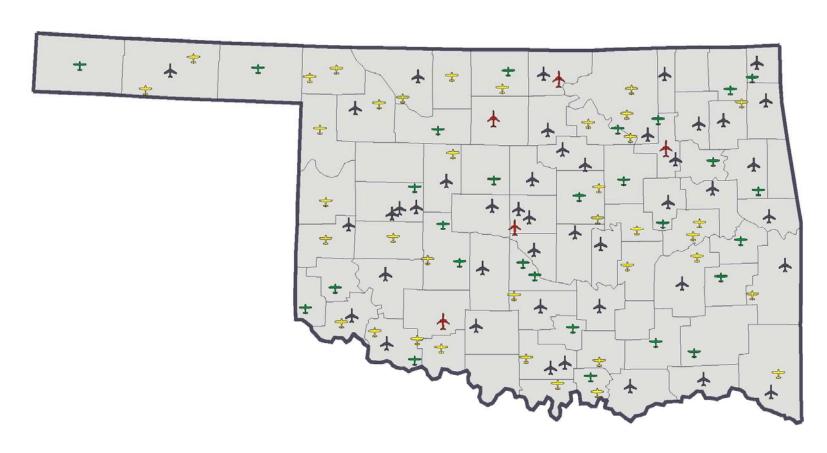


## Oklahoma Airport System Plan



**Executive Summary** 

## **System Planning Process**

#### **System Planning Process**

The airport system planning process consists of seven primary activities:

- maintaining inventories of airport facilities, services and activities;
- forecasting aviation activity;
- classifying airports with respect to their service level, role, design standard and functional classification;
- → conducting a public-participation program;
- identifying the capital improvements needed at each system plan airport and the associated costs;
- preparing the annual capital improvement program; and
- conducting special studies such as the economic impact of civil aviation activity, preparing action plans for specific system plan airports, preparing airport layout plans and conducting an airport-pavement evaluation and management program.

Airport inventories are maintained through an annual airport inspection program and recorded using the Federal Aviation Administration (FAA) Form 5010-1, Airport Inspection Program. This information becomes a part of the national database and is reported in aeronautical publications such as the *Airport/Facility Directory* and the *Oklahoma Aeronautics Commission Airport Directory*.

The various classifications used for airports included in the Oklahoma Airport System Plan (OASP) are explained in detail in the section on airport system plan classifications.

#### **Regional Planning Meetings**

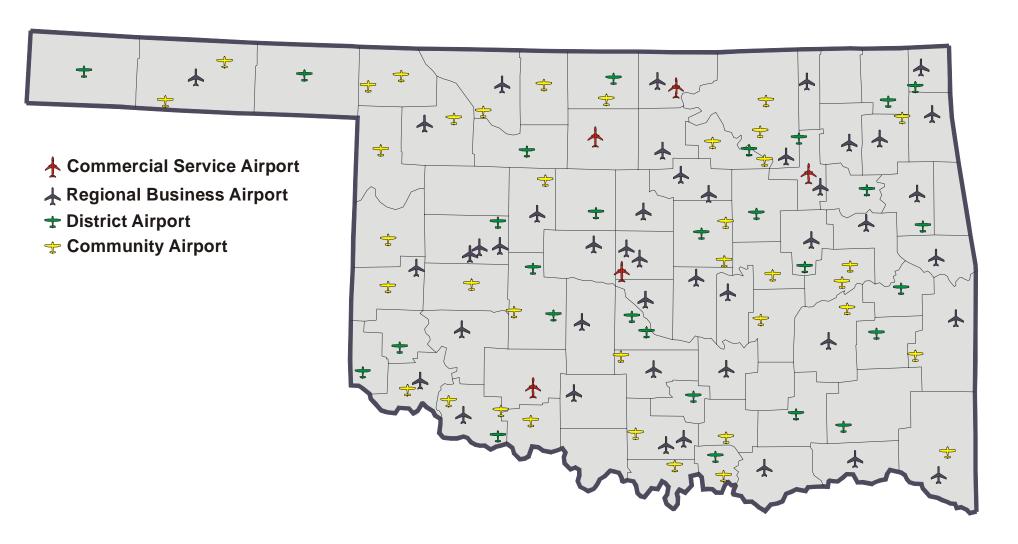
The Oklahoma Aeronautics Commission (Commission) has conducted an extensive public participation process annually since the summer of 1995. At these meetings, information is provided on the system planning process, the classifications used in the system plan, the airport classifications and the associated capital improvements identified in the system plan for each airport and the capital improvement program.

Airport sponsors are asked to provide information on economic activity such as business locations and expansions, travel and tourism, agriculture, oil and gas activity, industrial development, sales tax revenue trends, and more. The economic activity of a community and the classification of the airport are closely linked.

These meetings provide the Commission staff with a formal opportunity to better understand the economic dynamics of the community. This economic activity in turn impacts the system plan airport classification appropriate for the community's airport. Airport sponsors are also asked to provide information on the amount of aviation activity and type of aircraft that are using their airport. Comments are requested on the information shown on the airport development worksheet and the priorities for the identified development.

Following each meeting, summaries are prepared and the airport development worksheets are updated. These meetings provide a structured process for updating the OASP on a continuous basis.

## **Oklahoma Airport System Plan Airports**



## **System Plan Classifications**

One of the primary functions of airport system planning is the appropriate classification of OASP airports by time period. OASP airports are classified into four categories: airport service level, airport design standard, airport reference code and airport classification. The first three classifications are Federal Aviation Administration (FAA)-developed classifications used in the National Plan of Integrated Airport Systems (NPIAS). The fourth, the airport functional classification, was developed for the OASP to further clarify the function of each airport. The definitions for these classifications are provided in this section.

#### Service Level

The airport service level reflects the type of service provided by the airport to the community. There are four airport service levels: general aviation airport (GA), reliever airport (RL), non-primary commercial service (CM) and primary commercial service (PR). The following is a description of the service level categories used to classify airports.

#### General Aviation Airport (GA)

General aviation airports provide access to the population and economic activity centers of the state. An objective of the OASP is to provide access to population and mineral resource centers for business jet aircraft and to agricultural resource centers for piston-powered aircraft within a reasonable surface access time. Reasonable surface access time is defined as 30 minutes or less ground travel time (FAA Order 5090.3B, Field Formulation of the National Plan of Integrated Airport Systems, September 1985). For the OASP, a 25-statute mile



radius is used to estimate an average ground travel time of 30 minutes.

#### Reliever Airport (RL)

Reliever airports reduce congestion at commercial service airports in Metropolitan Statistical Areas (MSAs), as defined by the U.S. Office of Management and Budget (OMB), by providing general aviation users with alternative airport facilities. Reliever airports provide capabilities similar to the commercial service airport being relieved. Relievers are all-weather, instrumented facilities that primarily serve itinerant general aviation aircraft. Relievers are located in such a manner, with respect to the city center or business or industrial activities served so that they provide user conveniences equivalent to those provided by the relieved airport.

The OASP includes three reliever airports. Wiley Post Airport in Oklahoma City and the University of Oklahoma Westheimer Airport in Norman are relievers to Will Rogers World Airport. Richard L. Jones, Jr. Airport in Tulsa is a reliever to Tulsa International Airport.

The FAA makes reliever airport designations. At one time, relievers competed for specifically designated Airport Improvement Plan (AIP) reliever funding on a national basis. This is no longer the case, there is no more reliever set-a-side funding. However, the designation has been retained to recognize the critical role that reliever airports play within metropolitan areas.

#### Non-Primary Commercial Service (CM)

A non-primary commercial service airport is an airport that receives scheduled passenger service and enplanes at least 2,500, but less than 10,000 passengers annually, as reported by the FAA. There are two non-primary commercial service airports in the OASP: Enid Woodring Regional in Enid and Ponca City Regional in Ponca City.

#### Primary Commercial Service (PR)

A primary commercial service airport is an airport that receives scheduled passenger service and enplanes 10,000 or more passengers annually, as reported by the FAA. There are three commercial service airports in the OASP: Lawton-Fort Sill Regional in Lawton, Will Rogers World in Oklahoma City and Tulsa International in Tulsa.

Although there is strong interest by some communities in attracting scheduled air passenger service, no assessment or evaluation of the feasibility or potential for additional scheduled passenger service has been done as a part of the airport system planning process.

#### **Airport Role**

The role of the airport influences its design and determines the type of aircraft the airport can accommodate. In the case of commercial service airports (PR and CM), the role also influences the nonstop routes and markets the airport serves. There are three airport roles associated with commercial service, reliever and general aviation airports. These roles are basic utility, general utility and transport.

Closely associated with the role of the airport is the design standard for the airport. The design standards associated with the basic utility role are Basic Utility I and Basic Utility II. The design standards associated with the general utility role are General Utility I and General Utility II. The design standard associated with the transport role is the Transport design standard. These definitions are clarified below.

- → Basic Utility: Basic Utility airports are small airports designed primarily for single-engine and some light twin-engine aircraft. Precision approaches are not anticipated.
- General Utility: General Utility airports are designed for a broader spectrum of general aviation aircraft than are basic utility airports. The airports can accommodate air-taxi and scheduled commuter services. General Utility airports will accommodate most air-taxi and commuter aircraft with 20 seats or less and some business jet aircraft with low approach speeds. General Utility airports can serve as reliever airports when substantial use by jet or large corporate aircraft is not

- anticipated. Precision instrument approaches may be anticipated at some General Utility airports.
- Transport: Transport airports are designed for use by aircraft that cannot be accommodated by a General Utility airport. Commercial service airports are designed as Transport airports. Transport airports also serve large corporate aircraft and business jet aircraft with higher approach speeds. Precision approaches are provided at Transport airports designated as commercial service level and at some Transport airports with a Reliever or General Aviation service level.

#### **Design Standard**

The airport roles of Basic Utility, General Utility and Transport are refined further into runway design standards. The design standards are defined as follows.

- Basic Utility Stage I. This type of runway serves 75 percent of the small (12,500 pounds or less) single-engine and twinengine aircraft in Aircraft Approach Categories A and B used for personal and business purposes. Precision approach operations are not anticipated. This runway type is designed for aircraft in Airport Reference Code A-1.
- Basic Utility Stage II. This type of runway serves 95 percent of the small (12,500 pounds or less) single-engine and twinengine aircraft in Approach Categories A and B. This includes all aircraft served by Basic Utility Stage I runways, plus some small business and air-taxi twin-engine aircraft. Precision approach operations are not anticipated. This type of runway is designed for aircraft in Airport Reference Code B-1.

- General Utility Stage I. This type of runway serves 100 percent of the small (12,500 pounds or less) single-engine and twin-engine aircraft in Aircraft Approach Categories A and B. Precision approach operations are not anticipated. This type of runway is designed for aircraft in Airport Reference Code B-II.
- General Utility Stage II. This type of runway serves all aircraft included in General Utility Stage I, plus most of the large aircraft (60,000 pounds or less) in Aircraft Approach Categories A and B. The runway may have the capability for precision-approach operations. This type of runway is normally designed for aircraft in Airport Reference Code B-II.
- Transport. This type of runway serves all the aircraft accommodated by Basic and General Utility runways, plus general aviation aircraft in Aircraft Approach Categories C and D. This type of runway is normally designed for aircraft in Airport Reference Code C-II.

#### **Airport Reference Code (ARC)**

The airport reference code is a coding system used to relate airport design criteria to the operational and physical characteristics of the aircraft intended to operate at the airport. The airport reference code has two components pertaining to the airport design aircraft. The first component, depicted by a letter, is the aircraft approach category and relates to the aircraft approach speed, an operational characteristic. The second component, depicted by a roman numeral, is the aircraft design group and relates to the aircraft wingspan, a physical characteristic.

Generally, runway standards are related to aircraft approach speed, aircraft wingspan and the approach visibility minimums. Taxiway and taxilane standards are related to aircraft design group.

As part of the system planning process, information on the types of aircraft using each system plan airport is collected, typically, during the regional planning meetings, but also from other sources. Information is also collected on any aircraft users desiring to use a particular airport, but who are unable to do so because of airport design limitations. This information is one of the criteria that the Commission staff use to develop the recommended airport reference code by time period for each system plan airport.

Most system plan airports with a general aviation service level have aircraft approach category designations of A, B or C and an aircraft design group designation of I or II (See following definitions). Airports with a commercial service service level may have aircraft approach category designations of D or E and aircraft design group designations of III, IV, V or VI.

**Aircraft Approach Category.** A grouping of aircraft based on 1.3 times their stall speed in their landing configurations at their maximum certificated landing weight. The categories are:

Category A: Speed less than 91 knots;

Category B: Speed 91 knots or more, but less than 121 knots;

Category C: Speed 121 knots or more, but less than 141 knots; and

Category D: Speed 141 knots or more, but less than 166 knots.

**Aircraft Design Group.** A grouping of aircraft based on wingspan. The groups are:

Group I: Up to, but not including 49 feet;

Group II: 49 feet up to, but not including 79 feet;

Group III: 79 feet up to, but not including 118 feet;

Group IV: 118 feet up to, but not including 171 feet;

Group V: 171 feet up to, but not including 214 feet; and

Group VI: 214 feet up to, but not including 262 feet.

#### **Example Airport and Aircraft Classification**

Example classifications of airports with their associated aircraft types are provided below.

Service Level — General Aviation; Role — Basic Utility; Design Standard — Basic Utility Stage I (BU-I); ARC — A-I; Small Aircraft (12,500 pounds or less):

Aerospatiale TB10 Tobago

Aerospatiale TB20 Trinidad

Aerospatiale TB360 Tangara

Bellanca Viking 17-30A

Cessna 150/152

Cessna 172 Skyhawk

Cessna 177 Cardinal

Cessna 180/185 Skywagon

Cessna 182 Skylane

Cessna 206 Stationair



Cessna 210 Centurion

Cessna 337 Skymaster

Gulfstream American Lynx

Gulfstream American Cheetah

Mooney Allegro

Mooney Bravo

Mooney Eagle

Mooney Encore

**Mooney Ovation** 

North American Rockwell Commander 111, 112, 114

Piper PA-20 Pacer

Piper PA-22 Tri-Pacer

Piper PA-24 Comanche

Piper PA-28-161 Warrior 3

Piper PA-28-181 Archer 3

Piper PA-28R-201 Arrow

Piper PA-32R-301 Saratoga

Piper PA-34-220T Seneca 5

Piper PA-44-180 Seminole

Piper PA-46-350P Malibu Mirage

Raytheon Beech Bonanza A36

Raytheon Beach Bonanza B36TC

Raytheon Beach Bonanza F33A

Raytheon Beach Bonanza V35B

Raytheon Beach Baron B55/E55

Raytheon Beech Duchess 76

Service Level — General Aviation; Role — Basic Utility; Design Standard — Basic Utility Stage II (BU-II); ARC — B-I; Small Aircraft (12,500 pounds or less):

Cessna 402

Cessna 404 Titan

Cessna 414 Chancellor

Cessna 421 Golden Eagle

Embraer 121 Xingu

Gulfstream Cougar GA-7

Piper Cheyenne III-A

Piper 400LS Cheyenne

Piper 31-310 Navaho

Piper 60-602P Aerostar

Raytheon Beach Baron 58, 58P, 58TC

Raytheon Beech Duke B60

Service Level — General Aviation or Reliever; Role — General Utility; Design Standard — General Utility Stage I (GU-I); ARC — B-I or B-II; Small Aircraft with less than 10 passenger seats:

Cessna 441 Conquest

Cessna 206B Super Cargo Master

Cessna CitationJet

Commander 560

Fairchild Merlin III

Raytheon Beech E18S

Raytheon Beech King Air C90B

Raytheon Beech King Air B200



Typical Small Aircraft in Aircraft Approach Categories A and B, Design Groups I and II with 10 or more passenger seats:

Cessna 208 Caravan 675

Cessna 208B Grand Caravan

Cessna 421

De Havilland Twin Otter

Embraer 120

Fairchild Merlin IV

Fairchild Metro Executive

Mitsubishi MU-2

Raytheon Beech Airliner C99

Raytheon Beech King Air BE-200

Raytheon Beech King Air BE-300LW

Service Level — General Aviation or Reliever; Role — General Utility; Design Standard — General Utility Stage II; ARC — B-II; Large Aircraft (greater than 12,500 pounds and less than 30,000 pounds):

Bombardier Learjet 28

Bombardier Learjet 29

Bombardier Learjet 31A

British Aerospace Jetstream 31

Cessna Citation 7

Cessna Bravo

Cessna Excel

Cessna Ultra

Dassault Aviation Falcon 10

Embraer-110 Bandeirante

Fairchild Aerospace Merlin 4C

Israel Aircraft Industries Astra SP, SPX

Mitsubishi Diamond MU-300

Piaggio PD-808

Raytheon Beech 1900D Airliner

Raytheon Beech Jet BE 400 A

Raytheon Beech King Air 350

Raytheon Beech Starship BE 2000

Raytheon Aircraft Co. Hawker 800XP

Sabreliner Corp. Sabreliner 40, 60, 65

Shorts 330

Shorts 360

Service Level — General Aviation or Reliever; Role — General Utility; Design Standard — General Utility Stage II; ARC — B-II; Large Aircraft (greater than 30,000 pounds and less than 60,000 pounds):

Bombardier (de Havilland) Dash 8Q-200, Dash 8Q-300

Cessna Citation 10

Dassault Aviation Falcon 20, 50

Dassault Falcon 200

Dassault Aviation Falcon 900C, 900EX

Dassault Aviation Falcon 2000

Fokker F-27-500

Service Level — General Aviation or Reliever; Role — Transport; Design Standard — Transport; ARC — C-II; Large Aircraft (greater than 12,500 pounds and less than 60,000 pounds):

Bombardier Canadair SE

Bombardier Challenger 600W, 601-IA, 601-3A, 601-3R, 604

Bombardier Corporate Jetliner

Bombardier Learjet 35A, 45, 60

Dassault Aviation Falcon 50EX

Dassault Aviation Falcon 900B

Fairchild Aerospace Envoy 3

Fokker F-28-3000, F28-4000

Israel Aircraft Industries Galaxy

Raytheon Aircraft Co. Beechjet 400A

Raytheon Aircraft Co. Hawker Horizon

Sabreliner Corp. Sabreliner 80

#### **Functional Classification**

The OASP airports are further classified by the functional classifications of Regional Business Airport, District Airport and Community Airport. These functional classifications were developed to more accurately define the purpose of each airport within the system. The logic for these classifications is similar in concept to the classifications of rural principal arterial, rural minor arterial, rural collector and rural local road used to functionally classify the rural highway system.

The airport classifications previously described (service level, role, design standard and airport reference code) focus primarily on the types of aircraft the airport is designed to accommodate. These classifications are not sufficient to understand how individual airports function in a system or how they relate to each other. For example, the function of a rural interstate highway (functionally classified as a rural principal arterial) is to carry high volumes of all types of highway vehicles traveling long distances. The function of a regional business airport is to accommodate high volumes of all types of general aviation aircraft under all weather conditions. Interstate highways are spaced considerable distances apart, for example, there are 27 east-west and 32 north-south interstate highways crossing the U.S. Due to demand and cost, it is economically feasible to provide only a limited number of these high-order facilities. Similarly, due to demand and cost, it is economically feasible to provide only a limited number of Regional Business Airports.

The functional classification is important as it will affect the role and the design standard for participation by the state and federal government with regard to a particular airport. It affects the capital items that are eligible for programming in the Capital Improvement Program (CIP), and it also affects the priorities used to prepare the CIP.

#### Why A Functional Classification System?

There are a number of reasons for the functional classification system. Over the past two decades, the cost of personal flying has increased, and the amount of personal flying has declined. At the same time, the amount of business flying has increased. The number of new general aviation aircraft delivered and the total number of general aviation aircraft has declined since 1983. However, the value of the aircraft delivered has increased steadily through the entire time period. This implies that the aircraft being sold are the expensive aircraft, the \$1 million plus aircraft and the several million dollar aircraft. These are the aircraft being used by businesses and corporations.

The cost of owning and operating aircraft has increased, while at the same time the cost of alternative transportation, particularly commercial passenger transportation, has decreased, primarily because of airline deregulation. The quality of surface transportation, the highway system, has shown dramatic improvement since 1983, as has the quality of personal use vehicles, automobiles, sports utility vehicles and pick-up trucks used for intercity transportation.

The overall structural condition of the airports included in the OASP has declined for a number of years. The functional integrity of these airports, the condition of the runway, taxiway, apron pavements and lighting systems was not as good in 1999 as it was in 1995 or 1990. This decline is a result of insufficient capital to maintain the amount of infrastructure that has been built. Neither the federal government nor the state government has proportionally been able to provide the funds that they were able to provide when these airports were built. Local governments have been unable to provide, from local funds, sufficient capital to make up for the decline in state and federal funding for general aviation airports. Many local governments have difficulty finding sufficient local revenue to properly maintain and operate their airport. More

recently, since implementation of the federal Non-Primary Entitlement (NPE) program in fiscal year 2001, the structural condition of these airports eligible for NPE funding has improved, and, as a result, the overall condition of the airports in the system has improved.

One purpose of the system planning process is to help focus capital resources on those airports where the investment in improvements will provide the most benefit for the system as a whole. The functional classification system will help achieve this purpose.



Without question, a single airport can effectively serve multiple communities, and this is a key part of the Regional Business Airport concept. In terms of the sponsorship of airports it does not work this way. In almost all cases, an airport is financially supported by one sponsor. That one airport sponsor is bearing the cost burden for maintaining and operating a facility that serves a geographic area much larger than the corporate limits of the airport sponsor and, in most cases, an area larger than the county where the airport is located.

#### **Characteristics of a Regional Business Airport**

A key characteristic of a Regional Business Airport is that it serves multiple communities. Typically, it will serve a community of at least 5,000 persons, generally larger. It will serve a county population of 10,000 or more persons. It is located near the center of a local sustaining economy. Local sustaining economies are geographical regions that function with some degree of independence from the rest of the state. The Oklahoma Department of Commerce (ODOC) has identified 47 of these regions. The airports functionally classified as Regional Business Airports closely match the local sustaining economies identified by the ODOC. Regional Business Airports serve major employers that are defined as businesses with 50 or more employees. Major employers are typically the types of companies that use corporate aircraft or whose customers or suppliers use corporate aircraft.

It is critical that the sponsor of a Regional Business Airport demonstrate the financial capability to continue to develop, maintain and operate their airport and demonstrate continuing interest in their airport. In some cases, communities have the financial capability, but not the interest. In other cases, communities have the interest, but not sufficient financial capability. To make the Regional Business Airport concept work, the airport sponsors must be financially capable and have a strong community interest.

Typically, a Regional Business Airport will have 20 or more based aircraft and provide services to general aviation piston-powered aircraft, turboprop and jet aircraft. The airport is attended and has an on-site manager. The airport has jet fuel and aviation gasoline available. Typically, there will be a fixed based operator providing airframe and engine repair services, flight instruction and aircraft rental. The airport also has a modern public terminal building.

A Regional Business Airport is already, or can be developed into, a General Utility Stage Two (GU-II) or Transport (T) airport design standard. A Regional Business Airport also has a non-precision instrument approach. In the future, with the improving global positioning system (GPS) technology, many of the Regional Business Airports will have the capability of approach minimums as low as three-quarters of a mile visibility and 300 feet ceiling height, and many will have vertical approach guidance. Terminal weather reporting is essential for achieving an all-weather capability at a Regional Business Airport. Many of the Regional Business Airports now have weather observation equipment on the airport, and additional systems are being installed. These systems allow pilots to obtain, prior to takeoff and during flight, the weather conditions at the destination airport.

#### Characteristics of a District Airport

The District Airport is the second functional classification. Typically, these airports are providing access to a part of the state that is not well served by a Regional Business Airport. They are also airports whose sponsor has demonstrated a financial capability and

continuing interest in the airport. Normally, there will be about five or more based aircraft at these airports or an equivalent number of annual itinerant operations. The airports are attended, aviation gasoline is available and there is a public terminal building.

#### **Characteristics of a Community Airport**

The Community Airport is the third functional classification. These are entry-level airports. These airports routinely serve small communities. In almost all cases, the city population is less than 5,000, and for many, the population is less than 2,000. Usually, they are not attended, many have no services available, and the sponsor has limited financial capability to fund capital improvement work on the airport.

## **System Plan Overview**

The Oklahoma airport system has developed over many years through close cooperation among federal, state and local agencies. Historically, the FAA has taken an active role in guiding the planning and development of the nation's airport system. The FAA's planning guidance significantly influences the preparation of state system plans and individual airport master plans. Its comprehensive library of advisory circulars guides the planning, construction, maintenance and operations of all publicly owned civil airports.

FAA's system planning guidance has been followed in the preparation of the OASP. As the nation's airport system matured, FAA's role in general aviation airports has shifted from being an active participant in the planning, funding and construction of new general aviation airports to one of providing guidance, oversight and funding to state aviation agencies. The state aviation agencies have taken the lead in continuing to develop and maintain a general aviation airport system that is now largely in place. The FAA continues to be active in the planning, development and funding of the airport system's Commercial Service and Reliever airports.

#### Relationship of the OASP to the NPIAS

The guiding principles used to develop the nation's airport system during the past 50 years have remained largely unchanged. These principles, as shown in the NPIAS, 2005-2009, dated September 2004, include the following.

- Airports should be safe and efficient, be located at optimum sites, and developed and maintained to appropriate standards.
- → Airports should be operated efficiently for both users and the government, relying primarily on user fees and placing mini-

- mal burden on the general revenues of the local, state and Federal governments.
- → Airports should be flexible and expandable, able to meet increased demand, accommodate new aircraft types and provide opportunities for competitive service.
- → Airports should be permanent, with assurance that they will remain open for aeronautical use over the long term.
- → Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and the requirements of residents in neighboring areas.
- → Airports should be developed in concert with improvements to the air traffic control system.
- → The airport system should support national objectives for defense, emergency readiness and postal delivery.
- → The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20 miles of travel to the nearest NPIAS airport.
- → The airport system should help air transportation contribute to a productive national economy and international competitiveness.

#### The OASP

The OASP has focused particularly on the principles that airports should be safe and efficient; located at optimum sites; developed and maintained to standards; affordable to federal, state and local governments; be extensive and contribute to economic competitiveness. In addition, the OASP has focused on the need to carefully identify the function of each airpport included in the



system to ensure that limited federal, state and local government financial resources can be optimally allocated to achieve the greatest system benefit. This functional classification system is explained in detail below.

Early in the planning process, a decision was made to include almost all the state's publicly owned general aviation airports in the system regardless of their level of aviation activity, their physical condition, or the financial ability or interest of the airport sponsor.

In 2004, this initial decision was re-visited and after staff evaluation and input during public meetings, staff made a recommendation to the Commission to delete seven publicly owned general aviation airports from the OASP. On February 10, 2005, the Commission voted to delete Crazy Horse Municipal (Davis), Haddock Field (Erick), Freedom Municipal, Nowata Municipal, Seiling, Stilwell/Cherokee Nation and the Vici Municipal airports. A variety of factors, including limited aviation demand, poor pavement condition, proximity to other system airports, and the financial capability of the airport sponsor, led to this decision.

Although some system airports are used little at present, such airports may become vital assets in the future due to changing aircraft technology and costs or changing demographic patterns. Once an airport is lost due to closing or neglect, re-opening the airport at a later date can be very difficult, if not impossible.

The OASP consists of 114 airports. The airports in the plan are classified according to service level, role, design standard, airport reference code and functional classification. By service level, there are three primary commercial service airports, two non-primary commercial service airports, three reliever airports and 106 general aviation airports.

#### **Commercial Service Airports**

In addition to providing scheduled passenger service, the five commercial service airports function as Regional Business Airports and provide all-weather access for all types of general aviation aircraft. The Commission is not involved with the planning, capital development or funding of Will Rogers World Airport or Tulsa International Airport. The Commission has participated in capital projects at the Lawton-Fort Sill Regional Airport and participates in the planning, capital development and funding for Enid Woodring Regional and Ponca City Regional airports.

Primary commercial service airports receive funding from the federal Airport Improvement Program based on the number of enplaned passengers and tons of cargo enplaned. These airports may also elect to use Passenger Facility Charges as a source of capital funding. Several Oklahoma cities have a strong interest in attracting scheduled passenger service. However, no studies on the economic feasibility of scheduled passenger service at new locations were performed as a part of this system plan update.

#### **Reliever Airports**

Reliever airports perform a special role within the airport system. The relievers identified in the OASP are located within the state's two largest metropolitan areas and provide alternative facilities for general aviation aircraft users who might otherwise use the Will Rogers World or Tulsa International airports. There are two reliever airports in the Oklahoma City metropolitan area and one in the Tulsa metropolitan area. The reliever airports also function as Regional Business Airports providing all-weather access for most types of general aviation aircraft. All of the reliever airports are currently developed to a transport design standard. At one time, the U.S. Congress provided separate funding within the Airport Improvement Program for reliever airports. This is no longer the case. Reliever airports now compete for the same funding as general aviation airports.

#### **General Aviation Airports**

General aviation consists of all flying that is not scheduled commercial service or military. These airports provide air access to communities throughout the state and obviously make up the majority of the state's airport system. Every community, with any significant population, can be reached by air through one of these airports. The runway capabilities and services provided at these airports vary widely. To better understand the contribution of each general aviation airport in the system, the airports are further classified by function, role, design standard and airport reference code.

#### **New System Airports**

A new replacement airport is planned for the community of Atoka that will also serve the community of Coalgate and Atoka County.

#### **Functional Classifications**

The airport functional classification was developed to further clarify the contribution of each airport in the OASP. In order of importance, the functional classifications are Regional Business Airport, District Airport and Community Airport. Functional classification criteria were developed for each classification. The Commission staff applied the criteria and made the initial designations. Subsequently public meetings were held throughout the state to explain the criteria and to receive public comment. Changes in the initial functional classification designations were made on the basis of new information provided at the public



meetings. The designations shown here are based on application of the criteria using the most accurate information available through research, the public meetings and staff judgement.

#### **Regional Business Airport Criteria**

#### System Planning Criteria

- Does the airport serve multiple communities of greater than 2,500 persons? (Y or N)
- → Is the number of highway miles from the airport to the center of the local sustaining economy less than 25 miles? (Y or N)
- Is the number of highway miles to the nearest GU-II or T airport greater than 25 miles? (Y or N)
- → Is the airport location needed to provide air access to a part of the state that would not otherwise be served? (Y or N)
- → Is the city population served greater than 5,000 persons? (Y or N)
- → Is the county population served greater than 10,000 persons? (Y or N)
- Are annual retail sales greater than 0.2 percent of the state's retail sales? (Y or N)
- → Is the county's income greater than 0.2 percent of the state's income? (Y or N)
- → Is the county's farm and ranch income greater than 0.4 percent of the state's farm and ranch income? (Y or N)
- → Is the county's mineral income greater than 0.4 percent of the state's mineral income? (Y or N)
- → Is the county's employment greater than 0.2 percent of the state's employment? (Y or N)
- → Is the number of private corporations with more than 50 employees greater than 10? (Y or N)
- → Is there a private employer with 150 employees or more? (Y or N)

- Is there a significant on-airport industry requiring a GU-II or Trunway? (Y or N)
- Is there a demonstrated ability of the community to promote business and local job formation? (Y or N)

#### Sponsor Criteria

- Has the sponsor demonstrated the financial capability to operate and maintain the airport? (Y or N)
- Has the sponsor consistently demonstrated an interest in the airport? (Y or N)

#### Demand Criteria

- Is the number of active based aircraft greater than 20? (Y or N)
- Is the number of based turboprop aircraft greater than 2? (Y or N)
- → Are there any based jets? (Y or N)

#### Services Criteria

- → Is the airport attended? (Y or N)
- Is there an airport manager on the airport? (Y or N)
- Are fixed base operator or repair services available? (Y or N)
- → Is aviation gasoline available? (Y or N)
- → Is Jet A fuel available? (Y or N)
- → Is there a public terminal? (Y or N)

#### Airport Planning Criteria

- Is the current OASP role GU-II or T? (Y or N)
- Does the airport have an approved Airport Layout Plan (ALP) that meets current FAA requirements? (Y or N)

- → Does the airport have an Airport Master Plan (AMP) or Airport Action Plan (AAP) that the sponsor is using to guide development of the airport? (Y or N)
- → Is the surrounding land use compatible with a GU-II or T role? (Y or N)
- → Does the airport have an adopted height hazard zoning ordinance? (Y or N)

#### Airfield Geometric Criteria

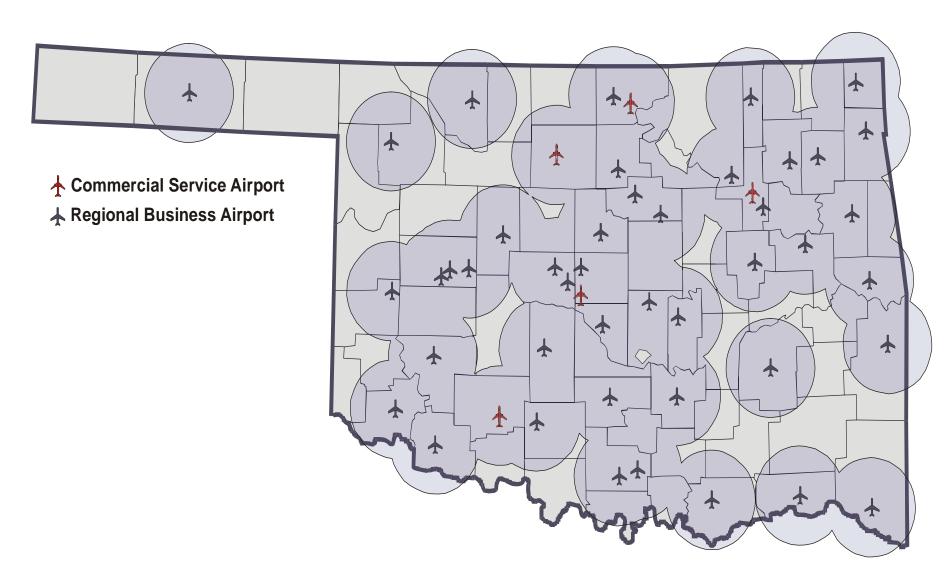
- → Will it cost less than \$2 million to extend the runway to 5,000 feet corrected for altitude? (Y or N)
- Is the runway width 75 feet or greater? (Y or N)
- Does the runway have a full parallel taxiway, or is a full parallel taxiway economically feasible? (Y or N)
- → Is the taxiway width 35 feet or greater? (Y or N)
- Are the runway protection zones (RPZs) for the current published approach owned fee simple or controlled through easements? (Y or N)

- Does the airport have a 34:1 approach slope to one runway end, and does the airport sponsor own fee simple or have easements for the runway protection zone for that approach? (Y or N)
- Does the airport runway safety area meet the criteria for an ARC B-II runway with lower than 3/4 statute mile approach visibility minimum, 300 feet wide and 500 feet beyond runway end? (Y or N)
- → Does the airport meet Federal Aviation Regulations (FAR) Part 77 criteria? (Y or N)
- → Does the airport have a non-precision approach to one runway end? (Y or N)
- → Does the airport have a rotating beacon? (Y or N)
- → Does the airport have a lighted wind indicator? (Y or N)
- Does the airport have medium intensity runway lights? (Y or N)

## **Regional Business Airports**

1.	Ada	Ada Municipal	27.	Miami	Miami Municipal
2.	Altus	Altus Quartz Mountain Regional	28.	Muskogee	Davis Field
3.	Alva	Alva Regional	29.	Norman	University of Oklahoma
4.	Ardmore	Ardmore Downtown Executive			Max Westheimer
5.	Ardmore	Ardmore Municipal (industrial	30.	Oklahoma City	Clarence E. Page
		airport)	31.	Oklahoma City	Wiley Post
6.	Bartlesville	Bartlesville Municipal	32.	Oklahoma City	Will Rogers World
7.	Blackwell	Blackwell-Tonkawa Municipal	33.	Okmulgee	Okmulgee Regional
8.	Chickasha	Chickasha Municipal	34.	Pauls Valley	Pauls Valley Municipal
9.	Claremore	Claremore Regional	35.	Perry	Perry Municipal
10.	Clinton	Clinton Municipal	36.	Ponca City	Ponca City Regional
11.	Clinton	Clinton-Sherman (industrial airport)	37.	Poteau	Robert S. Kerr
12.	Cushing	Cushing Municipal	38.	Pryor Creek	Mid-America Industrial (industrial
13.	Duncan	Halliburton Field			airport)
14.	Durant	Eaker Field	39.	Sallisaw	Sallisaw Municipal (not to 5,000
15.	Elk City	Elk City Municipal			feet)
16.	El Reno	El Reno Municipal	40.	Sand Springs	William R. Pogue Municipal
17.	Enid	Enid Woodring Regional	41.	Seminole	Seminole Municipal
18.	Frederick	Frederick Municipal	42.	Shawnee	Shawnee Regional
19.	Grove	Grove Municipal	43.	Stillwater	Stillwater Regional
20.	Guthrie	Guthrie-Edmond Regional	44.	Tahlequah	Tahlequah Municipal
21.	Guymon	Guymon Municipal	45.	Tulsa	Tulsa International
22.	Hobart	Hobart Municipal	46.	Tulsa	Richard L. Jones, Jr.
23.	Hugo	Stan Stamper Municipal	47.	Watonga	Watonga Municipal
24.	Idabel	McCurtain County Regional	48.	Weatherford	Thomas P. Stafford (not to 5,000
25.	Lawton	Lawton-Fort Sill Regional Airport			feet)
26.	McAlester	McAlester Regional	49.	Woodward	West Woodward

# Commercial Service and Regional Business Airports Area of Coverage



#### **District Airport Criteria**

#### Airport System Planning Criteria

→ Is the airport location needed to provide air access to a part of the state not served by a regional business airport? (Y or N)

#### Sponsor Criteria

- Has the sponsor demonstrated support for the airport over a significant period of time? (Y or N)
- Has the sponsor demonstrated the financial capability to operate and maintain the airport? (Y or N)
- Does the sponsor have an effective airport pavement management program? (Y or N)

#### Demand Criteria

Is the number of active based aircraft greater than 5, or is there an equivalent number of annual itinerant operations, about 1,000 operations per year, which is about 10 arrivals per week? (Y or N)

#### Services Criteria

 $\rightarrow$  Is the airport attended? (Y or N)

- → Is aviation gasoline available? (Y or N)
- → Is there a public terminal? (Y or N)

#### Airport Planning Criteria

- → Does the airport have an approved ALP? (Y or N)
- Is the surrounding land use compatible with a BU-II or GU-I design standard? (Y or N)
- Does the airport have an adopted height hazard zoning ordinance? (Y or N)

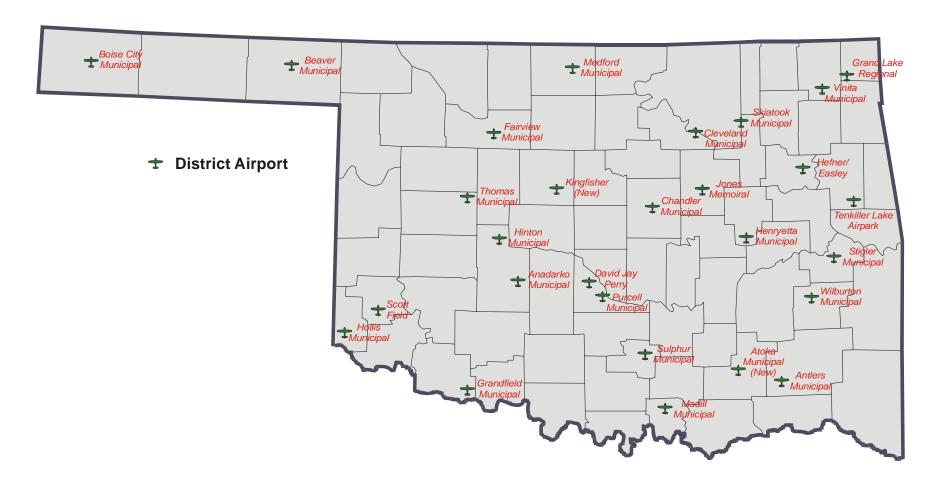
#### Airfield Geometric Criteria

- Are the runway protection zones (RPZs) for the currently published approach (visual or non-precision) owned fee simple or controlled through easements? (Y or N)
- Does the airport have a 20:1 approach slope to each runway end? (Y or N)
- Does the airport runway safety area meet the criteria for an ARC B-II runway with visual runways and runways with not lower than 3/4 statute mile approach visibility minimums, 150 feet wide and 300 feet beyond runway end? (Y or N)
- → Does the airport meet FAR Part 77 criteria? (Y or N)

## **District Airports**

1.	Afton	Grand Lake Regional	15.	Hinton	Hinton Municipal
2.	Anadarko	Anadarko Municipal	16.	Hollis	Hollis Municipal
3.	Antlers	Antlers Municipal	17.	Kingfisher	Kingfisher (new airport on existing site)
4.	Atoka	Atoka Municipal (new airport on	18.	Madill	Madill Municipal
		existing site)	19.	Mangum	Scott Field
5.	Beaver	Beaver Municipal	20.	Medford	Medford Municipal
6.	Boise City	Boise City Municipal	21.	Purcell	Purcell Municipal
7.	Bristow	Jones Memorial	22.	Skiatook	Skiatook Municipal
8.	Chandler	Chandler Municipal	23.	Stigler	Stigler Municipal
9.	Cleveland	Cleveland Municipal	24.	Sulphur	Sulphur Municipal
10.	Cookson	Tenkiller Lake Airpark	25.	Thomas	Thomas Municipal
11.	Fairview	Fairview Municipal	26.	Vinita	Vinita Municipal
12.	Goldsby	David Jay Perry	27.	Wagoner	Hefner/Easley
13.	Grandfield	Grandfield Municipal	28.	Wilburton	Wilburton Municipal
14.	Henryetta	Henryetta Municipal			

## **District Airports**



#### **Community Airport Criteria**

#### Airport System Planning Criteria

→ Is the airport owned by a municipality? (Y or N)

#### Sponsor Criteria

→ None.

#### Demand Criteria

→ None.

#### Services Criteria

→ None.

#### Airport Planning Criteria

→ Does the airport have an approved Airport Layout Drawing? (Y or N)

- → Is the surrounding land use compatible with a BU-I design standard? (Y or N)
- → Does the airport have an adopted height hazard zoning ordinance? (Y or N)

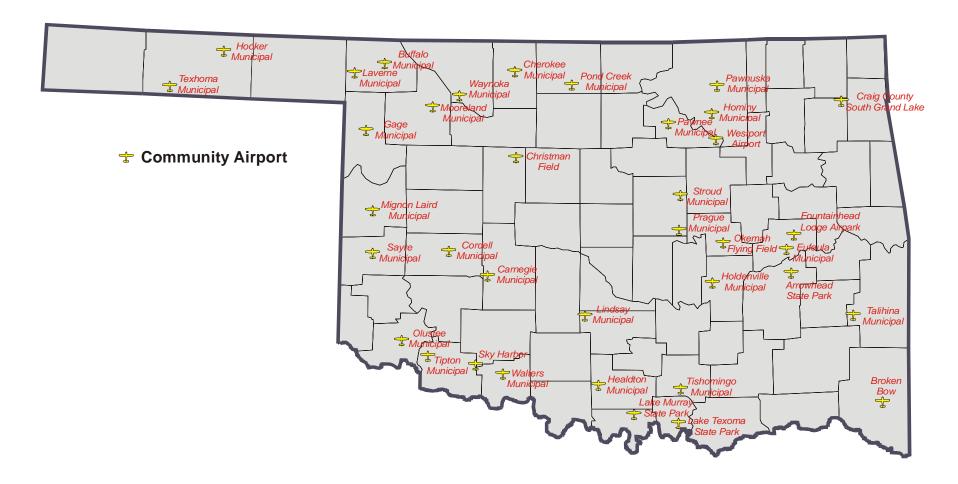
#### Airfield Geometric Criteria

- Are the RPZs for the currently published approach (visual or non-precision) owned fee simple or controlled through easements? (Y or N)
- → Does the airport have a 20:1 approach slope to each runway end? (Y or N)
- → Does the airport runway safety area meet the criteria for an ARC B-I runway, 120-feet wide and 240 feet beyond runway's end? (Y or N)
- → Does the airport meet FAR Part 77 criteria? (Y or N)

## **Community Airports**

1.	<b>Broken Bow</b>	Broken Bow Municipal	20.	Mooreland	Mooreland Municipal
2.	Buffalo	Buffalo Municipal	21.	Okeene	Christman Field
3.	Canadian	Arrowhead State Park	22.	Okemah	Okemah Flying Field
4.	Carnegie	Carnegie Municipal	23.	Olustee	Olustee Municipal
5.	Chattanooga	Sky Harbor	24.	Overbrook	Lake Murray State Park
6.	Cherokee	Cherokee Municipal	25.	Pawhuska	Pawhuska Municipal
7.	Cheyenne	Mignon Laird Municipal	26.	Pawnee	Pawnee Municipal
8.	Cordell	Cordell Municipal	27.	Pond Creek	Pond Creek Municipal
9.	Eufaula	Eufaula Municipal	28.	Prague	Prague Municipal
10.	Eufaula	Fountainhead Lodge Airpark	29.	Sayre	Sayre Municipal
11.	Gage	Gage Municipal	30.	Stroud	Stroud Municipal
12.	Healdton	Healdton Municipal	31.	Talihina	Talihina Municipal
13.	Holdenville	Holdenville Municipal	32.	Texhoma	Texhoma Municipal
14.	Hominy	Hominy Municipal	33.	Tipton	Tipton Municipal
15.	Hooker	Hooker Municipal	34.	Tishomingo	Tishomingo Municipal
16.	Ketchum	Craig County South Grand Lake	35.	Walters	Walters Municipal
17.	Kingston	Lake Texoma State Park	36.	Waynoka	Waynoka Municipal
18.	Laverne	Laverne Municipal	37.	Westport	Westport Airport
19.	Lindsay	Lindsay Municipal			

## **Community Airports**



#### **OASP Minimum Design Standards**

The OASP has established minimum design standards for each

airport classification. These standards are highlighted in the following table.

#### **OASP Minimum Design Standards for General Aviation Airports**

Functional Classification	Regional Business Airport	Regional Business Airport	District Airport	District Airport	Community Airport	
Design Standard	Transport	General Utility Stage II	General Utility Stage I	Basic Utility Stage II	Basic Utility Stage I	
Design Aircraft	Heavy business jet	Heavy business jet	Light business jet, turboprop or piston twin	Light turboprop, piston twin or single	Light piston twin or single eingne	
Approach Category	C and D	A and B	A and B	A and B	A and B	
Minimum Land						
Landing Area	136 acres	62 acres	40 acres	36 acres	36 acres	
Approach Area	160 acres	60 acres	50 acres	50 acres	50 acres	
Building Area	24 acres	24 acres	24 acres	12 acres	12 acres	
Runways						
Length	5,000'	5,000'	4,000'	3,200'	3,000'	
Width	100'	75'	75'	60'	50'	
Strength	30,000 lbs.	30,000 lbs.	12,500 lbs.	12,500 lbs.	12,500 lbs.	
Lighting	MIRL	MIRL	MIRL	MIRL	LIRL	

## **System Plan Performance Measures**

Performance measures evaluate how well any particular system or part of a system of airports meets a particular set of criteria. In this section, the performance of the airports designated as Regional Business Airports is illustrated using some of the criteria used to functionally classify the airports selected for inclusion in the OASP.

The 49 airports classified as Regional Business Airports, when fully developed, will meet most of the goals established for the OASP. The airports comprising this part of the system can provide all-weather jet access to most communities in Oklahoma. The inclusion of the District Airports provides significant additional coverage to support the mineral and agriculture sectors of the economy. The measures described are based on the airports as they existed on May 1, 2005. As improvements are made to the Regional Business Airports, some of the described measures will improve.



#### **Airport System Planning Criteria**

- Communities With More Than 2,500 Population. The percent of communities with populations of more than 2,500 within the service area of a designated Regional Business Airport is 98.4 percent. Oklahoma has 125 communities with populations of more than 2,500, of which 123 are within the service area of one or more of the 49 designated Regional Business Airports. The two communities with populations of more than 2,500 that are not within the service area of a designated Regional Business Airport are Atoka and Fairview. There are nine airports designated as Regional Business Airports that do not yet have runways of at least 5,000 feet. Until these runways are extended, several communities with populations greater than 2,500 are not yet served to the desired level of service. These communities are Alva, served by Alva Regional; Antlers and Hugo served by Stan Stamper Municipal; Heavener, Pocola and Poteau served by Robert S. Kerr; Muldrow, Roland, Sallisaw and Stigler served by Sallisaw Municipal; Stilwell served by Tahlequah Municipal; Watonga served by Watonga Municipal and Weatherford served by Thomas P. Stafford.
- → **Population.** The percent of the state's population within the service area of a designated Regional Business Airport is 96.7 percent. The estimated 2004 population of Oklahoma is 3,523,553 of which 116,277 do not live within the service area of one or more of the 49 designated Regional Business Airports. Until these runways area extended, approximately 195,000 persons are not yet served to the desired level.

- → Economic Indicators. The percent of the state's retail sales and civilian labor force served by the Regional Business Airport system tracks very closely with the the percent of the population served by the Regional Business Airport system.
- → In 1997 there were 14,353 retail establishments in Oklahoma with retail sales of \$27,065,555,000, an annual payroll of \$2,406,936,000, and 161,613 paid employees. (Retail Trade Geographic Area Series, U.S. Census Bureau, 1997 Economic Census, December 3, 1999).
- → In March 2005 the Oklahoma civilian labor force was 1,719,700 (ODOC April 25, 2005).
- Agriculture. The percent of the state's agricultural income served by regional business airports is 81.5 percent. Total state agricultural cash receipts in 1996 were \$4,042,852,000. Cash receipts outside the service area are estimated to be \$752,484,500. Two important agriculture counties, Beaver and Cimarron, are outside the service area of a Regional Business Airport but are served by the District Airports Beaver Municipal and Boise City Municipal.
- Oil and Gas. The percent of the state's oil and gas income served by Regional Business Airports is 75.2 percent. Total oil and gas production taxes in 1998 were \$387,851,900. Oil and gas production taxes within the service area are estimated to be \$291,671,240. Two important oil and gas counties, Beaver and Cimarron, are outside the service area of a Regional Business Airport, but are served by the District Airports Beaver Municipal and Boise City Municipal.

- Employers. The percent of private corporations with greater than 50 employees served by Regional Business Airports is 96.8 percent. This measure used estimates from the county community profile data prepared for all counties by the ODOC. This estimate is low because data from Oklahoma and Tulsa Counties only included private corporations with more than 100 employees.
- Gaps in the Regional Business Airport system exist in Beaver and Cimarron counties, a 15-mile radius around Atoka, and the northern half of Pushmataha and McCurtain counties where they meet with Latimer and Le Flore counties.
- Oklahoma covers 68,686 square miles. The 25-mile service areas of Regional Business Airports encompass 52,203 square miles, or 76 percent of Oklahoma's land area.

#### **Sponsor Criteria**

- The percentage of airports in the Regional Business Airport system that have sponsors who have demonstrated financial capability is 98 percent.
- The percentage of airports in the Regional Business Airport system whose sponsors have an effective pavement maintenance program is 88 percent. The Commission has initiated with the state's airport sponsors an airport pavement management program. As this program matures, this measure will improve.

#### **Demand Criteria**

- The percentage of the state's publicly based aircraft located at the 49 Regional Business Airports is 85.1 percent. Regional Business and District Airports together account for 96.9 percent of the aircraft based at publicly owned airports in Oklahoma. There are 92 based aircraft at the 36 community airports which comprise 3.0 percent of the state's aircraft based at publicly owned airports. There are 948 aircraft based at 215 private airports in Oklahoma. The top 15 privately owned airports comprise 638 or 68 percent of the 948 aircraft based on privately owned airports.
- The percentage of the state's jet aircraft that are based within the service area of a Regional Business Airport is 100 percent. There is one jet aircraft based at Chandler Municipal, a District Airport.

#### **Services Criteria**

- The percentage of Regional Business Airports that are attended is 100 percent.
- The percentage of Regional Business Airports with an onsite airport manager is 100 percent.
- The percentage of Regional Business Airports with a fixed base operator (FBO) and repair services available is 87.8 percent. There are 36 of the Regional Business Airports with major airframe and powerplant repair, six with both minor airframe and powerplant repair, and one with minor powerplant repairs only, for a total of 43.
- The percentage of Regional Business Airports with aviation gasoline available is 100 percent.

- The percentage of Regional Business Airports with Jet A fuel is 85.7 percent.
- All but one Regional Business Airport has a public terminal.

#### **Airport Planning Criteria**

- The percentage of Regional Business Airports in the system that are currently a General Utility Stage II or a Transport design standard is 82 percent. A total of nine airports do not currently meet these design criteria. They are Alva, Blackwell-Tonkawa, Clinton Municipal, Stan Stamper Hugo, Poteau, Sallisaw, Tahlequah, Watonga, and Thomas Stafford-Weatherford. The runway length deficiencies at these nine airports are the most critical system shortcoming.
- The percentage of Regional Business Airports in the system with adopted height zoning ordinances is 92 percent.

#### **Airfield Geometric Criteria**

- The percentage of Regional Business Airports with a full parallel taxiway or where a full parallel taxiway is financially feasible is 90 percent.
- The percentage of Regional Business Airports with Runway Protections Zones for current published approaches that are owned fee simple or controlled through easements is 96 percent.
- The percentage of Regional Business Airports with a straight in non-precision approach to one runway end is 96 percent. The Mid-America Industrial Airpark in Pryor Creek and the McCurtain County Regional Airport do not have non-precision instrument approaches.

- The percentage of Regional Business Airports with a precision approach is 24 percent. With the advances in GPS technology, additional precision approaches should be possible in the future.
- The percentage of Regional Business Airports with a terminal weather system is 90 percent. The installation of systems at five additional airports is critical to the goal of providing all weather capability at all Regional Business Airports. Blackwell-Tonkawa Municipal, Miami Municipal, Clarence E. Page, Perry Municipal and the Mid-America Industrial Airpark need a terminal weather system.
- The percentage of Regional Business Airports that have a 34:1 approach slope to one runway end, and the airport sponsor/owner owns fee simple or has easements for the Runway Protection Zone for that approach is 91.5 percent.

## **System Plan Implementation**

The planning process described previously resulted in the selection of the airports and their respective classifications required to meet the OASP goals and objectives. Also, as a part of the continuous planning process, the capital improvements and associated costs needed at each system airport are identified.

#### **Airport Development Worksheet**

The airport development worksheet is the primary document used for system planning. An airport development worksheet is prepared for each system airport. The worksheet for any system airport is available on the Commission Internet site.

The worksheet for a particular airport is jointly developed by the airport sponsor and the Commission staff. The worksheet for an airport is updated whenever the airport classification changes; the physical conditions of runways, taxiways, aprons, or lighting changes indicating the need for a capital project; a capital project is completed; or other new information becomes available.

The airport development worksheet shows the airport name, airport sponsor, NPIAS status, the ARC, functional classification, the projects that need to be accomplished and the project cost, construction type, objective code, airport component and project status.

The Commission staff maintains a project history file for each airport showing the capital projects completed at the airport since 1970 that were funded with state or federal dollars. Besides providing a historical record, the project histories are used to help evaluate pavement life cycles and to help predict the timing for future pavement rehabilitation projects.

#### **→** Project Description

The project description is a brief explanation of a project that needs to be accomplished on one component of the airport. For example: "Extend RW 17/35, 1000' x 75', 30,000#, 35 end." This is the notation for showing that the project will extend the runway 1,000 feet long and 75 feet wide to the south and will have a pavement strength designed to support a 30,000-pound aircraft.

#### **→** Project Costs

The project costs developed at this stage of the process are planning, not engineering, costs. Project costs are based on recent construction experience. When the project is ready for programming, engineering costs will be prepared.

#### **→** Construction Type

Each project is coded with a construction type code. Construction type codes are used for runway, taxiway or apron <u>paving</u>; runway or taxiway <u>lighting</u>; <u>land</u> acquisition; installation of visual <u>approach aids</u> such as a rotating beacon, lighted wind cone; construction of structures such as a terminal <u>building</u> and an <u>other</u> category that includes items such as fencing, access roads, or vehicle parking.

#### Objective Codes

Each project is coded with an objective code. Objective codes are: <u>safety/special</u> — reserved for projects with an immediate safety impact such as a lighting system that has

failed; <u>preservation</u> — used for projects to preserve existing pavements or lighting systems; <u>reconstruction</u> — used for projects where the existing pavement needs to be rebuilt from the base up; <u>standards</u> — used for projects to correct an existing deficiency for an airport's current classification, for example installing lights on an airport that does not have lights; <u>upgrade</u> — a project that will result in a change to the airports design standard or the type of aircraft the airport can accommodate; <u>capacity</u> — a project to increase the capacity of an airport component such as to expand the size of the apron; and <u>new airport access</u> — a project to provide a new airport where air access does not currently exist.

#### **→** Airport Component

Each project is coded with a component code. Component codes are primary runway, primary taxiway, secondary runway, secondary taxiway, apron, hangar area, terminal, other landside, and planning.

The codes are used to categorize the types of development needed for the system as a whole or for specific parts of the system, and for setting project priorities that are used in the programming process. For example, a project to reconstruct a primary runway will have a higher priority than will a project to reconstruct a secondary runway. A project to construct a hangar access taxiway will have a lower priority than a project to expand an apron.

### **Construction Type**

	Description
PAVE	(Paving) runway, taxiway, or apron paving.
LITE	(Lighting) runway, taxiway, or apron lighting.
LAND	(Land) acquisition of land for a new airport, a runway extension, a larger runway protection zone, landside development, etc.
AAID	(Approach Aids) installation of any approach aid, such as a rotating beacon, visual approach guidance indicator, runway end identifier lights, etc.
BLDG	(Buildings) construction of a public terminal building.
OTHR	(Other) any development item not otherwise coded, such as fencing, access roads, vehicle parking, a terminal-weather observation system, environmental assessment, airport layout plan, etc.

## **Objective Codes**

SAFE	(Safety) work required to make the airport safe for aircraft operations. Examples: removal of an obstruction in the runway protection zone, or replacement of a lighting system that has failed.
PRSV	(Preservation) work required to preserve the functional or structural integrity of the airport. Examples: joint cleaning and resealing of a concrete pavement, or crack filling and sealing of an asphalt pavement.
RECON	(Reconstruction) work required to reconstruct a portion of the airport pavement, lighting, or approach aid systems to their original configuration. Reconstruction work is more substantial than preservation work. Examples: reconstruct an asphalt runway, taxiway, or apron to its previous dimensions, reconstruct a runway lighting system that has reached the end of its design life.
STDS	(Standards) improvements required to bring the airport to design standards for current users. Examples: replacement of a low intensity lighting system with a medium intensity lighting system at a Basic Utility Stage II airport or installation of visual approach aids at a Transport airport.
UPGR	(Upgrade) improvements required to expand the airport to accommodate heavier aircraft or longer stage lengths consistent with the airport's functional classification. Examples: developing a General Utility Stage I airport to a General Utility Stage II airport so that the airport can fulfill its function as a regional business airport.
CAPT	(Capacity) expansion required to accommodate more aircraft or higher activity levels. Examples: construction of an additional apron so the airport can accommodate additional based or transient aircraft.

## **Airport Component Codes**

Component	Component Description
PRWY	(Primary Runway) a project constructed on the airport's primary runway. The primary runway is the runway aligned with the dominate wind direction.
PTXY	(Primary Taxiway) a project constructed on the airport's primary taxiway. The primary taxiways are all the taxiways serving the primary runway.
APRN	(Apron) a project constructed on the apron designed to serve based or itinerant aircraft.
ANAS	(Airside Not Area Specific) any other project constructed on the airside of the airport, the airside being the part of the airport provided for the operation of aircraft.
SRWY	(Secondary Runway) a project constructed on the crosswind runway or on a short runway parallel to the primary runway.
STXY	(Secondary Taxiway) a project constructed on any of the taxiways serving the secondary runway.
HANG	(Hangar Area) a project constructed in the hangar area of the airport's terminal area, typically hangar access taxiways. Does not include the cost of constructing hangars.
TERM	(Terminal) a project to construct a public terminal building.
OLSD	(Other Landside) any other project constructed on the landside of the airport. The landside includes that part of the airport used for structures, access roads, vehicle parking areas, terminal area or perimeter fencing, etc.
PLAN	(Airport Plan) any planning project for the airport that does not involve construction. Examples include the preparation of an Airport Master Plan (AMP), an Airport Action Plan (AAP), a height hazard zoning ordinance, a detailed terminal area plan, etc.

#### **Relationship Between Planning and Programming**

The relationship between airport system planning and project programming is really quite simple. The system planning process involves all the steps described previously: maintaining inventories, classifying airports, forecasting aviation activity, conducting a public participation program, identifying the capital improvements needed at each system airport, and conducting special studies. The capital projects identified in system planning are not constrained by the dollars of revenue that the funding agencies are expected to have available during any particular time period. Programming is the process of deciding, based on established system priorities, which projects will be funded in which time period with the dollars that are expected to be available in that time period. Programming is constrained by dollars. The Commission's programming process is detailed in the Oklahoma Aeronautics Commission 3-Year Capital Improvement Plan, updated and adopted annually by the Commission.

**System Plan Airport Classifications** 

## Oklahoma Airport System Plan Airports Key to Headings

City	Name of city that is the airport sponsor.
Airport Name	Name of airport, new, if not a currently existing site.
NPIAS	Is airport included in the National Plan of Integrated Airport Systems?
Service Level	Primary type of service airport provides: primary commercial service, non-primary commercial service, reliever, or general aviation.
Functional Classification	The function that the airport serves within the Oklahoma airport system: regional business service, district service, or community service.
Design Standard	The airport design criteria associated with the airport reference code. Transport airports serve C and D aircraft. Utility airports serve A and B aircraft.
Airport Reference Code	The airport reference code (ARC) is used to relate airport design criteria to the operational and physical characteristics of the aircraft that the airport serves. The first component, depicted by a letter, is the aircraft approach category and relates to the aircraft approach speed, an operational characteristic. The second component, depicted by a roman numeral, is the aircraft design group and relates to the aircraft wingspan, a physical characteristic.

OASP Facilitie	OASP Facilities Plan		Service			esign Stand	ard	Airport Reference Code (ARC)		
City	Airport Name	NPIAS	Service Level	Functional Classification	Current	0-5 Year	6-10 Year	Current	0-5 Year	6-10 Year
Ada	Ada Municipal	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II
Afton	Grand Lake Regional	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I
Altus	Altus/Quartz Muntain Regional	Υ	GA	RB	GUII	GUII	Т	B-II	B-II	C-II
Alva	Alva Regional	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II
Anadarko	Anadarko Municipal	N	GA	D	BUI	BUII	BUII	B-I	B-I	B-I
Antlers	Antlers Municipal	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I
Ardmore	Downtown Executive	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Ardmore	Ardmore Municipal	Υ	GA (IA)	RB	Т	Т	Т	C-III	C-III	C-III
Atoka	Atoka (new)	Υ	GA	D	Ñ	GUI	GUI	B-II	B-II	B-II
Bartlesville	Bartlesville Municipal	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II
Beaver	Beaver Municipal	Υ	GA	D	BUI	BUII	BUII	B-I	B-I	B-I
Blackwell	Blackwell-Tonkawa Municipal	Υ	GA	RB	BUII	GUII	GUII	B-I	B-II	B-II
Boise City	Boise City Municipal	Υ	GA	D	BUI	BUI	BUI*	B-I	B-I	B-I
Bristow	Jones Memorial	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I
Broken Bow	Broken Bow Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Buffalo	Buffalo Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Canadian	Arrowhead State Park	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Carnegie	Carnegie Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Chandler	Chandler Municipal	Υ	GA	D	GUI	GUII	GUII	B-II	B-II	B-II
Chattanoga	Sky Harbor	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Cherokee	Cherokee Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I

City A	Airport Name			Service				Airport Reference Code (ARC)		
	an port realing	NPIAS	Service Level	Functional Classification	Current	0-5 Year	6-10 Year	Current	0-5 Year	6-10 Year
Cheyenne M	lignon Laird Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Chickasha C	Chickasha Municipal	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II
Claremore C	Claremore Regional	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II
Cleveland C	Cleveland Municipal	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I
Clinton C	Clinton Municipal	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II
Clinton C	Clinton - Sherman	Υ	GA (IA)	RB	Т	Т	Т	D-VI	D-VI	D-VI
Cookson To	enkiller Lake Airpark	N	GA	D	BUI	BUI	BUI*	B-I	B-I	B-I
Cordell C	Cordell Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Cushing C	Cushing Municipal	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Duncan H	Halliburton Field	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II
Durant E	aker Field	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II
Elk City E	Elk City Municipal	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II
El Reno E	El Reno Municipal Airpark	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Enid E	Enid Woodring Regional	Υ	СМ	RB	Т	Т	Т	C-III	C-III	C-III
Eufaula E	Eufaula Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
	Fountainhead Lodge Airpark	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Fairview F	airview Municipal	Υ	GA	D	BUII	GUI	GUI	B-I	B-II	B-II
Frederick F	rederick Municipal	Υ	GA	RB	Т	Т	Т	B-II	B-II	B-II
Gage G	Gage Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Goldsby D	David Jay Perry	Υ	GA	D	BUI	BUII	BUII	B-I	B-I	B-I
Grandfield G	Grandfield Municipal	Υ	GA	D	BUI	BUI	BUI	B-I	B-I	B-I
Grove G	Grove Municipal	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II

OASP Facilitie	OASP Facilities Plan		Service			sign Stand	ard	Airport Reference Code (ARC)		
City	Airport Name	NPIAS	Service Level	Functional Classification	Current	0-5 Year	6-10 Year	Current	0-5 Year	6-10 Year
Guthrie	Guthrie-Edmond Regional	Υ	GA	RB	GUI	GUI	GUI	B-II	B-II	B-II
Guymon	Guymon Municipal	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Healdton	Healdton Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Henryetta	Henryetta Municipal	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I
Hinton	Hinton Municipal	Υ	GA	D	BUI	BUII	BUII	B-I	B-I	B-I
Hobart	Hobart Municipal	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II
Holdenville	Holdenville Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Hollis	Hollis Municipal	Υ	GA	D	BUI	BUI	BUI	B-I	B-I	B-I
Hominy	Hominy Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Hooker	Hooker Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Hugo	Stan Stamper Municipal	Υ	GA	RB	BUII	GUII	GUII	B-I	B-II	B-II
ldabel	McCurtain County Regional	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Ketchum	Craig County South Grand Lake	N	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Kingfisher	Kingfisher Municipal	N	GA	D	BUI	BUII	BUII	B-I	B-I	B-I
Kingston	Lake Texoma State Park	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Laverne	Laverne Municipal	N	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Lawton	Lawton-Fort Sill Regional	Υ	PR	RB	Т	Т	Т	C-III	C-III	C-III
Lindsay	Lindsay Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Madill	Madill Municipal	Υ	GA	D	BUI	BUI	BUI	B-I	B-I	B-I
Mangum	Scott Field	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I

OASP Facilitie	s Plan		Service			esign Stand	lard	Airport Reference Code (ARC)		
City	Airport Name	NPIAS	Service Level	Functional Classification	Current	0-5 Year	6-10 Year	Current	0-5 Year	6-10 Year
McAlester	McAlester Regional	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Medford	Medford Municipal	Υ	GA	D	BUI	BUII	BUII	B-I	B-I	B-I
Miami	Miami Municipal	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Mooreland	Mooreland Municipal	Υ	GA	С	BUI	BUII	BUII	B-I	B-I	B-I
Muskogee	Davis Field	Υ	GA	RB	Т	Т	Т	C-III	C-III	C-III
Norman	University of OK Max Westheimer	Υ	RL	RB	Т	Т	Т	C-II	C-II	C-II
Okeene	Christman Field	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Okemah	Okemah Flying Field	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Oklahoma City	Clarence E. Page Municipal	Υ	RL	RB	Т	Т	Т	C-II	C-II	C-II
Oklahoma City	Wiley Post	Υ	RL	RB	Т	Т	Т	C-III	C-III	C-III
Oklahoma City	Will Rogers World	Υ	PR	RB	Т	Т	Т	D-V	D-V	D-V
Okmulgee	Okmulgee Regional	Υ	RL	RB	Т	Т	Т	C-II	C-II	C-II
Olustee	Olustee Municipal	N	GA	С	BUII	BUII	BUII	B-I	B-I	B-I
Overbrook	Lake Murray State Park	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Pauls Valley	Pauls Valley Municipal	Υ	GA	RB	GUI	Т	Т	B-II	C-II	C-II
Pawhuska	Pawhuska Municipal	N	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Pawnee	Pawnee Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I
Perry	Perry Municipal	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II
Ponca City	Ponca City Regional	Υ	СМ	RB	Т	Т	Т	C-II	C-II	C-II

OASP Facilities Plan			Service			Design Standard			Airport Reference Code (ARC)		
City	Airport Name	NPIAS	Service Level	Functional Classification	Current	0-5 Year	6-10 Year	Current	0-5 Year	6-10 Year	
Pond Creek	Pond Creek Municipal	N	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	
Poteau	Robert S. Kerr	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II	
Prague	Prague Municipal	Υ	GA	С	BUI	BUII	BUII	B-I	B-I	B-I	
Pryor Creek	Mid-America Industrial	Υ	GA (IA)	RB	GUII	GUII	GUII	B-II	B-II	B-II	
Purcell	Purcell Municipal	Υ	GA	D	BUI	BUII	BUII	B-I	B-I	B-I	
Sallisaw	Sallisaw Municipal	Υ	GA	RB	GUI	GUI	GUI	B-II	B-II	B-II	
Sand Springs	William R. Pogue Municipal	Υ	RL	RB	GUII	GUII	GUII	B-II	B-II	B-II	
Sayre	Sayre Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I	
Seminole	Seminole Municipal	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II	
Shawnee	Shawnee Regional	Υ	GA	RB	GUII	GUII	GUII	B-II	B-II	B-II	
Skiatook	Skiatook Municipal	Υ	GA	D	BUI	BUI	BUI	B-I	B-I	B-I	
Stigler	Stigler Municipal	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I	
Stillwater	Stillwater Regional	Υ	GA	RB	Т	Т	Т	C-III	C-III	C-III	
Stroud	Stroud Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	
Sulphur	Sulphur Municipal	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I	
Tahlequah	Tahlequah Municipal	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II	
Talihina	Talihina Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I	
Texhoma	Texhoma Municipal	N	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	
Thomas	Thomas Municipal	Υ	GA	D	BUI	GUI	GUI	B-I	B-II	B-II	
Tipton	Tipton Municipal	N	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	
Tishomingo	Tishomingo Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	

OASP Facilities Plan			Service			Design Standard			Airport Reference Code (ARC)		
City	Airport Name	NPIAS	Service Level	Functional Classification	Current	0-5 Year	6-10 Year	Current	0-5 Year	6-10 Year	
Tulsa	Tulsa International	Υ	PR	RB	Т	Т	Т	D-V	D-V	D-V	
Tulsa	Richard L. Jones Jr.	Υ	RL	RB	Т	Т	Т	C-II	C-II	C-II	
Vinita	Vinita Municipal	Υ	GA	D	BUI	GUI	GUI	B-I	B-II	B-II	
Wagoner	Hefner/Easley	Υ	GA	D	BUII	BUII	BUII	B-I	B-I	B-I	
Walters	Walters Municipal	Υ	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	
Watonga	Watonga Municipal	Υ	GA	RB	BUII	GUII	GUII	B-I	B-II	B-II	
Waynoka	Waynoka Municipal	Υ	GA	С	BUII	BUII	BUII	B-I	B-I	B-I	
Weatherford	Thomas P. Stafford	Υ	GA	RB	GUI	GUII	GUII	B-II	B-II	B-II	
Westport	Westport Airport	N	GA	С	BUI	BUI	BUI	B-I	B-I	B-I	
Wilburton	Wilburton Municipal	Υ	GA	D	BUI	BUII	BUII	B-I	B-I	B-I	
Woodward	West Woodward	Υ	GA	RB	Т	Т	Т	C-II	C-II	C-II	

#### Service Level:

CM - Non-Primary Commercial Service

GA - General Aviation

PR - Primary Commercial Service

RL - Reliever

(IA) - Industrial Airport

#### **Functional Classification:**

C - Community

D - District

RB - Regional Business

#### **Design Standard:**

BUI - Basic Utility Stage 1

BUII - Basic Utility State 2

GUI - General Utility Stage 1

GUII - General Utility Stage 2

T - Transport

NPIAS - National Plan of Integrated Airport Systems