Chapter One
Inventory

AIRPORT SETTING

Kayenta Airport is a general aviation airport located in northeastern Arizona. The airport is located approximately two miles southeast of the Township of Kayenta immediately north of US Highway 160. The airport encompasses approximately 140 acres of land and is owned and operated by Kayenta Township. Kayenta was originally founded in 1912 and was established as its own political subdivision, Kayenta Township, in January 1996. The Navajo people refer to Kayenta as Tohdenasshai.

The airport is located in northeastern Arizona at a field elevation of 5,710 feet mean sea level (MSL). Kayenta Airport is surrounded by high desert landscape. An airport's location is defined by its airport reference point (ARP), which is the geometric center of the runway system based upon the length of the existing runways. ARPs are also calculated based on future and ultimate runway locations and lengths. The existing ARP is located at 36° 42' 34.99" North latitude and 110° 14' 12.47" West longitude. The location of Kayenta is shown in Figure 1-1.

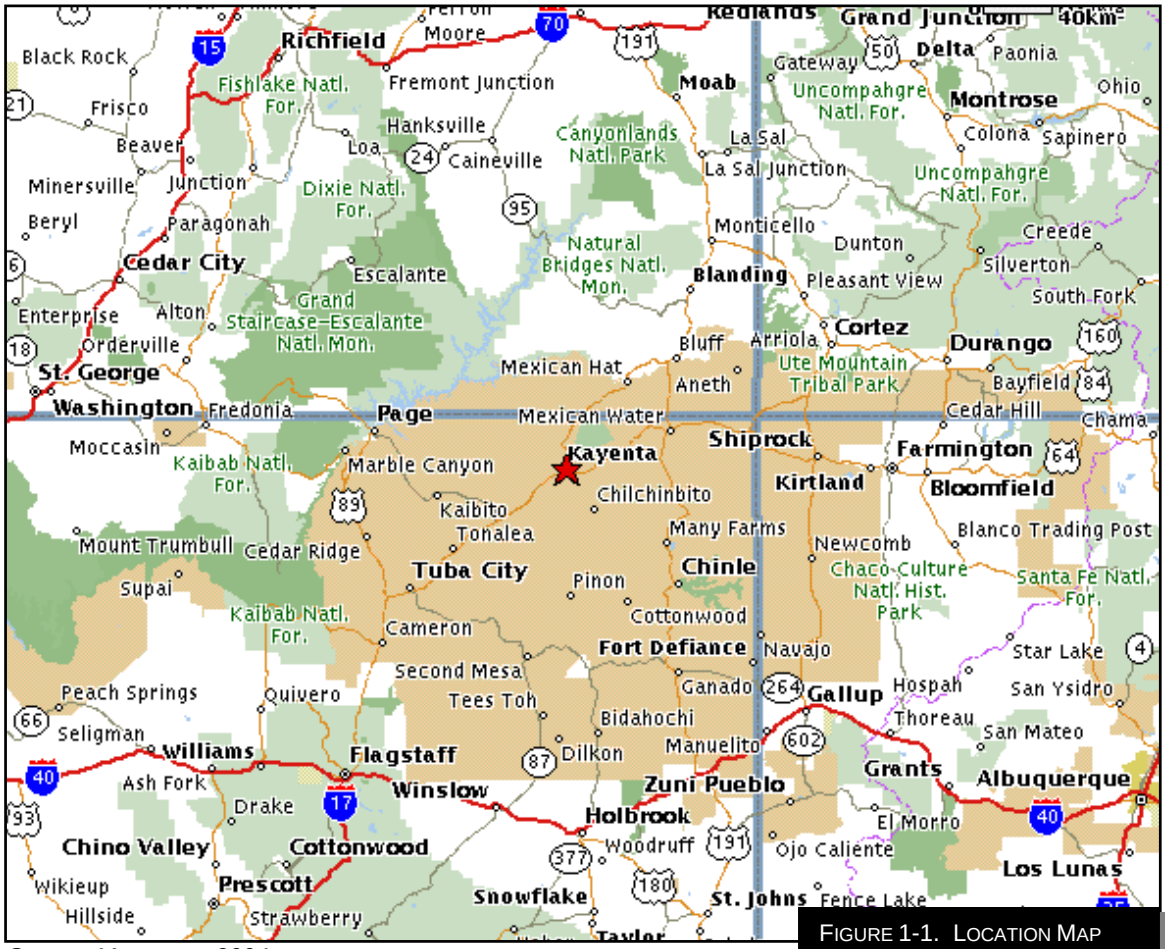


FIGURE 1-1. LOCATION MAP

Source: Map quest 2004

AI
Primarily Single-Engine Propeller Aircraft, some light twins

Example Type: Cessna 172 Skyhawk

BI
Primarily Light Twin-Engine Propeller Aircraft

Example Type: Piper Navajo

BII
(<12,500 lbs)
Primarily Light Turboprops

Example Type: Beechcraft King Air

BII
(>12,500 lbs)
Mid-sized corporate jets and commuter airliners

Example Type: Cessna Citation II

A/BIII
Primarily large commuter-type aircraft

Example Type: De Havilland Dash 8

CI, DI
Primarily small and fast corporate jets

Example Type: Lear Jet 36

C/DII
Large corporate jets and regional-type commuter jets

Example Type: Gulfstream IV

C/DIII
Commercial airliners (approx. 100-200 seats)

Example Type: Boeing 737

C/DIV
Large commercial airliners (approx. 200-350 seats)

Example Type: Boeing 767

DV
Jumbo commercial airliners (approx. 350+ seats)

Example Type: Boeing 747

FIGURE 1-2 AIRCRAFT REFERENCE CODES

AIRPORT REFERENCE CODE

The airport reference code (ARC) is a system established by the FAA to relate airport design criteria to the operational and physical characteristics of the aircraft currently operating and/or forecast to operate at the airport. The ARC has two components relating to the airport design aircraft. The first component, depicted by a letter, is the aircraft approach category and correlates to the aircraft approach speed (an operational characteristic). The second component, depicted by a Roman numeral, is the aircraft design group and relates to aircraft wingspan (a physical characteristic). Generally, aircraft approach speed applies to runways and runway facilities and aircraft wingspan applies to taxiway and taxilane separation criteria. Table 1-1 has been included to

provide a definition of both aircraft approach categories and aircraft design groups. Examples of each of these ARCs can be found in Figure 1-2.

TABLE 1-1 AIRPORT REFERENCE CODES

Approach Category	Approach Speed
Category A	less than 91 knots
Category B	91 to 120 knots
Category C	121 to 140 knots
Category D	141 to 165 knots
Category E	166 knots or more

Design Group	Wingspan
Group I	less than 49 feet
Group II	49 to 117 feet
Group III	118 to 170 feet
Group IV	171 to 213 feet
Group V	214 to 262 feet

SOURCE: FAA 150/5300-13

To ensure that facilities at Kayenta Airport are designed to accommodate expected air traffic and meet FAA design criteria, the specific ARC for the airport must be determined. In order to designate a specific ARC for an airport, aircraft in that ARC should perform a minimum of five hundred annual itinerant operations. Based upon known users, the airport has an Airport Reference Code of B-II. Fixed wing aircraft currently using the airport include single and multi-engine private and recreational aircraft in design groups A/B-I and A/B-II and corporate and business aircraft in design group A/B-II, C/D-II. The primary role of the airport includes business, recreational transit, flight tours and air ambulance aviation.

AIRPORT HISTORY

The current airport configuration was constructed in 1987-1988 by the Navajo Nation in order to increase the safety of air medivac aircraft operating into Kayenta. The previous airfield was a dirt runway located to the south of the existing runway. The major demand for the airport has been and continues to be air medivac operations for the entire Navajo Nation. On February 24, 2000 the Kayenta Airport was transferred from the Navajo Nation to the Kayenta Township. The airport continues to serve general aviation users, though its value as a waypoint for sightseeing traffic has increased. The Airport Master Plan was last updated in 1986. The Kayenta Airport is situated within the legal description in Executive Order of May 17, 1884. The following is the legal description beginning at a point on the north boundary line of said Kayenta Airport tract, a point from which the Brass Cap, Navajo Control System No. Kay 29, with Arizona State Plane coordinates, East Zone, X=2076645.8400, bears S 18 ^{o} 00’03”W-2317.61 feet distant; and a point from which the Brass Cap No. Kay 23 with Arizona State Plane coordinates, East Zone, X= 478535.64, Y=2079269.93, bears N 39 ^{o} 26’23”W-544.76 feet distant; thence from the beginning point of the herein described tract of land on said North Boundary Line, N 65 ^{o} 52’30”E-8450.96 feet to the Northeast corner.

DEVELOPMENT HISTORY

TABLE 1-2 GRANT HISTORY

Grant Number and Year	Description of Work	Amount
001-1985	Airport Master Plan Study	$34,372
002-1987	Remove Obstructions	$250,000
	Construct Runway	$311,695
003-1988	Improve Access Road	$68,000
	Construct Apron	$70,000
	Install Apron Lighting	$44,000
	Improve Airport Drainage	$63,484
	Construct Runway	$741,649
	Install Runway Lighting	$60,000
	Install Runway Vertical Guidance	$58,000
	Construct Taxiway	$75,000
004-2004	Airport Master Plan Study	$146,300

SOURCE: FAA GRANT HISTORY

SERVICE LEVEL

The Kayenta Airport is included in the National Plan of Integrated Airport Systems (NPIAS). The NPIAS is a nationwide system of public-use facilities that serves a variety of traffic. An airport must be included in the NPIAS in order to receive funding under the Airport Improvement Program (AIP). The NPIAS is prepared by the Federal Aviation Administration (FAA) every two years and identifies airports considered necessary to provide a safe, efficient and integrated system of airports that meet civil aviation, national defense and United States Postal Service (USPS) needs. The NPIAS also considers the relationship between an airport and the rest of the transportation system in a particular area, the forecast of technological developments in aeronautics and the development forecast in other modes of transportation. Airport facilities included in the NPIAS are classified under two different categories: service level and airport role.

The airport service level reflects the type of public use the airport provides to the community. The service level also reflects the funding categories established by Congress to assist in airport development. The following list identifies the different types of airport service levels:

- *Commercial service* airports are public airports that enplane 2,500 or more annual passengers and receive aircraft offering scheduled passenger service.

- *Primary* airports are commercial service airports that have more than 10,000 annual enplaned passengers.

- *Cargo service* airports are served by aircraft providing air transportation of property only, including mail, with an aggregate annual aircraft landing weight in excess of one hundred thousand pounds.

- *Reliever* airports provide substantial capacity or instrument training relief to a commercial service airport that serves a metropolitan statistical area with a population of at least two hundred fifty thousand persons or has at least two hundred fifty thousand annual enplaned passengers and operates at sixty

percent of its capacity, or would be operated at such a level before being relieved by one or more reliever airports, or is subject to restrictions that limit activity that would otherwise reach sixty percent of capacity.

- *General aviation* airports that receive U.S. mail service are listed as a scheduled stop by an air carrier transporting mail pursuant to a current contract with the USPS. A general aviation airport can also be listed if it is included in a state system plan, serves a community more than thirty minutes from the nearest existing or proposed airport included in the NPIAS, is forecasted to have ten based aircraft during the short-term planning period and has an eligible sponsor willing to undertake ownership and development of the airport.

- *Public use heliports* that do not meet other criteria are included in the plan if they make significant contributions to public transportation.

Kayenta Airport is listed in the NPIAS as a general aviation airport.

EXISTING ACTIVITY LEVELS

There are various federal, state and local sources available for determining existing activity levels at an airport. These can include, but are not limited to, Federal Aviation Administration (FAA) 5010-1 Form, FAA Terminal Area Forecast (TAF), on-site inventory, airport sponsor's records and *Aircraft Owner and Pilot Association AOPA* records.

The Federal Aviation Administration (FAA) *Airport Master Record*, Form 5010-1, is the official record kept by the FAA to document airport physical conditions and other pertinent information. The information is usually collected from the airport sponsor and includes an annual estimate of aircraft activity as well as the number of based aircraft. The accuracy of the information contained in the 5010-1 Form correlates directly with the airport manager's record keeping system. The current FAA 5010-1 Form for Kayenta Airport indicates three based aircraft and 4,700 annual operations.

FIGURE 1-3 KING AIR 200

The FAA TAF is an historical record and projected forecast for based aircraft and annual operations. The TAF is maintained by the FAA and utilized by them for planning and budgeting purposes. The TAF reports three based aircraft at the airport and 4,626 annual operations. The FAA database of registered aircraft indicates that there is one aircraft registered in Kayenta. Aircraft are registered by the owner's primary residence and not by airport location; therefore, it is possible for aircraft to be registered in one municipality and based at an airport located in another municipality. An on-site inventory

indicated two based aircraft. Eagle Air Med and Aero Care base medivac operations out of the Kayenta Airport using a King Air C-90 and a King Air B-200 respectively. This is further discussed in Chapter 4. Eagle Air Med and Aero Care perform the majority of the operations that occur at the Kayenta airport. On an occasional basis air tour flights operate into the airport when weather conditions at Monument Valley Airport are poor.

TABLE 1-3 EXISTING ACTIVITY LEVELS (2004)

Based Aircraft	Based Aircraft	Aircraft Operations
-	Air Tour	136
-	GA Local	20
2	GA Iterant	4,368
	Enplanements	416

DESIGN STANDARDS

The FAA has established recommended design standards for ensuring safety and efficiency at the nation's airports. FAA AC 150/5300-13, *Airport Design*, establishes these guidelines for runway and taxiway designs, surface gradients, site requirements for navigational aids and air traffic control facilities, wind analysis, threshold sitting requirements, airport reference points, airplane parking, aircraft tie downs and various other factors affecting airport design.

A design standards inventory was conducted in September 2004. The airport was found to be compliant with all standards for an ARC of B-II with the exception of taxilane clearances on the apron. However, the condition of numerous airfield facilities was found to be poor to fair. This is further discussed within the sections of this chapter. The design standards inventory inspection sheets can be found in Appendix A.

As previously discussed, the ARC system is used to relate airport design criteria to the operational and physical characteristics of the critical aircraft intended to operate at the airport. FAA AC 150/5300-13 *Airport Design* establishes design standards for an airport based on its airport reference code.

SAFETY AREAS

Runway and taxiway safety areas (RSAs and TSAs) are defined surfaces surrounding the runway or taxiway prepared specifically to reduce the risk of damage to aircraft in the event of an under-shoot, over-shoot or excursion from the runway or taxiway.

The safety areas must be:

- Cleared and graded and have no potentially hazardous surface variations.
- Drained so as to prevent water accumulation.
- Capable, under dry conditions, of supporting snow removal equipment, ARFF equipment and the occasional passage of aircraft without causing structural damage to the aircraft.
- Free of objects, except for objects that need to be located in the runway or taxiway safety area because of their function.

OBSTACLE FREE ZONE (OFZ) AND OBJECT FREE AREA (OFA)

The OFZ is a three dimensional volume of airspace which supports the transition of ground to airborne aircraft operations. The clearing standard precludes taxiing and parked airplanes and object penetrations, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function. The runway OFZ is similar to the FAR Part 77 Primary Surface in that it represents the volume of space longitudinally centered on the runway. It extends 200 feet beyond the end of each runway.

The runway OFA is a two-dimensional ground area surrounding the runway. The runway OFA clearing standard requires clearing the OFA of above ground objects protruding above the runway safety area edge elevation.

RUNWAY PROTECTION ZONES (RPZ)

The RPZ is trapezoidal in shape and centered about the extended runway centerline. It begins 200 feet beyond the end of the area usable for takeoff or landing. The RPZ dimensions are functions of the design aircraft, type of operation and visibility minimums.

While it is desirable to clear all objects from the RPZ, uses such as agricultural operations (provided they do not attract birds) and golf courses are normally acceptable. Land uses that are prohibited within the RPZ include residences and places of public assembly, such as churches, schools, hospitals, office buildings and shopping centers. The RPZ's are currently owned in fee simple and controlled by the Kayenta Township. The portions of the future RPZ's located off Township property should be controlled with an avigation easement, therefore preventing noncompatible land uses from being developed in the RPZ.

TABLE 1-4 DESIGN STANDARDS

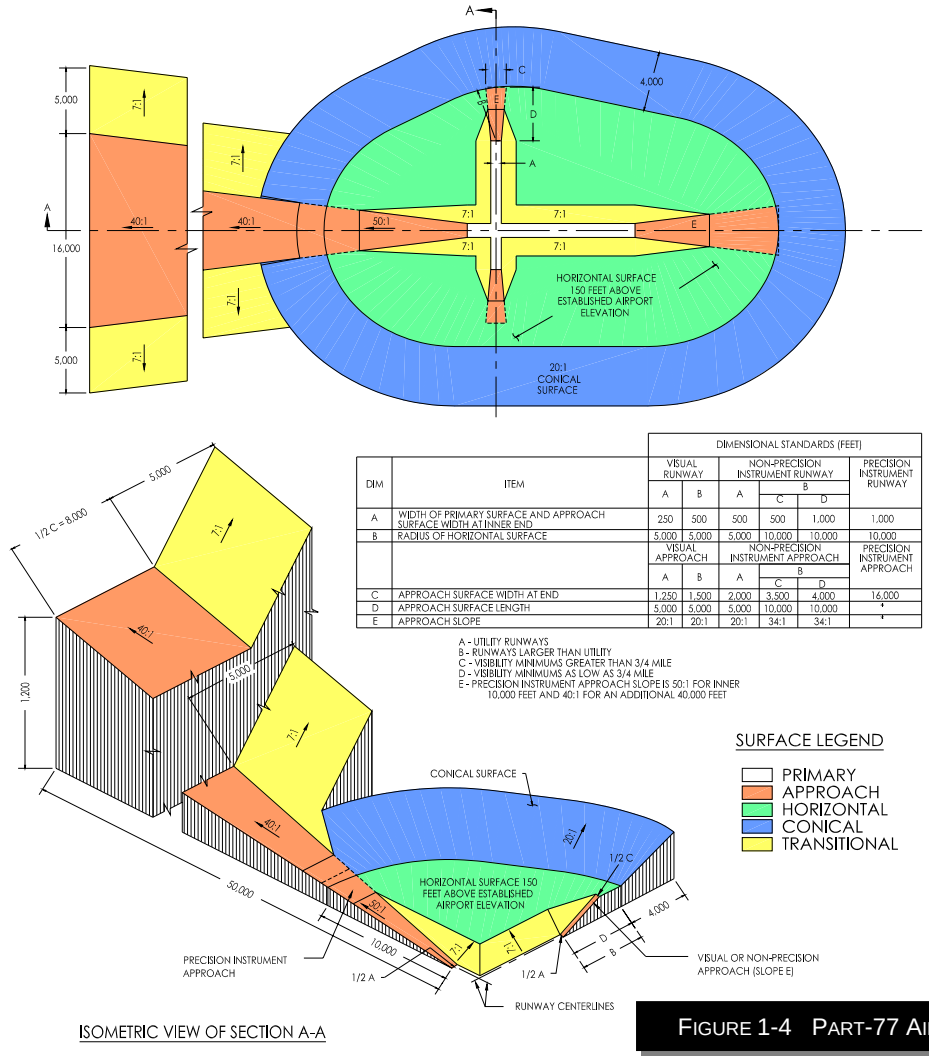
Description	B-II
Rwy centerline to parallel Txy centerline	240'
Rwy centerline to aircraft parking apron	250'(350' actual)
Rwy width	75'
Rwy Safety Area width	150'
Rwy Safety area length beyond Rwy end	300'
Rwy Object Free Area width	500'
Rwy Object Free Area length beyond Rwy end	300'
Rwy Obstacle Free Zone width	400'
Rwy Obstacle Free Zone length beyond Rwy end	200'
Rwy Protection Zone	500' x 700' x 1000'
Txy width	35'
Txy Safety Area width	79'
Txy Object Free Area width	131'
Rwy centerline to aircraft hold lines	200'

FAA ADVISORY CIRCULAR 5300-13 CHANGE 8

FEDERAL AVIATION REGULATION (FAR) PART 77 AIRSPACE SURFACES

FAR Part 77 establishes several imaginary surfaces that are used as a guide to provide a safe, unobstructed operating environment for aviation. These surfaces, which are typical for civilian airports, are shown in Figure 1-4. The primary, approach, transitional, horizontal and conical surfaces identified in FAR Part 77 are applied to each runway at both existing and new airports on the basis of the type of approach procedure available or planned for that runway and the specific FAR Part 77 runway category criteria. For the purpose of this section, a visual/utility runway is a runway that is constructed for and intended for use by propeller driven aircraft of 12,500 pounds maximum gross weight and less. A visual runway is a runway intended for the operation of aircraft weighing more than 12,500 pounds and using only visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, a military service approved military airport layout plan or by any planning document submitted to the FAA by competent authority. A non-precision instrument runway is a runway with an approved or planned straight-in instrument

approach procedure that has no existing or planned precision instrument approach procedure.



ISOMETRIC VIEW OF SECTION A-A

DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
					C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
					C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

A - UTILITY RUNWAYS
B - RUNWAYS LARGER THAN UTILITY
C - VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
D - VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
E - PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET

FIGURE 1-4 PART-77 AIRSPACE

SOURCE: FAR PART 77

PRIMARY SURFACE

The primary surface is an imaginary surface of specific width longitudinally centered on a runway. The primary surfaces extend 200 feet beyond each end of the paved surface of runways, but do not extend past the end of non-paved runways. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width is either 250, 500 or 1,000 feet depending on the size of the aircraft and type of approach.

APPROACH SURFACE

The approach surface is a surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of the runway based upon the type of approach available or planned for that runway, with gradients of 20:1, 34:1 or 50:1. The inner edge of the surface is the same width as the primary surface. It expands uniformly to a width corresponding to the FAR Part 77 runway classification criteria.

TRANSITIONAL SURFACE

The transitional surfaces extend outward and upward at right angles to the runway centerlines from the sides of the primary and approach surfaces at a slope of 7:1 and end at the horizontal surface.

HORIZONTAL SURFACE

The horizontal surface is considered necessary for the safe and efficient operation of aircraft in the vicinity of an airport. As specified in FAR Part 77, the horizontal surface is a horizontal plane 150 feet above the established airport elevation. The airport elevation is defined as the highest point of an airport's useable runways, measured in feet above mean sea level. The perimeter is constructed by arcs of specified radius from the center of each end of the primary surface of each runway. The radius of each arc is 5,000 feet for runways designated as utility or visual and 10,000 feet for all other runways.

CONICAL SURFACE

The conical surface extends outward and upward from the periphery of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.

OBSTRUCTIONS LIST

- Terrain penetrates the approach surface southwest of the airport by approximately 9'.
- Terrain penetrates the horizontal surface south of the airport by approximately 53' as well as north of the airport by approximately 35'.
- Terrain penetrates the conical surface northwest of the airport by approximately 93' and southwest of the airport by approximately 53'.

SUMMARY OF DIMENSIONAL CRITERIA

Table 1-5 summarizes the defining dimensional standards described above for the airport facilities described in this section.

Table 1-5 Part 77 Surfaces	
Primary Surface width	250' (visual utility)
Primary Surface beyond Rwy end	200'
Approach Surface dimensions	250' x 1,250' x 5,000'
Approach Surface slope	20:1
Transitional Surface slope	7:1

Source: FAR Part 77

EXISTING AIRSIDE FACILITIES

The airside facilities of an airport are described as the runway configuration, the associated taxiway system, the ramp and aircraft parking area and any visual or electronic approach navigational aids. Table 1-6 describes the existing facilities for Kayenta.

RUNWAY

The runway configuration is the end number and orientation of runways. The number of runways provided at an airport depends largely on the volume of traffic. The orientation of the runways depends almost entirely on the direction of the prevailing wind patterns in the area, the size and shape of the area available for development and land-use or airspace restrictions in the vicinity of the airport. In general, the runway and connecting taxiways should be arranged to provide adequate separation between aircraft in the traffic pattern, cause the least interference and delay in taxiing, landing and takeoff operations and provide the shortest taxi distance from the terminal area to the runway ends.

TABLE 1-6 EXISTING AIRPORT FACILITIES

Airport Data	Description
Identifier	0V7
FAA Site Number	00712.8A
FAA NPIAS Number	04-0067
Airport Reference Code	B-II
Owner	Kayenta Township
Airport Elevation	5710' MSL
Airport Facility	**Description**
Runways	RW 5/23: 7,140'x75' asphalt (poor/failed)
Taxiways	One connector Taxiway (poor)
Aprons	Approximately 4,100 SY(fair)
Tie Downs	10
Runway Markings	Visual
Pavement Strength	12,500 lbs SWG
Pavement Condition	Poor
Hangar Facilities	None
Fuel Storage	None Public Use (Eagle Air Med 8,000 Gallons Jet A; 6,000 Gallons 100LL)
Lighting	MIRL/MITL
Visual Aids	Wind Indicator, Beacon, Segmented Circle

SOURCE: ACI INVENTORY (SEPTEMBER, 2004)

The runway configuration at Kayenta Airport consists of one asphalt runway, true bearing of 68^{o} 00' 10" and is designated Runway 5/23. The runway is 7,140 feet long by 75 feet wide and has a reported pavement strength of 12,500 pounds for single wheel gear (SWG). The runway is marked with visual runway markings, including runway designators and a dashed white centerline. The airport has no current PCI Index information available on the pavements although the runway surface is in poor-failed condition with collapsing pavement sections and major ruts. The most severe problems are primarily on the east end of the runway, however the entire runway is in poor condition. Runway threshold lights are in poor condition and nearly half are broken or missing. The signage for the runway is also in poor condition. The current effective gradient is 1.00%.

The Runway safety and object free areas generally meet the overall B-II dimensional standards; however some vegetation growth and rutting/erosion has occurred within the safety area and should be corrected.

FIGURE 1-5 RUNWAY PAVEMENT CONDITION

SOURCE: TERRA SERVER 2004

FIGURE 1-6 AERIAL PHOTO

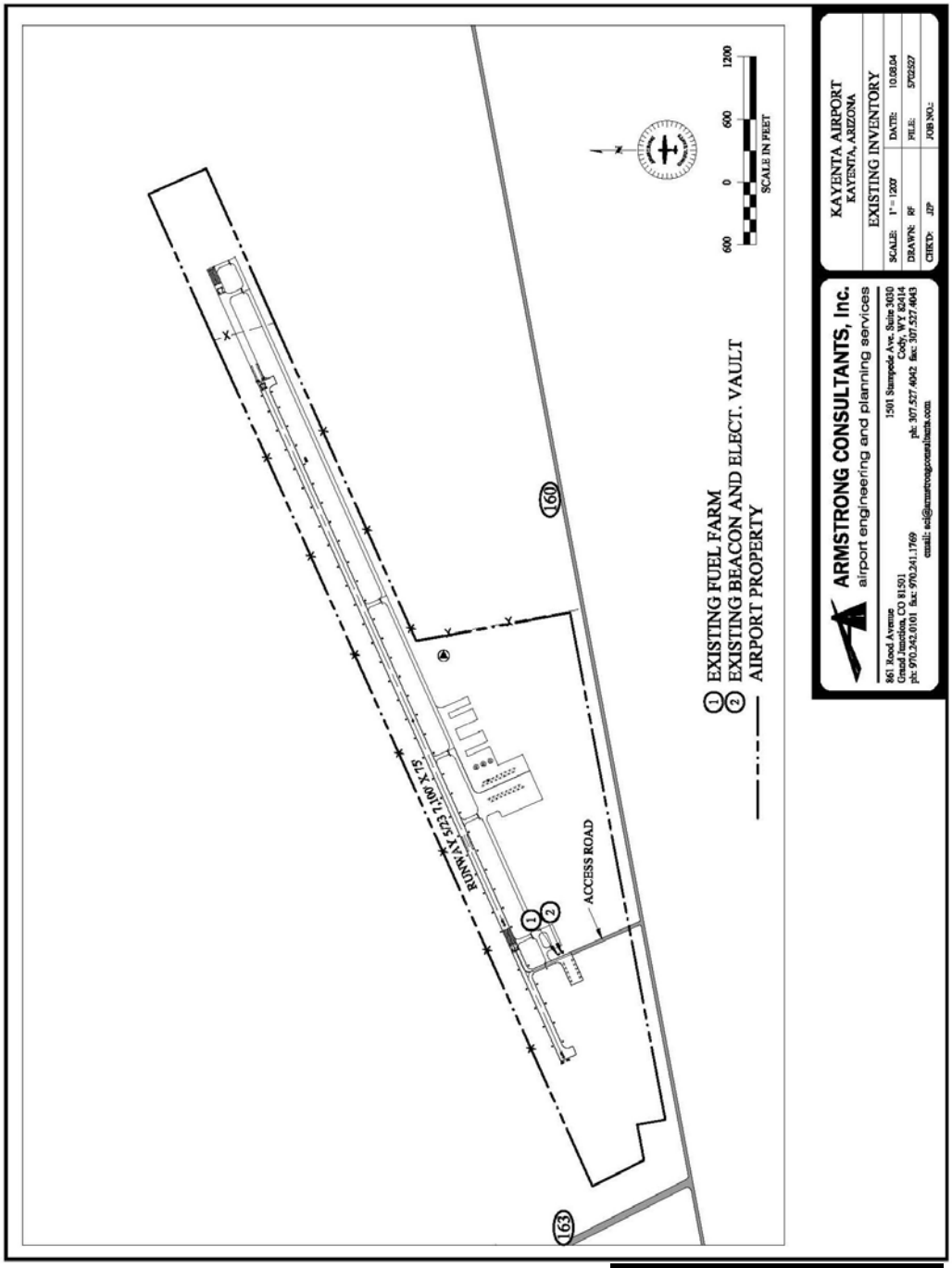


FIGURE 1-7 AIRFIELD DIAGRAM

TAXIWAY SYSTEM

The primary function of a taxiway system is to provide access between runways and the terminal area. The taxiways should be located so that aircraft exiting the runway will have minimal interference with aircraft entering the runway or remaining in the traffic pattern. Taxiways expedite aircraft departures from the runway and increase operational safety and efficiency.

The taxiway system at Kayenta Airport currently consists of one connector taxiway located off of Runway 5, which connects the runway with the aircraft parking and tie down area. There are also turnaround stubs at each runway end to allow aircraft to make 180-degree turns. The taxiway is 35 feet wide and meets the design standard criteria. The taxiway is also equipped with medium intensity taxiway lights (MITL). The pavement on the taxiway is in poor-failed condition.

FIGURE 1-8 RAMP AREA

APRON

The aircraft apron provides an area for aircraft to park. The apron is typically connected to the runway via taxiways or taxilanes. The aircraft-parking apron at Kayenta Airport has approximately 4,100 square yards (SY) of area and contains 10 aircraft tiedowns. The tiedowns and taxilanes are configured for Group I aircraft although there are two based Group II aircraft that utilize the apron on a daily basis creating a congestion problem on the apron. The area around the apron and runway are not graded for proper drainage, water runs down the ramp toward the runway causing deep puddles to accumulate near the taxiway-runway intersection. The water then runs across the taxiway and into the drainage area on the south side of the runway. The apron has an estimated pavement strength of 12,500 lbs. the same as the runway.

AIRFIELD LIGHTING AND VISUAL AIDS

Guidance on airport lighting standards is provided in Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5340-30, *Design and Installation Details for Airport Visual Aids*. Airport lighting enhances safety during periods of inclement weather and nighttime operations by providing visual guidance to pilots in the air and on the ground. Several common airfield lighting features of general aviation airports include:

- Precision approach path indicator (PAPI) located on the left side of the runway and consists of two or four lights installed in a single row. A PAPI provides visual approach path guidance by emitting a series of white and red lights. These lights can be seen for up to five miles during the day and up to twenty miles at night.

- Retroreflectors, used in lieu of taxiway lighting, consists of a single row bordering each side of the taxiway of reflective tape mounted on a pole.

- Rotating beacon is used to guide pilots to lighted airports with a sequence of yellow, green, and/or white lights. Most general aviation airports are considered to be civilian land airports, consisting of alternating white and green lights or a water airport, consisting of alternating white and yellow lights. A beacon is normally operated from dusk until dawn. If the beacon is on during other hours it typically indicates that the airport is operating under instrument flight rules.

- Runway edge lights consist of a single row of white lights bordering each side of the runway and can be classified according to three intensity levels. High intensity runway lights (HIRL) are the brightest runway lights available. Medium intensity runway lights (MIRL) and low intensity runway lights (LIRL) are, as their names indicate, lower in intensity. At most non-towered airports, runway lights can be activated from the aircraft cockpit by transmitting a series of "clicks" on the radio transmitter. In the caution zone runway edge lights incorporate yellow lights on the last half of the runway (or last two thousand feet, whichever distance is less) to inform the pilot of the amount of runway remaining.

- Runway end identifier lights (REIL) are high intensity white strobe lights placed on each side of the runway to enable rapid identification of the runway threshold.

- Runway markings vary depending on whether the runway is used exclusively for visual flight rule operations (VFR) or instrument flight rule (IFR) operations. A visual runway is typically marked with the runway designator numbers and a dashed white centerline. Threshold and aiming point markings are added to a visual runway to complete non-precision instrument markings. A precision instrument runway further includes touchdown zone markings.

- A segmented circle is located around the wind direction indicator. The segmented circle has two purposes, including identifying the location of the wind direction indicator and identifying non-standard traffic patterns.

- Taxiway edge lights consist of a single row of blue lights bordering each side of the taxiway. These lights mark the edge of the taxiways and guide aircraft from the runway to the ramp or apron area.

- Threshold lights consist of a single row of green lights used to indicate the beginning of the usable landing surface. These lights are two-directional and appear red from the opposite end of the runway to mark the end of the usable runway.

- A wind direction indicator consists of either a windcone, wind tee or tetrahedron. A windcone aligns itself into the wind as the wind blows into the large end and out of the small end. The tail of a wind tee aligns itself similar to a weather vane into the wind. A tetrahedron may either swing around to align the small end pointing into the wind or it may be manually positioned to show landing direction.

FIGURE 1-9 RUNWAY HOLD LINE

- Lighted signs indicate connector taxiways and runway ends.

The airfield lighting and visual aids at Kayenta Airport are MIRL from dusk to dawn for Runway 5/23 and PVASI which are reported to have been out of service indefinitely, lighted wind indicator, segmented circle and rotating beacon, retroreflective hold bar sign (faded and semi-buried) and threshold lights (several broken/missing).

NAVIGATIONAL AIDS

Navigational aids commonly referred to as NAVAIDs, assist the pilot with enroute navigation and approaches into and out of airports. There are several types of NAVAIDs commonly used at general aviation airports and by general aviation aircraft:

- Global positioning system (GPS) is a space-based radio positioning, navigation and time-transfer station developed and maintained by the Department of Defense (DOD). A GPS utilizes three or more of the strategically placed twenty-four satellites to calculate the aircraft's position and from there determine the distance, bearing and estimated time enroute to the next waypoint.

- Nondirectional radio beacons (NDBs) transmit low to medium frequency signals in the range of one hundred ninety kilohertz (kHz) to five hundred thirty-five kHz.

- The use of automatic direction finder (ADF) equipment on an aircraft to receive the transmitted NDB signals allows the pilot to navigate without line of sight limitations.

- Very high frequency omnidirectional range (VOR) navigational aids operate between the frequencies of one hundred eight megahertz (MHz) and one hundred 17.95 MHz. VOR stations transmit radio beams or radials, outward in every direction to provide line of sight guidance for aircraft. Common variations of a VOR include VOR/DME, which provides additional distance guidance and VORTAC, which is a military operated TACAN located in conjunction with a VOR and allows civilians access to the distance guidance information.

The closest VOR/DME to Kayenta Airport is the Page VOR located approximately 60 nautical miles from Kayenta. There are no published instrument procedures for Kayenta however a nonprecision instrument approach procedure will be investigated further during this plan.

EXISTING LANDSIDE FACILITIES

The landside facilities of an airport consist of those facilities not categorized as airside. Examples of landside facilities include any structure adjoining the airfield, terminal buildings, hangars, the access routes to and from the airport, automobile parking areas, airport fencing, utilities, fuel provisions and aircraft rescue and fire fighting (ARFF) equipment.

HANGARS

Hangars provide storage for aircraft during adverse weather conditions. They also provide security for the airplanes at the airport while unattended. The Kayenta airport has no existing hangars.

AIRPORT ACCESS/SIGNAGE

Airport access systems consist of parking facilities, signs to the airport and connecting roadways that enable originating and terminating airport users to enter and exit the airport landside facilities.

The airport is located adjacent to Arizona State Highway 160, the two-lane asphalt surface, intersects Arizona State Highway 163 just west of the airport. Westbound State Highway 160 merges with State Highway 89 approximately 82 miles west of the Town of Kayenta. The airport is accessed via an airport access road, which intersects State Highway 160. The access road allows direct entry onto the ramp area and runway. The only airport sign is located along Highway 160. It is a double plated sign located on the south side of the highway. The sign is considered to be inadequate. An airport entrance sign is recommended, along with additional way finding signs including signs at the intersection of Highways 160 and 163.

GROUND TRANSPORTATION

Kayenta has no scheduled bus or rail service. The nearest rail and bus service is located approximately 150 miles away in Flagstaff Arizona. The airport offers convenient highway access for ground vehicles. There is currently no shuttle to local hotels or courtesy car to provide airport users transportation to and from the airport.

AUTOMOBILE PARKING

Automobile parking facilities are necessary to provide access to the airport facilities for originating and terminating airport users. It is important that vehicular parking is adequate to serve the needs of all airport users. There are currently no designated vehicle or automobile parking areas; however vehicles routinely park in the dirt areas adjacent to the fuel tanks, adjacent to the apron and on the apron.

UTILITIES

Electrical power is installed at the airport and is provided by Navajo Tribal Utility Authority. The current power lines are 14,400 KV 120/240 single phase. No other utilities are installed. Gas services could be provided by Navajo Tribal Utility Authority and telephone services could be provided by Navajo Communications Co., Inc. Water and sewer services could be provided by the Navajo Utility Authority. The closest water line to the Kayenta airport is located on the south side of Highway 160 paralleling the highway and the nearest sewer line is located southwest of the airport near the intersection of Highways 160 and 163. Service for electricity, gas, telephone will need to be implemented at the airport. A future six-inch water line should be adequate for the airport. The uses of potable water at general aviation airports typically include restroom facilities and drinking fountains therefore a six-inch line is typical for this type of use and demand.

SECURITY AND FENCING

The primary purpose of airport fencing is to prevent unwanted intrusions by persons or animals onto airport property. Airport fencing provides increased safety and security for

the airport. It is normally installed along the perimeter of the airport property and outside of any safety areas defined by FAA AC 150/5300-13 and FAR Part 77.

The airport has a four-strand barbed wire fencing around the property line along with a cattle guard at the entrance on the access road, however the road to the apron is unrestricted and cars are able to drive onto the ramp and runway. Wind carried sediments often accumulate around the fence area allowing animals to easily cross the fence. Eagle Air Med also has installed a closed circuit television system allowing them to monitor activity on the apron area.

EMERGENCY SERVICE AVAILABILITY

The nearest hospital to Kayenta is located in Chinle, which is located approximately 59 miles from Kayenta. Kayenta does have a U.S. Public Health Service Clinic with 11 doctors, four dentists and one nurse. Kayenta Volunteer Fire Department is located in the Town of Kayenta on U.S. Highway 163 approximately 1.5 miles from the airport. Kayenta also has a local police department. The Township is also in the process of having a new hospital constructed across from the airport.

TABLE 1-7 KAYENTA EMERGENCY MEDICAL SERVICES

Distance from Airport: 2 miles		**Response Time**: 5 minutes
Personnel	**Paramedic**	**EMT**
Full Time:12	1	11
Volunteer: 17 Fire Fighters	None	1
Equipment	**Storage (Gal.)**	
2 Ambulance units	-	
4 Fire trucks with water tanks	1,750 Gallons of foam combined	
1 Fire tanker truck	1,000 Gallons of water (foam capable)	

Source: Kayenta Fire Department November, 2004

ARFF MAINTENANCE AND ATCT FACILITIES

The airport is currently maintained by the Township Maintenance Department, including snow removal, light replacement, mowing and pavement maintenance. The airport does not have an air traffic control tower (ACTC) located on the airport. There is currently no ARFF equipment stored at the airport. The airport does not have any security personnel based at the airport. The Township police patrol the area on a regular basis.

FUEL STORAGE

Currently there is no fuel provided to the public; however Eagle Air Med operates two fuel tanks. The first tank is an 8,000 gallon Jet A tank, the second tank is a 6,000 gallon 100LL. Aircraft are fueled directly using the fuel tanks. Both tanks are in good condition however no secondary containment has been installed for either tank. The implementation of a Spill Prevention Control and Countermeasure Plan (SPCC) is recommended.

AIRPORT SERVICE AREA

An airport service area is defined by the communities and surrounding areas served by the airport facility. Generally, the airport service area includes the area within a thirty-minute ground driving time or twenty-mile radius, of the airport. However, the actual service area is dependent upon several factors including the airport's surrounding topographic features, proximity to its users, quality of ground access and the proximity of the facility to other airports that offer the same or similar services. To define the service area for Kayenta Airport, the airports in the vicinity and their facilities were reviewed.

TABLE 1-8 AREA AIRPORTS

Airport Name And Identifier	Distance From Kayenta	Runway Length	Pavement Type	Instrument Approaches	Fuel Available	Town/City
Cal Black Memorial, (U96)	54 miles Northwest	5,700'x60'	Asphalt	VFR	100LL, Jet A	Halls Crossing, Utah
Bluff, (66V)	57 miles Northwest	3,000'x45'	Asphalt	VFR	None	Bluff, Utah
Chinle Municipal, (E91)	48 miles Southwest	6,149'x60'	Asphalt	VFR	None	Chinle, AZ
Tuba City, (T03)	66 miles Southwest	6,230'x75'	Asphalt	VFR	None	Tuba City, AZ
Blanding Municipal, (BGD)	63 miles Northeast	6,000'x75'	Asphalt	RNAV (GPS) RWY 35	100LL, Jet A	Blanding, Utah
Oljato	20 miles Northwest	3,950'x50'	Asphalt	VFR	None	Oljato, Utah
Monument Valley Airport	20 miles North	4,000'x75'	Dirt	VFR	None	Monument Valley, Utah

Source: Airnav, 2004

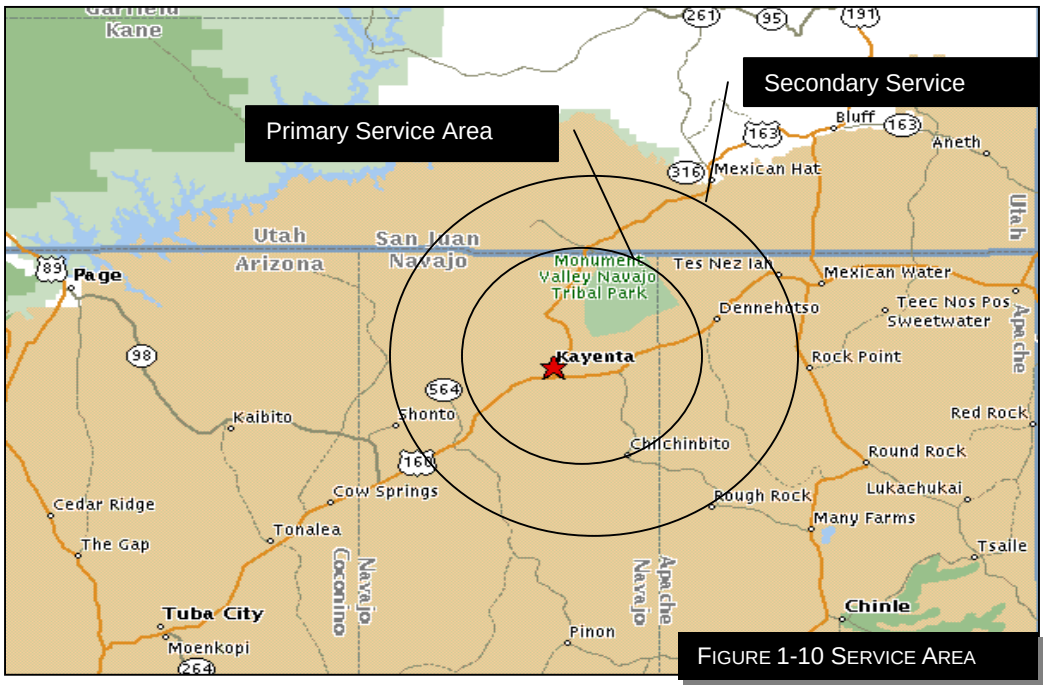


FIGURE 1-10 SERVICE AREA

SOURCE: MAP QUEST 2004

The area of Monument Valley is a small community approximately 20 miles North of Kayenta. Monument Valley airport is a privately owned airport which recieves high volumes of tourism air traffic. The runway at Monument Valley is 4,000 feet long by 75 feet wide and is dirt . Most of the traffic that flies into Monument Valley are sightseeing aircraft out of Las Vegas Nevada, Sedona Arizona, Page Arizona and Phoenix Arizona. The majority of the aircraft are Twin Otters and Cessna Caravans. Kayenta would like to provide service to these aircraft tour companies by attracting them with better facilities. Kayenta has extensive history and is a major attraction for people visiting the area; Kayenta is also home to the Wind Talkers' display.

The Kayenta Primary Service Area encompasses the area within a 30-minute drive (20 mile) radius of the airport. The secondary service area encompasses the area halfway between Kayenta and the next closest airport offering equivalent or better services and facilities.

AIRSPACE

NATIONAL AIRSPACE SYSTEM

The National Airspace System consists of various classifications of airspace regulated by the FAA. Airspace classification is necessary to ensure the safety of all aircraft utilizing the facilities during periods of inclement weather, with the primary function of airspace classification being the separation of instrument flight rules (IFR) traffic from visual flight rules (VFR) traffic. Pilots flying in controlled airspace are subject to air traffic control (ATC) requirements and must either follow VFR or IFR regulations. These regulations, which include combinations of operating rules, aircraft equipment and pilot certification, vary depending on the class of airspace and are described in Federal Aviation Regulation (FAR) Part 71, *Designations of Class A, Class B, Class C, Class D and Class E Airspace Areas, Airways, Routes and Reporting Points* and Part 91, *General Operating and Flight Rules*. General definitions of the classes of airspace are as follows:

- Class A airspace extends from eighteen thousand feet MSL up to and including sixty thousand feet MSL (also known as FL600). It covers the majority of the contiguous states and Alaska, as well as the area extending twelve nautical miles out from the United States coastline.

- Class B airspace has different levels of airspace which are portrayed as a series of interconnected circular patterns around major airports. Terrain, the amount and flow of air traffic and the location of other airports all influence the design of Class B airspace.

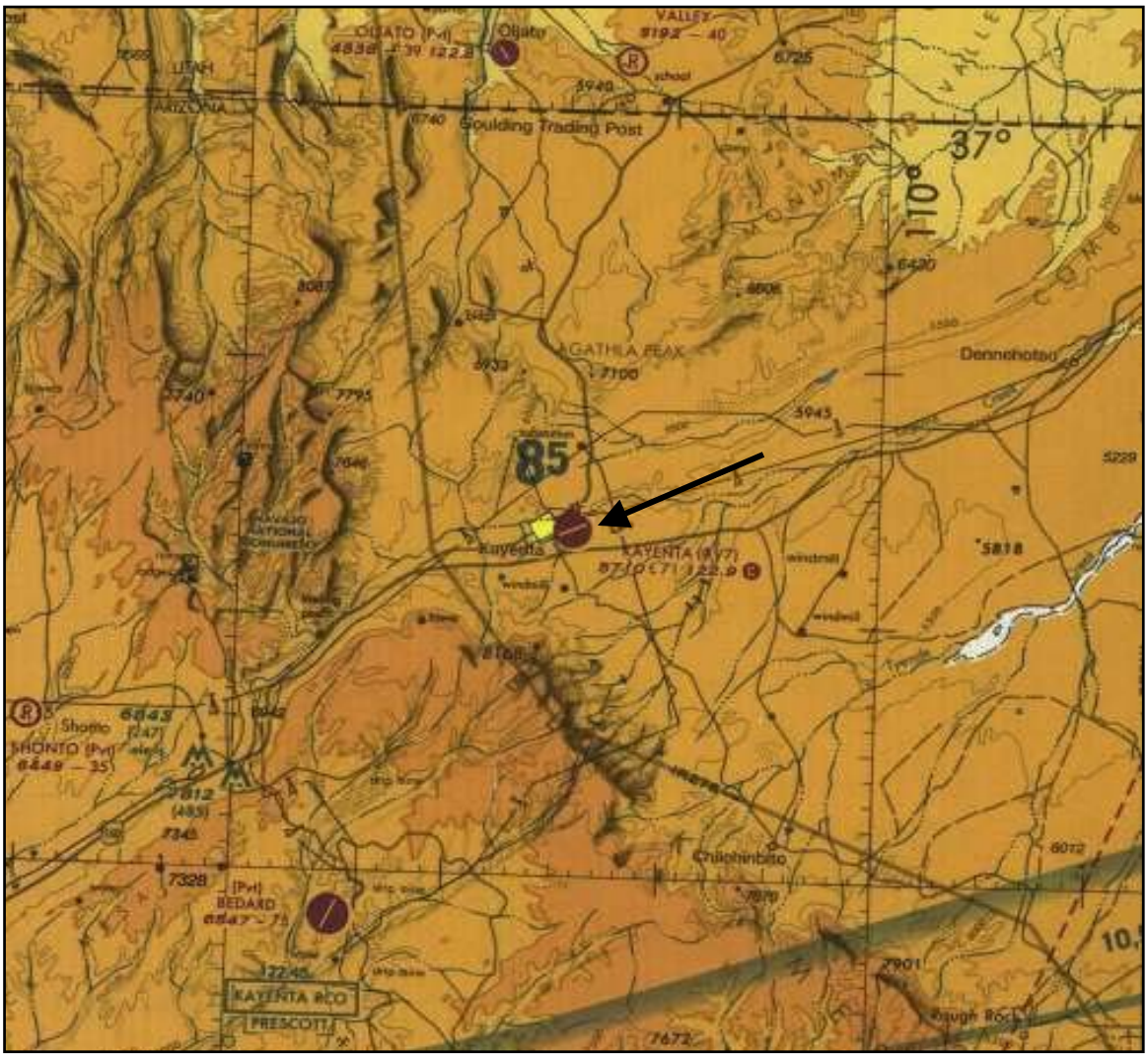
- Class C airspace normally consists of a five nautical mile radius core area that extends from the surface to four thousand feet above the ground level (AGL) of the primary airport. A ten nautical mile radius shelf area usually extends from one thousand two hundred feet to four thousand feet above the airport elevation. An outer area usually extends out to twenty nautical miles from the primary airports.

- Class D airspace normally extends from the surface up to approximately two thousand five hundred feet AGL and surrounds those airports with an operating control tower that does not provide radar service. This airspace is classified as Class D only when the tower is operational.

- Class E airspace consists of several different segments, including Victor airways and airspace surrounding terminal areas. Generally, Class E airspace is any controlled airspace other than Class A, Class B, Class C or Class D.

- Class G airspace is uncontrolled and normally extends from the surface to the base of the overlying controlled airspace.

Kayenta is located within Class G airspace. Figure 1-11 illustrates the Kayenta Airport on the 2004 Denver Sectional Map.



SOURCE: 2004 DENVER SECTIONAL

FIGURE 1-11 SECTIONAL MAP

VICTOR AIRWAYS

Victor airways are a series of airways based on radio beacons. Typically each airway extends four nautical miles on either side of the airway centerline and extends from one thousand two hundred feet AGL up to, but not including, eighteen thousand feet MSL, unless otherwise indicated. Each airway is depicted by a blue line on the aeronautical chart and is designated by the letter "V" followed by a numerical identifier. The closest Victor airway to the Kayenta Airport is V210 located approximately 24 nautical miles to the south of the airport.

MILITARY OPERATIONS AREA

Military Operations Areas (MOA) are special use airspace of defined vertical and lateral limits established to help Visual Flight Rule (VFR) traffic identify locations where military

activities are conducted. The Sunny MOA is located approximately 50 nautical miles Southwest of Kayenta. The time of use for the Sunny MOA is by NOTAM (Notice to Airmen) 24 hours in advance. The altitude use is from 12,000 feet to 18,000 feet and the controlling agency is Albuquerque Center. Military training route IR 276 runs north-south approximately three nautical miles south west of the Kayenta Airport. Extra pilot vigilance is recommended within MOA's and in the vicinity of military training routes.

WILDERNESS AND HISTORICAL AREAS

The Navajo National Monument is located approximately 10 nautical miles to the west of the airport.

RESTRICTED AREAS

Restricted Areas are designated special use airspace within which aircraft flight, while not prohibited, is subject to restrictions. There are no Restricted Areas within the Kayenta area.

LOCAL OPERATIONAL PROCEDURES

Any operation in the vicinity of an airport warrants extra caution. Traffic separation and procedures at controlled airports are regulated by ATC. While the ultimate responsibility still lies with the pilot in command, ATC provides traffic advisories, active runways and weather information amongst other advisory information. Uncontrolled airports do not have this advantage and navigation becomes the sole responsibility of the pilot in command. The FAA has established standard terminal procedures for both uncontrolled and controlled airports, including right-of-way rules, minimum safe altitudes and traffic pattern procedures.

The airport is located within the jurisdiction of the Denver Air Route Traffic Control Center (ARTCC) and the Prescott Flight Service Station (FSS). The Prescott FSS provides weather data and other information to pilots on the Kayenta Remote Communications Outlet (RCO) frequency 122.45.

Kayenta is an uncontrolled airport; navigation and traffic awareness relies on the ability of the pilots using the airport. The airport currently operates with standard left-handed traffic patterns, a traffic pattern altitude of 6,700' MSL for nonturbine aircraft, 7,200' MSL for turbine driven aircraft and on a common traffic advisory frequency of 122.9.

VISUAL FLIGHT RULE PROCEDURES

Normally aircraft enroute to the airport, below ten thousand feet MSL, are required to maintain three statute miles of visibility and five hundred feet below, one thousand feet above and two thousand feet horizontal distance from any clouds. Because the airport is located within class G airspace, aircraft must simply remain clear of clouds.

INSTRUMENT FLIGHT RULE PROCEDURES

Instrument flight rule procedures into terminal areas typically consist of one or a combination of instrument approaches. These approaches are classified as either visual, nonprecision or precision approaches. Visual approaches require that visual contact be maintained at all times with the runway facilities and other aircraft in the vicinity of the airport. These approaches are unmonitored and demand pilot proficiency in see and avoid procedures. Nonprecision and precision instrument approaches are controlled approaches and are monitored by the local air traffic jurisdiction. Nonprecision approaches differ from precision approaches in that they only provide horizontal guidance, while precision instrument approaches provide both horizontal and

vertical guidance information. With the addition of vertical guidance information, precision approaches enable lower visibility and cloud heights. There are currently no instrument approaches into Kayenta Airport.

SOCIOECONOMIC FACTORS

Demographics are the physical and dynamic socioeconomic characteristics that form a community, including past, present and future characteristics. By using statistical information it is possible to evaluate the historical trends to present day situations and then utilize these same trends to analyze future projections. Comprised of such statistical information as sex, age, growth rates, unemployment, local industry, income and education among others; an analysis can be conducted to provide a general picture of the community.

Examining the specific socioeconomic characteristics of the Navajo Nation and Kayenta Township will help determine the factors influencing aviation activity in the area and determine the extent to which aviation facility developments are needed in the area. Characteristics, such as population, employment and income, will provide a foundation upon which to base the potential growth rate of aviation activity at the airport.

POPULATION

Population trends in an area are indicative of whether a community is realizing economic growth, stagnation or decline. This information can then be used by the Township, businesses and community members in assessing business plans and future growth potential.

According to the United States Census Bureau, the State of Arizona has shown consistent growth in population over the past eight years; the Navajo Nation and Kayenta Township have also shown growth. In the most recent ten-year period, Kayenta experienced a population growth of approximately 1.12%. The Kayenta population is projected to increase to 8,156 by the year 2025.

Table 1-9 POPULATION DATA

Year	United States	State of Arizona	Navajo Nation	Kayenta Township
1990	248,709,873	3,665,228	77,685	4,372
2000	281,421,906	5,130,632	97,470	4,922
2003	290,809,777	5,629,870	103,790	5,241

Source: U.S. Census Bureau and the Arizona Department of Economic Security 2003

According to the 2003 Census statistics, Kayenta has already exceeded the 1997 Arizona Department of Economic Security 2010 population projection.

Table 1-10 PROJECTED POPULATION DATA

Year	United States	State of Arizona	Navajo Nation	Kayenta Township
2010	320,397,198	6,145,125	99,975	6,467
2015	340,778,826	6,744,800	105,850	7,065
2020	361,160,455	7,363,625	111,950	7,679
2025	384,135,182	7,993,000	117,925	8,156

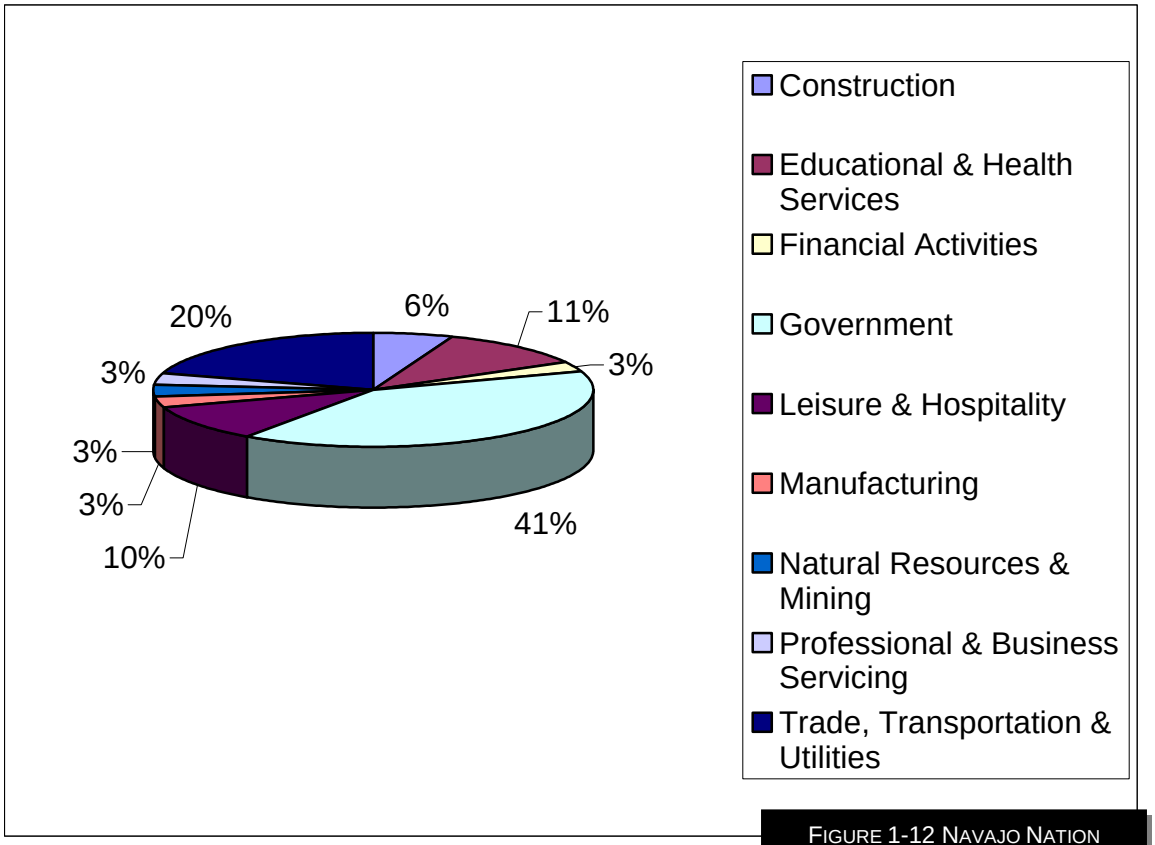
Source: Arizona Department of Economic Security and the U.S. Census Bureau 2003

Another important factor in evaluating demographics and socioeconomic characteristics of a community's population is the ethnic and age distribution. In the township the population is spread out with 44.4% under the age of 18, 9.6% from 18 to 24, 26.2% from 25 to 44, 16.9% from 45 to 64 and 2.9% who are 65 years of age or older. The median age is 22 years. 92.7% of the population is American Indian.

EMPLOYMENT

Employment remains the strongest defense a community has against poverty. States, counties and towns are vigilant of employment sectors and unemployment rates in order to tabulate the type of businesses that the area can support and the type of businesses that are needed in the area. According to the Arizona Department of Economic Security, the unemployment rate for Kayenta is 9.8%.

According to the Arizona Department of Economic Security, the Reservation's primary industry, employing nearly 41% of the labor force, is government. The next highest industries, employing approximately 20%, are Trade, Transportation and Utilities.



Source: Arizona Department of Economic Security 2003

FIGURE 1-12 NAVAJO NATION EMPLOYMENT AREAS

INCOME

Income data, including per capita income, poverty levels and total earnings, can be used to evaluate a community's standard of living and the availability of expendable income. According to the 2000 census, the median income for a household in the township is $31,707 and the median income for a family is $32,500. Males have a median income of $40,804 versus $21,912 for females. The per capita income for the township is $9,421.

COMPARISONS

Unemployment in Kayenta between 1990 and 2003 has gone down 5.7 percent. The Civilian Labor Force between 1990 and 2003 has gone up 7.4 percent. Population over the past ten years has shown a positive increase. State comparisons with Kayenta show that the household income is below the state average. The state comparisons with median house value are below state average. A review of the factors indicate economic growth in the community with increasing population, decreasing unemployment and numerous local building and improvement projects including:

- New housing
- New fire truck
- Expansion of Kayenta Township commission building
- Hospital site selection
- Industrial business quadrant site selection
- Kayenta office complex site selection
- Commercial business quadrant site selection

LAND USE COMPATIBILITY

The FAA recommends that airport sponsors protect the areas surrounding an airport from incompatible development. Incompatible development includes those land uses which would be sensitive to aircraft noise or over flight, such as residences, schools, churches and hospitals and those uses which could attract wildlife and cause a hazard to aircraft operations such as landfills, ponds and wastewater treatment facilities. Figure 1-13 shows the current and future land uses for the Kayenta Township. With the exception of the existing residential area (area 13) existing land uses are compatible with the airport although development is beginning to encroach on the Runway 5 traffic pattern area. There are currently no airport overlay zones (height restriction or compatible land use) in effect. A recommended Compatible Land Use and Height Restriction will be included as part of this plan.

In accordance with A.R.S § 28-8485 a political subdivision of the state may designate an airport influence area for the notification and disclosure to owners or potential purchasers of property in the airport influence area that a property in the area may be subjected to aircraft noise and over flight. Additionally, A.R.S.28-8486 requires each public airport to prepare and record a disclosure map identifying the areas within the traffic pattern airspace. Kayenta Township currently does not have these maps on record. Maps for the Kayenta Airport meeting these requirements are included in the Appendix of this report.

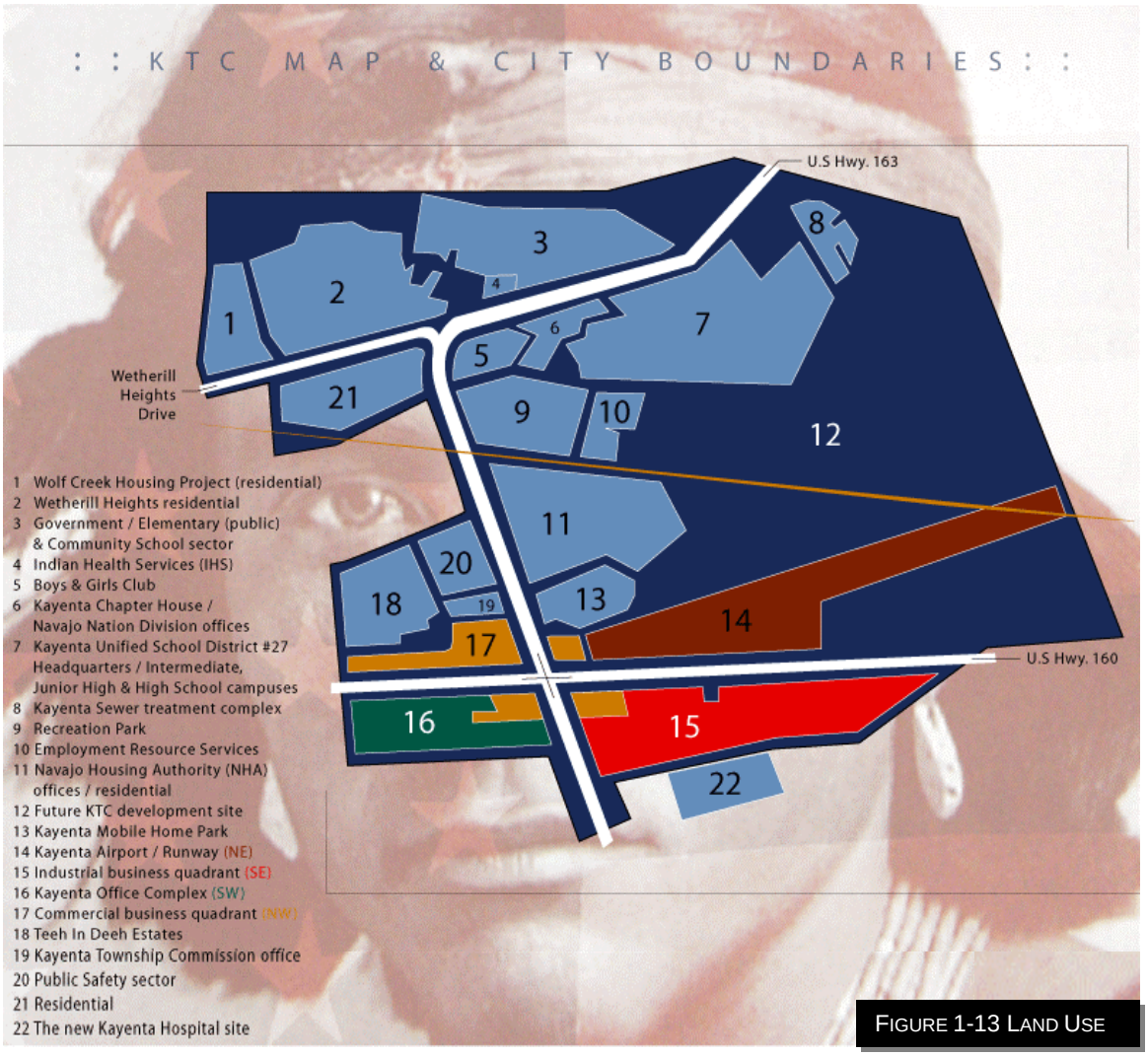


FIGURE 1-13 LAND USE

SOURCE: 2004 KAYENTA TOWNSHIP

METEOROLOGICAL CONDITIONS

Meteorological conditions have a direct impact on the operational characteristics of an airport. These conditions determine the regulations under which operations may be conducted, the frequency of use for each operational configuration and the instrumentation required to assist aircraft in landing and departing. Temperature, combined with airport elevation, also affects aircraft performance capabilities. Currently the airport has no on site weather reporting system such as an Automated Weather Observation System (AWOS) or Automated Surface Observation System (ASOS).

LOCAL CLIMATIC DATA

Kayenta Airport is located in northeast Arizona. Climatic characteristics in this area include low relative humidity, abundant sunshine, light rainfall, high wind and a large daily range in temperature. The majority of rain falls during the monsoon season during August. Summer precipitation is largely from the accumulation of thunderstorm activity. Temperatures in Kayenta range from an average maximum temperature of 89.3 degrees Fahrenheit in July to an average minimum temperature of 21.7 degrees Fahrenheit in

January. Average total precipitation is 8.7 inches, with 12.8 inches average total snowfall.

CEILING AND VISIBILITY CONDITIONS

Ceiling and visibility conditions are important considerations for an airport as the occurrence of low ceiling and/or poor visibility limits the use of the airport to instrument approach and departure operations until conditions improve. Under poor visibility conditions or instrument meteorological conditions (IMC), the pilot must operate under IFR; meanwhile, under visual meteorological conditions (VMC), pilots can operate VFR. Under IFR the pilot maneuvers the aircraft through sole reference to instruments in the aircraft and navigational aids. The airport must be closed for use when conditions are worse than the published IFR minimums for the airport, see previous section titled *Instrument Flight Procedures*. When weather permits VMC, the pilot can maneuver the aircraft by reference to the horizon and objects on the ground.

As previously discussed, Kayenta Airport has no instrument approaches in place and visual approaches may be flown when weather permits.

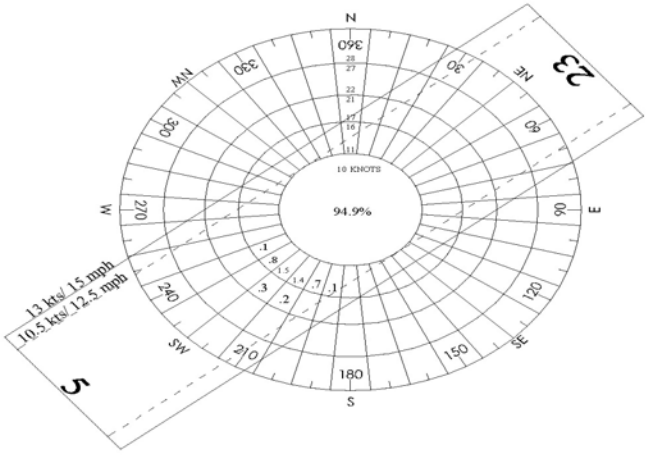


Table 1-11 Wind Data

Crosswind (knots)	All Weather Coverage
10.5	99.98%
13.0	100%

Source: Buckskin Lo Arizona RAWS September 2002-July 2004

RUNWAY WIND COVERAGE

An analysis of wind is essential in deciding the desired alignment and configuration of the runway system. It is beneficial to align runways as closely as practicable in the direction of the prevailing winds. Aircraft land and takeoff into the wind and, therefore, can only tolerate limited crosswind components. The crosswind component of wind direction and velocity is the resultant vector, which acts at a right angle to the runway and is equal to the wind velocity multiplied by the trigonometric sine of the angle between the wind direction and the runway direction. In other words, crosswinds are those winds that blow perpendicular to the runway centerline. The maximum allowable crosswind depends on the aircraft size, design characteristics and pilot proficiency. Table 1-11 shows the wind data collected for the Kayenta Airport. FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, recommends that a runway should be oriented so that it yields 95 percent wind coverage under stipulated crosswind coverage defined by the airport ARC. If a single runway alignment cannot meet the recommended 95 percent wind coverage then construction of an additional runway may be advisable.

Hourly wind data for Kayenta was obtained from a Remote Automated Weather Stations (RAWS) near Kayenta. RAWS are usually owned and operated by wild land fire agencies and are placed in locations where they can monitor fire danger. RAWS wind speed and direction data is available from the Western Regional Climatic Center (WRCC) based on a 36-point wind rose. The RAWS station where data was collected is Buckskin Lo Arizona, located approximately 31 nautical miles southwest of the airport. A wind rose was created with 24 months of observations from the Buckskin Lo Arizona RAWS. The information obtained confirmed the existing runway configuration is adequate for aircraft using the airport. The installation of an AWOS is recommended to provide onsite data; this will assist in compiling a ten-year wind rose and verify runway wind coverage.

AIRPORT MANAGEMENT AND COMPLIANCE

The Kayenta Airport is owned and operated by Kayenta Township. The Kayenta Township is a political subdivision (similar to a municipality) of the Kayenta Chapter (similar to a county). Both the Township and Chapter are political subdivisions of the Navajo Nation. The airport is managed and maintained by the Township staff. There are no records kept for Airport Safety Inspections. The Standards Manual includes a form on how the airport should conduct self-inspections and when they should be done.

MINIMUM STANDARDS

Minimum Standards are set forth to foster, encourage and ensure the economic stability and orderly development of aviation activities and businesses at the Airport; as well as control the level and quality of services offered and to insure adequate service and facilities to Airport users. The airport does not currently participate in the Aeronautics Division Pavement Management Program (PMMP). Currently the airport has no storm water pollution prevention plan (SWPPP) or a spill prevention control and countermeasure plan, both plans should be developed and implemented. There are currently no records kept on runway incursions for the airport as well as no Runway Safety Area Surveys. There are no minimum standards currently established for the Kayenta Airport. Recommended minimum standards developed as part of this project are included in the Airport Standards Manual document. The Airport Standards Manual will address each of the following items.

- Rules and Regulations
- Architectural Standards

- Minimum Standards
- Rates and Charges
- Airport Security
- Emergency Action Plan
- Airport Self-Inspection
- Standard Lease Agreements