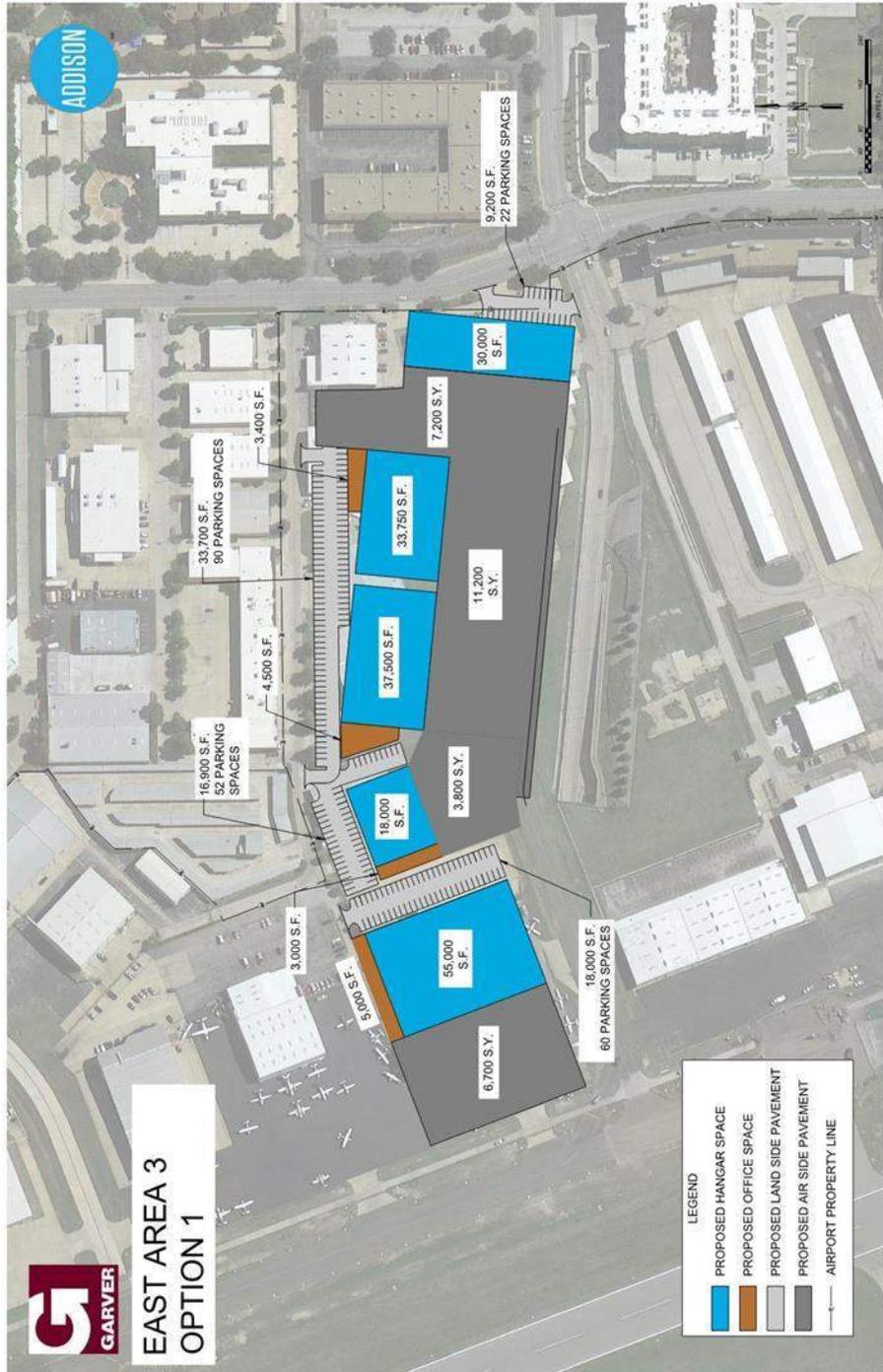
***Option 3:***

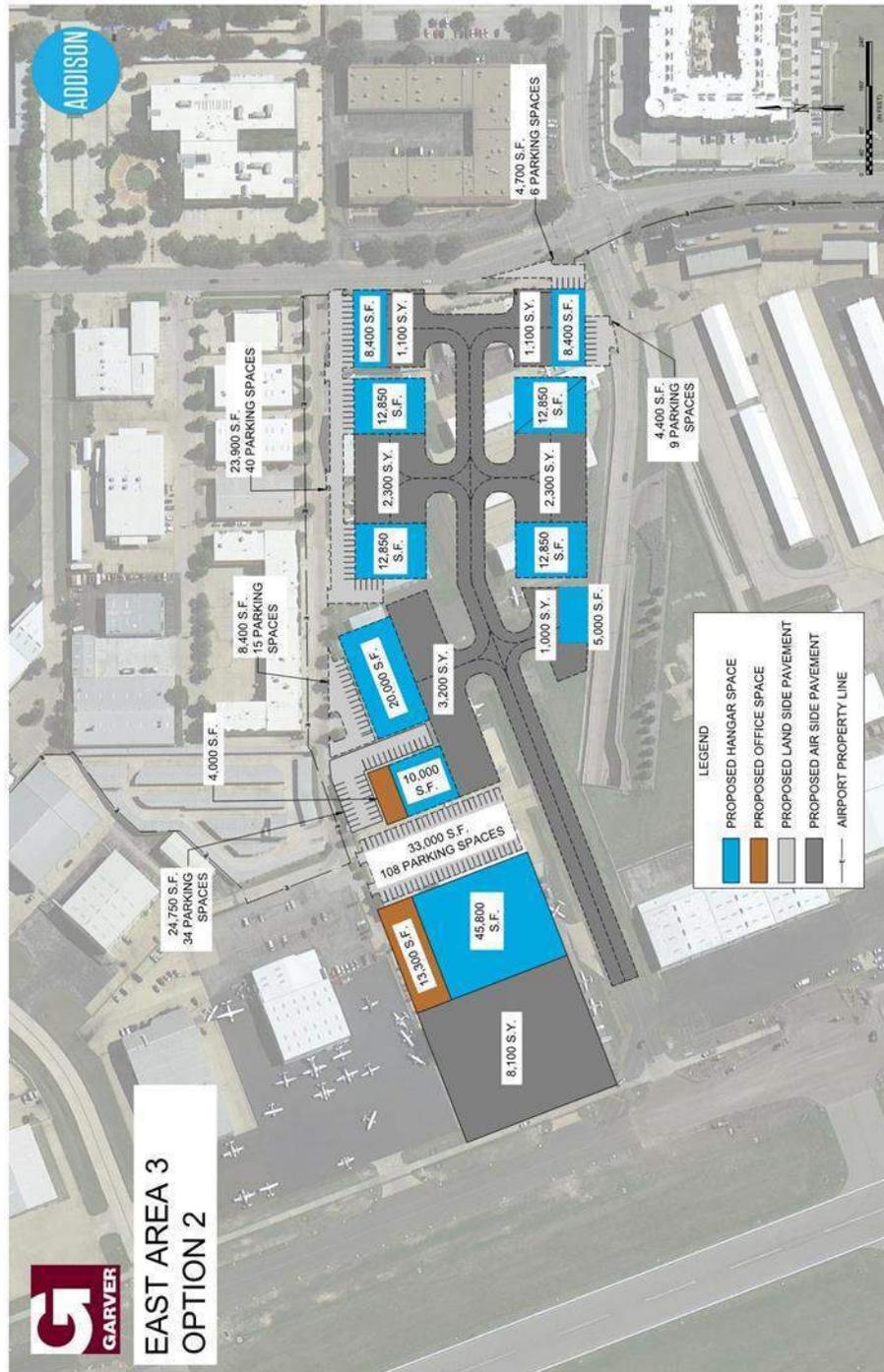
Estimated Total Hangar Space: 135,100 square feet  
Estimate Office Space Outside of Hangar: 12,200 square feet  
Estimated Apron: 30,200 square yards  
Estimated Taxilane: 3,400 square yards / 880 linear feet  
Estimated Auto Access and Parking: 9,800 square yards  
Estimated Auto Parking: 160 spaces

# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS

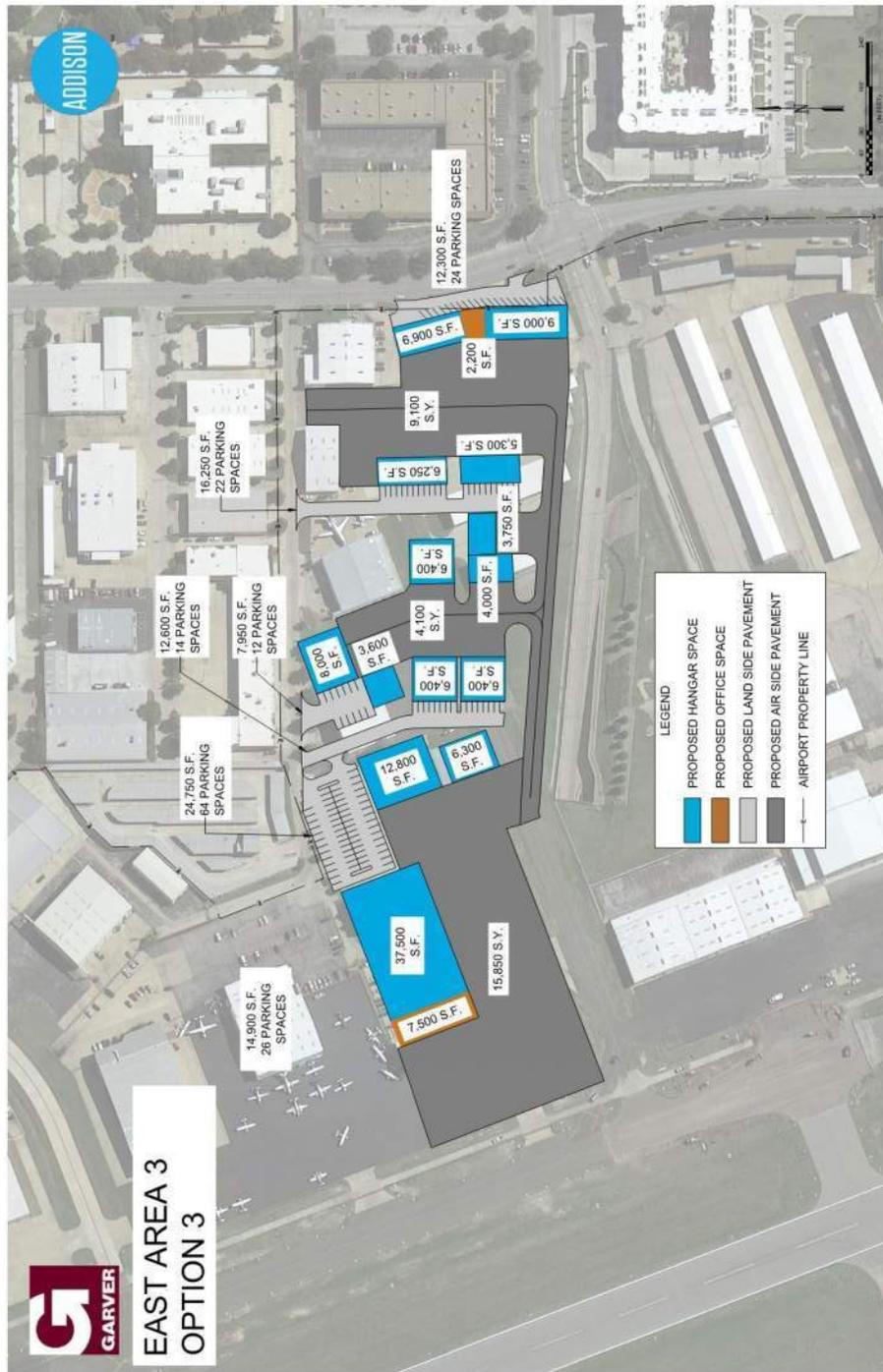




# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS



**East-side Area 4**

The development area entails as much as 6.5 acres of available area within which to construct various aircraft storage facilities and supporting infrastructure. This area is occupied by a public-airport restroom, a grouping of three common/box hangars, and Jimmy Doolittle Road. This area could be modified to accommodate various size hangar options for Design Group A-I/B-I to B-II aircraft in the back side to large Airport Design Group C-II to D-III aircraft for facilities along Taxiway Alpha. Based on the proposed layout of East-side Area 4 the following concepts/options are presented. **Figures 4-12 through 4-14**, depict each option for East-side Area 4.

***Option 1:***

Estimated Total Hangar Space: 15,000 square feet

Estimated Apron: 2,900 square yards

Estimated Taxilane: 190 linear feet

Estimated Auto Parking: 20,800 square feet

Estimated Auto Parking: 45 spaces

***Option 2:***

Estimated Total Hangar Space: 13,500 square feet

Estimated Apron: 2,800 square yards

Estimated Taxilane: 400 linear feet

Estimated Auto Access and Parking: 15,800 square feet

Estimated Auto Parking Spaces: 16 spaces

***Option 3:***

Estimated Total Hangar Space: 88,800 square feet

Estimated Office Space Outside of Hangars: 1,500 square feet

Estimated Apron: 9,400 square yards

Estimated Auto Access and Parking Area: 15,200 square yards

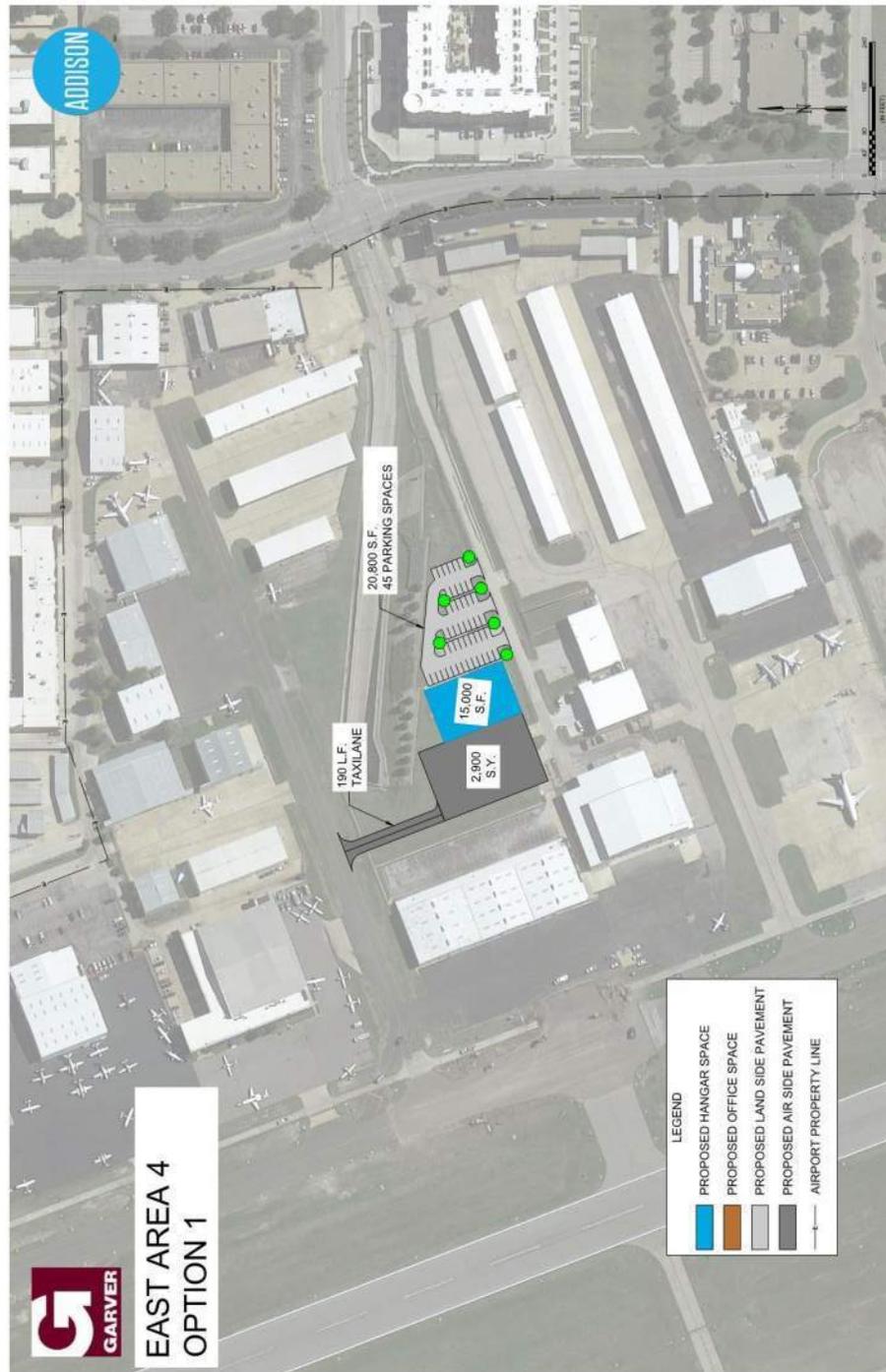
Estimated Auto Parking Spaces: 150 spaces

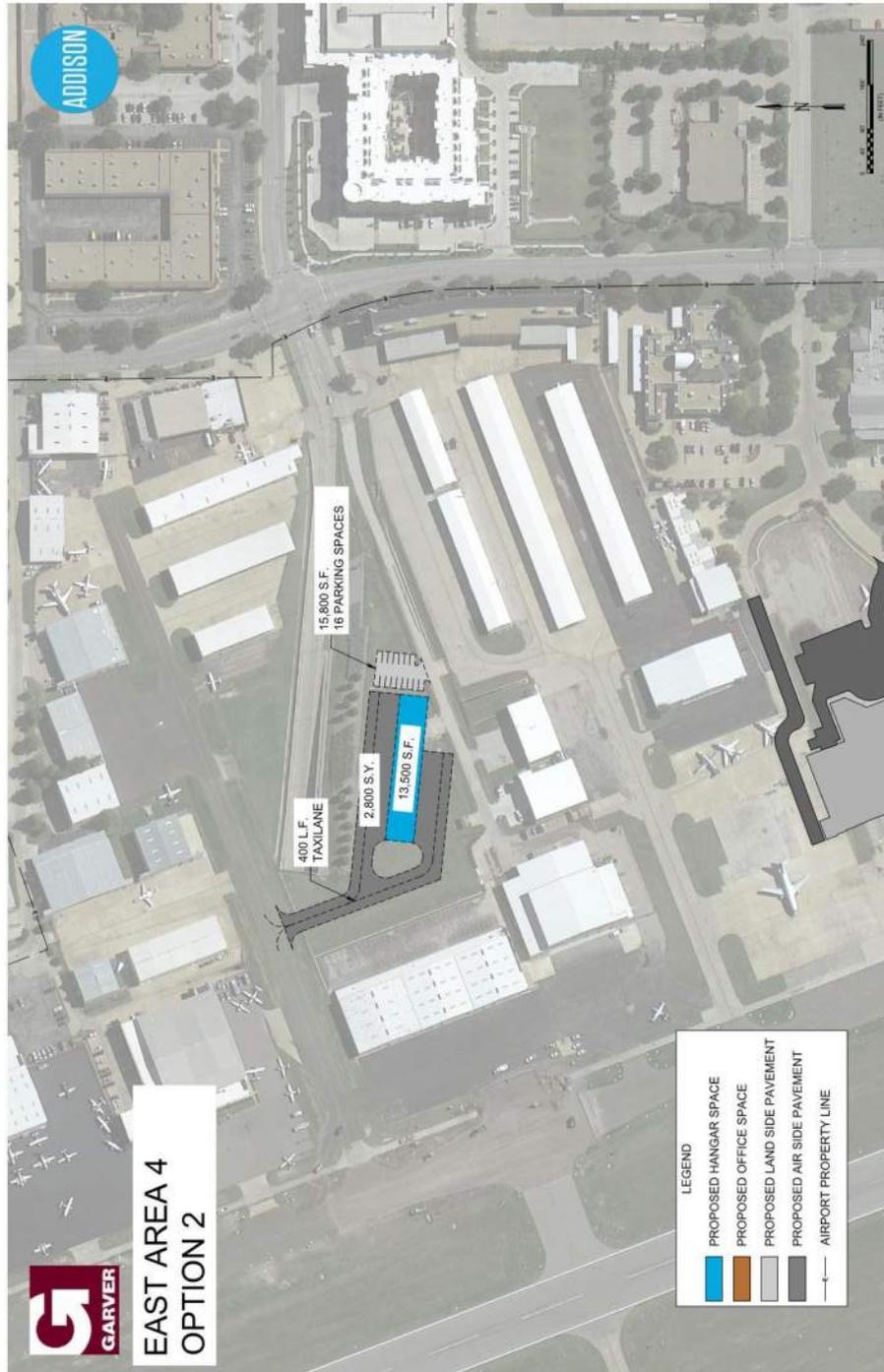
Estimated Auto Access Road: 1,600 linear feet (25 feet wide); 40,000 square feet

# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS

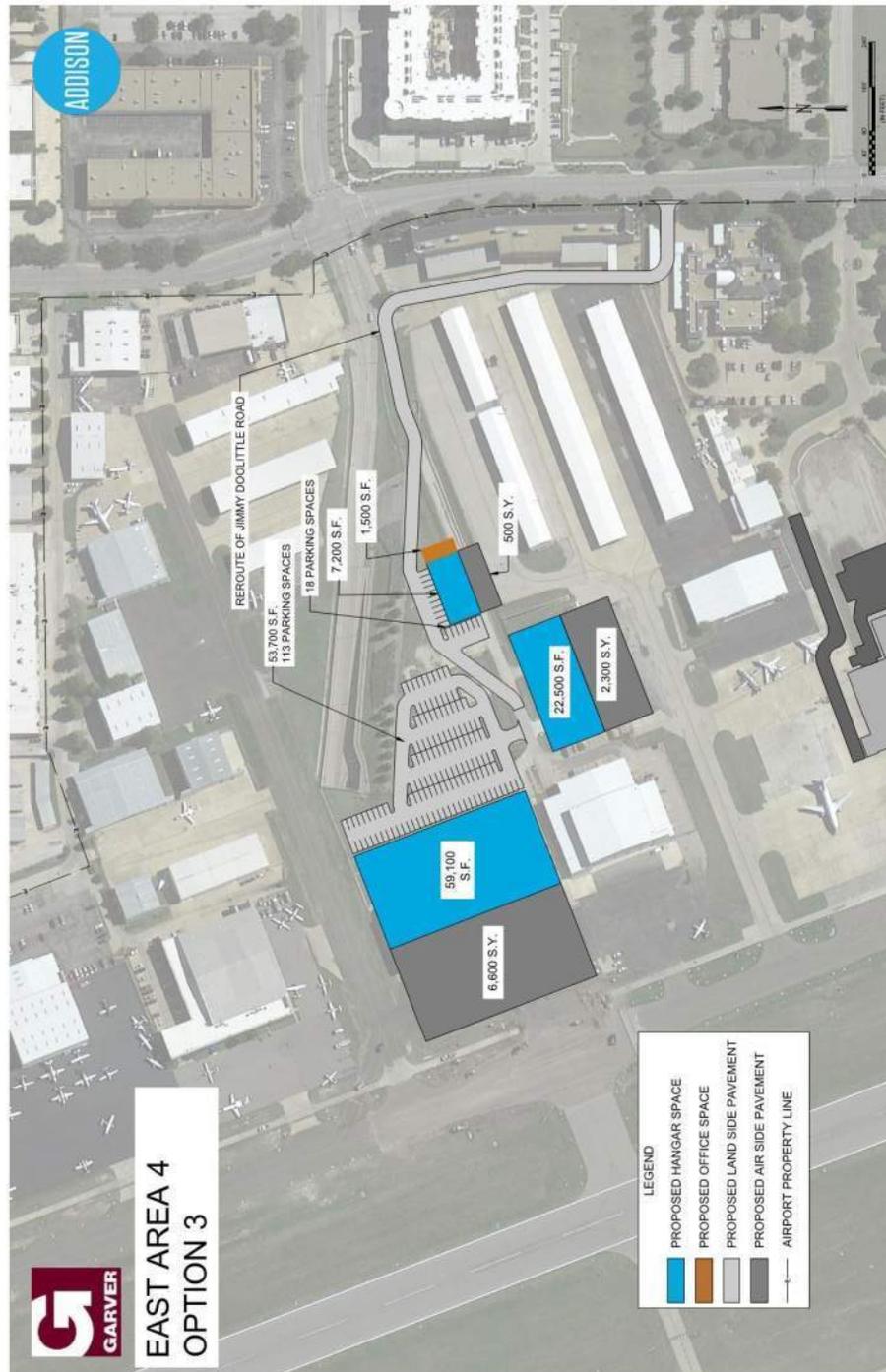




# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS



**East-side Area 5**

The development area entails approximately 2.10 acres of available area within which to construct various aircraft storage facilities. This area is the location of a recently removed common/box/corporate hangar and the site is vacant without development plans. It is located west of the PepsiCo hangar between Taxilane Sierra and a new large corporate hangar that is being designed at present with construction slated for 2015. This area is capable of supporting various hangar sizes to accommodate Design Group C-II to D-IV aircraft. Based on the proposed layout of East-side Area 5 the following concepts/options are presented. **Figures 4-15** through **4-17**, depict each option for East-side Area 5.

***Option 1:***

Estimated Total Hangar Space: 19,375 square feet  
Estimated Apron: Retains existing 3,800 square yards

***Option 2:***

Estimated Total Hangar Space: 61,500 square feet  
Estimated Apron: 1,800 square yards  
Estimated Total Office Space: 5,600 square feet  
Estimated Auto Access and Parking Space: 21,000 square feet  
Estimated Auto Parking: 45 spaces

***Option 3:***

Estimated Total Hangar Space: 35,600 square feet  
Estimated Apron: 4,000 square yards  
Estimated Auto Access and Parking Space: 15,400 square feet  
Estimated Auto Parking: 28 spaces

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**ADDISON, TEXAS**

**East-side Area 6**

This development area entails approximately 0.75 acres. This area is unoccupied at this time and based on existing lease and infrastructure surrounding it will have limited use. Without modifications to an existing lease this parcel does not have access to airside at ADS and potential development is limited to non-aeronautical use without lease modification or conversion of an existing roadway that serves multiple existing tenants to a taxi lane providing airside access. Based on the proposed layout of East-side Area 6 the following concepts/options are presented. **Figures 4-15** through **4-17**, depict each option for East-side Area 6.

***Option 1:***

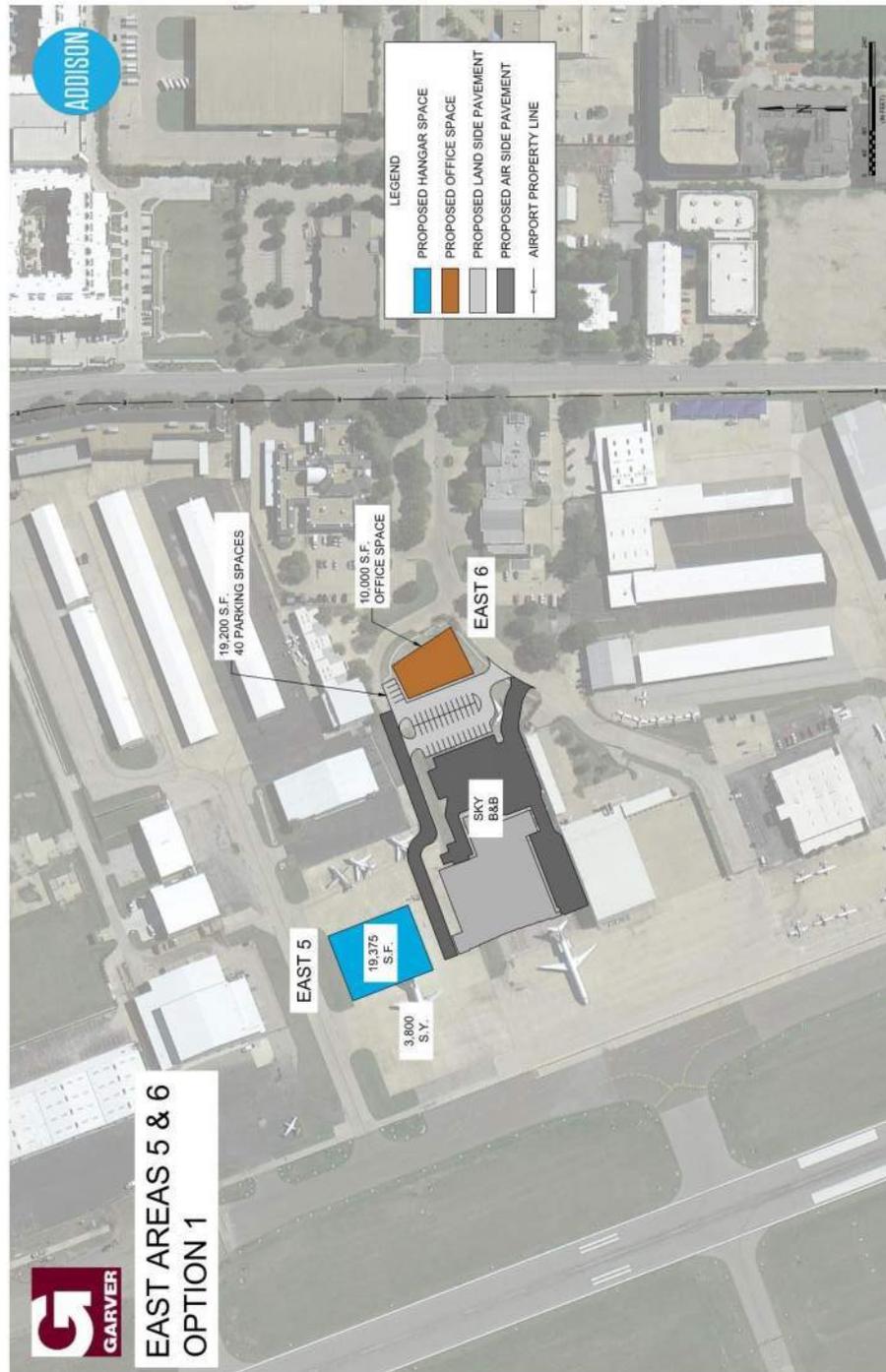
Estimated Total Office Space: 10,000 square feet  
Estimated Auto Access and Parking: 19,200 square feet  
Estimated Auto Parking: 40 spaces

***Option 2:***

Estimated Auto Parking: 25,600 square feet  
Estimated Auto Access and Parking: 54 spaces  
Area Reserved for Landscape/Sculpture: 5,000 square feet

***Option 3:***

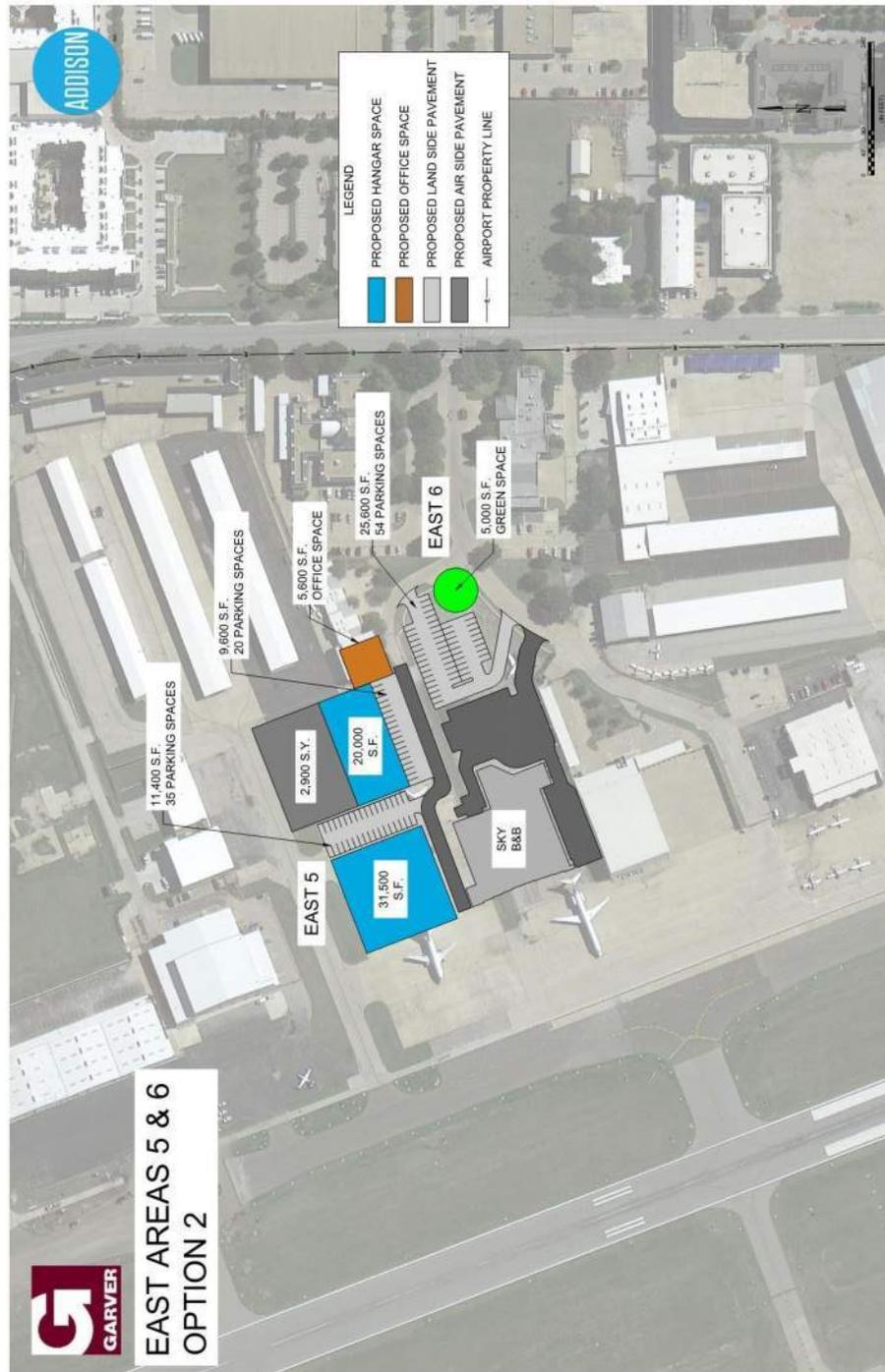
Estimated Auto Parking: 23,600 square feet  
Estimated Auto Parking: 54 spaces  
Area Reserved for Landscape/Sculpture: 5,000 square feet



# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS





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**ADDISON, TEXAS**

**East-side Area 7**

This development area encompasses a total of 15.75 acres split into two parts. The southern portion occupied mostly by T-hangars is approximately 11.2 acres while the northern optional parcel occupied by the Collins hangars encompasses 4.55. Redevelopment in this region of the airport is focused on replacing the T-hangars and possibly the Collins hangars with a new FBO/corporate hangar complex that could be home to a third FBO along with other corporate tenants. This area is best suited for FBO/maintenance/avionics type uses and, as such, reflects various size hangar options to accommodate Design Group A-I/B-I to D-III aircraft.

An option in the future for this area may include the acquisition of the Masonic Lodge and Cigar Shop properties near the corner of Addison Road and Lindbergh Drive. This area is best suited for public space that could include airport administration.

Based on the proposed layout of East-side Area 7 the following concepts/options are presented. **Figures 4-18** through **4-20**, depict each option for East-side Area 7.

***Option 1: (retains Collins hangars and apron)***

Estimated Total Hangar Space: 106,650 square feet

Estimated Apron Space: 35,300 square yards

Estimated Taxilane: 120 linear feet

Estimated FBO Administration/Public Space: 14,600 square feet

Estimated Restaurant Space: 9,700 square feet (second story structure)

Estimated Walkway/Mezzanine: 620 linear feet (15 feet wide)

Estimated Parking Garage: 167,000 square feet (three level parking)

Estimated Auto Parking: 450 spaces (east of Addison Road in parking garage)

Estimated Auto Access and Parking: 57,200 square feet (west of Addison Road)

Estimated Auto Parking: 140 spaces (west of Addison Road)

Estimated Roadway: 425 linear feet (standard 25-foot width)

Estimated Park Space: 19,400 square feet with walkway, viewing area, and landscaping

***Option 2:***

Estimated Hangar Space: 155,500 square feet

Estimated Office Space: 31,000 square feet

Estimated Apron: 43,000 square yards



## ADDISON AIRPORT AIRPORT MASTER PLAN

### ADDISON, TEXAS

Estimated Taxilane: 200 linear feet

Estimated Auto Access and Parking: 44,900 square feet

Estimated Auto Parking Spaces: 118 spaces

#### **Option 3:**

Estimated Total Hangar Space: 115,000 square feet

Estimated Office/Commercial Space: 231,100 square feet

Estimated Restaurant Space: 31,500 square feet

Estimated Apron: 16,600 square yards

Estimated Taxilane: 100 linear feet

Estimated Auto Access and Parking: 90,900 square feet

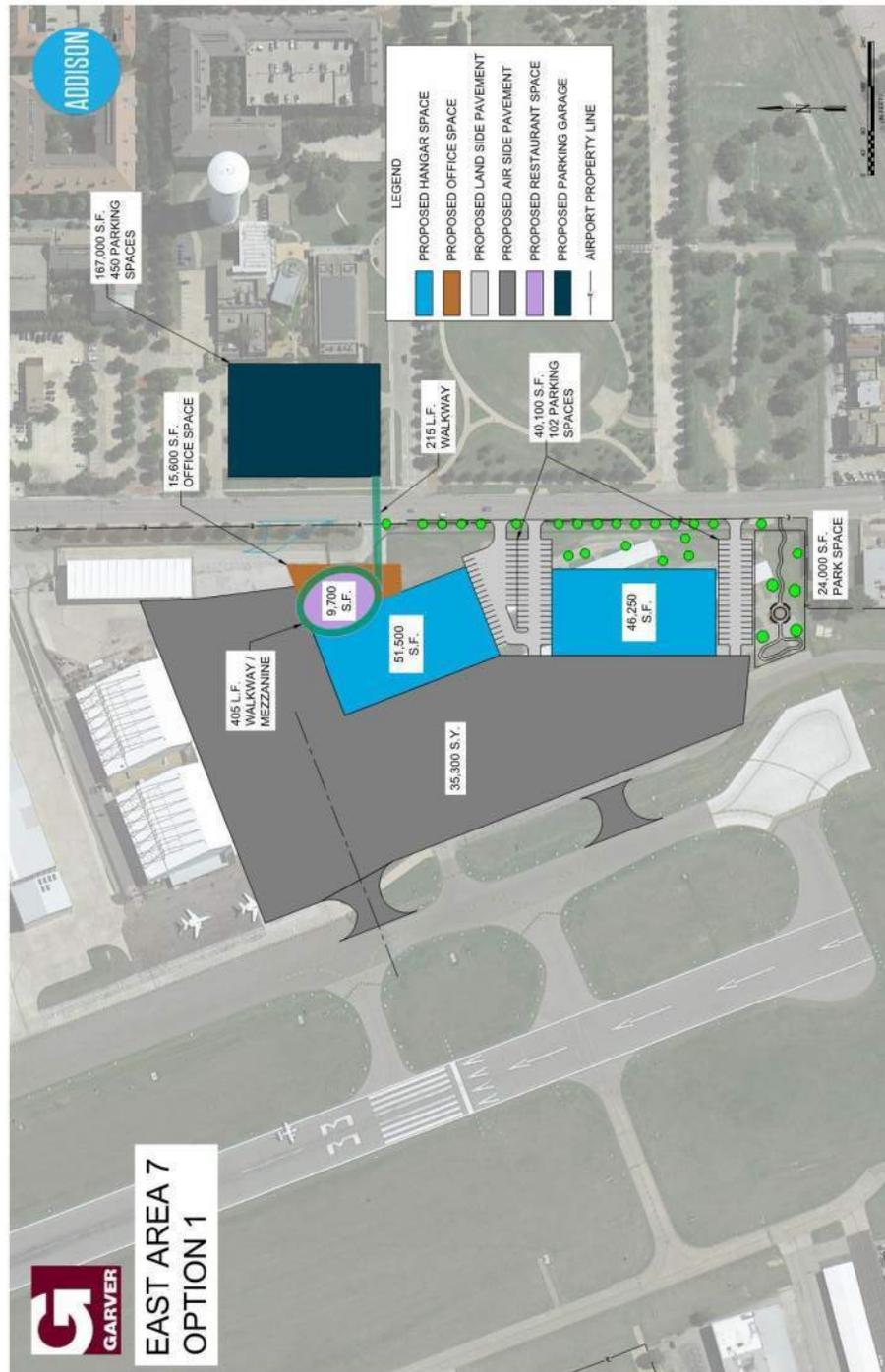
Estimated Auto Parking Spaces: 170 spaces

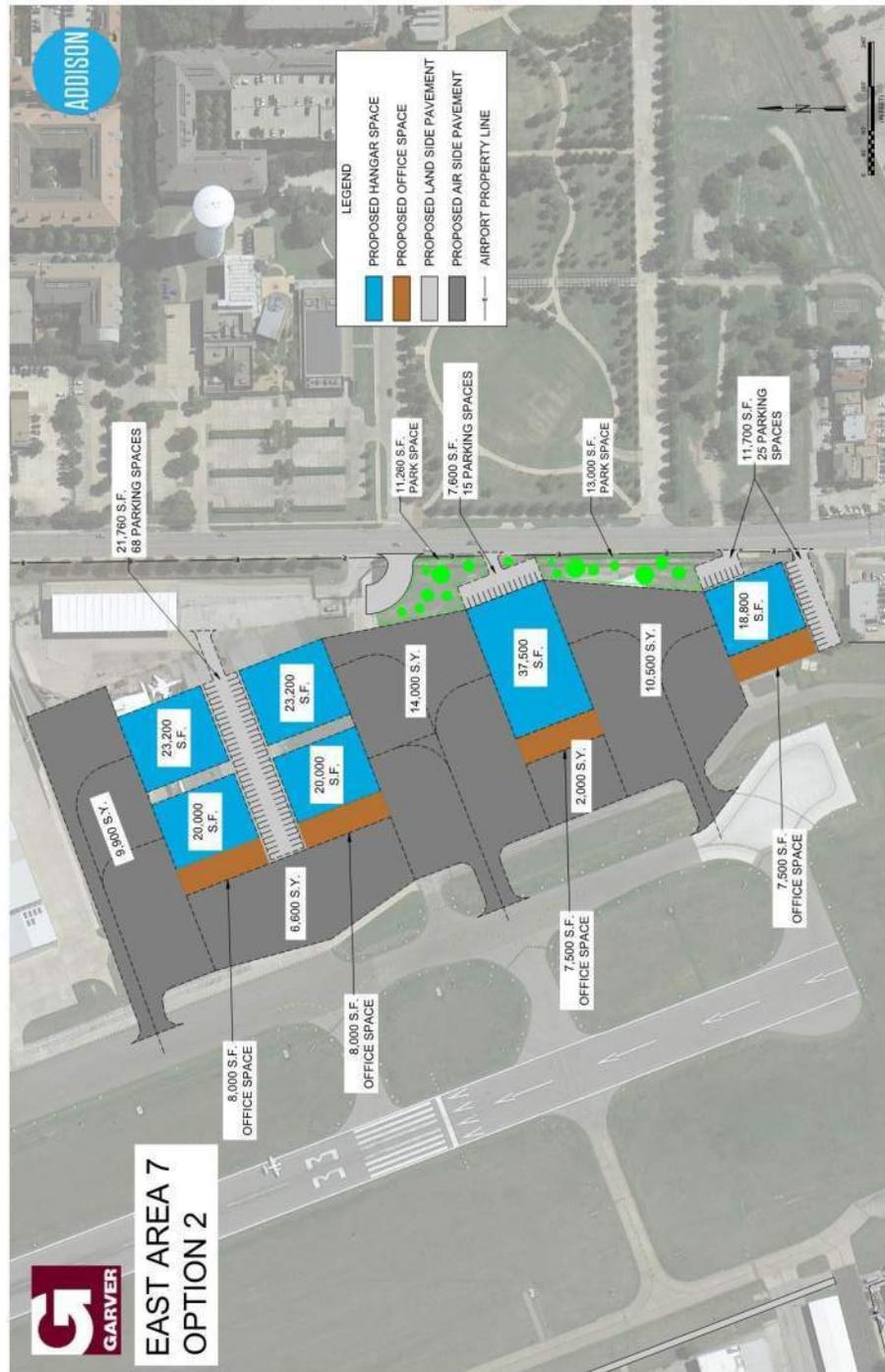
Estimated Park Space: 24,000 square feet with walkway, viewing area, and landscaping

# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS

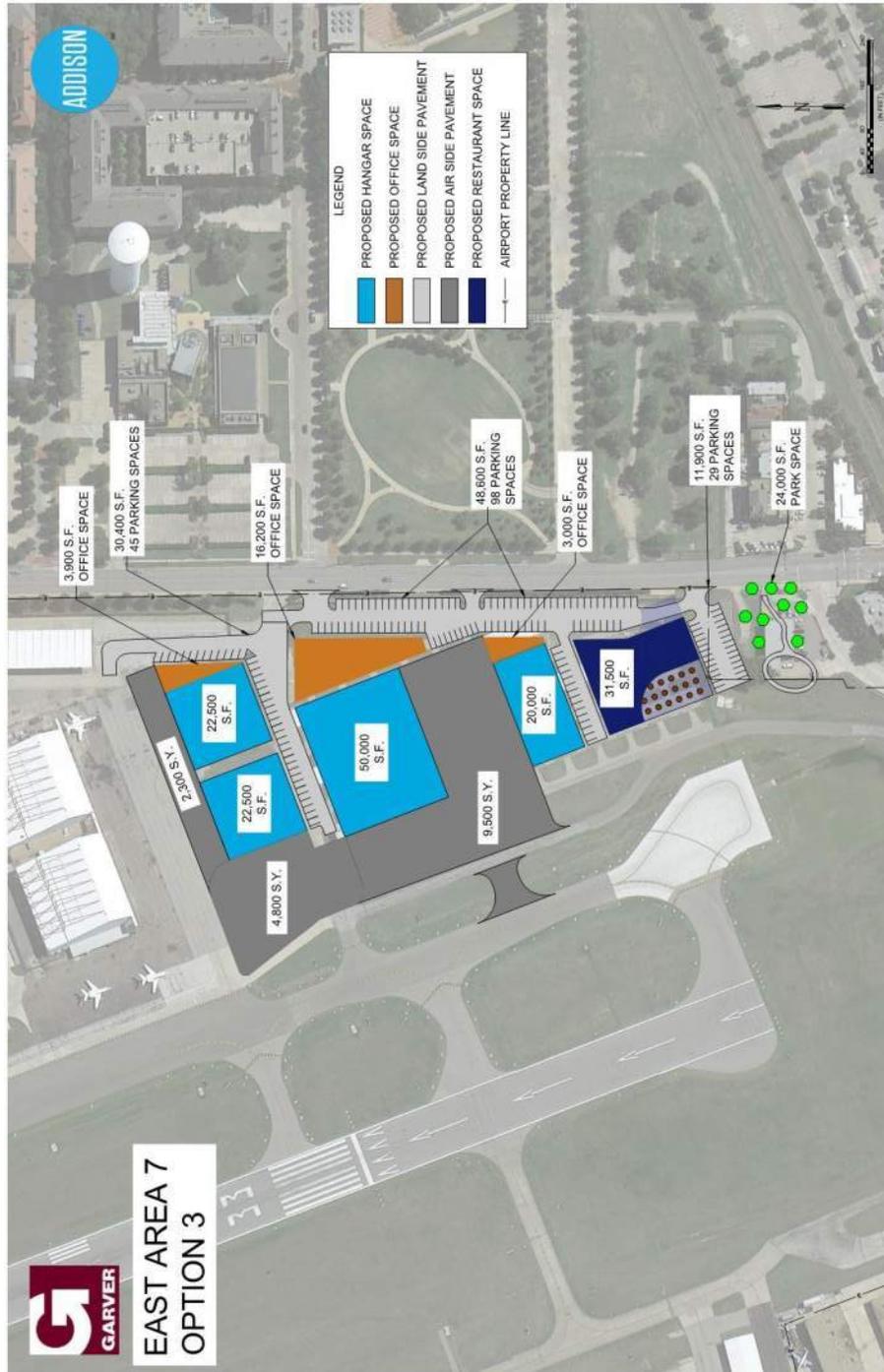




# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS



**West-side Area 1**

This development area encompasses approximately 2.85 acres part of which is airport property and a portion that is privately owned. The property is undeveloped but has had a number of development proposals over the years expressed by the private property owner. This area is best suited for hangar options to accommodate Design Group A-I/B-I to B-II aircraft. Space on the north end near Midway Road could be used as an airport viewing area for the public. Based on the proposed layout of West-side Area 1 the following concepts/options are presented. **Figures 4-21** through **4-23**, depict each option for West-side Area 1.

***Option 1:***

Estimated Total Hangar Space: 22,500 square feet  
Estimated Apron Space: 3,900 square yards  
Estimated Taxilane: 250 linear feet  
Estimated Auto Parking: 23,700 square feet  
Estimated Auto Parking: 66 spaces  
Estimated Park Space: 6,500 square feet (numerous picnic tables)  
Estimated Auto Parking for Park Space: 6,200 square feet  
Estimated Auto Parking Spaces for Park Space: 14 spaces

***Option 2:***

Estimated Hangar Space: 12,650 square feet  
Estimated Office Space Outside of Hangar: 3,135 square feet  
Estimated Apron: 7,800 square yards  
Includes airside access, helipad, and four helicopter parking spaces  
Estimated Taxilane: 150 linear feet  
Estimated Auto Access and Parking: 6,100 square feet  
Estimated Auto Parking Spaces: 12 spaces

***Option 3:***

Estimated Total Hangar Space: 26,700 square feet  
Estimated Office Space Outside of Hangar: 4,350 square feet  
Estimated Apron: 4,800 square yards 6,400  
Estimated Taxilane: 6,500 square yards (1,000 linear feet)  
Estimated Auto Access and Parking: 21,800 square feet

***ADDISON AIRPORT  
AIRPORT MASTER PLAN***



***ADDISON, TEXAS***

Estimated Auto Parking Spaces: 32 spaces

Estimated Auto Parking for Park Space: 6,200 square feet

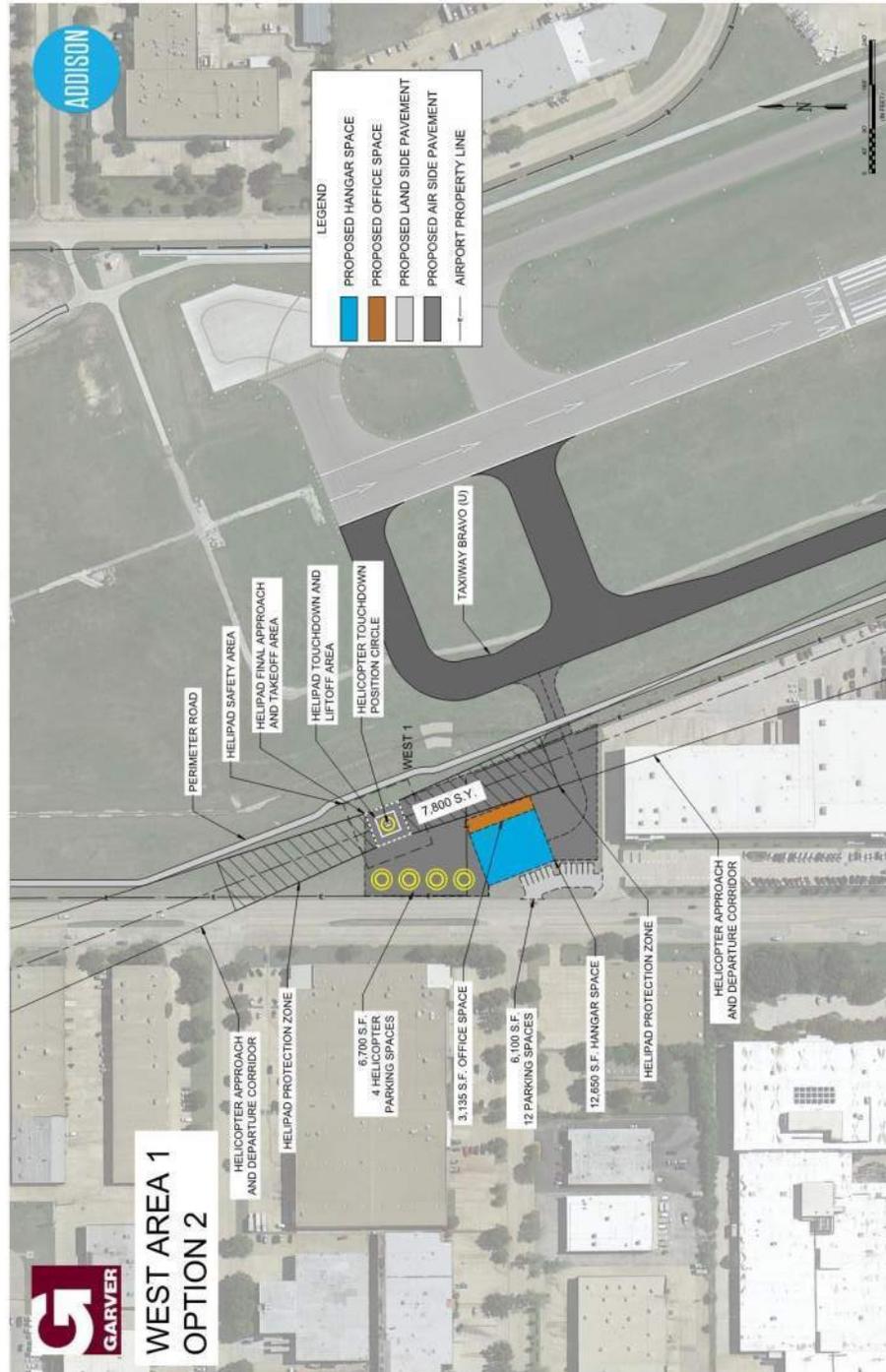
Estimated Auto Parking Spaces for Park Space: 14 spaces



# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS





**ADDISON, TEXAS**

**West-side Area 2**

This development area encompasses approximately 4.7 acres of current airport property. Options have been developed that only utilize the existing airport property for aeronautical use facilities. Properties beyond the airport boundary will have development options potentially out to Midway Road focused on replacing the existing commercial building structures with a corporate office complex that would utilize hangar facilities on airport property. This area has flexibility to suit both Design Group A-I/B-I to B-II aircraft and larger aircraft in the Design Group C-II to D-III categories. Based on the proposed layout of West-side Area 2 the following concepts/options are presented. **Figures 4-24** through **4-26**, depict each option for West-side Area 2.

***Option 1:***

Estimated Total T-Hangar Space: 35,300 square feet (28 units)  
Estimated Total Box Hangar Space: 4,500 square feet  
Estimate Public Building Space: 1,200 square feet  
Estimated Apron Space: 1,400 square yards  
Estimated T-hangar Taxilane/Apron Frontage: 16,300 square yards  
Estimated Taxilane: 340 linear feet  
Estimated Auto Access Parking: 18,900 square feet  
Estimated Auto Parking: 10 spaces  
Estimated Fueling System: AvGAS and Jet-A, 24-hour Credit Card Pump  
Estimated Fuel Truck Delivery Access: 6,300 square feet  
Estimated Park/Viewing Area Space: 14,400 square feet (numerous picnic tables)  
Estimated Auto Parking for Park Space: 1,800 square feet  
Estimated Auto Parking Spaces for Park Space: 8

***Option 2:***

Estimated Hangar Space: 75,000 square feet  
Estimate Corporate Building Space: 50,000 square feet (100,000 square feet if two story building)  
Estimated Apron: 10,000 square yards  
Estimated Taxilane: 3,000 square yards (770 linear feet)  
Estimated Auto Access and Parking Space: 138,700 square feet  
Estimated Auto Parking Spaces: 350 spaces  
Estimated Park/Viewing Area Space: 14,400 square feet (numerous picnic tables)



## ADDISON AIRPORT AIRPORT MASTER PLAN

### ADDISON, TEXAS

Estimated Auto Access and Parking Space for Park: 14,000 square feet

Estimated Auto Parking Spaces for Park Space: 6 spaces

#### **Option 3:**

Estimated Hangar Space: 52,750 square feet

Estimated Apron: 8,333 square yards

Estimated Taxiway: 200 linear feet

Estimated Auto Access and Parking Space: 5,800 square feet

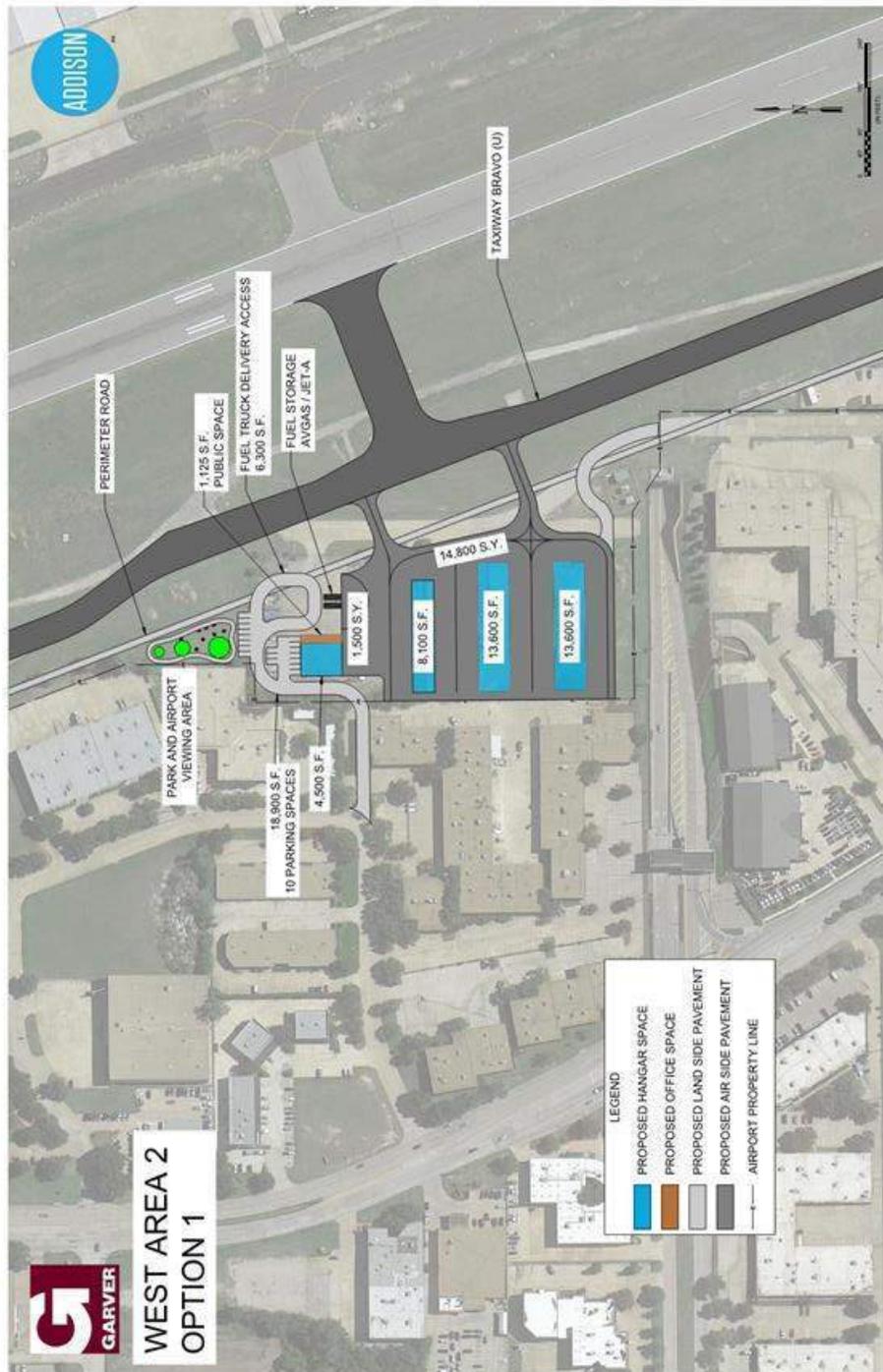
Estimated Auto Parking Spaces: 42 spaces

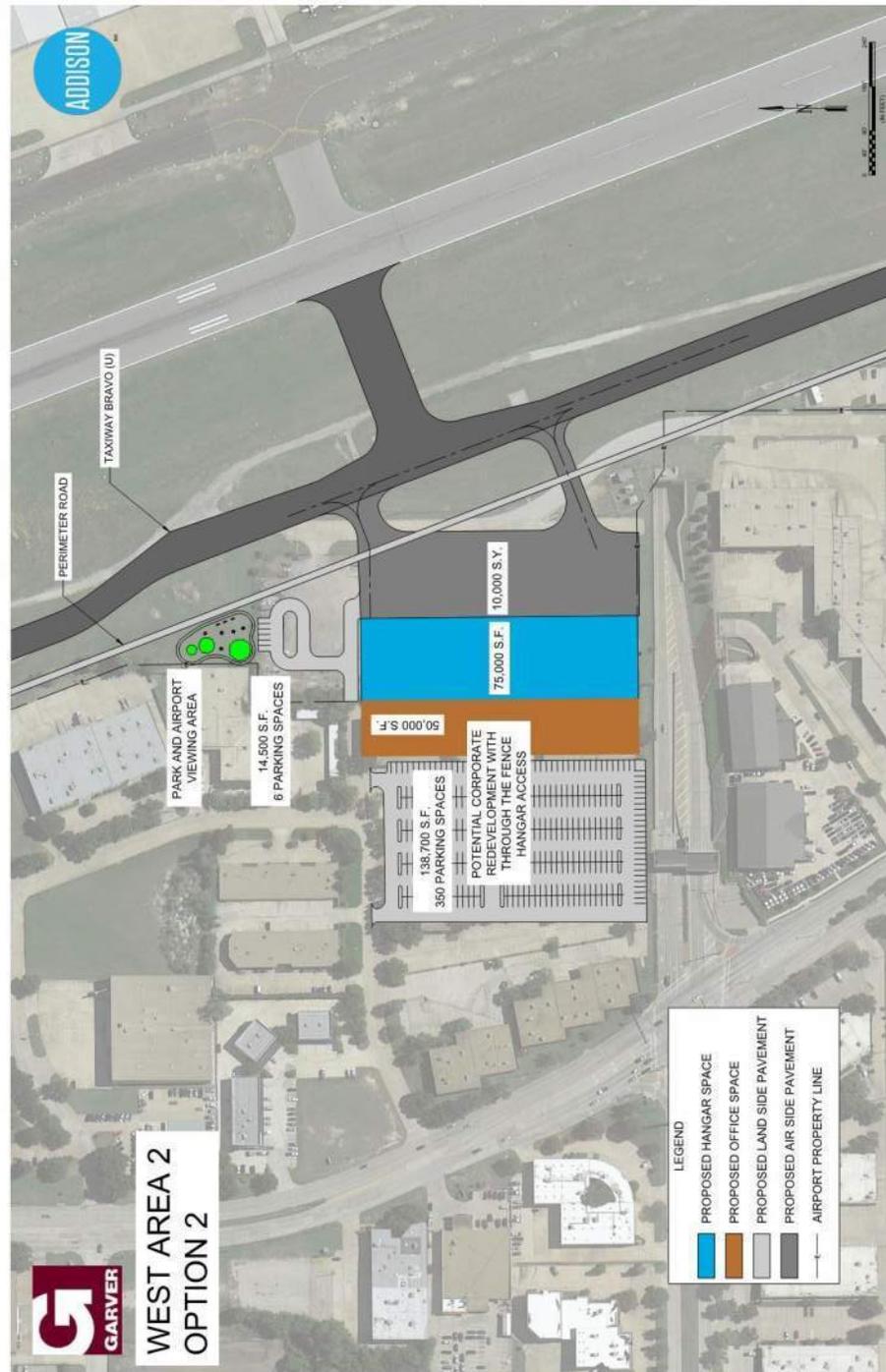
Estimated Park/Viewing Area Space: 14,400 square feet (numerous picnic tables)

# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS

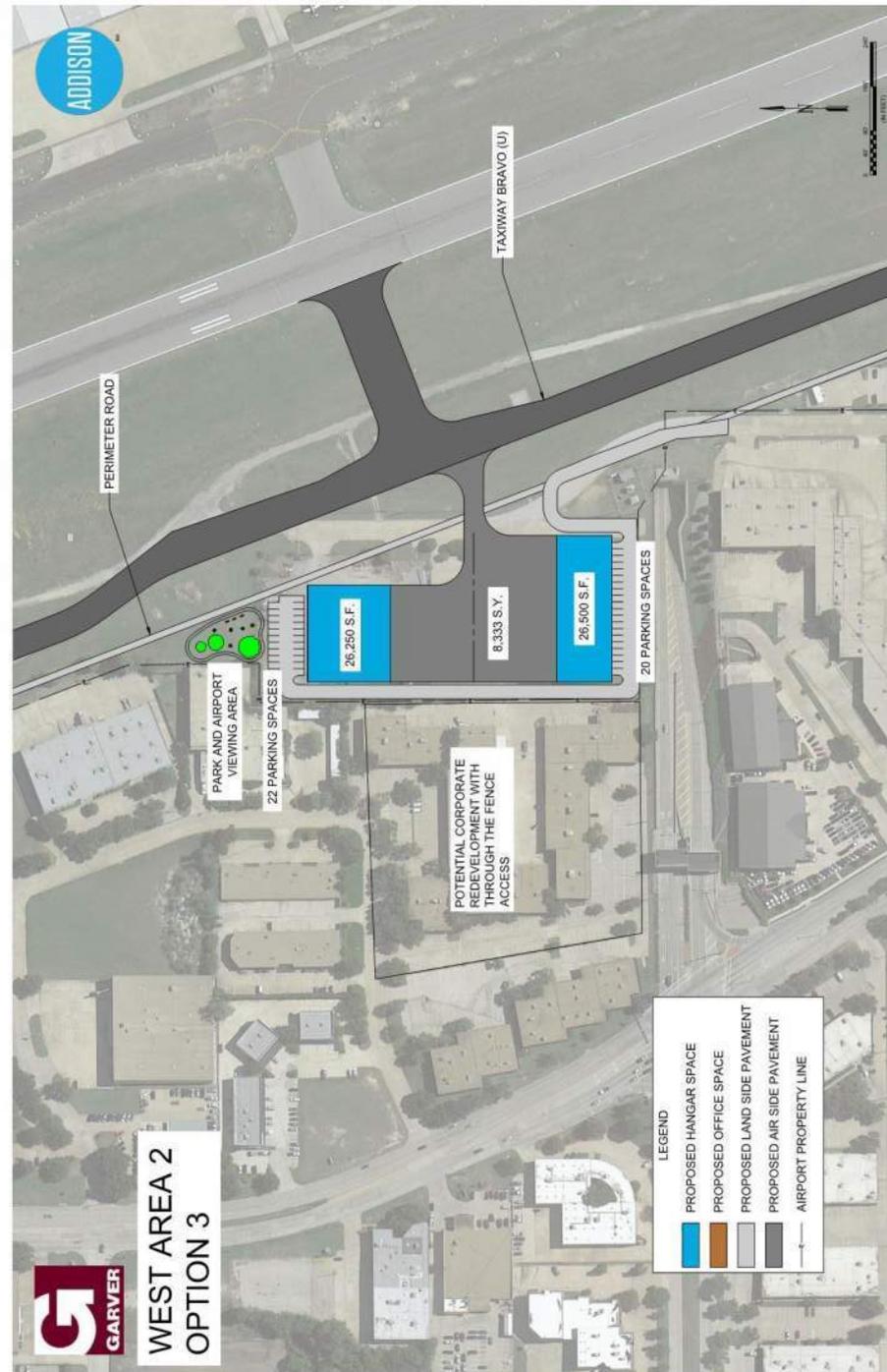




# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS



**West-side Area 3**

This development area encompasses approximately 21.5 acres. The area currently holds the airport's west-side T-hangars, a few small hangars, airport maintenance facilities, and various commercial buildings. Redevelopment as a corporate hangar complex following acquisition is recommended. It is assumed that each corporate/box/common hangar would also include some office/administration/shop space to serve individual tenant/owner needs. This area is best suited corporate aircraft in Design Group B-II/C-II to D-III aircraft. Based on the proposed layout of West-side Area 3 the following concepts/options are presented. **Figures 4-27** through **4-29**, depict each option for West-side Area 3.

***Option 1:***

Estimated Total Hangar Space: 300,000 square feet  
Estimated Apron/Taxilane Space: 36,500 square yards  
Estimated Taxilane: 1,350 linear feet  
Estimated Auto Access and Parking Space: 153,800 square feet  
Estimated Auto Parking: 412 spaces

***Option 2: Retains Bravo T-Hangars***

Estimated Hangar Space: 73,000 square feet  
Estimate Office Space (outside of hangars): 14,800 square feet  
Estimated Apron: 10,650 square yards  
Estimated Auto Access and Parking Space: 46,000 square feet  
Estimated Auto Parking: 130 spaces

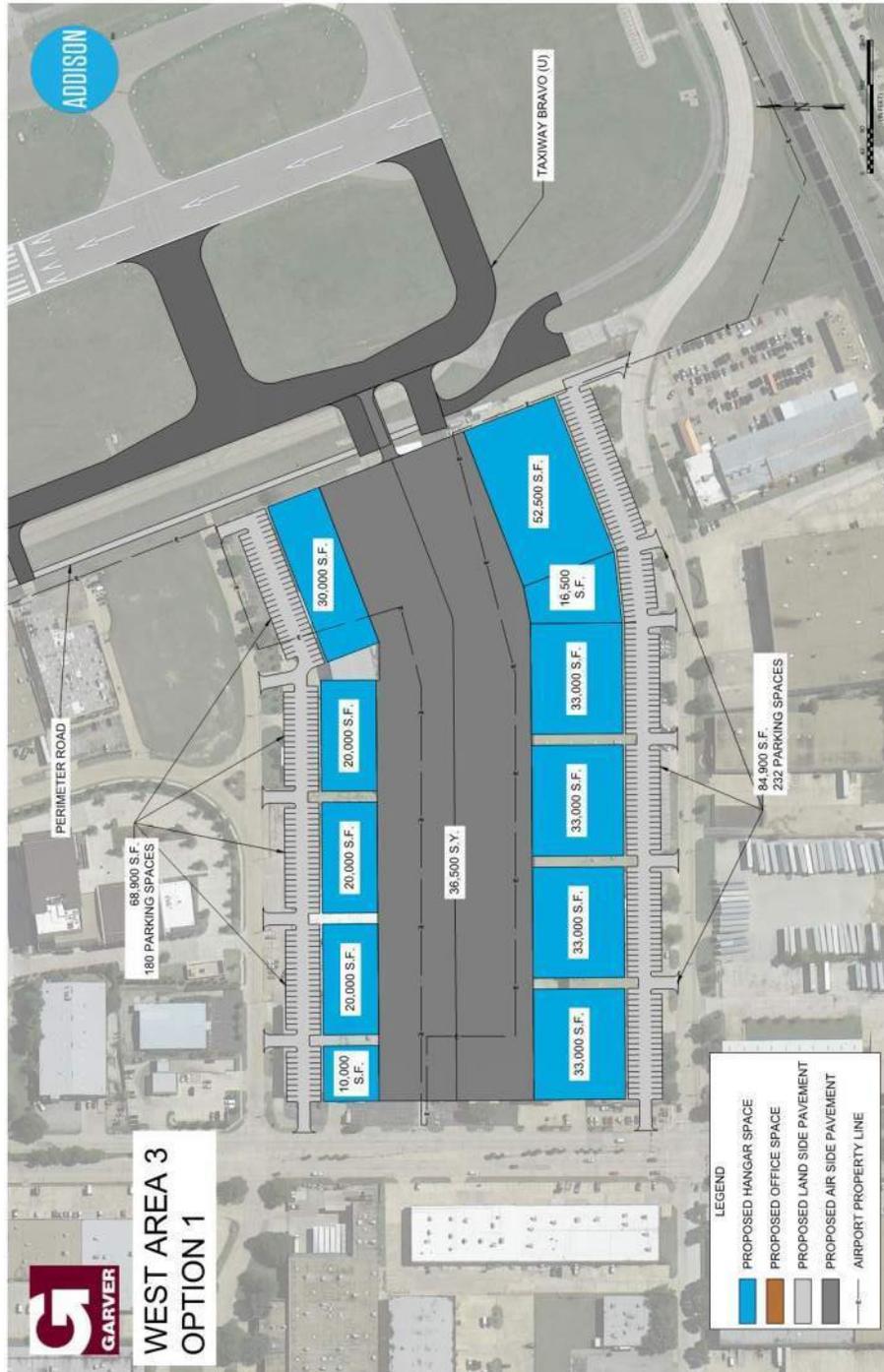
***Option 3:***

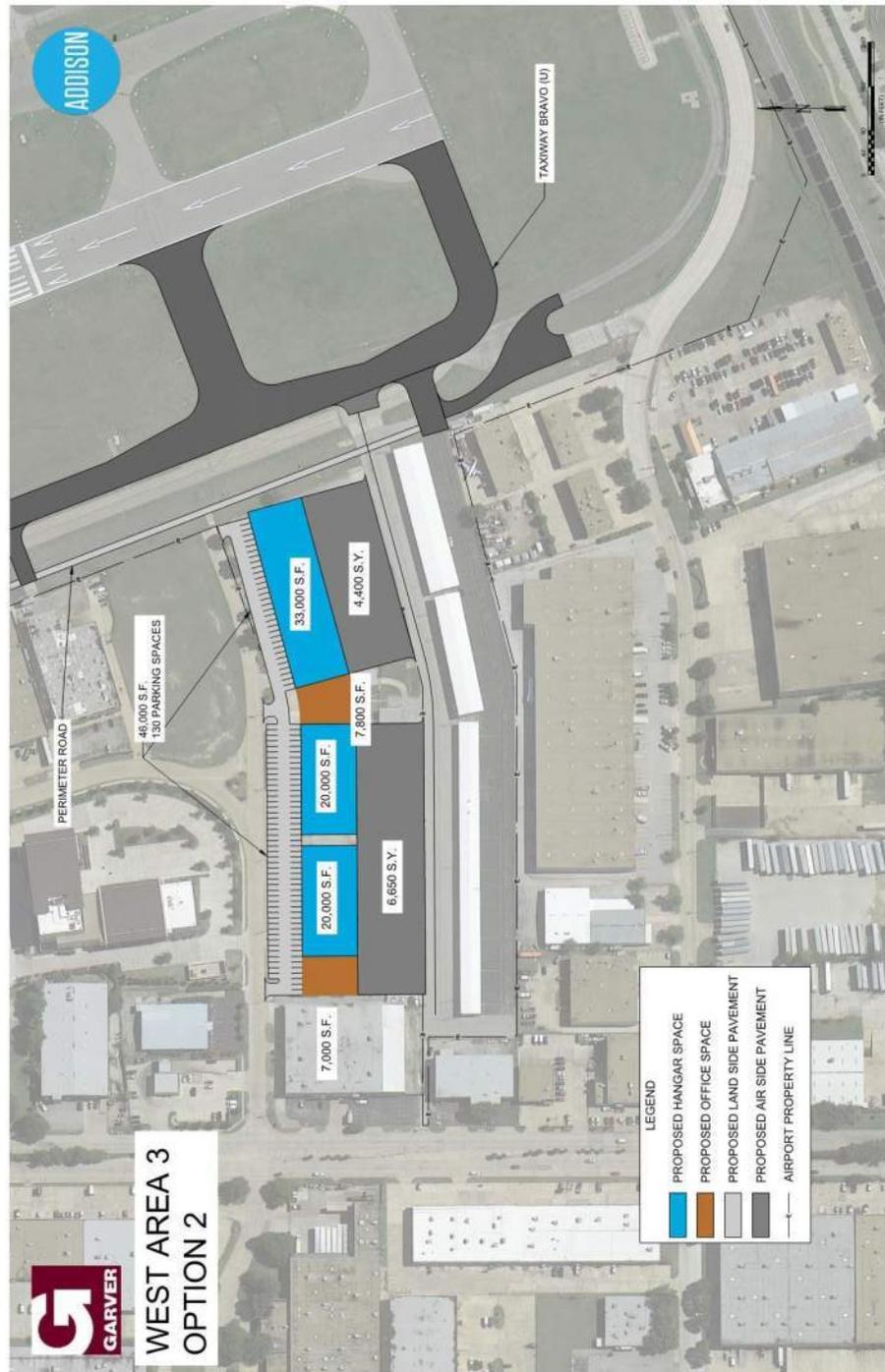
Estimated Total Hangar Space: 280,100 square feet  
Estimated Apron: 39,100 square yards  
Estimated Taxilane: 1,200 linear feet  
Estimated Auto Access and Parking Space: 117,400 square feet  
Estimated Auto Parking: 240 spaces

# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS





# ADDISON AIRPORT AIRPORT MASTER PLAN



## ADDISON, TEXAS



**Appendix H**  
**Financial Schedules (Numbered)**  
**Leibowitz & Horton**

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

**Capital Improvement Program**

**1**

	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

**Capital Project Descriptions**

**2015  
Base Year  
Costs**

Capital Project Descriptions	Estimated Project Costs and Development Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
	2015	2016	2017	2018	2019	2020				Total
<b>Phase I Projects (2015-2020)</b>										
<b>Airside Projects - 2015</b>										
I-AOA-01 Construct Taxilane Victor Improvements	\$2,030,000	\$2,030,000					\$2,030,000			\$2,030,000
I-AOA-02 Design/Coordinate - R/W 33 Localizer Replacement	155,000	155,000					155,000			155,000
I-AOA-03 Design Westside Ditch/Drainage Improvements	45,700	45,700					45,700			45,700
<b>Total Airside Projects for 2015</b>	<b>\$2,230,700</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>
<b>Landside Projects - 2015</b>										
-	\$0	\$0					\$0			\$0
-	0	0					0			0
<b>Total Landside Projects for 2015</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total All Projects for 2015</b>	<b>\$2,230,700</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$2,230,700</b>
<b>Airside Projects - 2016</b>										
I-AOA-04 Construct R/W 33 Localizer Replacement	\$0	\$0					\$0			\$0
I-AOA-05 Design Runway 15/33 & Taxiway Alpha Rejuvenation	15,000	15,450					15,450			15,450
I-AOA-06 Construct Westside Ditch/Drainage Improvements	430,700	443,621					443,621			443,621
<b>Total Airside Projects for 2016</b>	<b>\$445,700</b>	<b>\$0</b>	<b>\$459,071</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$459,071</b>	<b>\$0</b>	<b>\$0</b>	<b>\$459,071</b>
<b>Landside Projects - 2016</b>										
I-Q-01 QUEBEC-Aircraft Storage Hangars	\$3,500,000	\$3,605,000					\$3,605,000			\$3,605,000
I-C-01 CORPORATE-Design/Construct New Corporate Hangar (Former Owens Location)	3,509,000	3,614,270					3,614,270			3,614,270
I-G-01 GENERAL-Plan/Design Wayfinding Signage	25,000	25,750					25,750			25,750
<b>Total Landside Projects for 2016</b>	<b>\$7,034,000</b>	<b>\$0</b>	<b>\$7,245,020</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,245,020</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,245,020</b>
<b>Total All Projects for 2016</b>	<b>\$7,479,700</b>	<b>\$0</b>	<b>\$7,704,091</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,704,091</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,704,091</b>

**2**

**3**

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020				Total
<b>Airside Projects - 2017</b>											
I-AOA-07 Design Taxiway Bravo/Golf Improvements (MITL, Service Road)	\$605,000			\$641,845				\$641,845			\$641,845
I-AOA-08 Construct Runway 15/33 Rejuvenation & Runway 16/34 Remarking	800,000			848,720				848,720			848,720
I-AOA-09 Install Runway/Roadway Weather Info System (RWIS)	45,000			47,741				47,741			47,741
I-AOA-10 Design Taxiway Uniform Improvements	175,000			185,658				185,658			185,658
I-AOA-11 Design Access & Security Improvements Phases II/III	110,000			116,699				116,699			116,699
<b>Total Airside Projects for 2017</b>	<b>\$1,735,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,840,662</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,840,662</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,840,662</b>
<b>Landside Projects - 2017</b>											
I-M-01 MIKE-Design Light GA T-Hangars, Taxiway & Auto Access	\$405,000			\$429,665				\$429,665			\$429,665
I-M-02 MIKE-Wayfinding Signage at Midway Road & Kellway Circle	6,000			6,365				6,365			6,365
I-M-03 MIKE-Wayfinding Signage at Kellway Circle & Access Point into Mike Development	3,000			3,183				3,183			3,183
I-Q-02 QUEBEC-Apron/Ramp/Taxiway	4,964,000			5,266,308				5,266,308			5,266,308
I-Q-03 QUEBEC-FBO Hangar (200' x 160')	3,800,000			4,031,420				4,031,420			4,031,420
I-Q-04 QUEBEC-Auto Access/Parking	1,770,000			1,877,793				1,877,793			1,877,793
I-Q-05 QUEBEC-FBO Office/Commercial Building	3,900,000			4,137,510				4,137,510			4,137,510
I-Q-06 QUEBEC-Wayfinding Signage (Monumental) Addison Road South End of Airport	30,000			31,827				31,827			31,827
I-Q-07 QUEBEC-Wayfinding Signage (Monumental) at Addison Road and Addison Circle	75,000			79,568				79,568			79,568
I-C-02 CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Airport Parkway and Addison Road	14,000			14,853				14,853			14,853
I-C-03 CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Addison Road and Eddie Rickenbacker Drive	8,000			8,487				8,487			8,487
I-C-04 CORPORATE-Landscaping Along Airport Parkway and Eddie Rickenbacker Drive	42,000			44,558				44,558			44,558
I-C-05 CORPORATE-Pocket Park/Art Feature at Airport Parkway and Eddie Rickenbacker Drive	50,000			53,045				53,045			53,045
I-U-01 UNIFORM-Wayfinding Signage (Secondary) at Westgrove Drive and Claire Chennault Street	14,000			14,853				14,853			14,853
I-U-02 UNIFORM-Wayfinding Signage (Monumental-Airport) at Westgrove Drive and Addison Road (was I-V-08)	30,000			31,827				31,827			31,827
I-A-01 ALPHA-Design General Purpose Apron Reconstruction Customs Facility	95,000			100,786				100,786			100,786
I-V-01 VICTOR-Airport Observation Park - Westgrove Drive	250,000			265,225				265,225			265,225
I-A-02 ALPHA-Customs Facility Rehabilitation/Renovation	3,000,000			3,182,700				3,182,700			3,182,700
<b>Total Landside Projects for 2017</b>	<b>\$18,456,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,579,970</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,579,970</b>	<b>\$0</b>	<b>\$0</b>	<b>\$19,579,970</b>
<b>Total All Projects for 2017</b>	<b>\$20,191,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,420,632</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,420,632</b>	<b>\$0</b>	<b>\$0</b>	<b>\$21,420,632</b>

4

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020				Total
<b>Airside Projects - 2018</b>											
I-AOA-12 Construct Taxiway Bravo/Golf and Westside Service Road Improvements	\$6,765,000				\$7,392,298			\$7,392,298			\$7,392,298
I-AOA-13 Construct Access & Security Improvements Phases II/III	940,000				1,027,163			1,027,163			1,027,163
I-AOA-14 Construct Taxilane Uniform Improvements	2,656,000				2,902,283			2,902,283			2,902,283
<b>Total Airside Projects for 2018</b>	<b>\$10,361,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,321,744</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,321,744</b>	<b>\$0</b>	<b>\$0</b>	<b>\$11,321,744</b>
<b>Landside Projects - 2018</b>											
I-M-04 MIKE-Construct Light GA T-Hangars, Taxilane & Auto Access	\$4,947,000				\$5,405,720			\$5,405,720			\$5,405,720
I-M-05 MIKE-Design/Construct Light GA Fueling Facility	150,000				163,909			163,909			163,909
I-M-06 MIKE-Design/Construct Public Use Building	600,000				655,636			655,636			655,636
I-M-07 MIKE-Design/Construct Public Use Auto Parking	150,000				163,909			163,909			163,909
I-M-08 MIKE-Design/Construct Pocket Park (North End)	150,000				163,909			163,909			163,909
I-Q-08 QUEBEC-SE Quadrant Park Features Along Addison Road	650,000				710,273			710,273			710,273
I-A-03 ALPHA-Reconstruct General Purpose Apron Customs Facility	1,968,000				2,150,487			2,150,487			2,150,487
<b>Total Landside Projects for 2018</b>	<b>\$8,615,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,413,843</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,413,843</b>	<b>\$0</b>	<b>\$0</b>	<b>\$9,413,843</b>
<b>Total All Projects for 2018</b>	<b>\$18,976,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,735,588</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,735,588</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,735,588</b>
<b>Airside Projects - 2019</b>											
I-AOA-15 Design/Construct Taxiway Alpha Rejuvenation	\$475,000					\$534,617		\$534,617			\$534,617
-	0					0		0			0
<b>Total Airside Projects for 2019</b>	<b>\$475,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$534,617</b>	<b>\$0</b>	<b>\$534,617</b>	<b>\$0</b>	<b>\$0</b>	<b>\$534,617</b>
<b>Landside Projects - 2019</b>											
I-G-02 GENERAL-Airport Maintenance Facility	\$850,000					\$956,682		\$956,682			\$956,682
I-Q-09 QUEBEC-Restaurant	3,350,000					3,770,455		3,770,455			3,770,455
I-Q-10 QUEBEC-Addison Road Street Lighting - From Westgrove Drive to Lindbergh Drive	525,000					590,892		590,892			590,892
I-C-06 CORPORATE-Lighting Along Airport Parkway and Eddie Rickenbacker Drive	140,000					157,571		157,571			157,571
I-S-01 SIERRA-Design/Construct Redevelopment of A6 with Apron Expansion	3,580,000					4,029,322		4,029,322			4,029,322
I-S-02 SIERRA-Develop Expanded Auto Parking - Jimmy Doolittle Drive	580,000					652,795		652,795			652,795
I-U-03 UNIFORM-Claire Chennault Street Improvements (Widening and Drainage)	1,250,000					1,406,886		1,406,886			1,406,886
I-U-04 UNIFORM-Lighting Along Claire Chennault Street	125,000					140,689		140,689			140,689
I-V-02 VICTOR-Aircraft Storage Hangar/Apron (Million Air Dallas)	4,361,000					4,908,344		4,908,344			4,908,344
<b>Total Landside Projects for 2019</b>	<b>\$14,761,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,613,636</b>	<b>\$0</b>	<b>\$16,613,636</b>	<b>\$0</b>	<b>\$0</b>	<b>\$16,613,636</b>
<b>Total All Projects for 2019</b>	<b>\$15,236,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,148,252</b>	<b>\$0</b>	<b>\$17,148,252</b>	<b>\$0</b>	<b>\$0</b>	<b>\$17,148,252</b>

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020				Total
<b>Airside Projects - 2020</b>											
I-AOA-16 Design Eastside Perimeter Road	\$115,000						\$133,317	\$133,317			\$133,317
-	0						0	0			0
<b>Total Airside Projects for 2020</b>	\$115,000	\$0	\$0	\$0	\$0	\$0	\$133,317	\$133,317	\$0	\$0	\$133,317
<b>Landside Projects - 2020</b>											
I-Q-11 QUEBEC-Collins Hangar Refurbishment	\$2,300,000						\$2,666,330	\$2,666,330			\$2,666,330
I-Q-12 QUEBEC-Acquire Masonic Lodge & Develop Airport Observation Park	850,000						985,383	985,383			985,383
I-S-03 SIERRA-Jimmy Doolittle Drive Realignment	190,000						220,262	220,262			220,262
I-S-04 SIERRA-Wayfinding Signage (Secondary-Multi-Tenant) at Keller Springs Road and Jimmy Doolittle Drive	14,000						16,230	16,230			16,230
I-S-05 SIERRA-Art Features - NTTA Toll Tunnel	30,000						34,778	34,778			34,778
I-S-06 SIERRA-New Small A&P Hangar Along Realigned Jimmy Doolittle Drive	860,000						996,976	996,976			996,976
I-S-07 SIERRA-Lighting Along Jimmy Doolittle Drive	75,000						86,946	86,946			86,946
I-S-08 SIERRA-Landscaping Along Jimmy Doolittle Drive	28,000						32,460	32,460			32,460
<b>Total Landside Projects for 2020</b>	\$4,347,000	\$0	\$0	\$0	\$0	\$0	\$5,039,364	\$5,039,364	\$0	\$0	\$5,039,364
<b>Total All Projects for 2020</b>	\$4,462,000	\$0	\$0	\$0	\$0	\$0	\$5,172,681	\$5,172,681	\$0	\$0	\$5,172,681
<b>Total Phase I Projects</b>	\$68,575,400	\$2,230,700	\$7,704,091	\$21,420,632	\$20,735,588	\$17,148,252	\$5,172,681	\$74,411,944	\$0	\$0	\$74,411,944

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020				Total
<b>Phase II Projects (2021-2025)</b>											
<b>Airside Projects</b>											
II-AOA-17 Construct Eastside Perimeter Road	\$1,384,000							\$0	\$1,727,489		\$1,727,489
II-AOA-18 Design Taxilane Tango Realignment/Apron Expansion	200,000							0	249,637		249,637
II-AOA-19 Construct Taxilane Tango Realignment	1,656,000							0	2,066,995		2,066,995
II-AOA-20 Design Taxiway Bravo Extension to Runway 16 End	827,000							0	1,032,250		1,032,250
II-AOA-21 Design Taxilane Romeo Reconstruction to Correct OFA	20,000							0	24,964		24,964
II-AOA-22 Reconstruct Taxilane Romeo	200,000							0	249,637		249,637
II-AOA-23 EMAS Rehabilitation	65,000							0	81,132		81,132
II-AOA-24 Construct Taxiway Bravo Extension	5,509,000							0	6,876,255		6,876,255
II-AOA-25 Design/Construct Runway 16 Glideslope Relocation	940,000							0	1,173,295		1,173,295
II-AOA-26 AWOS Replacement	125,000							0	156,023		156,023
II-AOA-27 Design Taxiway Reconstruction Bravo (South & Connectors)	450,000							0	561,684		561,684
II-AOA-28 Reconstruct Taxiway Bravo (South End Centerline Offset & Westside Connectors)	11,870,000							0	14,815,964		14,815,964
II-AOA-29 Design/Construct Runway 34 Glideslope Relocation	970,000							0	1,210,740		1,210,740
II-AOA-30 Design Runway 16/34 Structural Overlay	411,200							0	513,254		513,254
<b>Total Airside Projects for 2021-2025</b>	<b>\$24,627,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$30,739,318</b>	<b>\$0</b>	<b>\$30,739,318</b>
<b>Landside Projects</b>											
II-L-01 LIMA-Heliport FBO Hangar	\$1,600,000							\$0	\$1,997,097		\$1,997,097
II-L-02 LIMA-Helipad, Apron, Helo Parking	1,300,000							0	1,622,641		1,622,641
II-L-03 LIMA-Taxilane Connection to Taxiway Bravo	250,000							0	312,046		312,046
II-L-04 LIMA-Auto Parking	65,000							0	81,132		81,132
II-L-05 LIMA-Wayfinding Signage	3,000							0	3,745		3,745
II-N-01 NOVEMBER-Property Acquisition for Taxilane (4.4 acres)	7,350,000							0	9,174,165		9,174,165
II-N-02 NOVEMBER-New Corporate Hangar & Ramp	2,953,000							0	3,685,892		3,685,892
II-N-03 NOVEMBER-Wayfinding Signage (Mult-Tenant Post-Panel) Midway Road & Wiley Post Road	14,000							0	17,475		17,475
II-N-04 NOVEMBER-Landscaping Along Wiley Post Road	\$75,000							0	93,614		93,614
II-N-05 NOVEMBER-Lighting Along Wiley Post Road	92,000							0	114,833		114,833
II-N-06 NOVEMBER-New T-Hangar (19 units, 48' door)	2,306,000							0	2,878,316		2,878,316
II-N-07 NOVEMBER-New A&P Hangar for Light GA	1,124,000							0	1,402,961		1,402,961
II-N-08 NOVEMBER-Light GA Public/Tenant Building & Auto Parking	960,000							0	1,198,258		1,198,258
II-N-09 NOVEMBER-New T-Hangar (18 units, 42' door)	1,500,000							0	1,872,278		1,872,278
II-C-07 CORPORATE-Design/Construct S2 Hangar Redevelopment	3,077,000							0	3,840,667		3,840,667
II-T-01 TANGO-Atlantic FBO Redevelopment	8,040,000							0	10,035,413		10,035,413
II-V-03 VICTOR-Million Air Apron Expansion, Fuel Truck Parking and Auto Overflow Parking	289,000							0	360,726		360,726
II-V-04 VICTOR-Aircraft Storage Hangar (JetPort South)	797,000							0	994,804		994,804
<b>Total Landside Projects for 2021-2025</b>	<b>\$31,795,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$39,686,063</b>	<b>\$0</b>	<b>\$39,686,063</b>
<b>Total Phase II Projects</b>	<b>\$56,422,200</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$70,425,380</b>	<b>\$0</b>	<b>\$70,425,380</b>

**5**

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020				Total
<b>Phase III Projects (2026-2035)</b>											
<b>Airside Projects</b>											
III-AOA-31 Construct Runway 16/34 Structural Overlay	\$2,741,000							\$0		\$4,270,389	\$4,270,389
III-AOA-32 Update Airport Master Plan	300,000							0		467,390	467,390
III-AOA-33 Design Taxiway Alpha Structural Overlay	197,000							0		306,920	306,920
III-AOA-34 Update AGIS Aeronautical Survey	100,000							0		155,797	155,797
III-AOA-35 Construct Taxiway Alpha Structural Overlay	1,314,000							0		2,047,169	2,047,169
III-AOA-36 Replace Rotating Beacon	30,000							0		46,739	46,739
III-AOA-37 Install New Primary Wind Cone	30,000							0		46,739	46,739
III-AOA-38 Install Two Supplementary Wind Cones	30,000							0		46,739	46,739
III-AOA-39 Design/Construct Northside Perimeter Road	1,491,000							0		2,322,929	2,322,929
III-AOA-40 Upgrade Runway 16/34 HIRL LED	330,000							0		514,129	514,129
III-AOA-41 Upgrade PAPI LED	110,000							0		171,376	171,376
III-AOA-42 Rehabilitate Runway Lighting Control System (ALCMS)	120,000							0		186,956	186,956
III-AOA-43 Rehabilitate Taxiway Alpha MITL	650,000							0		1,012,679	1,012,679
III-AOA-44 Rehabilitate Runway 16/34 Guard Light	125,000							0		194,746	194,746
III-AOA-45 Rehabilitate Electrical Vault	350,000							0		545,289	545,289
III-AOA-46 Replace EMAS	4,850,000							0		7,556,142	7,556,142
III-AOA-47 Approach Lighting System Runway 34	1,430,000							0		2,227,893	2,227,893
<b>Total Airside Projects for 2026-2035</b>	<b>\$14,198,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$22,120,021</b>	<b>\$22,120,021</b>
<b>Landside Projects</b>											
III-C-08 CORPORATE-Auto Parking (Former Admin Bldg Site)	\$490,000							\$0		\$763,404	\$763,404
III-S-09 SIERRA-Redevelop Hangars S1/S3 as Larger Corporate Hangar	3,240,000							0		5,047,814	5,047,814
III-T-02 TANGO-Rebuild Hangar Area T-17	2,944,000							0		4,586,656	4,586,656
III-T-03 TANGO-Flight Training Hangar and Ramp	2,879,000							0		4,485,388	4,485,388
III-T-04 TANGO-A&P Hangar and Ramp	2,939,000							0		4,578,866	4,578,866
III-T-05 TANGO-Charter Hangar (West) and Ramp	2,617,000							0		4,077,201	4,077,201
III-T-06 TANGO-Aircraft Storage Hangar and Ramp	2,561,000							0		3,989,955	3,989,955
III-T-07 TANGO-Reconstruct Glenn Curtiss Drive	650,000							0		1,012,679	1,012,679
III-T-08 TANGO-Charter Hangar with Offices (East) and Auto Parking	2,996,000							0		4,667,670	4,667,670
III-T-09 TANGO-Restaurant (Next to Charter Hangar East)	880,000							0		1,371,011	1,371,011
III-T-10 TANGO-Wayfinding Signage (Monumental), Pocket Park at Addison Road and Keller Springs	150,000							0		233,695	233,695
III-T-11 TANGO-Wayfinding Signage at Addison Road and Glenn Curtiss Drive (Secondary-Multi-Tenant)	14,000							0		21,812	21,812
III-T-12 TANGO-Landscaping Along Addison Road North of Keller Springs Boulevard	150,000							0		233,695	233,695
III-T-13 TANGO-Landscaping Along Glenn Curtiss Drive	35,000							0		54,529	54,529
III-T-14 TANGO-Lighting Along Glenn Curtiss Drive	125,000							0		194,746	194,746
III-U-05 UNIFORM-Develop 2 100' x 100' Hangars with Office (Cherry Air)	4,102,000							0		6,390,782	6,390,782
III-U-06 UNIFORM-Develop 200'x120' Hangar with Office (Monarch)	4,079,000							0		6,354,949	6,354,949
III-U-07 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NE)	2,149,000							0		3,348,072	3,348,072
III-U-08 UNIFORM-Develop 165'x100' Hangar (Cavanaugh SE)	2,100,000							0		3,271,732	3,271,732
III-U-09 UNIFORM-Landscaping Along Claire Chennault Street	42,500							0		66,214	66,214
III-U-10 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NW)	2,113,000							0		3,291,985	3,291,985
III-U-11 UNIFORM-Develop 165'x100' Hangar w/ Office (Cavanaugh SW)	4,297,000							0		6,694,586	6,694,586
<b>Total Landside Projects for 2026-2035</b>	<b>\$41,552,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$64,737,441</b>	<b>\$64,737,441</b>
<b>Total Phase III Projects</b>	<b>\$55,750,500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$86,857,462</b>	<b>\$86,857,462</b>
<b>Total Project Costs</b>	<b>\$180,748,100</b>	<b>\$2,230,700</b>	<b>\$7,704,091</b>	<b>\$21,420,632</b>	<b>\$20,735,588</b>	<b>\$17,148,252</b>	<b>\$5,172,681</b>	<b>\$74,411,944</b>	<b>\$70,425,380</b>	<b>\$86,857,462</b>	<b>\$231,694,786</b>

**6**

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-1

**Master Plan Capital Improvement Program  
Estimated Project Costs and Development Schedule**

21-Mar-16

Capital Improvement Program	Funding Schedule									
	Phase I						Phase II 2021-25	Phase III 2026-35	Total Funding	
	2015	2016	2017	2018	2019	2020				Total
<b>Capital Funds Used</b>										
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847	\$64,700,691
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0	500,000
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0	1,900,000
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0	489,321
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368	133,518,297
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738	16,092,137
Net Operating Cash Flow	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440	32,941,637
Funds Available Current Year	2,310,624	7,917,359	20,406,678	20,995,197	16,567,307	6,097,233	74,294,398	77,463,291	98,384,393	250,142,082
Funds Carried Over from Prior Year	2,211,678	2,291,602	2,504,870	1,490,916	1,750,526	1,169,580	2,211,678	2,094,132	9,132,043	2,211,678
Funds Used Current Year	(2,230,700)	(7,704,091)	(21,420,632)	(20,735,588)	(17,148,252)	(5,172,681)	(74,411,944)	(70,425,380)	(86,857,462)	(231,694,786)
Funds Carried Over to Next Year	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973	\$20,658,973

Capital Project Descriptions	2015 Base Year Costs	Estimated Project Costs and Development Schedule									
		Phase I						Phase II 2021-25	Phase III 2026-35	Total Escalated Costs	
		2015	2016	2017	2018	2019	2020				Total
<b>SUMMARY - ALL PROJECTS - ALL PHASES</b>											
<b>Airside Projects</b>											
Phase I Projects	\$15,362,400	\$2,230,700	\$459,071	\$1,840,662	\$11,321,744	\$534,617	\$133,317	\$16,520,110	\$0	\$0	\$16,520,110
Phase II Projects	24,627,200	0	0	0	0	0	0	0	30,739,318	0	30,739,318
Phase III Projects	14,198,000	0	0	0	0	0	0	0	0	22,120,021	22,120,021
<b>Total Airside Projects</b>	<b>\$54,187,600</b>	<b>\$2,230,700</b>	<b>\$459,071</b>	<b>\$1,840,662</b>	<b>\$11,321,744</b>	<b>\$534,617</b>	<b>\$133,317</b>	<b>\$16,520,110</b>	<b>\$30,739,318</b>	<b>\$22,120,021</b>	<b>\$69,379,449</b>
<b>Landside Projects</b>											
LIMA	\$3,218,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,016,661	\$0	\$4,016,661
MIKE	6,411,000	0	0	439,213	6,553,084	0	0	6,992,296	0	0	6,992,296
NOVEMBER	16,374,000	0	0	0	0	0	0	0	20,437,792	0	20,437,792
QUEBEC	25,714,000	0	3,605,000	15,424,425	710,273	4,361,347	3,651,713	27,752,758	0	0	27,752,758
SIERRA	8,597,000	0	0	0	0	4,682,117	1,387,651	6,069,768	0	5,047,814	11,117,582
CORPORATE	7,330,000	0	3,614,270	120,943	0	157,571	0	3,892,784	3,840,667	763,404	8,496,855
TANGO	26,980,000	0	0	0	0	0	0	0	10,035,413	29,507,903	39,543,315
UNIFORM	20,301,500	0	0	46,680	0	1,547,575	0	1,594,254	0	29,418,320	31,012,574
VICTOR	5,697,000	0	0	265,225	0	4,908,344	0	5,173,569	1,355,530	0	6,529,099
GENERAL	875,000	0	25,750	0	0	956,682	0	982,432	0	0	982,432
ALPHA	5,063,000	0	0	3,283,486	2,150,487	0	0	5,433,972	0	0	5,433,972
<b>Total Landside Projects</b>	<b>\$126,560,500</b>	<b>\$0</b>	<b>\$7,245,020</b>	<b>\$19,579,970</b>	<b>\$9,413,843</b>	<b>\$16,613,636</b>	<b>\$5,039,364</b>	<b>\$57,891,833</b>	<b>\$39,686,063</b>	<b>\$64,737,441</b>	<b>\$162,315,337</b>
<b>Total Project Costs</b>	<b>\$180,748,100</b>	<b>\$2,230,700</b>	<b>\$7,704,091</b>	<b>\$21,420,632</b>	<b>\$20,735,588</b>	<b>\$17,148,252</b>	<b>\$5,172,681</b>	<b>\$74,411,944</b>	<b>\$70,425,380</b>	<b>\$86,857,462</b>	<b>\$231,694,786</b>

7

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Phase I Projects (2015-2020)</b>									
<b>Airside Projects - 2015</b>									
I-AOA-01	Construct Taxilane Victor Improvements	\$2,030,000	\$1,827,000					\$203,000	\$2,030,000
I-AOA-02	Design/Coordinate - R/W 33 Localizer Replacement	155,000			0			155,000	155,000
I-AOA-03	Design Westside Ditch/Drainage Improvements	45,700			45,700			0	45,700
<b>Total Airside Projects for 2015</b>		<b>\$2,230,700</b>	<b>\$1,827,000</b>	<b>\$0</b>	<b>\$45,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$358,000</b>	<b>\$2,230,700</b>
<b>Landside Projects - 2015</b>									
-	-	\$0						\$0	\$0
-	-	0						0	0
<b>Total Landside Projects for 2015</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Total All Projects for 2015</b>		<b>\$2,230,700</b>	<b>\$1,827,000</b>	<b>\$0</b>	<b>\$45,700</b>	<b>\$0</b>	<b>\$0</b>	<b>\$358,000</b>	<b>\$2,230,700</b>
<b>Airside Projects - 2016</b>									
I-AOA-04	Construct R/W 33 Localizer Replacement	\$0			\$0			\$0	\$0
I-AOA-05	Design Runway 15/33 & Taxiway Alpha Rejuvenation	15,450	13,905					1,545	15,450
I-AOA-06	Construct Westside Ditch/Drainage Improvements	443,621			443,621			0	443,621
<b>Total Airside Projects for 2016</b>		<b>\$459,071</b>	<b>\$13,905</b>	<b>\$0</b>	<b>\$443,621</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,545</b>	<b>\$459,071</b>
<b>Landside Projects - 2016</b>									
I-Q-01	QUEBEC-Aircraft Storage Hangars	\$3,605,000				\$3,424,750		\$180,250	\$3,605,000
I-C-01	CORPORATE-Design/Construct New Corporate Hangar (Former Owens Location)	3,614,270				3,433,557		180,714	3,614,270
I-G-01	GENERAL-Plan/Design Wayfinding Signage	25,750						25,750	25,750
<b>Total Landside Projects for 2016</b>		<b>\$7,245,020</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,858,307</b>	<b>\$0</b>	<b>\$386,714</b>	<b>\$7,245,020</b>
<b>Total All Projects for 2016</b>		<b>\$7,704,091</b>	<b>\$13,905</b>	<b>\$0</b>	<b>\$443,621</b>	<b>\$6,858,307</b>	<b>\$0</b>	<b>\$388,259</b>	<b>\$7,704,091</b>

8

9

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Airside Projects - 2017</b>									
I-AOA-07	Design Taxiway Bravo/Golf Improvements (MITL, Service Road)	\$641,845	\$577,660					\$64,184	\$641,845
I-AOA-08	Construct Runway 15/33 Rejuvenation & Runway 16/34 Remarking	848,720	763,848					84,872	848,720
I-AOA-09	Install Runway/Roadway Weather Info System (RWIS)	47,741	42,966					4,774	47,741
I-AOA-10	Design Taxilane Uniform Improvements	185,658	167,092					18,566	185,658
I-AOA-11	Design Access & Security Improvements Phases II/III	116,699	105,029					11,670	116,699
<b>Total Airside Projects for 2017</b>		<b>\$1,840,662</b>	<b>\$1,656,595</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$184,066</b>	<b>\$1,840,662</b>
<b>Landside Projects - 2017</b>									
I-M-01	MIKE-Design Light GA T-Hangars, Taxilane & Auto Access	\$429,665				\$408,181		\$21,483	\$429,665
I-M-02	MIKE-Wayfinding Signage at Midway Road & Kellway Circle	6,365				6,047		318	6,365
I-M-03	MIKE-Wayfinding Signage at Kellway Circle & Access Point into Mike Development	3,183				3,024		159	3,183
I-Q-02	QUEBEC-Apron/Ramp/Taxilane	5,266,308				5,002,992		263,315	5,266,308
I-Q-03	QUEBEC-FBO Hangar (200' x 160')	4,031,420				3,829,849		201,571	4,031,420
I-Q-04	QUEBEC-Auto Access/Parking	1,877,793				1,783,903		93,890	1,877,793
I-Q-05	QUEBEC-FBO Office/Commercial Building	4,137,510				3,930,635		206,876	4,137,510
I-Q-06	QUEBEC-Wayfinding Signage (Monumental) Addison Road South End of Airport	31,827				30,236		1,591	31,827
I-Q-07	QUEBEC-Wayfinding Signage (Monumental) at Addison Road and Addison Circle	79,568				75,589		3,978	79,568
I-C-02	CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Airport Parkway and Addison Road	14,853				14,110		743	14,853
I-C-03	CORPORATE-Wayfinding Signage (Secondary-Multi-Tenant) at Addison Road and Eddie Rickenbacker Drive	8,487				8,063		424	8,487
I-C-04	CORPORATE-Landscaping Along Airport Parkway and Eddie Rickenbacker Drive	44,558				42,330		2,228	44,558
I-C-05	CORPORATE-Pocket Park/Art Feature at Airport Parkway and Eddie Rickenbacker Drive	53,045					53,045	0	53,045
I-U-01	UNIFORM-Wayfinding Signage (Secondary) at Westgrove Drive and Claire Chennault Street	14,853				14,110		743	14,853
I-U-02	UNIFORM-Wayfinding Signage (Monumental-Airport) at Westgrove Drive and Addison Road (was I-V-08)	31,827				30,236		1,591	31,827
I-A-01	ALPHA-Design General Purpose Apron Reconstruction Customs Facility	100,786	90,707					10,079	100,786
I-V-01	VICTOR-Airport Observation Park - Westgrove Drive	265,225					265,225	0	265,225
I-A-02	ALPHA-Customs Facility Rehabilitation/Renovation	3,182,700		500,000			2,682,700	0	3,182,700
<b>Total Landside Projects for 2017</b>		<b>\$19,579,970</b>	<b>\$90,707</b>	<b>\$500,000</b>	<b>\$0</b>	<b>\$15,179,304</b>	<b>\$3,000,970</b>	<b>\$808,989</b>	<b>\$19,579,970</b>
<b>Total All Projects for 2017</b>		<b>\$21,420,632</b>	<b>\$1,747,302</b>	<b>\$500,000</b>	<b>\$0</b>	<b>\$15,179,304</b>	<b>\$3,000,970</b>	<b>\$993,055</b>	<b>\$21,420,632</b>

10

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b><u>Airside Projects - 2018</u></b>									
I-AOA-12	Construct Taxiway Bravo/Golf and Westside Service Road Improvements	\$7,392,298	\$6,653,068					\$739,230	\$7,392,298
I-AOA-13	Construct Access & Security Improvements Phases II/III	1,027,163	924,447					102,716	1,027,163
I-AOA-14	Construct Taxilane Uniform Improvements	2,902,283	2,612,055					290,228	2,902,283
<b>Total Airside Projects for 2018</b>		<b>\$11,321,744</b>	<b>\$10,189,570</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,132,174</b>	<b>\$11,321,744</b>
<b><u>Landside Projects - 2018</u></b>									
I-M-04	MIKE-Construct Light GA T-Hangars, Taxilane & Auto Access	\$5,405,720				\$5,135,434		\$270,286	\$5,405,720
I-M-05	MIKE-Design/Construct Light GA Fueling Facility	163,909				155,714		8,195	163,909
I-M-06	MIKE-Design/Construct Public Use Building	655,636				622,854		32,782	655,636
I-M-07	MIKE-Design/Construct Public Use Auto Parking	163,909				155,714		8,195	163,909
I-M-08	MIKE-Design/Construct Pocket Park (North End)	163,909				155,714		8,195	163,909
I-Q-08	QUEBEC-SE Quadrant Park Features Along Addison Road	710,273				674,759		35,514	710,273
I-A-03	ALPHA-Reconstruct General Purpose Apron Customs Facility	2,150,487	1,935,438					215,049	2,150,487
<b>Total Landside Projects for 2018</b>		<b>\$9,413,843</b>	<b>\$1,935,438</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,900,189</b>	<b>\$0</b>	<b>\$578,216</b>	<b>\$9,413,843</b>
<b>Total All Projects for 2018</b>		<b>\$20,735,588</b>	<b>\$12,125,008</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,900,189</b>	<b>\$0</b>	<b>\$1,710,391</b>	<b>\$20,735,588</b>
<b><u>Airside Projects - 2019</u></b>									
I-AOA-15	Design/Construct Taxiway Alpha Rejuvenation	\$534,617	\$481,155					\$53,462	\$534,617
-	-	0						0	0
<b>Total Airside Projects for 2019</b>		<b>\$534,617</b>	<b>\$481,155</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$53,462</b>	<b>\$534,617</b>
<b><u>Landside Projects - 2019</u></b>									
I-G-02	GENERAL-Airport Maintenance Facility	\$956,682						\$956,682	\$956,682
I-Q-09	QUEBEC-Restaurant	3,770,455				3,770,455		0	3,770,455
I-Q-10	QUEBEC-Addison Road Street Lighting - From Westgrove Drive to Lindbergh Drive	590,892					590,892	0	590,892
I-C-06	CORPORATE-Lighting Along Airport Parkway and Eddie Rickenbacker Drive	157,571				149,693		7,879	157,571
I-S-01	SIERRA-Design/Construct Redevelopment of A6 with Apron Expansion	4,029,322				3,827,855		201,466	4,029,322
I-S-02	SIERRA-Develop Expanded Auto Parking - Jimmy Doolittle Drive	652,795				620,155		32,640	652,795
I-U-03	UNIFORM-Claire Chennault Street Improvements (Widening and Drainage)	1,406,886					1,406,886	0	1,406,886
I-U-04	UNIFORM-Lighting Along Claire Chennault Street	140,689					140,689	0	140,689
I-V-02	VICTOR-Aircraft Storage Hangar/Apron (Million Air Dallas)	4,908,344				4,908,344		0	4,908,344
<b>Total Landside Projects for 2019</b>		<b>\$16,613,636</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$13,276,502</b>	<b>\$2,138,467</b>	<b>\$1,198,667</b>	<b>\$16,613,636</b>
<b>Total All Projects for 2019</b>		<b>\$17,148,252</b>	<b>\$481,155</b>	<b>\$0</b>	<b>\$0</b>	<b>\$13,276,502</b>	<b>\$2,138,467</b>	<b>\$1,252,129</b>	<b>\$17,148,252</b>

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>		<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Airside Projects - 2020</b>									
I-AOA-16	Design Eastside Perimeter Road	\$133,317	\$66,658					\$66,658	\$133,317
-	-	0						0	0
	<b>Total Airside Projects for 2020</b>	\$133,317	\$66,658	\$0	\$0	\$0	\$0	\$66,658	\$133,317
<b>Landside Projects - 2020</b>									
I-Q-11	QUEBEC-Collins Hangar Refurbishment	\$2,666,330				\$2,666,330		\$0	\$2,666,330
I-Q-12	QUEBEC-Acquire Masonic Lodge & Develop Airport Observation Park	985,383	394,153				591,230	0	985,383
I-S-03	SIERRA-Jimmy Doolittle Drive Realignment	220,262					220,262	0	220,262
I-S-04	SIERRA-Wayfinding Signage (Secondary-Multi-Tenant) at Keller Springs Road and Jimmy Doolittle Drive	16,230					16,230	0	16,230
I-S-05	SIERRA-Art Features - NTTA Toll Tunnel	34,778					34,778	0	34,778
I-S-06	SIERRA-New Small A&P Hangar Along Realigned Jimmy Doolittle Drive	996,976				947,127		49,849	996,976
I-S-07	SIERRA-Lighting Along Jimmy Doolittle Drive	86,946					86,946	0	86,946
I-S-08	SIERRA-Landscaping Along Jimmy Doolittle Drive	32,460					32,460	0	32,460
	<b>Total Landside Projects for 2020</b>	\$5,039,364	\$394,153	\$0	\$0	\$3,613,457	\$981,905	\$49,849	\$5,039,364
	<b>Total All Projects for 2020</b>	\$5,172,681	\$460,811	\$0	\$0	\$3,613,457	\$981,905	\$116,507	\$5,172,681
<b>Total Phase I Projects</b>		\$74,411,944	\$16,655,182	\$500,000	\$489,321	\$45,827,758	\$6,121,342	\$4,818,340	\$74,411,944

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>	<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Phase II Projects (2021-2025)</b>								
<b>Airside Projects</b>								
II-AOA-17 Construct Eastside Perimeter Road	\$1,727,489	\$863,744					\$863,744	\$1,727,489
II-AOA-18 Design Taxilane Tango Realignment/Apron Expansion	249,637	224,673					24,964	249,637
II-AOA-19 Construct Taxilane Tango Realignment	2,066,995	1,860,296					206,700	2,066,995
II-AOA-20 Design Taxiway Bravo Extension to Runway 16 End	1,032,250	929,025					103,225	1,032,250
II-AOA-21 Design Taxilane Romeo Reconstruction to Correct OFA	24,964	22,467					2,496	24,964
II-AOA-22 Reconstruct Taxilane Romeo	249,637	224,673					24,964	249,637
II-AOA-23 EMAS Rehabilitation	81,132	73,019					8,113	81,132
II-AOA-24 Construct Taxiway Bravo Extension	6,876,255	6,188,629					687,625	6,876,255
II-AOA-25 Design/Construct Runway 16 Glideslope Relocation	1,173,295	1,055,965					117,329	1,173,295
II-AOA-26 AWOS Replacement	156,023	117,017					39,006	156,023
II-AOA-27 Design Taxiway Reconstruction Bravo (South & Connectors)	561,684	505,515					56,168	561,684
II-AOA-28 Reconstruct Taxiway Bravo (South End Centerline Offset & Westside Connectors)	14,815,964	13,334,367					1,481,596	14,815,964
II-AOA-29 Design/Construct Runway 34 Glideslope Relocation	1,210,740	1,089,666					121,074	1,210,740
II-AOA-30 Design Runway 16/34 Structural Overlay	513,254	461,929					51,325	513,254
<b>Total Airside Projects for 2021-2025</b>	<b>\$30,739,318</b>	<b>\$26,950,987</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,788,331</b>	<b>\$30,739,318</b>
<b>Landside Projects</b>								
II-L-01 LIMA-Heliport FBO Hangar	\$1,997,097				\$1,897,242		\$99,855	\$1,997,097
II-L-02 LIMA-Helipad, Apron, Helo Parking	1,622,641				1,541,509		81,132	1,622,641
II-L-03 LIMA-Taxilane Connection to Taxiway Bravo	312,046	280,842					31,205	312,046
II-L-04 LIMA-Auto Parking	81,132				77,075		4,057	81,132
II-L-05 LIMA-Wayfinding Signage	3,745				3,557		187	3,745
II-N-01 NOVEMBER-Property Acquisition for Taxilane (4.4 acres)	9,174,165	1,834,833				7,339,332	0	9,174,165
II-N-02 NOVEMBER-New Corporate Hangar & Ramp	3,685,892				3,501,598		184,295	3,685,892
II-N-03 NOVEMBER-Wayfinding Signage (Multi-Tenant Post-Panel) Midway Road & Wiley Post Road	17,475				16,601		874	17,475
II-N-04 NOVEMBER-Landscaping Along Wiley Post Road	93,614				88,933		4,681	93,614
II-N-05 NOVEMBER-Lighting Along Wiley Post Road	114,833				109,091		5,742	114,833
II-N-06 NOVEMBER-New T-Hangar (19 units, 48' door)	2,878,316				2,734,400		143,916	2,878,316
II-N-07 NOVEMBER-New A&P Hangar for Light GA	1,402,961				1,332,813		70,148	1,402,961
II-N-08 NOVEMBER-Light GA Public/Tenant Building & Auto Parking	1,198,258				1,138,345		59,913	1,198,258
II-N-09 NOVEMBER-New T-Hangar (18 units, 42' door)	1,872,278				1,778,665		93,614	1,872,278
II-C-07 CORPORATE-Design/Construct S2 Hangar Redevelopment	3,840,667				3,648,634		192,033	3,840,667
II-T-01 TANGO-Atlantic FBO Redevelopment	10,035,413				9,533,642		501,771	10,035,413
II-V-03 VICTOR-Million Air Apron Expansion, Fuel Truck Parking and Auto Overflow Parking	360,726					360,726	0	360,726
II-V-04 VICTOR-Aircraft Storage Hangar (JetPort South)	994,804				945,064		49,740	994,804
<b>Total Landside Projects for 2021-2025</b>	<b>\$39,686,063</b>	<b>\$2,115,675</b>	<b>\$0</b>	<b>\$0</b>	<b>\$28,347,170</b>	<b>\$7,700,057</b>	<b>\$1,523,161</b>	<b>\$39,686,063</b>
<b>Total Phase II Projects</b>	<b>\$70,425,380</b>	<b>\$29,066,661</b>	<b>\$0</b>	<b>\$0</b>	<b>\$28,347,170</b>	<b>\$7,700,057</b>	<b>\$5,311,492</b>	<b>\$70,425,380</b>

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

<b>Capital Improvement Projects</b>	<b>Total Escalated Costs</b>	<b>TxDOT AIP Block Grants</b>	<b>TxDOT Aviation Div</b>	<b>Other Capital</b>	<b>Private 3rd Party Financing</b>	<b>Other Unidentified Funding</b>	<b>Cash Reserves/ Net Revenues</b>	<b>Total Funding</b>
<b>Phase III Projects (2026-2035)</b>								
<b>Airside Projects</b>								
III-AOA-31 Construct Runway 16/34 Structural Overlay	\$4,270,389	\$3,843,350					\$427,039	\$4,270,389
III-AOA-32 Update Airport Master Plan	467,390	420,651					46,739	467,390
III-AOA-33 Design Taxiway Alpha Structural Overlay	306,920	276,228					30,692	306,920
III-AOA-34 Update AGIS Aeronautical Survey	155,797	140,217					15,580	155,797
III-AOA-35 Construct Taxiway Alpha Structural Overlay	2,047,169	1,842,452					204,717	2,047,169
III-AOA-36 Replace Rotating Beacon	46,739	42,065					4,674	46,739
III-AOA-37 Install New Primary Wind Cone	46,739	42,065					4,674	46,739
III-AOA-38 Install Two Supplementary Wind Cones	46,739	42,065					4,674	46,739
III-AOA-39 Design/Construct Northside Perimeter Road	2,322,929	1,161,465					1,161,465	2,322,929
III-AOA-40 Upgrade Runway 16/34 HIRL LED	514,129	462,716					51,413	514,129
III-AOA-41 Upgrade PAPI LED	171,376	154,239					17,138	171,376
III-AOA-42 Rehabilitate Runway Lighting Control System (ALCMS)	186,956	168,260					18,696	186,956
III-AOA-43 Rehabilitate Taxiway Alpha MITL	1,012,679	911,411					101,268	1,012,679
III-AOA-44 Rehabilitate Runway 16/34 Guard Light	194,746	175,271					19,475	194,746
III-AOA-45 Rehabilitate Electrical Vault	545,289	490,760					54,529	545,289
III-AOA-46 Replace EMAS	7,556,142	6,800,528					755,614	7,556,142
III-AOA-47 Approach Lighting System Runway 34	2,227,893	2,005,104					222,789	2,227,893
<b>Total Airside Projects for 2026-2035</b>	<b>\$22,120,021</b>	<b>\$18,978,847</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,141,174</b>	<b>\$22,120,021</b>
<b>Landside Projects</b>								
III-C-08 CORPORATE-Auto Parking (Former Admin Bldg Site)	\$763,404					\$763,404	\$0	\$763,404
III-S-09 SIERRA-Redevelop Hangars S1/S3 as Larger Corporate Hangar	5,047,814				4,795,424		252,391	5,047,814
III-T-02 TANGO-Rebuild Hangar Area T-17	4,586,656				4,357,323		229,333	4,586,656
III-T-03 TANGO-Flight Training Hangar and Ramp	4,485,388				4,261,119		224,269	4,485,388
III-T-04 TANGO-A&P Hangar and Ramp	4,578,866				4,349,923		228,943	4,578,866
III-T-05 TANGO-Charter Hangar (West) and Ramp	4,077,201				3,873,341		203,860	4,077,201
III-T-06 TANGO-Aircraft Storage Hangar and Ramp	3,989,955				3,790,457		199,498	3,989,955
III-T-07 TANGO-Reconstruct Glenn Curtiss Drive	1,012,679					1,012,679	0	1,012,679
III-T-08 TANGO-Charter Hangar with Offices (East) and Auto Parking	4,667,670				4,434,287		233,384	4,667,670
III-T-09 TANGO-Restaurant (Next to Charter Hangar East)	1,371,011				1,302,461		68,551	1,371,011
III-T-10 TANGO-Wayfinding Signage (Monumental), Pocket Park at Addison Road and Keller Springs	233,695					233,695	0	233,695
III-T-11 TANGO-Wayfinding Signage at Addison Road and Glenn Curtiss Drive (Secondary-Multi-Tenant)	21,812				20,721		1,091	21,812
III-T-12 TANGO-Landscaping Along Addison Road North of Keller Springs Boulevard	233,695				222,010		11,685	233,695
III-T-13 TANGO-Landscaping Along Glenn Curtiss Drive	54,529				51,802		2,726	54,529
III-T-14 TANGO-Lighting Along Glenn Curtiss Drive	194,746					194,746	0	194,746
III-U-05 UNIFORM-Develop 2 100' x 100' Hangars with Office (Cherry Air)	6,390,782				6,071,243		319,539	6,390,782
III-U-06 UNIFORM-Develop 200'x120' Hangar with Office (Monarch)	6,354,949				6,037,202		317,747	6,354,949
III-U-07 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NE)	3,348,072				3,180,668		167,404	3,348,072
III-U-08 UNIFORM-Develop 165'x100' Hangar (Cavanaugh SE)	3,271,732				3,108,145		163,587	3,271,732
III-U-09 UNIFORM-Landscaping Along Claire Chennault Street	66,214					66,214	0	66,214
III-U-10 UNIFORM-Develop 165'x100' Hangar (Cavanaugh NW)	3,291,985				3,127,386		164,599	3,291,985
III-U-11 UNIFORM-Develop 165'x100' Hangar w/ Office (Cavanaugh SW)	6,694,586				6,359,857		334,729	6,694,586
<b>Total Landside Projects for 2026-2035</b>	<b>\$64,737,441</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$59,343,368</b>	<b>\$2,270,738</b>	<b>\$3,123,335</b>	<b>\$64,737,441</b>
<b>Total Phase III Projects</b>	<b>\$86,857,462</b>	<b>\$18,978,847</b>	<b>\$0</b>	<b>\$0</b>	<b>\$59,343,368</b>	<b>\$2,270,738</b>	<b>\$6,264,509</b>	<b>\$86,857,462</b>
<b>Total Project Costs</b>	<b>\$231,694,786</b>	<b>\$64,700,691</b>	<b>\$500,000</b>	<b>\$489,321</b>	<b>\$133,518,297</b>	<b>\$16,092,137</b>	<b>\$16,394,341</b>	<b>\$231,694,786</b>

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-2

**Master Plan Capital Improvement Program  
Projected Capital Funding Sources**

21-Mar-16

Capital Improvement Projects	Total Escalated Costs	TxDOT AIP Block Grants	TxDOT Aviation Div	Other Capital	Private 3rd Party Financing	Other Unidentified Funding	Cash Reserves/ Net Revenues	Total Funding
<b>SUMMARY - ALL PROJECTS - ALL PHASES</b>								
<b>Airside Projects</b>								
Phase I Projects	\$16,520,110	\$14,234,884	\$0	\$489,321	\$0	\$0	\$1,795,906	\$16,520,110
Phase II Projects	30,739,318	26,950,987	0	0	0	0	3,788,331	30,739,318
Phase III Projects	22,120,021	18,978,847	0	0	0	0	3,141,174	22,120,021
<b>Total Airside Projects</b>	<b>\$69,379,449</b>	<b>\$60,164,718</b>	<b>\$0</b>	<b>\$489,321</b>	<b>\$0</b>	<b>\$0</b>	<b>\$8,725,410</b>	<b>\$69,379,449</b>
<b>Landside Projects</b>								
LIMA	\$4,016,661	\$280,842	\$0	\$0	\$3,519,384	\$0	\$216,435	\$4,016,661
MIKE	6,992,296	0	0	0	6,642,682	0	349,615	6,992,296
NOVEMBER	20,437,792	1,834,833	0	0	10,700,446	7,339,332	563,181	20,437,792
QUEBEC	27,752,758	394,153	0	0	25,189,498	1,182,122	986,985	27,752,758
SIERRA	11,117,582	0	0	0	10,190,561	390,675	536,345	11,117,582
CORPORATE	8,496,855	0	0	0	7,296,386	816,449	384,020	8,496,855
TANGO	39,543,315	0	0	0	36,197,086	1,441,120	1,905,110	39,543,315
UNIFORM	31,012,574	0	0	0	27,928,846	1,613,788	1,469,939	31,012,574
VICTOR	6,529,099	0	0	0	5,853,408	625,951	49,740	6,529,099
GENERAL	982,432	0	0	0	0	0	982,432	982,432
ALPHA	5,433,972	2,026,145	500,000	0	0	2,682,700	225,127	5,433,972
<b>Total Landside Projects</b>	<b>\$162,315,337</b>	<b>\$4,535,973</b>	<b>\$500,000</b>	<b>\$0</b>	<b>\$133,518,297</b>	<b>\$16,092,137</b>	<b>\$7,668,931</b>	<b>\$162,315,337</b>
<b>Total Project Costs</b>	<b>\$231,694,786</b>	<b>\$64,700,691</b>	<b>\$500,000</b>	<b>\$489,321</b>	<b>\$133,518,297</b>	<b>\$16,092,137</b>	<b>\$16,394,341</b>	<b>\$231,694,786</b>

11

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-3

**Master Plan Capital Improvement Program  
Actual, Estimated, Budgeted and Projected Operations & Maintenance Expenses**

21-Mar-16

Operations & Maintenance Expenses	Actual 2012	Actual 2013	Actual 2014	Phase I						Phase II Projected 2021-25	Phase III Projected 2026-35	
				Estimate 2015	Budget 2016	Projected						Total
						2017	2018	2019	2020			
Operating Expenses:												
Town Administration	\$847,008	\$1,147,259	\$1,038,763	\$1,155,423	\$707,212	\$728,430	\$750,290	\$772,800	\$795,980	\$4,910,135	\$4,225,158	\$9,815,360
RAMP Grant Expense	92,784	101,860	100,000	100,000	100,000	100,000	100,000	100,000	100,000	600,000	500,000	999,994
Operations Expense	1,845,839	1,837,517	2,453,851	2,426,776	3,004,748	3,049,819	3,095,567	3,142,000	3,189,130	17,908,040	16,677,718	37,321,811
Operator Service Contract	312,008	349,849	335,592	396,971	413,301	416,009	427,582	439,484	451,727	2,545,074	3,313,963	5,944,411
<b>Total Operating Expenses</b>	<b>\$3,097,639</b>	<b>\$3,436,485</b>	<b>\$3,928,206</b>	<b>\$4,079,170</b>	<b>\$4,225,261</b>	<b>\$4,294,258</b>	<b>\$4,373,439</b>	<b>\$4,454,284</b>	<b>\$4,536,837</b>	<b>\$25,963,249</b>	<b>\$24,716,839</b>	<b>\$54,081,576</b>
Annual Growth Rate	-	10.9%	14.3%	3.8%	3.6%	1.6%	1.8%	1.8%	1.9%	2.4%	2.5%	1.2%
Other Capital Outlays Not Included in the CIP:												
Building Capital Repairs	\$0	\$0	\$0	\$0	\$0	\$491,887	\$328,526	\$658,214	\$356,190	\$1,834,817	\$6,095,387	\$5,682,268
Minor Capital Projects	92,840	108,918	0	0	0	160,000	250,000	60,000	0	470,000	0	0
O&M Equipment	0	0	0	110,000	60,000	36,050	37,132	38,245	39,393	320,820	215,416	539,227
<b>Total Other Capital Outlays Not Included in the CIP</b>	<b>\$92,840</b>	<b>\$108,918</b>	<b>\$0</b>	<b>\$110,000</b>	<b>\$60,000</b>	<b>\$687,937</b>	<b>\$615,658</b>	<b>\$756,459</b>	<b>\$395,583</b>	<b>\$2,625,637</b>	<b>\$6,310,803</b>	<b>\$6,221,495</b>
Annual Growth Rate	-	17.3%	-100.0%	-	-45.5%	1046.6%	-10.5%	22.9%	-47.7%	-	32.6%	-27.9%
<b>Total Operations &amp; Maintenance Expenses</b>	<b>\$3,190,479</b>	<b>\$3,545,403</b>	<b>\$3,928,206</b>	<b>\$4,189,170</b>	<b>\$4,285,261</b>	<b>\$4,982,195</b>	<b>\$4,989,096</b>	<b>\$5,210,743</b>	<b>\$4,932,420</b>	<b>\$28,588,885</b>	<b>\$31,027,642</b>	<b>\$60,303,072</b>
Annual Growth Rate	-	11.1%	10.8%	6.6%	2.3%	16.3%	0.1%	4.4%	-5.3%	3.9%	6.5%	-1.4%

12

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-4

**Master Plan Capital Improvement Program  
Actual, Estimated, Budgeted and Projected Operating Revenues**

21-Mar-16

Revenues	Actual 2012	Actual 2013	Actual 2014	Phase I						Phase II Projected 2021-25	Phase III Projected 2026-35	
				Estimate 2015	Budget 2016	Projected						Total
						2017	2018	2019	2020			
Operating Revenues:												
Fuel Flowage Fees	\$717,667	\$758,758	\$784,286	\$829,044	\$929,760	\$948,355	\$1,059,322	\$1,130,509	\$1,212,119	\$6,109,109	\$7,180,559	\$17,300,258
Gross Potential Rentals	3,551,536	3,665,520	3,930,283	4,252,449	4,505,380	4,560,203	4,547,741	5,334,787	5,347,437	28,547,997	37,586,500	62,406,158
Less Vacancy Allowance	0	0	0	0	(176,911)	(179,064)	(178,574)	(209,479)	(209,976)	(954,004)	(1,475,894)	(2,450,478)
User Fees	(13,656)	81,152	98,739	73,867	161,250	163,669	166,124	168,616	171,145	904,670	895,011	2,002,877
<b>Total Operating Revenues</b>	<b>\$4,255,547</b>	<b>\$4,505,430</b>	<b>\$4,813,308</b>	<b>\$5,155,360</b>	<b>\$5,419,479</b>	<b>\$5,493,163</b>	<b>\$5,594,612</b>	<b>\$6,424,433</b>	<b>\$6,520,725</b>	<b>\$34,607,773</b>	<b>\$44,186,176</b>	<b>\$79,258,816</b>
Annual Growth Rate	-	5.9%	6.8%	7.1%	5.1%	1.4%	1.8%	14.8%	1.5%	5.2%	7.9%	-1.0%
Non-Operating Income:												
TxDOT Operating Grants	\$0	\$0	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$300,000	\$250,000	\$500,000
Interest Earnings and Other	529	245	5,000	5,000	5,000	5,150	5,300	5,460	5,620	31,530	30,500	77,000
<b>Total Non-Operating Income</b>	<b>\$529</b>	<b>\$245</b>	<b>\$55,000</b>	<b>\$55,000</b>	<b>\$55,000</b>	<b>\$55,150</b>	<b>\$55,300</b>	<b>\$55,460</b>	<b>\$55,620</b>	<b>\$331,530</b>	<b>\$280,500</b>	<b>\$577,000</b>
<b>Total Revenues</b>	<b>\$4,256,076</b>	<b>\$4,505,675</b>	<b>\$4,868,308</b>	<b>\$5,210,360</b>	<b>\$5,474,479</b>	<b>\$5,548,313</b>	<b>\$5,649,912</b>	<b>\$6,479,893</b>	<b>\$6,576,345</b>	<b>\$34,939,303</b>	<b>\$44,466,676</b>	<b>\$79,835,816</b>
Annual Growth Rate	-	5.9%	8.0%	7.0%	5.1%	1.3%	1.8%	14.7%	1.5%	5.1%	7.8%	-1.0%

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**ADDISON AIRPORT (ADS)  
Town of Addison, Texas**

ADSMP7a.123

Schedule 7-5

**Master Plan Capital Improvement Program  
Financial Plan Summary  
Estimated, Budgetd and Projected Net Revenues, Capital Funding, Capital Expenditures**

21-Mar-16

Operating/Capital Cash Flow	Phase I						Phase II Projected 2021-25	Phase III Projected 2026-35	
	Estimate	Budget	Projected						Total
	2015	2016	2017	2018	2019	2020			
<b><u>Operating Cash Flow</u></b>									
Revenues:									
Operating Revenues	\$5,155,360	\$5,419,479	\$5,493,163	\$5,594,612	\$6,424,433	\$6,520,725	\$34,607,773	\$44,186,176	\$79,258,816
Non-Operating Income	55,000	55,000	55,150	55,300	55,460	55,620	331,530	280,500	577,000
Total Revenues	\$5,210,360	\$5,474,479	\$5,548,313	\$5,649,912	\$6,479,893	\$6,576,345	\$34,939,303	\$44,466,676	\$79,835,816
Operations & Maintenance Expenses	(4,189,170)	(4,285,261)	(4,982,195)	(4,989,096)	(5,210,743)	(4,932,420)	(28,588,885)	(31,027,642)	(60,303,072)
Net Revenue Before Debt Service	\$1,021,190	\$1,189,218	\$566,118	\$660,816	\$1,269,149	\$1,643,925	\$6,350,417	\$13,439,034	\$19,532,744
Less Existing Debt Service:									
GO Refunding Bonds AMT Series 2014	(366,300)	(367,875)	(369,400)	(375,400)	(380,375)	(383,800)	(2,243,150)	0	0
Combo Tax and Revenue COBs, Series 2013	(216,966)	(219,816)	(217,616)	(215,416)	(217,591)	(219,066)	(1,306,473)	(1,089,631)	(1,741,304)
Total Existing Debt Service	(583,266)	(587,691)	(587,016)	(590,816)	(597,966)	(602,866)	(3,549,623)	(1,089,631)	(1,741,304)
Total Net Operating Cash Flow Available For Capital Expenditures	437,924	601,527	(20,898)	70,000	671,183	1,041,059	2,800,795	12,349,402	17,791,440
<b><u>Capital Cash Flow</u></b>									
Beginning Cash Balance	\$2,211,678	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,211,678	\$2,094,132	\$9,132,043
Other Capital Funding Sources:									
TxDOT AIP Block Grants	\$1,827,000	\$13,905	\$1,747,302	\$12,125,008	\$481,155	\$460,811	\$16,655,182	\$29,066,661	\$18,978,847
TxDOT Aviation Division	0	0	500,000	0	0	0	500,000	0	0
Land Purchase Reimbursement	0	0	0	1,900,000	0	0	1,900,000	0	0
Other Capital	45,700	443,621	0	0	0	0	489,321	0	0
Private Third Party Financing	0	6,858,307	15,179,304	6,900,189	13,276,502	3,613,457	45,827,758	28,347,170	59,343,368
Other Unidentified Funding	0	0	3,000,970	0	2,138,467	981,905	6,121,342	7,700,057	2,270,738
Total Other Capital Funding Sources	\$1,872,700	\$7,315,833	\$20,427,576	\$20,925,197	\$15,896,124	\$5,056,174	\$71,493,603	\$65,113,889	\$80,592,953
Total Funds Available for Capital Expenditures	\$4,522,302	\$10,208,961	\$22,911,548	\$22,486,113	\$18,317,832	\$7,266,813	\$76,506,076	\$79,557,423	\$107,516,436
Capital Improvement Program Expenditures	2,230,700	7,704,091	21,420,632	20,735,588	17,148,252	5,172,681	74,411,944	70,425,380	86,857,462
Ending Cash Balance	\$2,291,602	\$2,504,870	\$1,490,916	\$1,750,526	\$1,169,580	\$2,094,132	\$2,094,132	\$9,132,043	\$20,658,973

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**Appendix J**  
**Airport Layout Plan**

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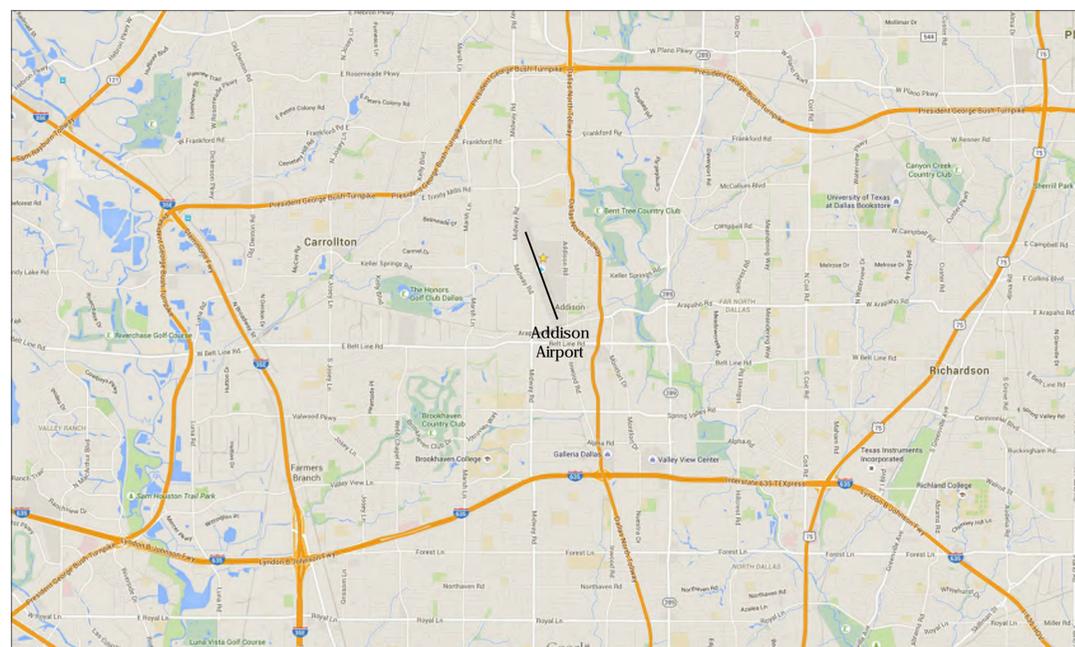
# Airport Layout Plan

Addison Airport  
Addison, Texas

June, 2016



Location Map



Vicinity Map

SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
<b>AIRPORT LAYOUT DRAWING</b>	
1	AIRPORT LAYOUT DRAWING
<b>INNER PORTION OF THE APPROACH SURFACE DRAWINGS</b>	
2	IPASD RUNWAY 15
3	IPASD RUNWAY 33
<b>TERMINAL AREA DRAWINGS</b>	
4	SOUTHEAST TERMINAL AREA DRAWING
5	EAST CENTRAL TERMINAL AREA DRAWING
6	NORTHEAST TERMINAL AREA DRAWING
7	SOUTHWEST TERMINAL AREA DRAWING
8	WEST CENTRAL TERMINAL AREA DRAWING
9	NORTHWEST TERMINAL AREA DRAWING
<b>LAND USE AND UTILITIES DRAWING</b>	
10	LAND USE AND UTILITIES DRAWING
<b>AIRPORT PROPERTY MAP DRAWING</b>	
11	AIRPORT PROPERTY MAP

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RUNWAY END COORDINATES AND ELEVATIONS			
RUNWAY END	LATITUDE	LONGITUDE	ELEVATION
EXISTING END OF RWY 15	32°58'40.23" N	96°50'25.85" W	636.7'
DISPLACED THRESHOLD OF RWY 15	32°58'31.14" N	96°50'21.88" W	633.5'
EXISTING END OF RWY 33	32°57'33.36" N	96°49'56.62" W	635.9'
DISPLACED THRESHOLD OF RWY 33	32°57'40.53" N	96°49'59.75" W	639.0'

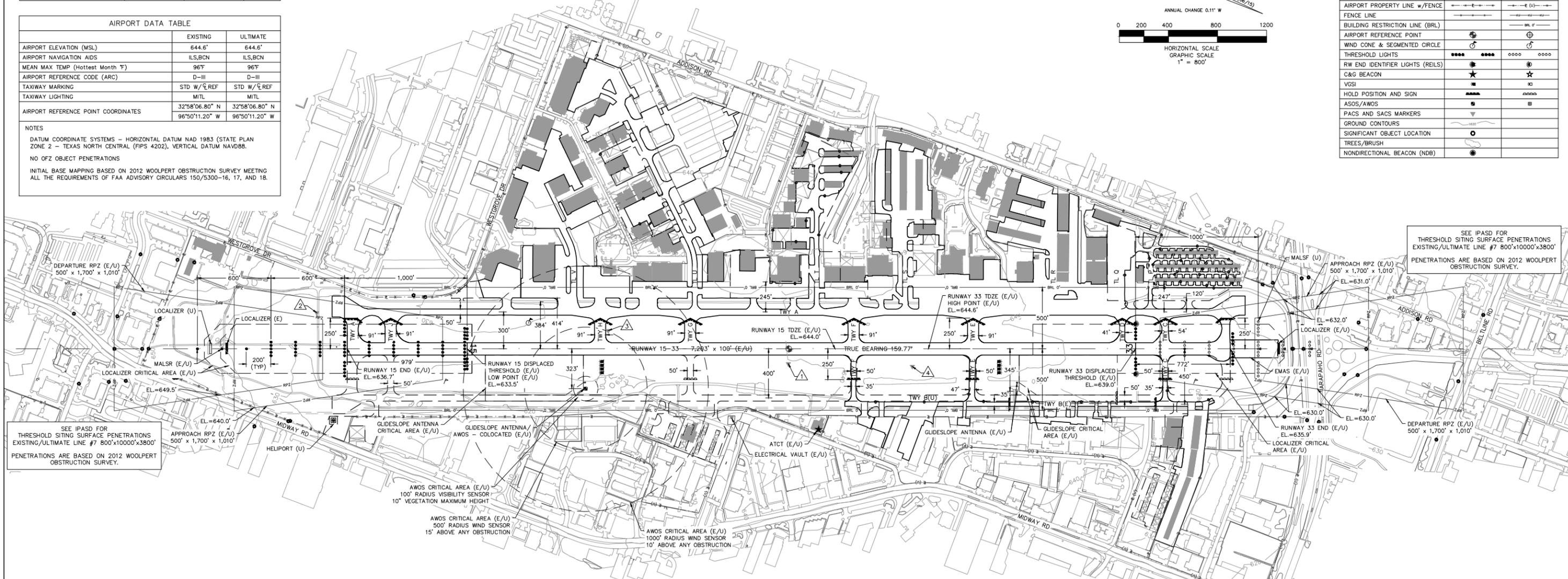
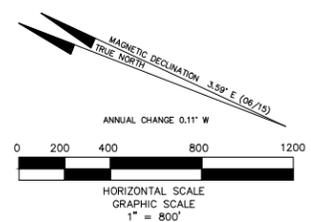
OBSTACLE FREE ZONE PENETRATIONS		
SIG OBJ NO.	OBJECT DESCRIPTION	REMIEDIATION
1	-	NO PENETRATIONS EXIST
2	-	-
3	-	-

**GENERAL NOTES:**  
 RUNWAY 15 DISPLACED 979'  
 RUNWAY 33 DISPLACED 772'  
 SEE TERMINAL AREA DRAWINGS FOR BUILDING NUMBERING/DESCRIPTIONS.  
 EMAS PROVIDES EQUIVALENT RSA BEYOND RUNWAY 33 END.  
 RUNWAY 15-33 TO BE RENUMBERED 16-34 DUE TO MAGNETIC DECLINATION CHANGE.

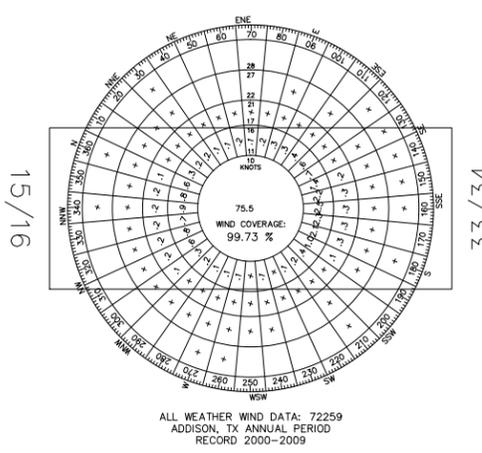
AIRPORT DATA TABLE		
	EXISTING	ULTIMATE
AIRPORT ELEVATION (MSL)	644.6'	644.6'
AIRPORT NAVIGATION AIDS	ILS,BCN	ILS,BCN
MEAN MAX TEMP (Hottest Month °F)	96°F	96°F
AIRPORT REFERENCE CODE (ARC)	D-III	D-III
TAXIWAY MARKING	STD W/Q REF	STD W/Q REF
TAXIWAY LIGHTING	MITL	MITL
AIRPORT REFERENCE POINT COORDINATES	32°58'06.80" N 96°50'11.20" W	32°58'06.80" N 96°50'11.20" W

**NOTES**  
 DATUM COORDINATE SYSTEMS - HORIZONTAL DATUM NAD 1983 (STATE PLAN ZONE 2 - TEXAS NORTH CENTRAL (FIPS 4202), VERTICAL DATUM NAVD88.  
 NO OFZ PENETRATIONS  
 INITIAL BASE MAPPING BASED ON 2012 WOOLPERT OBSTRUCTION SURVEY MEETING ALL THE REQUIREMENTS OF FAA ADVISORY CIRCULARS 150/5300-16, 17, AND 18.

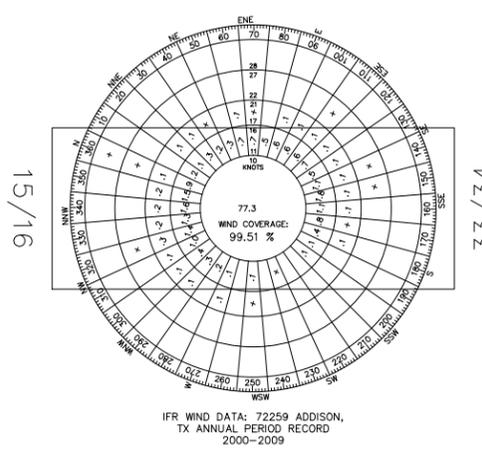
ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	■	■
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊕	⊕
WIND CONE & SEGMENTED CIRCLE	☼	☼
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●	●
C&G BEACON	★	★
VGSI	■	■
HOLD POSITION AND SIGN	■	■
ASOS/AWOS	■	■
PACS AND SACS MARKERS	▽	▽
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	○	○
TREES/BRUSH	○	○
NONDIRECTIONAL BEACON (NDB)	●	●



RUNWAY DATA TABLE				
	RW 15-33		RW 16-34	
	EXISTING	ULTIMATE	EXISTING	ULTIMATE
RUNWAY RDC	D-III		D-III	
DESIGN AIRCRAFT & ARC	BBJ2 (D-III)		BBJ2 (D-III)	
BALANCED FIELD LENGTH	6,141'		6,141'	
RUNWAY LENGTH & WIDTH (ft.)	7,203' X 100'		7,203' X 100'	
PAVEMENT DESIGN STRENGTH (1000 lbs.)	60 SW / 120 DW		60 SW / 120 DW	
RUNWAY LIGHTING	HIRL		HIRL	
PERCENT EFFECTIVE GRADIENT	0.01%		0.01%	
PERCENT WIND COVERAGE	99.73%		99.73%	
MAXIMUM ELEVATION ABOVE MSL	644.60'		644.60'	
RW SURFACE TYPE	ASPH (GROOVED)		ASPH (GROOVED)	
RSA - LENGTH BEYOND RW END	1,000' (EMAS)		1,000' (EMAS)	
RSA - WIDTH	500'		500'	
OFA - LENGTH BEYOND RW END	1,000'		1,000'	
OFA WIDTH	800'		800'	
OFZ - LENGTH BEYOND RW END	200'		200'	
OFZ WIDTH	400'		400'	
RUNWAY END	15	33	16	34
APPROACH TYPE	ILS/GPS		ILS/GPS	
APPROACH VISIBILITY MINIMA	1 MILE		1 MILE	
THRESHOLD SITING SURFACE & SLOPE	#7 34:1	#7 34:1	#7 34:1	#7 34:1
RUNWAY MARKING	PIR	PIR	PIR	PIR
RUNWAY VISUAL AIDS	PAPI-4L	PAPI-4L	PAPI-4L	PAPI-4L
TOUCHDOWN ZONE ELEVATION	644.00'	644.60'	644.00'	644.60'
FAR PART 77 APPROACH CATEGORY	PIR		PIR	
FAR PART 77 APPROACH SURFACE SLOPE	40:1/50:1	40:1/50:1	40:1/50:1	40:1/50:1
TAKE-OFF RUN AVAILABLE (TORA)	7,203'	7,203'	7,203'	7,203'
TAKE-OFF DISTANCE AVAILABLE (TODA)	7,203'	7,203'	7,203'	7,203'
ACCELERATE STOP DISTANCE AVAIL. (ASDA)	7,203'	7,203'	7,203'	7,203'
LANDING DISTANCE AVAILABLE (LDA)	6,224'	6,431'	6,224'	6,431'



ALL WEATHER WIND COVERAGE		
RUNWAY	CROSSWIND COMPONENT	PERCENT
RUNWAY 15-33	16 KNOTS	99.73%



IFR WIND COVERAGE		
RUNWAY	CROSSWIND COMPONENT	PERCENT
RUNWAY 15-33	16 KNOTS	99.51%

MODIFICATIONS TO FAA STANDARDS TABLE		
EXIST./ULT.	DESCRIPTION OF MODIFICATION	REASON FOR MODIFICATION
E/U	RDC D-III RUNWAY TO TAXIWAY OFFSET AT 300'	IMPACTS TO EXISTING INFRASTRUCTURE; FAA STUDY NO. 2007-ASW-818-NRA APPROVED MOD

AIRFIELD MONUMENTS				
NO.	TYPE	DESIGNATION	LAT.	LONG.
1	FACS	ARP 2 ADS	32°58'06.41" N	96°50'12.58" W
2	SACS	ADS D	32°58'43.54" N	96°50'23.62" W
3	SACS	AP STA A ADS	32°58'20.97" N	96°50'15.58" W
4	SACS	ARP ADS	32°57'56.95" N	96°50'08.72" W
ALL COORDINATES AND ELEVATIONS HORIZONTAL NAD 83, VERTICAL NAVD 88.				

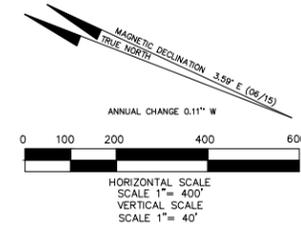
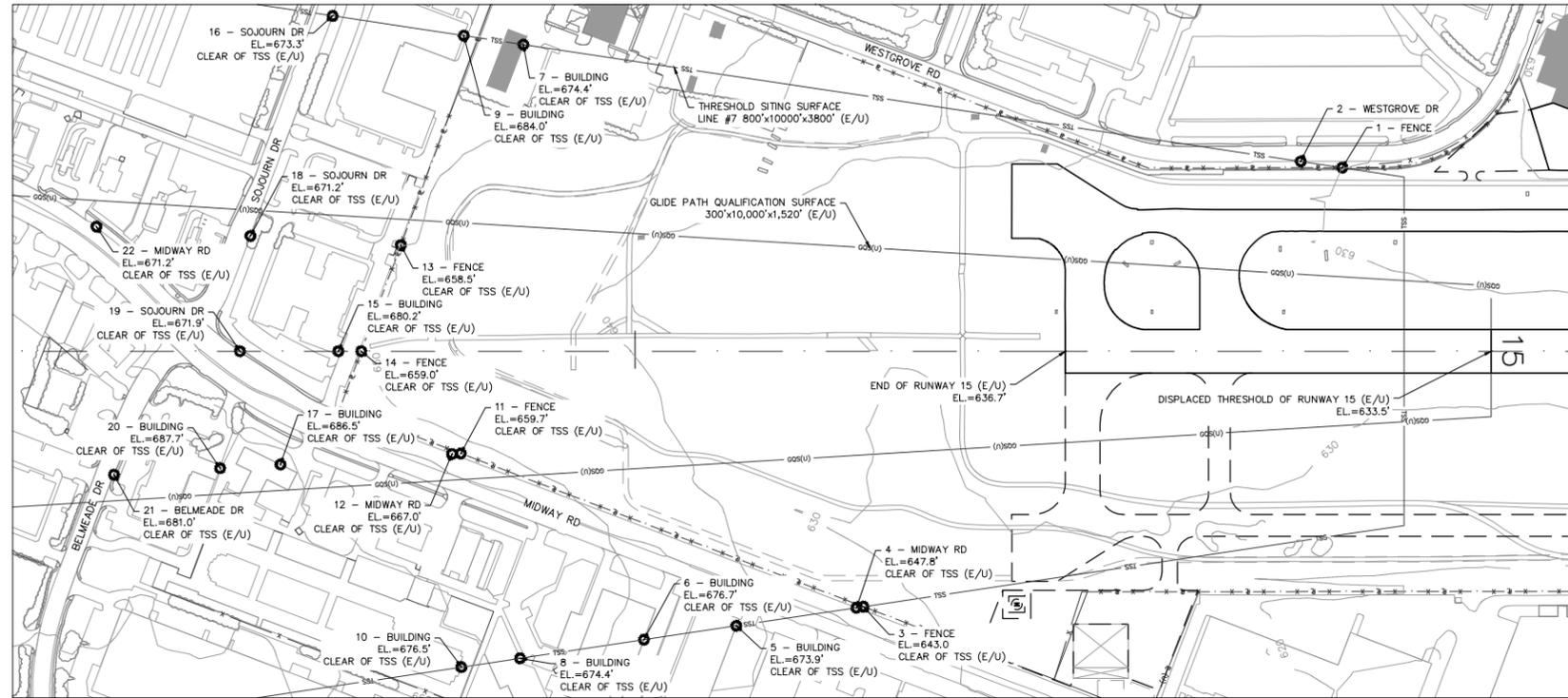
TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NRA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED. DAVID FULTON, DIRECTOR, AVIATION DIVISION	AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING. GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX
DATE	SIGNATURE
DATE	DATE
TITLE, AIRPORT SPONSOR'S REPRESENTATIVE	DATE
PREPARED BY:	PLH
DESIGNED BY:	JAH
DRAWN BY:	DATE

AIRPORT LAYOUT DRAWING  
 ADDISON AIRPORT  
 ADDISON, TEXAS (ADS)



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### RUNWAY 15 – PLAN VIEW

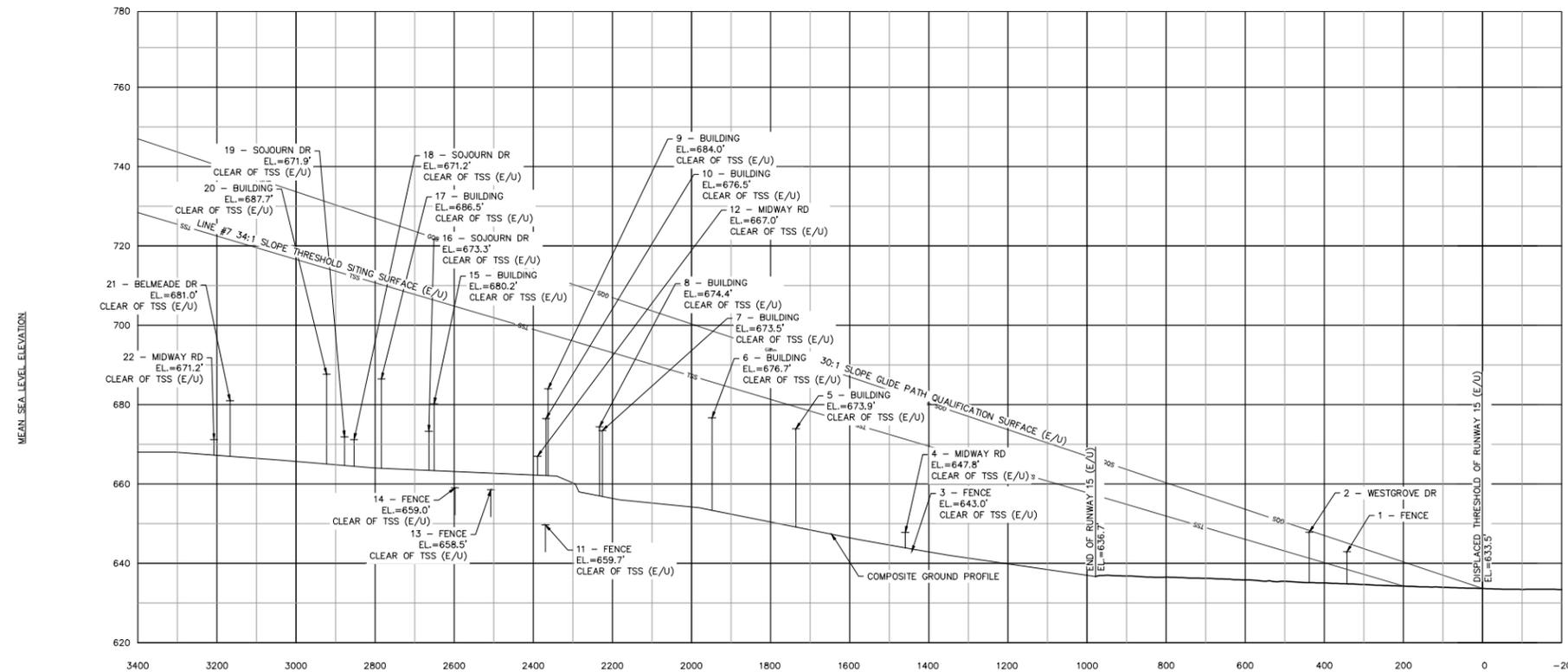


PENETRATIONS TO THRESHOLD SITING SURFACE								
NO.	OBJECT DESCRIPTION	LATITUDE (N)	LONGITUDE (W)	DISTANCE FM RW END	OFFSET FM RW C/L*	TOP ELEVATION**	AMT OF PENETRATION	REMEDIATION
1	FENCE	32°58'35.76"	96°50'18.62"	342.0'	421' L	638.0'	1.6'	LOWER FENCE 1.7' OR INSTALL OBSTR. LIGHT
2	WESTGROVE RD	32°58'36.69"	96°50'18.85"	438.0'	436' L	647.9'	1.8'	LOWER ROAD 1.9' OR RAISE TCH IN FUTURE

FURTHER DISPLACEMENT OF THE RWY 15 THRESHOLD BRINGS ADDITIONAL OBSTRUCTIONS INTO PLAY; GPA SET AT 3.0 DEGREES TO COINCIDE WITH ITS GLIDEPATH; TCH SET AT 60' WHICH IS 8' ABOVE THE ILS TCH.

\* OFFSETS FROM CENTERLINE ARE DESCRIBED RIGHT OR LEFT OF THE RUNWAY CENTERLINE AS SEEN BY A PILOT APPROACHING THE RUNWAY TO LAND  
 \*\* ELEVATIONS ADJUSTED UPWARD 15' FOR PUBLIC ROADWAY, 17' FOR INTERSTATE HIGHWAY, 23' FOR RAILROADS

### RUNWAY 15 – PROFILE VIEW

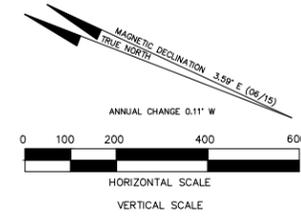
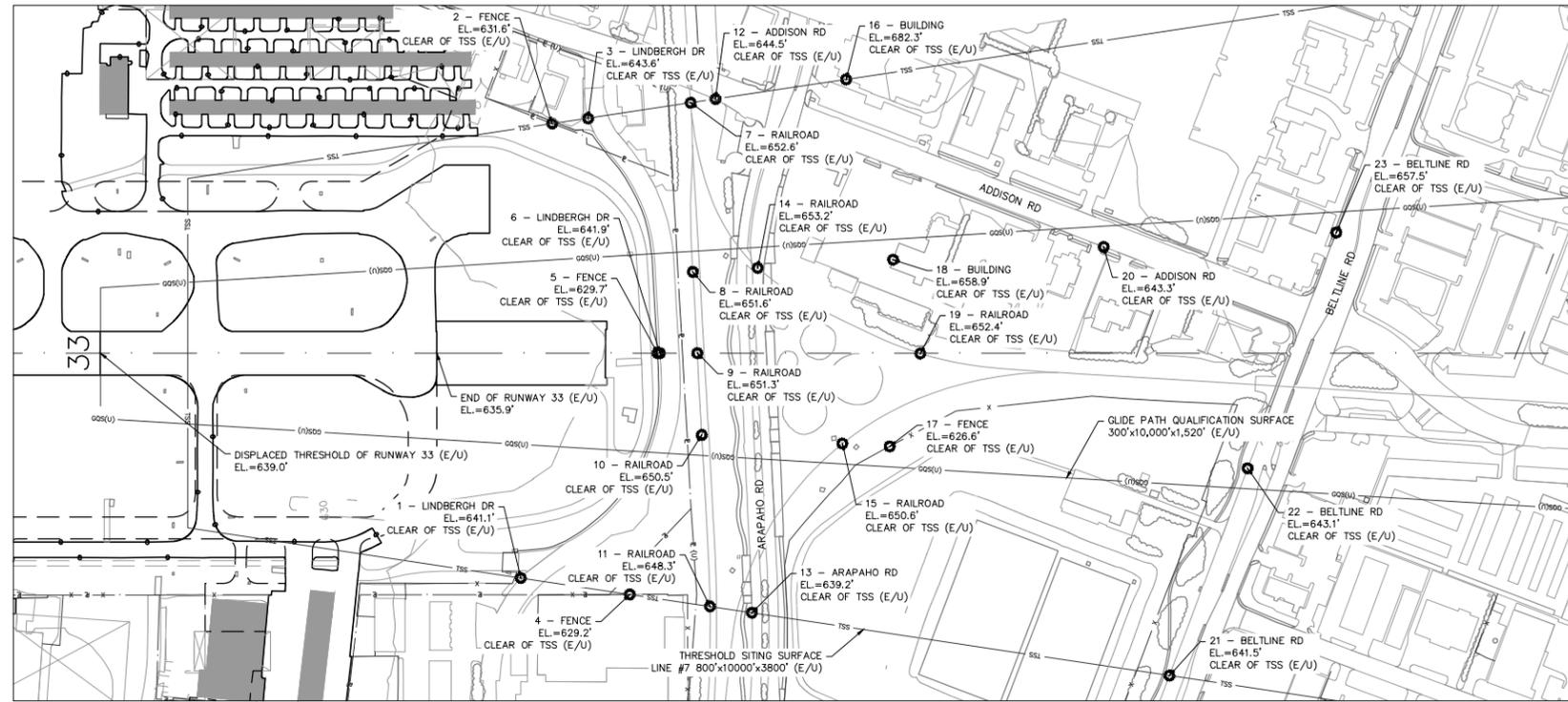


IPASD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	— — — — —	— — — — —
RUNWAY/TAXIWAY TO BE REMOVED	— — — — —	— — — — —
BUILDINGS/FACILITIES	■	□
AIRPORT PROPERTY LINE	— — — — —	— — — — —
AIRPORT PROPERTY LINE w/FENCE	— — — — —	— — — — —
THRESHOLD SITING SURFACE	— TSS —	— TSS (U) —
FENCE LINE	— — — — —	— — — — —
THRESHOLD LIGHTS	● ● ● ● ●	○ ○ ○ ○ ○
RW END IDENTIFIER LIGHTS (RELS)	●	○
GROUND CONTOURS	— — — — —	— — — — —
SIGNIFICANT OBJECT PLAN VIEW	○	○
SIGNIFICANT OBJECT PROFILE VIEW	—	—
TREES/BRUSH	—	—

TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NREA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED. DAVID FULTON, DIRECTOR, AVIATION DIVISION	AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING. SIGNATURE _____ DATE _____ TITLE, AIRPORT SPONSOR'S REPRESENTATIVE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX	PLH DESIGNED BY _____ JUNE 2016 DATE JAH DRAWN BY _____ JUNE 2016 DATE

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## RUNWAY 33 – PLAN VIEW

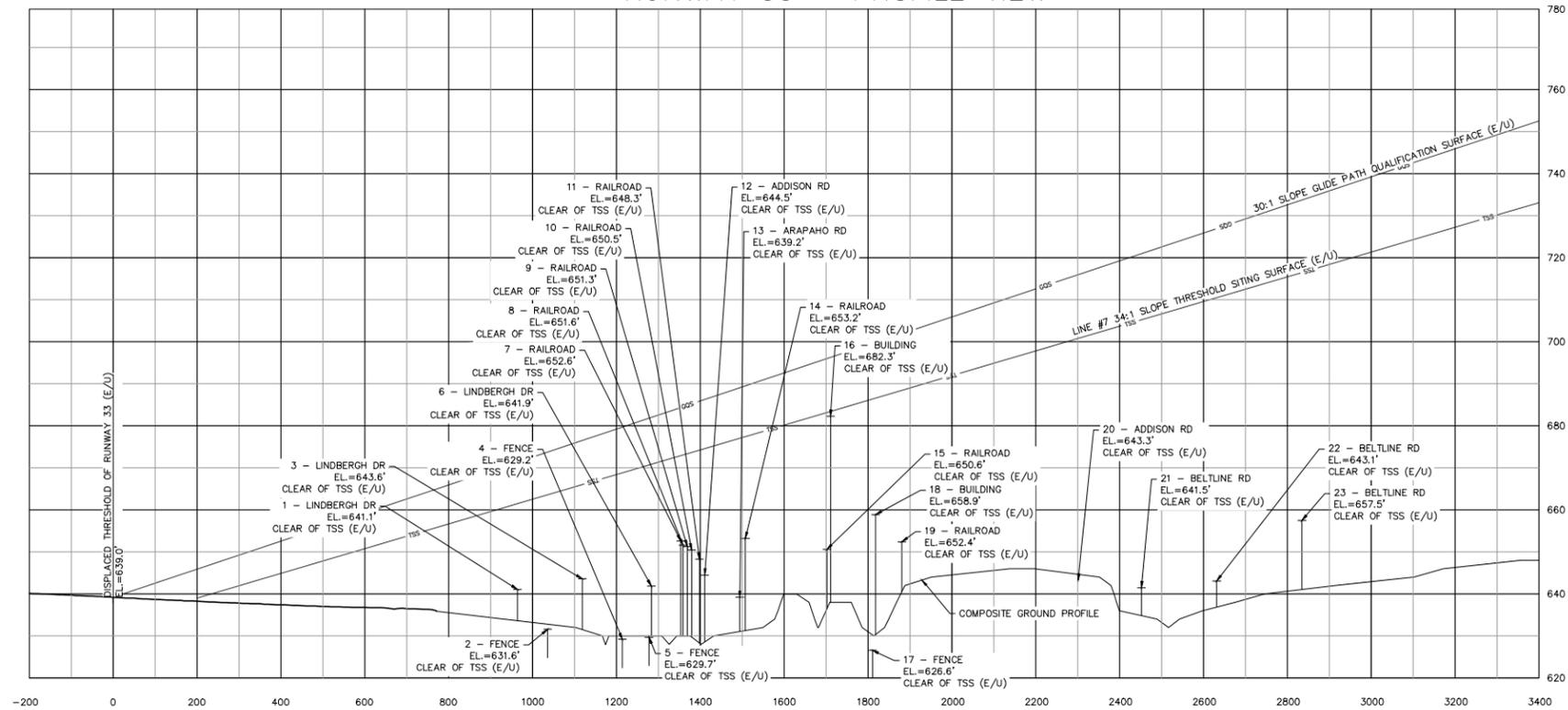


SCALE 1" = 400'  
SCALE 1" = 40'

PENETRATIONS TO THRESHOLD SITING SURFACE								
NO.	OBJECT DESCRIPTION	LATITUDE (N)	LONGITUDE (W)	DISTANCE FM RW END	OFFSET FM RW C/L*	TOP ELEVATION**	AMT OF PENETRATION	REMIEDIATION
1	NO PENETRATIONS							

\* OFFSETS FROM CENTERLINE ARE DESCRIBED RIGHT OR LEFT OF THE RUNWAY CENTERLINE AS SEEN BY A PILOT APPROACHING THE RUNWAY TO LAND  
\*\* ELEVATIONS ADJUSTED UPWARD 15' FOR PUBLIC ROADWAY, 17' FOR INTERSTATE HIGHWAY, 23' FOR RAILROADS

## RUNWAY 33 – PROFILE VIEW



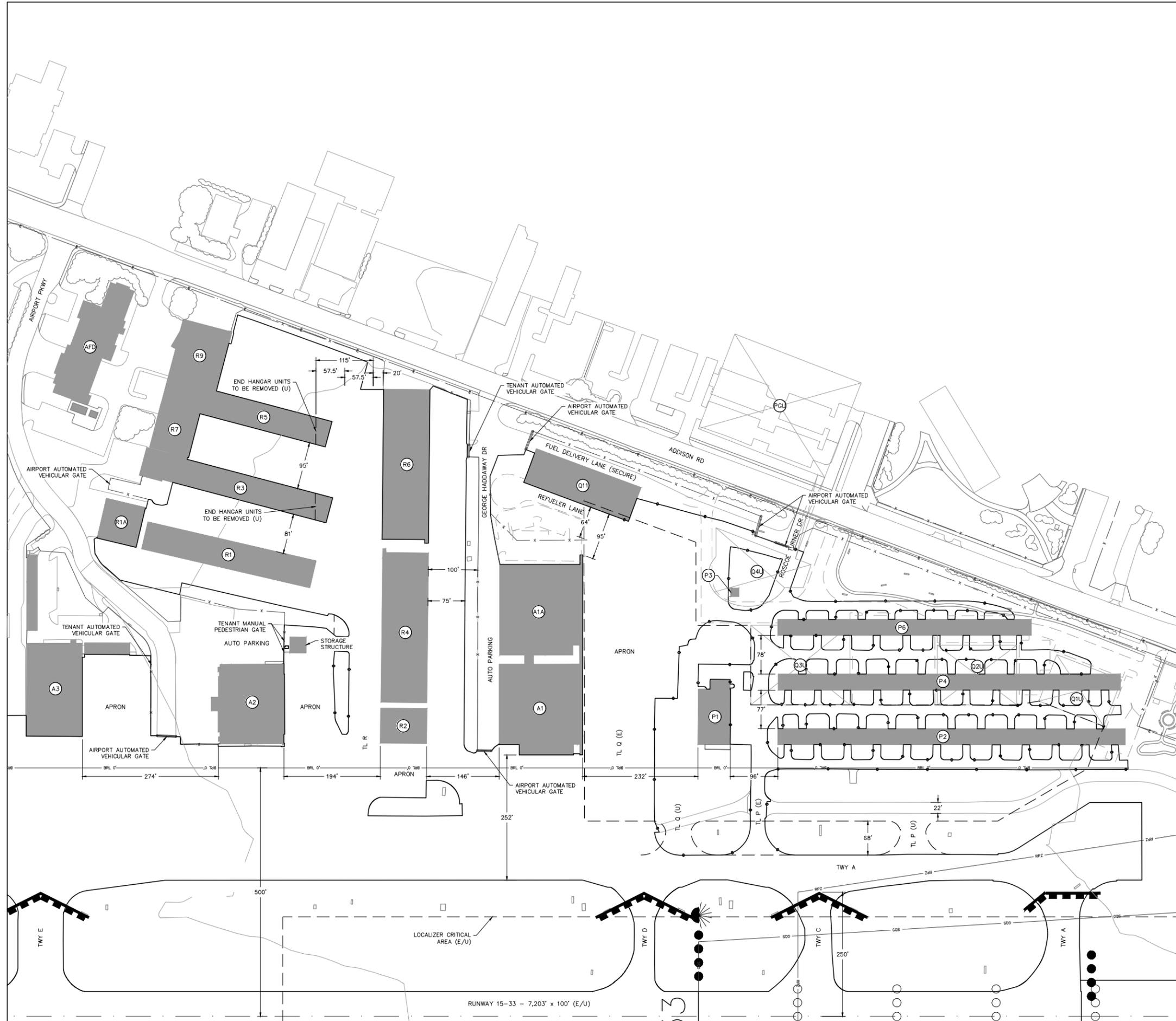
IPASD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE		
RUNWAY/TAXIWAY TO BE REMOVED		
BUILDINGS/FACILITIES		
AIRPORT PROPERTY LINE		
AIRPORT PROPERTY LINE w/FENCE		
THRESHOLD SITING SURFACE		
FENCE LINE		
THRESHOLD LIGHTS		
RW END IDENTIFIER LIGHTS (REILS)		
GROUND CONTOURS		
SIGNIFICANT OBJECT PLAN VIEW		
SIGNIFICANT OBJECT PROFILE VIEW		
TREES/BRUSH		

<p style="text-align: center;"><b>TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION</b></p> <p>ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NEA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY.</p> <p>COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED.</p> <p>DAVID FILTON, DIRECTOR, AVIATION DIVISION</p>	<p style="text-align: center;"><b>AIRPORT SPONSOR</b></p> <p>CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR</p> <p>SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING.</p>
<p>PREPARED BY:</p> <p style="margin-left: 20px;">GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX</p>	<p>SIGNATURE _____ DATE _____</p> <p>TITLE AIRPORT SPONSOR'S REPRESENTATIVE _____</p> <p>PLH DESIGNED BY _____ JUNE 2016 DATE</p> <p>JAH DRAWN BY _____ JUNE 2016 DATE</p>

IPASD RUNWAY 33  
ADDISON AIRPORT  
ADDISON, TEXAS (ADS)

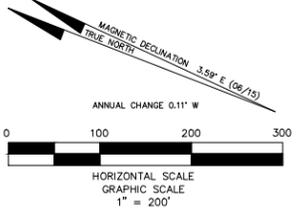


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ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	■	■
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊕	⊕
WIND CONE & SEGMENTED CIRCLE	⊕	⊕
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●	●
C&G BEACON	★	★
VGSI	■	■
HOLD POSITION AND SIGN	■	■
ASOS/AWOS	■	■
PACS AND SACS MARKERS	▽	▽
GROUND CONTOURS	~	~
SIGNIFICANT OBJECT LOCATION	○	○
TREES/BRUSH	○	○
NONDIRECTIONAL BEACON (NDB)	⊕	⊕

BUILDING TABLE				
BUILDING NUMBER	DESCRIPTION	ELEVATION		ELEVATION
		EXISTING	ULTIMATE	
AFD	FIRE STATION/ARFF	-	-	741.9'
A1	CORPORATE HGR	-	-	711.1'
A1A	CORPORATE HGR	-	-	709.8'
A2	CORPORATE HGR	-	-	667.6'
A3	CORPORATE HGR	-	-	678.7'
P1	CORPORATE HGR	-	-	669.0'
P2	24-UNIT T-HGR	-	-	648.5'
P3	REST ROOMS	-	-	651.6'
P4	22-UNIT T-HGR	-	-	650.7'
P6	15-UNIT T-HGR	-	-	651.1'
Q11	FUEL FARM	-	-	660.8'
R1	16-UNIT SHADE	-	-	660.0'
R1A	CORPORATE HGR	-	-	664.4'
R2	CORPORATE HGR	-	-	671.8'
R3	15-UNIT T-HGR	-	-	660.0'
R4	CORPORATE HGR	-	-	667.2'
R5	10-UNIT T-HGR	-	-	660.0'
R6	CORPORATE HGR	-	-	666.9'
R7	CORPORATE HGR	-	-	664.0'
R9	CORPORATE HGR	-	-	670.5'
Q1U	-	-	STORAGE HGR	TBD
Q2U	-	-	STORAGE HGR	TBD
Q3U	-	-	FBO	TBD
Q4U	-	-	COMMERCIAL BLDG	TBD
PGU	-	-	PARKING GARAGE	TBD



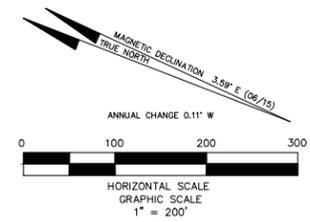
TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NRIA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED.		AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING.	
DAVID FULTON, DIRECTOR, AVIATION DIVISION	DATE	SIGNATURE	DATE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY JAH DRAWN BY JUNE 2016 DATE JUNE 2016 DATE	
SOUTHEAST TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
 Aviation Division SHEET 4 OF 11			

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BUILDING TABLE			
BUILDING NUMBER	DESCRIPTION		TOP ELEVATION
	EXISTING	ULTIMATE	
A4	CORPORATE HGR	-	696.0'
A5	CORPORATE HGR	-	681.7'
A6	CORPORATE HGR	-	664.9'
A7	CORPORATE HGR	-	682.3'
A8	CORPORATE HGR	-	667.9'
A9	CORPORATE HGR	-	674.5'
APD	POLICE & COURTS	-	695.5'
S1	CORPORATE HGR	-	666.8'
S2	CORPORATE HGR	-	665.1'
S3	CORPORATE HGR	-	667.5'
S4	18-UNIT T-HGR	-	658.2'
S5	6-UNIT T-HGR	-	662.2'
S6	22-UNIT T-HGR	-	676.0'
S7	3-UNIT T-HGR	-	662.3'
S8A	CORPORATE HGR	-	670.8'
S8B	SINGLE HANGAR	-	662.8'
S8C	SINGLE HANGAR	-	662.8'
S8D	SINGLE HANGAR	-	662.8'
S9	AIRPORT OFFICES & 5 T-HANGARS	-	692.4'
S10	REST ROOMS	-	652.1'
T1	BOX HANGAR	-	664.7'
T3	BOX HANGAR	-	668.9'
T5	BOX HANGAR	-	670.3'
T7	BOX HANGAR	-	666.9'
T9	BOX HANGAR	-	671.0'
T11	BOX HANGAR	-	665.1'
T13	BOX HANGAR	-	674.5'
T14	3-UNIT T-HGR	-	654.2'
T15	BOX HANGAR	-	673.4'
T16	SHADE HANGAR	-	654.2'
T17	BOX HANGAR	-	670.3'
T18	6-UNIT T-HGR	-	660.3'
T20	BOX HANGAR	-	666.5'
A6U	-	HGR EXPANSION	TBD
A7U	-	FBO EXPANSION	TBD
A9U	-	HGR EXPANSION	TBD
S1U	-	A&P AVIONICS HGR	TBD
S2U	-	CORPORATE HGR	TBD
S3U	-	A&P AVIONICS HGR	TBD
S8U	-	CORPORATE HGR	TBD
S8AU	-	CORPORATE HGR	TBD
T1U	-	STORAGE HGR	TBD
T3U	-	CHARTER HGR	TBD
T5U	-	A&P AVIONICS HGR	TBD
T7U	-	FLT TRAINING HGR	TBD
T8U	-	CHARTER HGR	TBD
T10U	-	CHARTER OFFICE	TBD

ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	▭	▭
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊙	⊙
WIND CONE & SEGMENTED CIRCLE	⊙	⊙
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	⊙	⊙
C&G BEACON	★	★
VGSI	⊙	⊙
HOLD POSITION AND SIGN	⊙	⊙
ASOS/AWOS	⊙	⊙
PACS AND SACS MARKERS	⊙	⊙
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	⊙	⊙
TREES/BRUSH	⊙	⊙
NONDIRECTIONAL BEACON (NDB)	⊙	⊙



TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NREA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED.		AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING.	
DAVID FULTON, DIRECTOR, AVIATION DIVISION	DATE	SIGNATURE	DATE
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EAST CENTRAL TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
 Aviation Division SHEET 5 OF 11			

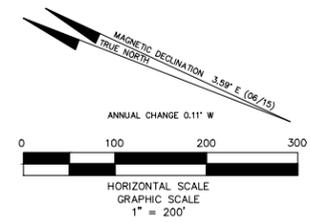
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BUILDING TABLE			
BUILDING NUMBER	DESCRIPTION		TOP ELEVATION
	EXISTING	ULTIMATE	
A10	CORPORATE HGR	-	665.6'
A10A	CORPORATE HGR	-	665.4'
A10B	CORPORATE HGR	-	680.5'
A11	OFFICE/TERMINAL	-	685.3'
A12	CORPORATE HGR	-	676.6'
A13	CORPORATE HGR	-	680.4'
M1	8-UNIT T-HGR	-	656.6'
M2	18-UNIT T-HGR	-	656.8'
M3	20-UNIT T-HGR	-	656.5'
M4	8-UNIT T-HGR	-	656.8'
M10	CORPORATE HGR	-	669.8'
M22	CORPORATE HGR	-	678.6'
U1	CORPORATE HGR	-	666.6'
U2	CORPORATE HGR	-	674.8'
U2A	OUT BUILDING	-	-
U3	CORPORATE HGR	-	666.2'
U4	CORPORATE HGR	-	682.3'
U5	CORPORATE HGR	-	667.5'
U6	CORPORATE HGR	-	684.0'
U7	CORPORATE HGR	-	670.3'
U8	CORPORATE HGR	-	685.4'
U9	CORPORATE HGR	-	670.3'
U10	CORPORATE HGR	-	-
U11	CORPORATE HGR	-	675.3'
U13	CORPORATE HGR	-	672.8'
U15	CORPORATE HGR	-	672.8'
U17	CORPORATE HGR	-	-
U21	CORPORATE HGR	-	-
U24	CORPORATE HGR	-	-
U26	CORPORATE HGR	-	-
V3	CORPORATE HGR	-	691.4'
V8	CORPORATE HGR	-	686.8'
V10	CORPORATE HGR	-	677.6'
V12	CORPORATE HGR	-	673.6'
V14	CORPORATE HGR	-	683.4'
V16	CORPORATE HGR	-	694.7'
V18	CORPORATE HGR	-	686.8'
A11S	-	STORAGE HGR	TBD
U11U	-	CHARTER HGR	TBD
U1AU	-	CHARTER OFFICE	TBD
U3U	-	A&P AVONICS HGR	TBD
U5U	-	A&P AVONICS HGR	TBD
U7U	-	ACFT SALES HGR	TBD
U9U	-	A&P AVONICS HGR	TBD
U9AU	-	A&P AV OFFICE	TBD
U11U	-	A&P AVONICS HGR	TBD
U13U	-	A&P AVONICS HGR	TBD
U15U	-	A&P AV OFFICE	TBD
U28U	-	HANGAR	TBD
U28AU	-	COMMERCIAL	TBD
V6U	-	STORAGE HGR	TBD

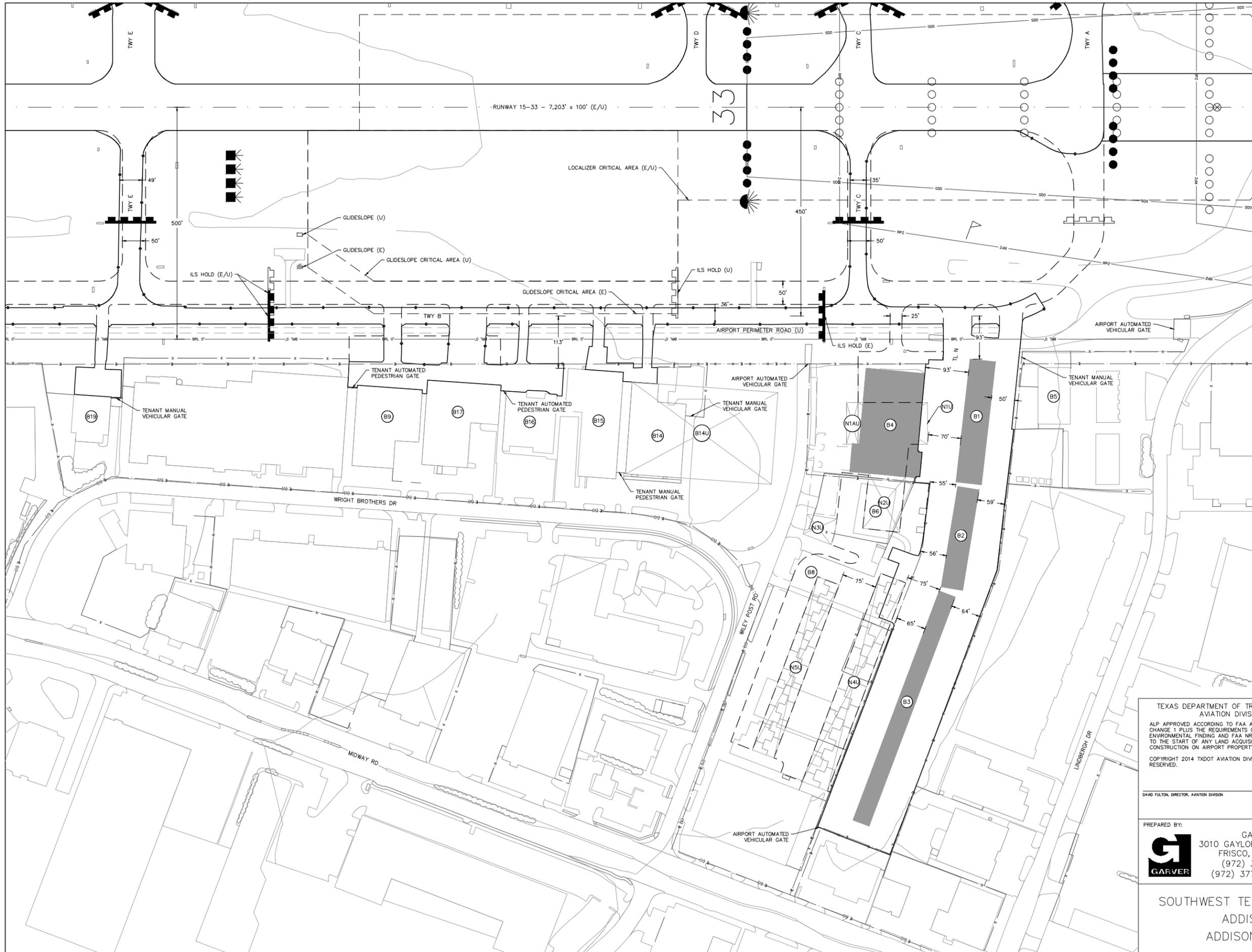
NOTE: LABELED AND UNSHADED HANGARS OPERATING VIA A THROUGH-THE-FENCE USE AGREEMENT.

ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	█	█
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊕	⊕
WIND CONE & SEGMENTED CIRCLE	⊕	⊕
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●	●
C&G BEACON	★	★
VGSI	■	■
HOLD POSITION AND SIGN	■	■
ASOS/AWOS	■	■
PACS AND SACS MARKERS	■	■
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	○	○
TREES/BRUSH	○	○
NONDIRECTIONAL BEACON (NDB)	○	○



TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NRIA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED.		AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING.	
DAVID FULTON, DIRECTOR, AVIATION DIVISION	DATE	SIGNATURE	DATE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY: JUNE 2016 DATE JAH DRAWN BY: JUNE 2016 DATE	
NORTHEAST TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
 Aviation Division SHEET 6 OF 11			

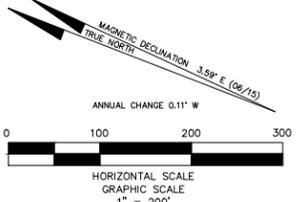
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ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE		
RUNWAY/TAXIWAY TO BE REMOVED		
BUILDINGS/FACILITIES		
AIRPORT PROPERTY LINE		
AIRPORT PROPERTY LINE w/FENCE		
FENCE LINE		
BUILDING RESTRICTION LINE (BRL)		
AIRPORT REFERENCE POINT		
WIND CONE & SEGMENTED CIRCLE		
THRESHOLD LIGHTS		
RW END IDENTIFIER LIGHTS (REILS)		
C&G BEACON		
VGSI		
HOLD POSITION AND SIGN		
ASOS/AWOS		
PACS AND SACS MARKERS		
GROUND CONTOURS		
SIGNIFICANT OBJECT LOCATION		
TREES/BRUSH		
NONDIRECTIONAL BEACON (NDB)		

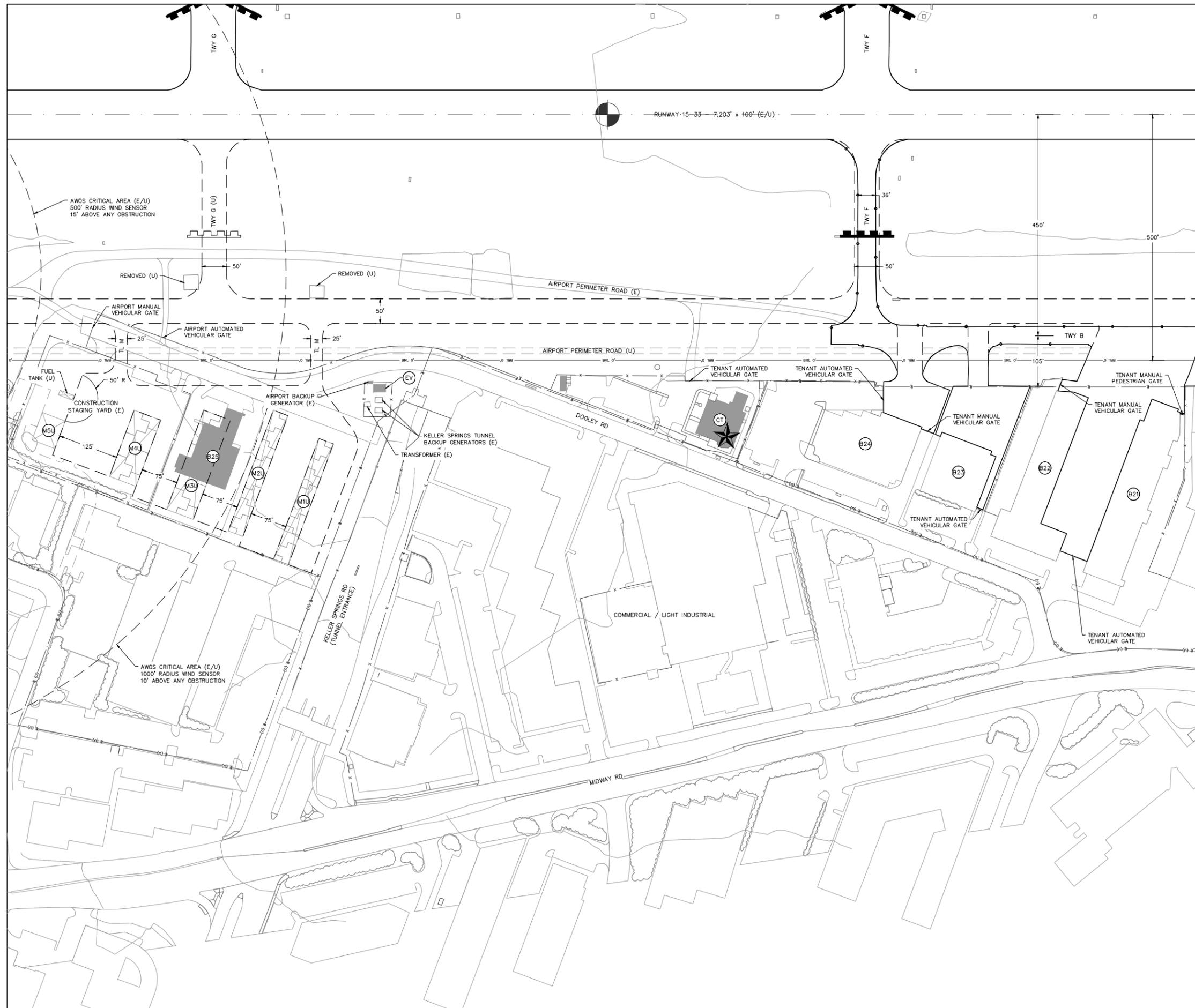
BUILDING TABLE			
BUILDING NUMBER	DESCRIPTION		TOP ELEVATION
	EXISTING	ULTIMATE	
B1	T-HGR	-	650.7'
B2	T-HGR	-	653.5'
B3	T-HGR	-	664.8'
B4	COMMERCIAL BLDG	-	663.0'
B5	COMMERCIAL BLDG	-	668.1'
B6	COMMERCIAL BLDG	-	668.4'
B8	COMMERCIAL BLDG	-	665.1'
B9	COMMERCIAL BLDG	-	672.1'
B14	COMMERCIAL BLDG	-	663.1'
B15	COMMERCIAL BLDG	-	675.1'
B16	COMMERCIAL BLDG	-	669.4'
B17	COMMERCIAL BLDG	-	678.3'
B19	COMMERCIAL BLDG	-	674.3'
N1U	-	CORPORATE HGR	TBD
N1AU	-	CORPORATE OFFICE	TBD
N2U	-	A&P AVONICS HGR	TBD
N3U	-	PUBLIC BUILDING	TBD
N4U	-	19-UNIT T-HANGAR	TBD
N5U	-	18-UNIT T-HANGAR	TBD

- NOTES:  
 1. LABELED AND UNSHADED HANGARS OPERATING VIA A THROUGH-THE-FENCE USE AGREEMENT.  
 2. SOUTHWEST UNIT OF B5 HOUSES AIRPORT MAINTENANCE EQUIPMENT AND VEHICLES.



TEXAS DEPARTMENT OF TRANSPORTATION AVIATION DIVISION ALP APPROVED ACCORDING TO FAA AC 150/5300-13A CHANGE 1 PLUS THE REQUIREMENTS OF A FAVORABLE ENVIRONMENTAL FINDING AND FAA NREA STUDY PRIOR TO THE START OF ANY LAND ACQUISITION OR CONSTRUCTION ON AIRPORT PROPERTY. COPYRIGHT 2014 TXDOT AVIATION DIVISION, ALL RIGHTS RESERVED. DAVID FULTON, DIRECTOR, AVIATION DIVISION	AIRPORT SPONSOR CURRENT AND FUTURE DEVELOPMENT DEPICTED ON THIS ALP IS APPROVED AND SUPPORTED BY AIRPORT SPONSOR. SPONSOR ACKNOWLEDGES APPROVAL OF ALP BY TXDOT DOES NOT CONSTITUTE A COMMITMENT TO FUNDING. SIGNATURE _____ DATE _____ TITLE, AIRPORT SPONSOR'S REPRESENTATIVE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX	PLH DESIGNED BY _____ JUNE 2016 DATE JAH DRAWN BY _____ JUNE 2016 DATE

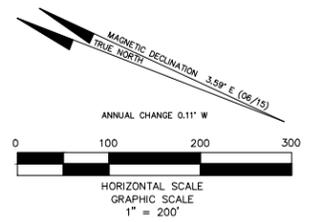
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ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	▭	▭
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊙	⊙
WIND CONE & SEGMENTED CIRCLE	⊙	⊙
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●●●●	●●●●
C&G BEACON	★	★
VGSI	✱	✱
HOLD POSITION AND SIGN	⊞	⊞
ASOS/AWOS	⊞	⊞
PACS AND SACS MARKERS	⊞	⊞
GROUND CONTOURS	~	~
SIGNIFICANT OBJECT LOCATION	⊙	⊙
TREES/BRUSH	⊙	⊙
NONDIRECTIONAL BEACON (NDB)	⊙	⊙

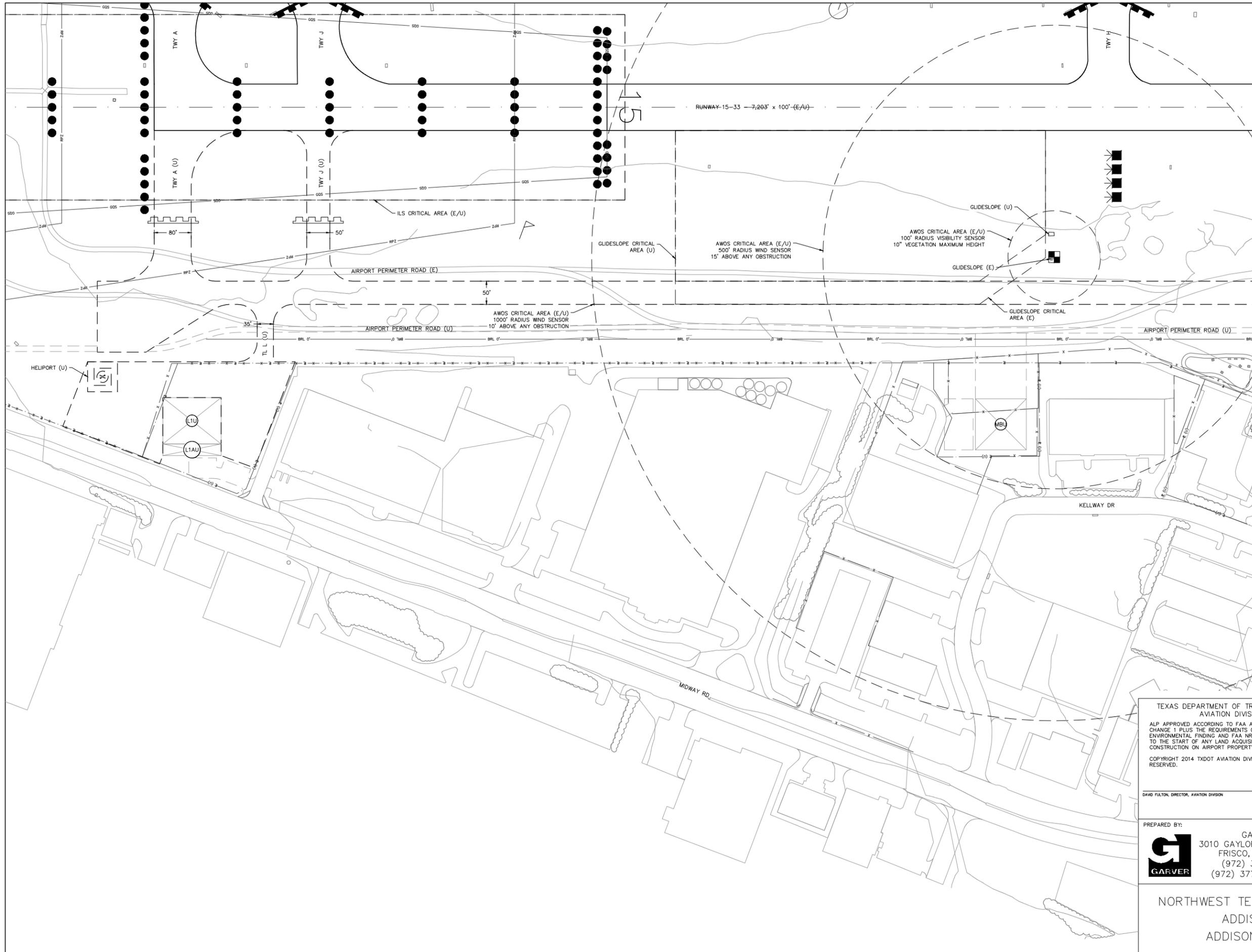
BUILDING TABLE				
BUILDING NUMBER	DESCRIPTION			TOP ELEVATION
	EXISTING	ULTIMATE		
B21	COMMERCIAL BLDG	-	-	679.1'
B22	COMMERCIAL BLDG	-	-	677.8'
B23	COMMERCIAL BLDG	-	-	688.1'
B24	COMMERCIAL BLDG	-	-	680.6'
B25	COMMERCIAL BLDG	-	-	651.0'
CT	CONTROL TOWER	-	-	735.5'
EV	ELECTRICAL VAULT	-	-	649.5'
M1U	-	8-UNIT T-HANGAR	-	TBD
M2U	-	8-UNIT T-HANGAR	-	TBD
M3U	-	8-UNIT T-HANGAR	-	TBD
M4U	-	5-UNIT T-HANGAR	-	TBD
M5U	-	PUBLIC BUILDING	-	TBD

NOTE: LABELED AND UNSHADED HANGARS OPERATING VIA A THROUGH-THE-FENCE USE AGREEMENT.



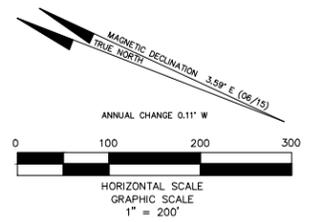
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DAVID FULTON, DIRECTOR, AVIATION DIVISION DATE: _____	DATE: _____	SIGNATURE: _____ TITLE: AIRPORT SPONSOR'S REPRESENTATIVE	DATE: _____
PREPARED BY:  GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY: _____ JAH DRAWN BY: _____	JUNE 2016 DATE: _____ JUNE 2016 DATE: _____
WEST CENTRAL TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
 Aviation Division SHEET 8 OF 11			

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ALD LEGEND		
FEATURE	EXISTING	ULTIMATE
RUNWAY/TAXIWAY OUTLINE	---	---
RUNWAY/TAXIWAY TO BE REMOVED	---	---
BUILDINGS/FACILITIES	▭	▭
AIRPORT PROPERTY LINE	---	---
AIRPORT PROPERTY LINE w/FENCE	---	---
FENCE LINE	---	---
BUILDING RESTRICTION LINE (BRL)	---	---
AIRPORT REFERENCE POINT	⊕	⊕
WIND CONE & SEGMENTED CIRCLE	⊙	⊙
THRESHOLD LIGHTS	●●●●	●●●●
RW END IDENTIFIER LIGHTS (REILS)	●●●●	●●●●
C&G BEACON	★	★
VGSI	■	■
HOLD POSITION AND SIGN	■	■
ASOS/AWOS	■	■
PACS AND SACS MARKERS	▽	▽
GROUND CONTOURS	---	---
SIGNIFICANT OBJECT LOCATION	○	○
TREES/BRUSH	○	○
NONDIRECTIONAL BEACON (NDB)	●	●

BUILDING TABLE				
BUILDING NUMBER	DESCRIPTION			TOP ELEVATION
	EXISTING	ULTIMATE		
L1U	-	-		TBD
L1AU	-	-		TBD
MBU	-	MAINTENANCE BLDG		TBD



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DAVID FULTON, DIRECTOR, AVIATION DIVISION	DATE	SIGNATURE	DATE
PREPARED BY: GARVER 3010 GAYLORD PKWY, #190 FRISCO, TX 75034 (972) 377-7480 (972) 377-8380 FAX		PLH DESIGNED BY JUNE 2016 DATE JAH DRAWN BY JUNE 2016 DATE	
NORTHWEST TERMINAL AREA DRAWING ADDISON AIRPORT ADDISON, TEXAS (ADS)			
 Aviation Division SHEET 9 OF 11			

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**Appendix K**  
**Acronyms and Glossary**

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**ACRONYMS and TERMS**
**ACRONYMS**

A/C	Aircraft	ADSB	Automatic Dependent Surveillance Broadcast
A/G	Air to Ground	ADSIM	Airfield Delay Simulation Model
A/H	Altitude/Height	ADSY	Administrative Equipment Systems
AAC	Mike Monroney Aeronautical Center	ADTN	Administrative Data Transmission Network
AAF	Army Air Field	ADVO	Administrative Voice
AAI	Arrival Aircraft Interval	AEG	Aircraft Evaluation Group
AAP	Advanced Automation Program		
AAR	Airport Acceptance Rate	AERA	Automated EnRoute Air Traffic Control
ABDIS	Automated Data Interchange System Service B	AEX	Automated Execution
AC	Advisory Circular	AF	Airway Facilities
AC AIS	Air Carrier Activity Information System	AFB	Air Force Base
ACAS	Aircraft Collision Avoidance System	AFIS	Automated Flight Inspection System
ACC	Airports Consultants Council	AFP	Area Flight Plan
ACC	Area Control Center	AFRES	Air Force Reserve Station
ACCT	Accounting Records	AFS	Airways Facilities Sector
ACD	Automatic Call Distributor	AFSFO	AFS Field Office
ACDO	Air Carrier District Office	AFSFU	AFS Field Unit
ACF	Area Control Facility	AFSOU	AFS Field Office Unit (Standard is AFSFOU)
ACFO	Aircraft Certification Field Office		
ACFT	Aircraft	AFSS	Automated Flight Service Station
ACINA	Airports Council International North America	AFTN	Automated Fixed Telecommunications Network
ACID	Aircraft Identification	AGIS	Airports Geographic Information System
ACIP	Airport Capital Improvement Plan	AGL	Above Ground Level
ACLS	Automatic Carrier Landing System	AID	Airport Information Desk
ACLT	Actual Landing Time Calculated	AIG	Airbus Industries Group
ACO	Office of Airports Compliance and Field Operations	AIM	Airman's Information Manual
ACO	Aircraft Certification Office	AIP	Airport Improvement Plan
ACRP	Airport Cooperative Research Program	AIRMET	Airmen's Meteorological Information
		AIRNET	Airport Network Simulation Model
ADA	Air Defense Area	AIS	Aeronautical Information Service
ADAP	Airport Development Aid Program	AIT	Automated Information Transfer
ADAS	AWOS Data Acquisition System	ALP	Airport Layout Plan
ADCCP	Advanced Data Communications Control Procedure	ALS	Approach Lighting System
ADDA	Administrative Data	ALSF1	ALS with Sequenced Flashers I
ADF	Automatic Direction Finding	ALSF2	ALS with Sequenced Flashers II
ADG	Airplane Design Group	ALSIP	Approach Lighting System Improvement Plan
ADI	Automatic Deice and Inhibitor	ALTRV	Altitude Reservation
ADIN	AUTODIN Service	AMASS	Airport Movement Area Safety System
ADIZ	Air Defense Identification Zone	AMCC	ACF/ARTCC Maintenance Control Center
ADL	Aeronautical Datalink	AMOS	Automated Meteorological Observation Station
ADLY	Arrival Delay	AMP	ARINC Message Processor (OR) Airport Master Plan
ADO	Airline Dispatch Office		
ADP	Automated Data Processing		
ADS	Automatic Dependent Surveillance		

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AMVER	Automated Mutual Assistance Vessel Rescue System	ATCAA	Air Traffic Control Assigned Airspace
ANC	Alternate Network Connectivity	ATC	Air Traffic Control
ANCA	Airport Noise and Capacity Act	ATCBI	Air Traffic Control Beacon Indicator
ANG	Air National Guard	ATCCC	Air Traffic Control Command Center
ANGB	Air National Guard Base	ATCO	Air Taxi Commercial Operator
ANMS	Automated Network Monitoring System	ATCRB	Air Traffic Control Radar Beacon
ANSI	American National Standards Group	ATCRBS	Air Traffic Control Radar Beacon System
AOA	Air Operations Area	ATCSCC	Air Traffic Control Systems Command Center
AP	Acquisition Plan	ATCT	Airport Traffic Control Tower
APP	Approach	ATIS	Automated Terminal Information Service
APS	Airport Planning Standard	ATISR	ATIS Recorder
AQAFO	Aeronautical Quality Assurance Field Office	ATM	Air Traffic Management
ARAC	Army Radar Approach Control (AAF)	ATM	Asynchronous Transfer Mode
ARAC	Aviation Rulemaking Advisory Committee	ATMS	Advanced Traffic Management System
ARC	Airport Reference Code	ATN	Aeronautical Telecommunications Network
ARCTR	FAA Aeronautical Center or Academy	ATODN	AUTODIN Terminal (FUS)
ARF	Airport Reservation Function	ATOVN	AUOTVON (Facility)
ARFF	Aircraft Rescue and Fire Fighting	ATOMS	Air Traffic Operations Management System
ARINC	Aeronautical Radio, Inc.	ATS	Air Traffic Service
ARLNO	Airline Office	ATSCCP	ATS Contingency Command Post
ARO	Airport Reservation Office	AVON	AUTOVON Service
ARP	Airport Reference Point	AVN	Aviation Standards National Field Office, Oklahoma City
ARP	Aerospace Recommended Practice	AWIS	Airport Weather Information
ARRA	American Recovery and Reinvestment Act of 2009	AWOS	Automated Weather Observation System
ARSA	Airport Service Radar Area	AWP	Aviation Weather Processor
ARSR	Air Route Surveillance Radar	AWPG	Aviation Weather Products Generator
ARTCC	Air Route Traffic Control Center	AWS	Air Weather Station
ARTS	Automated Radar Terminal System	BANS	BRITE Alphanumeric System
ASAS	Aviation Safety Analysis System	BART	Billing Analysis Reporting Tool (GSA software tool)
ASC	AUTODIN Switching Center	BASIC	Basic Contract Observing Station
ASCP	Aviation System Capacity Plan	BASOP	Military Base Operations
ASD	Aircraft Situation Display	BCA	Benefit/Cost Analysis
ASDA	Accelerate Stop Distance Available	BCR	Benefit/Cost Ratio
ASLAR	Aircraft Surge Launch And Recovery	BDAT	Digitized Beacon Data
ASM	Available Seat Mile	BMP	Best Management Practices
ASP	Arrival Sequencing Program	BOC	Bell Operating Company
ASOS	Automatic Surface Observation System	bps	bits per second
ASQP	Airline Service Quality Performance	BRI	Basic Rate Interface
ASR	Airport Surveillance Radar	BRITE	Bright Radar Indicator Terminal Equipment
ASTA	Airport Surface Traffic Automation	BRL	Building Restriction Line
ASV	Annual Service Volume	BUEC	Backup Emergency Communications
ASV	Airline Schedule Vendor		
AT	Air Traffic		
ATA	Air Transport Association of America		
ATAS	Airspace and Traffic Advisory Service		

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BUECE	Backup Emergency Communications Equipment	CVTS	Compressed Video Transmission Service
CAA	Civil Aviation Authority	CWA	Clean Water Act
CAA	Clean Air Act	CW	Continuous Wave
CAB	Civil Aeronautics Board	CWSU	Central Weather Service Unit
CAC	Citizen's Advisory Committee	CWY	Clearway
CAD	Computer Aided Design	DA	Direct Access
CARF	Central Altitude Reservation Facility	DA	Decision Altitude/Decision Height
CASFO	Civil Aviation Security Office	DA	Descent Advisor
CAT	Category	DABBS	DITCO Automated Bulletin Board System
CAT	Clear Air Turbulence	DAIR	Direct Altitude and Identity Readout
CAU	Crypto Ancillary Unit	DAR	Designated Agency Representative
CBI	Computer Based Instruction	DARC	Direct Access Radar Channel
CCC	Communications Command Center	dBA	Decibels Aweighted
CCCC	Staff Communications	DBCRC	Defense Base Closure and Realignment Commission
CCCH	Central Computer Complex Host	DBE	Disadvantaged Business Enterprise
CC&O	Customer Cost and Obligation	DBMS	Data Base Management System
CCSD	Command Communications Service Designator	DBRITE	Digital Bright Radar Indicator Tower Equipment
CCS7 NI	Communication Channel Signal-7 Network Interconnect	DCA	Defense Communications Agency
CCU	Central Control Unit	DCAA	Dual Call, Automatic Answer Device
CD	Common Digitizer	DCCU	Data Communications Control Unit
CDR	Cost Detail Report	DCE	Data Communications Equipment
CDT	Controlled Departure Time	DDA	Dedicated Digital Access
CDTI	Cockpit Display of Traffic Information	DDD	Direct Distance Dialing
CENTX	Central Telephone Exchange	DDM	Difference in Depth of Modulation
CEP	Capacity Enhancement Program	DDS	Digital Data Service
CEQ	Council on Environmental Quality	DEA	Drug Enforcement Agency
CERAP	Center Radar Approach Control	DEDS	Data Entry and Display System
CERAP	Combined Center/Radar Approach Control	DEIS	Draft Environmental Impact Statement
CFC	Central Flow Control	DEP	Departure
CFCF	Central Flow Control Facility	DEWIZ	Distance Early Warning Identification Zone
CFCS	Central Flow Control Service	DF	Direction Finder
CFR	Code of Federal Regulations	DFAX	Digital Facsimile
CFWP	Central Flow Weather Processor	DFI	Direction Finding Indicator
CSO	Customer Service Office	DGPS	Differential Global Positioning Satellite (System)
CSR	Communications Service Request	DH	Decision Height
CSS	Central Site System	DID	Direct Inward Dial
C/S/S/N	Capacity/Safety/Security/Noise	DIP	Drop and Insert Point
CTA	Controlled Time of Arrival	DIRF	Direction Finding
CTA	Control Area	DITCO	Defense Information Technology Contracting Office Agency
CTA/FIR	Control Area/Flight Information Region	DME	Distance Measuring Equipment
CTAF	Common Traffic Advisory Frequency	DME/P	Precision Distance Measuring Equipment
CTAS	Center Tracon Automation System	DMN	Data Multiplexing Network
CTMA	Center Traffic Management Advisor		
CUPS	Consolidated Uniform Payroll System		
CVFR	Controlled Visual Flight Rules		

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DNL	DayNight Equivalent Sound Level (Also called Ldn)	ETA	Estimated Time of Arrival
DOD	Direct Outward Dial	ETE	Estimated Time En Route
DoD	Department of Defense	ETG	Enhanced Target Generator
DOI	Department of Interior	ETMS	Enhanced Traffic Management System
DOS	Department of State	ETN	Electronic Telecommunications Network
DOT	Department of Transportation	EVAS	Enhanced Vortex Advisory System
DOTS	Dynamic Ocean Tracking System	EVCS	Emergency Voice Communications System
DOTCC	Department of Transportation Computer Center		
DSCS	Digital Satellite Compression Service	FAA	Federal Aviation Administration
DSUA	Dynamic Special Use Airspace	F&E	Facilities and Equipment
DTS	Dedicated Transmission Service	FAAAC	FAA Aeronautical Center
DUAT	Direct User Access Terminal	FAACIS	FAA Communications Information System
DVFR	Defense Visual Flight Rules	FAATC	FAA Technical Center
DVFR	Day Visual Flight Rules	FAC	Facility
DVOR	Doppler Very High Frequency OmniDirectional Range	FAF	Final Approach Fix
DYSIM	Dynamic Simulator	FAP	Final Approach Point
		FAPM	FTS2000 Associate Program Manager
EMSAW	EnRoute Automated Minimum Safe Altitude Warning	FAR	Federal Aviation Regulation
EA	Environmental Assessment	FAST	Final Approach Spacing Tool
EARTS	En Route Automated Radar Tracking System	FATO	Final Approach and Take Off
ECOM	En Route Communications	FAX	Facsimile Equipment
ECVFP	Expanded Charted Visual Flight Procedures	FBO	Fixed Base Operator
EDCT	Expedite Departure Path	FBS	Fall Back Switch
EFAS	En Route Flight Advisory Service	FCC	Federal Communications Commission
EFC	Expect Further Clearance	FCLT	Freeze Calculated Landing Time
EFIS	Electronic Flight Information Systems	FCOM	FSS Radio Voice Communications
EIAF	Expanded Inward Access Features	FCPU	Facility Central Processing Unit
EIS	Environmental Impact Statement	FDAT	Flight Data Entry and Printout (FDEP) and Flight Data Service
ELT	Emergency Locator Transmitter	FDE	Flight Data Entry
ELWRT	Electrowriter	FDEP	Flight Data Entry and Printout
EMAS	Engineered Materials Arresting System	FDIO	Flight Data Input/Output
EMPS	En Route Maintenance Processor System	FDIOC	Flight Data Input/Output Center
EMS	Environmental Management System	FDIOR	Flight Data Input/Output Remote
ENAV	En Route Navigational Aids	FDM	Frequency Division Multiplexing
EPA	Environmental Protection Agency	FDP	Flight Data Processing
EPS	Engineered Performance Standards	FED	Federal
EOF	Emergency Operating Facility	FEIS	Final Environmental Impact Statement
EPSS	Enhanced Packet Switched Service	FEP	Front End Processor
ERAD	En Route Broadband Radar	FFAC	From Facility
ESEC	En Route Broadband Secondary Radar	FIFO	Flight Inspection Field Office
ESP	En Route Spacing Program	FIG	Flight Inspection Group
ESYS	En Route Equipment Systems	FINO	Flight Inspection National Field Office
ESF	Extended Superframe Format	FIPS	Federal Information Publication Standard

*Addison, Texas*

FIR	Flight Information Region	GSA	General Services Administration
FIRE	Fire Station	GSE	Ground Support Equipment
FIRMR	Federal Information Resource Management Regulation	H	Nondirectional Radio Homing Beacon (NDB)
FL	Flight Level	HAA	Height Above Airport
FMA	Final Monitor Aid	HAL	Height Above Landing
FMF	Facility Master File	HARS	High Altitude Route System
FMIS	FTS2000 Management Information System	HAT	Height Above Touchdown
FMS	Flight management System	HAZMAT	Hazardous Material
FNMS	FTS2000 Network Management System	HCAP	High Capacity Carriers
FOIA	Freedom Of Information Act	HLDC	High Level Data Link Control
FONSI	Finding of No Significant Impact	HDME	NDB with Distance Measuring Equipment
FP	Flight Plan	HDQ	FAA Headquarters
FRC	Request Full Route Clearance	HELI	Heliport
FSAS	Flight Service Automation System	HF	High Frequency
FSDO	Flight Standards District Office	HH	NDB, 2kw or More
FSDPS	Flight Service Data Processing System	HIEFAS	High Altitude EFAS
FSEP	Facility/Service/Equipment Profile	HOV	High Occupancy Vehicle
FSP	Flight Strip Printer	HPZ	Heliport Protection Zone
FSPD	Freeze Speed Parameter	HSI	Horizontal Situation Indicators
FSS	Flight Service Station	HUD	Housing and Urban Development
FSSA	Flight Service Station Automated Service	HWAS	Hazardous InFlight Weather Advisory
FSTS	Federal Secure Telephone Service	Hz	HERTZ
FSYS	Flight Service Station Equipment Systems	IA	Indirect Access
FTS	Federal Telecommunications System	IAF	Initial Approach Fix
FUS	Functional Units or Systems	I/AFSS	International AFSS
FWCS	Flight Watch Control Station	IAP	Instrument Approach Procedures
GA	General Aviation	IAPA	Instrument Approach Procedures Automation
GAA	General Aviation Activity	IBM	International Business Machines
GAAA	General Aviation Activity and Avionics	IBP	International Boundary Point
GADO	General Aviation District Office	IBR	Intermediate Bit Rate
GCA	Ground Control Approach	ICAO	International Civil Aviation Organization
GIS	Geographic Information System	ICSS	International Communications Switching Systems
GNAS	General National Airspace System	IDAT	Interfacility Data
GNSS	Global Navigation Satellite System	IF	Intermediate Fix
GOES	Geostationary Operational Environmental Satellite	IFCP	Interfacility Communications Processor
GOESF	GOES Feed Point	IFDS	Interfacility Data System
GOEST	GOES Terminal Equipment	IFEA	InFlight Emergency Assistance
GPRA	Government Performance Results Act	IFO	International Field Office
GPS	Global Positioning System	IFR	Instrument Flight Rules
GPWS	Ground Proximity Warning System	IFSS	International Flight Service Station
GRADE	Graphical Airspace Design Environment	ILS	Instrument Landing System
GS	Glide Slope Indicator	IM	Inner Marker
		IMC	Instrument Meteorological Conditions
		INM	Integrated Noise Model

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INS	Inertial Navigation System	MAA	Maximum Authorized Altitude
IRMP	Information Resources Management Plan	MALS	Medium Intensity Approach Lighting System
ISDN	Integrated Services Digital Network	MALSF	MALS with Sequenced Flashers
ISMLS	Interim Standard Microwave Landing System	MALSRL	MALS with Runway Alignment Indicator Lights
ITI	Interactive Terminal Interface	MAP	Maintenance Automation Program
IVRS	Interim Voice Response System	MAP	Military Airport Program
IW	Inside Wiring	MAP	Missed Approach Point
		MAP	Modified Access Pricing
Kbps	Kilobits Per Second	Mbps	Megabits Per Second
Khz	Kilohertz	MCA	Minimum Crossing Altitude
KVDT	Keyboard Video Display Terminal	MCAS	Marine Corps Air Station
		MCC	Maintenance Control Center
LAA	Local Airport Advisory	MCL	Middle Compass Locator
LAAS	Low Altitude Alert System	MCS	Maintenance and Control System
LABS	Leased A B Service	MDA	Minimum Descent Altitude
LABSC	LABS GS200 Computer	MDT	Maintenance Data Terminal
LABSR	LABS Remote Equipment	MEA	Minimum En Route Altitude
LABSW	LABS Switch System	METI	Meteorological Information
LAHSO	Land and Hold Short Operation	MF	Middle Frequency
LAN	Local Area Network	MFJ	Modified Final Judgment
LATA	Local Access and Transport Area	MFT	Meter Fix Crossing Time/Slot Time
LAWRS	Limited Aviation Weather Reporting System	MHA	Minimum Holding Altitude
LBA	Load Bearing Area	Mhg	MegHERTZ
LCF	Local Control Facility	MIA	Minimum IFR Altitudes
LCN	Local Communications Network	MIDO	Manufacturing Inspection District Office
LDA	Localizer Directional Aid	MIS	Meteorological Impact Statement
LDA	Landing Directional Aid	MISC	Miscellaneous
LDIN	Leadin Lights	MISO	Manufacturing Inspection Satellite Office
LEC	Local Exchange Carrier	MIT	Miles In Trail
LF	Low Frequency	MITRE	Mitre Corporation
LINCS	Leased Interfacility NAS Communications System	MLS	Microwave Landing System
LIS	Logistics and Inventory System	MM	Middle Marker
LLWAS	Low Level Wind Shear Alert System	MMC	Maintenance Monitoring Console
LM/MS	Low/Medium Frequency	MMS	Maintenance Monitoring System
LMM	Locator Middle Marker	MNPS	Minimum Navigation Performance Specification
LMS	LORAN Monitor Site	MNPSA	Minimum Navigation Performance Specifications Airspace
LOC	Localizer	MOA	Memorandum of Agreement
LOCID	Location Identifier	MOA	Military Operations Area
LOI	Letter of Intent	MOCA	Minimum Obstruction Clearance Altitude
LOM	Compass Locator at Outer Marker	MODE C	Altitude Encoded Beacon Reply
LORAN	Long Range Aid to Navigation	MODE C	Altitude Reporting Mode of Secondary Radar
LPV	Lateral Precision Performance with Vertical Guidance	MODE S	Mode Select Beacon System
LRCO	Limited Remote Communications Outlet	MOU	Memorandum of Understanding
LRNAV	Long Range Navigation	MPO	Metropolitan Planning Organization
LRR	Long Range Radar		

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MPS	Maintenance Processor Subsystem (OR) Master Plan Supplement	NEXRAD	Next Generation Weather Radar
MRA	Minimum Reception Altitude	NFAX	National Facsimile Service
MRC	Monthly Recurring Charge	NFDC	National Flight Data Center
MSA	Minimum Safe Altitude	NFIS	NAS Facilities Information System
MSAW	Minimum Safe Altitude Warning	NI	Network Interface
MSL	Mean Sea Level	NICS	National Inter-facility Communications System
MSN	Message Switching Network	NM	Nautical Mile
MTCS	Modular Terminal Communications System	NMAC	Near Mid Air Collision
MTI	Moving Target Indicator	NMC	National Meteorological Center
MUX	Multiplexor	NMCE	Network Monitoring and Control Equipment
MVA	Minimum Vectoring Altitude	NMCS	Network Monitoring and Control System
MVFR	Marginal Visual Flight Rules	NOAA	National Oceanic and Atmospheric Administration
NAAQS	National Ambient Air Quality Standards	NOC	Notice Of Completion
NADA	NADIN Concentrator	NOTAM	Notice to Airmen
NADIN	National Airspace Data Interchange Network	NPDES	National Pollutant Discharge Elimination System
NADSW	NADIN Switches	NPE	Nonprimary Airport Entitlement
NAILS	National Airspace Integrated Logistics Support	NPIAS	National Plan of Integrated Airport Systems
NAMS	NADIN IA	NPRM	Notice of Proposed Rulemaking
NAPRS	National Airspace Performance Reporting System	NR	Non-rulemaking; refers to a type of airport airspace analysis case
NAS	National Airspace System or Naval Air Station	NRA	Non-rulemaking Airport; refers to a type of airport airspace analysis case
NASDC	National Aviation Safety Data	NRC	Nonrecurring Charge
NASP	National Airspace System Plan	NRCS	National Radio Communications Systems
NASPAC	National Airspace System Performance Analysis Capability	NSAP	National Service Assurance Plan
NATCO	National Communications Switching Center	NSSFC	National Severe Storms Forecast Center
NAVAID	Navigational Aid	NSSL	National Severe Storms Laboratory; Norman, OK
NAVMN	Navigation Monitor and Control	NTAP	Notices To Airmen Publication
NAWAU	National Aviation Weather Advisory Unit	NTP	National Transportation Policy
NAWPF	National Aviation Weather Processing Facility	NTSB	National Transportation Safety Board
NCAR	National Center for Atmospheric Research; Boulder, CO	NTZ	No Transgression Zone
NCF	National Control Facility	NWS	National Weather Service
NCIU	NEXRAD Communications Interface Unit	NWSR	NWS Weather Excluding NXRD
NCP	Noise Compatibility Program	NSWRH	NWS Regional Headquarters
NCS	National Communications System	NXRD	Advanced Weather Radar System
NDB	Nondirectional Radio Homing Beacon	OAG	Official Airline Guide
NDNB	NADIN II	OALT	Operational Acceptable Level of Traffic
NEM	Noise Exposure Map	OAW	Off-airway Weather Station
NEPA	National Environmental Policy Act	ODAL	Omnidirectional Approach Lighting System
		ODAPS	Oceanic Display and Processing Station

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OEI	One Engine Inoperative	PPIMS	Personal Property Information Management System
OEP	Operational Evolution Plan / Partnership	PR	Primary Commercial Service Airport
OFA	Object Free Area	PRI	Primary Rate Interface
OFDPS	Offshore Flight Data Processing System	PRM	Precision Runway Monitor
OFT	Outer Fix Time	PSDN	Public Switched Data Network
OFZ	Obstacle Free Zone	PSN	Packet Switched Network
OM	Outer Marker	PSS	Packet Switched Service
OMB	Office of Management and Budget	PSTN	Public Switched Telephone Network
ONER	Oceanic Navigational Error Report	PTC	Presumed to Conform
OPLT	Operational Acceptable Level of Traffic	PUB	Publication
OPSW	Operational Switch	PUP	Principal User Processor
OPX	Off Premises Exchange	PVC	Permanent Virtual Circuit
ORD	Operational Readiness Demonstration	PVD	Plan View Display
OTR	Oceanic Transition Route	QA	Quality Assurance
OTS	Organized Track System	RAIL	Runway Alignment Indicator Lights
PABX	Private Automated Branch Exchange	RAPCO	Radar Approach Control (USAF)
PAD	Packet Assembler/Disassembler	RAPCON	Radar Approach Control (FAA)
PAL	Planning Activity Level	RATCC	Radar Air Traffic Control Center
PAM	Peripheral Adapter Module	RATCF	Radar Air Traffic Control Facility (USN)
PAPI	Precision Approach Path Indicator	RBC	Rotating Beam Ceilometer
PAR	Precision Approach Radar	RBDPE	Radar Beacon Data Processing Equipment
PAR	Preferential Arrival Route	RBSS	Radar Bomb Scoring Squadron
PATWAS	Pilots Automatic Telephone Weather Answering Service	RCAG	Remote Communications Air/Ground
PBB	Passenger Boarding Bridge	RCC	Rescue Coordination Center
PBCT	Proposed Boundary Crossing Time	RCF	Remote Communication Facility
PBRF	Pilot Briefing	RCCC	Regional Communications Control Centers
PBX	Private Branch Exchange	RCIU	Remote Control Interface Unit
PCA	Positive Control Airspace	RCL	Radio Communications Link
PCC	Portland Cement Concrete	RCLR	RCL Repeater
PCM	Pulse Code Modulation	RCLT	RCL Terminal
PDAR	Preferential Arrival And Departure Route	RCO	Remote Communications Outlet
PDC	Predeparture Clearance	RCU	Remote Control Unit
PDC	Program Designator Code	RDAT	Digitized Radar Data
PDR	Preferential Departure Route	RDP	Radar Data Processing
PDN	Public Data Network	RDSIM	Runway Delay Simulation Model
PFC	Passenger Facility Charge	REIL	Runway End Identification Lights
PGP	Planning Grant Program	RF	Radio Frequency
PIC	Principal Interexchange Carrier	RL	General Aviation Reliever Airport
PIDP	Programmable Indicator Data Processor	RMCC	Remote Monitor Control Center
PIREP	Pilot Weather Report	RMCF	Remote Monitor Control Facility
PMS	Program Management System	RML	Radio Microwave Link
POLIC	Police Station	RMLR	RML Repeater
POP	Point Of Presence	RMLT	RML Terminal
POT	Point Of Termination	RMM	Remote Maintenance Monitoring
		RMMS	Remote Maintenance Monitoring System

*Addison, Texas*

RMS	Remote Monitoring Subsystem		System With Sequenced Flashing Lights
RMSC	Remote Monitoring Subsystem Concentrator	SFAR38	Special Federal Aviation Regulation 38
RNAV	Area Navigation	SHPO	State Historic Preservation Officer
RNP	Required Navigation Performance	SIC	Service Initiation Charge
ROD	Record of Decision	SID	Station Identifier
ROSA	Report of Service Activity	SID	Standard Instrument Departure
ROT	Runway Occupancy Time	SIGMET	Significant Meteorological Information
RP	Restoration Priority	SIMMOD	Airport and Airspace Simulation Model
RPC	Restoration Priority Code	SIP	State Implementation Plan
RPG	Radar Processing Group	SM	Statute Miles
RPZ	Runway Protection Zone	SMGC	Surface Movement Guidance and Control
RRH	Remote Reading Hygrothermometer	SMPS	Sector Maintenance Processor Subsystem
RRHS	Remote Reading Hydrometer	SMS	Safety Management System
RRWDS	Remote Radar Weather Display	SMS	Simulation Modeling System
RRWSS	RWDS Sensor Site	SNR	Signal-to-noise ratio, also: S/N
RSA	Runway Safety Area	SOC	Service Oversight Center
RSAT	Runway Safety Action Team	SOAR	System of Airports Reporting
RSS	Remote Speaking System	SOIR	Simultaneous Operations On Intersecting Runways
RT	Remote Transmitter	SOIWR	Simultaneous Operations on Intersecting Wet Runways
RT / BTL	Radar Tracking And Beacon Tracking Level	SRAP	Sensor Receiver and Processor
RTAD	Remote Tower Alphanumerics Display	SRM	Safety Risk Management
RTCA	Radio Technical Commission for Aeronautics	SSALF	SSALS with Sequenced Flashers
RTP	Regional Transportation Plan	SSALR	Simplified Short Approach Lighting System
RTR	Remote Transmitter/Receiver	SSB	Single Side Band
RTRD	Remote Tower Radar Display	STAR	Standard Terminal Arrival Route
RVR	Runway Visual Range	STD	Standard
RW	Runway	STMUX	Statistical Data Multiplexer
RWDS	Same as RRWDS	STOL	Short Takeoff and Landing
RWP	Realtime Weather Processor	SURPIC	Surface Picture
S/S	Sector Suite	SVCA	Service A
SAC	Strategic Air Command	SVCB	Service B
SAFI	Semi Automatic Flight Inspection	SVCC	Service C
SALS	Short Approach Lighting System	SVCO	Service O
SATCOM	Satellite Communications	SVFO	Interphone Service F (A)
SAWRS	Supplementary Aviation Weather Reporting System	SVFB	Interphone Service F (B)
SBGP	State Block Grant Program	SVFC	Interphone Service F (C)
SCC	System Command Center	SVFD	Interphone Service F (D)
SCVTS	Switched Compressed Video Telecommunications Service	SVFR	Special Visual Flight Rules
SDF	Simplified Direction Finding	T1MUX	T1 Multiplexer
SDF	Software Defined Network	TAAS	Terminal Advance Automation System
SDIS	Switched Digital Integrated Service	TAC	Technical Advisory Committee
SDP	Service Delivery Point		
SDS	Switched Data Service		
SEL	Single Event Level		
SELF	Simplified Short Approach Lighting		

*Addison, Texas*

TACAN	Tactical Aircraft Control and Navigation	TMLI	Television Microwave Link Indicator
TACR	TACAN at VOR, TACAN only	TMLR	Television Microwave Link Repeater
TAF	Terminal Area Forecast, Terminal Aerodrome Forecast	TMLT	Television Microwave Link Terminal
TARS	Terminal Automated Radar Service	TM&O	Telecommunications Management and Operations
TAS	True Air Speed	TMP	Traffic Management Processor
TATCA	Terminal Air Traffic Control Automation	TMS	Traffic Management System
TAVT	Terminal Airspace Visualization Tool	TMSPS	Traffic Management Specialists
TCA	Traffic Control Airport or Tower Control Airport	TMU	Traffic Management Unit
TCA	Terminal Control Area	TODA	Takeoff Distance Available
TCACCIS	Transportation Coordinator Automated Command and Control Information System	TOPS	Telecommunications Ordering and Pricing System (GSA software tool)
TCAS	Traffic Alert And Collision Avoidance System	TORA	Takeoff Run Available
TCC	DOT Transportation Computer Center	TNAV	Terminal Navigational Aids
TCCC	Tower Control Computer Complex	TR	Telecommunications Request
TCE	Tone Control Equipment	TRACAB	Terminal Radar Approach Control in Tower Cab
TCLT	Tentative Calculated Landing Time	TRACON	Terminal Radar Approach Control Facility
TCO	Telecommunications Certification Officer	TRAD	Terminal Radar Service
TCOM	Terminal Communications	TRB	Transportation Research Board
TCS	Tower Communications System	TRNG	Training
TDPC	Touchdown/Positioning Circle	TSA	Taxiway Safety Area
TDLS	Tower DataLink Services	TSEC	Terminal Secondary Radar Service
TDMUX	Time Division Data Multiplexer	TSP	Telecommunications Service Priority
TDWR	Terminal Doppler Weather Radar	TSR	Telecommunications Service Request
TELCO	Telephone Company	TSYS	Terminal Equipment Systems
TELMS	Telecommunications Management System	TTMA	TRACON Traffic Management Advisor
TERPS	Terminal Instrument Procedures	TTY	Teletype
TFAC	To Facility	TVOR	Terminal VHF Omnidirectional Range
TH	Threshold	TW	Taxiway
TIMS	Telecommunications Information Management System	TWEB	Transcribed Weather Broadcast
TIPS	Terminal Information Processing System	TWR	Tower (noncontrolled)
TL	Taxilane	UAS	Uniform Accounting System
TLOF	Touchdown and Liftoff Area	UHF	Ultra High Frequency
TMA	Traffic Management Advisor	URA	Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
TMC	Traffic Management Coordinator	USAF	United States Air Force
TMC/MC	Traffic Management Coordinator/Military Coordinator	USC	United States Code
TMCC	Terminal Information Processing System	USOC	Uniform Service Order Code
TMCC	Traffic Management Computer Complex	VALE	Voluntary Airport Low Emission
TMF	Traffic Management Facility	VASI	Visual Approach Slope Indicator
TML	Television Microwave Link	VDME	VOR with Distance Measuring Equipment
		VF	Voice Frequency
		VFR	Visual Flight Rules
		VGSI	Visual Glideslope Indicator

VHF	Very High Frequency
VLF	Very Low Frequency
VMC	Visual Meteorological Conditions
VNAV	Visual Navigational Aids
VNTSC	Volpe National Transportation System Center
VON	Virtual Onnet
VOR	VHF Omnidirectional Range
VOR/DME	VHF Omnidirectional Range/Distance Measuring Equipment
VORTAC	VOR collocated with TACAN
VOT	VOR Test Facility
VP/D	Vehicle/Pedestrian Deviation
VRS	Voice Recording System
VSCS	Voice Switching and Control System
VTA	Vertex Time of Arrival
VTAC	VOR collocated with TACAN
VTOL	Vertical Takeoff and Landing
VTS	Voice Telecommunications System
WAAS	Wide Area Augmentation System
WAN	Wide Area Network
WC	Work Center
WCP	Weather Communications Processor
WECO	Western Electric Company
WESCOM	Western Electric Satellite Communications
WHA	Wildlife Hazard Assessment
WHMP	Wildlife Hazard Management Plan
WSO	Weather Service Office
WX	Weather

## *Addison, Texas*

### **TERMS:**

**Advisory Circular (AC):** A series of external FAA publications consisting of all non-regulatory material of a policy, guidance, and informational nature.

**Air Cargo:** All commercial air express and air freight with the exception of air-mail and air parcel post.

**Air Carrier:** A commercial operator providing for the transport of passengers or property by aircraft for compensation or hire utilizing aircraft with greater than 30 seats and certificated in accordance with Federal Aviation Regulations (FAR) Parts 121 or 127.

**Aircraft Mix:** The numerical or percentage breakdown of aircraft into categories based on aircraft engine and weight.

**Aircraft Operation:** Any aircraft arrival or departure including touch-and-go operations.

**Aircraft Type:** A distinctive model of aircraft, as designated by the manufacturer.

**Airline:** A scheduled air carrier certificated by the Federal Aviation Administration under Part 121 of the Federal Aviation Regulations.

**Airline Operations:** Takeoffs and landings performed by aircraft operated by Part 121 or 127 airlines on scheduled and non-scheduled flights.

**Airport:** A landing area regularly used by aircraft for receiving or discharging passengers or cargo.

**Airport Service Area:** The geographic area that generates demand for aviation services at an airport.

**Airport Surveillance Radar (ASR):** A navigation instrument used to control air traffic within the immediate airport traffic areas.

**Airspace:** The area above the ground in which aircraft travel. It is divided into corridors, routes, and restricted zones for the control and safety of traffic.

**Air Taxi:** The transport of people or property for compensation or hire by a commercial operator (not an air carrier) in an aircraft having a maximum seating capacity of 30 or less and certified under Federal Aviation Regulations Part 135.

**Ambient:** The sum total of existing environmental conditions for any given impact category.

**Ambient Air Quality:** The existing quality of the air.

**Aquatic:** Growing or living in or upon water.

**Approach Surface:** An imaginary inclined surface longitudinally centered on the extended centerline of a runway, extending outward and upward from the runway. It has a shallower gradient than the corresponding glide slope.

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*Addison, Texas*

**Apron:** An area on an airport designated for the parking, loading, fueling, or servicing of aircraft.

**Aviation Easement:** A form of limited property right purchase that establishes legal land-use control prohibiting incompatible development of areas required for airports or aviation-related purposes.

**Based Aircraft:** Aircraft stationed at the airport on a permanent basis.

**Beacon:** See rotating beacon.

**Biotic Community:** Recognizable assemblages of vegetation and wildlife organisms generally functioning as a unit.

**Building Restriction Line (BRL):** An imaginary line that identifies suitable building area locations on airports. The BRL is also dependent upon the Runway Visibility Zone (RVZ) and ATCT line-of-sight capabilities.

**Capacity:** The airport operating level, expressed as the number of aircraft movements that can occur at an airport over a specified time period.

**Circling Approach:** A descent used in an approved procedure to an airport for a circle to land maneuver.

**Commercial Aviation:** Aircraft activity licensed by state or federal authority to transport passengers and/or cargo on a scheduled or non-scheduled basis.

**Community:** A city, group of cities, or a Metropolitan Statistical Area receiving scheduled air service by a certificated route air carrier at an airport.

**Commuter Airline:** Commercial operators that operate aircraft with a maximum of 60 seats, and that provides scheduled service, or that carries mail; commuters may be either air taxis or certified air carriers.

**Condemnation:** Proceedings under which a property interest may be forcibly acquired; government may condemn land through the power of eminent domain; an individual may apply inverse condemnation to obtain just compensation for a property interest taken by government without prior agreement.

**Conical Surface:** A surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet and extending to a height of 350 feet above the airport elevation.

**Critical Aircraft:** The most demanding category or family of aircraft that performs 500 annual itinerant operations at an airport (Also referred to as the design aircraft).

**Critical Habitat:** An entire habitat or portion thereof, having any constituent element that is necessary to the normal needs or survival of an endangered or threatened species.

**Decibel (dB):** A unit of measurement used to describe sound pressure level. It is a dimensionless unit, which is commonly expressed as one-tenth of the logarithm of the ratio between two power levels, one of which is nominally a reference level. The human auditory response to a given increase in sound pressure

## *Addison, Texas*

is approximately proportional to the increase in sound pressure in comparison to the pressure already present.

**Displaced Threshold:** Actual touchdown point on specific runways designated due to obstructions that make it impossible to use the actual physical runway end.

**Distance Measuring Equipment (DME):** An airborne instrument that indicates the distance the aircraft is from a fixed point, usually a VOR station.

**Draft Environmental Impact Statement:** FAA's initial evaluation of the environmental impact of a proposed action when coordinated pursuant to Section 102(20Cc) of NEPA is initiated.

**Ecology:** The science or study of the relationship between an organism and its environment.

**Ecosystem:** An ecological community together with its physical environment, considered as a unit.

**Effective Runway Gradient:** The maximum difference between runway centerline elevations divided by the runway length, expressed as a percentage.

**Eminent Domain:** Right of the government to take property from the owner, upon compensation, for public facilities or other purposes in the public interest.

**Endangered Species:** Those species in danger of extinction throughout all or a significant portion of their range.

**Enplanement:** A term applying to passengers and cargo which board a departing aircraft.

**Enroute Airways:** The route a flight follows from departure point to destination.

**Express:** Property transported under published air express tariffs.

**Fauna:** A collective term for the animal species present in an ecosystem.

**Fixed Base Operator (FBO):** A private enterprise engaged in services related to general aviation, such as fuel sales, aircraft maintenance, aircraft storage, aircraft rental and sales, flight instruction, and crop dusting.

**Flora:** A collective term for the plant species present in an ecosystem.

**Floodplain:** An area that would be inundated by storm-water runoff that occurs under a given recurrent frequency flood condition.

**Fleet Mix:** See Aircraft Mix.

**Flight Service Station (FSS):** FAA facility used for pilot briefings on weather, airports, altitudes, routes, and other flight planning data.

**General Aviation (GA):** All aviation activities except those performed by commercial air carrier or

military.

**General Aviation Aircraft:** All civil aircraft except those owned by and classified as air carriers.

**General Obligation Bond:** A form of public indebtedness backed by the full faith and credit of the municipality or other appropriate public body.

**Glide Slope (GS):** Electronic vertical guidance provided the pilot while on the final approach to landing; usually an angle between two degrees and three degrees and intersecting the runway at the touch down area.

**Global Positioning System (GPS):** Satellite-based navigation capabilities utilizing a minimum of four (4) of 26 satellites orbiting the earth.

**Horizontal Surface:** A horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway and connecting the adjacent arcs by tangent lines.

**IFR Conditions:** Weather conditions below the minimum prescribed for flight under VFR.

**Indirect Source:** A facility, building, structure, or installation which attracts mobile air pollution source activity that results in emissions of a pollutant for which there is a national standard.

**Instrument Landing System (ILS):** A landing approach system that establishes a course and a descent path to align an aircraft with a runway for final approach.

**Instrument Flight Rules (IFR):** Rules that govern flight procedures when ceiling and visibility are below 1,000 feet and three miles respectively.

**Instrument Approach:** A landing approach using electronic aids and made without visual reference to the ground.

**Itinerant Operations:** Arrivals and departures of aircraft to or from an area greater than 20 miles from the airport. Itinerant operations may involve an aircraft based at the airport or an aircraft from another airport.

**Local Area Augmentation System (LAAS):** Intended to compliment Wide Area Augmentation System (WAAS) by meeting Category II/ III instrument approach requirements, as well as provide users with all weather surface navigation, surface navigation, and surface surveillance/ traffic management system capabilities.

**Localizer (LOC):** An electronic instrument that is part of an ILS and emits radio signals which provide the pilot with course guidance to the runway centerline.

**Local Operations:** Operations performed by aircraft that (1) operate in the local traffic pattern or within sight of the tower; (2) are known to be departing for or arriving from +/- light in local practice areas located within a 20 mile radius of the control tower; and (3) execute simulated instrument approaches or low passes at the airport.

## *Addison, Texas*

**Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR):** A facility by which the pilot is provided visual reference to the instrument runway during transition from instrument to visual flight.

**Microwave Landing System:** An instrument landing system using VHF radio signals to guide the aircraft's approach instead of the VHF system still widely used. The microwave system provides for fewer ground reflections, takes up less space, and uses small aerials.

**Minimum Descent Altitude (MDA):** The lowest altitude, expressed in feet above MSL, to which descent is authorized on final approach or during circling-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

**Middle Marker (MM):** An electronic beacon that indicates a position approximately 3,500 feet from the landing threshold.

**Military Operations:** An operation by military aircraft.

**Missed Approach:** A prescribed procedure to be followed by aircraft that cannot complete an attempted landing at an airport.

**Nautical Mile:** A measure of lineal distance equal to one minute of a great circle at the equator and is the length of one minute of latitude (6,076.1155 feet). To convert to statute miles, multiply by 1.150779.

**NAVAID:** Any navigational aids, such as PAPI, MALS, REIL, etc.

**Noise Contour:** A line connecting points of equal noise exposure.

**Non-precision Approach Procedure:** A standard instrument approach procedure in which no electronic glide slope is provided.

**Non-scheduled Service:** Revenue flights that are not operated in regular scheduled service such as charter flights and all non-revenue flights incident to such flights.

**Object Free Area (OFA):** An area on the ground centered on the runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

**Obstacle Free Zone (OFZ):** The OFZ is the airspace below 150 feet (45m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or departing from the runway, and for missed approaches.

**Operation:** Any airborne arrival or departure of an aircraft at or from an airport. "Touch-and-go" practice landings are considered as two operations.

**Origination:** The initial enplanement of any passengers and cargo; total originations include all enplanements except transfers and stop-overs.

**Outer Marker (OM):** An electronic beacon that indicates a position at which aircraft will intercept the ILS glide path.

**Parts 25 and 121 Criteria:** Those applicable portions of the Federal Aviation Regulations within which criteria for operational takeoff flight paths are defined.

**Part 77:** The applicable portions of Federal Aviation Regulations which define obstructions to air navigation.

**Peak Hour:** Represents that highest number of operations or passengers during the busiest hour of an average day of a peak month.

**Precision Approach Path Indicator (PAPI):** A lighting system providing for visual flight path, within the airport approach zone, so that an approaching pilot can establish a positive controlled descent (also VASI).

**Precision Instrument:** The term used to describe an approach using both horizontal and vertical guidance. This term also describes the runway with this type of approach and the markings on the runway.

**Primary Runway:** That runway which provides the best wind coverage, etc.; this runway receives the most usage at an airport.

**Primary Surface:** A surface longitudinally centered on a runway. When the runway has a hard surface, the primary surface extends 200 feet beyond each runway end; but when there is no hard surface, or planned hard surface, the primary surface ends at the end of the runway. The width of the primary surface of a runway will be that width prescribed in FAA Part 77 for the most precise existing or planned approach to that runway end.

**Revenue Bonds:** A form of public indebtedness backed by the revenue generated by the facility for which the debt was incurred.

**Rotating Beacon:** A visual NAVAID displaying flashes of white and/or colored light used to indicate the location of an airport.

**Runway (RW):** A defined area on an airport prepared for landing and takeoff of aircraft.

**Runway Protection Zone (RPZ):** An area off the runway end to enhance the protection of people and property on the ground.

**Runway Safety Area:** A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft in the event of an overshoot, undershoot, or excursion from the runway.

**Runway Visibility Zone (RVZ):** An acceptable runway profile permits any two points five feet (1.5m) above the runway centerline to be mutually visible for the entire runway length. Hence, a clear line-of-sight between the ends of the intersecting runways is recommended. Finally, the RVZ is an area formed by the imaginary lines connecting the two runways' visibility points.

## *Addison, Texas*

**Scheduled Service:** Transport service performed by a commercial operator on a regular basis.

**Segmented Circle:** An airport aid identifying the traffic pattern direction.

**Socioeconomic:** Data pertaining to the population and economic characteristics of a region.

**Special Use Airspace:** Airspace of defined dimensions, within which flight of aircraft, while not wholly prohibited, is subject to restrictions or to hazards that may exist to non-participating aircraft.

**Straight-In Approach:** A descent in an approach procedure in which the final approach course alignment and descent gradient permits authorization of straight-in landing minimums.

**Student Activity:** Any aviation activity by student pilots.

**Taxiway (TWY):** A defined area on an airport prepared for the surface movement of aircraft to and from the runway.

**Terminal Airspace:** The controlled airspace normally associated with aircraft departure and arrival patterns to or from airports within a terminal control system.

**Terminal Building:** That building on an airport which is used in making the transition between surface and air transportation.

**T-Hangar:** A T-shaped aircraft storage building that provides economical shelter for a single aircraft.

**Threshold:** The beginning of that portion of the runway available for landing. In some instances the landing threshold may be displaced.

**Tie Downs:** An area on an airport specifically designed for the outdoor storage of aircraft.

**Total Operations:** The total of all operations (domestic and international) performed at an airport.

**Touch-and-Go Operations:** An aircraft operation for practice or testing purposes characterized by a landing touch-down and then continuing takeoff without stopping.

**Traffic Pattern:** The flow of traffic that is prescribed for aircraft landing at, taxiing on, or taking off from an airport.

**Transition Surface:** An imaginary surface extending to the sides of the approach surface and inclined at a specified gradient 90 degrees to the extended centerline of the runway. Any object penetrating this surface would be an obstruction to air navigation.

**Turnaround:** A pavement area designed for turning around or holding aircraft at the end of a runway when a full parallel taxiway is not provided.

**UNICOM:** A ground radio communications station that provides pilots with pertinent airport information at specific airports.

**Visual Approach Slope Indicator (VASI):** A lighting system providing a visual flight path, within the airport approach zone, so that an approaching pilot can establish a more positive controlled descent (also PAPI).

**Vector:** A heading issued to an aircraft to provide navigational guidance by radar.

**Visual Flight Rules (VFR):** Rules under which aircraft are operated by visual reference to the ground, and fly on a “see and be seen” principle.

**Very High Frequency Omni-Directional Range (VOR):** Air navigation aid that provides bearing information to aircraft.

**Wide Area Augmentation System (WAAS):** Planned as a GPS augmentation by providing users with the use of GPS for all phases of flight from the en route environment to Category 1 precision instrument approaches. Thereby, providing more direct routing of aircraft, saving time, fuel, and money.

**Wind Cone (Sock):** Conical wind direction indicator.

**Wind Coverage:** Refers to orientation of runway in relationship to direction of prevailing winds (concerns usability of runway for takeoffs and landings).

**Wind Rose:** A diagram indicating the prevalence of winds from various directions, at a specific place.

**Wind Tee:** A visual device used to advise pilots about wind direction.

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