Chapter One: Existing Conditions

INTRODUCTION

As the initial step in the master plan process, the existing conditions chapter is a comprehensive data collection process that provides background information regarding the airport's physical, operational and functional characteristics and provides further understanding of past and present aviation factors and activity demand. The information collected as part of this chapter provides the basis for evaluating existing facilities and subsequently determining future demand forecasts and facility needs at the Monett Municipal Airport (HFJ).

BACKGROUND INFORMATION

Airport Location

HFJ is situated on approximately 202 acres approximately five miles west of the central business district of the City of Monett, Barry County, MO. The main access route to/from the Airport is via Missouri State Highway 97 and U.S. Highway 60 which are located immediately east and north of the Airport, respectively.

Airport Role

HFJ is a National Plan of Integrated Airport Systems (NPIAS) airport. HFJ is classified within the NPIAS and Missouri State Airport System Plan (MoSASP) as a General Aviation facility. The MoSASP system role of HFJ has been identified as one of 27 Regional facilities in the state. MoSASP Regional airports accommodate a wide range of general aviation aircraft for large service areas outside of major metropolitan areas throughout the state and typically have locally based turbine and business jet aircraft as well as substantial levels of itinerant/transient turbine aircraft activity. Additionally, Regional airports are capable of accommodating 100 percent of transient general aviation users typically operating aircraft weighing less than 12,500 pounds and/or 75 percent of the general aviation fleet weighing from 12,500 to 60,000 pounds.

Ownership and Management

HFJ is a public owned, public use facility that is owned and operated by the City of Monett which operates under a Mayor-Board of Commission form of government as a Third Class City. The City administers the Airport through appointment by an elected three member City Commission, including the Mayor and two Commissioners, as well as the City Administrator. The City employs a full-time airport manager who coordinates and directs administrative and contractual functions including preparation of an annual budget, coordination of capital improvement projects, lease negotiations, agreements and public relations.

On-Airport Businesses

Currently, there are three businesses based at HFJ that provide aviation-related goods and services and conduct regular operational activity.



HFJ Entrance Marquee



Monett City Hall



MONETT MUNICIPAL AIRPORT (HFJ)

City of Monett, Missouri

Exhibit 1.1-Location & Vicinity Maps

Location Map



Vicinity Map



Source: www.googlemaps.com





City of Monett

Fixed based operation (FBO) services at HFJ include 100LL and Jet A fuel, hangar rental, tie-downs, aircraft rental and charter, flight instruction, pilot supplies, covered overnight aircraft storage, public telephone and restroom, vending, courtesy car transportation and computer weather/flight planning service. The city employs three full-time employees including an airport manager and two additional employees who are responsible for line service duties, maintenance and operations.

Jack Henry & Associates, Inc.

According to the company's website, Jack Henry & Associates, Inc. (JKHY) "was founded in 1976 as a provider of core information processing solutions for community banks. Today, the company's extensive array of products and services are processing transactions, automating business processes, and managing mission-critical information for more than 8,700 financial institutions and corporate entities." The company currently employs a total of approximately 4,000 employees and has 48 offices nationwide.

JKHY's corporate flight department, consisting of 36 employees, including the company's in-house travel agency, is based at HFJ which maintains and operates a fleet of four Cessna Citation Encore (Model 560) business jets as well as a Beechcraft Bonanza A36. JKHY's fleet of Citation jets fly approximately 2,100 hours per year and average nearly 530-640 flight hours per aircraft annually.

Golden Aviation

Golden Aviation is a privately owned aircraft restoration and parts manufacturing company based at HFJ which specializes in general aviation and military aircraft including new concept aircraft manufacturing, custom built replicas and restored classic airplanes including warbirds, as well as structural design and airframe stress analysis. Housed in a 30,000 square foot facility that includes a machine shop, aircraft production and aircraft showroom, Golden Aviation employs 14 employees.

In addition to private aircraft restoration, Golden Aviation, in 2008, received a multi-year Department of Defense contract to restore and modernize nearly 700 units of the Cessna 337 'Skymaster' (USAF O-2A/B) and the Cessna T-37B 'Tweet' for allied foreign militaries, as well as the U.S. Border Patrol, U.S. Customs and Border Protection. Restoration and delivery of these restored aircraft over a period of five to 20 years will occur at HFJ.

In addition to those businesses based at HFJ, a number of companies located in Barry, Lawrence and Newton counties currently have based aircraft at HFJ including EFCO Corporation/Pella Window, Three D Corp., Impact Transportation Solutions, Inc., Marco Aviation Services, Inc., Roderick Arms, Falcon Broadcasting, Inc., Eagle Broadcasting, Inc., P.M. Aero and Signs for Life.



Runway 18 Threshold (looking south)



Runway 18 Inner Approach Surface (looking north)



Runway 36 Threshold (looking north)



Runway 36 Inner Approach Surface (looking south)

Services and Operating Conditions

HFJ is attended continuously throughout the year. In addition to those already mentioned, services and activities at HFJ include air ambulance, transient corporate, military, state agency and experimental flight operations.

Historic Development

Friend Air Park, dating back to the 1950s and once located on the existing site of HFJ, was a private airfield equipped with a paved 3,500' x 50' asphalt runway, low intensity runway lighting, as well as terminal area facilities including fuel storage, an administration building and hangars.

In 1978-79 the City commissioned a master plan and site selection study to evaluate the feasibility of this and three other sites within Lawrence and Barry counties to support an airport for the City of Monett. At the conclusion of the study, Friend Air Park was recommended as the preferred site to which the City elected to acquire and develop the site into the Monett Municipal Airport.

The City acquired the airport during the 1980s and in 1989 a new 3,000' x 60' asphalt runway was constructed which included airfield lighting and a partial parallel taxiway. Then in 1994, Runway 18-36 was extended to 4,000 feet in addition to the installation of visual approach aids, reconstruction of the partial parallel taxiway and installation of a new rotating beacon. Also during the mid-1990s, the airport experienced apron expansion, access road construction and installation of perimeter fencing.

The late 1990s brought significant growth to HFJ. In 1998-99, Runway 18-36 was expanded to a 5,000' x 75' concrete surface which included the installation of a MALSF approach lighting system to the Runway 36 threshold as well as property acquisition to the south of the facility. Then in 2002, the partial parallel taxiway was reconstructed and expanded to a full 5,000 foot long parallel concrete taxiway. Since 2002 the Airport has witnessed multiple improvement projects including apron expansion, as well as taxiway and taxilane rehabilitation.

Since 1989, approximately \$5 million dollars in Federal and state funding grantsin-aid have been invested in the further expansion and development of HFJ.

AIRFIELD FACILITIES

The published field elevation is 1,313.9 feet above mean sea level (MSL) while the Airport's geographic location is 39° 54' 22.40" N latitude and 94° 00' 45.90" W longitude. The current magnetic declination for the airport location is 1° 57' E and changing by 0° 7' W per year (Epoch Year 2010). **Exhibit 1.2** illustrates the airfield facilities and layout of HFJ.

Runway

HFJ's airfield layout consists of a 5,000' x 75' single runway, designated 18-36. Runway 18-36's concrete surface has a weight bearing capacity of 30,000 pounds to accommodate single wheel gear (SWG) aircraft and is in good physical condition. It should be noted that the Runway 18 threshold has a 470 foot paved overrun.



MONETT MUNICIPAL AIRPORT (HFJ)

City of Monett, Missouri

Exhibit 1.2-Airfield Facilities and Airport Layout



Source: National Agricutural Imagery Program (NAIP), Barry County.



Township 25N, Range 28W Monett Township Sections 5, 8 and 32 NOT TO SCALE





Full Parallel Concrete Taxiway (5,000' x 35')



HFJ's AWOS-III System



Runway 36 MALSF Approach Lighting System and PAPI-4L Visual Approach Aid

Runway 18-36 is equipped with non-precision instrument (NPI) runway markings and currently accommodates straight-in RNAV⁽¹⁾ (GPS) approach procedures utilizing WAAS⁽²⁾, LNAV⁽³⁾, LNAV/VNAV⁽⁴⁾ and LPV⁽⁵⁾ technology to the Runway 18 and 36 thresholds.

Taxiways

HFJ's taxiway system consists of a full parallel concrete taxiway which provides direct access between both runway thresholds for 18-36, the Airport's apron and terminal area complex, as well as Golden Aviation's apron area. The taxiway system also includes two mid-field connector taxiways providing direct access to the main terminal area as well. HFJ's taxiway system has a weight bearing capacity of 30,000 pounds SWG.

Airfield Lighting

Runway 18-36 is equipped with pilot controlled, white, stake mounted, medium intensity runway lighting (MIRL), red and green omni-directional threshold lights, as well as Runway End Indicator Lighting (REIL) for rapid identification of the thresholds during night and inclement weather conditions. Additionally, the Runway 35 end is equipped with a Medium Intensity Approach Lighting System with Flashing Lights (MALSF) that can provide instrument approach capabilities down to, but not less than, ³/₄-mile. It should be noted the instrument approach minima for HFJ and Runway 35 is not less than 1-mile. Lastly, the taxiway system at HFJ is equipped with blue stake-mounted reflectors.

Weather Reporting System

HFJ is served by an automated weather observing system (AWOS-III) which is a suite of sensors which measure, collect and disseminate weather data to help meteorologists, pilots and flight dispatchers prepare and monitor weather forecasts, plan flight routes, and provide necessary information for correct takeoffs and landings. An AWOS-III transmits wind speed, peak gust, wind direction, temperature, dew point, altimeter setting, density altitude, visibility, as well as sky condition, cloud height and cloud type, and provides a minute-to-minute update that is transmitted to pilots by a VHF radio frequency between 118 and 136 MHz. HFJ's AWOS is located south-southeast of the terminal area complex and interfaces with the National Weather Service (NWS).

- 2. WAAS- Wide Area Augmentation System
- 3. LNAV- Refers to a non-precision approach procedure which uses GPS and/or WAAS for Lateral Navigation (LNAV). On an LNAV approach, the pilot flies the final approach lateral course, but does not receive vertical guidance for a controlled descent to the runway. Typically, LNAV procedures achieve a minimum descent altitude of 400 feet height above the runway.
- 4. LNAV/VNAV (Lateral Navigation/Vertical Navigation) approaches use lateral guidance from GPS and/or WAAS and vertical guidance provided by either the barometric altimeter or WAAS. The decision altitudes on these approaches are usually 350 feet above the runway.
- 5. LPV (Localizer Performance with Vertical guidance) is similar to LNAV/VNAV except it is much more precise and enables descent to 200-250 feet above the runway and can only be flown with a WAAS receiver.

^{1.} RNAV-Area Navigation

NAVAIDS/Communications

NAVAIDs are classified as either an enroute or terminal area facility. Enroute NA-VAIDs provide point-to-point navigational services within the enroute airspace environment while a terminal area NAVAID is one which provides direct navigation to/ from an airport. The nearest enroute NAVAIDS to HFJ are the NEOSHO VOR-DME(⁶) which is located approximately 20 nautical miles (Nm) southwest of the Airport, as well as the RAZORBACK and SPRINGFIELD VORTAC(⁷) stations located approximately 40 Nm south-southwest and 36 Nm northeast, respectively.

Another enroute and more prevalent terminal area NAVAID is GPS. GPS is a highly accurate worldwide satellite navigational system that is unaffected by weather and provides point-to-point navigation by encoding transmissions from multiple satellites and ground-based datalink stations using an airborne receiver. GPS currently supports the published straight-in RNAV (GPS) instrument approach procedures (IAP) to Runway 18-36.

HFJ is served by a remote communications outlet (RCO) which is located immediately adjacent to the terminal building. An RCO is a remote aviation band radio transceiver, established to enhance aircraft ground communication capabilities with local Air Route Traffic Control Centers (ARTCC) and/or Automated Flight Service Stations (AFSS).

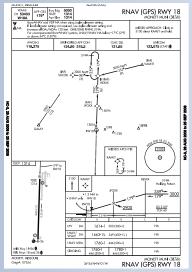
Visual Approach Aids

Visual approach aids assist aircraft on final approach by providing vertical situational awareness in relation to the runway threshold. The most common visual aid includes a precision approach path indicator (PAPI)(⁸), which are in service at HFJ. Runways 18 and 36 are equipped with PAPI-4Ls.

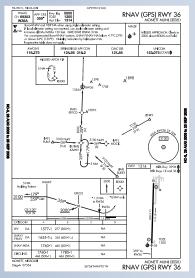
- 6. A VOR-DME and VOR are very high frequency omni-directional radio range (VOR) facility with distance measuring equipment (DME) in which the ground-based NAVAID transmits very high frequency (VHF) signals 360 degrees oriented from magnetic north, allowing aircraft to track to and from the facility, located on or near an airport. The VOR-DME and VOR broadcast range is typically 200 nautical miles and is restricted by line-of-sight (VHF signals do not follow the curvature of the earth), and periodically identifies itself by Morse code while some facilities are equipped with a voice identification feature.
- 7. A VORTAC is a very high frequency omni-directional radio range facility with tactical air navigation (TACAN) in which the ground-based NAVAID transmits very high frequency (VHF) signals 360 degrees oriented from magnetic north, allowing aircraft to track to and from the facility, located on or near an airport. The VORTAC broadcast range is typically 200 nautical miles and is restricted by line-of-sight (VHF signals do not follow the curvature of the earth), and periodically identifies itself by Morse code while some facilities are equipped with a voice identification feature.
- 8. The PAPI is a system of lights located on the side of a runway that provides visual descent guidance information during the approach to a runway. These lights are visible from 3-5 miles during the day and up to 20 miles or more at night. Each set of lights for both systems are designed so that viewing it from above a specific angle it shows white lights and below that angle red lights. If flight crews see red on the set farther down the runway and white on the closest set, then the aircraft is on the glide slope. White over white means the aircraft is too high and red over red indicates the aircraft is below glidepath.



Remote Communications Outlet (RCO)



Runway 18 IAP Approach Chart



Runway 36 IAP Approach Chart

Instrument Approach Procedures (IAP)

Table 1.1 discloses information regarding the published IAPs in place at HFJ. IAPs permit operations during instrument meteorological conditions and further increase access, capacity, and overall safety and efficiency of the Airport.

Table 1.1

Pub	lished	IAPs	

Runway End	Approach	Approach Minimums/ Category	Minimum Descent Altitude (MDA)
	LPV DA	1-mile (A & B); n/a (C & D)	1,614' MSL/300' AGL
	LNAV/VNAV DA	1-mile (A & B); n/a (C & D)	1,663' MSL/349' AGL
RNAV (GPS) RWY 18	LNAV MDA	1-mile (A & B); n/a (C & D)	1,760' MSL/446' AGL
	Circling	1-mile (A & B); n/a (C & D)	1,780' MSL/466' AGL
	LPV DA	1-mile (A & B); n/a (C & D)	1,577' MSL/277' AGL
RNAV (GPS) RWY 36	LNAV/VNAV DA	1-mile (A & B); n/a (C & D)	1,655' MSL/355' AGL
	LNAV MDA	1-mile (A & B); n/a (C & D)	1,760' MSL/460' AGL
	Circling	1-mile (A & B); n/a (C & D)	1,780' MSL/466' AGL

Note: When local altimeter setting not received, use Joplin altimeter setting and increase all DAs/MDAs 120 feet.

Source: U.S. Terminal Procedures- North Central (NC-3).

Airfield Facilities Summary

Table 1.2 highlights and denotes the pertinent airfield facilities and equipment at HFJ.

Table 1	.2
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Airfield Facilities Summary

Airfield Item	Physical Description
Runway 18-36	
Runway Dimensions	5,000' x 75'
Runway Surface	Concrete-PCC (Good Condition)
Pavement Strength	30,000 lbs. SWG
True Runway Bearing	1.65° true bearing
Pavement Markings	NPI
Runway Lighting	MIRL/Threshold Lighting/REIL
Visual Approach Aids	PAPI-4L (Rwy 18 & 36)
Taxiway System	
Full Parallel Taxiway	Stake-Mounted Blue Reflectors; 30,000 lbs. SWG
Connector Taxiways	Stake-Mounted Blue Reflectors; 30,000 lbs. SWG
Other Airfield Items	
NAVAIDs/Communications	Enroute (GPS)/RCO Located Adjacent to Terminal Bldg
Weather Reporting	AWOS-III
Airport Beacon	Operational; Located NE of Terminal Building
Instrument Approaches	RNAV(GPS) (18 & 36)

Source: BWR; HFJ Site Visit.

TERMINAL AREA FACILITIES

HFJ's general aviation facilities include the airport's terminal building, terminal area auto parking, T-hangars, clear span hangars, local and transient apron areas, tie-downs. **Exhibit 1.3** illustrates the terminal area facilities and layout of HFJ.

Terminal Building

Constructed in 1996, the terminal building is a 2,400 square foot structure located immediately east of and adjacent to the aircraft apron and accommodates local airport patrons and transient pilots and passengers. This 40' x 60' structure provides space for administrative offices, as well as amenities for local and transient users including pilots' lounge, waiting area, kitchenette, flight planning facilities, public restrooms, conference area as well as historic and local business exhibits.

It should also be noted that JKHY maintains approximately 1,200 square feet of passenger space for employees enplaning and deplaning company aircraft within the JKHY's hangar 'B' located at the northernmost portion of the terminal area and aircraft apron.

Auto Parking

The auto parking facilities include a 2,800 square foot asphalt public auto parking lot located adjacent to and east of the terminal building capable of accommodating seven parking spaces. Additional public auto parking is co-located within JKHY's employee parking lot, located immediately north of the terminal building, which measures approximately 17,900 square feet and accommodates 44 parking spaces.

In addition to auto parking located near the terminal building, JKHY also maintains additional parking facilities located north of hangar 'B' for enplaning and deplaning company employees at the airport, in addition to corporate flight department staff, which measures approximately 27,200 square feet and accommodates an additional 75 parking stalls for peak period parking demand.

Hangar Facilities

Table 1.3 identifies the aircraft hangars currently in use at HFJ by size (square footage), type and capacity. Presently, the total available hangar area is estimated to be nearly 64,500 square feet and capable of hosting nearly 35 based aircraft which includes 20 T-hangar units and five clear span hangars. Overall building floor space at HFJ, including hangar storage, office and manufacturing space totals nearly 95,700 square feet.



JKHY's Hangar B Passenger Lounge



JKHY's 11,800 sq. ft. Hangar A (foreground) and 13,125 sq. ft. Hangar B (background)



Passenger Terminal Building (Landside)



Terminal Building (Airside)



MONETT MUNICIPAL AIRPORT (HFJ)

City of Monett, Missouri

Exhibit 1.3-Terminal Area Facilities



Source: National Agricutural Imagery Program (NAIP), Barry County.



Township 25N, Range 28W Monett Township Sections 5, 8 and 32 NOT TO SCALE



Table 1.3 Hangar Facilities

Hangar Designation	Stored Aircraft	Hangar Type	Size (Sq. Ft.)*/ Dimensions
A*	10	T-Hangar	15,240/ 60' x 254'
B*	5	Clear Span	8,000/ 80' x 100'
C*	10	T-Hangar	11,700/ 50' x 234'
EFCO/Pella Windows	1	Clear Span	5,800/ 60' x 80'
JKHY Hangar A**	2	Clear Span	6,800/ 75' x 90'
JKHY Hangar B***	3	Clear Span	11,925/ 125' x 105'
Golden Aviation****	4	Clear Span	5,000/ 71' x 71'
HFJ Hangar Accommodations	35	-	64,465

Note: Square footage noted is hangar floor space only and does not include office, storage, mechanical space, etc.

(*) City owned facilities.

(***) JKHY A has an additional 5,000 sq. ft. of office space totaling nearly 11,800 sq. ft. (***) JKHY B has an additional 1,200 sq. ft. of passenger terminal space totaling nearly 13,125 sq. ft.

(****) Golden Aviation has an additional 25,000 sq. ft. of manufacturing, storage, showroom and office space.

Source: HFJ Site Visit.

Apron Facilities

The public aircraft apron at HFJ occupies approximately 16,800 square yards (151,600 square feet) of paved area, is comprised of a concrete surface, and has a total of 17 tie-downs. Based on visual inspection, the apron area appears to be in good condition.

JKHY also maintain approximately 2,000 square yards (17,800 square feet) of leased apron within the immediate terminal area complex while Golden Aviation utilizes an additional 5,500 square yards, or 49,400 square feet, of apron south of the main terminal area. Both apron areas consist of a concrete surface and are in good condition.

Total apron area at HFJ is estimated to be approximately 24,300 square yards, or nearly 218,800 square feet.

SUPPORT FACILITIES

HFJ's support facilities include the fuel storage, aircraft maintenance and snow removal and equipment (SRE) storage facilities, as well as utility service providers.

Fuel Farm

Fueling operations at HFJ are conducted via a 24-hour fuel pump/meter and fuel farm facility located immediately adjacent to the southeastern portion of the air-craft apron. **Table 1.4** identifies HFJ's fuel storage capabilities and facilities.



EFCO/Pella Windows' 5,800 sq. ft. hangar



City owned T-Hangar 'C' (50' x 234')



City owned Clear Span Hangar 'B' (80' x 100')



City owned T-Hangar 'A' (60' x 254')



Golden Aviation's 30,000 sq. ft. Facility (airside)



Concrete Apron Area (looking north)



Concrete Apron Area (looking south)



Fuel Farm (landside)



100LL & Jet A Fuel Facilities (airside)



Airport SRE Facility (60' x 72')

Table 1.4	
Fuel Farm Facilities	

Fuel Type	Storage Capacity (Gal.)	Number of Tanks/Units	Containment
100LL	10,000	One	Aboveground- Contained
Jet A	32,000*	Two	Aboveground- (1) Contained
Autogas	600	Two	Aboveground-Uncontained
Diesel	550	One	Aboveground-Uncontained
Fuel Truck**	2,000	One	n/a
Total Storage Capacity	45,150		

(*) Includes one 12,000 gallon and one 20,000 gallon storage tank. (**) Owned, operated and maintained by JKHY.

Source: HFJ Site Visit.

Aircraft Maintenance

Currently, there is not a privately owned and public-use airfame and powerplant maintenance shop located at HFJ.

JKHY performs airframe and powerplant maintenance on its Citation fleet of aircraft within the 11,800 square foot hangar/office complex designated JKHY Hangar 'A' located north of the terminal building. This hangar is sufficient to accommodate JKHY's maintenance needs into the foreseeable future.

Golden Aviation, operating from it's 30,000 square foot maintenance and manufacturing hangar located south of the main terminal complex, provide airframe and powerplant services to private individuals as well as the company's own private fleet of aircraft.

SRE Facilities

HFJ's SRE facility is housed within a 60' x 72', 4,320 square foot facility located southeast of the terminal building and accommodates airport, snow removal and airfield maintenance equipment. This facility is considered adequate to meet future SRE storage needs at HFJ.

Utility Service Providers

Table 1.5 describes the utilities utilized at HFJ, as well as the providers of utility services for the Airport.

Table 1.5 Utilities and Service Providers

Service Provider
Empire Electric
City of Monett Water Department
AT&T
Wild Blue
Phillips 66
City of Monett
City of Monett; Pierce City and Monett Rural Volunteers
City of Monett, Barry County Sheriffs Department

Source: HFJ site visit.

INTERMODAL ACCESS

The intermodal transportation network in the vicinity of MHFJ includes local interstates, U.S. highways, state highways, as well as county routes and local roads within the vicinity of the airport.

Interstates

Interstate 44 (I-44) is located approximately 10 miles north or HFJ and is the primary interstate route within southwestern Missouri and link between Tulsa, Joplin, Springfield and St. Louis.

U.S. Highways

U.S. Highway 60(U.S. 60) is located immediately north of HFJ and serves as the major east-west access route through northern Barry County and linking Monett with Tulsa (109 Nm southwest), Neosho (23 Nm southwest) and Springfield (35 Nm northeast).

State Highways

Missouri Highway 97 (MO 97) located immediately east of HFJ, provides direct access between Monett and small rural communities to the north and south of the airport including Pierce City to the north and Wheaton to the south. Additionally, Missouri Highway 37 (MO 37) located approximately two miles north of HFJ provides direct access to the north from Pierce City to Sarcoxie and I-44.

County Routes and Local Roadways

HFJ is flanked by two local roadways to the south and west providing unrestricted local area access. Farm Road (FM) 1020, located to the west, and situated north-south, provides access directly to U.S. 60. FM 2025, aligned east-west and located south of the airport, provides direct access to MO 97 to the east of the airport.

LOCAL AIRPORTS AND AIRSPACE CHARACTERISTICS

The airspace characteristics evaluation for HFJ will include an assessment of local area airports, airspace classifications, charted airways and special use airspace.

Local Airports

Exhibit 1.4 illustrates the airspace structure surrounding HFJ, as well as public and private airports located within a 25 NM radius of the airport. **Table 1.6** lists local airports including information regarding each facility's physical characteristics and facilities, as well as distance and direction from HFJ. Currently, there are four publicly owned facilities and 16 privately owned airports in the vicinity of Monett.

Table 1.6 Local Airports

Airport Name, Associated City	Airport Identifier	Primary Runway Characteristics	Airport Role	Distance/ Direction from HFJ
Monett Municipal, Monett	HFJ	18-36: 5,000' x 75'	GA	-
Bil-Mitch Airport	-	2,500′- Turf	Private	4 NW
McClurg Airport	-	2,000'- Turf	Private	6 NW
Frazier Airport	-	1,300′- Turf	Private	8 ENE
Ingram Airport	-	1,300′- Turf	Private	10 SE
Mount Vernon Mun., Mount Vernon	2MO	18-36: 3,195' x 60'	GA	11 NNE
Dalbom Ultralight Flight Park	-	Turf	Private	13 SW
Cassville Municipal, Cassville	94K	9-27: 3,600' x 60'	GA	14 SSE
Lynch Airport	-	1,800′- Turf	Private	14 W
Jerry Sumners Sr. Municipal, Aurora	2H2	18-36: 3,002' x 60'	GA	16 ENE
Nimsick Airport	-	2,600'- Turf	Private	17 NNW
Tiber Line Airpark	-	1,900'- Turf	Private	19 SW
Hugh Robinson Mem., Neosho	EOS	1-19: 5,001' x 100'	GA	20 WSW
Andrews Airport	-	1,400′- Turf	Private	20 NNW
Route 66 Airport	-	2,500′- Turf	Private	20 NW
Leaming Airport	-	1,800- Turf	Private	21 NNW
Baker's Landing Airport	-	1,300′- Turf	Private	22 ENE
Sunderland Airport	-	2,000'- Turf	Private	22 NNW
Kathy's Patch Airport	-	1,400′- Turf	Private	22 NW
Stony Branch Airport	-	2,400'- Turf	Private	25 NNW
Turkey Mountain Estates Airport	-	3,900'- Turf	Private	25 SE
GA- General Aviation				

GA- General Aviation

Source: NOAA/FAA Kansas City Sectional Aeronautical Chart.

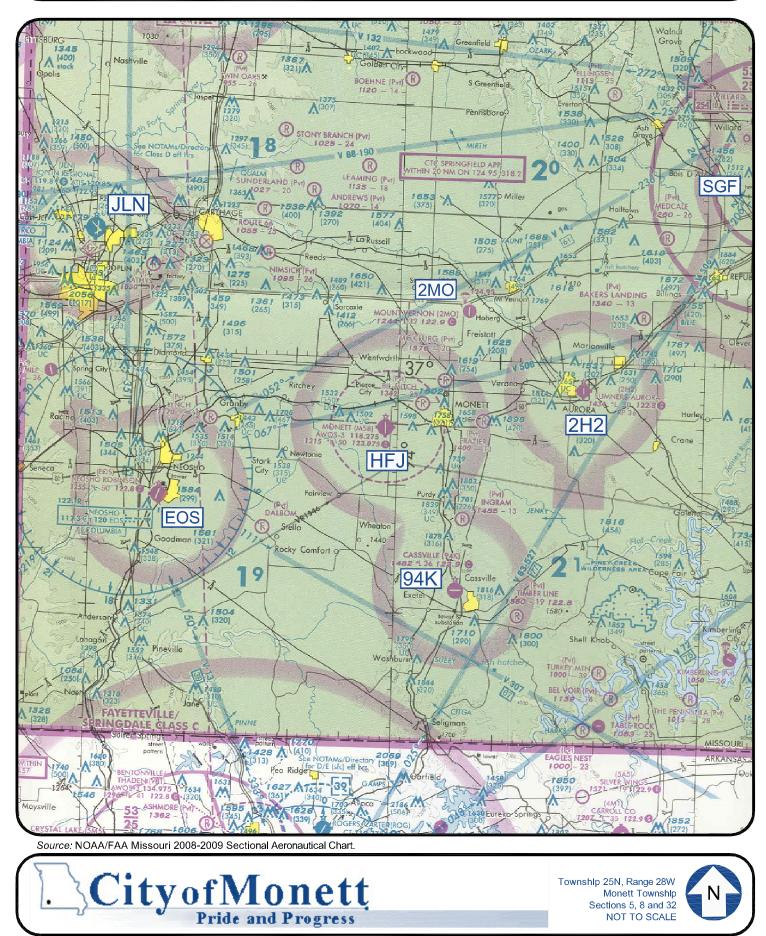


MONETT MUNICIPAL AIRPORT (HFJ)

City of Monett, Missouri

Exhibit 1.4-

Local Airports & Airspace Characteristics



Airspace Classifications

The airspace abeam HFJ is classified as controlled Class E Airspace. Class E airspace extends upward from either the surface or a designated altitude, which in this case is down to the surface five Nm from the airport and 700 feet above ground level (AGL) 10 Nm from the facility, to the overlying or adjacent controlled airspace (Class G). Class E airspace is also the airspace used by aircraft transitioning to and from the terminal or en route environment normally beginning at 14,500 feet to 18,000 feet. Class E airspace ensures IFR aircraft remain in controlled airspace when approaching airports without Class D airspace or when flying on Victor airways-federal airways that are below 18,000 feet. Class E airspace exists everywhere from 1,200 feet above mean sea level (AMSL) up to 18,000 feet MSL. Aircrew and aircraft are not required to be in contact with ATC services and are recommended to follow traffic advisory practices while maintaining an aircraft speed of 250 knots or less when operating below 10,000 feet MSL. **Exhibit 1.4** depicts the Class E airspace classifications in the vicinity of HFJ.

Charted Airways

Established air routes, also known as Victor Airways, are charted and published routes linking VOR/VOR-DME/VORTAC stations throughout the contiguous United States. Victor Airways are low level (below 18,000 feet AMSL- Flight Level (FL) 180) Class E airspace corridors which are approximately 10 NM wide and whose airspace begins at 1,200 feet AMSL and extends up to but not including FL 180 (17,999 feet AMSL).

Exhibit 1.4 depicts the 052° radial, Victor Airway V506, and the 067° radial, Victor Airway V14, off the NEOSHO VOR-DME, currently situated abeam HFJ's Class E airspace surfaces from the southwest to the northeast. Additionally, the military training route, VR1546, transects HFJ's airspace to the south of the airport.

Special Use Airspace

A Military Operations Areas (MOA) is established outside of Class A airspace to separate or segregate certain non-hazardous military activities from IFR traffic and to identify for VFR traffic where these activities are being conducted. There are no MOAs or other special use airspaces in the vicinity of HFJ.

AIRPORT ENVIRONS & LAND USE

This section will address and examine the regional setting of HFJ and the land uses that surround it. This task is critical to the future development of the Airport given that planning decisions will most likely extend beyond the Airport's physical property boundary while local land use patterns will ultimately affect the potential for airport expansion and capital development.

County/City/Airport Geography

Barry County, named after named after William Taylor Barry from Kentucky, a United States Postmaster General and organized in 1835, has a population of approximately 36,200 residents and totals approximately 791 square miles, or 506,240 acres of land.

The City of Monett, located inside the Monett Township within Barry County and

Pierce Township within Lawrence County, has a population of approximately 7,400 residents and covers an area of nearly 6.5 square miles.

HFJ is located on approximately 202 acres of land consisting of fee simple property and easements and is situated within three different map sections including sections 5, 8 and 32. The township/range of HFJ is T 25 N/R 28 W, respectively.

Land Use Ordinances and Zoning

HFJ is not codified as having a specified zoning or land use designation for city planning purposes. Additionally, the county does not have a legislatively enacted land use/zoning ordinance to govern land uses in the rural portions of Barry County.

Adjacent Land Use

Given the limited local and county land use controls, this evaluation will rely heavily on information and observations noted during the airport site visit to determine the existing land uses adjacent to HFJ.

The land use within the immediate vicinity is almost exclusively agricultural in nature and is defined by open fields and gently rolling hills and fields containing low yield cropland. Low density residential use, most likely associated with agriculture activity, exists primarily to the north, south, southwest and northwest of HFJ. Land uses such as commercial/industrial, Section 4(f), institutional and/or sanitary landfills were not noted and not readily apparent.

Land Uses Affecting Expansion

Based on this evaluation, future airport expansion is not expected to be adversely affected by local area land uses given the rural setting of HFJ coupled with agriculturally-based land uses in the immediate vicinity. Although residential use occurs adjacent to the Airport, the number and location of existing residences are not expected to be significantly impacted by potential capital development.

With regard to potential natural terrain and/or manmade features in the immediate vicinity, US 60 located north of the airport and MO 97 to the east are expected to influence planning considerations with respect to expanding Runway 18-36 as well as the terminal area. Given this, potential runway expansion and/ or property acquisition will most likely occur to the south and west of the Airport while terminal area expansion will most likely have to occur along the established frontage of the existing terminal area complex.

SOCIOECONOMIC CONDITIONS

Population, income data including per capita income (PCI) and median household income (MHI) we well as labor force participation information has been collected to understand and evaluate current socioeconomic conditions in the Barry, Lawrence and Newton County region that will assist in making assumptions and projections regarding the future level of aviation demand at HFJ.

Because HFJ's airport environs includes portions of Barry, Lawrence and Newton Counties, in addition to providing valuable air transportation services to each, the socioeconomic condition of the tri-county area will be evaluated and considered as part of the demand forecast element of the master plan update.

Population

Barry, Lawrence and Newton County are located within the Missouri Department of Economic Development, Missouri Economic Research and Information Center's (MERIC) southwest region. Of the seven counties that comprise this region, Barry, Lawrence and Newton County rank 4th, 3rd and 2nd, in terms of population, respectively. **Table 1.7** illustrates the population trends for these counties since 1990.

Та	b	le	1	.7

Historic Population Statistics

Place Name	1990	2000	2007-08	Percent Change 1990-Present	Annual Growth Rate 1990-Present
Barry County	27,547	34,010	36,197	31.4%	1.5%
Lawrence County	30,236	35,204	37,650	24.5%	1.2%
Newton County	44,445	52,636	56,038	26.0%	1.3%
State of Missouri	5,116,901	5,595,211	5,878,415	14.8%	0.8%

Source: MERIC.

Over the past 18 years, Barry County's population, currently ranked 31st in the state, has increased approximately 31 percent, or 8,650 new residents, and experienced an average annual population growth of 1.5 percent. Lawrence County's population, currently ranked 30th in the state, has increased nearly 25 percent since 1990 averaging an annual population growth of 1.2 percent. Newton County, ranked 18th in the state in population, has become home to an additional 11,600 residents over that period of time resulting in a 1.3 annual growth in population. Combined, the counties have averaged 1.3 percent annual population growth equaling a total of 27,567 new residents to the tri-county area.

Moderate population growth within the tri-county area is expected thru 2030 with Barry County averaging one percent population growth, or approximately 8,100 new residents. Lawrence and Newton counties are expected to grow as well by approximately 1.1 and 0.8 percent, respectively, over the next two decades. In 2030, the tri-county region is expected to host a total of nearly 29,000 new residents while averaging a modest one percent annual growth over the same period. **Table 1.8** illustrates the population projections for these counties through 2030.

Table	1.8		

Projected Population Statistics

Place Name	2007- 2008	2010	2015	2020	2025	2030	Annual Growth Rate Present-2030
Barry County	36,197	37,100	39,000	40,900	42,700	44,300	1.0%
Lawrence County	37,650	38,900	41,100	43,300	45,300	47,300	1.1%
Newton County	56,038	57,300	59,700	62,200	64,600	66,700	0.8%
State of Missouri	5,878,415	5,979,300	6,184,400	6,389,900	6,580,900	6,746,800	0.7%
Note: Pop. projections rounded to the nearest hundred for planning purposes.							

Source: MERIC; U.S. Census Bureau; Bureau of Economic Analysis (BEA), U.S. Dept. of Commerce.

Per Capita and Median Household Income

Per Capita Income (PCI) and Median Household Income (MHI) are widely used indicators for gauging the economic performance of local economies. PCI serves as an indicator of the economic well-being of a community being defined as the total personal income of all people in an area, divided by the total number of people. MHI, on the other hand, includes the income of the householder and all other persons 15 years and older in the household, whether related to the householder or not, and represents the value in the middle when all incomes in a given geographical area are arranged highest to lowest. **Table 1.9** illustrates the PCI and MHI for the state and tri-county region since 1990.

Table 1.9

Per Capita and Median Household Income	

1990	2000	2007-08	Annual Growth Rate 1990-Present	
\$9,465	\$14,980	\$23,925	5.3%	
\$9,672	\$15,399	\$22,481	4.8%	
\$11,136	\$17,502	\$27,896	5.2%	
\$12,989	\$19,936	\$33,984	5.5%	
Median Household Income (MHI)				
\$19,169	\$28,906	\$31,078	2.7%	
\$20,643	\$31,239	\$33,568	2.7%	
\$22,263	\$35,041	\$36,378	3.4%	
\$26,362	\$37,934	\$40,885	2.5%	
	\$9,465 \$9,672 \$11,136 \$12,989 (MHI) \$19,169 \$20,643 \$22,263	\$9,465 \$14,980 \$9,672 \$15,399 \$11,136 \$17,502 \$12,989 \$19,936 (MHI) \$19,169 \$20,643 \$31,239 \$22,263 \$35,041	\$9,465\$14,980\$23,925\$9,672\$15,399\$22,481\$11,136\$17,502\$27,896\$12,989\$19,936\$33,984(MHI)\$19,169\$28,906\$31,078\$20,643\$31,239\$33,568\$22,263\$35,041\$36,378	

Source: U.S. Census Bureau; BEA, U.S. Department of Commerce.

In 2006-07, Barry County's PCI ranked 73rd in the state and was 73 percent of the state's PCI levels. Lawrence and Newton counties PCI levels ranked 89th and 24th, respectively, in 2006-07. Barry County's PCI has averaged an annual growth of nearly 5.5 percent annually since 1990 while Lawrence and Newton counties have experienced similar growth of 4.8 and 5.2 percent, respectively.

Regarding MHI, Barry and Lawrence counties, since 1990, have experienced an annual average growth of 2.7 percent while Newton County sustained a more robust increase of 3.4 percent. The tri-county region surpassed Missouri's MHI increase which averaged 2.5 percent over the period.

Labor Force

Table 1.10 illustrates the labor force for the tri-county region as of July 2008. Within MERIC's southwest region, of seven counties, Barry ranks 4th; Lawrence County ranks 7th; and Newton County ranks 2nd in unemployment. The overall unemployment rate for the tri-county region is approximately six percent.

Table 1.10	
Labor Force Statistics	;

Civilian Labor Force	Employment	Unemployment	Unemployment Rate
18,078	17,020	1,058	5.9%
19,750	18,729	1,021	5.2%
28,651	26,699	1,952	6.8%
3,006,657	2,807,241	199,416	6.6%
	18,078 19,750 28,651	18,078 17,020 19,750 18,729 28,651 26,699	19,750 18,729 1,021 28,651 26,699 1,952

Source: MERIC.

Industry Sectors

According to MERIC, the southwest Missouri region's three highest growing industries are 1) retail trade, 2) health care and social services and 3) administrative services. These three top industry sectors employ nearly 32,900 residents and have experienced a combined average growth of approximately 1.4 percent annually in terms of total wages in recent years.

GENERAL AVIATION ACTIVITY

The FAA recognizes three broad categories of aviation which include general aviation, certificated air carrier, and military. General Aviation is defined as all aviation activity except that of air carriers certified in accordance with FAR Part 121, 123, 127, 125 and 135 excluding military aircraft.

Based Aircraft and Annual Operations

A tabulation of HFJ's historical aviation activity from 1990 to 2008, as provided by the MoDOT Aviation Section and the FAA, is presented in **Table 1.11**. This table presents a summary of activity at the Airport including the total annual operations including local versus itinerant operations, as well as number of based aircraft throughout the period.

Since the airport was built in 1989 it has come from having four based aircraft and 3,700 annual operations to being the home base for 35 aircraft including five business jets. This 18-year period of activity represents an annual growth of an outstanding 12.8 percent annual increase in based aircraft and a yearly average increase of 8.8 percent for takeoffs and landings. Since 1990, air taxi operations alone at HFJ have increased an astounding 17 percent annually accounting for nearly 21 percent of the airport's current operational activity.

HFJ is the destination for some of the most influential domestic Fortune 500 companies, such as Lowes, Tyson Foods, Caterpillar and Citigroup, while operating some of the more sophisticated business jet aircraft in the general aviation fleet including the Gulfstream 400, Bombardier Challenger 604, Dassault Falcon 2000 and Cessna Citation X.

HFJ's most regular user, current airport tenant and headquartered in Monett, Jack Henry & Associates, Inc., operates a fleet of four Cessna Citation Encores (560 Series). Over the past four years alone, JKHY's fleet has logged an estimated 10,600 hours of flight time; flown 9,100 legs throughout the U.S.; carried approximately 31,000 passengers; and averaged three to four passengers per trip.

Table 1.11 Operational Activity Summary

Year		Single Engine	Multi Engine	Business Jets		ltinerant Operations	Air Taxi Operations	Total Operations
1990	4	4	0	0	1,000	2,500	200	3,700
1995	19	12	4	3	1,600	7,700	1,500	10,800
2000	18	10	4	4	1,700	6,600	1,600	9,900
2005	36	26	3	7	4,500	9,000	3,500	17,000
2007-08	34	25	4	5*	4,500	9,000	3,500	17,000

Note: Military operations account for nearly 100 annual operations.

Note: Figures rounded to the nearest hundred for planning purposes.

(*) Includes (4) Cessna Citation 560 Encores, (1) Eclipse Jet and does not include EFCO/ Pella Window's Lear 45 based at the airport four months annually.

Source: MoDOT Aviation Section; FAA 5010 Inspection Form.

Fuel Flowage

Fuel flowage estimates can be a useful tool in realizing the overall operational trends of an airport in terms of annual operational activity and fleet mix. During the past five year period (2003-07), HFJ has dispensed an average of 573,200 total gallons of fuel including approximately 58,300 gallons of 100LL and nearly 514,900 gallons of Jet A annually.

Critical Aircraft

The critical aircraft is the largest airplane within a composite family of aircraft conducting at least 500 itinerant operations (combination of 250 takeoffs and landings) per year at the airport. The critical aircraft is evaluated with respect to size, speed and weight, and is important for determining airport design and safety area standards, as well as structural and equipment needs for the airfield and terminal area facilities. **Table 1.12** provides information regarding the existing critical aircraft for HFJ.

The Cessna Citation Encore was chosen as the existing critical aircraft due to its high level of operational activity at HFJ with JKHY which operate a fleet of four Encores which fly approximately 530-640 flight hours per aircraft annually while conducting, on average, 501 landings and takeoffs per year at HFJ.



EFCO/Pella Windows' N12VU



JKHY's N154JH



JKHY's N155JH



JKHY's N156JH



JKHY's N157JH

Table 1.12 Existing Critical Aircraft- Cessna Citation 'Encore' (560 Series)

Characteristic	Specifications/Performance
Airport Reference Code (ARC)	B-II
Wing Span	54 ft. 1 in.
Length	48 ft. 11 in.
Height	15 ft. 2 in.
Seating (Crew + Pax)	2 + 7
Maximum Takeoff Weight (MTOW)	16,830 lb.
Normal Approach Speed	98 knots
Takeoff Field Length*	3,500 feet
Landing Distance**	2,800 feet
Max. Range Performance***	1,778 Nm

(*) MTOW, sea level, standard temperature, 15° flaps.

(**) Max. landing weight, sea level, standard temperature, landing distance over 50 foot obstacle.

(***) Max. fuel, MTOW, IFR Reserves (100 Nm alternate).

Source: Cessna Aircraft Corporation, Wichita, Kansas.



CLIMATIC CONDITIONS

Climatic characteristics are utilized in determining runway dimensional requirements, crosswind runway wind coverage, navigational and lighting aids to accommodate instrument approaches, as well as the necessary snow removal and airport maintenance equipment needed to cope with varying weather occurrences.

The climate analysis for HFJ is derived from information provided by the National Oceanic and Atmospheric Administration (NOAA), Midwestern Regional Climate Center (MRCC). This analysis will include a summary of local area temperature, precipitation, snowfall and sunshine data for the Monett and Barry County area.

Temperature

During winter, the average and average daily minimum temperature is 35°

F and 21° F, respectively, with the lowest recorded temperature being -19° F recorded at Cassville in 1984. During the summer months the average daily temperature is 75° F and the average daily maximum temperature is 87° F. The highest recorded temperature of 106° F for Barry County was recorded in 1980.

Precipitation

The total annual precipitation for Barry County is approximately 43 inches, of which nearly 25 inches, or 60 per cent of the total county rainfall, falls from April through September. The heaviest one day rain event occurred in 1956 at Cassville and totaled approximately 5.4 inches. Thunderstorms occur on nearly 60 days annually in Barry County.

Snowfall

Average seasonal snowfall is approximately 10 inches annually. The greatest recorded snowfall in Barry County was 14 inches. On average, only three days per year, at least one inch of snow cover will blanket the ground.

Sunshine, Prevailing Wind and Humidity

The sun shines nearly 65 percent of the time in Barry County during the summer months and 50 per cent during the winter. The prevailing wind through the county is from the south-southeast while the average highest wind speed is approximately 13 miles per hour and most often occurs during the spring months. Lastly, the average relative humidity during the daytime hours is nearly 55 percent while, at night and at dawn, the average humidity reaches 80 percent.

WIND ANALYSIS

Local wind patterns were collected and analyzed to determine the impacts of all-weather, visual meteorological conditions (VMC) and instrument meteorological conditions (IMC) on the existing runway configuration. Yearly wind observations were obtained from the National Oceanic and Atmospheric Administration (NOAA), National Climatic Data Center (NCDC), as reported hourly at the Springfield-Branson National Airport (SGF) over the past ten year period. Combined, the recorded wind data included 80,101 all-weather, 72,519 VMC and 6,604 IMC observations.

For planning standards, the desirable wind coverage is 95 percent for the primary runway, and is computed based on the crosswind component not exceeding 10.5 knots for airport reference code (ARC) A-I and B-I category aircraft, 13.0 knots for ARC A-II to B-II aircraft, and 16.0 knots for ARC A-III, B-III and C-I to D-III general aviation aircraft. By design, a small aircraft (weighing less than 12,500 pounds) is recommended to be able to operate approximately 95 percent of a given period without experiencing a crosswind component greater than 10.5 knots.

All Weather Wind Conditions

Table 1.13 illustrates the percent of all-weather wind coverage for the 10.5,13.0 and 16.0-knot wind velocities. Runway 18-36 provides 95.3 percent wind

coverage at 10.5 knots for ARC A-I and B-I aircraft; 98.0 percent wind coverage at 13.0 knots for A-II and B-II aircraft; and 99.6 percent wind coverage for ARC C-I to D-III aircraft at 16.0 knots.

Based on the prevailing wind patterns and favorable wind coverage provided by Runway 18-36, planning considerations regarding the development of a potential crosswind runway are not recommended and will not necessitate further analysis.

VMC Wind Conditions

Table 1.13 also illustrates the percent wind coverage during VMC conditions. Runway 18-36 provides 95.4 and 98.0 percent wind coverage during VMC conditions for Category A and B aircraft at 10.5 and 13.0 knots, respectively. Runway 18-36 also provides 99.6 percent wind coverage for ARC C-I to D-III aircraft at 16.0 knots.

IMC Wind Conditions

Table 1.13 illustrates the percent wind coverage during IMC conditions at HFJ as well. Runway 18-36 provides 93.0 and 97.1 percent wind coverage during IMC conditions for Category A and B aircraft at 10.5 and 13.0 knots, respectively. Likewise, Runway 18-36 provides 99.4 percent wind coverage for ARC C-I to D-III aircraft at 16.0 knots.

Strong Wind Conditions

Table 1.13 notes strong wind characteristics during all-weather conditions at HFJ. Approximately 25 percent of all-weather and VMC wind observations occur as strong winds that exceed 10.5 knots. During IMC conditions, nearly 32 percent of IMC wind observations occur as strong winds.

Table 1.13

All-Weather, VFR and IFR Wind Coverage

Runway Alignment (True Bearing)	Crosswind Component Wind Speed & Corresponding ARC	Percent All-Weather Wind Coverage	Percent VMC Wind Coverage	Percent IMC Wind Coverage
	10.5 kts. (A-I and B-I)	95.3%	95.4%	93.0%
Rwy 18-36*	13.0 kts. (A-II and B-II)	98.0%	98.0%	97.1%
	16.0 kts. (A-III; B-III, C-I to D-III)	99.6%	99.6%	99.4%
Total Calm and Light Winds (0-10.5 Knots)		75.2%	75.8%	68.2%
Total Strong W	inds (Greater Than 10.5 Knots)	24.8%	24.2%	31.8%

(ARC) Airport Reference Code

Note: Wind coverage figures rounded to the nearest tenth of a percent for planning purposes.

(*) 1.65° True Bearing

Source: NOAA, NCDC, Asheville, NC; Springfield-Branson National Airport (SGF).

Exhibit 1.5 illustrates the Airport's wind rose which depicts the predominant wind directions and velocities occurring at HFJ during all-weather conditions.

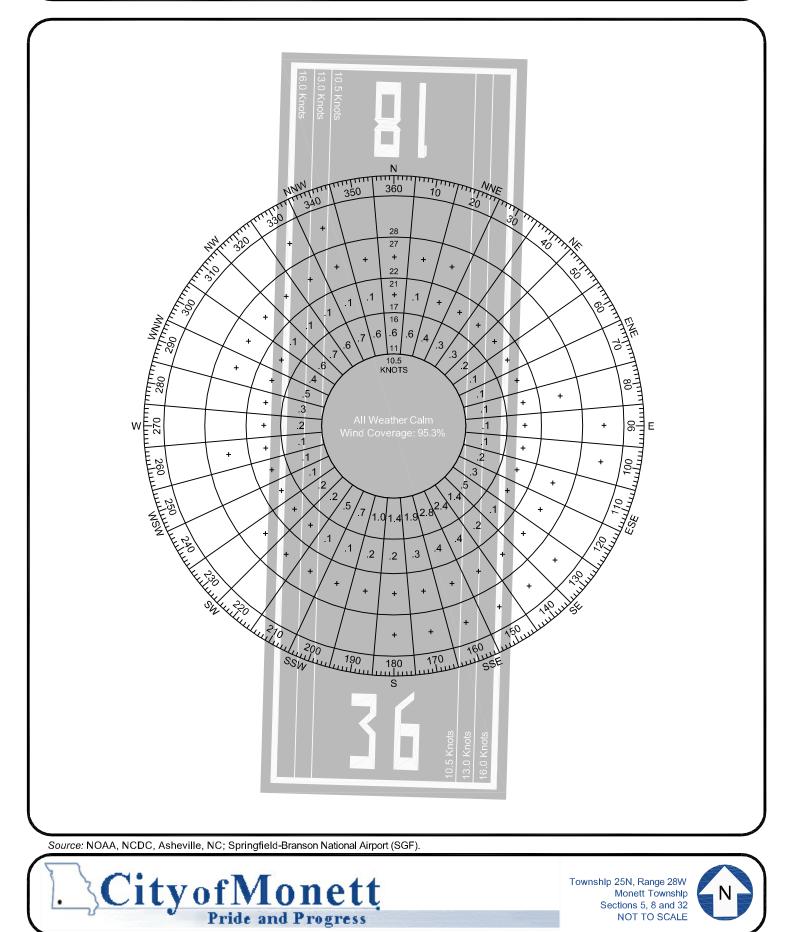


MONETT MUNICIPAL AIRPORT (HFJ)

City of Monett, Missouri

Exhibit 1.5-

All Weather Windrose



AIRPORT ECONOMIC BENEFIT

In 2004-05 the MoDOT, Aviation Section completed *The Economic Benefit of Missouri's Airport System* to determine the overall benefits of Missouri's system of public-use airports to the statewide economy. The total economic benefit of aviation activity in Missouri was quantified in terms of employment, payroll and output (economic activity).

The airports were surveyed to measure the direct benefits associated with onairport businesses and indirect benefits related to visitor expenditures. Direct benefits include the economic activity associated not only with on-airport businesses but airport tenants and governmental entities which support general aviation. Indirect benefits generally occur off-airport and can be attributed to visitor expenditures. Secondary benefits consist of the induced impact of the recirculation of direct and indirect benefits which results in a 'multiplier effect.' The multiplier effect attributed to both direct and indirect economic benefits is calculated to determine the overall economic impact of each airport.

The following discussion highlights each benefit measured for HFJ in terms of employment, payroll and total economic output to the local community.

Employment

Measures the number of people employed as a result of the operation and maintenance of the Airport. This also includes citizens employed in the aviation industry and those jobs that support aviation activity. HFJ is responsible for employing approximately 86 citizens.

Payroll

Measures the annual wages and benefits paid to employees whose salaries are directly or indirectly attributed to the Airport. The total payroll attributed to the operation of HFJ is estimated to be approximately \$2,608,000.

Total Economic Impact

Measures the dollar value of all aviation and non-aviation-related goods and services that exist within the Monett and Barry County region. The total economic benefit is approximately \$26,400,000 which is assumed to be the sum of annual gross sales of aviation and non-aviation related activity occurring within the community.

Table 1.14 provides information regarding the economic impacts of the HFJ to the local and regional economy.

Table 1.14

HFJ Economic Benefits Summary

Total	Total	Total
Employment	Payroll	Economic Output
86	\$2,608,000	\$26,400,000

Source: The Economic Benefit of Missouri's Airport System, MoDOT, Aviation Section.

EXISTING CONDITIONS SUMMARY

The information provided in this chapter establishes the foundation on which the remaining elements of the master plan update will be based. Aviation demand forecasts, facility requirements, alternatives analysis, environmental overview, 20-year phased airport capital improvement program (ACIP) and development costs, update to the airport layout plan (ALP) set of drawings, as well as a financial program will be addressed in subsequent chapters of this study.

