Aztec Municipal Airport

Airport Action Plan

MAY 2008

Prepared for the City Aztec, New Mexico
By WHPacific, Inc. (formerly ASCG Incorporated of New Mexico)
In association with Airport Planning West

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INTRODUCTION

The purpose of the Aztec Municipal Airport Action Plan is to provide a means for documenting the City's short-term goals for the airport, any issues needing consideration, the current physical condition of the airport, its anticipated growth, and proposed development to accommodate that growth.

Inventory is the first of several key planning tasks, which are all documented in chapters in the Action Plan. The Inventory included a physical inspection of existing facilities, meetings with the Airport Manager and City staff, and the review of previous studies and other data available.

This chapter provides a summary of the Airport's surroundings, its existing facilities and their condition, and a synopsis of historical airport activity and development. This information is fed into subsequent tasks. For example, current based aircraft and operations data is used as a baseline for the forecasts, and the details on existing facilities help quantify shortfalls when determining future facility needs.

AIRPORT LOCATION & ACCESS

Aztec Municipal Airport is located two miles northwest of the City of Aztec and 18 miles northeast of Farmington. Aztec is the County seat and located in the northeast quadrant of San Juan County just 14 miles south of the Colorado state line (**Exhibit 1A**). NM Highway 516 links the City of Aztec and the Airport at Oliver Drive, which becomes Airport Drive.

Highway 550, a new four-lane highway, serves the three-hour drive from Albuquerque to Aztec, and continues on to Colorado.

The closest interstates include I-25 and I-40, which are approximately 161 and 120 miles from Aztec, respectively.

Population (2005) is estimated at 7,084 for Aztec and 126,208 for San Juan County. San Juan County is the sixth largest of the 33 counties in New Mexico with an area of 5,500 square miles.

Local Transportation

The airport does not have an official courtesy car, but the Airport Manager has provided local transportation, as needed, on a 24-hour basis.

Taxi and bus service in the community is provided by Farmington-based transit companies such as 4 Corners Cab Company and Dial-A-Ride. Rental car agencies serving Aztec are also located in Farmington.

Regional Transportation

Aztec does not have train service, but travelers can catch Amtrak's Chicago-to-Los Angeles route in Gallup, which is three hours away. Greyhound has a bus line that stops in Farmington.

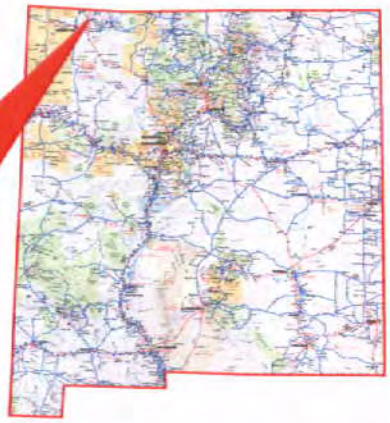
AREA TOPOGRAPHY

The Aztec Municipal Airport consists of 160 acres and sits atop a mesa at an elevation of 5,883 mean sea level (MSL). The ground immediately surrounding the airport drops between 260 and 280 feet. The City of Aztec has an average elevation of 5,644 feet MSL.

CLIMATE

Aztec has a semiarid climate with relatively mild winters and warm summers. The average low temperature ranges from the high 20s to low 30s, and the average high temperature ranges from the high 80s to low 90s. Winter's occasional snow, the summer's thunderstorms, and other rainfall scattered throughout the year bring less than 10 inches of average annual precipitation to Aztec. The mean maximum temperature of the hottest month, July, is 94 degrees Fahrenheit.

Winds are typically from the east in the morning and the west in the afternoon.



AZTEC, N.M.

NOT TO SCALE

AZTEC MUNICIPAL AIRPORT ACTION PLAN	LOCATION MAP	EXHIBIT 1A

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COMMUNITY AND AIRPORT HISTORY

The City of Aztec derived its name from its history, which is tied to the Aztec Ruins. The Aztec Ruins consist of several multi-story buildings that run along the banks of the Animas River for a two-mile stretch that is less than a mile wide. Some of the structures are over 30 feet high. One area, referred to as the West Ruin is believed to have had at least 400 interconnected rooms around an open plaza. Archaeologists believe many of these structures were built in 1100, but abandoned in 1150. However, they were reoccupied and expanded in the 1200s. The Aztec name came from early European settlers who mistakenly believed that the villages were built by Aztecs. However, archaeological findings proved that the builders were actually ancestors of the Pueblo people. Although archaeologists began referring to these early people as Anasazi, their descendants prefer they be called Ancestral Pueblo today.

The Aztec Ruins were established as a National Monument in 1923. Now, the 320-acre site attracts 40,000 visitors annually.

The City of Aztec covers 9.7 square miles. The City is divided into five districts with a Commission form of government to include a mayor, four city commissioners, and a city manager.

The City of Aztec is the airport sponsor and owner, but leases land from the Bureau of Land Management (BLM) for approximately half of the Airport. The Airport is operated by an Airport Manager through a contractual agreement between D&N Enterprises and the City of Aztec. The Airport Manager is one of the owners of D&N Enterprises.

This is the first airport planning study conducted for the Aztec Municipal Airport. However, an Airport Layout Plan (ALP) drawing was prepared and, subsequently, updated within the last five years. There is little documentation on the airport's history, and actual development projects funded by outside sources are few. According to the Airport Manager, the Aztec Municipal Airport was a private airport before the City bought it in 1961 for $8,900. Initially, the airport was managed by a City department and contracted management. In 1996, the current Airport Manager took over through a contractual agreement. The earliest airfield project on record included a one-inch overlay back in 1981. In the last decade, the airfield received a slurry seal, a connecting taxiway was constructed southwest of the runway intersection, improvements were made to taxilanes for hangar access, and drainage improvements were completed.

AVIATION ACTIVITY

Table 1A lists six airports in the vicinity of Aztec. Two are located within 20 statute miles, or 17 nautical miles (nm), of Aztec Municipal Airport. All of the airports listed with the exception of Animas Airpark are included in the federal system of airports.

Until recently, the Aztec Municipal Airport was excluded from the federal system of airports, which is referred to as the National Plan of Integrated Airport Systems (NPIAS), prepared by the U. S. Department of Transportation, Federal Aviation Administration (FAA). In the latest publication, NPIAS 2007-2011, there are 50 New Mexico airports included and more than 3,300

airports nationwide. Aztec's recent addition to the NPIAS database makes it eligible for federal funding now.

Table 1A, Public Use Airports near Aztec

Airport	Identifier	Distance/Direction from Aztec (N19)	City	General Facility Description
Aztec Municipal Airport	N19	--	Aztec	Paved 4,311' runway, visual approaches
Four Corners Regional Airport	FMN	11 nm NW	Farmington, NM	Paved 6,700' runway, instrument approaches
Navajo Lake Airport	1V0	18 nm E	Navajo Dam, NM	Paved 4,995' runway, visual approaches
Durango-La Plata County Airport	DRO	23 nm NE	Durango, CO	Paved 9,201' runway, instrument approaches
Animas Air Park	00C	23 nm N	Durango, CO	Paved 5,010' runway, visual approaches
Shiprock Airstrip	5V5	33 nm W	Shiprock, NM	Paved 4,840, visual approaches
Cortez Airport	CEZ	40 nm NW	Cortez, CO	Paved 7,205' runway, instrument approaches

Source: FAA Airport Master Records and AirNav.com

Airport Service Area

The service area for Aztec Municipal Airport generally encompasses an area within 20 miles of Aztec that extends west along Highway 574 out to La Plata (15 miles) and out Highway 550 to the north to Bondad, Colorado (18 miles) and to the south to Bloomfield (9 miles). However, the Town of Nageezi further south on Highway 550 is also included since there are no other airports nearby. Nageezi is 45 miles south of Aztec with a population of less than 300.

Based Aircraft

There are 16 based aircraft at Aztec consisting of 11 single-engine piston, three ultralights, and two light sport aircraft. The 16th arrived in June 2006, and there were only 13 based aircraft in 2004.

A Lancair, owned by a local optometrist, is the fastest based aircraft at the airport and nearly the largest with a wingspan of 36 feet. The remaining aircraft are generally a mix of Pipers and Cessnas, one of which has a 40-foot wingspan. All based aircraft are stored in hangars with the exception of one ultralight and one Cessna 150, which are parked on the apron. These aircraft fall into the same airplane design group identified as Group I, which includes aircraft with wingspans up to but not including 49 feet. Airplane design groups along with aircraft approach categories are further defined and discussed in Chapter 2.

Aircraft Operations

Total aircraft operations for Aztec are estimated at 8,100 annually. An aircraft operation is a landing or a takeoff, so a touch-and-go counts as two operations. Summer is peak season for operations with an estimated 30 flights daily while winter is the slowest time of year.

For Aztec, nearly all operations fall into the general aviation (GA) category, which refers to all aircraft operations other than scheduled commercial service and military. GA operations are subdivided into two categories: GA local and GA itinerant. Local operations refer to activity that remains within 20 miles of the airport such as touch-and-go activity and other flights maneuvering in a practice area. All other operations are considered itinerant.

Of the 8,100 annual operations, the Airport Manager estimates that 3,000 are GA local, 5,000 are GA itinerant, and 100 are military.

Aztec's typical operations consist of recreational, training, business, medical, firefighting, military, and cargo air taxi activity. The diverted air taxi activity comes from Farmington about six times a year when the Four Corners Regional Airport is fogged in. A confluence of three rivers in Farmington causes the fog that sends three Cessna Caravans (single turboprop) from FedEx, two Cessna 414s (twin engine), and another Cessna operated by UPS to Aztec.

The largest aircraft that flies into Aztec on a routine basis is the Beech 1900. When a Mesa pilot is transitioning from co-pilot to pilot, they fly an approach into Aztec in the Beech 1900 at night using the reflective airfield lighting at Aztec. These training flights into Aztec occur an average of two nights per month.

Helicopter traffic is infrequent, but firefighting season brings helicopters for daylong operations. Helicopters operate just south of the runway intersection. Evergreen from Durango comes in with a Skycrane on occasion. The Skycrane is parked on the south end of the apron. Single engine air tankers (SEATs) also operate out of Aztec during firefighting season. In the summer of 2006, aircraft operating out of Aztec fought 20 fires during the season. One SEAT was based at the airport in July for two weeks in support of ongoing firefighting operations.

EXISTING FACILITIES

Aztec Municipal Airport's facilities are categorized as airside, landside, or support facilities. Airside facilities include aircraft movement areas such as runways, taxiways, and aprons. Hangars, airport terminal building, auto parking, other airport buildings, and similar facilities fall into the landside category. Support facilities include utilities, fencing, emergency, and other miscellaneous facilities. **Exhibit 1B** identifies the existing facilities, which are discussed here.

Airside Facilities

Runways. Aztec Municipal Airport has two paved, asphalt runways that intersect near the midpoint of the primary runway. Runway 8-26, the primary runway, is 4,311 feet long and 50 feet wide with a displaced threshold of 210 feet at both runway ends. The pavement strength

EXHIBIT 1B

EXISTING AIRPORT FACILITIES

AZTEC MUNICIPAL AIRPORT ACTION PLAN

CITY LIMITS
AIRPORT PROPERTY LINE
PASI LIGHTING
REFLECTIVE EDGE LIGHTING
RUNWAY 8–26
PLASI LIGHTING
FUEL STORAGE
ROTATING BEACON
WINDSOCK
RPZ (E)
RESIDENCE
CITY FIRE STATION
AIRPORT MGR. HANGAR/OFFICE
RUNWAY 4–22
AIRPORT MANAGER'S RESIDENCE
AIRPORT DR.
RESIDENTIAL AREA
MC WILLIAMS RD.
POLICE IMPOUND
WATER TANK
CRANES CROSSING

RUNWAYS
TAXIWAY, APRON, AND ENTRANCE ROAD
AIRPORT PROPERTY LINE
HANGARS/BUILDINGS
RUNWAY VISIBILITY ZONE (EXISTING)

NORTH
ASCG INCORPORATED

0 200' 400' 800'
1" = 400'

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rating is estimated at 6,000 pounds single wheel loading (SWL), but cannot be confirmed without pavement analysis. The Airport Master Record, FAA Form 5010-1, identifies the estimated pavement strength for Runway 8-26 as 10,000 pounds SWL, but past pavement maintenance projects suggest that this figure may be high.

Runway 4-22 is the secondary, or crosswind, runway. It is 2,909 long by 40 feet wide. This runway's pavement strength rating is also estimated at 6,000 pounds SWL, which is less than the Airport Master Record's estimate of 8,000 pounds SWL.

Higher elevations at midfield obstruct visibility between runway ends. Runway 4-22 ends are not visible from Runway 8-26 ends, and Runway 8 end is not visible from Runway 26 end. Runway 8-26 has a turnaround at each runway end. The Runway 4 end also has a turnaround, but the Runway 22 end does not.

Taxiways. There are two connecting taxiways on the airfield, but no parallel taxiways to the runways. One taxiway forms an elbow connection between Runway 8-26 and 4-22 on the west side of the airfield near intersection of the runways and is slightly elevated to provide a clear line-of-sight of the runway ends that is not otherwise available. The second connecting taxiway is between the apron and Runway 4-22 where it meets the elbow taxiway 350 feet southwest of the runway intersection. Both connecting taxiways are 25 feet wide.

Aprons and Aircraft Parking. There is one large contiguous aircraft apron south of the runway intersection with two separate tiedown areas that form an L-shape. One area runs north-south with nine nested public tiedowns and the other area runs east-west and has two additional tiedowns. The north-south apron area is 200 feet by 350 feet, and the east-west apron area is 150 by 100 feet.

Airfield Lighting. Instead of conventional lighting, Runway 8-26 has reflective lighting. A pilot must be aligned on final approach to see the lighted panels on Runway 8-26. In addition, there are four approach lights on Runway 8 that are considered non-standard since they are located at less than standard spacing. The approach lights can be activated on the common traffic advisory frequency (CTAF). They will stay on for about 15 minutes. The lights are battery-powered and recharged by solar collectors. The connecting taxiways also have reflectors.

The apron has a combination of floodlights, which are located on the north ramp, and building lights, which help light portions of the southern ramp area.

Airport Navigational Aids. Airport Navigational Aids, also referred to as NAVAIDS, include both visual and instrument approach aids.

Visual Aids. Visual aids at Aztec include a rotating beacon, and visual glide slope indicators on Runway 8 and 26 ends. Runway 8 end has a Passive Approach Slope Indicator (PASI) on the left side of the runway. To align on the PASI glide slope, the pilot must align three white bars to form a straight, horizontal line. If the middle bar is up, the aircraft is too high and if a red bar is visible, the aircraft it too low. Runway 26 has a Pulsating Light Approach Slope Indicator (PLASI) on the right side of the runway. The PLASI also provides pilots with glide slope

information, but has a different light configuration. On a PLASI, a flashing white light means you are too high, a solid white means you are on the glide slope, a solid red means you are slightly low, and a flashing red means you are way low.

Instrument Approach Aids. Instrument approach aids are typically used for airports that permit instrument flight rules (IFR) operations, which means that operations are permitted when the visibility and cloud ceiling are below minimums for visual flight rules (VFR). Aztec Municipal Airport is a VFR airport and is not equipped with instrument approach aids. However, there are VORs in the area that provide radio navigation to pilots transiting the area; the closest ones are a VORTAC in Farmington and a VOR/DME in Durango.

Other Airfield Facilities. One wind cone is located at midfield near the intersection of the runways. Weather reporting is available from an Automated Surface Observing System (ASOS), which is 11 nautical miles southwest at Four Corners Regional Airport in Farmington. Other weather reporting for the area is available at the National Park Service's weather station in Aztec.

An airfield directional sign at the connecting taxiways is in good condition. The remainder of the airfield has non-standard airfield signage and lacks numerous signs outlined in FAA guidance.

Landside Facilities

Airport Buildings. There are both conventional hangars and T-hangar units on the airport. Five hangars are City-owned and leased to based aircraft owners. The others are privately owned on ground leases with the City. There is at least one aircraft in each hangar and some contain two or three aircraft. The Airport Manager's office is located in the easternmost hangar along with his based aircraft and maintenance shop. A trailer located just outside the airport property is the Airport Manager's residence. The City Fire Station is the southernmost building on airport property.

Aviation Services. The airport is attended on a 24/7 basis since the Airport Manager lives just outside the airport boundary. Airport services include hangar/tiedown storage, aircraft fueling, and minor aircraft maintenance. Fuel includes 100LL and Mogas.

Airport Access and Vehicle Parking. Airport access from the City is via Highway 516 that connects to Oliver Drive that turns into Airport Drive as it enters the airport.

Airport users often park around the Airport Manager's office or adjacent to their own hangars. Recently, a new parking area just outside the fence was paved for general public parking.

Airport Support Facilities

Emergency Services. The City of Aztec provides emergency response with the City's police and volunteer firefighters. There is a City Fire Station, which is located south of the hangars just inside the airport property line.

Airport Maintenance. Airport maintenance is provided by D&N Enterprises through a contractual arrangement with the City of Aztec.

Airport Fencing. A four-strand, four-foot high fence surrounds the airport perimeter. However, the airport is open at the access road. Portions of the fence around the airport are below the runway elevation since the terrain drops off around the perimeter.

Utilities. Utilities available at the Airport include electricity, gas, water and septic tanks. There is a major gas line that runs through the airport and under the runway.

Airport Signage. Local community directional signs to the airport are located on Highway 516 and Oliver Drive.

Other Support Facilities. Fuel storage for both 100LL and Mogas is located on the airport. Storage for the 100LL is north of the Airport Manager's hangar. Mogas is stored at the south end of the apron area.

Although not affiliated with the airport, there is a police impound area southeast of the hangar area.

RATES & CHARGES

Leases at the airport consist of City-owned hangars and ground leases for privately owned hangars. The City of Aztec charges $65 per month for a City-owned hangar. In comparison, Farmington is charging $80 per month and Durango is charging $150 per month for comparable hangar space. Tiedowns at Aztec are $35 per month or $5 for overnight use, free with fuel purchase.

All hangar and fuel revenues go to D&N Enterprises through an agreement with the City. D&N Enterprises manages the airport to include paying all utilities and insurance, maintaining airport buildings, executing grants, and managing the tenant leases. Although the City, as the airport sponsor, has a budget item for the airport insurance, D&N reimburses the City. D&N also provides the City's local match required for state grants and typically provides the match with in-kind services such as grading.

Ground lease terms for privately built hangars are free for five years, then $0.15 per square foot/year for ten years. The improvements on the lease lot revert to the City of Aztec after 15 years.

RULES & REGULATIONS

The City of Aztec has published a set of rules and regulations for airport tenants. There is no commercial activity permitted in a hangar. Further, the hangar must be predominantly used for aviation. A tenant may store their car in the hangar as long as there is an aircraft in there, too. However, boat storage is not permitted due to insurance liability issues.

LAND USE PLANNING

For many years, Aztec was a rural ranching and farming community, but that has significantly declined over the years with the oil and gas industry becoming the dominant employer and user of the land. Community growth drove the City to prepare a Comprehensive Plan Update to plan for the growth impacts. State statute gives the City the authority to plan within a three-mile radius of the City, which is referred to as the Planning and Platting Jurisdiction (PPJ). The City of Aztec Comprehensive Plan Update is dated December 2002 and titled *Tending to the Heart of Rural Community in a Changing Landscape*. The Plan went though a public involvement process to inform the community of growth issues, identify and evaluate growth alternatives, and conclude with some general recommendations for further study and growth management. Although the airport is not specifically addressed, land use in the area is addressed. Regarding land use control and authority, the following excerpt from the Comprehensive Plan is provided:

> *The City is empowered to adopt a master plan for the physical development of the municipality and those areas within this three-mile planning and platting jurisdiction that in the City's judgment bear a relationship to the planning of the municipality.*
>
> *The City of Aztec also has joint authority with San Juan County to review and approve subdivision plats in the PPJ. New subdivision proposals must meet the requirements of both the City's and the County's subdivision ordinances.*

The City of Aztec's latest plans for subdivision development shows the majority of future development west and northwest of the City, which is in the direction of the airport. There is already scattered residential and commercial development near the airport. The City of Aztec requires plats to disclose that these properties are located near an airport.

The City's proposed development plans near the airport show two subdivisions to the east, referred to as Pioneer Heights and Cecil Henry, with 100 and 150 lots, respectively. These proposed subdivisions are aligned with and to the sides of the Runway 26 approach. Northeast of the airport is the proposed Crane subdivision with 150 lots, which is partially aligned with the Runway 22 approach. These developments are contained inside the City's boundary that requires real estate disclosure on plats about the airport's close proximity.

North and west of the airport property is BLM land. While the airport's boundary contains 160 acres of land, about half (88 acres) of the airport is actually on BLM land, which is used by the airport through a lease agreement. The City has plans to transfer the land through a patent or potentially a land swap in the future.

Aztec Municipal Airport was recently added to the NPIAS so the City will be eligible for both Federal and State grant dollars now. However, being included in the NPIAS draws closer scrutiny of the airport and its compliance with design standards and grant assurances. Included in FAA grant assurances is the airport sponsor's commitment to promote compatible land use in the vicinity of the airport. FAA leaves the specific details of this compatible land use requirement to the local jurisdiction since there are substantial variances among communities regarding their perception of and tolerance for airport noise. However, the goal is to protect the long-term

viability of the airport by disallowing noise-sensitive neighbors. The airport's location atop a mesa helps minimize noise impacts associated with arriving and departing aircraft. Additional support for real estate disclosures and proper zoning around an airport is expected in the future as the New Mexico DOT Aviation Division continues its pursuit of legislation that gives airport sponsors the authority to identify an area of influence around the airport. The boundary, often referred to as an airport influence area or an airport overlay zone, is typically the existing or anticipated future traffic pattern for the airport. It will still be up to the local jurisdiction to take this area/zone boundary one step further by appropriately zoning the areas inside. The City of Aztec is currently updating their zoning around the airport.

Airspace protection is also of concern, which is addressed in 14 CFR Part 77, *Objects Affecting Navigable Airspace*. This regulation defines a set of imaginary surfaces that should ideally be kept clear of obstructions, particularly the runway approach surface. The FAA will review the proposed construction of a structure in the vicinity of an airport to ensure that it is not a hazard to air navigation. In fact, there is a requirement to submit FAA Form 7460-1, *Notice of Proposed Construction,* to the FAA so they may evaluate the possible airspace impacts. A copy of this form is included in the Appendices to the Action Plan.

For Aztec, the inner approach surfaces for Runways 8, 26, and 22 are clear. Runway 4 has a four-foot fence located an estimated 60 feet from the threshold. Airport operations are visual so approach slopes requiring protection are 20:1, which means one foot up for every 20 feet out. Airports with instrument approaches and larger aircraft operations require the protection of 34:1 and 50:1 slopes.

Chapter Two
FORECASTS

INTRODUCTION

Aviation demand forecasts of based aircraft and aircraft operations for the Aztec Municipal Airport are presented in this chapter. These forecasts serve as input to a subsequent task by helping determine the type, size, and phasing of airport improvements needed. Further, forecasts help characterize the airport so the airport sponsor may better understand the airport's needs and how to integrate them into the City's comprehensive planning process.

The baseline year for the forecasts is 2006 and the forecast period is from 2007 through 2011. Forecasts presented here follow the FAA-accepted guidelines that are outlined in *Forecasting Aviation Activity by Airport* by GRA, Incorporated, July 2001.

The chapter begins with an overview of existing state and national forecasts and industry trends. Then, socioeconomic characteristics are presented and, finally, the forecasts for Aztec Municipal Airport. The airport forecasts include based aircraft, aircraft operations, and airport reference code (ARC). The ARC is an alphanumeric code that identifies the most demanding family of aircraft operating at the airport in terms of approach speed and wingspan.

STATE FORECASTS

In July 2003, the NMDOT Aviation Division published the New Mexico Airport System Plan (NMASP). The NMASP presented a broad overview of public use airports around the state including a set of forecasts for each airport for the short-term (through 2006), the intermediate term (2007-2011), and the long-term (2012-2021). Aztec Municipal Airport's based aircraft and operations forecasts from the NMASP are shown in **Table 2A**. The long-term forecasts are shown to provide a broad overview of the possible growth.

Table 2A, New Mexico Airport System Plan (NMASP) Forecasts

Activity	Base Year	Low Growth		High Growth	
		Forecast 2021	Ave. Annual Growth Rate	Forecast 2021	Ave. Annual Growth Rate
Based Aircraft	12	9	-1.25%	33	5.25%
Operations	1,200	1,102	-0.41%	4,101	12.09%

Source: New Mexico Airport System Plan (NMASP) 2003

The NMASP used three forecast models to produce projections of based aircraft for the state. The highest and lowest growth rates resulting from the models were used to produce a forecast range of based aircraft for the state. Then, a market share model translated the state total for based aircraft into airport-specific based aircraft totals.

The NMASP also projected the fleet mix for based aircraft in the state. For 2011, the forecast shows 73 percent single engine, 13 percent multi-engine, four percent jet, two percent helicopter, three percent military, and five percent gliders and ultralights. By 2021, the NMASP projects that the state fleet mix split will change with a drop in single-engine and multi-engine share by one percent to 72 percent and 12 percent, respectively, and an increase in jet aircraft share by two percent for a six percent total share.

Similar to the based aircraft forecast, the NMASP established a high and low growth rate for total general aviation (GA) operations, and then applied a market share model to divide the operations amongst the state's airports.

NATIONAL AVIATION TRENDS AND FORECASTS

Trends in the aviation industry and other recent forecasts are important factors to consider in projecting activity for airports. GA trends such as recent GA aircraft shipments, active student pilots, and the FAA's forecasts of these and similar GA activity measures were reviewed as part of the forecasting process for Aztec. According to *FAA Aerospace Forecasts 2006-2017*, GA aircraft shipments reportedly increased 10 percent overall between 2004 and 2005 after decreases three years prior. A breakdown of GA aircraft shipments for 2005 by category included the following growth rates: piston increased 9.5 percent; turboprops increased by 5.3 percent; and business jets increased 15.1 percent.

The active GA aircraft fleet also grew an estimated 1.0 percent from 2004 to 2005. In contrast, active student pilots decreased by 0.8 percent for the same period, but had experienced growth for two consecutive years prior. GA hours flown in 2005 compared to 2004 showed strong growth with a 3.8 percent increase.

FAA expects that the GA industry will continue its turnaround as a result of government and industry programs and initiatives put into effect in recent years to help remedy the impacts from high fuel prices, the remaining effects of 9-11, and the slow economic recovery.

The FAA is projecting growth in several key GA segments. The strongest growth is expected in the corporate/business segment with the entry of the lightweight and inexpensive very light jets (VLJs) into the market. VLJs, also known as microjets, weigh 10,000 lbs. or less, carry five to six people, require a single pilot to operate, and cost substantially less than other corporate jets on the market. In recent years, the GA industry has speculated that the introduction of the VLJs will revolutionize this segment of aviation. The Eclipse E500 was the first VLJ to receive certification by the FAA in late 2006. The business community is attracted to the VLJ since it offers faster and more convenient travel than going through commercial service airports, and at a much lower cost than the existing corporate jet fleet. In addition, the VLJs require less runway length than today's corporate jets so this gives the business traveler many other airport options for reaching their destination, especially in large metropolitan areas.

The other GA aircraft types in the fleet are expected to increase, too. This includes turboprops, rotorcraft, and fixed wing single- and multi-engine piston. However, turboprops and rotorcraft are expected to show stronger growth than fixed wing piston aircraft. Aircraft utilization is expected to increase so the FAA's forecast of hours flown will generally outpace aircraft growth. Consequently, the GA aircraft fleet is projected to grow an average of 1.4 percent annually while total GA hours flown is projected to increase at 3.2 percent annually. The FAA is forecasting that active GA pilots will increase at 1.1 percent per year.

A new addition to FAA's list of GA segments is the light sport aircraft (LSA). The FAA expects the number of registered LSAs to reach 10,000 by 2011, and 17,000 by 2017. In the past, these ultralight aircraft have not been counted in the FAA's registry. However, many of these aircraft qualified to register as a LSA when a new set of guidelines was published in 2004. Today, LSAs at GA airports will become a part of the based aircraft count.

SOCIOECONOMIC FORECASTS

Population growth within an airport's service area can often be reflected in aviation activity growth at an airport. Aztec Municipal Airport's service area includes several communities, but Aztec and Bloomfield represent the largest cities inside the service area and the only two with published population data (estimates) through the Census Bureau and the University of New Mexico for 2000 through 2005 (**Table 2B**). The combined population growth of these two communities totals 13.5 percent in five years. This outpaced the growth seen for the state and the county; New Mexico population grew 6.0 percent and San Juan County grew 8.9 percent for the same period.

As shown in Table 2B, the population for the service area has averaged a 2.71 percent increase annually since 2000.

Table 2B, Airport Service Area Population History

Year	Aztec	Bloomfield	Total
2000	6,378	6,417	12,795
2001	6,587	6,865	13,452
2002	6,782	7,095	13,877
2003	6,918	7,223	14,141
2004	7,010	7,362	14,372
2005	7,084	7,442	14,526
Average Annual Growth Rate 2000-2005	2.21%	3.19%	2.71%

Source: U.S. Census Bureau

According to the San Juan Economic Development Services (SJEDS), San Juan County has been the fastest growing county in the state in recent years. The County has exceeded the growth projections that were prepared by University of New Mexico's Bureau of Business and Economic Research (BBER). The BBER projected county population to grow to 116,800 between 2000 and 2005, but actual population for 2005 was estimated at 126,200, eight percent higher than forecast.

The most recent population projections available that are tailored to the local area are included in the City of Aztec's *Water Development Plan*, dated May 2006. The Plan cites population projections for Aztec and San Juan County (Table 2C). As shown, population is projected to grow at 2.37 percent for Aztec and 1.24 percent for San Juan County.

Table 2C, Aztec and San Juan County Population Projections

Year	Aztec	San Juan County
Base Year - Census 2000	6,378	113,801
2010	8,464	128,592
2015*	8,920	135,150
2020	9,404	142,057
Average Annual Growth Rate 2000-2020	2.37%	1.24%

**Figures shown for 2015 are interpolated.*
Source: City of Aztec's Water Development Plan, prepared by Southwest Water Consultants, Inc., May 2006

The US Census Bureau released projections by state for the period 2000 through 2030, and updated these projections in 2004. For New Mexico, the US Census Bureau projects 15.4 percent growth for the 2000-2030 period or an average annual growth rate of 0.5 percent.

Table 2D gives an overview of the employment breakdown for Aztec and Bloomfield to highlight the predominant employment sectors in the airport service area. Per capita personal income is also included, which reveals that Aztec was only slightly higher than Bloomfield in 2000. These figures help characterize the local economy.

Table 2D, Airport Service Area Employment and Income

Description	Aztec	Bloomfield
Total Employment	2,840	2,458
Employment by Sector (%)		
- Management, Professional	25.0%	18.1%
- Service	21.9%	16.6%
- Sales and Office	25.4%	34.1%
- Farming, Fishing, Forestry	0.5%	0.3%
- Construction, Extraction and Maintenance	13.9%	16.9%
- Production, Transportation and Material Moving	13.3%	14.0%
Per Capita Personal Income (PCPI) for 2000*	$14,750	$14,424

Source: SJECS website.
**For comparison, the PCPI for San Juan County was $18,969 in 2000, and $22,135 for the State in 2000. Unemployment rates in 2000 for the County and the State were 5.8% and 5.0%, respectively. (NM Department of Labor).*

The Aztec area is characterized by its large production of gas and oil, its growing population that is striving to retain its rural sentiment, its large number of annual tourists visiting the Aztec National Monument and other area attractions, and its remarkable history so apparent at these attractions.

Since the gas and oil industry moved into San Juan County in the 1950s, it remained the predominant employer for many years. However, recent years brought substantial population growth, which caused a natural shift to retail as the primary economic base. Today, both industries play a substantial economic role in the County's economy. The County's economy is also reaping the benefits of a large highway improvement project completed in 2001. U.S. Highway 550 (formerly NM Route 44), which links San Juan County with Albuquerque, was rebuilt and widened. This has enhanced the safety of the highway and attracted more commercial vehicle usage.

Future economic development projects in San Juan County include a proposed coal-powered electrical plant near Shiprock, to serve the Four Corners Region. The power plant, named Desert Rock, would provide 200 jobs at the plant, 200 jobs in the coal mine, and an estimated 2,000 jobs during its four-year construction. Desert Rock would become the third power plant in San Juan County following Four Corners Power Plant that went online in 1963, and San Juan Generating Station that went online in 1973.

A recent and notable economic development kudos for San Juan County occurred in May 2006 when *Inc. Magazine* published its article on "Best Cities for Doing Business", which ranked 393 population centers across the nation. Farmington was ranked #39 out of the 393 total, and ranked

#25 within the sub-category of "hottest small cities" for doing business. Cities with an employment base of less than 150,000 fall into the "small cities" category.

AZTEC MUNICIPAL AIRPORT FORECASTS

Since 1995, Aztec Municipal Airport has seen based aircraft increase from 12 to 16 and operations increase concurrently. Growing aviation demand is also evident with the growing waiting list for hangar space at the airport, which holds 10 names today.

The Airport's location, competitive lease rates, two-runway configuration, and fuel service helps preserve its important GA role in the region.

The 16 aircraft based at the Airport consist of 11 single-engine piston Pipers and Cessnas, three ultralights, and two light sport aircraft.

The Airport Manager is available to the Airport on a 24/7 basis. Since there is no air traffic control tower, the operations estimates are derived from the Airport Manager's experience at the Airport. The peak season for airport operations is the summer, and the slowest period is the winter. Summer activity often includes a surge in operations associated with regional firefighting. The types of airport operations are diverse and span based aircraft operators, corporate operators such as those linked to the oil and gas production in the area, medical transporters, military, firefighters in single engine air tankers (SEATs) and helicopters, training flights, aircraft diverted from Farmington, and other business and recreational operators.

This is the first time that a forecast has been prepared for the Aztec Municipal Airport, specifically. As part of this process, forecast models were prepared and reviewed to establish based aircraft and operations projections for the Airport.

Based Aircraft Forecasts

Table 2E summarizes the results of the based aircraft forecast by fleet mix for the Airport. While the Action Plan is a short-term planning tool that looks out to 2011, these forecasts were projected to 2026 by applying the same annual growth rate used for the 2011 projections. As shown, a total of 18 based aircraft are expected within five years and 26 total within 20 years. Forecast models for based aircraft were prepared and reviewed prior to selecting a forecast. A discussion of each model reviewed follows Table 2E. The selected annual growth rate applied to project based aircraft is 2.37 percent, which was derived from a population growth forecast model. The model used the average annual growth rate for the Aztec population forecast from the City of Aztec's *Water Development Plan*, May 2006. This growth rate is above the FAA's projected 1.4 percent annual growth in the GA aircraft fleet nationwide. However, population growth in the Aztec Municipal Airport service area that averaged 2.71 percent over the last five years, the basis from which the *Water Development Plan* formulated its population forecasts for the area over the next 20-plus years, and the Airport's recent based aircraft growth support the selected 2.37 percent growth rate.

Table 2E, Based Aircraft Forecast

Year	Single Engine Piston	Multi-Engine Piston	Light Sport	Other (Ultralight)	Total
2006 (Actual)	11	0	2	3	**16**
2011	13	0	2	3	**18**
2016	14	0	3	3	**20**
2026	18	1	3	4	**26**

Source: ASCG & Airport Planning West, 2006

The two forecast models reviewed as part of the based aircraft forecasting process included the population growth model as well as a state market share model, described here.

Population Growth Model. According to the most recent set of population projections as published in the City's Water Development Plan, population for Aztec is projected to grow at an average annual rate of 2.37 percent through 2020. Applying the 2.37 percent annual growth rate to the current based aircraft results in an estimated 18 based aircraft by 2011, or two more aircraft over the next five years. Looking out 20 years, the Airport's based aircraft count would be 26 by 2026.

State Market Share Model. The NMASP projected statewide growth in based aircraft over a 20-year period. The low forecast projected 0.4 percent annual growth and the high forecast projected 3.3 percent annual growth. From the high and low forecast, this model takes the midpoint for a medium forecast growth of approximately 1.86 percent. Assuming that Aztec maintains its share of the statewide market over the next five years, the medium growth rate for the state is applied to the existing Aztec based aircraft count. This results in a projected based aircraft count of 18 by 2011, and 23 by 2026.

Also included in the review of forecast models were the low- and high-growth forecast scenarios derived from the NMASP's average annual growth rates for the Aztec Municipal Airport. **Table 2F** summarizes the two forecast models and the NMASP low and high forecasts.

Table 2F, Summary of Forecasts Models

Year	Population Growth Model (Selected)	State Market Share Model	NMASP Low	NMASP High
Base Year	**16**	16	12	12
2011	**18**	18	11	20
2016	**20**	19	10	26
2026	**26**	23	9	43
AAG	**2.37%**	1.86%	-1.25%	5.25%

Note: The NMASP 2003 projected a low of 9 based aircraft and a high of 33 by 2021, so the average annual growth rate (AAG) from these projections were applied to come up with the 2026 figures.

Aircraft Operations Forecasts

Table 2G summarizes the results of the operations forecast by type for the Airport. Operations, like based aircraft, are forecast out to 2026. The operations forecast was prepared by establishing an operations-per-based-aircraft (OPBA) ratio for the current activity and applying it to the based aircraft forecast. Total operations for 2006 as well as the breakdown of GA local, GA itinerant and military operations are based on the Airport Manager's estimates. Further, the Airport Manager estimates that historical operations over the last decade have generally grown in proportion to the based aircraft suggesting consistency in the character of the airport over the last several years. Since there are no major changes in the nature of the airport operations on the five-year horizon, it is reasonable to apply the OPBA ratio to the based aircraft projections to produce an aircraft operations forecast. Consequently, this approach links operations growth to population growth like the based aircraft forecast so the average annual growth rate is comparable. The operations split between GA local and GA itinerant is also projected to remain constant. Military operations are not expected to increase.

The OPBA ratio is currently 506. This figure, rounded to 510, is applied to the based aircraft projections and results in an airport operations forecast of nearly 9,200 in five years, and an estimated 13,260 within 20 years.

Table 2G, Aircraft Operations Forecast

Year	GA Local	GA Itinerant	Military	Total
2006 (est.)	3,000	5,000	100	8,100
2011	3,400	5,680	100	9,180
2016	3,790	6,310	100	10,200
2026	4,930	8,230	100	13,260

Source: ASCG & Airport Planning West, 2006

The operations forecast is also presented by aircraft fleet mix. Table 2H shows that 95 percent of the current operations are conducted by single engine piston aircraft, but that figure will fall to 87 percent by 2026. As shown, the fleet mix is anticipated to make small, but progressive shifts in fleet mix over time as outlined in the NMASP 2003 projections and the national GA trends.

Table 2H, Operational Fleet Mix Forecast

Year	Single Engine Piston	Multi-Engine Piston	Turboprop	Turbojet	Rotorcraft
2006 (est.)	95%	2%	1%	0%	2%
2011	94%	2%	1%	1%	2%
2016	90%	3%	2%	2%	3%
2026	89%	4%	2%	2%	3%

All airport operations at Aztec are visual. The Airport does not have an instrument approach and the Airport does not have any immediate plans for one. The Four Corners Regional Airport in Farmington is the closest airport with an instrument approach.

CRITICAL AIRCRAFT AND AIRPORT REFERENCE CODE

An airport is designed around its critical aircraft. A critical aircraft is the aircraft with the most demanding attributes that is using the airport on a regular basis, which means it is conducting 500 or more annual operations. A take-off or a landing is counted as one operation. Identifying the critical aircraft is the first step in determining the design needs of an airport. The second step is to determine the airport reference code (ARC). The ARC is an alphanumeric designation that identifies the operational and physical characteristics of the most demanding aircraft (critical aircraft) or family of aircraft operating at the airport on a regular basis. The ARC drives the design of the airport such as runway and taxiway widths, separations, and runway safety. The letter in the ARC refers to aircraft approach speed (Aircraft Approach Category) and the Roman numeral refers to the wingspan (Airplane Design Group). Aircraft Approach Categories are defined by A, B, C, D and E. Airplane Design Groups are defined by Roman numerals I, II, III, IV, V and VI. Aztec Municipal Airport is an A-I airport, which means that the aircraft that are predominantly using the airport have approach speeds less than 91 knots and wingspans up to but not including 49 feet. Examples of A-I aircraft include the Lancair 400, Cessna 172, Beech Bonanza, and Piper Cherokee. In fact, the new Eclipse, part of the microjet or VLJ aircraft family, is also an A-I aircraft with its estimated 87-knot approach speed and wingspan of just over 37 feet.

According to the NMASP 2003, the ARC for Aztec is A-I, but is projected to be a B-I in the future. Examples of B-I aircraft include the Beech King Air, Cessna 404, and Piper Cheyenne. For Aztec, the critical aircraft is the Lancair 400 with an approach speed of 78 knots, a wingspan of 36 feet, and a maximum takeoff weight of 3,600 pounds. This A-I aircraft is representative of the family of aircraft that are operating at the airport daily, which are all defined as "small aircraft" (12,500 pounds or less).

Based on the projected operational fleet mix, the Aztec Municipal Airport should continue to be designated as an A-I airport through 2011. Beyond 2011, B-I aircraft operations are expected to grow and the airport will become a B-I facility.

Chapter Three
FACILITY REQUIREMENTS

INTRODUCTION

Aztec Municipal Airport's facility requirements are derived from aviation demand and the FAA's current design standards. The proposed improvements are based on a set of planning criteria. The criteria drive the size and type of facility improvements. The facility improvements are presented by category and include airside facilities, landside facilities, support facilities, and airport environs.

PLANNING CRITERIA AND AIRPORT ROLE

Standards for airport design are derived from FAA guidance. To remain eligible for federal funding, airports are required to comply with FAA design standards. In particular, FAA Airport Advisory Circular 150/5300-13, including changes 1-12, *Airport Design*, is applied during the preparation of planning documents and drawings such as the airport layout drawing. These standards have been applied to Aztec Municipal Airport in determining the airport's current and future facility needs.

Also of importance is the understanding of the airport's role in the system of airports. Aztec Municipal Airport is included in both the state aviation system and the federal system of airports.

An airport's inclusion in the *National Plan of Integrated Airport Systems (NPIAS)* means that it is important to the national system of airports and that it is eligible for federal funding. The NPIAS, which is published by the U. S. Department of Transportation, Federal Aviation Administration (FAA), identifies Aztec as a General Aviation (GA) airport. GA airports are those that do not receive scheduled commercial service or that do not meet the criteria for classification as a commercial service airport, but typically have at least 10 based aircraft and are at least 20 miles from the nearest NPIAS airport.

The New Mexico Airport System Plan (NMASP) uses the NPIAS categories to identify roles for its airports statewide. However, the NMASP breaks GA into two subcategories: GA Gateway and GA Key. The NMASP 2003 upgraded the Aztec Municipal Airport from its GA Key role (NMASP 2000) to a GA Gateway Airport, which means the airport serves a larger population base than a Key airport and regularly serves business activity. The results of Chapter Two, Forecasts, in this Action Plan suggest that the Airport may continue in a GA Key role.

DESIGN AIRCRAFT AND AIRPORT REFERENCE CODE

FAA guidance provides airport planning and design standards appropriate for the speed and size of aircraft using the airport, as outlined in **Table 3A**.

Table 3A, Airport Reference Code Components

Aircraft Approach Categories		**Airplane Design Groups**	
Category	*Approach Speed*	*Group*	*Wingspan*
A	Less than 91 knots	I	Up to but not including 49 feet
B	91 knots or more but less than 121 knots	II	49 feet up to but not including 79 feet
C	121 knots or more but less than 141 knots	III	79 feet up to but not including 118 feet
D	141 knots or more but less than 166 knots	IV	118 feet up to but not including 171 feet
E	166 knots or more	V	171 feet up to but not including 197 feet
		VI	197 feet up to but not including 262 feet

Airplane Design Group	**Tail Height**
I	Less than 20 feet
II	20 to less than 30 feet
III	30 to less than 45 feet
IV	45 to less than 60 feet
V	60 to less than 66 feet
VI	66 to less than 80 feet

Source: FAA AC 15/5300-13, Airport Design

Aircraft approach categories are defined by letters A through E and refer to an aircraft's approach speed, which is 1.3 times its stall speed. Design groups refer to wingspan and tail height, and are defined by Roman numerals I through VI. An aircraft approach category combined with an airplane design group forms an alphanumeric code referred to as an airport reference code (ARC). The ARC helps define the character and design needs of an airport. An ARC is determined by the airport's design aircraft, or family of aircraft, operating there on a regular basis. The FAA defines "regular basis" as 500 annual itinerant operations. As described in Chapter Two, Aztec Municipal Airport is an A-I airport now, and is expected to be B-I in the future.

AIRSIDE FACILITY REQUIREMENTS

Airside facilities include runways, taxiways, and apron areas. This section presents the facility requirements for Aztec through 2011.

Runway Alignment

The primary runway at an airport should be aligned with the prevailing winds. Primary Runway 8-26 at Aztec Municipal Airport aligns with the predominant east-west wind conditions, which is supported by the last 10 years of wind data from Farmington, 1996-2005, shown in **Table 3B**.

Table 3B, All-Weather Wind Coverage at Aztec

	10.5 knots/12 mph	13 knots/ 15 mph
Runway 8-26	96.51%	98.17%
Runway 4-22	88.87%	93.32%
Combined	98.8%	99.25%

Source: Farmington, New Mexico 1996-2005 (24 hours, daily)

As shown, the wind coverage on Runway 8-26 exceeds 95 percent. This result is important since FAA recommends an airport's primary runway have at least 95 percent wind coverage at 12 mph for small aircraft. When coverage is less than 95 percent, FAA guidelines recommend a crosswind runway. When coverage is higher than 95 percent, FAA is not likely to participate in funding a crosswind runway. However, several pilots operating at the Airport have stated that there is a strong need to continue maintaining a crosswind runway. Experienced pilots have stated that crosswinds have lasted for several hours.

An old Airport Layout Drawing for Aztec previously showed that Runway 8-26's wind coverage at 12 mph was only 93.7 percent. This is likely the result of how historical wind data was collected and tabulated. The old Airport Layout Drawing included 22 years of wind data from Farmington spanning 1954 to 1976. However, the data was reported in an outdated 16-point windrose rather than the more current and precise 36-point windrose used today. The 36-point windrose provides wind data in increments of 10 degrees rather than the less accurate 22.5-degree increments.

Runway Dimensions

Primary Runway 8-26 Length. Runway 8-26's length is 4,311 feet, but each threshold is displaced 210 feet from the runway end to accommodate runway safety area (RSA) requirements. The terrain slopes down too sharply at both runway ends to provide a standard RSA length beyond the runway end. The RSA required for A-I airports, serving small aircraft exclusively, is 240 feet beyond the runway end and there is currently only an estimated 30 feet off each end. According to the FAA Computer Model results for runway length determination for Aztec shown in Table 3C, 75 percent of the small aircraft fleet needs a runway length of 5,230 feet, which is 919 feet more than the Airport has today. The 75-percent category is equivalent to the A-I family of small aircraft. The Lancair 400, which is the design aircraft identified in Chapter Two, falls within this 75-percent category of small aircraft.

Table 3C, FAA Computer Model Results for Runway Length at Aztec

Airport and Runway Data	
Airport elevation	5,883 feet
Mean daily maximum temperature of the hottest month	94.00 F.
Maximum difference in runway centerline elevation	17 feet
Length of haul for airplanes of more than 60,000 pounds	500 miles
Dry runways	
Runway Lengths Recommended for Airport Design	
Small airplanes with approach speeds of less than 30 knots	480 feet
Small airplanes with approach speeds of less than 50 knots	1,270 feet
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes	**5,230 feet**
95 percent of these small airplanes	7,410 feet
100 percent of these small airplanes	7,410 feet
Small airplanes with 10 or more passenger seats	7,410 feet
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load	7,450 feet
75 percent of these large airplanes at 90 percent useful load	8,770 feet
100 percent of these large airplanes at 60 percent useful load	11,170 feet
100 percent of these large airplanes at 90 percent useful load	11,170 feet
Airplanes of more than 60,000 pounds	Approximately 7,080 feet

Source: FAA Computer Model for Airport Design.

Crosswind Runway 4-22 Length. With a current length of 2,909 feet, Runway 4-22 provides only 56 percent of the recommended 5,230 feet of runway. Although not physically possible on the current site, this means the runway would need to be extended 2,321 feet to meet the full recommended runway length for the A-I family of aircraft. However, the new all-weather wind data collected from Farmington indicates that the primary runway alone meets the FAA-recommended 95 percent wind coverage. Therefore, any improvements to the crosswind runway would likely not be an eligible project for FAA funding unless other wind data specific to Aztec revealed that the wind coverage on Runway 8-26 was less than 95 percent.

Runway 8-26 Width. Based on FAA guidelines for an A-I runway with not lower than ¾-mile approach visibility minimums, Runway 8-26 should be a minimum of 60 feet wide. Runway 8-26 is currently 50 feet wide, so future improvements should include a 10-foot widening. The 60-foot minimum width also applies to B-I runways. Therefore, when the Airport upgrades to a B-I facility, the runway will not require widening beyond the 60 feet.

Runway 4-22 Width. Like the Runway 8-26 width requirements, Runway 4-22 also needs to be widened to 60 feet from its current 40-foot width.

Pavement Strength and Condition

The pavement strength rating for the primary and crosswind runways are estimated at 6,000 pounds single wheel loading (SWL). Apron and taxiway pavement strength ratings are estimated to be the same as the runways. All airfield pavements should be improved to a minimum pavement strength rating of 12,500 pounds SWL.

Pavement condition is assessed using a numerical rating system, known as Pavement Condition Index (PCI), which has a range from 0 (failed pavement) to 100 (new pavement). The source of the following PCI data is a May 23, 2007 pavement condition report provided by the NMDOT Aviation Division for Aztec.

Facility	PCI Rating
Runway 8-26	69
Runway 4-22	24
Main Apron	37
Connecting Taxiway	73

The PCI rating of 69 for Runway 8-26 means the pavement is in fair condition. Runway 4-22's rating of 24 is based on varying pavement condition: the pavement north of the runway intersection is classified as failed pavement, while the pavement south of the runway intersection is classified as being in very poor condition. The condition of the main apron, with a PCI of 37, is also very poor. However, a small strip of taxilane pavement in the southwest corner of the apron has the highest PCI rating, 100.

Runway Gradients and Line-of-Sight

Runway longitudinal gradients for both runways comply with current FAA guidelines since they are less than 2%, which is the maximum gradient for runways serving Aircraft Approach Category A and B. The maximum difference in runway elevation on Runway 8-26 is 17 feet and Runway 4-22 is 21 feet. However, the higher elevations at midfield for Runway 8-26 obstruct visibility between the intersecting runways and 8-26 runway ends. Further, a pilot taking off on Runway 8 or 26 cannot see the opposite end of the runway to ensure it is clear for takeoff due to the parabolic longitudinal grades of 8-26 and 4-22. The only clear line-of-sight to all four runway ends is on the connecting elbow taxiway, which is southwest of the runway intersection point.

The connecting taxiway was designed and constructed to provide an immediate, but temporary, solution to the airfield line-of-sight problems.

The Runway Visibility Zone (RVZ) establishes an area that provides line-of-sight between intersecting runways. The RVZ should be clear of buildings and other objects that would prevent a pilot departing one runway from seeing an aircraft simultaneously departing the intersecting runway in ample time to take evasive action. Specifically, FAA AC 150/5300-13, *Airport Design*, states "Terrain needs to be graded and permanent objects need to be designed or sited so that there will be an unobstructed line of sight from any point five feet above one runway centerline to any point five feet above an intersecting centerline, within the runway visibility zone." The distance between a runway intersection point and each runway end determines the RVZ. At Aztec, the RVZ is a distorted diamond shape, as shown on Exhibit 1B in Chapter One. One point of the diamond is the end of Runway 22. The other three points are each located at the midpoint between the runway intersection and the remaining three respective runway ends. As Exhibit 1B shows, buildings are located inside the RVZ, and, therefore, the airfield does not comply with the FAA standard for line-of-sight. This issue should be addressed when identifying future development alternatives with varying physical layouts.

Taxiways

Although not a priority in the short-term, the airfield taxiway system should be improved in the long-term to include a parallel taxiway for Runway 8-26, or a partial parallel taxiway, at a minimum. A parallel taxiway is typically not warranted until activity reaches about 20,000 annual operations or an instrument approach is established. For an instrument approach with 1-mile visibility minimums, the FAA recommends that the runway have a parallel taxiway. A parallel taxiway is required for precision instrument approaches or any approach with less than 1-mile visibility minimums. The physical constraints at the Airport make it challenging to achieve the required runway to taxiway centerline separation, which is 150 feet for ARCs A-I and B-I.

Without a parallel taxiway system, the turnarounds at the runway ends accommodate A-I or B-I aircraft taxiing operations. However, only three of the four runway ends have turnarounds. Further, Runway 8 and 26 end turnarounds are suitable for A-I and B-I aircraft, but the turnaround at Runway 4 end is narrow and inadequate. A turnaround should also be constructed at the Runway 22 end.

Any new taxiways should be at least 25 feet wide, the minimum required for Airplane Design Group I.

Aprons and Aircraft Parking

The L-shaped aircraft apron area at Aztec can, in the short-term, meet typical and peak period use by based and transient aircraft as well as the seasonal firefighting operations with single engine air tankers (SEATs) and helicopters. However, airport operations will continue to grow so the apron area should be improved and expanded in the long-term to accommodate the growth in a more efficient and functional use of ramp space.

Airfield Lighting

The current Runway 8-26 reflective lighting is a low-cost, low maintenance alternative to a conventional runway lighting system and meets the Airport's needs in the short-term. However, the Airport should plan for a medium intensity runway lighting (MIRL) system in the long-term as operations grow. A runway lighting system will better serve approaching pilots at night to enhance safety since the reflective lighting requires the pilot be aligned on final approach to see the lighted panels. However, there are currently approach lights/runway identifier strobes on Runway 8, which can be activated on the Common Traffic Advisory Frequency (CTAF). The approach lights are considered non-standard since they are located at less than standard spacing so a lighting project should address this issue.

A reflective lighting or MIRL system should be installed on Runway 4-22 in the future. There are currently no lighting sources on this secondary runway.

The existing connecting taxiway reflectors meet the Airport's needs in the short-term and keep operating costs low. Like the runway lighting recommendations, taxiway lighting improvements should be planned for the long-term to serve growing activity better.

The current apron lighting is adequate, but additional security lighting should be coincident with future apron improvements.

Airport Navigational Aids

The Airport's visual aids, which include the rotating beacon and visual glide slope indicators for Runways 8 and 26, have adequately served users at a low cost. It is recommended that reflective visual glide slope indicators be installed on Runways 4 and 22 also.

Aztec Municipal Airport's role in serving small GA users and its fewer than 10,000 annual operations has driven only modest demand for instrument approach aids. However, the Airport should plan for a long-term GPS approach since the cost has made it much more feasible for smaller and more rural airports than in the past. Visibility minimums and runway separation requirements associated with an instrument approach will play a role in the decision on the type of approach in the future.

Other Airfield Facilities

Airfield signage should be updated to comply with current FAA signage standards. Current airfield signage is non-standard or lacking.

Supplemental wind cones should be installed on the airfield to provide pilots with better wind direction information. There is currently only one primary wind cone on the airfield located approximately midfield.

Weather reporting meets the current needs of the local pilots. The Automated Surface Observing System (ASOS) is providing service 11 nautical miles southwest at Four Corners Regional Airport in Farmington.

Fixed wing operations are predominant with infrequent helicopter activity, which typically occurs as part of firefighting operations. As a result, a separate helicopter operations area is not needed in the short-term. However, long-term development should consider separating fixed wing and rotorcraft activity to promote a safe and more efficient airfield environment as operations grow to minimize rotor wash impacts on fixed wing operations. Aztec is occasionally used as an aerial firefighting facility by BLM. Among the BLM aircraft staging from Aztec is the Sikorsky Skycrane, which has a 72-foot rotor diameter and can create a rotor wash of approximately 100 miles per hour at a 10-foot hover.

Key Airfield Dimensions

Table 3D highlights some of the key airfield dimensions described earlier as well as other relevant airfield design needs, as defined in FAA guidance. Runway safety areas, object free areas, obstacle free zones, and runway protection zones are all important surfaces that represent a significant factor in airfield design/layout. Definitions for these surfaces follow Table 3D. The column titled "A-I/B-I Standards" provides the airport's existing and future design standards. Table 3D also includes a column titled "B-II Standards" for information and possible long-term planning purposes. The airport's physical constraints on the mesa make it less feasible to accommodate B-II standards since many facility dimensions and separation requirements are greater than A-I/B-I requirements. However, some King Airs and comparable turboprops are B-II aircraft so the B-II standards are noteworthy for comparison.

Many of the airfield dimensions outlined in Table 3D are self-explanatory. For the others, brief definitions are presented here:

- Runway Object Free Area (OFA) is a two-dimensional ground area surrounding the runways that should be clear of objects except for objects whose location is fixed by function.
- Runway Safety Area (RSA) is a graded surface surrounding the runway that serves to minimize damage to an aircraft in the event of an undershoot, overshoot, or excursion from the runway.
- Runway Obstacle Free Zone (OFZ) is protected airspace that is centered on the runway centerline and should be kept clear of object penetrations.
- Runway Visibility Zone (RVZ) is an established area that provides line-of-sight between intersecting runways. The RVZ must be clear of buildings and other objects that would prevent an aircraft departing one runway to see an aircraft simultaneously departing the intersecting runway in ample time to take evasive action.
- Runway protection zone (RPZ) is a trapezoidal surface centered on the extended runway centerline and beginning 200 feet from the runway end. The purpose of the RPZ is to enhance the protection of people and property on the ground and, therefore, the FAA recommends that this surface remain clear of objects. The type of aircraft using the runway and the approach visibility minimums dictate the RPZ dimensions.

Table 3D, Airfield Design Standards

	A-I/B-I Standards, Small Aircraft Exclusively (Existing/ Short-term Planning)	B-II Standards (For Information and Possible Long-term Planning)
Runway Width	60'	75'
Runway to Taxiway Separation		
- small aircraft exclusively	150'	240'
- all aircraft in category	225'	
Taxiway Width	25'	35'
Runway Object Free Area (ROFA) Width		
- small aircraft exclusively	250'	
- all aircraft in category	400'	500'
Runway Object Free Area (ROFA) Length	240'	300'
Runway Safety Area (RSA) Width	120'	150'
Runway Safety Area (RSA) Length (before and after landing threshold)	240'	300'
Runway Obstacle Free Zone (OFZ) Length Beyond Runway End	200'	200'
Runway Obstacle Free Zone Width		
- small aircraft exclusively*	250'	
- all aircraft in category	400'	400'
Runway Visibility Zone	Calculation based on distance between runway intersection and runway ends (see chapter discussion)	
Runway Protection Zone		
- Visual & not lower than 1-mile visibility min.		
-- small aircraft exclusively	1,000' x 250' x 450'	1,000' x 250' x 450'
-- all aircraft in category	1,000' x 500' x 700'	1,000' x 500' x 700'
- Not lower than 3/4-mile visibility min.	1,700'x 1,000'x 1,510	1,700'x 1,000'x 1,510

Note: All dimensions based on visibility minimums of not lower than ¾-mile unless otherwise noted.
** For small aircraft with approach speeds of 50 knots or more*
Source: FAA AC 150/5300-13, change 12, Airport Design

Runway safety area is a critical surface and FAA requires compliance or, at a minimum, a high priority project programmed to mitigate the non-standard condition. Runway 8-26 cannot meet the RSA standards beyond the runway pavement ends due to the considerable drop in terrain so the 210-foot displaced threshold at each end serves to mitigate this condition and comply with the standards. The RSA must be cleared and graded to support emergency ground equipment or an aircraft that may undershoot or overrun the runway.

Based on an inspection of Runway 4-22 ends, the RSA appears to be in compliance on Runway 22 end. However, the RSA does not appear to meet the RSA dimensional or grading requirements on Runway 4 end. Therefore, RSA improvements to or a more detailed physical inspection of Runway 4 end should be planned.

Portions of the runway protection zones for Runway 8, 26, and 22 extend beyond airport property and should be controlled through fee simple acquisition or avigation easement.

Dimensions for runway separation should be incorporated into proposed runway, taxiway, and apron improvements.

LANDSIDE FACILITIES

Airport Administration Building

The airport manager's hangar, which includes his office, adequately meets airport administration space needs in addition to providing him with adequate storage for his based aircraft and maintenance shop.

Terminal Building

Terminal buildings at small GA airports vary in size depending on the pilot/passenger volume and the need for specific terminal functions. Basic terminal needs typically include public restrooms and a pilot lounge for flight planning. Aztec's low activity supports the need for a modest facility. Currently, the Airport Manager's office space is partly serving the terminal function. There are restrooms and a seating area for pilots or other airport visitors. Although not immediately necessary, an area should be designated for the development of a small GA terminal facility in the long-term. The terminal might be a new stand-alone building or an expansion of the existing facility.

Fixed Base Operator (FBO) Facilities

The Airport does not have an official FBO, but D&N Enterprises, which is contracted with the City of Aztec to manage the airport, provides aircraft fueling. Designating an FBO development area should be considered in the long-term. Low activity airports do not typically provide enough business for an FBO to be economically viable. As airport activity grows in the long-term, it may be cost-effective for an FBO to operate at the Airport.

Hangars

Additional hangar development is needed at the airport in the short-term. All but two based aircraft are stored in hangars. Two additional based aircraft are projected at the Airport within five years for a total of 18. The projected growth in the future primarily includes single engine like the aircraft there today. Therefore, future hangar development should address both T-hangars and conventional hangars. One new T-hangar was recently constructed, so at least three more aircraft hangar spaces are needed in the short-term.

The Airport's current waiting list for hangar space is evidence of the need to accommodate more hangar development in the short-term. The City permits private hangar development with ground leases. However, individuals on the hangar waiting list have not expressed interest in private

development. Farmington's Four Corners Regional Airport is the closest public use airport alternative for hangar space. Based on the significant interest in hangar storage expressed by pilots in the region, the Airport Manager estimates that the construction of up to ten T-hangar units or equivalent conventional hangar storage could be easily filled in a reasonable amount of time. Some of the interest is from New Mexico residents in the Farmington area and some is from pilots residing in Colorado.

Airport Access and Vehicle Parking

Airport access from the City to the Airport is adequate in the short- and long-term. The airport access road was repaved in mid-2007. Future airport development should include a review of the current alignment of Airport Drive and how it serves the ultimate layout of facilities. Directional signage from the City to the Airport is sufficient with signs located on Highway 516 and Oliver Drive.

Auto parking capacity is sufficient in the short- and long-term. The auto parking area outside the airport fence was recently paved. This newly paved area combined with the parking area adjacent to the Airport Manager's office provides parking for an estimated 25 vehicles.

AIRPORT SUPPORT FACILITIES

Aircraft Rescue and Firefighting Facilities (ARFF)

Since the Airport does not have commercial service, it is not required to have aircraft rescue and firefighting capability. The City Fire Station, located on airport property, provides support to the community and the Airport with a team of local volunteer firefighters. The medical facilities in the area and the volunteer firefighters are adequate to meet operational requirements. However, it is recommended that the firefighters be trained in aircraft firefighting and rescue.

Aircraft Fuel Storage

Fuel storage for 100LL includes one aboveground 5,000-gallon tank, which is located on the north side of the Airport Manager's office and hangar complex. The current storage capacity is adequate the short-term (2011). However, long-term planning for fuel storage should consider space for expansion and appropriate environmental containment requirements.

The Airport also has a 300-gallon mogas storage tank located at the south end of the apron with next-day service available when additional mogas is needed.

Fuel sales at Aztec average about 2,000 gallons monthly or 24,000 annually, of which 90 percent is 100LL fuel sales. Based on Aztec's estimated 8,100 annual operations, fuel demand averages three gallons per operation. Applying this ratio to the projected 2011 annual operations results in an average monthly fuel demand of 2,290 gallons, but the peak month demand will likely approach 3,100 gallons. Therefore, demand can be accommodated with the current fuel storage capacity in the short-term. If fuel consumption exceeds projections, the Airport can increase the frequency of fuel deliveries without expanding the fuel storage. Currently, fuel deliveries

average one per month and are "compartment" deliveries, which means that the fuel truckload is shared with another airport to keep costs low.

Airport Maintenance

Airport maintenance equipment is stored outside and adjacent to the Airport Manager's hangar. Future airport improvements should include the construction of a maintenance equipment building.

Airport Fencing

The four-strand, four-foot high fence meets the Airport's current need to enhance the safety and security of the airport operations by deterring trespassers and wildlife. However, the fence line is too close to the runway ends. Further, the alignment and location of the fence should be modified to accommodate the ultimate airport boundary and future facilities once a preferred development alternative is selected.

Utilities and Drainage

Utilities at the Airport include electricity, gas, water and sewer, which are available to the Airport Manager's office and hangar. Other hangars are limited to electricity.

Currently, drainage at the Airport is adequate. Drainage as well as utility infrastructure improvements should be coincident with future airside and landside development.

According to the Airport Manager, Aztec Municipal Airport's Storm Water Pollution Plan is up to date.

Airport Property

Half of the airport is on property owned by the Bureau of Land Management (BLM). The City has been leasing the land from this federal agency for $12.50 per month. The BLM-leased property totals 88 acres and the Airport-owned property totals 72 acres. The City is currently pursuing a patent for the BLM land. The City's current five-year lease should provide the time necessary to complete the planning, environmental, and coordination process.

AIRPORT ENVIRONS

On-Airport Land Use

For Aztec, on-airport land use can be divided into six categories: Airfield Operations Area (AOA), Terminal Area/Support, GA, Corporate GA/FBO, Firefighting, and Open/Aviation Reserve. The Open/Aviation Reserve designation should be used for property not already designated for use in the other categories. For example, terrain may make some property unsuitable for development, or other property may already accommodate the development plans for the next several years.

D&N Enterprises has a lease to operate the Airport. D&N sublets the property for other specific aviation and non-aviation land uses, which bring in revenue without affecting airport operations. One example of a non-aviation land use is the cell phone tower on top of the Airport's old beacon. It is recommended that future renewal of leases consider the Airport's short- and long-term development plans. In addition, there is the possibility of demand growing beyond projections. This could drive the need for property development to occur faster. Further, the character of the Airport and its associated needs could also change later, so the City should keep its plans as flexible and responsive as practical.

Off-Airport Land Use

Since Aztec Municipal Airport is now in the NPIAS, the FAA will require compliance with grant assurances as part of the acceptance of federal funding. As described in Chapter One and recapped here, one of the grant assurances requires that the City commit to promoting compatible land use around the Airport. This primarily refers to two critical issues: height and noise.

Height. The set of imaginary airspace surfaces that should be protected on and around an airport are outlined in 14 CFR Part 77, *Objects Affecting Navigable Airspace*. The City and Airport Manager should continue their close review of all proposed development near the Airport to keep the airspace free of obstructions. Such proposed development should be submitted on FAA Form 7460-1, *Notice of Proposed Construction*.

Upon the selection of a preferred development alternative, the City of Aztec should also submit its Part 77 Airspace Plan to the FAA for review. The Airspace Plan will graphically depict the imaginary airspace surfaces as they apply to the future plan for Aztec.

Noise. Although the City has a real estate disclosure requirement near the Airport, it is recommended that additional land use controls be put in place. Zoning around the Airport is needed. The zoning should restrict development to land uses compatible with airport operations. Residential development, schools, churches and similar places of public assembly are not compatible with airport operations so their placement should consider the runway approach and departure airspace, airport traffic pattern, and associated noise impacts.

Two proposed subdivisions, Pioneer Heights and Cecil Henry, are within or adjacent to the approach path to Runway 26. The Crane subdivision is adjacent to the Runway 22 approach. Although the City requires a disclosure statement about the airport's proximity on these subdivision plats, these neighborhoods may present an encroachment problem that escalates in the future. Increasing aircraft operations will bring increased noise impacts to the area. The City's forethought and planning today will help the Airport and community neighborhoods suitably coexist in the future.

It is recommended that future updates to the City's Comprehensive Plan and related planning documents include an overview of the current airport facilities, current and projected activity, the

proposed long-term development plans, and specific details of the current and proposed land use protection tools for the airport environs such as zoning and easements.

Regional Airspace

The closest public use airport to Aztec Municipal is Four Corners Regional Airport in Farmington, located 11 nautical miles northwest. Four Corners Regional incurs a high level of airport activity. In comparison, Aztec's activity represents an estimated seven percent of the total activity at Farmington. Operationally, both airports coexist without airspace conflicts. While Aztec is a basic visual airport, Farmington has several instrument approaches including an instrument landing system (ILS) approach.

Chapter Four
ALTERNATIVES

INTRODUCTION

With facility needs identified for the Airport, the next step is to identify one or more possible physical layouts that can serve those needs. Three preliminary development alternatives have been identified for the City's consideration that address airfield configuration changes and what that means to potential landside development.

All three alternatives recognize the development challenges facing any proposed improvements such as the significant drop in terrain near the runway ends, the need to maintain a clear line-of-sight between runways to comply with FAA standards, and the limited amount of developable and accessible land at the site.

All three alternatives are based on the following guidelines and assumptions:

- Future development will be demand-driven.
- All proposed improvements will comply with current applicable FAA design standards and airspace regulations.
- Proposed alternatives should maximize the use of the available undeveloped land on the site and take advantage of the airport facilities and infrastructure already in place.

- Proposed alternatives should address both short-term (five-year) and long-term (20-year) development within the limitations of the site. A substantial increase in airside or landside development beyond that reflected in the alternatives may require the City to seek a new and larger airport site.
- A possible instrument approach in the 20-year future will include visibility minimums not less than 1 mile, so the runway protection zone (RPZ) dimensions and facility separation requirements may be minimized and developable land maximized.
- Land needed for development will be acquired.

Ultimately, the City's preferred development alternative should represent a comprehensive and functional long-term plan for the Airport. While the alternatives show layouts appropriate for the 20-year future—15 years beyond the scope of this Action Plan—land acquisition from the BLM should look beyond the 20-year future for several reasons:

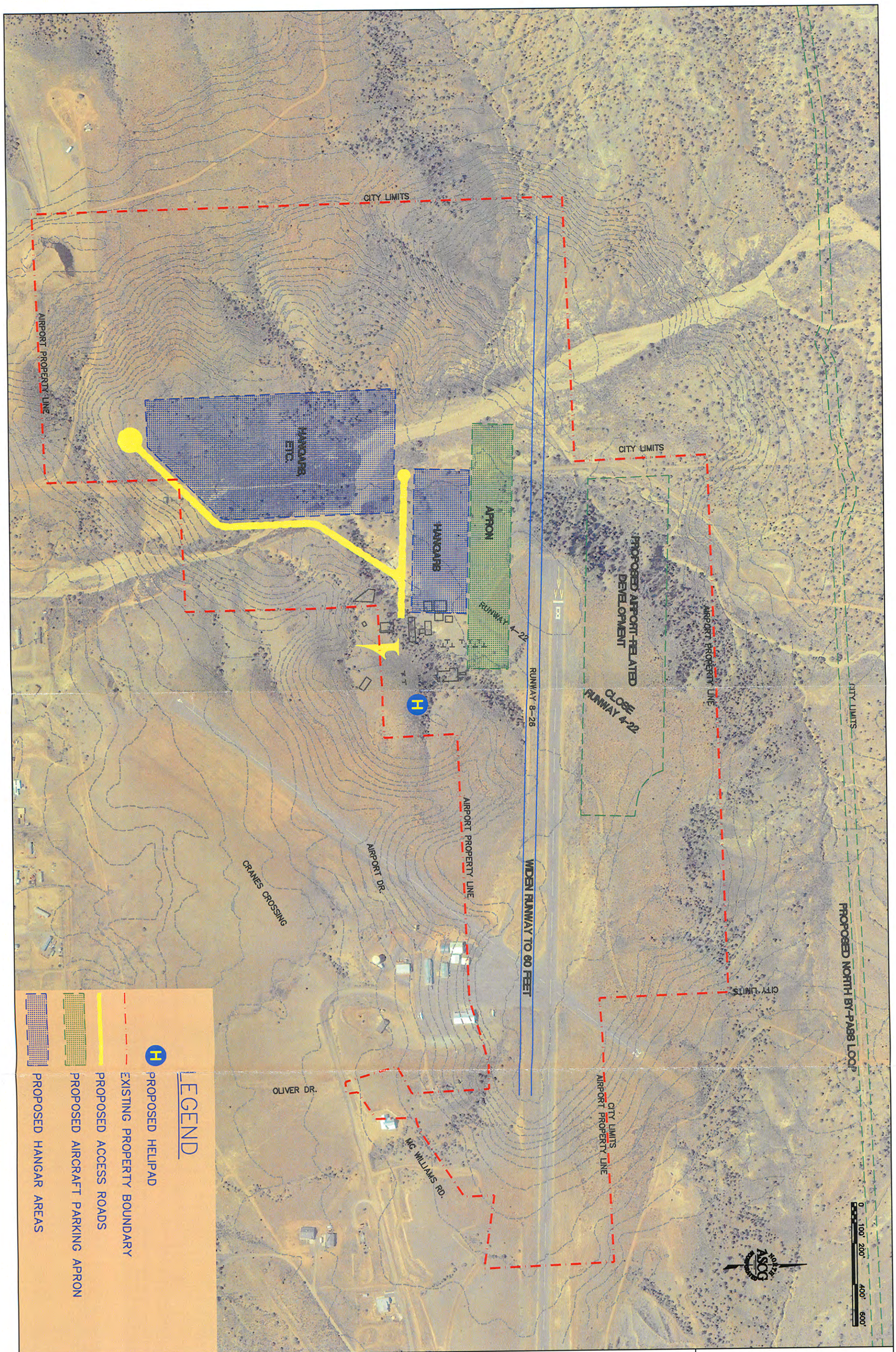
- Aircraft and navigational aid technology is changing rapidly, and changes to the FAA's airport design advisory circular are published on an almost annual basis, mostly to keep up with GPS instrument approach technology. It would be prudent to protect larger RPZs at Aztec Municipal Airport, to allow better instrument approaches in the future.
- Land on the mesa top north of Runway 8-26 and land needed to provide surface access to it from below the mesa and from the south side of Runway 8-26 should be acquired to accommodate future airport landside development. In other words, it would be prudent for the Airport property to include as much of the mesa, from bottom to top, as feasible.
- The regional population is growing rapidly, the airport influence area extends past the City limits into the unzoned San Juan County, zoning is not popular among many rural residents of the County, and the BLM in this region is amenable to selling land near cities to private individuals who subdivide it for residences. The City's compatible land use zoning and real estate disclosure cannot be as effective as Airport control of areas that will be subject to aircraft noise exposure in the future.

AIRPORT DEVELOPMENT ALTERNATIVES

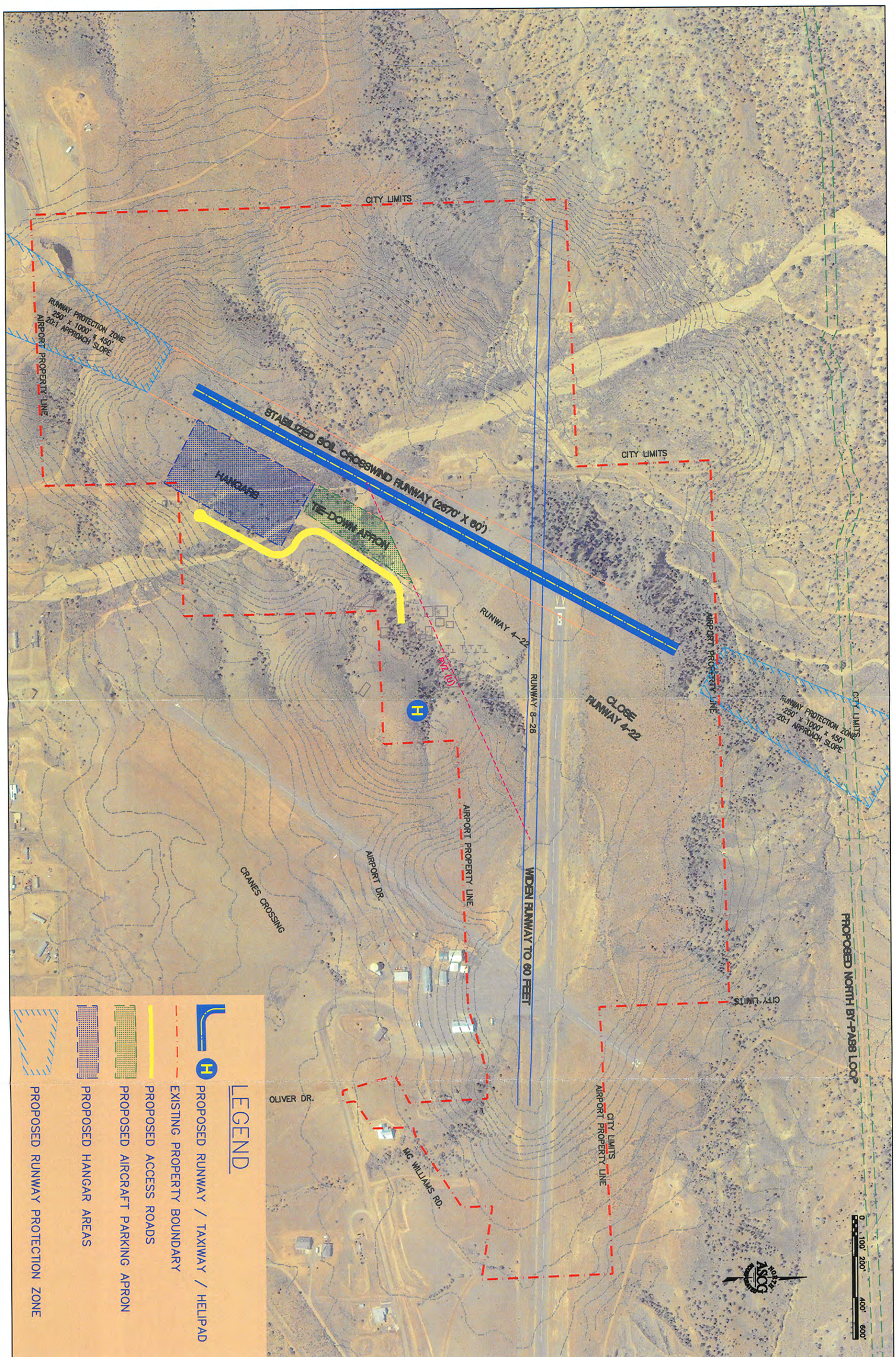
The three preliminary development alternatives are described here and presented in Exhibits 4A, 4B, and 4C. Common features among the three development alternatives include widening Runway 8-26 to 60 feet to meet FAA design standards, constructing a helipad southeast of and adjacent to the main apron, and reserving the land around the airport manager's office for the development/expansion of a terminal building/FBO site.

Alternative A – No Crosswind Runway

This alternative maximizes the development of hangars by abandoning the crosswind runway. The apron would be expanded to the west, parallel to Runway 8-26, to provide more aircraft parking, circulation, and staging area, all of which would have runway frontage that provides quick and easy access to the airfield. Hangars could be developed along the apron and as hangar demand grows, there would be substantial space to expand hangars to the south and southwest.



AZTEC MUNICIPAL AIRPORT ACTION PLAN	ALTERNATIVE A	EXHIBIT 4A



AZTEC MUNICIPAL AIRPORT ACTION PLAN	ALTERNATIVE B	EXHIBIT 4B

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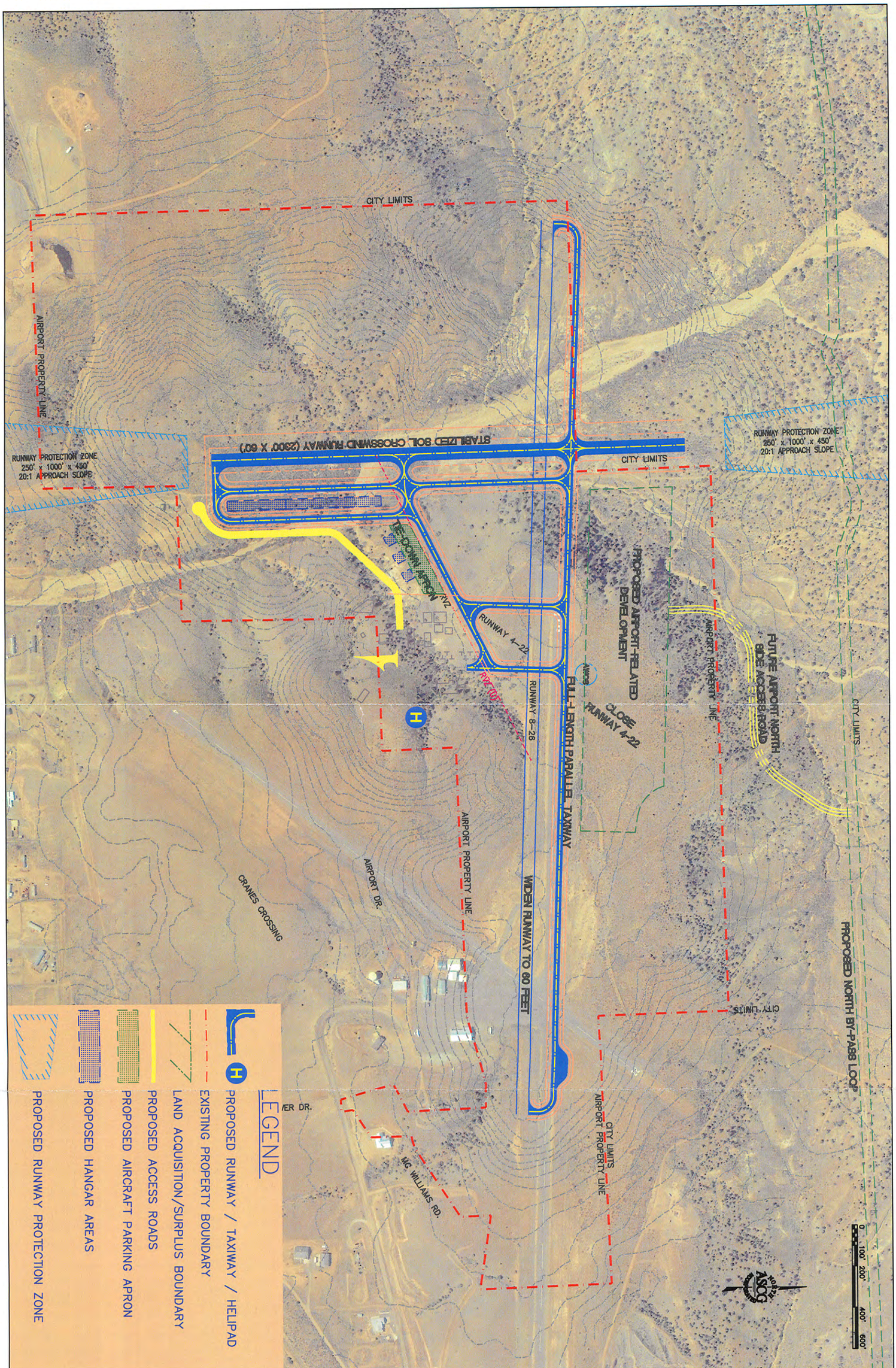

AZTEC MUNICIPAL AIRPORT ACTION PLAN	ALTERNATIVE C	EXHIBIT 4C

The airport access road would be extended to serve the growing hangar development. Taxilanes would be constructed from the west apron expansion area to the new hangars for aircraft access.

Alternative B – Crosswind Runway 3-21

This alternative realigns the crosswind runway. Compared to the existing crosswind runway, the north end would be rotated an estimated 10 degrees to the west for a Runway 3-21 alignment. Runway 3-21 would be 2,670 feet long[1] and 60 feet wide and would be stabilized soil, rather than asphalt pavement, to reduce the construction cost. The purpose of this alternative is to lessen runway visibility zone (RVZ) impacts on the existing buildings and open up a large hangar development area southwest of the existing building area. This alternative includes an extension of the access road to the proposed southwest hangar area.

Alternative C – Crosswind Runway 18-36 and Parallel Taxiway Systems

This alternative provides a stabilized soil crosswind runway that is nearly perpendicular to the primary runway. The 60-foot wide crosswind runway would be 2,300 feet long. Alternative C opens up an area west of the existing building area for apron expansion and an area to the southwest for additional hangars. The new crosswind runway's location also provides adequate space for a partial parallel taxiway from the Runway 36 threshold to Runway 8-26. This alternative also includes a full-length parallel taxiway system for Runway 8-26, but on the north side of the runway. The preferred location of a parallel taxiway would be on the same side as the apron and building area, so that aircraft would not have to cross the runway when taxiing between the parallel taxiway and the apron/hangar area. However, the north side location for the parallel taxiway avoids any impacts to the existing apron and buildings and keeps Runway 8-26 in its existing location, which provides the maximum available runway length on the mesa. Alternative C also shows the addition of an Automated Weather Observing System (AWOS), which would provide pilots with better real-time weather information and allow the future improvement of instrument approaches.

"No Development" Alternative

In addition to the three development alternatives described above, the City has the option of taking no action, which is referred to as the "No Development" Alternative. This means that the Aztec Municipal Airport would be maintained in its current configuration, with no future expansion. This alternative would allow the repair of airfield pavements, but would not improve any non-standard conditions, such as runway width, safety area, and RVZ, nor would it allow an increase in hangars or apron to accommodate future demand.

[1] Existing Runway 4-22 is 2,909 feet long, but on its south end, it does not meet the requirement for the safety area to extend 240 feet beyond the runway. Reducing 4-22's length to accommodate the safety area would result in 2,669 feet, comparable to proposed Runway 3-21. The proposed stabilized soil crosswind runway might provide longer takeoff distance by using declared distances, similar to Runway 4-22. However, declared distances are not recommended for unpaved runways, due to the difficulty in marking displaced thresholds.

ALTERNATIVES EVALUATION

Alternative A Evaluation

This alternative considers the results of the wind analysis that revealed that the primary runway has crosswind coverage more than 95 percent of the time–a threshold that FAA considers in determining the eligibility of funding for a crosswind runway. In other words, crosswind coverage of 95 percent or more on the primary runway means that there is not a theoretical need for a crosswind, which makes it ineligible for federal funding. However, local pilots suggest that the crosswind is a very important runway at the Airport. The crosswind has been especially important in serving the frequent activity of tail draggers, light sport aircraft, and experimental aircraft that are more sensitive to crosswind conditions and can use the short crosswind runway.[2] Further, the pilots have indicated that on some days the wind has blown for six hours straight along the Runway 22 alignment.

The advantage of abandoning the crosswind runway is that it opens up a substantial area for more hangar development. Further, a single-runway airfield eliminates the need for a RVZ between intersecting runways, which also increases the area that could otherwise accommodate hangars.

While the large hangar development presented in this alternative could better serve long-term hangar demand in the region and potentially bring more revenue to the Airport, this benefit must be measured against the operational loss associated with abandoning the crosswind runway. Pilots suggest that the need for a crosswind runway is more significant than the wind analysis results indicate.

Alternative B Evaluation

This alternative balances the need to accommodate a crosswind runway with the need to provide more land area for apron and hangar development. The 10-degree runway realignment provides almost the same crosswind coverage as the existing crosswind runway alignment, which has served pilots well in the past. The proposed apron area has Runway 3-21 frontage providing a more functional layout for tiedowns as well as better aircraft circulation and access to the runway and proposed hangar area than Runway 4-22 allows. The RVZ affects some existing buildings and crosses the existing tiedown area, which could eliminate the use of some parking in that area. This would mean that apron area would be reserved for taxiing only.

While this alternative does not provide the substantial increase in hangar development offered by Alternative A or the crosswind parallel taxiway system of Alternative C, it strikes the balance between accommodating the same crosswind runway length and more hangar development.

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[2] As shown in Table 3C, Chapter Three, small airplanes with approach speeds of less than 50 knots require a runway length of only 1,270 feet for the conditions at Aztec.

Alternative C Evaluation

While this alternative reduces the crosswind runway length, the new airfield configuration eliminates any impacts on the existing buildings because the RVZ boundary is shifted northwest. However, two tiedowns on the existing apron are still within the RVZ and would be abandoned to comply with the RVZ requirements.

The crosswind runway alignment is a more substantial deviation from the current alignment, but since it is perpendicular to the primary runway and there is still substantial crosswind coverage according to the wind data analysis, this alignment is still operationally feasible. Alternative C requires land acquisition from the BLM before the crosswind runway can be constructed.

Proposed crosswind Runway 18-36 provides a parallel taxiway for ¾ of the runway length, which enhances the overall efficiency and safety of the airfield.

"No Development" Alternative Evaluation

The "No Development" Alternative minimizes the additional dollars invested in the airport. However, the airport could only accommodate demand to its existing capacity. Additional demand would be displaced to other area airports. The closest public use airport, Farmington, might not be able to accommodate the displaced demand, considering its constrained site. The "No Development" Alternative could be detrimental to the general aviation community and the economic growth of Aztec and the area.

In addition, the "No Development" Alternative would not include any of the safety enhancements afforded by bringing the airport into compliance with FAA design standards.

SELECTION OF PREFERRED ALTERNATIVE

The City completed its review of the development alternatives, following a public meeting held on December 18, 2007, at City Hall. Alternatives A, B, and C were presented to the public for review and comment. Based on public input and the City's evaluation, the City selected Alternative C as the preferred alternative.

The preferred alternative is refined and detailed on the Airport Layout Plan (ALP) drawing for Aztec Municipal Airport, which is discussed in the next chapter. Appendix C contains a copy of the ALP.

Chapter Five
CAPITAL IMPROVEMENT PROGRAM

INTRODUCTION

This chapter presents a five-year capital improvement program (CIP) that identifies projects by priority that support the City-selected "Preferred Alternative" from Chapter 4. Preliminary project cost estimates, project descriptions, eligibility for federal and state funding, and the FAA-required Airport Layout Plan (ALP) to reflect future development are addressed.

CAPITAL IMPROVEMENT PROJECTS

Table 5A identifies the capital improvement projects at Aztec Municipal Airport through 2012. Additional projects that should be programmed beyond 2012 are listed in **Table 5B** for future reference as the City updates its CIP annually. Projected funding through 2012 is not expected to allow these additional projects to be executed sooner.

Although not specifically called out as separate projects, it is assumed that utility and drainage improvements will be coincident with development projects listed here on an as-needed basis.

Table 5A, Capital Improvement Program 2008-2012

Rank	Year	Description	Est. Cost
1	2008	Land Acquisition	NA
2	2008	Improve Runway Safety Areas	150,000
3	2009-2010	Reconstruct, Widen, and Strengthen Runway 8-26; Install MIRL	1,200,000
4	2011	Reconstruct Main Apron	300,000
5	2012	Install PAPI System Runway 8-26; Install Supplemental Wind Indicators	80,000
6	2012	Install Security Access Gate and Realign Fencing	100,000
		TOTAL	**$ 1,830,000**

Note: Cost estimates are in 2008 dollars.

Table 5B, Proposed Development Beyond 2012

Preliminary Ranking	Description
1	Upgrade Airfield Signage
2	Environmental Assessment for New Crosswind Runway 17-35 and Access Road
3	Install Automated Weather Observation System (AWOS)
4	Buy Additional Land and Construct New Crosswind Runway 17-35
5	Construct Access Road to Future Landside Development Area
6	Construct Taxiway Access to Future Landside Development Area
7	Construct Hangars
8	Construct Helipad Southeast of Main Apron
9	Construct GA Terminal and Airport Maintenance Equipment Building
10	Construct Full-length Parallel Taxiway
11	Construct Partial Parallel Taxiway System for Runway 17-35

Project Descriptions for CIP 2008-2012

A brief description of each CIP project listed by priority ranking in Table 5A is presented here.

#1 (2008) – Land Acquisition
The Aztec Municipal Airport is on approximately 160 acres, half of which is leased from the BLM. This project consists of transferring BLM-owned property within the Airport boundary to the City of Aztec. Further, FAA recommends that airports control the RPZ for all runway ends in fee simple, or at a minimum, in avigation easement. Both RPZs for Runway 8-26 should be

acquired. Runway 8's RPZ is located off airport property while a large outer portion of Runway 26's RPZ is located off airport property. The City plans to acquire easements for both parcels.

#2 (2008) – Improve Runway Safety Area
Additional grading is needed to bring the runway safety areas into compliance with FAA design standards for A-I/B-I activity.

#3 (2009-2010) – Reconstruct, Widen, and Strengthen Runway 8-26; Install MIRL
The runway should be widened from 50 to 60 feet to comply with FAA design standards. Runway 8-26 pavement condition is fair (PCI = 69) but deteriorating, pavement strength is estimated at 6,000 to 10,000 pounds SWL (single wheel load) and should be 12,500 pounds SWL, and the runway is not in compliance with line-of-sight standards. Currently, it is not possible to see from one end of the runway to the other end. MIRL (medium intensive runway lighting) should replace the existing reflective lighting.

#4 (2011) – Reconstruct Main Apron
The main apron is in very poor condition with a PCI rating of 37, and should be reconstructed in the near-term.

#5 (2012) – Install PAPI and Wind Indicators
PASI and PLASI, described in Chapter 1, need to be replaced with a Precision Approach Path Indicator (PAPI) system on Runway 8-26. Further, the Airport is currently limited to one windsock near the runway intersection. Supplemental wind indicators should be installed to provide pilots with a better visual assessment of wind conditions.

#6 (2012) – Install Security Access Gate and Realign Fencing
A new security access gate should be installed at the entrance to the Airport. Further, the fence line should be realigned to follow the new property line.

Project Descriptions for Proposed Development Beyond 2012

This section provides a brief description of the proposed airport improvements beyond the current CIP timeframe. These projects are described in their order of anticipated priority.

Upgrade Airfield Signage
This project would upgrade airfield signage to comply with current FAA guidance.

Environmental Assessment for New Crosswind Runway 17-35 and Access Road
New Runway 17-35 will likely require an environmental assessment (EA). The EA should be initiated early to ensure timely completion of all required analyses and agency coordination prior to runway design and construction.

Install Automated Weather Observation System (AWOS)
Aztec currently relies on weather reporting data obtained from Four Corners Regional Airport located 11 nautical miles away. An AWOS at the Aztec Municipal Airport would better serve the pilot needs by providing site-specific data.

Construct New Crosswind Runway 17-35
This project consists of constructing a new stabilized soil crosswind runway at a Runway 17-35 alignment with dimensions of 2,300-by-60 feet, and nearly perpendicular to the primary runway. Existing Crosswind Runway 4-22 would be abandoned to open up space for additional apron and hangar development, which is important to this site-constrained airport to meet future demand. The new crosswind runway alignment will also mitigate the current runway visibility zone (RVZ) problem on the airfield where the existing building area is located within the RVZ.

Construct Access Road to Future Landside Development Area
Once Runway 4-22 is abandoned, land becomes available for future hangar and apron area development. An access road that branches off from the current airport entrance road will be required to serve future tenants of the new facilities.

Construct Taxiway Access to Future Landside Development Area
Taxiway access from the existing apron and building area to the proposed apron and hangar development area is required.

Construct Hangars
The City's preferred development alternative will accommodate hangar construction west of the existing building area. Additional hangars may be constructed at the south end of and parallel to Runway 17-35. The new hangars will serve aircraft owners on the current hangar waiting list as well as future demand projected for Aztec.

Construct Helipad Southeast of Main Apron
As airport operations grow, it is recommended that a helipad be constructed near the southeast end of the main apron to help separate fixed-wing and rotorcraft operations.

Construct GA Terminal and Airport Maintenance Equipment Building
As transient activity at the airport grows and tenants increase, the City should consider the construction of a GA terminal building, which could include restrooms, a lobby/waiting room, flight-planning area, and a meeting room. Currently, the airport manager's office is used in this capacity. An airport maintenance equipment building should be considered to provide centralized storage to meet the airport's ongoing and long-term maintenance equipment needs.

Construct Full-length Parallel Taxiway
As operations grow at Aztec, a full-length parallel taxiway, including a Medium Intensity Taxiway Lighting (MITL) system, for Runway 8-26 should be constructed. The taxiway will need to be constructed on the north side of the Runway 8-26 to avoid impacts to existing building areas on the south side. Further, Runway 8-26 must remain in its current location to maximize its length on the mesa.

Construct Partial Parallel Taxiway System for Runway 17-35
A new ¾-length parallel taxiway system for the new crosswind runway should be constructed in the long-term to enhance the safety and efficiency of airfield operations.

Funding Sources

Since Aztec Municipal Airport was only recently added to the National Plan of Integrated Airport System (NPIAS), airport development has historically been funded by state and local dollars. The Airport's inclusion in the NPIAS means that the majority of future airport improvements will be eligible for federal funding for up to 95 percent; the remaining balance is split between state and local funding sources.

Table 5C lists the CIP projects by funding eligibility. Funding has been and will continue to be reliant on the availability of funds, the eligibility of an airport to receive funds, and the continuation of the grant funding programs.

Table 5C, CIP Projects Costs by Funding Eligibility

Year	Description	Federal	State	Local	Total Cost
2008	Improve Runway Safety Areas	142,500	3,750	3,750	150,000
2009-2010	Reconstruct, Widen, and Strengthen Runway 8-26; Install MIRL	1,140,000	30,000	30,000	1,200,000
2011	Reconstruct Main Apron	285,000	7,500	7,500	300,000
2012	Install PAPI System Runway 8-26; Install Supplemental Wind Indicators	76,000	2,000	2,000	80,000
2012	Install Security Access Gate and Realign Fencing	95,000	2,500	2,500	100,000
	TOTAL	**$1,738,500**	**$45,750**	**$45,750**	**$1,830,000**

Note: Cost estimates are in 2008 dollars.

The total CIP for 2008-2012 is estimated at $1.83 million; this breaks down to an estimated $45,750 from local sources to match possible FAA grants for $1.74 million. Like the 2.5 percent local match, NMDOT Aviation would also contribute $45,750. For Aztec's local funding requirement, this translates to an average of $9,150 required annually. According to NMDOT's *Economic Impact of Aviation in New Mexico 2003*, the Aztec Municipal Airport has an economic impact estimated at $608,900 annually, substantially higher than its local funding requirements.

While Table 5C shows what is eligible for FAA grant funding, the project costs exceed the Airport's anticipated entitlement funding of $150,000 per year from the FAA's Airport Improvement Program (AIP). To obtain a discretionary grant for additional AIP funding, the City will be competing with many other airport sponsors.

AIRPORT LAYOUT PLAN (ALP) DRAWING

An Airport Layout Plan (ALP) drawing set has been prepared for the Aztec Municipal Airport. The ALP is a graphic depiction of the existing and proposed facilities at the Airport. The

proposed improvements are based on the preferred development alternative selected by the City in December 2007, for which the majority is outlined in the CIP described earlier. Although the timeframe for the Action Plan is only five years, the future realigned crosswind runway and other improvements programmed more than five years in the future appear on two sheets--the Airport Layout Plan and Airport Property Map. This planning beyond the five-year scope of the Action Plan was done to identify the needed land transfer from the BLM. The future crosswind runway does not appear on the other drawings in the ALP set.

Since Aztec Municipal Airport is included in the NPIAS, the FAA must review and approve the ALP drawing. Further, all future development must be reflected on a FAA-approved ALP before the improvements are eligible for federal funding. Therefore, any future changes to development plans should be incorporated into an updated ALP drawing and submitted to the FAA.

Appendix C contains a reduced version of the ALP drawing set. It was prepared using guidance from FAA Advisory Circulars 150/5070-6B, *Airport Master Plans*, and 150/5300-13, *Airport Design*.

The Aztec Municipal ALP drawing is at a 1"=300' scale. FAA-required data in support of the ALP drawing includes the Airport Data Table, Runway Data Table, All-Weather Wind Rose, and the Legend. A table listing the top elevations of structures on the Airport is also included. While some of the data in the tables is already illustrated directly on the drawing, the data tables provide a more formal and organized presentation of information that is significant to the FAA and helps streamline their review and approval process.

The Airport Data Table includes general airport information such as airport elevation, airport reference point (ARP) coordinates, the mean maximum daily temperature, and the airport reference code (ARC). As discussed in earlier chapters, the FAA defines the ARC as a coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to use the airport. The designation A-I indicates that aircraft currently using the Airport are in Approach Category A, and Airplane Design Group I. Approach Category relates to aircraft approach speed, and Design Group relates to aircraft wingspan. Ultimately, the Airport is projected to serve B-I aircraft.

Runway-specific information is presented in the Runway Data Table. Examples include runway end elevations, approach categories; aircraft design groups, runway dimensions, runway surface and pavement strengths, runway instrumentation, approach aids, runway safety area dimensions, and runway protection zone dimensions.

The all-weather wind rose depicts the runway orientation on a compass and includes, by compass sector, the frequencies at which winds in a given velocity range occur. A wind coverage table accompanies the wind rose to identify the wind coverage for individual and combined runways at varying wind speeds that are important to varying sizes of aircraft.

The Airspace Drawing is prepared in accordance with 14 CFR Part 77, *Objects Affecting Navigable Airspace*, which defines a set of "imaginary surfaces" that should be protected from

obstructions to air navigation, when possible. The "imaginary surfaces" depicted in the Airspace Drawing include:

- Primary Surface
- Approach Surface
- Horizontal Surface
- Transitional Surface
- Conical Surface

Primary Surface. The primary surface extends 200 feet beyond each runway end and is longitudinally centered on the runway. The width of Aztec's primary surface is 250 feet. The primary surface is at the same elevation as the runway.

Approach Surface. From the end of the primary surface at each runway end, the approach surface begins. The approach surface is longitudinally centered on the extended runway centerline with an inner width of 250 feet, which is coincident with the primary surface width. Then, it extends outward and upward from each end of the primary surface at a 20:1 slope in accordance with visual approach slope standards for 5,000 feet.

Horizontal Surface. The horizontal surface is a horizontal plane at 150 feet above the airport elevation. The horizontal surface, as labeled on the Airspace Drawing, is defined by a set of 5,000-foot arcs off of the primary surface. A tangent line connects the arcs. The length of the arcs are dictated by the approach surface.

Transitional Surface. The transitional surface is an inclined plane with a slope of 7:1 extending upward and outward from the primary and approach surfaces. The transitional surface ends where it intercepts the horizontal surface or any other surface where a more restrictive elevation is intercepted.

The transitional surface is often used to help determine where a building restriction line should be defined and to what height buildings should be permitted. The FAA has indicated that the transitional surface can also be used as a screening tool to determine if existing or proposed buildings should be further evaluated for impacts to the airfield. For example, a building that obstructs the transitional surface may potentially remain if it still clears the more critical obstacle free zone (OFZ), which is another surface described in an earlier chapter.

Conical Surface. The conical surface is an inclined plane extending upward and outward from the outer boundary of the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.

Airport Property Map. The Airport Property Map for Aztec Municipal Airport identifies the existing airport ownership (by the City of Aztec), the portion of airport property that is owned by the BLM and leased to the City, and proposed land and easement acquisition

The City must acquire the property to fully control its Airport and be eligible for federal funding since it was recently added to the federal system of airports known as the NPIAS.

APPENDIX A

AZTEC MUNICIPAL AIRPORT ACTION PLAN

FAA FORECAST APPROVAL LETTER

U.S. Department
of Transportation
Federal Aviation Administration

Southwest Region
Airports Division
Louisiana/New Mexico
Airports Development
Office

2601 Meacham Blvd
Fort Worth, TX 7613

October 16, 2006

Mr. Mike Arnold
Airport Manager
Aztec Municipal Airport
201 West Chaco
Aztec, NM 87410

RE: Aztec Airport Master Plan Forecast Submittal

Dear Mr. Arnold:

The Federal Aviation Administration has reviewed the aviation forecasts submitted on September 19, 2006, for the Aztec Municipal Airport prepared by Airport Planning West. We approve and concur with aforesaid forecast for its use within the current Airport Master Plan. In addition, this forecast will be used by our offices and will be reflected in the next Terminal Area Forecast (TAF).

Should you have any questions, please call me at (817) 222-5647.

Sincerely,

ORIGINAL SIGNED BY:

Andrew D. Velayos
Lead Program Manager
LA/NM Airports Development Office

cc:
Mr. Tom Baca
New Mexico Highway and
Transportation Department
PO Box 1149
Santa Fe, NM 87504-1149

Mr. Ms. Wendy M. Renier
Airport Planning West
P.O. Box 71508
Phoenix, AZ 85050

APPENDIX B

AZTEC MUNICIPAL AIRPORT ACTION PLAN

FAA FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION

NOTICE OF PROPOSED CONSTRUCTION OR ALTERATION

§77.13 Construction or alteration requiring notice.

(a) Except as provided in §77.15, each sponsor who proposes any of the following construction or alteration shall notify the Administrator in the form and manner prescribed in §77.17.

(1) Any construction or alteration of more than 200 feet in height above the ground level at its site.

(2) Any construction or alteration of greater height than imaginary surface extending outward and upward at one of the following slopes:

(i) 1 00 to 1 for horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport specified in paragraph (a)(5) or this section with at least one runway more than 3,200 feet in actual length, excluding heliports.

(ii) 50 to 1 for horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport specified in paragraph (a)(5) of this section with its longest runway no more than 3,200 feet in actual length, excluding heliports.

(iii) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport specified in paragraph (a)(5) of this section.

(3) Any highway, railroad, or other traverse way for mobile objects, of a height which, if adjusted upward 17 feet for an Interstate Highway that is part of the National System of Military and Interstate Highways where overcrossings are designed for a minimum of 17 feet vertical distance, 16 feet for any other public roadway, 10 feet or the height of the highest mobile object that would normally traverse the road, whichever is greater, for a private road, 23 feet for a railroad, and for a waterway or any other traverse way not previously mentioned, an amount equal to the height of the highest mobile object that would normally traverse it, would exceed a standard of paragraph (a)(1) or (2) of this section.

(4) When requested by the FAA, any construction or alteration that would be in an instrument approach area (defined in the FAA standards governing instrument approach procedures) and available information indicates it might exceed a standard of Subpart C of this part.

(5) Any construction or alteration on any of the following airports (including heliports):

(i) An airport that is available for public use and is listed in the Airport Directory of the current Airman's Information Manual or in either the Alaska or Pacific Airman's Guide and Chart Supplement.

(ii) An airport under construction, that is the subject of a notice or proposal on file with the Federal Aviation Administration, and except for military airports, it is clearly indicated that airport will be available for public use.

(iii) An airport that is operated by an armed force of the United States.

(b) Each sponsor who proposes construction or alteration that is the subject of a notice under paragraph (a) of this section and is advised by an FAA regional office that a supplemental notice is required shall submit that notice on a prescribed form to be received by the FAA regional office at least 48 hours before the start of construction or alteration.

(c) Each sponsor who undertakes construction or alteration that is the subject of a notice under paragraph (a) of this section shall, within 5 days after that construction or alteration reaches its greatest height, submit a supplemental notice on a prescribed form to the FAA regional office having jurisdiction over the region involved, if –

(1) The construction or alteration is more than 200 feet above the surface level of its site; or

(2) An FAA regional office advises him that submission of the form is required.

§77.15 Construction or alteration not requiring notice.

No person is required to notify the Administrator for any of the following construction or alteration:

(a) Any object that would be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the structure so shielded will not adversely affect safety in air navigation.

(b) Any antenna structure of 20 feet or less in height except one that would increase the height of another antenna structure.

(c) Any air navigation facility, airport visual approach or landing air, aircraft arresting device, or meteorological device, of a type approved by the Administrator, or an appropriate military service on military airports, the location and height of which is fixed by its functional purpose.

(d) Any construction or alteration for which notice is required by any other FAA regulation.

§77.17 Form and time of notice

(a) Each person who is required to notify the Administrator under §77.13 (a) shall send one executed form set of FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area within which the construction or alteration will be located. Copies of FAA Form 7460-1 may be obtained from the headquarters of the Federal Aviation Administration and the regional offices.

(b) The notice required under §77.13 (a)(1) through (4) must be submitted at least 30 days before the earlier of the following dates –

(1) The date the proposed construction or alteration is to begin.

(2) The date an application for a construction permit is to be filed.

However, a notice relating to proposed construction or alteration that is subject to the licensing requirements of the Federal Communications Act may be sent to the FAA at the same time the application for construction is filed with the Federal Communications Commission, or at any time before that filing.

(c) A proposed structure or an alteration to an existing structure that exceeds 2,000 feet in height above the ground will be presumed to be a hazard to air navigation and to result in an inefficient utilization of airspace and the applicant has the burden of overcoming that presumption. Each notice submitted under the pertinent provisions of this part 77 proposing a structure in excess of 2,000 feet above ground, or an alteration that will make an existing structure exceed that height, must contain a detailed showing, directed to meeting this burden. Only in exceptional cases, where the FAA concludes that a clear and compelling showing has been made that it would not result in an inefficient utilization of the airspace and would not result in a hazard to air navigation, will a determination of no hazard be issued.

(d) In the case of an emergency involving essential public services, public health, or public safety that required immediate construction or alteration, the 30 day requirement in paragraph (b) of this section does not apply and the notice may be sent by telephone, telegraph, or other expeditious means, with an executed FAA Form 7460-1 submitted within five (5) days thereafter. Outside normal business hours, emergency notices by telephone or telegraph may be submitted to the nearest FAA Flight Service Station.

(e) Each person who is required to notify the Administrator by paragraph (b) or (c) of §77.13, or both shall send an executed copy of FAA Form 7460-2, Notice of Actual Construction or Alteration, to the Manager, Air Traffic Division, FAA Regional Office having jurisdiction over the area involved.

ADDRESSES OF THE REGIONAL OFFICES

Alaska Region
AK
Alaskan Regional Office
Air Traffic Division, AAL-530
222 West An Avenue
Anchorage, AK 99513
Tel: 907-271-5893

Central Region
IA, KS, MO, NE
Central Regional Office
Air Traffic Division, ACE-520
80 East 12th Street
Kansas City, MO 64106
Tel: 816-426-3408 or 3409

Eastern Region
DC, DE, MD, NJ, NY, PA, VA, WV
Eastern Regional Office
Air Traffic Division, AEA-520
JFK International Airport
Fitzgerald Federal Building
Jamaica, NY 11430
Tel: 718-553-2616

Great Lakes Region
IL, IN, MI, MN, ND, OH, SD
Great Lakes Regional Office
Air Traffic Division, AGL-520
2300 East Devon Avenue
Des Plaines, IL 60018
Tel: 847-294-7568

New England Region
CT, MA, ME, NH, RI, VT
New England Regional Office
Air Traffic Division, ANE-520
12 New England Executive Park
Burlington, MA 01803-5299
Tel: 781-238-7520

Northwest Mountain Region
CO, ID, MT, OR, UT, WA, WY
Northwest Mountain Regional Office
Air Traffic Division, ANM-520
1601 Lind Avenue, SW
Renton, WA 98055-4056
Tel: 425-227-2520

Southern Region
AL, FL, GA, KY, MS, NC, PR
SC, TN, VI
Southern Regional Office
Air Traffic Division, ASO-520
1701 Columbia Avenue
College Park, GA 30337
Tel: 404-305-5685

Southwest Region
AR, LA, NM, OK, TX
Southwest Regional Office
Air Traffic Division, ASW-520
2601 Meacham Boulevard
For Worth, TX 76137-0520
Tel: 817-222-5531

Western Pacific Region
HI, CA, NV, AZ, GU
Western-Pacific Regional Office
Air Traffic Division, AWP-520
15000 Aviation Boulevard
Hawthorne, CA 90260
Tel: 310-725-6557

INSTRUCTIONS FOR COMPLETING FAA FORM 7460-1

PLEASE TYPE or PRINT

ITEM #1. Please include the name, address and phone number of a personal contact point as well as the company name.

ITEM #2. Please include the name, address and phone number of a personal contact point as well as the company name.

ITEM #3. New Construction would be a structure that has not yet been built.

Alteration is a change to an existing structure such as the addition of a side mounted antenna, a change to the marking and lighting, a change to power and/or frequency, or a change to the height. The nature of the alteration shall be included in **ITEM #21** "Complete Description of Proposal".

Existing would be a correction to the latitude and/or longitude, a correction to the height, or if filing on an existing structure which has never been studied by the FAA. The reason for the notice shall be included in **ITEM #21** "Complete Description of Proposal".

ITEM #4. If Permanent, so indicate. If Temporary, such as a crane or drilling derrick, enter the estimated length of time the temporary structure will be up.

ITEM #5. Enter the date that construction is expected to start and the date that construction should be completed.

ITEM #6. Please indicate the type of structure. DO NOT LEAVE BLANK.

ITEM #7. In the event that obstruction marking and lighting is required, please indicate type desired. If no preference, check "other" and indicate "no preference" **DO NOT LEAVE BLANK.** ***NOTE:*** *High Intensity lighting shall be used only for structures over 500' AGL.* In the absence of high intensity lighting for structures over 500' AGL, marking is also required.

ITEM #8. If this is an existing tower that has been registered with the FCC, enter the FCC Antenna Structure Registration number here.

ITEM #9 and #10. Latitude and longitude must be geographic coordinates, accurate to within the nearest second or to the nearest hundredth of a second if known. Latitude and longitude derived solely from a **hand-held GPS instrument is NOT acceptable**. A hand-held GPS is only accurate to within 100 meters (328 *feet*) 95 percent of the time. This data, when plotted, should match the site depiction submitted under **ITEM #20**.

ITEM #11. NAD 83 is preferred; however, latitude and longitude may be submitted in NAD 27. Also, in some geographic areas where NAD 27 and NAD 83 are not available other datums may be used. It is important to know which datum is used. **DO NOT LEAVE BLANK.**
ITEM #12. Enter the name of the nearest city and state to the site. If the structure is or will be in a city, enter the name of that city and state.

ITEM #13. Enter the **full** name of the nearest public-use ***(not private-use)*** airport or heliport or military airport or heliport to the site.

ITEM #14. Enter the distance **from** the airport or heliport listed in **#13 to the structure.**

ITEM #15. Enter the direction **from** the airport or heliport listed in **#13 to the structure.**

ITEM #16. Enter the site elevation above mean sea level and expressed in whole feet rounded to the nearest foot (e.g. 17'3" rounds to 17', 17'6" rounds to 18'). This data should match the ground contour elevations for site depiction submitted under **ITEM #20.**
ITEM #17. Enter the total structure height **above ground level** in **whole feet** rounded to the **next highest foot** (e.g. 17'3" rounds to 18'). **The total structure height shall include anything mounted on top of the structure, such as antennas, obstruction lights, lightning rods, etc.**

ITEM #18. Enter the overall height above mean sea level and expressed in **whole feet.** This will be the total of **ITEM #16 + ITEM #17.**

ITEM #19. If an FAA aeronautical study was previously conducted, enter the previous study number.

ITEM #20. Enter the relationship of the structure to roads, airports, prominent terrain, existing structures, etc. Attach an 8-1/2" x 11" non-reduced copy of the appropriate 7.5 minute U.S. Geological Survey *(USGS)* Quadrangle Map MARKED WITH A PRECISE INDICATION OF THE SITE LOCATION. To obtain maps, contact USGC at 1-800-435-7627 or via internet at "http://mapping.usgs.gov". If available, attach a copy of a documented site survey with the surveyor's certification stating the amount of vertical and horizontal accuracy in feet.

ITEM #21.

- For transmitting stations, include maximum effective radiated power *(ERP)* and all frequencies.
- For antennas, include the type of antenna and center of radiation *(Attach the antenna pattern, if available)*.
- For microwave, include azimuth relative to true north.
- For overhead wires or transmission lines, include size and configuration of wires and their supporting structures *(Attach depiction)*.
- For **each** pole/support, include coordinates, site elevation, and structure height above ground level or water.
- For buildings, include site orientation, coordinates of **each** corner, dimensions, and construction materials.
- For alterations, explain the alteration thoroughly.
- For existing structures, thoroughly explain the reason for notifying the FAA *(e.g. corrections, no record or previous study, etc.)*.

Filing this information with the FAA does not relieve the sponsor of this construction or alteration from complying with any other federal, state or local rules or regulations. If you are not sure what other rules or regulations apply to your proposal, contact local/state aviations and zoning authorities.

Paperwork Reduction Work Act Statement: This information is collected to evaluate the effect of proposed construction or alteration on air navigation and is not confidential. Providing this information is mandatory for anyone proposing construction or alteration that meets or exceeds the criteria contained in 14 CFR, part 77. We estimate that the burden of this collection is an average 19 minutes per response. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control number for this collection is 2120-0001. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to the FAA at: 800 Independence Ave. SW, Washington, DC 20591, Attn: Information Collection Clearance Officer, ABA-20

Please Type or Print on This Form

Form Approved OMB No.2120-0001
Expiration Date: 7/31/07

U.S. Department of Transportation
Federal Aviation Administration

Failure To Provide All Requested Information May Delay Processing of Your Notice

Notice of Proposed Construction or Alteration

FOR FAA USE ONLY

Aeronautical Study Number

1. Sponsor *(person, company, etc. proposing this action):*

Attn. of: _____

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

2. Sponsor's Representative *(if other than #1):*

Attn. of: _____

Name: _____

Address: _____

_____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

3. Notice of: ☐ New Construction ☐ Alteration ☐ Existing

4. Duration: ☐ Permanent ☐ Temporary (____ months, ____ days)

5. Work Schedule: Beginning _____ End _____

6. Type: ☐ Antenna Tower ☐ Crane ☐ Building ☐ Power Line
☐ Landfill ☐ Water Tank ☐ Other _____

7. Marking/Painting and/or Lighting Preferred:
☐ Red Lights and Paint ☐ Dual - Red and Medium Intensity White
☐ White - Medium Intensity ☐ Dual - Red and high Intensity White
☐ White - High Intensity ☐ Other

8. FCC Antenna Structure Registration Number *(if applicable)*:

_____

9. Latitude: _____ ° _____ ' _____ , _____ "

10. Longitude: _____ ° _____ ' _____ , _____ "

11. Datum: ☐ NAD 83 ☐ NAD 27 ☐ Other

12. Nearest: City: _____ State _____

13. Nearest *Public-use* *(not private-use)* or Military Airport or Heliport:

_____

14. Distance from #13. to Structure: _____

15. Direction from #13. to Structure: _____

16. Site Elevation *(AMSL)*: _____ ft.

17. Total Structure Height *(AGL)*: _____ ft.

18. Overall Height (#16 + #17) *(AMSL)*: _____ ft.

19. Previous FAA Aeronautical Study Number *(if applicable)*:

_____ -OE

20. Description of Location: *(Attach a USGS 7 5 minute Quadrangle Map with the precise site marked and any certified survey)*

21. Complete Description of Proposal:

Frequency/Power (kW)	

Notice is required by 14 Code of Federal Regulations, part 77 pursuant to 49 U.S.C., Section 44718. Persons who knowingly and willingly violate the notice requirements of part 77 are subject to a civil penalty of $1,000 per day until the notice is received, pursuant to 49 U.S.C., Section 46301(a)

I hereby certify that all of the above statements made by me are true, complete, and correct to the best of my knowledge. In addition, I agree to mark and/or light the structure in accordance with established marking & lighting standards as necessary.

Date	Typed or Printed Name and Title of Person Filing Notice	Signature

APPENDIX C

AZTEC MUNICIPAL AIRPORT ACTION PLAN

AIRPORT LAYOUT PLAN

AZTEC, NEW MEXICO
AZTEC MUNICIPAL AIRPORT (N19)

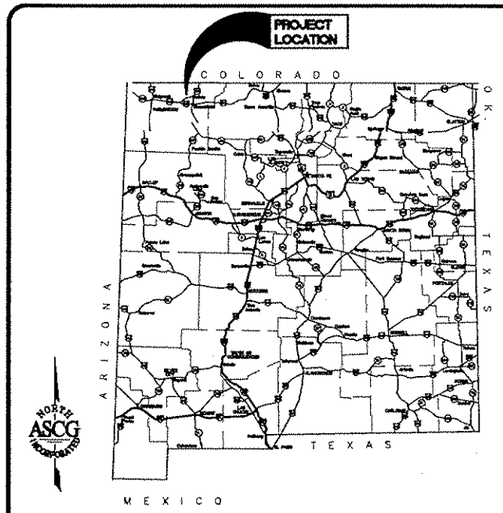
AIRPORT LAYOUT PLAN

MAY 2008

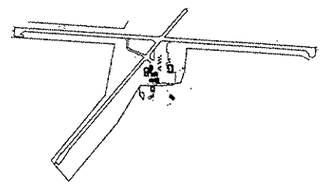
INDEX OF DRAWINGS

SHEET NO.	DRAWING TITLE
1	COVER SHEET, INDEX OF DRAWINGS, VICINITY MAP, LOCATION MAP
2	AIRPORT LAYOUT PLAN
3	AIRPORT AIRSPACE DRAWING
4	AIRPORT AIRSPACE ISOMETRIC
5	INNER PORTION OF THE APPROACH SURFACE DRAWING
6	TERMINAL AREA DRAWING
7	AIRPORT PROPERTY MAP

ASCG PROJECT NO. – 020810

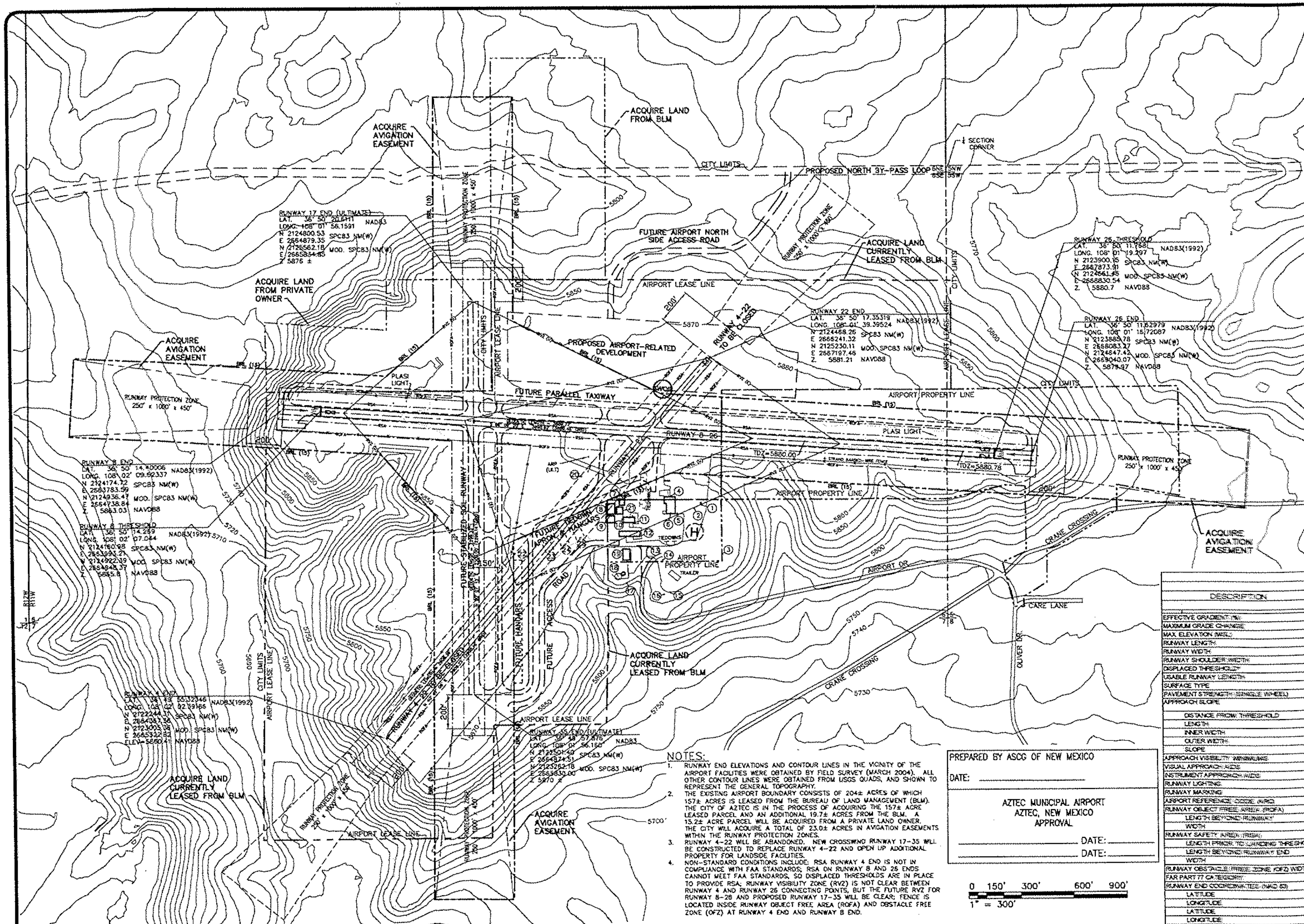


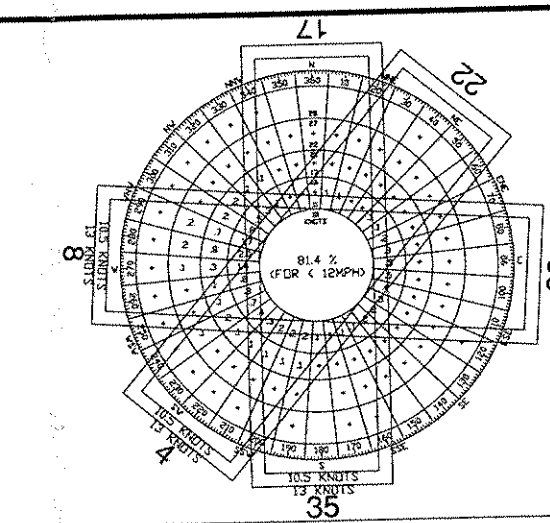
VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

ASCG INCORPORATED
ENGINEERS • ARCHITECTS • SURVEYORS • PLANNERS
6501 AMERICAS PARKWAY NE, SUITE 400
ALBUQUERQUE, NEW MEXICO 87110-5372
PHONE 505.247.0294 • FAX 505.242.4845





ALL-WEATHER WIND COVERAGE	10.5 KNOTS (12 MPH)	13 KNOTS (15 MPH)
RUNWAY 8-26	96.51%	98.17%
RUNWAY 4-22	88.87%	93.32%
RUNWAY 17-35	86.17%	91.34%
COMBINED (8-26/4-22)	98.80%	99.25%
COMBINED (8-26/17-35)	98.74%	99.58%

SOURCE: FARMINGTON, NEW MEXICO 1995-2005 (24 HOURS, DAILY)

AIRPORT DATA TABLE

AIRPORT DATA	EXISTING	PROPOSED
AIRPORT ELEVATION (MSL)	5883'	5883'
AIRPORT REFERENCE POINT (ARP) - NAD 83		
LATITUDE	36° 50' 10.1608"	36° 50' 11.6161"
LONGITUDE	108° 01' 46.4744"	108° 01' 47.9980"
MEAN MAX TEMPERATURE OF HOTTEST MONTH	94°F	94°F
AIRPORT TERMINAL AREA NAVAIDS	NONE	GPS
AIRPORT VISUAL AIDS	BEACON	BEACON
MAGNETIC VARIATION	10° 28' E	
DATE OF MAGNETIC VARIATION	DEC 2007	
NPIAS SERVICE LEVEL	GA	GA
STATE SERVICE LEVEL	GA	GA
AIRPORT REFERENCE CODE (ARC) - NOTE 2	A-I	B-I
DESIGN AIRCRAFT	LANCAIR 400	BEECH KING AIR
TAXIWAY LIGHTING	REFLECTORS	MITL
TAXIWAY MARKING	CL	CL
MISCELLANEOUS FACILITIES	FUEL / TIEDOWNS	SAME
USGS QUADRANGLE MAP	FLORA VISTA	SAME

RUNWAY DATA TABLE

DESCRIPTION	RUNWAY 8-26 EXISTING	RUNWAY 8-26 ULTIMATE	RUNWAY 4-22 EXISTING (TO BE ABANDONED)	RUNWAY 17-35 ULTIMATE (FUTURE)
EFFECTIVE GRADIENT (%)	0.38%	0.38%	0.72%	0.26%
MAXIMUM GRADE CHANGE	1.05%		0.71%	0.26%
MAX ELEVATION (MSL)	5880.78'	SAME	5881.21'	5876'
RUNWAY LENGTH	3891'	3891'	2909'	2300'
RUNWAY WIDTH	50'	60'	40'	60'
RUNWAY SHOULDER WIDTH	10'	10'	10'	10'
DISPLACED THRESHOLD*	210' / 210'	210' / 210'	N/A	N/A
USABLE RUNWAY LENGTH	3891'	3891'	2909'	2300'
SURFACE TYPE	ASPHALT	ASPHALT - PFC	ASPHALT - PFC	ASPHALT - PFC**
PAVEMENT STRENGTH (SINGLE WHEEL)	6000	12,500	6000	12,500
APPROACH SLOPE	Small airplanes, approach speed 50 knots, visual, daylight	Instrument straight-in night operations, Approach Category A & B	Small airplanes, approach speed 50 knots, visual, daylight	Small airplanes, approach speed 50 knots, visual, daylight
DISTANCE FROM THRESHOLD	0'	200'	0'	0'
LENGTH	5000'	10000'	5000'	5000'
INNER WIDTH	250'	400'	250'	250'
OUTER WIDTH	700'	3800'	700'	700'
SLOPE	20:1 / 20:1	20:1 / 20:1	20:1 / 20:1	20:1 / 20:1
APPROACH VISIBILITY MINIMUMS	VISUAL / VISUAL	1 MILE / 1 MILE	VISUAL / VISUAL	VISUAL / VISUAL
VISUAL APPROACH AIDS	PAPI / PLASI 3° GS	PAPI / PLASI 3° GS	NONE	NONE
INSTRUMENT APPROACH AIDS				
RUNWAY LIGHTING	REFLECTORS	MIRL	NONE	REFLECTORS
RUNWAY MARKING	VISUAL / VISUAL	VISUAL / VISUAL	VISUAL / VISUAL	VISUAL / VISUAL
AIRPORT REFERENCE CODE (ARC)	A-I	B-I	A-I	A-I
RUNWAY OBJECT FREE AREA (ROFA)				
LENGTH BEYOND RUNWAY	SEE NOTE 4	240'	SEE NOTE 4	240'
WIDTH	SEE NOTE 4	250'	SEE NOTE 4	250'
RUNWAY SAFETY AREA (RSA)				
LENGTH PRIOR TO LANDING THRESHOLD				
LENGTH BEYOND RUNWAY END	SEE NOTE 4	240'	SEE NOTE 4	240'
WIDTH	SEE NOTE 4	120'	SEE NOTE 4	120'
RUNWAY OBSTACLE FREE ZONE (OFZ) WIDTH	SEE NOTE 4	250'	SEE NOTE 4	250'
FAR PART 77 CATEGORY	VISUAL-UTILITY RUNWAY	VISUAL-UTILITY RUNWAY	VISUAL-UTILITY RUNWAY	VISUAL-UTILITY RUNWAY
RUNWAY END COORDINATES (NAD 83)				
LATITUDE	36° 50' 14.40006" N	36° 50' 14.40006" N	36° 49' 58.32346" N	36° 50' 20.6111" N
LONGITUDE	108° 02' 09.62337" W	108° 02' 09.62337" W	108° 02' 02.39186" W	108° 01' 56.1591" W
LATITUDE	36° 50' 11.62979" N	36° 50' 11.62979" N	36° 50' 17.35319" N	36° 48' 57.876" N
LONGITUDE	108° 01' 16.72087" W	108° 01' 16.72087" W	108° 01' 39.39524" W	108° 01' 56.180" W
RUNWAY END ELEVATIONS (MSL)	5863.03' / 5879.97'	5863.03' / 5879.97'	5860.41' / 5881.21'	5876' / 5870'
DISPLACED THRESHOLD COORDINATES (NAD 83)*			N/A	N/A
LATITUDE	36° 50' 14.269" N	36° 50' 14.269" N	N/A	N/A
LONGITUDE	108°02' 07.044" W	108°02' 07.044" W	N/A	N/A
LATITUDE	36° 50' 11.769" N	36° 50' 11.769" N	N/A	N/A
LONGITUDE	108°01' 19.297" W	108°01' 19.297" W	N/A	N/A
DISPLACED THRESHOLD ELEVATIONS (MSL)*	5865.8' / 5880.7'	5865.8' / 5880.7'	N/A	N/A
TDZ ELEVATION (MSL)				
LINE OF SIGHT VIOLATIONS	SEE NOTE 4	N/A	SEE NOTE 4	N/A
RUNWAY PROTECTION ZONE (RPZ)				
LENGTH	1000'	1000'	1000'	1000'
INNER WIDTH	250'	250'	250'	250'
OUTER WIDTH	450'	450'	450'	450'
CENTRAL PORTION OF THE RPZ (WIDTH)	250'	250'	250'	250'
TAXIWAY WIDTH	25'	25'	25'	25'
TAXIWAY SHOULDER WIDTH	-	10'	-	10'
TAXIWAY LIGHTING	RETROREFLECTIVE	MITL	N/A	RETROREFLECTIVE
TAXIWAY SAFETY AREA (TSA) WIDTH	N/A	49'	N/A	49'
TAXIWAY OBJECT FREE AREA (TOFA) WIDTH	N/A	89'	N/A	89'
TAXILANE OBJECT FREE AREA WIDTH	N/A	79'	N/A	79'
HOLDING POSITION SIGNS & MARKINGS	125'	125'	125'	125'
BUILDING RESTRICTION LINE (BRL)				
HEIGHT AT BRL	15'	15'	15'	15'
DISTANCE FROM RUNWAY CENTERLINE	230'	230'	230'	230'
OBSTRUCTIONS	SEE NOTE 4	N/A	SEE NOTE 4	N/A
INSTRUMENT APPROACH PROCEDURES	NONE / NONE	GPS / GPS	NONE / NONE	NONE / NONE

* ESTIMATED

** INITIALLY STABILIZED SOIL

NOTES:

1. RUNWAY END ELEVATIONS AND CONTOUR LINES IN THE VICINITY OF THE AIRPORT FACILITIES WERE OBTAINED BY FIELD SURVEY (MARCH 2004). ALL OTHER CONTOUR LINES WERE OBTAINED FROM USGS QUADS, AND SHOWN TO REPRESENT THE GENERAL TOPOGRAPHY.
2. THE EXISTING AIRPORT BOUNDARY CONSISTS OF 204± ACRES OF WHICH 157± ACRES IS LEASED FROM THE BUREAU OF LAND MANAGEMENT (BLM). THE CITY OF AZTEC IS IN THE PROCESS OF ACQUIRING THE 157± ACRE LEASED PARCEL AND AN ADDITIONAL 19.7± ACRES FROM THE BLM. A 15.2± ACRE PARCEL WILL BE ACQUIRED FROM A PRIVATE LAND OWNER. THE CITY WILL ACQUIRE A TOTAL OF 23.0± ACRES IN AVIGATION EASEMENTS WITHIN THE RUNWAY PROTECTION ZONES.
3. RUNWAY 4-22 WILL BE ABANDONED. NEW CROSSWIND RUNWAY 17-35 WILL BE CONSTRUCTED TO REPLACE RUNWAY 4-22 AND OPEN UP ADDITIONAL PROPERTY FOR LANDSIDE FACILITIES.
4. NON-STANDARD CONDITIONS INCLUDE: RSA RUNWAY 4 END IS NOT IN COMPLIANCE WITH FAA STANDARDS; RSA ON RUNWAY 8 AND 26 ENDS CANNOT MEET FAA STANDARDS, SO DISPLACED THRESHOLDS ARE IN PLACE TO PROVIDE RSA; RUNWAY VISIBILITY ZONE (RVZ) IS NOT CLEAR BETWEEN RUNWAY 4 AND RUNWAY 26 CONNECTING POINTS, BUT THE FUTURE RVZ FOR RUNWAY 8-26 AND PROPOSED RUNWAY 17-35 WILL BE CLEAR; FENCE IS LOCATED INSIDE RUNWAY OBJECT FREE AREA (ROFA) AND OBSTACLE FREE ZONE (OFZ) AT RUNWAY 4 END AND RUNWAY 8 END.

PREPARED BY ASCG OF NEW MEXICO

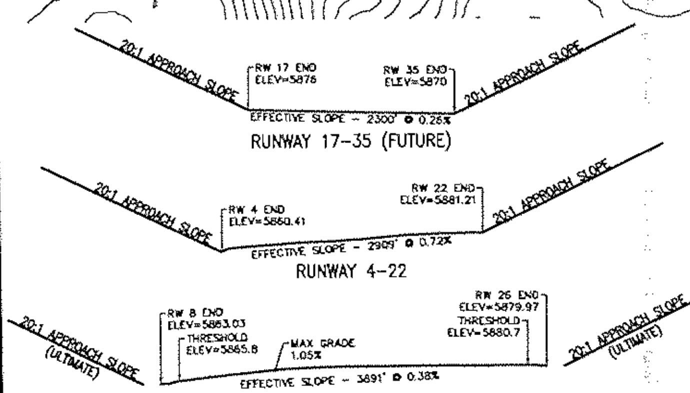
DATE: ______________

AZTEC MUNICIPAL AIRPORT
AZTEC, NEW MEXICO
APPROVAL

______________ DATE: ______

______________ DATE: ______

0 150' 300' 600' 900'
1" = 300'

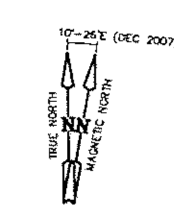


STRUCTURE ELEVATIONS

POINT #	RUNWAY 8/26 STATION	OFFSET	HIGHEST POINT ELEVATION	DESCRIPTION
1	24+32.55	406.1 RT	5931.7	TOP ROTATING BEACON
2	23+97.38	432.7 RT	5910.0	TOP POWER POLE WITH LIGHT
3	25+74.59	682.3 RT	5907.0	TOP POWER POLE
4	22+52.29	370.0 RT	5898.9	TOP AIRPORT MANAGER'S HANGAR
5	23+02.04	467.5 RT	5905.7	TOP WHIP ANTENNA
6	22+64.32	469.9 RT	5908.0	TOP WHIP ANTENNA
7	19+67.25	419.7 RT	5890.8	TOP HANGAR
8	19+17.04	432.8 RT	5897.9	TOP HANGAR
9	19+17.76	504.7 RT	5892.3	TOP HANGAR
10	19+95.42	507.0 RT	5899.0	TOP LIGHT
11	20+62.99	534.5 RT	5889.5	TOP HANGAR
12	20+97.79	611.5 RT	5887.8	TOP HANGAR
13	21+60.53	671.4 RT	5900.5	TOP LIGHT POLE
14	22+38.92	741.4 RT	5902.1	TOP LIGHT POLE
15	22+90.80	931.9 RT	5938.3	TOP COMMUNICATION TOWER
16	22+57.97	943.6 RT	5905.9	TOP ANTENNA ON WOOD POLE
17	20+41.28	889.2 RT	5901.7	TOP POWER POLE
18	19+87.18	853.5 RT	5902.7	TOP VENT WATER TANK
19	20+06.12	892.5 RT	5898.4	TOP ANTENNA FIRE STATION
20	17+38.81	286.0 RT	5895.3	TOP WIND SOCK
21	19+90.53	468.6 RT	5890.8	TOP HANGAR
22	14+03.30	795.3 RT	15' AGL	TOP HANGAR (FUTURE)
23	15+63.38	687.0 RT	15' AGL	TOP HANGAR (FUTURE)
24	16+48.78	643.1 RT	15' AGL	TOP HANGAR (FUTURE)
25	17+34.17	599.3 RT	15' AGL	TOP HANGAR (FUTURE)

LEGEND

EXISTING	ULTIMATE	DESCRIPTION
		CONTOURS
		ROADS
		RUNWAYS/TAXIWAYS/APPROACH SURFACES, ETC.
		FENCE LINE
(4)	(22)	STRUCTURES / STRUCTURE NUMBER (SEE TABLE)
		PROPERTY LINE (SEE NOTE 2)
		AIRPORT BOUNDARY (SEE NOTE 2)
	BRL (15)	BUILDING RESTRICTION LINE (BRL) - 15' HEIGHT
	ROFA	RUNWAY OBJECT FREE AREA (ROFA)
RSA	RSA	RUNWAY SAFETY AREA (RSA)
	RPZ	RUNWAY PROTECTION ZONE (RPZ)
RVZ	RVZ	RUNWAY VISIBILITY ZONE (RVZ)
1 6 / 12 7	NA	SECTION CORNERS



ANNUAL RATE OF CHANGE = 0° 7' WEST
SOURCE: NATIONAL GEOPHYSICAL DATA CENTER

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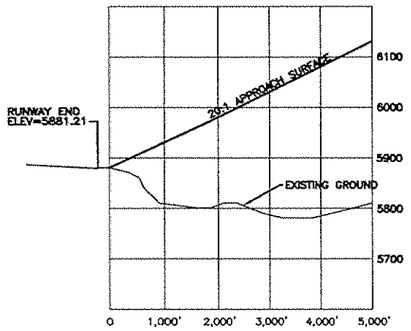
AZTEC MUNICIPAL AIRPORT (N19)
AZTEC, NEW MEXICO

AIRPORT LAYOUT PLAN EXISTING AND ULTIMATE CONDITIONS

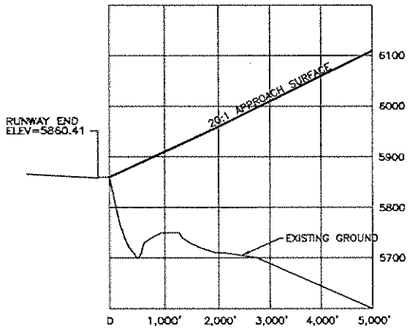
REVISIONS

NUMBER:	DATE:

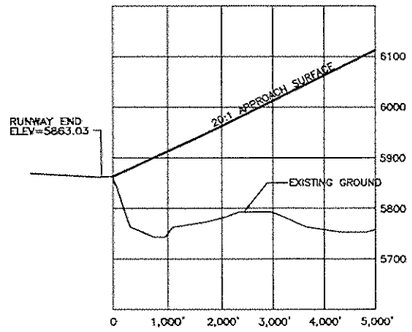
JOB NO: 020810
DATE: MAY 2008
DRAWN BY:
CHECKED BY:
DRAWING NO: 2
SHEET 2 OF 7



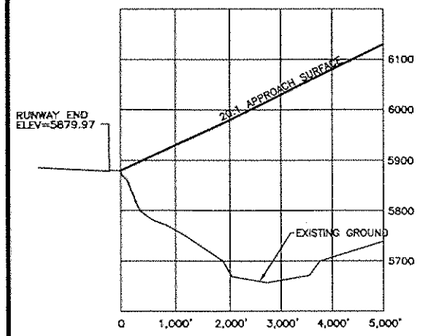
RUNWAY 22 APPROACH PROFILE



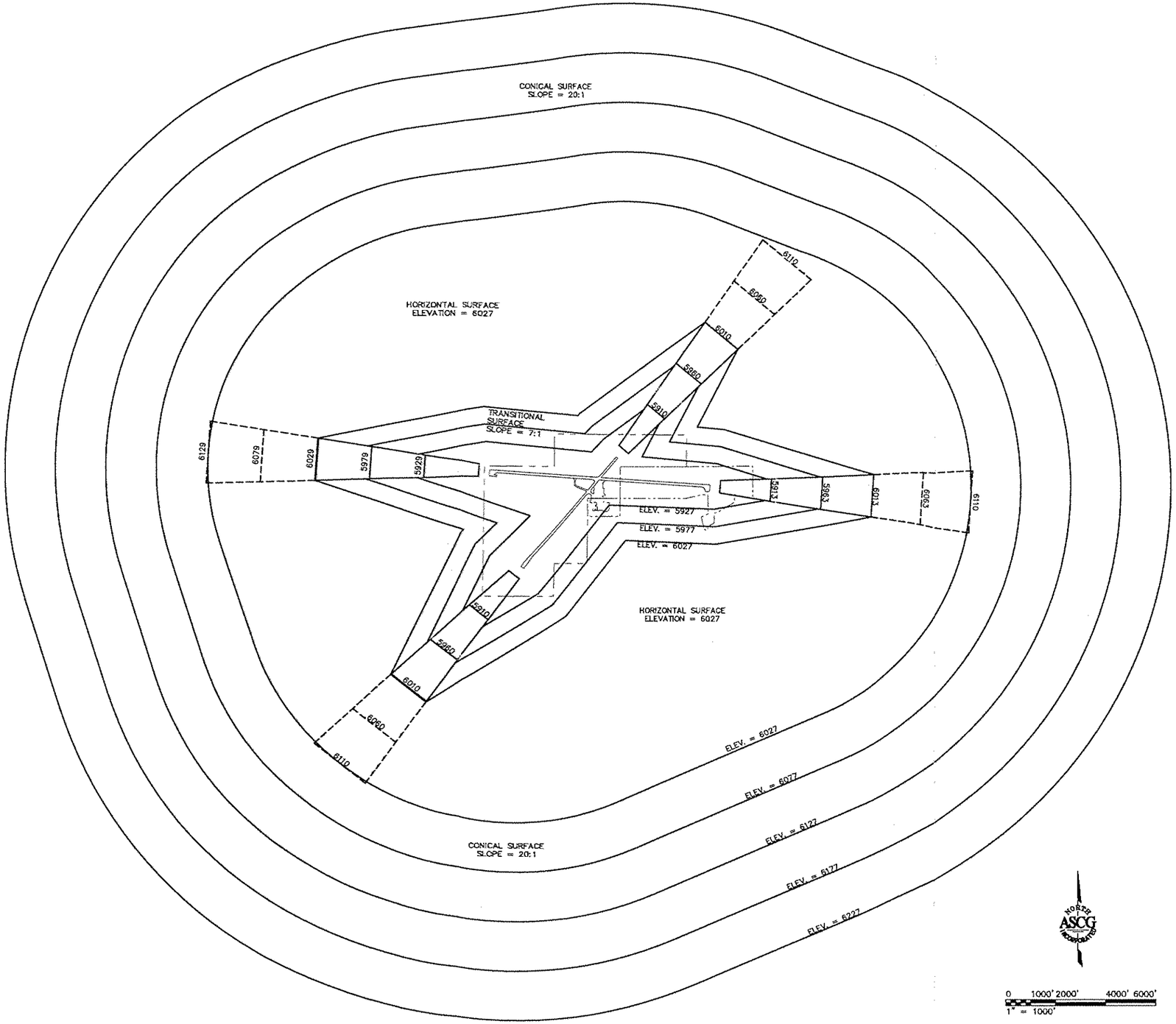
RUNWAY 4 APPROACH PROFILE



RUNWAY 8 APPROACH PROFILE



RUNWAY 26 APPROACH PROFILE



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AZTEC MUNICIPAL AIRPORT (N19)

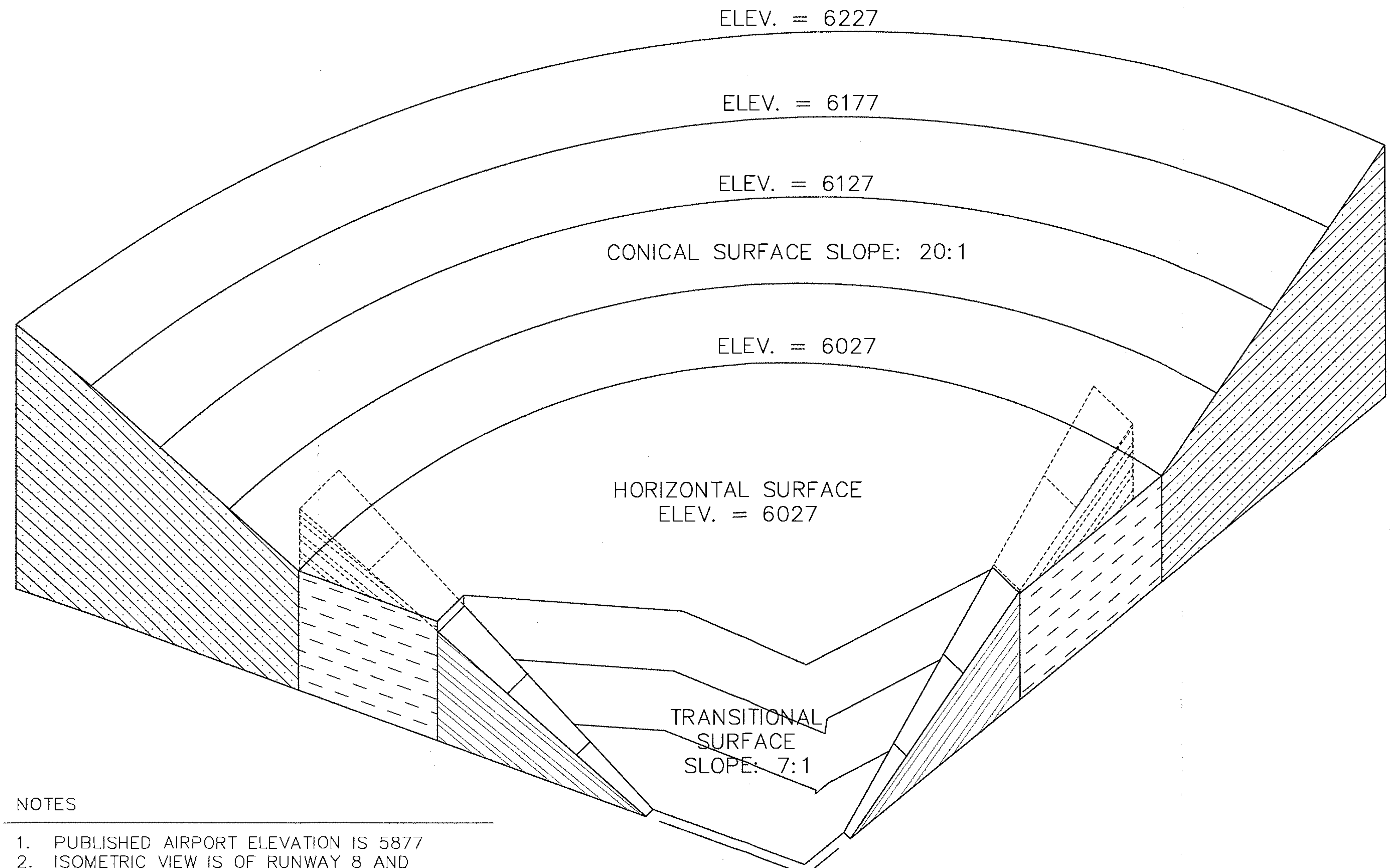
AZTEC, NEW MEXICO

AIRPORT AIRSPACE DRAWING

EXISTING CONDITIONS

REVISIONS	
NUMBER:	DATE:

JOB NO:	020810
DATE:	MAY 2008
DRAWN BY:	BJR
CHECKED BY:	
DRAWING NO:	3
SHEET	3 OF 7



NOTES

1. PUBLISHED AIRPORT ELEVATION IS 5877
2. ISOMETRIC VIEW IS OF RUNWAY 8 AND RUNWAY 22 FROM END TO INTERSECTION AT A ROTATED ANGLE.

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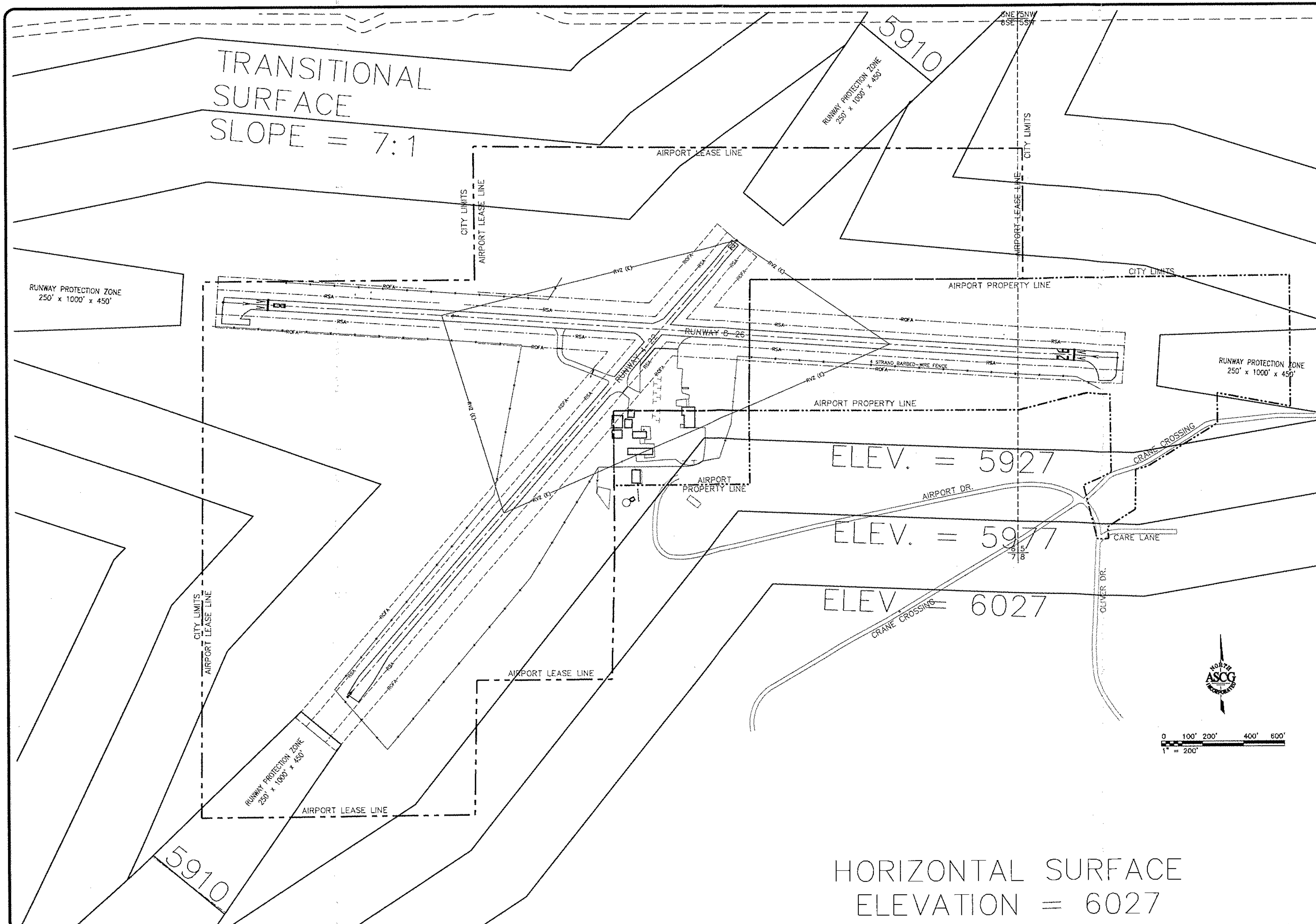
AZTEC MUNICIPAL AIRPORT (N19)
AZTEC, NEW MEXICO

AIRPORT AIRSPACE DRAWING
ISOMETRIC DEPICTION OF IMAGINARY SURFACES
EXISTING CONDITIONS

REVISIONS	
NUMBER:	DATE:

JOB NO: 020810
DATE: MAY 2008
DRAWN BY: BJR
CHECKED BY:
DRAWING NO: 4
SHEET 4 OF 7



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AZTEC MUNICIPAL AIRPORT (N19)
AZTEC, NEW MEXICO

INNER PORTION OF THE APPROACH SURFACE DRAWING EXISTING CONDITIONS

REVISIONS

NUMBER:	DATE:

JOB NO.: 020810
DATE: MAY 2008
DRAWN BY:
CHECKED BY:
DRAWING NO.: 5
SHEET 5 OF 7

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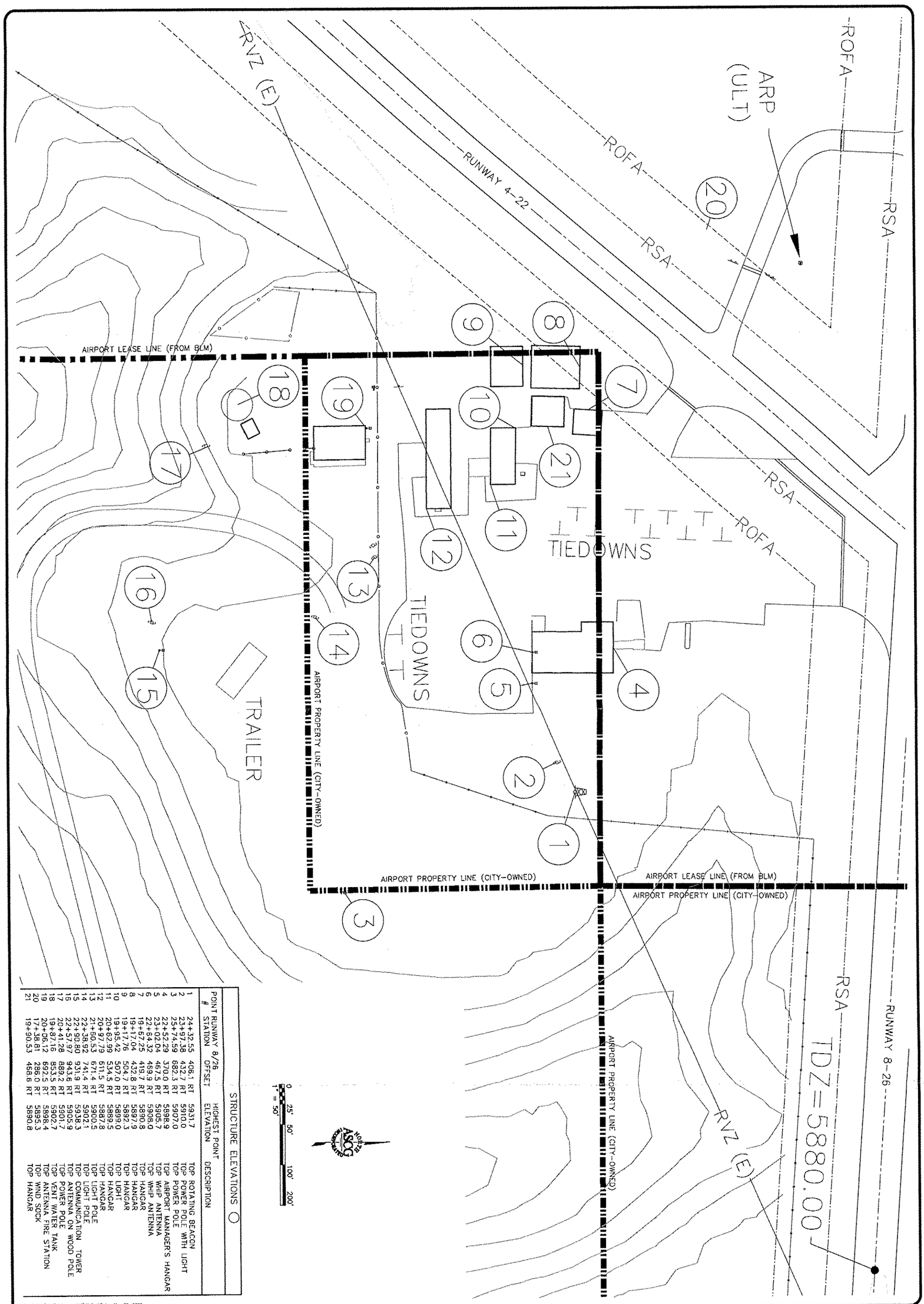

STRUCTURE ELEVATIONS ○

POINT #	RUNWAY 8/26 STATION	OFFSET	HIGHEST POINT ELEVATION	DESCRIPTION
1	24+32.55	406.1 RT	5931.7	TOP ROTATING BEACON
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7	19+67.25	419.7 RT	5890.8	TOP HANGAR
8	19+17.04	432.8 RT	5897.9	TOP HANGAR
9	19+17.76	504.7 RT	5892.3	TOP HANGAR
10	19+95.42	507.0 RT	5899.0	TOP LIGHT
11	20+62.99	534.5 RT	5899.3	TOP HANGAR
12	20+87.53	671.5 RT	5900.5	TOP HANGAR
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15	22+57.97	943.6 RT	5905.9	TOP ANTENNA ON WOOD POLE
16	20+41.28	889.2 RT	5901.7	TOP POWER POLE
17	19+87.16	853.5 RT	5902.7	TOP VENT WATER TANK
18	20+06.12	692.5 RT	5898.4	TOP ANTENNA FIRE STATION
19	17+38.81	286.0 RT	5895.3	TOP WIND SOCK
20	19+90.53	458.6 RT	5890.8	TOP HANGAR
21				

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JOB NO:	020810
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SHEET	6 OF 7

REVISIONS	
NUMBER	DATE

TERMINAL AREA DRAWING

EXISTING CONDITIONS

AZTEC MUNICIPAL AIRPORT (N19)

AZTEC, NEW MEXICO

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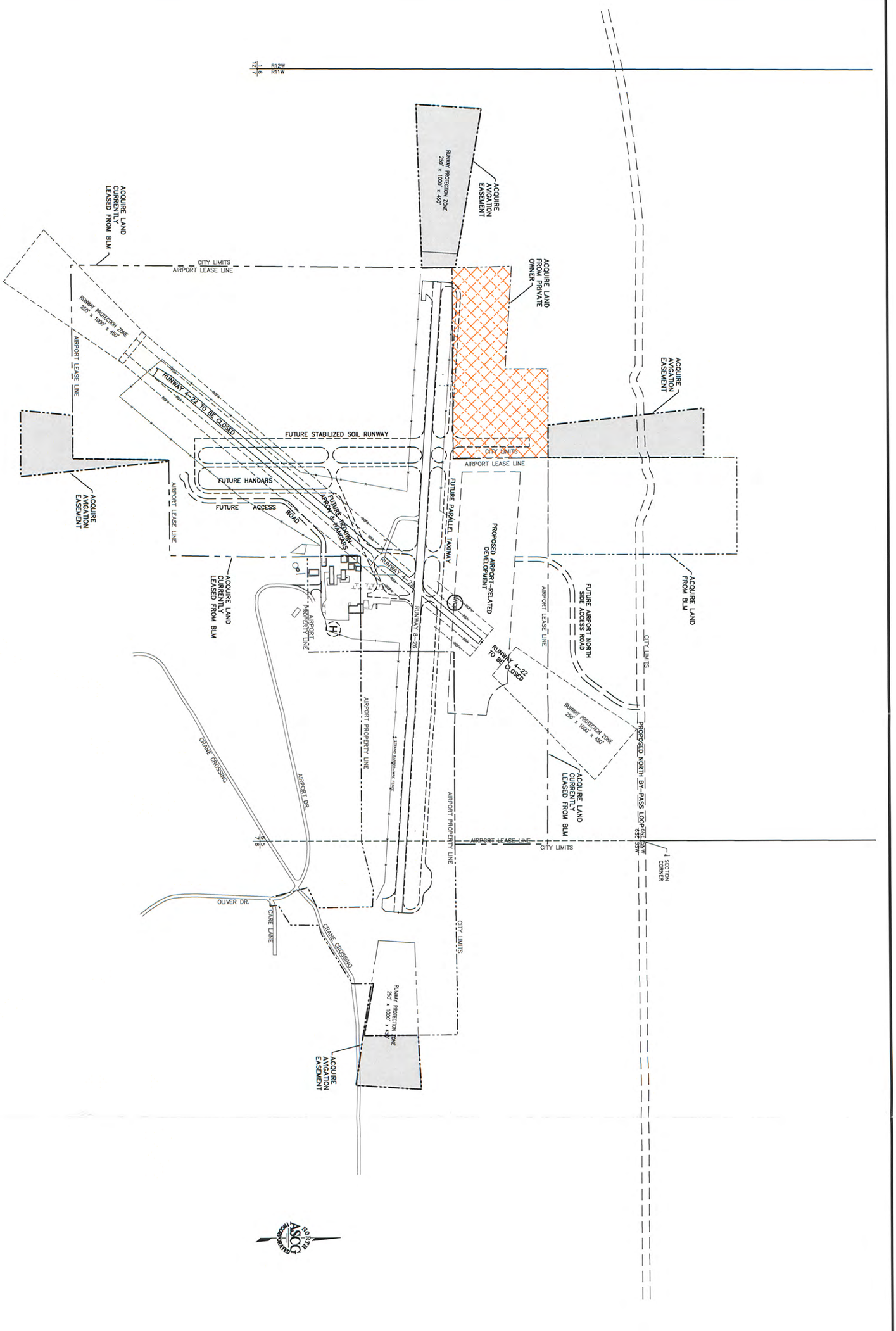

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DATE:	MAY 2008
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DRAWING NO:	7
SHEET 7 OF 7	

REVISIONS	
NUMBER	DATE

AIRPORT PROPERTY MAP
EXISTING AND ULTIMATE CONDITIONS

AZTEC MUNICIPAL AIRPORT (N19)
AZTEC, NEW MEXICO

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