



IOWA AVIATION SYSTEM PLAN
AIRPORT SUMMARY REPORT
WASHINGTON MUNICIPAL AIRPORT

Prepared for:

IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION

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Prepared by:

Snyder & Associates, Inc. and Wilbur Smith Associates, Inc.



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IOWA AVIATION SYSTEM PLAN - AIRPORT SUMMARY REPORT

This summary is intended to provide a general understanding of the specific information, findings and recommendations from the Iowa Aviation System Plan. An individual airport report was prepared for each public owned airport in Iowa.

INTRODUCTION

The Iowa Department of Transportation Office of Aviation, along with the System Plan Advisory Committee and consultant team, developed a strategic approach by which to identify and evaluate the needs of the Iowa aviation system within the period 2004 to 2024.

The Iowa aviation system is an integral component of the state's transportation network. The aviation system meets aviation and economic needs and links Iowa to the national transportation system. Aviation provides an important and efficient means of transportation for the movement of people and goods. The vision for the Iowa aviation system is to have safe, quality facilities and services that support transportation demands and meet economic development and quality of life needs in the state.

The primary goal of the system plan is to provide a framework that supports informed decisions related to planning and developing the Iowa aviation system. The objectives of this update of the Iowa Aviation System Plan are to:

- Identify and analyze aviation assets, including airspace, ground facilities and services, and needs of the state to assure that aviation performs its role in Iowa's economy and for its citizens.
- Provide continued guidance for development of a system of airports to meet the state's existing and future air transportation needs, projecting five, ten, and 20-year projects and giving guidance to meet needs.
- Build consensus among public policy makers, airport sponsors and users so that the plan's recommendations can be more readily accomplished.

Each airport was assigned to a functional classification. Facility and service objectives were developed for functional classifications. Based on existing facilities and services, recommendations were set forth for each airport.

SYSTEM GOALS

The following five goals and associated performance measures were identified and adopted to guide the Iowa aviation system development and establish the framework for the Iowa Aviation System Plan:

- **Development** – To provide an airport system that meets current and future customer needs.
- **Economic Support** – To promote an aviation system that sustains and enhances Iowa's economy.
- **Safety & Security** – To promote a safe and secure system of airports.
- **Accessibility** – To provide a system of airports that is accessible from both the ground and the air.
- **Education** – To support a system of airports that provides educational and career opportunities and promotes an understanding of the benefits of Iowa's air transportation system.

Performance Measure & Benchmark Summary	
<p>Performance Measure: Development</p> <p><i>Benchmarks</i></p> <ul style="list-style-type: none"> • Airports meeting aircraft storage objectives • Airports meeting aircraft parking objectives • Airports meeting auto parking objectives • Airports with Pavement Condition Index (PCI) rating of 70 or higher on primary runway • Airports with current master plan or Airport Layout Plan (ALP) • Airports included in a local comprehensive plan or with surrounding land use controls/zonings <p>Performance Measure: Economic Support</p> <p><i>Benchmarks</i></p> <ul style="list-style-type: none"> • Airports with jet fuel • Airports with a runway length of 5,500 feet or greater • Airports with rental car services • Airports with a courtesy car available • Airports with a 24-7 fueling (credit card or FBO) • Iowa employment within a 30-minute drive time of Commercial or Enhanced Service airport • Employment growth counties within 30-minute drive time of Commercial or Enhanced Service airport • Airports supporting air cargo • Airports with aircraft maintenance <p>Performance Measure: Safety and Security</p> <p><i>Benchmarks</i></p> <ul style="list-style-type: none"> • Airports with clear approaches to primary runway • Airports with wildlife management plans • Airports with emergency response plans • Airports with perimeter fencing • Airports with controlled access to airfield 	<p>Performance Measure: Accessibility</p> <p><i>Benchmarks</i></p> <ul style="list-style-type: none"> • Airports with precision approaches • Airports with any instrument approach • Airports with approach lighting system (ALS) • Airports with a precision approach and ALS • Iowa's Population within 30 minutes of any system airport • Iowa's population within 30 minutes of a Commercial or Enhanced Service airport • Iowa's population within 30 minutes of a General Service airport • Iowa's population within 30 minutes of an airport with a non-precision approach • Iowa's population within 30 minutes of an airport with a precision approach • Iowa's population within 30 minutes of an airport with onsite weather reporting equipment • Iowa's population within 60 minutes of an airport with one or more scheduled commercial airlines • Iowa's population within 120 minutes of an airport with two or more scheduled commercial airlines • Iowa's population within 120 minutes of an airport with two or more scheduled commercial airlines or 60 minutes of an airport with one or more scheduled commercial airlines <p>Performance Measure: Education</p> <p><i>Benchmarks</i></p> <ul style="list-style-type: none"> • Airports with on-site flight instruction • Aviation related training programs connected with local schools • Airports with public outreach/educational (following National Air Transportation Association (NATA,) National Business Aircraft Association (NBAA,) and Aircraft Owners and Pilots Association (AOPA) guidelines) programs, or hosting functions to bring the non-flying public to the airport

AIRPORT FUNCTIONAL ROLES

Airports within any transportation system contribute to meeting air transportation and economic needs in different ways and at varying levels. While each airport within a system contributes in some way, airports fill different roles. Because airports in the Iowa aviation system play different roles, their needs for facilities and services also vary accordingly.

With input from the Iowa DOT Office of Aviation and the System Plan Advisory Committee, each public owned airport in Iowa was assigned to one of five roles.

RECOMMENDED FUNCTIONAL AIRPORT ROLES

- **Commercial Service Airports** – these airports support some level of scheduled commercial airline service and they support a full range of general aviation aircraft to virtually all domestic and possibly some international destinations.
- **Enhanced Service Airports** – these airports support almost all general aviation aircraft, including most types of business jets; these airports generally serve as transportation centers and economic catalysts for the State.
Facility and service objectives: 5,500' x 100' runway, parallel taxiway, precision approach, approach lighting, AWOS/ASOS, covered aircraft storage, jet and aviation fuel, full service FBO, and ground transportation
- **General Service Airports** – these airports support most twin and single engine general aviation aircraft and may experience occasional use by business jets. These airports support regional and in-state air transportation needs and local economic development.
Facility and service objectives: 4,000' x 75' runway, partial parallel taxiway or turnarounds, non-precision approach, AWOS/ASOS, covered aircraft storage, jet and aviation fuel, limited service FBO, and ground transportation.
- **Basic Service Airports** – these airports support primarily single engine general aviation aircraft but may also sometimes accommodate smaller twin-engine general aviation aircraft. These airports support local air transportation, and special use aviation activities.
Facility and service objectives: 3,000' x 60' runway (paved), 2,500' runway (turf), exits as needed, visual approach, covered aircraft storage, and aviation fuel.
- **Basis Service II Airports** – These airports support local air transportation, special use aviation activities, and may duplicate services in the area.
No facility and service objectives are specified for these airports.

AIRPORT FACILITY AND SERVICE OBJECTIVE

Airport facility and service objectives were established for the functional roles. These objectives were developed with input from the Iowa DOT Office of Aviation and System Plan Advisory Committee. The facility and services objectives should not be considered a requirement or development standard. Current airport facilities and services were compared to the facility and service objectives. Where existing facilities and services do not meet or exceed the objectives, consideration may be given by the airport owner to develop future facility and services improvements. Development of some facilities would require local support and justification of need through development of an airport master plan or through the environmental documentation process.

No state or federal funding resources are guaranteed or committed by inclusion of specific facility and service improvements in this report.

Facility and service objectives for commercial service airports should, at minimum, equal those developed for enhanced service airports as well as recommendations set forth in a current Airport Master Plan.

Basic Service II airports should meet state minimum safety standards: Runway width 50', visual approach 20:1, wind indicator, and 24 hour public telephone. Additional facility and service objectives were not established for Basic Service II airports.

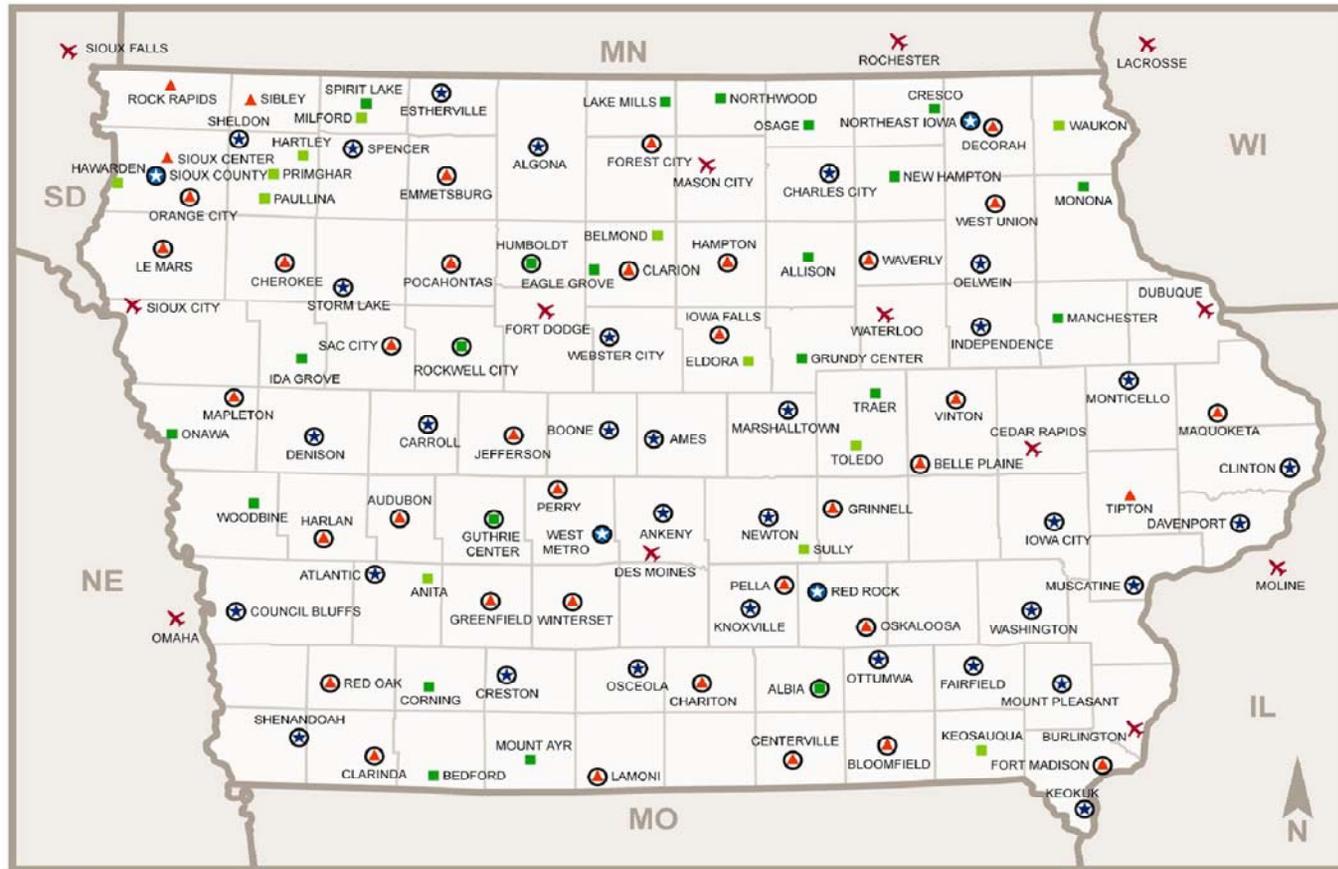
The following table sets forth the facility and service objectives for Enhanced Service, General Service, and Basic Service airports.

FACILITY AND SERVICE OBJECTIVES

	Enhanced Service Airports	General Service Airports	Basic Service Airports
Airport Reference Code (ARC)	C-II	B-II	B-I or Below
Runway Length (Primary)	Minimum 5,500 feet	Minimum Length 4,000 feet	3,000 feet Paved; 2500 feet Turf
Runway Width	100 feet	75 feet	60 feet Paved; 120 feet Turf
Taxiway	Full Parallel	Partial or Turnarounds	Exits as Needed
Approach	Precision	Non-Precision	Visual
Runway Lighting	MIRL/HIRL	MIRL	LIRL (Pilot Controlled)
Taxiway Lighting	MITL/HITL	LITL	Not An Objective
Weather Reporting	AWOS/ASOS	AWOS/ASOS	Not An Objective
Approach Aids	ALS	ALS	Not An Objective
Visual Guidance Slope Indicator (VGSI)	Both Runway Ends	Both Runway Ends	Not An Objective
Runway End Identifier Lights (REILS)	Both Runway Ends	Both Runway Ends	Not An Objective
Rotating Beacon	Rotating Beacon	Rotating Beacon	Not an Objective
Lighted Wind Indicator	Lighted Wind Indicator	Lighted Wind Indicator	Lighted Wind Indicator/Wind Sock
RCO Facilities	RCO Facilities	Not an Objective	Not an Objective
Other Pavement Strength	To Be Determined	To Be Determined	To Be Determined
Covered Storage	For 100% of Based Aircraft	100% of Based Aircraft	100% of Based Aircraft
Aircraft Apron	100% of Daily Transient	50% of Daily Transient	50% of Daily Transient
Terminal/Administration Bldg.	Yes	Not An Objective	Not An Objective
Auto Parking	Spaces equal to 100% of Based Aircraft (paved)	75% of Based Aircraft	50% of Based Aircraft
Fencing	Perimeter	Not An Objective	Not An Objective
Other	Building for Airport Maintenance Equipment	Not An Objective	Not An Objective
Fuel	100LL & Jet A - 24 Hour	100LL & Jet A 24 Hour (as needed)	100LL
FBO	Full Service - 24 Hour	Limited	Not An Objective
Ground Transportation	Rental Car, Taxi or Other	Courtesy Car/Off Site Rental Car	Not An Objective
Food Services	Vending	Vending	Not An Objective
Phone	Yes	Yes	Yes
Restroom	Yes	Yes	Yes
Pilot Lounge	Yes with Weather Reporting	Yes with Weather Reporting	Not An Objective
Security*	*	*	*
Snow Removal	Snow Removal	Snow Removal	Yes

*See the Iowa DOT Security Enhancement Guidelines.

Airports by System Role



- | | | |
|----------------------------------|------------------------------|---------|
| ✕ Commercial Service Airports | ▲ General Service Airports | ○ NPIAS |
| ★ Enhanced Service Airports | ■ Basic Service Airports | |
| ★• New Enhanced Service Airports | ■• Basic Service II Airports | |

WASHINGTON MUNICIPAL AIRPORT (AWG) INDIVIDUAL SUMMARY REPORT

The Washington Municipal Airport is owned and operated by the City of Washington. An Airport Commission was created by the city to manage the airport. The Washington Municipal Airport is included in the National Plan of Integrated Airport Systems (NPIAS). The NPIAS designates the Washington Municipal Airport as a general aviation airport. The Iowa Aviation System Plan identifies the Washington Municipal Airport as an Enhanced Service airport.

General aviation airports in Iowa provide an important means of accessing the communities and regions they serve and provide a link to the national transportation system. The Washington Municipal Airport serves the general aviation needs of Washington County. The airport is utilized by single engine, twin engine, turboprop, and business jet aircraft along with helicopters. The airport has a full time fixed-base operator (FBO) that offers fueling, aircraft maintenance, flight instruction and aircraft sales.

A wide range of aeronautical activities occur at the Washington Municipal Airport including: personal travel, business travel both local and transient, just-in-time shipping, law enforcement, agricultural and medical transport.

LOCATION MAP



Access to the airport is provided by Iowa Highway 1 and Iowa Highway 92. The airport is located one (1) mile southeast of the central business district.

EXISTING FACILITIES

The Washington Municipal Airport provides two runway facilities. Runway 18/36 is 4,000 feet in length and 75 feet in width. The concrete runway provides a 28,000 pound dual wheel loading. The runway is equipped with medium intensity edge and threshold lights. Runways 18 and 36 are equipped with precision approach path indicator lights (PAPI) and runway end identifier lights (REIL).

Runway 13/31 is a concrete surfaced runway that is 3,401 feet in length and 50 feet in width. The runway is equipped with medium intensity threshold and edge lights. The Runway 31 threshold is marked and lighted for a 335 foot displaced threshold. The threshold, as located, does not provide for a 15 foot vertical clearance between the 20:1 approach slope and county road. The displaced threshold should be located 750 feet from the pavement end in order to accommodate a published straight-in night time approach.

A connecting taxiway extends from Runway 18 to the apron area. A connecting taxiway from the apron to Runway 13/31 is located approximately 1,050 feet from the Runway 13 threshold. Medium intensity taxiway edge lights (MITL) are in place.

A non-precision instrument (NPI) approach may be made to Runways 31, 18 and 36. The following approaches are available as of 7-10-03:

VOR/DME or GPS Runway 31; VOR/DME Runway 36, NDB Runway 31:

GPS Runway 18, GPS Runway 36

A non-directional radio beacon (NDB) is located on the airport. The airport has a rotating beacon and lighted wind indicator. An Automated Weather Observing System (AWOS III) is located on the field.

Landside facilities include a terminal building, aircraft storage hangars, fuel facilities, apron area, vehicle parking and a facility for the storage of airport maintenance equipment.

The 1,700 square foot terminal building was constructed in 1993. The airport equipment maintenance storage facility contains 1,200 square feet of floor area. Aircraft storage facilities and noted as follows:

<u>Hangar Type</u>	<u>Year Build</u>	<u>Number of Spaces</u>	<u>Area</u>
Tee	1970	9	9,240 square feet
Bay	2002	6	5,376 square feet
Conventional	1974	1	1,920 square feet
Conventional	1997	3	4,320 square feet
Tee	2003	10	13,520 square feet
Maintenance Hangar	---	Maintenance	5,600 square feet

The maintenance hangar may be available for overnight transient storage.

Vehicle parking is provided for 22 vehicles.

Fuel storage (100LL, Jet A) is provided by two (2) 10,000 gallon tanks. Fuel is dispensed by pump and is available 24/7.

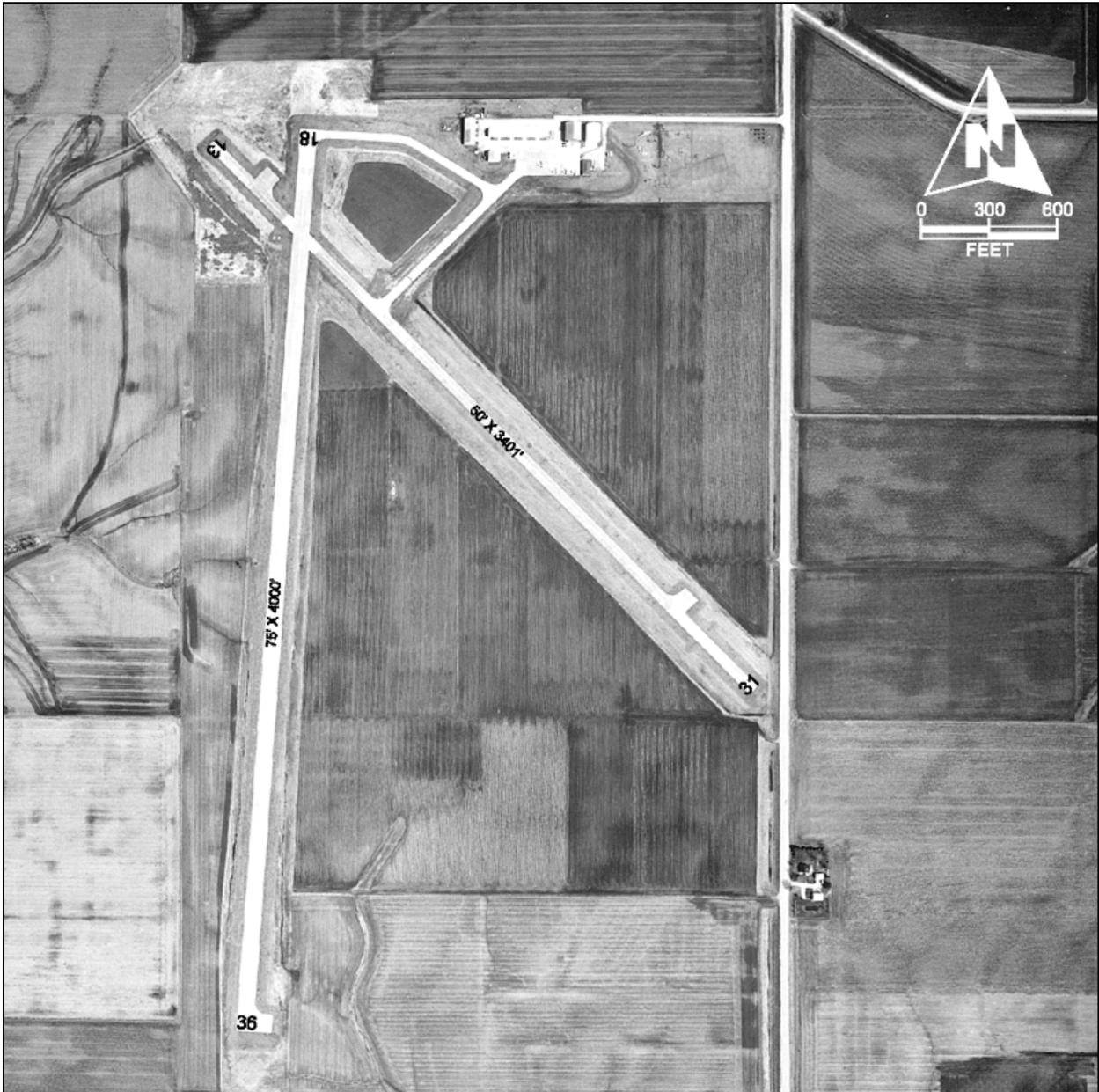
A comprehensive land use plan was adopted by the City of Washington. The plan depicts land uses compatible with the airport. The City of Washington has established zoning districts to implement the land use plan. A tall structures zoning ordinance has been adopted by the City of Washington and Washington County.

EXISTING SERVICES

Aeronautical services provided by the FBO include charter, aircraft rental, fuel (100LL, Jet A), power and airframe repair and pilot instruction. Fuel is available 24/7 from a self service credit card system. The FBO provides 24/7 on-call service.

The terminal building provides a pilot briefing room, restrooms, conference room, offices, pilot lounge, public lounge, vending machines and other amenities. Off-site ground transportation is available.

WASHINGTON MUNICIPAL AIRPORT (AWG)



Federal Role: General Aviation Airport
State Role: Enhanced Service Airport

CURRENT AND FORECAST DEMAND

There were 30 aircraft, not including ultralights, based at the airport in 2003. The based aircraft mix is noted as follows:

Single engine piston	25	Twin engine piston	2
Turboprop	2	Turbojet	0
Helicopter	1	Ultralights	1
Gliders	0	Other	0

The number of based aircraft, excluding gliders, ultralights and others is forecast to increase to no fewer than 33 in 2022.

There were an estimated 14,123 total annual operations conducted in 2003. The total number of operations is expected to increase to 17,798 in 2022.

<u>Operational Activity</u>	<u>2003</u>	<u>2007</u>	<u>2012</u>	<u>2022</u>
Based Aircraft	30	31	32	33
Annual Operations	14,123	15,819	17,152	17,798
Itinerant Operations	8,022	9,491	10,291	10,679
Local Operations	4,101	6,328	3,861	7,119

The based aircraft mix and aircraft operational mix are expected to change over the 20 year planning period. Reference may be made to Chapter Four of the 2004-2024 Iowa Aviation System Plan for additional forecast data regarding:

- Based aircraft mix
- Operational mix
- Annual Instrument Approaches
- Annual Instrument Operations

AIRPORT FACILITY AND SERVICE NEEDS

The Washington Municipal Airport has been classified as an Enhanced Service airport and should provide facilities and services commensurate with its system role.

The following table summarizes current facilities and services, the airport's facility and service objectives, and actions/projects recommended to meet objectives within the context of the system plan. Local airports may have additional projects planned to accommodate local needs and demand.

Airside Facilities	Existing	System Objective	Recommendation
Airport Reference Code	B-II	C-II	C-II
Primary Runway Length	4,000'	5,500 min.	Extend-1,500'
Primary Runway Width	75'	100'	Widen-25'
Taxiway	Connecting	Full Parallel	Full Parallel – 35'
Approach	NPI	Precision	Precision
Runway Lighting	MIRL	MIRL	None
Taxiway Lighting	MITL-connecting	MITL	MITL
Approach Aids	None	ALS	MALSR
Visual Guidance Slope Indicators (VGSI)	Runway 18/36	Both Ends	Relocate Runway 36
Runway End Identifier Lights (REIL)	Runway 18/36	Both Ends	Relocate Runway 36
Rotating Beacon	Yes	Rotating Beacon	None
Lighted Wind Indicator	Yes	Lighted Wind Indicator	None
RCO Facilities	---	RCO Facility	None
Pavement Strength	12,500 lb. DW	To be determined	30,000 lb DW
Landside			
Covered Storage	29	100 % Based Aircraft	6 units
Aircraft Apron	10 tiedowns	100% Daily Transient	None
Terminal/Admin Building	Yes	Yes	None
Auto Parking	22	Space equal to 100% based aircraft	Add 12 spaces
Fencing	No	Perimeter	Perimeter
Storage	Yes	Building for maintenance	Construct
Fuel	Yes	100LL, Jet A	None
FBO	Yes	FBO	None
Ground Transportation	Yes	Rental Car, Taxi, Other	None
Food Services	Yes	Vending	None
Phone	Yes	Phone	None
Restroom	Yes	Restroom	None
Pilot Lounge	Yes	Pilot Lounge	None
Security*	*	*	*
Snow Removal	Yes	Snow Removal	None
Other	Heated hangar	De-Icing	None

*Security enhancements for each airport depend on the size and activity at the airport. Each airport is encouraged to complete a security plan that addresses security enhancements recommended by the Transportation Security Administration and the Iowa DOT.

The Washington Airport Commission completed an Airport Layout Plan in 2003 depicting the ultimate development of Runway 18/36 to ARC C-II standards. The plan also depicts precision instrument approaches to Runways 18 and 36. The ALP proposes the construction of a parallel taxiway to Runway 18/36. These proposed projects support the system plan facility and service objectives.

The ALP also proposed to mitigate the displaced threshold on Runway 31 by extending Runway 13 and locating the threshold on Runway 31 so as to accommodate the straight-in nighttime instrument approach.

The ALP depicted the location for future aircraft storage facilities and apron area.

SYSTEM DEVELOPMENT COSTS

The Airport Capital Improvement Program (ACIP) identified a number of improvements that support the facility and service objectives set forth for Enhanced airports. There are no known site constraints that would preclude development of a runway to accommodate airplanes in approach Category C and airplane design Group II (ARC C-II).

<u>Development Item</u>	<u>2004-2009</u>
Land acquisition Runway 13	\$461,250
Runway 13/31 rehabilitation	\$1,255,425
Land acquisition Runway 18/36	\$2,143,750
Vehicle parking (12)	\$21,000
Hangar (6)	\$210,000
Total	\$4,091,425

OTHER RECOMMENDATIONS

There are no other recommendations other than providing for continued maintenance of airport facilities and services provided by the airport. Should substantial use of the airport by airplanes in approach Category C and Design Group II be documented, those facilities and services are required to support aeronautical activity.

Snyder & Associates, Inc.



SNYDER & ASSOCIATES
Engineers and Planners

2727 SW Snyder Blvd.
Ankeny, Iowa 50023
Phone: 515.964.2020
Fax: 515.964.7938
www.snyder-associates.com

Wilbur Smith Associates, Inc.



6600 Clough Pike
Cincinnati, OH 45244
Phone: 513.233.3700
Fax: 513.624.5182
www.wilbursmith.com

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