

# Albuquerque International Sunport

## Airport Master Plan



Executive Summary

# **ALBUQUERQUE INTERNATIONAL SUNPORT**

## **AIRPORT MASTER PLAN EXECUTIVE SUMMARY**

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**September 2002**

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#### **Executive Summary Report**

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# Executive Summary Report

The Albuquerque International Sunport Master Plan Study was undertaken to evaluate the airport's capabilities and role, to forecast future aviation demand and to plan for the timely development of new or expanded facilities that may be required to meet that demand. The ultimate goal of the Master Plan is to provide systematic guidelines for the airport's overall development and operation.

The Master Plan was a cooperative effort between the City of Albuquerque and Federal Aviation Administration (FAA). Technical work was prepared by Coffman Associates, Inc., NBBJ West Limited Partnership, Molzen-Corbin Associates, Inc., and Leigh Fisher Associates.

Specific objectives of the Master Plan are:

- To determine projected needs of airport users through the year 2025;
- To identify existing and future facility needs;



- To evaluate future airport facility development alternatives which will promote safety and optimize airport capacity, while not significantly impacting the environment;
- To provide a graphic representation of the ultimate airport development;
- To present land use strategies for the use of airport property;
- To screen the recommended plan for potential environmental impacts;
- To establish a schedule of development priorities and a program for improvements;
- To analyze the airport's financial requirements for capital improvement needs and grant options;



- To coordinate this Master Plan with local, regional, state, and federal agencies; and
- To develop active and productive public involvement through the planning process.

## **COORDINATION**

The Albuquerque International Sunport Master Plan is of interest to many within the local community. This includes local citizens, community organizations, airport users, airport tenants, areawide planning agencies, and aviation organizations.

To assist in the development of the Albuquerque International Sunport Master Plan, the City of Albuquerque identified a cross-section of community members and interested persons to serve in an advisory role in the development of the Master Plan. As members of the Advisory Committee or the Technical Committee, they reviewed working papers and provided comment throughout the study to help ensure that a realistic, viable plan was developed.

A series of public information workshops were also scheduled to allow the public to provide input and learn about the study. The public information workshops were designed to give the public access to general information concerning the Master Plan. The consultants and airport staff were available to answer individual questions.

The working papers were also made available to the general public over the

internet shortly after submission to the committees. The web site also allowed persons to e-mail comments to the consultants. Comments received from the committee meetings, public workshops, and the web site are included in Appendix D in Volume III.

## **ALBUQUERQUE INTERNATIONAL SUNPORT**

Albuquerque International Sunport (ABQ) is positioned to serve all segments of the air transportation industry. As shown on **Exhibit ES-1**, Albuquerque International Sunport has facilities to accommodate commercial airline activity, air cargo and general aviation users. Military aviation needs are accommodated at the adjacent Kirtland Air Force Base, which shares the airfield facilities.

**Table ES-1** summarizes runway data at Albuquerque International Sunport. There are currently four operational runways at Albuquerque International Sunport: Runway 8-26, Runway 3-21, Runway 12-30, and Runway 17-35.

Commercial airline activities are conducted from the passenger terminal facilities located in the northwest quadrant of the airport, north of Runway 8-26 and west of Runway 17-35. Primary access to the passenger terminal building is from Interstate 25 via Sunport Boulevard. Yale Boulevard and Girard Boulevard also provide access to the passenger terminal building.



**TABLE ES-1**  
**Airfield Facility Data**

	<b>Runway 8-26</b>	<b>Runway 3-21</b>	<b>Runway 12-30<sup>3</sup></b>	<b>Runway 17-35</b>
Runway Length (feet)	13,793 <sup>1</sup>	10,000	6,000	10,000 <sup>2</sup>
Runway Width (feet)	150	150	150	150
Runway Surface Surface Material Surface Treatment Condition	Concrete Grooved Good	Concrete Grooved Good	Concrete Grooved Good	Asphalt/Concrete Grooved Poor
Load Bearing Strength (lbs.)				
Single Wheel Loading	100,000	100,000	65,000	100,000
Dual Wheel	210,000	210,000	120,000	210,000
Dual Tandem Wheel	360,000	360,000	N/A	360,000
Double Dual Tandem Wheel	720,000	720,000	N/A	700,000
Runway Pavement Markings Condition	Precision Good	Precision Good	Non-Precision Good	Non-Precision Good
Arresting Device	BAK-9 (26) BAK-12/14 (8)	BAK-12/14 (3)	N/A	N/A
Airfield Lighting	HIRL RCL (8) TDL (8)	HIRL RCL (3) TDL (3)	MIRL	MIRL
Approach Aids	MALSR (8) VASI-6 (8, 26) RVR (8) REIL (26)	MALSR (3) PAPI-4 (3, 21) RVR (3)	PAPI-4 (30) REIL (30)	VASI-4 (17, 35) REIL (17, 35)
Traffic Pattern	Right (8) Left (26)	Right (3) Left (21)	Right (12) Left (30)	Right (17) Left (35)
Instrument Approach Procedures	ILS (8) VOR or TACAN or GPS (8)	ILS (3)	N/A	NDB or GPS (35)
Departure Procedures	Albuquerque One Largo Two			
Weather Reporting	ASOS, ATIS			
Other Facilities	Airport Beacon, Lighted Wind Cone			
Airport Elevation	5,352'			
Taxiway Lighting Aids	MITL, Directional Signs			
Taxiway Markings	Centerline, Hold Positions			

<sup>1</sup> Runway 8 threshold displaced 991'.

<sup>2</sup> Runway 17 threshold displaced 890'.

<sup>3</sup> 155,000 pounds single-tandem (ST).

Source: FAA 5010 Airport Master Record Form, U.S. Terminal Procedures, Southwest Volume 1 of 2, Airport Records.

Air cargo facilities are located along Runway 3-21 and accessed from Spirit Drive. Access to Interstate 25 is available via the University Boulevard interchange located approximately one mile south of the Spirit Drive/University Boulevard intersection.

General aviation facilities at Albuquerque International Sunport are located west of the Runway 12-30/Runway 3-21 intersection. General aviation facilities are accessed from University Boulevard via Access Road B to Clark Carr Road.

Kirtland Air Force Base encompasses approximately 52,000 acres of land along the eastern boundaries of Albuquerque International Sunport.

The 377th Air Base Wing is the host organization for Kirtland AFB. The Wing supports more than 200 tenant organizations, including the Air Force Research Laboratory, Air Force Operational Test and Evaluation Center, 58th Special Operations Wing, New Mexico Air National Guard, Field Command Defense Special Weapons Agency, Air Force Inspection Agency, Air Force Safety Center, the Department of Energy Albuquerque Office and Sandia National Laboratories.

Albuquerque International Sunport is owned and operated by the City of Albuquerque. The City's Aviation Department is responsible for the management, operation, and development of the airport. The Aviation Department is one of 13 departments within the City.

The airport is included in the *National Plan of Integrated Airport Systems* (NPIAS), where it is classified as a medium hub, primary commercial service airport. An airport must be included in the NPIAS to be eligible for federal funding assistance.

## **FORECASTS**

An important factor in any facility plan is a definition of the demand that it should reasonably be expected to accommodate during the useful life of its key components. In airport master planning, this involves projecting aviation activity indicators over at least a 20-year period. Forecasts of passengers, cargo, based aircraft, and operations (takeoffs and landings) serve as the basis for airport facility planning.

Aviation activity can be affected by many influences on the local, regional, and national level, making it virtually impossible to predict year-to-year fluctuations over 20 years with any certainty. Therefore, it must be remembered that forecasts are to serve only as guidelines and planning must remain flexible enough to respond to a range of unforeseen developments.

Recognizing this, it was intended to develop the Albuquerque International Sunport Master Plan to be demand-based rather than time-based. As a result, the reasonable levels of activity potential that are derived from the forecasting effort will be related to planning horizon levels rather than dates in time. These planning horizons are established as levels of activity that

will call for consideration of the implementation of the next step in the master plan program.

The service area of an airport is defined by its proximity to other airports providing similar service. Albuquerque's service area is rather extensive in that it is the only airport in the state of New Mexico with commercial service by the major airlines. Over 95 percent of the commercial passengers enplaning in New Mexico do so at Albuquerque International Sunport.

Over the years, studies have shown that over two-thirds of the ABQ originating passengers come from within a 30-mile radius of the airport. The next largest contributor has been the Santa Fe/Los Alamos area. Thus, the six-county area of Bernalillo, Sandoval, Valencia, Tarrant, Los Alamos, and Santa Fe generates over 75 percent of the passengers at ABQ.

There is good potential that passenger traffic at Santa Fe Municipal Airport will grow in the future. F.A.R. Part 139 certification is under consideration. This could eventually lead to 19-passenger aircraft being supplemented or replaced by 30- to 60-seat aircraft including regional jets at Santa Fe.

While improving, the level of air service at Santa Fe is still not expected to approach that available at ABQ. Thus, ABQ can be expected to continue to draw a slightly smaller, but still significant share of the Santa Fe market area in the future.

The general aviation service area is more localized due to the availability of other airports that serve general

aviation exclusively. Therefore, the general aviation market area is limited to the MSA, and primarily to Bernalillo County. In fact, much of that market is shared with Double Eagle II (the City of Albuquerque's reliever airport).

**Exhibit ES-2** is a graphic presentation of annual passenger enplanements at Albuquerque International Sunport from 1962 through 1999, the base year for the Master Plan forecasts. During this time, the airport experienced an annual average growth rate of 7.8 percent.

**Exhibit ES-3** graphically compares the non-stop flight destinations from Albuquerque International Sunport to its top 20 destinations. ABQ has daily non-stops to eight of its top ten markets and 15 of its top 20 markets. Daily non-stop service is currently not available to New York, Washington D.C., Baltimore, Boston, and Portland. Since the last Master Plan, service has been added to the top 20 destinations of San Diego, Atlanta, Seattle, Minneapolis, and Orlando.

**Table ES-2** provides a summary of the aviation forecasts for Albuquerque International Sunport.

In summary, airline passenger activity can reasonably be expected to grow at an average annual rate of between three and four percent over the next 20-plus years. Normal growth of enplaned freight and mail tonnage should be between five and six percent annually. Annual aircraft operations, or takeoffs and landings, can be reasonably anticipated to grow at an average annual rate of less than two percent.

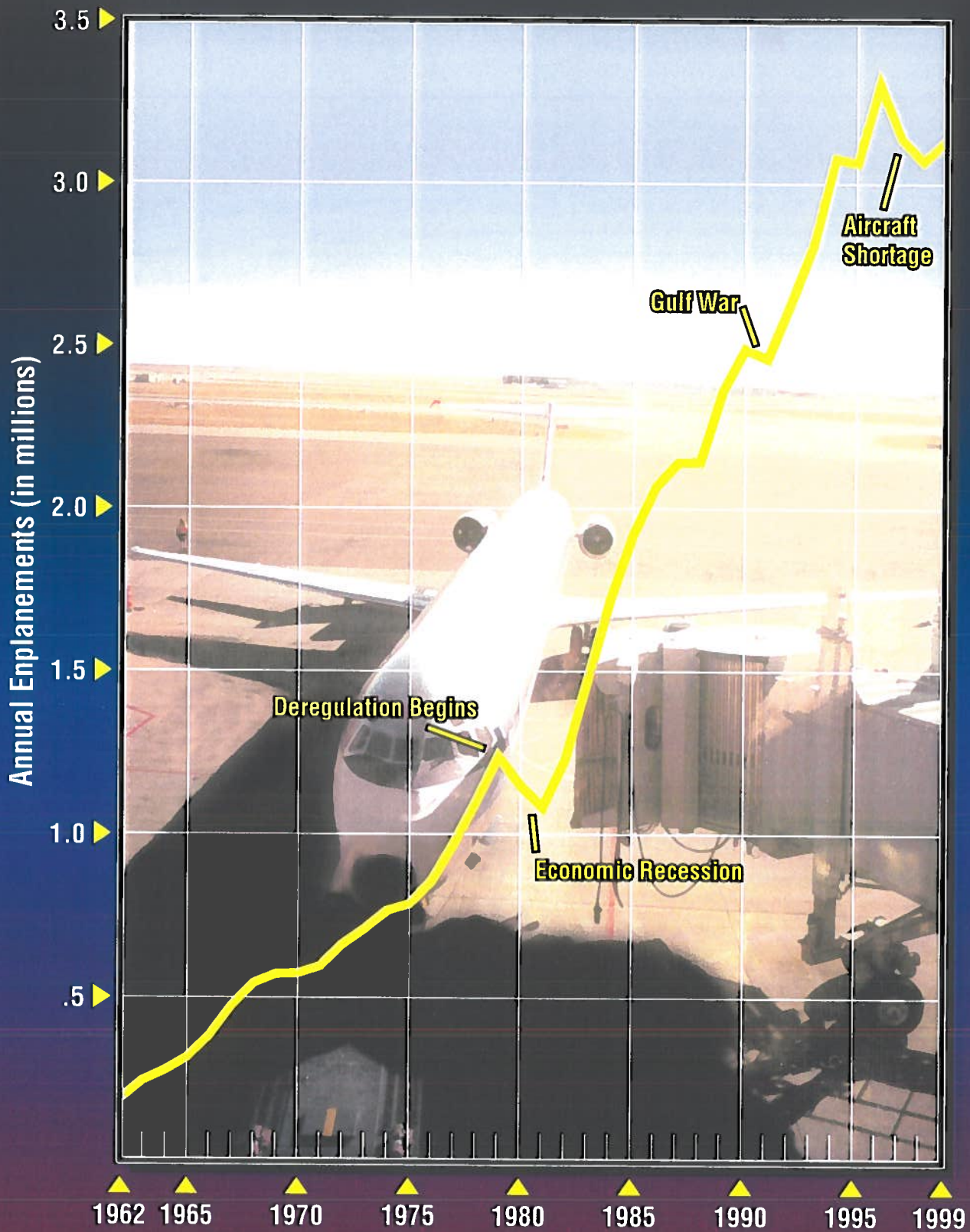
**TABLE ES-2**  
**Aviation Forecast Summary**  
**Albuquerque International Sunport**

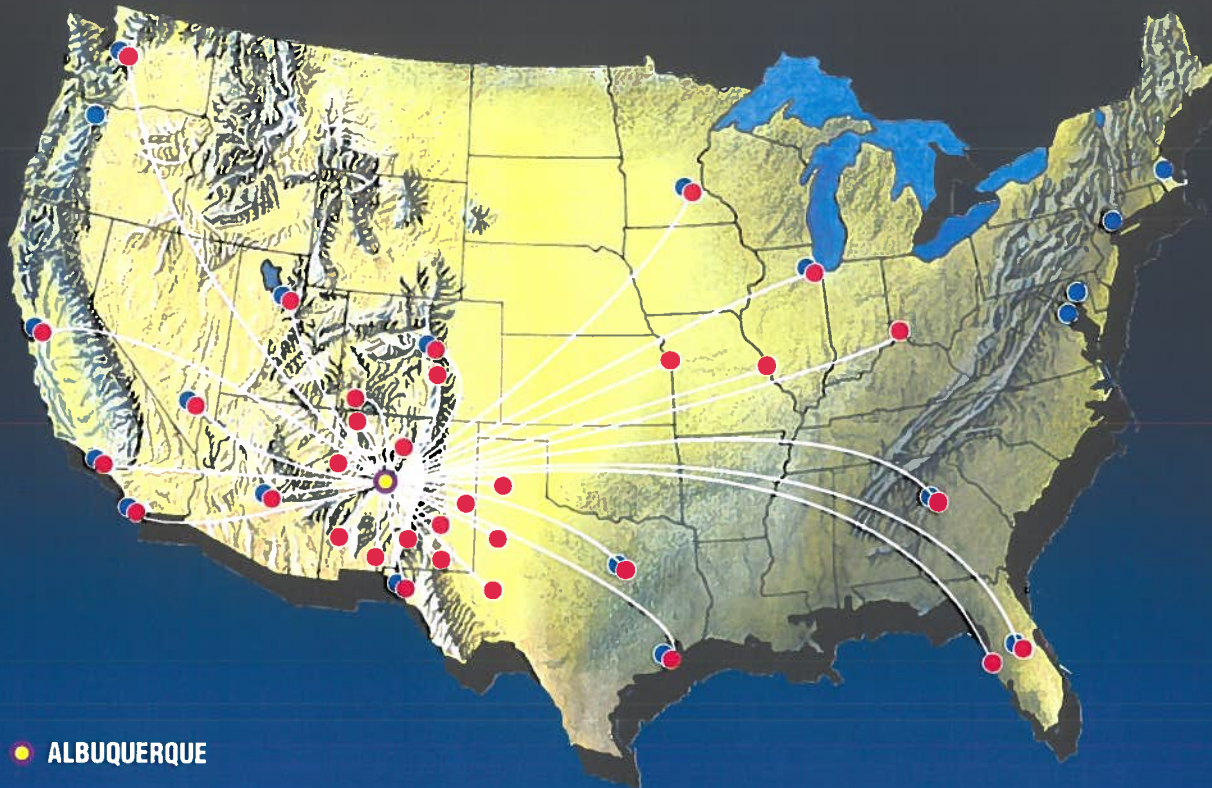
	2000	2001	2005	2010	2025
<b>ANNUAL OPERATIONS</b>					
<b><i>Air Carrier &amp; Air Taxi</i></b>	116,558	122,096	128,600	145,100	192,000
<b><i>General Aviation</i></b>					
Itinerant	63,214	59,637	70,700	77,000	93,500
Local	11,409	14,222	13,600	14,400	15,900
Total GA	74,623	73,859	84,300	91,400	109,400
<b><i>Military</i></b>					
Itinerant	22,232	23,338	24,000	24,000	24,000
Local	20,078	23,440	20,000	20,000	20,000
Total Military	43,761	46,778	44,000	44,000	44,000
<b>Total Annual Operations</b>	233,491	292,733	256,900	280,500	345,400
<b><i>Annual Enplanements</i></b>	3,146,208	3,089,703	3,902,000	4,703,000	7,105,000
<b><i>Based Aircraft</i></b>					
General Aviation	219	216	247	262	313
Military	64	58	58	58	58
<b>Total Annual Air Cargo (tons)</b>	95,045	80,093	127,000	168,000	335,000

The Albuquerque International Sunport is the most important interface to the air transportation system, not only for the city and the metropolitan area, but also for the entire state of New Mexico. The airport's forecasts and facility requirements analyses indicate future needs for facility improvements primarily in the landside components of the airport. The passenger terminal building, which is often the first and last memory of Albuquerque for visitors, will need to be able to grow to accommodate future needs. This is evidenced by simply reviewing history. Today's airport must handle 10 times more passengers than it did in 1965, and nearly three times more than it did 20 years ago. Growth in air cargo has

been even more dramatic. General aviation needs continue to change as use of business and corporate aircraft become more commonplace.

If Albuquerque International Sunport had not been capable of responding to this need, the community's and state's ability to participate and compete in the national and global economy would have been compromised. If facilities are not maintained and improved so the airport remains a pleasant experience to the visitor or business traveler, or if delays and queues become unacceptable, then these individuals may consider doing their business elsewhere or choose another location to spend their vacation dollars.





● ALBUQUERQUE

● **TOP 20 DESTINATIONS (1999)**

- |                           |                    |                   |                        |
|---------------------------|--------------------|-------------------|------------------------|
| 1. PHOENIX, AZ            | 6. HOUSTON, TX     | 11. SAN DIEGO, CA | 16. MINNEAPOLIS, MN    |
| 2. LOS ANGELES BASIN, CA  | 7. NEW YORK, NY    | 12. SEATTLE, WA   | 17. ORLANDO, FL        |
| 3. DALLAS / FT. WORTH, TX | 8. CHICAGO, IL     | 13. ATLANTA, GA   | 18. BOSTON, MA         |
| 4. SAN FRANCISCO BAY, CA  | 9. WASHINGTON D.C. | 14. EL PASO, TX   | 19. SALT LAKE CITY, UT |
| 5. LAS VEGAS, NV          | 10. DENVER, CO     | 15. BALTIMORE, MD | 20. PORTLAND, OR       |

● **NON-STOP SERVICE MARKETS (June 2000)**

ALAMOGORDO, NM	FARMINGTON, NM	PHOENIX, AZ
AMARILLO, TX	GALLUP, NM	ROSWELL, NM
ATLANTA, GA	HOUSTON, TX	SALT LAKE CITY, UT
CARLSBAD, NM	KANSAS CITY, MO	SAN DIEGO, CA
CHICAGO, IL	LAS CRUCES, NM	SAN FRANCISCO, CA
CINCINNATI, OH	LAS VEGAS, NV	SEATTLE, WA
CLOVIS, NM	LOS ALAMOS, NM	SILVER CITY, NM
COLORADO SPRINGS, CO	LOS ANGELES, CA	ST. LOUIS, MO
DALLAS / FT. WORTH, TX	LUBBOCK, TX	TAMPA, FL
DENVER, CO	MIDLAND / ODESSA, TX	TUCSON, AZ
DURANGO, CO	MINNEAPOLIS, MN	
EL PASO, TX	ORLANDO, FL	



The following sections address future needs and recommended plans by each of the four major components of the airport, as well as their support facilities.

## ***AIRFIELD***

The development undertaken since the last Master Plan has put the airfield in good shape. In fact, there are only a few improvements that would be necessary to carry the airfield through the long range planning horizon milestone. These include planning for an 11,000-foot length capability for the secondary commercial service runway and evaluating the taxiway system for possible efficiency improvements, as well as to serve future landside development.

**Exhibit ES-4** presents a summary of the facility requirements for this airfield.

Two of the biggest public issues related to Albuquerque International Sunport are the future justification of Runway 17-35 and the relocation of the airport to another site. The evaluation of Runway 17-35 considered the capacity and wind coverage analysis of the previous chapter. It also considered other factors such as the cost of continuing to maintain the runway, compatible land use factors, and the effect on providing future landside needs at the airport.

## **AIRPORT RELOCATION ANALYSIS**

The relocation of an airport's operations either to another existing airport or to a new airport is an alternative that will typically be favored by many residing close to the existing airport. The relocation of an airport, however, is a very complex and expensive development, particularly when it involves a major commercial service airport such as Albuquerque International Sunport.

It must be noted that Albuquerque International Sunport does not experience any serious constraints at the present time. The airfield has adequate runway length for all types of civilian aircraft. The airfield capacity should be adequate for at least the next quarter of a century as well. The Master Plan is examining alternatives for ensuring that landside facility needs can also be accommodated over the long range. A new commercial service airport site would only be feasible in the next quarter century if landside facilities at ABQ cannot be improved in a cost-effective manner without significant, unmitigable environmental impacts.

A key to the long range viability of the new airport site would be to invest in enough property acquisition to ensure compatible land use. History has shown that, over time, the presence of a commercial service airport attracts urban development. While the

surrounding property may be undeveloped where a new airport is constructed, it would not stay that way. A replacement airport for ABQ could require as much as 56 square miles of property acquisition. As site-specific refinements are made, it may be possible to reduce this envelope, but it can still be anticipated that at least 40 square miles should be reserved.

Space for major airport development is limited first by the mountainous terrain throughout the area. Indian reservations are present on three sides and comprise a large portion of the area.

The next major consideration is transportation and utility access. This level of facility will require freeway access similar to that provided by I-25 adjacent to the Sunport. The further a new airport is from existing freeways, the more expensive that access will become. Similarly, the further the airport is from the city, the further any future mass transportation would need to be extended.

With a site as large as this airport would command, the chances for environmental impacts are increased. Since the site would be primarily undeveloped, the potential for impacts to wildlife and its habitat, wetlands, farmland, and previously undisturbed cultural resources will generally be greater than the existing site which still has development capability.

The cost for development of a new site to meet the long range planning horizon milestone is estimated in the range of \$2.0 billion. Also to be considered is the

joint-use association of Albuquerque International Sunport with Kirtland Air Force Base (AFB). If the relocation were to include the Air Force Base, the resultant airport relocation could quickly become the most expensive ever undertaken in the United States. This does not even consider the potential ramifications relating to the Sandia National Laboratories.

At some point in the next century, Albuquerque International Sunport may reach its practical capacity. As that time approaches, it may be necessary to begin to consider a large, new airport site or, at least, relocating some commercial service activities elsewhere. That time, however, is well beyond the next quarter of a century, leaving Albuquerque International Sunport a serviceable airport with a significant useful life.





## **AIRFIELD PLANNING CONSIDERATIONS**

With minimum improvements the existing airfield will be adequate for the long range planning horizon of 345,000 annual operations. This level is not anticipated to be reached for at least a quarter of a century.

Therefore, the remaining airfield alternatives concentrate on optimizing the existing airfield.

### **Runway 8-26**

Over the past decade, the primary Runway 8-26 has undergone reconstruction of its entire length as

CATEGORY	EXISTING	SHORT TERM	LONG RANGE
<b>RUNWAYS</b> 	<u><b>Runway 8-26</b></u> 13,793' x 150' • 210,000# DWL <u><b>Runway 3-21</b></u> 10,000' x 150' • 210,000# DWL <u><b>Runway 12-30</b></u> 6,000' x 150' • 65,000# DWL <u><b>Runway 17-35</b></u> 10,000' x 150' • 210,000# DWL	<u><b>Primary Runway</b></u> 13,793' x 150' • 210,000# DWL <u><b>Secondary Runway</b></u> 10,000' x 150' • 210,000# DWL <u><b>General Aviation Runway</b></u> 6,000' x 100' • 65,000# DWL	<u><b>Primary Runway</b></u> Same <u><b>Secondary Runway</b></u> 11,000' x 150' • 210,000# DWL <u><b>General Aviation Runway</b></u> Same
<b>TAXIWAYS</b> 	<u><b>Runway 8-26</b></u> Full Parallel (both sides) Partial Dual Parallel High Speed Exits/Bypasses <u><b>Runway 3-21</b></u> Parallel, High Speed Exits Holding Apron - South <u><b>Runway 12-30</b></u> Full Parallel, Partial Parallel Right Angle Exits Holding Apron/Bypasses <u><b>Runway 17-35</b></u> Full Parallel, Partial Parallel Right Angle Exits/Bypasses	<u><b>Primary Runway</b></u> Full Parallel (both sides) Partial Dual Parallel High Speed Exits/Bypasses <u><b>Secondary Runway</b></u> Parallel, High Speed Exits Holding Apron/Bypass <u><b>General Aviation Runway</b></u> Full Parallel, Partial Parallel Right Angle Exits Holding Apron/Bypass	<u><b>Primary Runway</b></u> Same  <u><b>Secondary Runway</b></u> Add Parallel  <u><b>General Aviation Runway</b></u> Same
<b>NAVIGATIONAL AIDS</b> 	ASOS, RVR, ASR-9, ATCT <u><b>Runway 8-26</b></u> ILS (8) VORTAC/GPS (8) VASI-6 <u><b>Runway 3-21</b></u> ILS-3 PAPI-4 <u><b>Runway 12-30</b></u> PAPI-4 <u><b>Runway 17-35</b></u> NDB/GPS (35) VASI-4	ASOS, RVR, ASR-9, ATCT <u><b>Primary Runway</b></u> ILS GPS VASI-6 <u><b>Secondary Runway</b></u> ILS PAPI-4 <u><b>General Aviation Runway</b></u> GPS PAPI-4	ASOS, RVR, ASR-9, ATCT <u><b>Primary Runway</b></u> CAT I GPS VASI-6  <u><b>Secondary Runway</b></u> CAT I GPS PAPI-4 <u><b>General Aviation Runway</b></u> GPS PAPI-4
<b>LIGHTING AND MARKING</b> 	Rotating Beacon, MITL <u><b>Runway 8-26</b></u> HIRL, CL, TDZ MALSR (8)/REIL (26) Precision Marking <u><b>Runway 3-21</b></u> HIRL, CL, TDZ, MALSR Precision Marking <u><b>Runway 12-30</b></u> MIRL Basic Marking <u><b>Runway 17-35</b></u> MIRL Nonprecision Marking	Rotating Beacon, MITL <u><b>Primary Runway</b></u> HIRL, CL, TDZ MALSR/REIL Precision Marking <u><b>Secondary Runway</b></u> HIRL, CL, TDZ, MALSR Precision Marking <u><b>General Aviation Runway</b></u> MIRL Nonprecision Marking	Rotating Beacon, MITL <u><b>Primary Runway</b></u> Same  <u><b>Secondary Runway</b></u> Same  <u><b>General Aviation Runway</b></u> Same



well as its parallel taxiway system. This included the reconstruction and extension of parallel Taxiway E on the south side of the runway.

All the taxiway exits from the primary runway recommended by the previous Master Plan have been constructed; therefore, the runway's exit capabilities have been optimized. The only taxiway recommendation not completed was the extension of dual parallel Taxiway B west to the easternmost high speed exit.

The greatest benefit of the east Taxiway B extension would be for the military aircraft stationed near the east end of the runway during east flow. Because of its effects on military facilities and because the primary beneficiaries of its construction would be the military, further extension of Taxiway B should be included in the plan only at the request of Kirtland Air Force Base.

### **Runway 3-21**

As indicated earlier, one of the primary recommendations from the previous Master Plan was to upgrade Runway 3-21 to accommodate air carrier aircraft. The runway is now 10,000 feet long, 150 feet wide, and is equipped with a Category I instrument approach from the southwest.

The facility requirements indicated the airport should plan for a long range need for a secondary runway 11,000 feet in length. This can be added to the southwest end of the runway as depicted on **Exhibit ES-5**. There is an adequately graded area available for a 1,000-foot extension as well as the

associated extended runway safety area.

The landing threshold could be left in its present location to ensure that aircraft approaches over areas to the southwest are not lowered. At the same time, the limited departures to the northeast would be able to climb out higher with the departure threshold located 1,000 feet further southwest.

### **Runway 12-30**

The reconstruction and extension of Runway 12-30 to 6,000 feet makes it a better option for general aviation aircraft to avoid heavier traffic on the other runways. The proximity of the runway to the general aviation area makes Runway 12 convenient for departures in east flow and Runway 30 convenient for arrivals in west flow.

### **Runway 17-35**

As indicated earlier, Runway 17-35 is the fourth runway orientation on an airfield where the other three runways provide sufficient wind coverage as well as sufficient airfield capacity.

Runway 17-35 offers the airport a limited amount of additional capability. It is a second back-up for commercial and military airlines, and a third back-up for general aviation and commuters. It can be a runway of convenience for the airlines on the easternmost terminal concourse. This must be weighed against the following considerations.

- **Safety:** Runway 17-35 intersects all three other runways and increases the opportunity for runway incursions. The existing three-runway intersection is a condition that FAA seeks to avoid or eliminate due to its high potential for runway incursions.
- **Wind Coverage:** Runway 17-35 is needed for less than 1,400 operations per year. In extreme conditions, general aviation aircraft can use the north-south runway at Double Eagle II Airport.
- **Capacity:** The five highest airfield operations capacity scenarios do not include Runway 17-35. Increased use of Runway 17-35 would lower airfield capacity and increase aircraft delays.
- **Costs:** Short term runway rehabilitation costs are estimated at \$27.0 million. The minimal benefits of this runway will not survive a benefit-cost analysis.
- **Other Considerations:** The north approach directly overflies residential neighborhoods. The physical space and safety clearances required for this runway are in locations that can support future landside development on a land-poor airport.

Various options were considered to shift the runway south as well as to shorten the runway. These alternatives were still too expensive, both financially and operationally, to consider retaining Runway 17-35. As a result, Runway 17-35 is recommended to be closed before

extensive rehabilitation or reconstruction is required.

## **AIRFIELD PROGRAM**

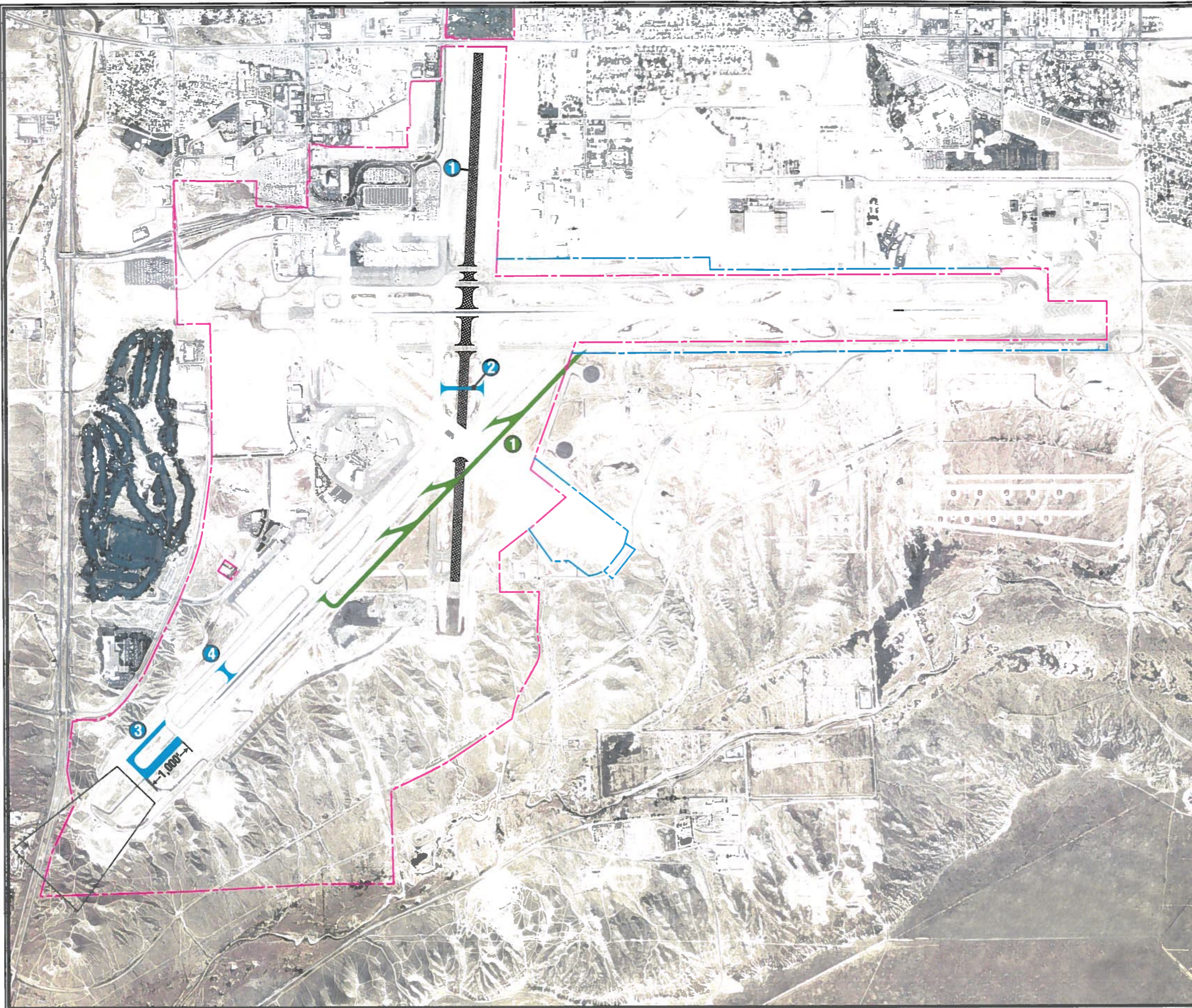
The minimal recommendations for the airfield program are depicted on **Exhibit ES-5**.

## **AIR CARGO**

Requirements for new facilities to accommodate projected growth in air cargo activity are summarized on **Exhibit ES-6**.

As shown in the exhibit, there is a potential need for an additional 250,000 square feet (s.f.) of building space to accommodate cargo processing in the long term planning horizon. An additional 143,000 square yards (s.y.) of automobile parking areas and truck staging areas are also anticipated. This would accommodate employee parking and provide areas for the transfer of air cargo from the planes to ground vehicles for delivery and distribution. An additional 80,200 square yards of apron area are projected to accommodate aircraft parking. While the existing air freight building (which primarily accommodates the needs of passenger airline belly freight) is anticipated to be adequate through the planning period, an additional 27,200 square feet of space is projected for the air mail facility.

While a requirement for additional air mail processing area has been projected by the Master Plan, expansion of the air mail facility would be at the discretion



# **LEGEND**

- Airport Property Line
- Lease Line
- Runway Pavement Eliminated
- Ultimate Runway Protection Zone
- Intermediate Term
- Long Term

## **SHORT TERM PLANNING HORIZON**

*No Short Term Airfield Projects Proposed*

## **INTERMEDIATE PLANNING HORIZON**

- 1 Close/Remove Runway 17-35
- 2 Connecting Taxiway Between C & D
- 3 Extend Runway 3-21 1,000 feet Southeast
- 4 Taxiway Exit on Runway 3-21

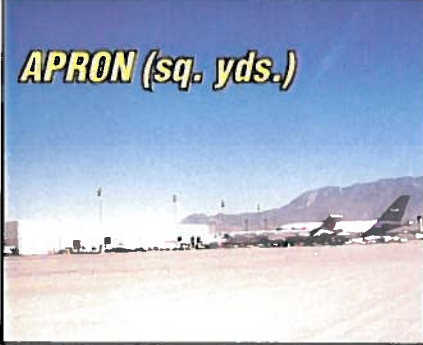
## **LONG RANGE PLANNING HORIZON**

- 1 Eastside Partial Parallel Taxiway



DATE OF PHOTO: 9-30-99



	AVAILABLE	CURRENT	SHORT TERM	INTERMEDIATE	LONG RANGE
89,700	60,100	75,500	93,900	169,900	
	52,000	75,770	108,000	143,000	302,000
	30	23	32	43	91
	25,000	42,000	60,000	80,000	168,000
	49,800	24,000	32,000	43,000	77,000
	39,900	ADEQUATE THROUGH PLANNING PERIOD.			



of the United States Postal Service (USPS). This Master Plan assumes any expansion would be contiguous with the existing air mail facility, which is planned to remain in its existing location.

The passenger airlines' air freight building, located west of the passenger terminal building, is planned to be replaced at the west end of the apron at the terminus of Yale Boulevard. The existing building accommodating the administrative and operations activities for the airline refueling contractor is planned to be removed to accommodate the new air freight building.

A second air freight building is planned near Gibson Boulevard with road access from Girard Boulevard. This building would be located near the end of the existing Runway 17-35 alignment, parallel with Gibson Boulevard. This air freight building is planned to serve the scheduled air carriers using the planned second terminal building.

The primary air cargo facility used by the all-cargo carriers is located west of Runway 3-21, south of Runway 8-26, along Spirit Drive.

The plan for accommodating air cargo activity at Albuquerque International Sunport is shown on **Exhibit ES-7**. The plan builds upon the investments made in the existing air cargo facilities to accommodate future demand. The existing air cargo area is expanded to the north and south to accommodate apron, building, truck courts, and automobile parking areas.

Prior to extending the apron to the north, two existing T-hangar facilities and four airport maintenance buildings would need to be removed. The T-hangar facilities are planned to be relocated to the western portion of the general aviation area as shown on **Exhibit ES-7**. The airport maintenance facilities would be replaced east of Runway 3-21.

The southern air cargo area would be linked to the existing air cargo facility by a roadway extending parallel to the air cargo apron.

## **GENERAL AVIATION**

**Exhibit ES-8** summarizes the projected general aviation facility needs for Albuquerque International Sunport. As shown in the table, the requirements analysis determined that existing general aviation facilities could be expected to accommodate projected general aviation demand through at least the intermediate term planning horizon demand levels. At long term planning horizon demand levels, the Master Plan projected a need for an additional 40,300 square feet of conventional hangar space and 9,000 square feet of terminal building space.

While the existing hangar space appears to be adequate, the facility requirements analysis did indicate the need for hangar facilities to more adequately accommodate the tail heights of common business class aircraft utilizing Albuquerque International Sunport.

It is the policy of the Aviation Department to encourage the use of Double Eagle II Airport by general aviation. Double Eagle II Airport was specifically constructed to serve as a general aviation reliever airport for Albuquerque International Sunport.

The Aviation Department policy should not be viewed as diminishing the role of general aviation at Albuquerque International Sunport. General aviation services will be needed, and are planned, for the foreseeable future at Albuquerque International Sunport. There is a segment of general aviation, particularly business-class aircraft, that use Albuquerque International Sunport because of the capabilities of the airfield system at Albuquerque International Sunport and the general aviation services provided at the airport.

The general aviation facility requirements for Albuquerque International Sunport recognize that any significant growth in general aviation beyond the capabilities of the existing general aviation area will be accommodated at Double Eagle II Airport or other general aviation airports.

The recommended plan for accommodating general aviation activity at Albuquerque International Sunport is shown on **Exhibit ES-9**. The plan considers opportunities for new conventional hangar development within the existing general aviation area to serve business aircraft use of the airport. This includes two potential hangar areas along the existing apron area and a hangar development parcel along Taxiway E1.

The recommended general aviation plan reserves areas for the relocation of the existing T-hangar facilities. Relocation of the T-hangar facilities will be required prior to expansion of the air cargo apron to the north.

## ***PASSENGER TERMINAL***

The existing airline passenger terminal has a gross area of 596,000 square feet. The evaluations indicated that the current building could accommodate over 3.6 million annual enplaned passengers.

At the short term planning horizon of 3.9 million enplaned passengers, 601,000 square feet will be required. At the intermediate term planning horizon of 9.4 million total annual passengers, a single terminal of 722,000 square feet will be required. At the long term planning horizon of 7.1 million annual enplanements, a single terminal of 893,000 square feet will be required. (See **Exhibit ES-10**.)

These figures reflect the continued expansion of a single consolidated terminal facility. If a second separate terminal is constructed, then the facilities requirements could be 20 to 40 percent larger due to plan layout and duplication of required facilities (i.e. general circulation, concessions, etc).

Following a broader search that considered replacement locations for the passenger terminal, the terminal alternatives analysis came to focus on options at the existing location in the northwest quadrant of the airport. As it became evident that the existing

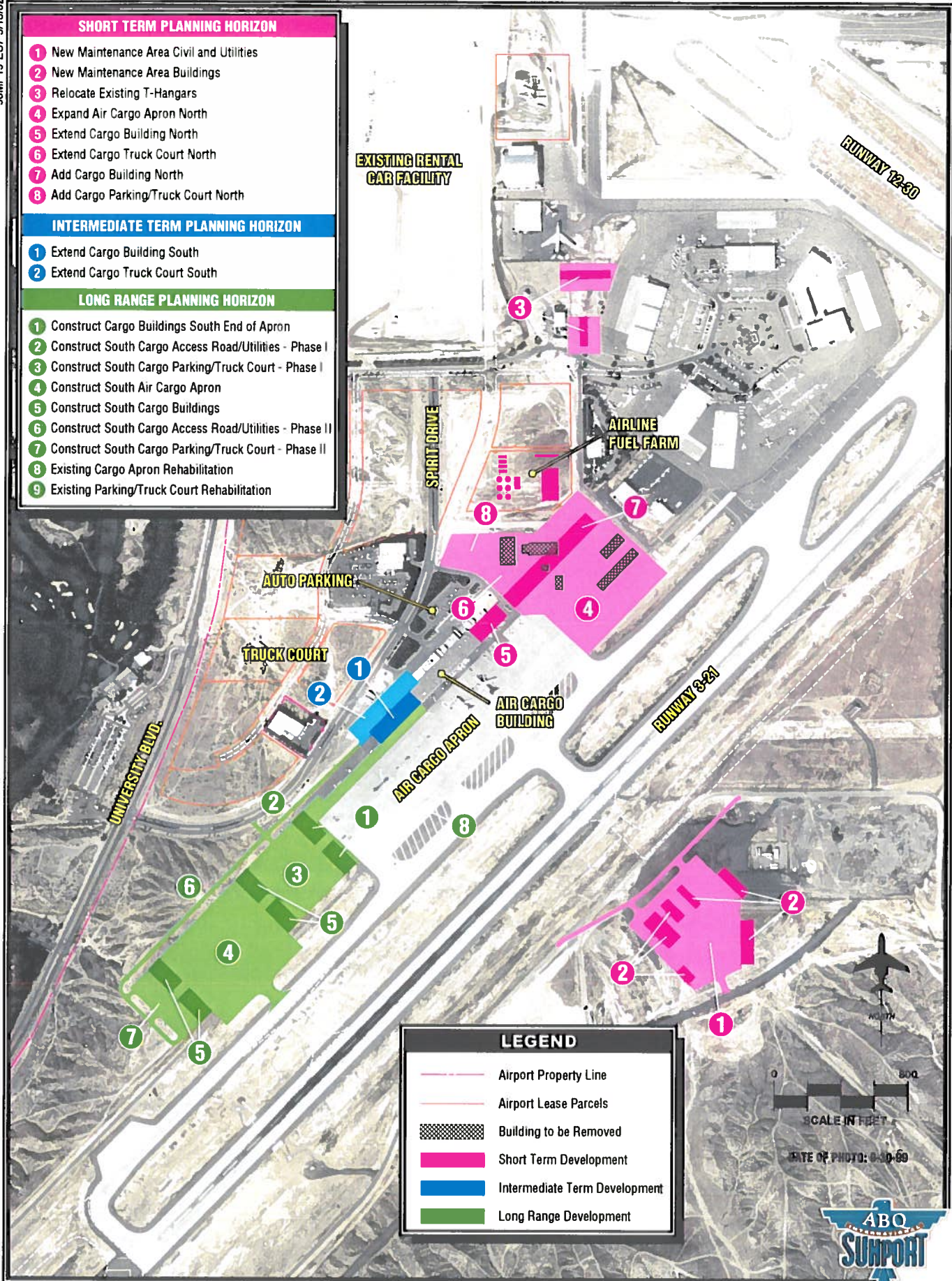



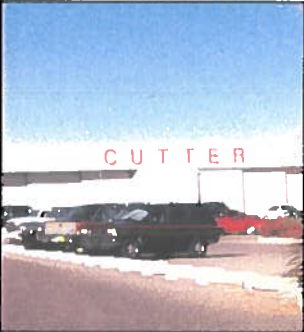
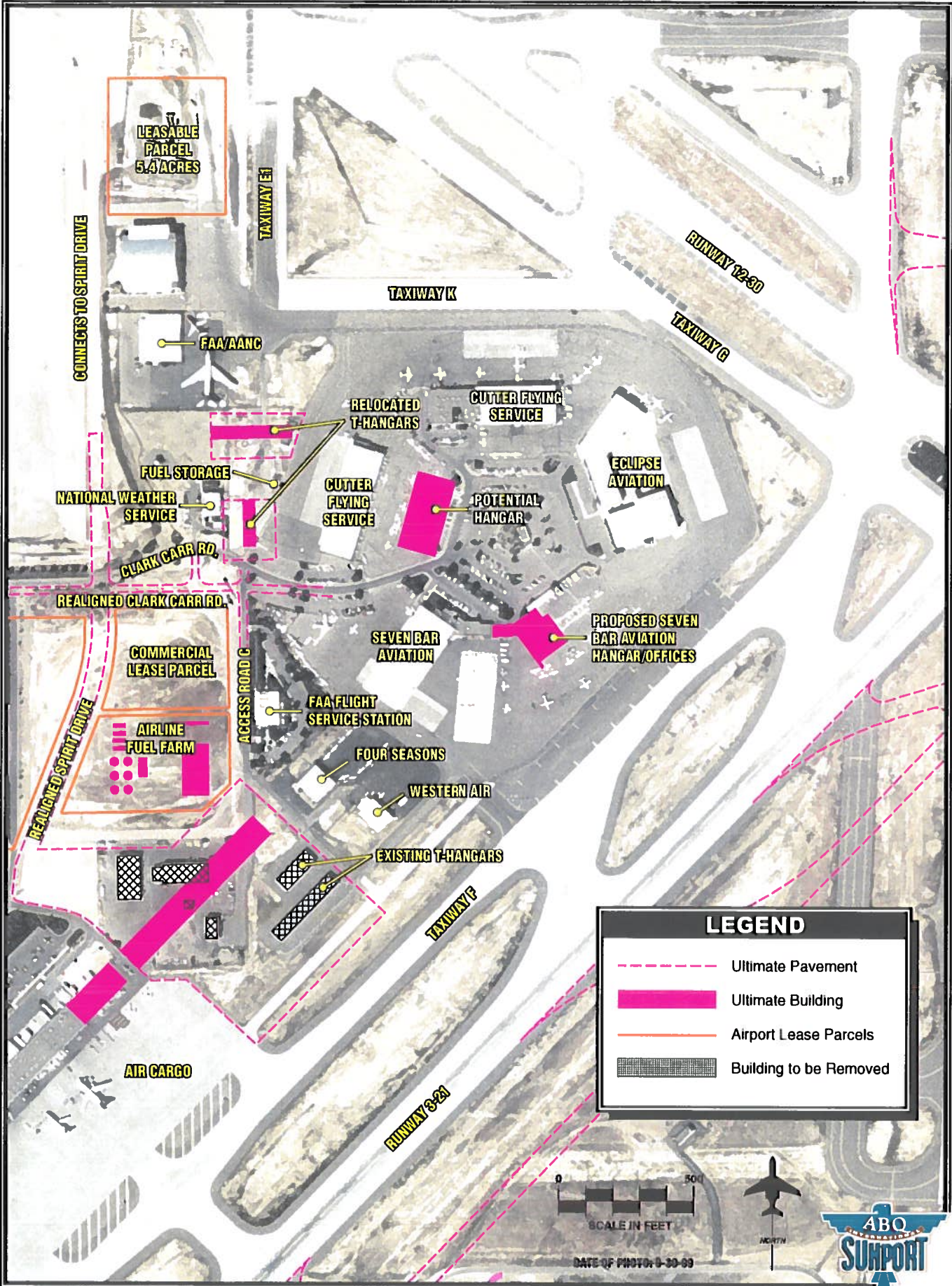









Exhibit ES-7  
AIR CARGO  
DEVELOPMENT STAGING

	Available	Current	Short Term	Intermediate	Long Range
	Conventional Hangars (sq. ft.) 281,700	184,000	222,000	244,000	322,000
	Positions 150±	116	128	138	172
	Parking Apron (sq. yds.) 126,500	79,800	88,100	93,900	111,900
	Transient Positions 100±	62	69	75	91
	Local Positions 140	111	119	124	141
	Terminal/ Office Space (sq. ft.) 55,000	37,000	44,000	49,000	64,000
	Public Parking Area (sq. ft.) 300,000	65,000	78,000	86,000	113,000
	Parking Spaces 953	184	222	244	322





		ENPLANEMENT HORIZONS (millions)			
CATEGORY	AVAILABLE	3.9	4.7	7.1	
<b>Airline Counter/Office</b> 	Counter Length (l.f.) Counter Area (s.f.) Ticket Queue (s.f.) Ticket Lobby (s.f.) Office Area (s.f.) Bag Make-up (s.f.)	298 3,000 9,724 7,740 14,235 17,900	298 3,000 5,500 7,500 8,900 17,900	347 3,500 6,400 8,100 10,400 20,900	430 4,300 8,000 10,800 12,900 25,800
<b>Security Processing</b> 	Stations Security Area (s.f.) Security Offices (s.f.)	4 1,920 300	5 2,300 500	6 2,800 600	7 3,400 700
<b>Baggage Claim</b> 	Devices Claim Display (l.f.) Claim Lobby (s.f.) Circulation (s.f.) Bag Input (s.f.) Baggage Service Offices (s.f.)	8 934 28,908 10,800 9,300 2,340	9 1,137 24,100 10,800 9,300 2,400	11 1,329 34,200 12,800 11,000 2,800	13 1,576 40,500 15,100 13,000 3,300
<b>Concourse/Gates</b> 	<b>MAJORS</b> Gates Hold Room Area (s.f.) Circulation (s.f.) Airline Operations (s.f.) <b>COMMUTER</b> Hold Room Area (s.f.) Airline Operations (s.f.)	23 49,000 23,600 15,515 7,653 7,170	24 45,500 22,900 15,100 1,900 700	31 60,600 30,800 20,200 2,200 800	44 85,600 43,700 28,700 3,000 1,200
<b>Public Spaces</b> 	Restrooms (s.f.) Concessions (s.f.)	14,000 75,441	14,000 78,090	28,200 91,972	31,300 112,920
<b>Gross Terminal Area</b> 	Program Area (s.f.) Gross Building Area (s.f.)	579,000 596,000	584,000 601,000	700,500 722,000	867,000 893,000





terminal building could not be sufficiently expanded to meet long term ticketing, bag claim, and access roadway requirements, the options concentrated on evaluating: 1) the development of a second terminal to work in conjunction with the existing terminal; or 2) the development of a new, larger central terminal on the site.

As shown on **Exhibit ES-11**, two concepts for each alternative were considered. The central terminal concepts (1A and 1B) involved placement of the new terminal, while the second terminal concepts (2A and 2B) differed in the layout of the access road systems.

Alternative 2B is the preferred terminal area development alternative. Unlike Alternatives 1A and 1B, Alternative 2B maximizes the use of the existing terminal building and departure concourse. This preserves the existing terminal infrastructure development as well as public and private investments inside the building. While this alternative duplicates ticketing and baggage claim functions in the second unit terminal, it allows for the continued use of the existing terminal building. Alternatives 1A and 1B would have replaced these functions in a new, central terminal building. This would have rendered a large portion of the existing terminal unusable, requiring additional costs to modify the structure for alternative uses or to be removed.

This alternative also provides development and phasing opportunities which do not impact the operation or use of the existing terminal building and departure concourse. Since

Alternative 2B focuses on new terminal development northeast of the existing terminal building, in an area currently not in use, Alternative 2B can be implemented with little or no impacts on the operation of the existing terminal building. Alternatives 1A and 2A would impact the existing parking structure.

**Exhibit ES-12** depicts the proposed terminal program. It is important to note that the new unit terminal is an addition alongside the existing terminal. It is not a replacement for the existing terminal. In fact, one of the key factors in the selection of the unit terminal over the central terminal was that the unit terminal will continue to maximize the use of the existing terminal infrastructure.

The passenger terminal has been undergoing several modifications in the months since the events of September 11, 2001. Security has been increased, putting an even greater strain on the security checkpoint in the terminal. Modifications are underway in this area, as well as throughout the terminal, to upgrade security and maintain the capacity of the facility. While they will be incorporated into future terminal design, they are being implemented separately from the long range terminal plan.

Still, the initial terminal recommendations are to focus on maintaining and modifying the existing terminal building to meet the short term needs of the airport. This will involve apron rehabilitation and improvements to add more space for gates at the existing concourses.

Additions to Concourses A and B and an extension to the west of Concourse B will allow for re-spacing existing aircraft gates plus adding three new B737-700 equivalent gates.

An addition to the east end of the main terminal will provide more space for baggage claim and ticketing facilities including all circulation, concessions, airport and airline support space, vertical circulation elements (elevators and stairs), building services, airport special systems, and baggage handling space.

The intent of the improvements in the existing terminal is to maximize the use and efficiency of the terminal and delay the need for the second terminal.

Once the current terminal has been optimized, the focus will then turn to development of the second unit terminal.

The aircraft parking apron and dual taxilane circulation will be developed on the east side of the terminal and between the concourses. Dual taxilanes running north-south from Taxiway A will provide ingress and egress to the second terminal. Parallel Taxiway D will be incorporated into this system as the outboard taxilane. The inboard taxilane will be a ramp taxiway.

The new unit terminal will be able to operate independently of the existing terminal but will still have the capability for a public interface between the terminals. These elevated enclosed

walkways will connect between terminals, concourses, and parking structures.

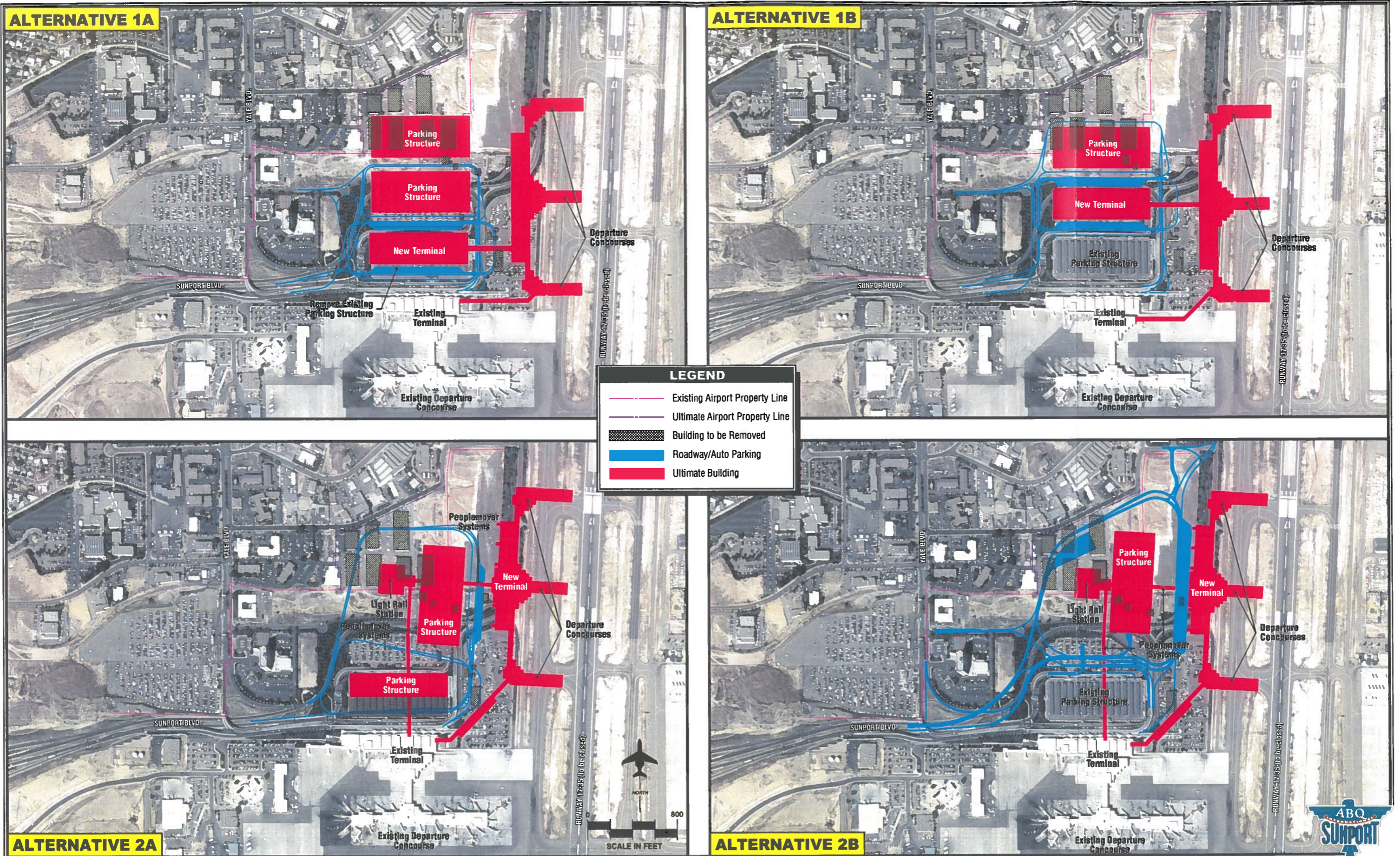
The second unit terminal will also be capable of accommodating Federal Inspection Services (F.I.S.) processing facilities.

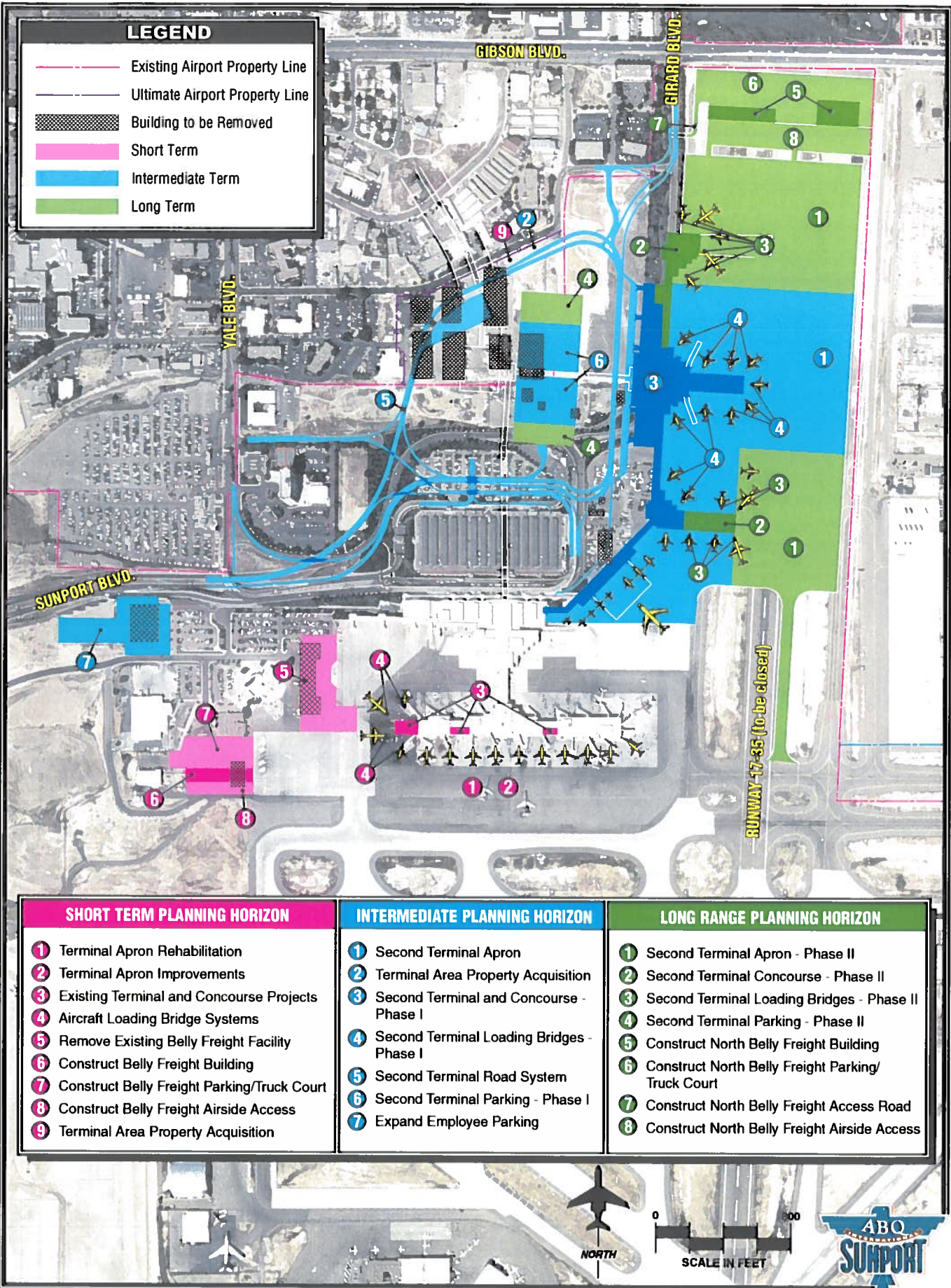
The second terminal will require a major change in the access loop system in the terminal area. The new roadway plan, however, will allow the airport to continue to utilize the same access corridors to Sunport, Yale, and Girard Boulevards. In the terminal area, the roadway systems will allow vehicles to bypass one of the terminals or go between both terminals.

The terminal curb length available will be increased with the addition of the second terminal. Curbfront will be available on both the upper and lower levels as it is with the existing terminal. Additional lane capability will be built into the second terminal design to avoid the limitations that currently face the existing terminal.

A second parking structure adjacent to the second terminal will provide for additional on-airport parking as passenger traffic grows.

A regional transit center for interface with the potential light rail system is included in the plan as well. To connect the transit center with the terminals, a peplemover system utilizing automated vehicles is allowed for in the plan.





## ***SUPPORT FACILITIES***

The location and function of support facilities are driven by the location and function of the other airport components to be served.

As a result, most of the support facilities were considered in conjunction with the other airport components they are designed to serve. This section will serve as a follow-up to summarize the support facility considerations and bring forward the recommended program.

The facility requirements are outlined on **Exhibit ES-13**.

The following support considerations take into account the recommended concept for the airfield, passenger terminal, general aviation, and air cargo.

Much of the airport's concerns with off-airport access capacity were relieved with the construction of Sunport Boulevard for direct access to Interstate 25. Even with reduced airport traffic, however, the nearby intersection of Gibson and Yale is expected to have capacity problems in the future. The Aviation Department should continue to coordinate with the City and regional transportation planners with regards to improvements off-airport.

Another off-airport consideration is the potential for light rail. The airport would be a natural terminus for light rail. A strong light rail system not only can reduce auto traffic, but also parking requirements. Light rail is still in the early planning phases in Albuquerque.

It does appear that a link to the airport would likely come from the university area to the north, although the right-of-way corridor has yet to be determined. Each terminal alternative considered light rail access and circulation in the evaluation.

The on-airport access loop in the northeast quadrant posed another unique situation due to the perpendicular access points.

The preferred alternative maintains the Sunport Boulevard entrance and exit in the existing Yale underpass corridor as depicted previously on **Exhibit ES-12**. The primary advantage of this alternative is minimizing the off-site roadway construction.

The parking plan, as depicted on **Exhibit ES-12**, will increase the on-airport parking to meet future needs as outlined in the facility requirements. Off-airport parking, however, will still be an important part of the public parking system at Albuquerque International Sunport, potentially supplying half of the parking spaces required to meet the long range demand.

The airport maintenance and snow removal equipment (SRE) facilities are presently located between the general aviation and air cargo area. This area is at-grade and makes an excellent location for development of additional air cargo facilities. Combining this with the need for additional storage space for maintenance and snow removal equipment, it is timely to consider relocating the maintenance and SRE facilities. Not only can the additional

storage be developed, but the entire facility can be brought up to state-of-the-art.

With the passenger terminal planned to remain on the north side of the airport, and the general aviation and air cargo facilities to remain on the southwest side, there is ample room on the southeast side for the maintenance and SRE facility. This is depicted on **Exhibit ES-14**. The facility has ready access to the airfield as well as the perimeter road system.

The Aviation Department has been considering a consolidated fuel farm with pipeline delivery for the past several years. A location on the southwest side of the airport, behind the general aviation and air cargo facilities, has been considered. The Master Plan review suggests that this site is still valid. It is off the flight line, but accessible from the perimeter service roads. It would also be readily accessible from the existing pipeline located west of the airport. Therefore, it is recommended to continue to plan for the consolidated facility in the location depicted on **Exhibit ES-14**.

## ***AIRPORT LAYOUT PLAN***

Per Federal Aviation Administration (FAA) requirements, a set of plans, referred to as Airport Layout Plans, has been prepared to graphically depict the ultimate airfield layout, facility development, and airspace. The airport layout plan set was actually an update to the previous airport layout plan that was prepared on a computer-aided drafting (CAD) system. The

computerized plan set provides detailed information of existing and future facility layouts on multiple layers that permits the user to focus in on any section of the airport at a desirable scale. The plan can be used as base information for design, and can continue to be easily updated in the future to reflect new development and more detail concerning existing conditions as made available through design surveys. The airport layout plan set includes a number of technical drawings, all of which are included in the Master Plan. **Exhibit ES-15** presents the key drawing, called the Airport Layout Drawing.

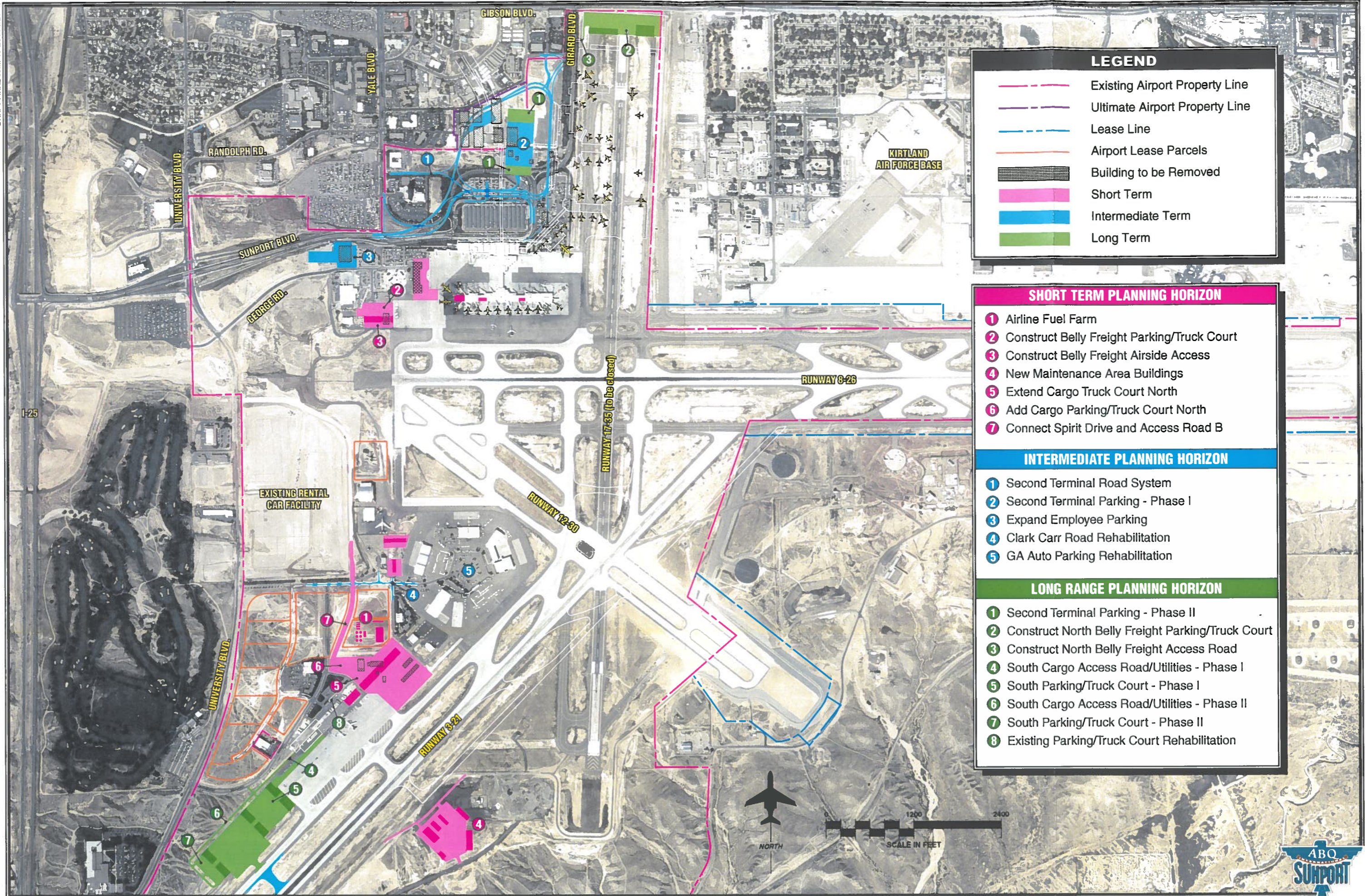
## ***FINANCIAL PLAN***

The financial operations of ABQ and its reliever, Double Eagle II Airport (together, the Airport System), are accounted for as an enterprise fund of the City of Albuquerque. Audited financial statements for the Airport System are prepared according to generally accepted accounting principles for government entities and the requirements of ABQ's Bond Ordinances.

The Bond Ordinances require that airline rates and charges be established each year to generate Net Revenues (Gross Airport Revenues less Operation and Maintenance Expenses) sufficient to make the deposits required to the funds and accounts established in the Bond Ordinances and demonstrate 120 percent debt service coverage for Outstanding Senior Parity Obligations and 110 percent debt service coverage for all Outstanding Senior and

CATEGORY	AVAILABLE	CURRENT	SHORT TERM	INTERMEDIATE	LONG RANGE
<b>TERMINAL CURB</b>					
Departure Curb (l.f.)	630	540	665	775	1,050
Arrival Curb (l.f.)					
Auto/Taxi	660	710	875	1,020	1,385
Commercial	660	385	470	550	750
					
<b>TERMINAL PARKING</b>					
Public Total Parking	11,827	8,100	10,200	12,400	19,200
On-Airport Parking	3,727	4,000	5,100	6,200	9,600
Short Term Parking	NA	1,200	1,500	1,900	2,900
Employee Parking	550	470	590	720	1,120
					
<i>All numbers refer to parking spaces</i>					
<b>RENTAL CAR</b>					
Ready/Return (spaces)	1,200	850	1,020	1,180	2,010
Service Storage (acres)	34	19	24	29	45
					
<b>FUEL STORAGE</b>					
JetA (gallons)	225,000	660,000	780,000	910,000	1,330,000
Avgas (gallons)	35,000	18,000	21,000	23,000	28,000
					





### LEGEND

- Existing Airport Property Line
- Ultimate Airport Property Line
- Lease Line
- Airport Lease Parcels
- Building to be Removed
- Short Term
- Intermediate Term
- Long Term

### SHORT TERM PLANNING HORIZON

- 1 Airline Fuel Farm
- 2 Construct Belly Freight Parking/Truck Court
- 3 Construct Belly Freight Airside Access
- 4 New Maintenance Area Buildings
- 5 Extend Cargo Truck Court North
- 6 Add Cargo Parking/Truck Court North
- 7 Connect Spirit Drive and Access Road B

### INTERMEDIATE PLANNING HORIZON

- 1 Second Terminal Road System
- 2 Second Terminal Parking - Phase I
- 3 Expand Employee Parking
- 4 Clark Carr Road Rehabilitation
- 5 GA Auto Parking Rehabilitation

### LONG RANGE PLANNING HORIZON

- 1 Second Terminal Parking - Phase II
- 2 Construct North Belly Freight Parking/Truck Court
- 3 Construct North Belly Freight Access Road
- 4 South Cargo Access Road/Utilities - Phase I
- 5 South Parking/Truck Court - Phase I
- 6 South Cargo Access Road/Utilities - Phase II
- 7 South Parking/Truck Court - Phase II
- 8 Existing Parking/Truck Court Rehabilitation



#### GENERAL NOTES:

1. Depiction of features and objects, including related elevations and clearances, within the Federal Aviation Regulations (FAR) Part 77 Approach Surface are depicted on the INNER PORTION OF RUNWAY APPROACH SURFACE DRAWINGS.
2. Details concerning terminal improvements are depicted on the TERMINAL AREA DRAWING.
3. Recommended and uses within the airport environs are depicted on the AIRPORT LAND USE DRAWING.

#### INSET-A

EXISTING RUNWAY 17 (To Be Closed)  
RPZ 500' x 1700' x 1010'  
1-MILE VISIBILITY MINIMUMS  
PARTIALLY OWNED IN FEE/EASEMENT

LEGEND	
EXISTING	ULTIMATE
DESCRIPTION	
PAVEMENT (To Be Removed)	
AIRPORT PROPERTY LINE	
AIRPORT REFERENCE POINT (ARP)	
AIRPORT ROTATING BEACON	
AVIGATION EASEMENT (If applicable)	
BUILDINGS (To Be Removed)	
BUILDING CONSTRUCTION	
BUILDING RESTRICTION LINE (BRL)	
DRAINAGE	
FACILITY CONSTRUCTION	
FENCING	
NAVIGATIONAL AID INSTALLATION (GVI)	
RUNWAY THRESHOLD LIGHTS and REIL	
WIND INDICATOR (Lighted)	
SEGMENTED CIRCLE/WIND INDICATOR	
TOPOGRAPHY (Surveyed)	
SECTION CORNER	

EXISTING BUILDINGS/FACILITIES	
DESCRIPTION	
1 ADMINISTRATION/TERMINAL BUILDING	
2 DEPARTURE CONCOURSE	
3 AIR FREIGHT BUILDING	
4 ORIGINAL TERMINAL BUILDING	
5 FORMER PALAZZO BUILDING	
6 AIRCRAFT SERVICE INTERNATIONAL GROVE	
7 PROVISION BUILDING	
8 POSTAL FACILITY	
9 FLIGHT KITCHEN	
10 WYNDHAM HOTEL	
11 TALE RENTAL	
12 CENTURY HANGAR	
13 FAA/AMC NDI VALIDATION CENTER	
14 CUTTER WEST HANGAR	
15 CUTTER FLYING SERVICE	
16 FBO HANGAR	
17 SEVEN BAR AVIATION	
18 FAA AUTOMATED FLIGHT SERVICE STATION	
19 FOUR SEASONS	
20 WESTERN AIR	
21 T-HANGAR	
22 T-HANGAR	
23 T-HANGAR	
24 AIRPORT MAINTENANCE BUILDING	
25 AIRPORT MAINTENANCE BUILDING	
26 AIRPORT MAINTENANCE BUILDING	
27 NATIONAL WEATHER SERVICE	
28 AIR CARGO BUILDING	
29 HERTS SERVICE AREA	
30 NATIONAL/ALAMO SERVICE AREA	
31 ADVANTAGE SERVICE AREA	
32 ADVANTAGE READY/RETURN	
33 HERTS READY/RETURN	
34 ALAMO READY/RETURN	
35 NATIONAL READY/RETURN	
36 BUDGET READY/RETURN	
37 DOLLAR READY/RETURN	
38 AVIS READY/RETURN	
39 THRIFTY/ENTERPRISE READY/RETURN	
40 AVIS SERVICE AREA	
41 ENTERPRISE SERVICE AREA	
42 DOLLAR SERVICE AREA	
43 THRIFTY SERVICE AREA	
44 BUDGET SERVICE AREA	
45 RENTAL CAR TERMINAL	

EXISTING/ULTIMATE RUNWAY 8  
APPROACH RPZ 1,000' x 2,500' x 1,750'  
DEPARTURE RPZ 500' x 1700' x 1010'  
1/2 MILE VISIBILITY MINIMUMS  
(OWNED FEE SIMPLE)

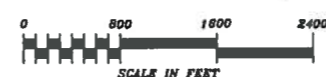
ULTIMATE BUILDINGS/FACILITIES	
DESCRIPTION	
61 FUEL FARM	
62 AIR CARGO BUILDING	
63 AIR CARGO BUILDING	
64 AIR CARGO BUILDING	
65 AIR CARGO BUILDING	
66 AIR CARGO BUILDING	
67 AIR CARGO BUILDING	
68 AIR CARGO BUILDING	
69 AIR CARGO BUILDING	
70 AIR CARGO BUILDING	
71 S.R.E. MAINTENANCE FACILITIES	
72 S.R.E. MAINTENANCE FACILITIES	
73 S.R.E. MAINTENANCE FACILITIES	
74 S.R.E. MAINTENANCE FACILITIES	
75 S.R.E. MAINTENANCE FACILITIES	
76 S.R.E. MAINTENANCE FACILITIES	
77 T-HANGAR (Building 22 Relocated)	
78 T-HANGAR (Building 23 Relocated)	
79 HANGAR (General Aviation)	
80 HANGAR (General Aviation)	
81 HANGAR	
82 CONCOURSE	
83 BUILDING	
84 BUILDING	
85 BUILDING	
86 BUILDING	

#### INSET-B

EXISTING/ULTIMATE RUNWAY 3 RPZ  
1,000' x 2,500' x 1,750'  
1/2 MILE VISIBILITY MINIMUMS  
PARTIALLY OWNED IN FEE/EASEMENT  
DEPARTURE RPZ 500' x 1700' x 1010'

#### RUNWAY 3 INSET-B

Magnetic Declination  
10° 22' 37.22" East  
Annual Rate of Change  
4.588" West (September 2001)



#### ALBUQUERQUE INTERNATIONAL SUNPORT AIRPORT LAYOUT DRAWING Albuquerque, New Mexico

PLANNED BY: Christopher M. Nguyen  
DETAILED BY: Larry B. Johnson  
APPROVED BY: Steven D. Benson

May 22, 2002 ES-15

**Coffman Associates**  
Airport Consultants  
www.coffmanassociates.com

Subordinate Parity obligations. ABQ's Outstanding Bonds are backed solely by the Net Revenues of the Airport System.

## FUNDING SOURCES

**Table ES-3** shows gross project costs for the Capital Development Program by cost center and the estimated sources of funding.

For purposes of projecting the financial results for the Airport System, the project costs shown on **Table ES-3** include allowances for: (1) ABQ costs allocable to capital projects and the acquisition of land; (2) design, construction, and program management fees and contingencies; (3) allowances for inflation; and (4) New Mexico gross receipts tax.

Sources of funding for the Capital Development Program are as follows:

- Federal grants-in-aid under the Airport Improvement Program (AIP)
- Passenger Facility Charges (PFCs)
  - Pay-as-you-go
  - Proceeds from the sale of PFC-supported bonds
- ABQ internally-generated funds
- Proceeds from the sale of airport revenue bonds

The amount of funding available from these sources will depend primarily on

future levels of aviation activity at ABQ and future federal reauthorizations.

## Federal Grants-In-Aids

The Airport Improvement Program is authorized by the *Airport and Airway Improvement Act of 1982* (the Act). The Act authorized funding for the AIP from the Airport and Airway Trust Fund for airport development, airport planning, and noise compatibility planning and programs. The Airport and Airway Trust Fund is funded through several aviation user taxes on airline fares, air freight, and aviation gasoline.

Under the AIP, ABQ receives annual entitlement grants based on numbers of enplaned passengers and cargo tonnage and is eligible to receive discretionary grants. In general, AIP grants can be used for land acquisition, noise mitigation, airfield improvements, on-airport roadways, public areas of terminal buildings, safety and security systems, and equipment.

On April 5, 2000, the U.S. Congress approved passage of the *Wendell H. Ford Aviation Investment and Reform Act for the 21<sup>st</sup> Century* (AIR-21). Among several provisions, AIR-21 provided for four years of AIP authorization (Federal Fiscal Years [FFY] 2000-2003), ranging from \$2.475 billion in FFY 2000 to \$3.4 billion in FFY 2003. Under AIR-21, if appropriated AIP funds equal or exceed \$3.2 billion in a single year, resulting entitlement grants to airport operators would be double the amount that would have been received under an appropriation lower than \$3.2 billion.

## **Passenger Facility Charges**

PFCs are authorized by Title 14 of the Code of Federal Regulations, Part 158, and the PFC program is administered by the FAA. PFCs are collected from qualified enplaned passengers and PFC revenues are used to fund eligible projects. A PFC of up to \$4.50 per eligible enplaned passenger can be imposed by an airport operator, and more than 85 percent of the nation's large-, medium-, and small-hub airport operators impose a PFC. Once a PFC is imposed, it is included as part of the ticket price paid by passengers enplaning at the airport, collected by the airlines, and remitted to the airport operator, less an allowance for airline processing expenses. ABQ currently imposes a \$3.00 PFC and foregoes 50 percent of its annual AIP entitlement funds. The amount foregone by ABQ is significantly less than the annual PFC revenues earned by imposing the \$3.00 PFC. If a \$4.50 PFC were imposed, ABQ would forego 75 percent of its annual AIP entitlement funds.

PFCs cannot be used for commercial facilities at airports, such as restaurants and other concession space, rental car facilities, public parking facilities, or construction of exclusively leased space or facilities.

ABQ has been collecting a \$3.00 PFC since July 1996 and is authorized by the FAA under its first PFC application to collect \$49.6 million. ABQ expects that the first PFC authorization will expire in FY 2002. ABQ's second PFC application was approved by the FAA in FY 2002 and allows ABQ to increase its

collection authority by \$44.5 million. Under the second PFC application, PFC revenues are to be used to paydown the unamortized cost of certain airfield projects. Based on the projections of aviation activity presented in Chapter Two, ABQ will reach its \$44.5 million authorized collections level by FY 2007.

## **Internally-Generated Funds**

The Airport System's financial operations are accounted for as an enterprise fund of the City. In the past, ABQ has used internally-generated funds to finance projects in the Airport System. Under the Bond Ordinances, internally-generated funds are deposited in the Capital Fund at the end of each year (after such funds have been used for all other purposes) and can be used for any lawful Airport System purpose.

## **Airport Revenue Bonds**

ABQ has four series of outstanding Senior Parity Obligations (the 1995 Bonds, 1997 Refunding Bonds, 1998 Refunding Bonds, and 2001 Refunding Bonds) and four series of outstanding Subordinate Party Obligations (the 1995 Refunding Bonds, 1996A Bonds, 2000A Bonds, and 2000B Bonds).

As shown on **Table ES-3**, ABQ may have to issue revenue bonds to finance the remaining costs (after applying the other funding sources discussed above) for the projects in the Capital Development Program within the three planning periods.

	Project costs (a)				Estimated sources of funding				
	Short term 2002-2005	Intermediate term 2006-2010	Long term 2011-2025	Total project costs	Federal grants (b)	PFC revenues (c)	Internally generated funds (d)	Airport revenue bonds (e)	Total funding sources
<b>TERMINAL COMPLEX</b>									
Existing Terminal & Concourse Projects	\$ 41,244,000	\$ -	\$ -	\$ 41,244,000	-\$	\$ -	\$ -	\$ 41,244,000	\$ 41,244,000
Aircraft Loading Bridge Systems	1,267,000	-	-	1,267,000	-	-	-	1,267,000	1,267,000
Second Terminal and Concourse - Phase I	-	256,186,000	-	256,186,000	-	64,046,000	-	192,140,000	256,186,000
Existing Terminal/Concourse Upgrades - Phase I	-	68,908,000	-	68,908,000	-	17,227,000	4,000,000	47,681,000	68,908,000
Second Terminal Loading Bridges - Phase I	-	6,653,000	-	6,653,000	-	6,653,000	-	-	6,653,000
Second Terminal/Concourse - Phase II	-	-	112,329,000	112,329,000	-	28,082,000	80,000,000	4,247,000	112,329,000
Existing Terminal/Concourse Upgrades - Phase II	-	-	79,833,000	79,833,000	-	19,958,000	-	59,875,000	79,833,000
Second Terminal Loading Bridges - Phase II	-	-	6,387,000	6,387,000	-	6,387,000	-	-	6,387,000
	<u>\$ 42,511,000</u>	<u>\$ 331,747,000</u>	<u>\$ 198,549,000</u>	<u>\$ 572,807,000</u>	<u>-\$</u>	<u>\$ 142,353,000</u>	<u>\$ 84,000,000</u>	<u>\$ 346,454,000</u>	<u>\$ 572,807,000</u>
<b>AIRFIELD</b>									
Close/Remove Runway 17-35	\$ -	\$ 4,879,000	\$ -	\$ 4,879,000	\$ 3,659,000	\$ -	\$ 1,220,000	\$ -	\$ 4,879,000
Connecting Taxiway between C & D	-	1,191,000	-	1,191,000	893,000	298,000	-	-	1,191,000
Extend Runway 3-21 1,000 feet SE	-	3,295,000	-	3,295,000	2,471,000	824,000	-	-	3,295,000
Taxiway Exit on Runway 3-21	-	840,000	-	840,000	630,000	210,000	-	-	840,000
Eastside Partial Parallel Taxiway	-	-	14,476,000	14,476,000	10,857,000	3,619,000	-	-	14,476,000
	<u>\$ -</u>	<u>\$ 10,205,000</u>	<u>\$ 14,476,000</u>	<u>\$ 24,681,000</u>	<u>\$ 18,510,000</u>	<u>\$ 4,951,000</u>	<u>\$ 1,220,000</u>	<u>\$ -</u>	<u>\$ 24,681,000</u>
<b>TERMINAL APRON</b>									
Terminal Apron Rehabilitation	\$ 19,817,000	\$ -	\$ -	\$ 19,817,000	\$ 5,792,000	\$ -	\$ -	\$ 14,025,000	\$ 19,817,000
Terminal Apron Improvements	2,831,000	-	-	2,831,000	2,123,000	-	-	708,000	2,831,000
Second Terminal Apron - Phase I	-	27,880,000	-	27,880,000	6,188,000	21,692,000	-	-	27,880,000
Second Terminal Apron - Phase II	-	-	30,656,000	30,656,000	15,661,000	14,995,000	-	-	30,656,000
	<u>\$ 22,648,000</u>	<u>\$ 27,880,000</u>	<u>\$ 30,656,000</u>	<u>\$ 81,184,000</u>	<u>\$ 29,764,000</u>	<u>\$ 36,687,000</u>	<u>\$ -</u>	<u>\$ 14,733,000</u>	<u>\$ 81,184,000</u>
<b>LANDSIDE AREA</b>									
Second Terminal Parking - Phase I	\$ -	\$ 67,863,000	\$ -	\$ 67,863,000	-\$	\$ -	\$ 67,863,000	\$ -	\$ 67,863,000
Expand Employee Parking	-	1,331,000	-	1,331,000	-	-	1,331,000	-	1,331,000
Second Terminal Parking - Phase II	-	-	88,902,000	88,902,000	-	-	88,902,000	-	88,902,000
	<u>\$ -</u>	<u>\$ 69,194,000</u>	<u>\$ 88,902,000</u>	<u>\$ 158,096,000</u>	<u>-\$</u>	<u>\$ -</u>	<u>\$ 158,096,000</u>	<u>\$ -</u>	<u>\$ 158,096,000</u>



Table ES-3  
ESTIMATED PROJECT COST AND SOURCES OF FUNDING  
2002 THROUGH 2025

	Project costs (a)				Estimated sources of funding				
	Short term 2002-2005	Intermediate term 2006-2010	Long term 2011-2025	Total project costs	Federal grants (b)	PFC revenues (c)	Internally generated funds (d)	Airport revenue bonds (e)	Total funding sources
<b>OTHER AREAS</b>									
<b>Cargo</b>									
Remove Existing Belly Freight Facility	\$ 703,000	\$ -	\$ -	\$ 703,000	\$ 527,000	\$ -	\$ -	\$ 176,000	\$ 703,000
Construct Belly Freight Building	3,207,000	-	-	3,207,000	-	-	-	3,207,000	3,207,000
Construct Belly Freight Parking/Truck Court	714,000	-	-	714,000	535,000	-	-	179,000	714,000
Construct Belly Freight Airside Access	890,000	-	-	890,000	667,000	-	-	223,000	890,000
Air Cargo Apron North	3,828,000	-	-	3,828,000	2,871,000	-	-	957,000	3,828,000
Extend Cargo Building North	2,567,000	-	-	2,567,000	-	-	-	2,567,000	2,567,000
Extend Cargo Truck Court North	422,000	-	-	422,000	-	-	-	422,000	422,000
Add Cargo Building North	2,605,000	-	-	2,605,000	-	-	-	2,605,000	2,605,000
Add Cargo Parking/Truck Court North	981,000	-	-	981,000	-	-	-	981,000	981,000
Extend Cargo Building South	-	3,158,000	-	3,158,000	-	-	3,158,000	-	3,158,000
Extend Cargo Truck Court South	-	1,090,000	-	1,090,000	-	-	1,090,000	-	1,090,000
Construct North Belly Freight Building	-	-	4,850,000	4,850,000	-	-	4,850,000	-	4,850,000
Construct North Belly Freight Parking/Truck Court	-	-	3,066,000	3,066,000	-	-	3,066,000	-	3,066,000
Construct North Belly Freight Access Road	-	-	511,000	511,000	383,000	128,000	-	-	511,000
Construct North Belly Freight Airside Access	-	-	2,129,000	2,129,000	1,597,000	-	532,000	-	2,129,000
Cargo Buildings South End of Ramp	-	-	4,850,000	4,850,000	-	-	4,850,000	-	4,850,000
South Cargo Access Road/Utilities Phase I	-	-	852,000	852,000	639,000	213,000	-	-	852,000
South Parking/Truck Court Phase I	-	-	3,066,000	3,066,000	-	-	3,066,000	-	3,066,000
South Cargo Apron	-	-	8,720,000	8,720,000	6,540,000	2,180,000	-	-	8,720,000
South Cargo Buildings	-	-	9,701,000	9,701,000	-	-	9,701,000	-	9,701,000
South Cargo Access Road/Utilities Phase II	-	-	852,000	852,000	639,000	213,000	-	-	852,000
South Parking/Truck Court Phase II	-	-	1,490,000	1,490,000	-	-	1,490,000	-	1,490,000
Existing Cargo Apron Rehabilitation	-	-	383,000	383,000	287,000	96,000	-	-	383,000
Existing Parking/Truck Court Rehabilitation	-	-	43,000	43,000	-	-	43,000	-	43,000
	<b>\$ 15,917,000</b>	<b>\$ 4,248,000</b>	<b>\$ 40,513,000</b>	<b>\$ 60,678,000</b>	<b>\$ 14,685,000</b>	<b>\$ 2,830,000</b>	<b>\$ 31,846,000</b>	<b>\$ 11,317,000</b>	<b>\$ 60,678,000</b>
<b>Other</b>									
Airline Fuel Farm	\$ 13,511,000	\$ -	\$ -	\$ 13,511,000	\$ -	\$ -	\$ -	\$ 13,511,000	\$ 13,511,000
New Maintenance Area Civil and Utilities	2,426,000	-	-	2,426,000	1,820,000	-	606,000	-	2,426,000
New Maintenance Area Buildings	5,685,000	-	-	5,685,000	2,842,000	-	2,843,000	-	5,685,000
Relocate Existing T-Hangars	642,000	-	-	642,000	481,000	-	161,000	-	642,000
South GA Apron Rehabilitation	9,233,000	-	-	9,233,000	6,925,000	-	2,308,000	-	9,233,000
GA Auto Parking Rehabilitation	-	634,000	-	634,000	-	-	634,000	-	634,000
	<b>\$ 31,497,000</b>	<b>\$ 634,000</b>	<b>\$ -</b>	<b>\$ 32,131,000</b>	<b>\$ 12,068,000</b>	<b>\$ -</b>	<b>\$ 6,552,000</b>	<b>\$ 13,511,000</b>	<b>\$ 32,131,000</b>
	<b>\$ 47,414,000</b>	<b>\$ 4,882,000</b>	<b>\$ 40,513,000</b>	<b>\$ 92,809,000</b>	<b>\$ 26,753,000</b>	<b>\$ 2,830,000</b>	<b>\$ 38,398,000</b>	<b>\$ 24,828,000</b>	<b>\$ 92,809,000</b>
<b>ROADWAYS</b>									
Connect Spirit Drive and Access Road B	\$ 1,486,000	\$ -	\$ -	\$ 1,486,000	\$ 1,115,000	\$ -	\$ 371,000	\$ -	\$ 1,486,000
Terminal Area Property Acquisition-Phase I	14,850,000	-	-	14,850,000	-	-	14,850,000	-	14,850,000
Terminal Area Property Acquisition-Phase II	-	16,713,000	-	16,713,000	-	-	16,713,000	-	16,713,000
Second Terminal Road System	-	62,096,000	-	62,096,000	-	62,096,000	-	-	62,096,000
Clark Carr Road Rehabilitation	-	95,000	-	95,000	-	95,000	-	-	95,000
	<b>\$ 16,336,000</b>	<b>\$ 78,904,000</b>	<b>\$ -</b>	<b>\$ 95,240,000</b>	<b>\$ 1,115,000</b>	<b>\$ 62,191,000</b>	<b>\$ 31,934,000</b>	<b>\$ -</b>	<b>\$ 95,240,000</b>
<b>Total project costs and sources of funding</b>	<b>\$ 128,909,000</b>	<b>\$ 522,812,000</b>	<b>\$ 373,096,000</b>	<b>\$ 1,024,817,000</b>	<b>\$ 76,142,000</b>	<b>\$ 249,012,000</b>	<b>\$ 313,648,000</b>	<b>\$ 386,015,000</b>	<b>\$ 1,024,817,000</b>

(a) Reflects a capital development program of \$746,226,000, escalated for inflation at 3.0% per year; New Mexico Gross Receipts Tax of 5.8125%; and CIP Overhead Charge of 1.9% for construction projects and 1.4% for land acquisition.

(b) Includes AIP entitlement grants and \$15 million in discretionary grants.

(c) Includes PFC pay-as-you-go and bond-funded amounts. Reflects PFC revenues available upon completion of current PFC program and collection of a \$4.50 PFC.

(d) Reflects investment of 100% of year-end remaining revenues. Also includes reimbursed equity from PFC revenues associated with the second PFC application of \$44.5 million from FY 2003 to FY 2007.

(e) Assuming bond issuance every 5-8 years, as needed, with a 20-year term, 2-year capitalized interest period, 15% cost of issuance, and allowances for increases in interest rates for future bonds.



## PROJECTED FINANCIAL RESULTS

**Table ES-4** presents debt service coverage from FY 1999 through the three planning periods. The calculations of the two tests that show debt service coverage compliance in accordance with ABQ's Bond Ordinances are shown in the table.

As shown on **Table ES-4**, Net Revenues (Gross Revenues less Operation and Maintenance Expenses) are projected to increase from \$36,582,041 in FY 2001 to \$90,434,000 in the intermediate-term planning period, resulting in debt service coverage ratios that exceed the requirements of both tests in the Bond Ordinances.

The financial projections were prepared on the basis of available information and assumptions as set forth in the Master Plan. It is believed that such information and assumptions provide a reasonable basis for projections to the level of detail appropriate for an airport master plan. Based on these assumptions, the Capital Development Program could be financed in the future by ABQ and result in key financial indicators that are consistent with the historical results of the Airport System and industry comparables.

## ENVIRONMENTAL OVERVIEW

The protection and preservation of the local environment are essential concerns in the master planning process. An inventory of known environmental issues at ABQ was developed at the start of the project.

These issues were considered during the preparation of this Master Plan's final recommendations. Now that a program for the use and development of Albuquerque International Sunport has been finalized, it is necessary to review environmental issues to ensure that this program can be implemented in compliance with applicable environmental regulations, standards, and guidelines.

All of the improvements planned for Albuquerque International Sunport as depicted on the Airport Layout Plan (ALP) will require compliance with the *National Environmental Policy Act (NEPA) of 1969*, as amended. Many of the improvements will be categorically excluded and will not require formal NEPA documentation; however, some improvements will likely require further NEPA analysis and documentation. These improvements include the following projects: closure of Runway 17-35, extension of Runway 3-21 1,000 feet southwest, construction of the southeast access road, and the construction of the second passenger terminal building. Compliance with the provisions of NEPA for these projects will be required prior to project implementation and is outside the scope of the Master Plan.

The following pages consider the environmental resources as outlined in *FAA Order 5050.4A*.

A review of existing documents and coordination with appropriate federal, state, and local agencies contributed to this analysis. Issues of concern that were identified as part of this process are presented on the following pages in **Table ES-5**.

The projections presented in this table were prepared using information from the sources indicated and assumptions provided by, or reviewed with and agreed to by, Airport management, as described in the accompanying text. Inevitably, some of the assumptions used to develop the projections will not be realized and unanticipated events and circumstances may occur. Therefore, there are likely to be differences between the projected and actual results, and those differences may be material.

		Historical (a)			Projected						
Table reference		1999	2000	2001	2002	2003	2004	2005	Intermediate term (b)	Long term (c)	
GROSS AIRPORT REVENUES											
Airline and nonairline revenues	D	\$ 43,258,426	\$ 45,701,964	\$ 45,739,346	\$ 49,181,000	\$ 50,741,000	\$ 53,778,000	\$ 68,842,000	\$ 109,643,000	\$ 170,677,000	
CFC revenues		-	-	1,840,909	3,861,000	4,086,000	4,325,000	4,807,000	6,932,000	10,803,000	
PFC revenues		8,258,458	8,289,634	8,544,558	9,014,000	9,510,000	10,034,000	10,587,000	19,401,000	29,321,000	
		-----	-----	-----	-----	-----	-----	-----	-----	-----	
		\$ 51,516,884	\$ 53,991,598	\$ 56,124,813	\$ 62,056,000	\$ 64,337,000	\$ 68,137,000	\$ 84,236,000	\$ 135,976,000	\$ 210,801,000	
Less: Operation and Maintenance Expenses	C	16,075,018	17,035,881	19,542,772	22,585,000	24,543,000	26,671,000	29,028,000	45,542,000	111,398,000	
		-----	-----	-----	-----	-----	-----	-----	-----	-----	
Net Revenues		\$ 35,441,866	\$ 36,955,717	\$ 36,582,041	\$ 39,471,000	\$ 39,794,000	\$ 41,466,000	\$ 55,208,000	\$ 90,434,000	\$ 99,403,000	
		=====	=====	=====	=====	=====	=====	=====	=====	=====	
RATE COVENANT TEST 1											
Net Revenues	[A]	\$ 35,441,866	\$ 36,955,717	\$ 36,582,041	\$ 39,471,000	\$ 39,794,000	\$ 41,466,000	\$ 55,208,000	\$ 90,434,000	\$ 99,403,000	
Senior Parity Debt Service Requirements	[B]	9,248,056	9,734,622	10,651,225	9,437,000	9,687,000	10,347,000	19,788,000	61,050,000	48,128,000	
Demonstrated coverage	[A/B]	3.83	3.80	3.43	4.18	4.11	4.01	2.79	1.48	2.07	
Required coverage		1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	
RATE COVENANT TEST 2											
Net Revenues		\$ 35,441,866	\$ 36,955,717	\$ 36,582,041	\$ 39,471,000	\$ 39,794,000	\$ 41,466,000	\$ 55,208,000	\$ 90,434,000	\$ 99,403,000	
Plus: Debt Service Reserve Account interest earnings	B-1	1,728,751	802,012	802,012	557,009	401,771	401,771	865,129	3,008,787	2,533,056	
		-----	-----	-----	-----	-----	-----	-----	-----	-----	
	[C]	\$ 37,170,617	\$ 37,757,729	\$ 37,384,053	\$ 40,028,009	\$ 40,195,771	\$ 41,867,771	\$ 56,073,129	\$ 93,442,787	\$ 101,936,056	
Debt Service Requirements	[D]	\$ 18,208,857	\$ 17,596,198	\$ 19,868,000	\$ 20,077,000	\$ 19,400,000	\$ 20,057,000	\$ 30,449,000	\$ 75,612,000	\$ 50,661,000	
Demonstrated coverage	[C/D]	2.04	2.15	1.88	1.99	2.07	2.09	1.84	1.24	2.01	
Required coverage		1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	

(a) Source: Aviation Department records.

(b) Assumed to be FY 2010.

(c) Assumed to be FY 2025.



**TABLE ES-5**  
**Summary of Environmental Resources**  
**Potentially Impacted by the Proposed Improvements**

Environmental Resource	Anticipated Impacts
<p><b>Noise.</b> The Yearly Day-Night Average Sound Level (DNL) is used in this study to assess aircraft noise. DNL is the metric currently accepted by the Federal Aviation Administration (FAA), Environmental Protection Agency (EPA), and Department of Housing and Urban Development (HUD) as an appropriate measure of cumulative noise exposure. These three federal agencies have each identified the 65 DNL noise contour as the threshold of incompatibility.</p>	<p><i>Less-than-significant negative impacts and significant positive impacts.</i></p> <ul style="list-style-type: none"> <li>• As depicted on <b>Exhibit ES-16</b>, closure of Runway 17-35 and extension of Runway 3-21 1,000 feet southwest will not result in any new impacts to noise-sensitive development southwest of the airport. With the closure of Runway 17-35, noise impacts on residential development north of the airport would likely decrease dramatically.</li> <li>• NEPA documentation will be required to fully assess the impact of the runway closure and runway extension.</li> </ul>
<p><b>Compatible Land Use.</b> F.A.R. Part 150 recommends guidelines for planning land use compatibility within various levels of aircraft noise exposure. In addition, <i>Advisory Circular 150/5200-33</i> identifies land uses that are incompatible with safe airport operations because of their propensity for attracting birds or other wildlife, which in turn results in an increased risk of aircraft strikes and damage. Finally, F.A.R. Part 77 regulates the height of structures within the vicinity of the airport.</p>	<p><i>Less-than-significant negative impacts and significant positive impacts.</i></p> <ul style="list-style-type: none"> <li>• Implementation of the proposed runway closure and runway extension do not result in additional noise impacts on noise-sensitive development. In fact, implementation of the proposed projects alleviates the noise impact of the airport to the north.</li> <li>• The proposed airport improvements will not provide wildlife attractants, nor will any development impede the airport's Part 77 surface.</li> </ul>
<p><b>Social Impacts.</b> These impacts are often associated with the relocation of residences or businesses or other community disruptions.</p>	<p><i>Less-than-significant impacts (with mitigation).</i></p> <ul style="list-style-type: none"> <li>• Development of the second terminal building parking structure and access roadways requires the acquisition of land and existing commercial businesses. <i>FAA Order 5050.4A</i> provides that where the relocation of a residence, business or farmland is involved, the provisions of the <i>Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970</i> (URARPAPA) must be met. The Act requires that businesses be offered assistance in finding a new site and funding relocation costs.</li> </ul>
<p><b>Induced Socioeconomic Impacts.</b> These impacts address those secondary impacts to surrounding communities resulting from the proposed development, including shifts in patterns of population movement and growth, public service demands, and changes in business and economic activity to the extent influenced by the airport development.</p>	<p><i>Less-than-significant negative impacts and significant positive impacts.</i></p> <ul style="list-style-type: none"> <li>• It is expected that the proposed developments would potentially induce positive socioeconomic impacts for the community over a period of years. The airport, with expanded facilities and services, would be expected to attract additional users. It is also expected to encourage tourism, industry, and trade, and to enhance the future growth and expansion of the community's economic base.</li> </ul>

**TABLE ES-5 (Continued)**  
**Summary of Environmental Resources**  
**Potentially Impacted by the Proposed Improvements**

<b>Environmental Resource</b>	<b>Resources Potentially Affected</b>
<b>Air Quality.</b> EPA has adopted air quality standards that specify the maximum permissible short-term and long-term concentrations of various air contaminants. Various levels of review apply within both NEPA and permitting requirements. For example, an air quality analysis is typically required during the preparation of a NEPA document if enplanement levels exceed 3.2 million enplanements or general aviation operations exceed 180,000.	<i>Anticipated less-than-significant impacts.</i> <ul style="list-style-type: none"> <li>• It is not anticipated that the proposed projects will have a dramatic affect on air quality (based on the results of two previous air quality assessments.) However, a new air quality assessment will most likely be required during the NEPA documentation process for the proposed runway projects.</li> </ul>
<b>Water Quality.</b>	<i>Less-than-significant impacts.</i>
<b>Section 4(f) Lands.</b> These include publicly-owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or any land from a historic site of national, state or local significance.	<i>No impacts anticipated.</i>
<b>Historical and Cultural Resources</b>	<i>Anticipated less-than-significant impacts.</i> <ul style="list-style-type: none"> <li>• Further coordination with the SHPO will be required prior to project implementation and field surveys may be required.</li> </ul>
<b>Threatened or Endangered Species and Biological Resources</b>	<i>Less-than-significant impacts.</i> <ul style="list-style-type: none"> <li>• Correspondence received from the U.S. Fish and Wildlife Service (FWS) indicated that no federally-listed threatened or endangered species are present and, thus, will not be affected by the proposed projects.</li> <li>• Under the Migratory Bird Treaty Act (MBTA), the taking of migratory birds, nests, and eggs is prohibited. To minimize the likelihood of a taking, the FWS recommended that construction activities occur outside the nesting season of March through August, or a survey be completed prior to construction to determine the potential affect on these protected species.</li> </ul>
<b>Waters of the U.S. including Wetlands</b>	<i>No impacts anticipated.</i>
<b>Floodplains</b>	<i>No impacts.</i>
<b>Wild and Scenic Rivers</b>	<i>No impacts.</i>
<b>Farmland</b>	<i>No impacts.</i>
<b>Energy Supply and Natural Resources</b>	<i>No impacts anticipated.</i>
<b>Light Emissions</b>	<i>No significant impacts anticipated.</i>
<b>Solid Waste</b>	<i>No impacts anticipated.</i>

