

## **CHAPTER SIX: AIRPORT DEVELOPMENT SCHEDULE AND FINANCIAL ANALYSIS**

### **INTRODUCTION**

This chapter details the various projects required for the continued improvement and operation of Chandler Municipal Airport throughout the Master Plan Update's 20-year planning period. These projects, by phase (time period), include estimates of probable project costs in constant 2006 dollars. The estimates are intended to be used for planning purposes only and should not be construed as construction cost estimates, which can only be compiled following the preparation of detailed design documentation.

The 20-year Capital Improvement Program (CIP) is broken down into the following three development phases:

- Phase I: Short-Term (first five years)
- Phase II: Intermediate-Term (second five years)
- Phase III: Long-Term (last 10 years)

This chapter also presents a financial evaluation of Chandler Municipal Airport and examines various facets of the financial operating condition of the Airport. In addition, this chapter examines historic operating revenues and expenses at the Airport and develops projections of future operating results. Financial projections of revenues and expenses at the Airport focus on the short- and mid-term planning period and are used to identify the ability of the Airport to contribute to the local share of anticipated project costs, as necessary.

### **PHASING OF PROPOSED DEVELOPMENT**

A list of capital improvement projects has been assembled based on the preferred development alternative established in Chapter 4, *Development Alternatives*, of this Master Plan Update. This project list has been coordinated with the Airport Layout Plan (ALP) drawing set and the CIP that is continuously updated by Airport management and the Federal Aviation Administration (FAA). The CIP itself has three primary purposes: it identifies improvement projects that will be required at an airport over a specific period of time; it estimates the order of implementation of the projects included in the plan; and it estimates the total costs and funding sources of the projects. It is important to note that as the CIP progresses from projects planned in the current year to projects planned in future years, the plan becomes less detailed and more flexible. Additionally, the CIP is typically modified on an annual basis as new projects are identified or as projects or funding change.

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

### **Phase I: Short-Term Development (0-5 Years)**

- A. FAR Part 150 Noise Compatibility Study Update  
Since the Airport's Part 150 Noise Compatibility Study was last updated in 1998, aircraft activity has significantly exceeded that which was projected. As such, per FAA and ADOT requirements, the Part 150 Study should be updated based on the current operational levels, as well as those forecasted in this Master Plan Update.
- B. Airport Pavement Preservation – Runway 4L/22R and Apron  
The Airport airfield pavement surfaces, including runways, taxiways and apron areas, require periodic maintenance to extend their useful lives. This project is comprised of two phases: maintenance of Runway 4L/22R and maintenance of the aircraft parking apron.
- C. Airport Storm Drain  
This project is Phase II of the Airport Terminal Area Storm Drainage System improvement program that will allow apron area runoff from storm water events to drain and be retained properly on Airport property. This will help prevent deterioration of the affected apron pavement subgrade and extend the pavement life. Phase I was completed in 1996.
- D. North Airport Apron Construction  
An aircraft parking apron on the north side of the Airport is needed to provide additional aircraft tiedown areas. This project will develop apron areas on the north side of the Airport in two phases. Phase I will encompass the design and construction of the "Armory Apron," located directly north of the existing Santan Apron, while Phase II (referred to as the Northwest Apron) will include the design and construction of a new apron area located north of Ryan Road and west of Curtis Road.
- E. Airport Boulevard & Terminal Parking  
Airport Boulevard must be relocated to provide access from Cooper Road to the Airport areas immediately north of Ryan Road. This is critical since Cooper Road will become the primary means of entry to the Airport with the completion of the Santan Freeway (Loop 202). Additionally, new automobile parking areas are needed to meet a current deficiency in parking spaces, as well as increasing demand for parking spurred by continued development in the north terminal area.
- F. Perimeter Road  
This project includes the construction of a paved airport perimeter road to eliminate mid-field crossing by fuel trucks serving future development on the south side of the Airport.

### **G. South Airport Apron Construction**

Additional apron and development areas will be required to accommodate the demand by additional aircraft as well as the need for an additional fixed-base operator (FBO) and other specialized aviation services as reflected previously in this Master Plan. The south side of the Airport offers prime parcels for this type of development. As such, this project will begin development of this side of the Airport with the construction of an apron area along the southeast side of the runway/taxiway system.

### **H. Airport Light Vault Reconstruction**

The existing Airport lighting control vault was installed in the early 1990s, and its components are outdated, deteriorating, and require special orders/servicing. A renovation of the existing lighting vault will update the facility, install climate controls to extend the life of the facility and provide more reliable circuitry to the Airport lighting system.

### **I. Upgrade Tower Voice Switch Gear/Transmitter**

The FAA-contractor for air traffic control tower (ATCT) services will add additional control personnel in the tower as the number of operations at the Airport continues to grow. As such, additional equipment, including a voice switch gear and transmitter/receiver, will be required to separate ground, flight, and weather operational duties.

### **J. Airport Guidance Sign Replacement**

This project involves two phases for replacing the existing or installing new mandatory Airport guidance signs for the runway/taxiway. This first phase will address signage changes requested by the FAA Runway Incursion Action Team (RIAT) as well as changes resulting from updated FAA signage standards. The second phase is needed to replace the remaining existing signs, originally installed from 1990 to 1993.

### **K. Aircraft Storage Facilities**

This project will consist of two primary construction phases. Phase I will include the construction of two canopy or shade hangars that will each house 25 aircraft. Phase II will include the construction of three T-hangar buildings, each having 11 hangar units.

### **L. Airport Erosion Control**

This project will establish a shoulder along all movement area pavements. This will prevent erosion of these edges and any resulting RSA safety concerns.

### **M. Existing Airport Terminal Apron Improvement**

This project includes improvements to the existing terminal aircraft parking apron that will upgrade the taxilane and tie-downs that serve the aircraft tie-down area directly in front of the terminal building. The aircraft parking pavement in this

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

area will be upgraded to sustain the same weight bearing capacity as the runways and taxiways.

### **N. Taxiway B Construction**

This project will extend Taxiway B to the southeast between Taxiways N and H. This project is necessary in order to allow the ATCT to more efficiently handle aircraft from both runways and help relieve aircraft congestion from Taxiway A.

### **O. Taxiway A Run-Up Area Construction**

This project will provide a new aircraft run-up area near the east end of Taxiway A to provide a large area off the taxiway where aircraft can perform engine preflight tests prior to takeoff.

### **P. Runway 4R-22L Extension/Associated Taxiways**

The extension of Runway 4R-22L has been discussed at length in Chapter 4, *Development Alternatives*. It is anticipated that this project will encompass several phases: the relocation of the Runway 4R threshold, and associated taxiways, 250 feet to the southwest; the relocation of the Runway 22L threshold, and associated taxiways, 600 feet to the northeast; and the overall rehabilitation of the existing pavement to the full extent.

## **Phase II: Mid-Term Development (5-10 Years)**

### **Q. Other Taxiway/Runway Modifications/Standards**

This project establishes a new taxiway or taxiway extension around the end of Runway 22R. Such a runway will greatly increase the efficiency and factor of safety of the airfield by definitely helping to minimize the number of runway crossings and the resultant possibility of incursions. Other taxiway improvements will be needed to meet standards and provide a full taxiway to both runways.

### **R. South Airport Apron Access Improvements**

As development progresses around the south Airport apron area, it is anticipated that upgrades to the surface road infrastructure and an increase in automobile parking will be required.

### **S. Update Airport Master Plan**

The FAA typically recommends that airport master plans be update every five to seven years, depending on the changes that have occurred since the completion of the previous master plan. A master plan update will be needed in the mid-term period.

# Chandler Municipal Airport/2007 Airport Master Plan Update

## Phase III: Long-Term Development (10-20 Years)

### T. Aircraft Storage Facilities

This project will consist of the construction of four T-hangar buildings, each having 11 hangar units.

### U. Update FAR Part 150 Noise Compatibility Study

With a planned update in 2007, a subsequent update should be conducted in the long-term planning horizon. The Part 150 Study should be updated based on the operational levels at the time of conduct, as well as those forecasted in the updated Master Plan.

## COST ESTIMATES

**Table 6.1** presents a summary of the proposed capital improvements over the 20-year planning period, broken down by phase, with estimates of the eligibility for all projects by funding source.

**Table 6.1  
SUMMARY TABLE**

Phase	FAA Share	State Share <sup>1</sup>	Local Share	Total Cost
Phase I	\$22,678,540	\$14,660,482	\$5,423,181	\$42,762,203
Phase II	\$13,724,175	\$621,263	\$390,063	\$14,735,501
Phase III	\$308,750	\$633,125	\$1,883,125	\$2,825,000
<b>TOTAL</b>	<b>\$36,711,465</b>	<b>\$15,914,870</b>	<b>\$7,696,369</b>	<b>\$60,322,704</b>

<sup>1</sup> Includes ADOT Airport Loan Program  
 SOURCE: Wilbur Smith Associates  
 PREPARED: December 2006

**Tables 6.2 through 6.4** list each proposed improvement and show a total cost estimate for the planning, design, and construction of each project. The estimates contained in these tables were derived from analyzing similar projects, but should be re-evaluated at the time of project initiation. Tables 6.2 through 6.4 respectively depict anticipated costs for the Short-Term (Phase I), Intermediate-Term (Phase II), and Long-Term (Phase III) developments included in the Airport's CIP. Phase I (shown in Table 6.2) contains approximately \$42.76 million in capital projects including the north Airport apron projects, south Airport apron projects, airfield improvements including taxiway construction, runway extension, T-hangar/shade hangar development and other miscellaneous projects. It is estimated that the sponsor share of Phase I capital costs will be approximately \$5.42 million and the state share will be approximately \$14.66 million with the balance (\$22.68 million) being eligible for funding from the FAA.

# Chandler Municipal Airport/2007 Airport Master Plan Update

**Table 6.2  
PHASE I (0 – 5 Years)**

Project	FAA Eligible	State Share	Local Share	Total Cost
A. FAR Part 150 Noise Compatibility Study Update	\$315,400	\$8,300	\$8,300	\$332,000
B. Airport Pavement Preservation – Runway 4L/22R and Apron	\$0	\$985,050	\$109,450	\$1,094,500
C. Airport Storm Drain	\$935,750	\$24,625	\$24,625	\$985,500
D. North Airport Apron Construction	\$6,159,800	\$348,850	\$182,850	\$6,691,500
E. Airport Boulevard & Terminal Parking	\$527,440	\$2,672,030	\$40,730	\$3,240,200
F. Perimeter Road	\$427,500	\$11,250	\$11,250	\$450,000
G. South Airport Apron Construction	\$8,379,000	\$864,900	\$307,600	\$9,551,500
H. Airport Light Vault Reconstruction	\$0	\$489,150	\$54,350	\$543,500
I. Upgrade Tower Voice Switch Gear/Transmitter	\$33,725	\$888	\$888	\$35,500
J. Airport Guidance Sign Replacement	\$1,072,550	\$90,325	\$35,125	\$1,198,000
K. Aircraft Storage Facilities	\$0	\$812,500 <sup>1</sup>	\$4,419,500	\$5,232,000
L. Airport Erosion Control	\$785,175	\$20,663	\$20,663	\$826,500
M. Existing Airport Terminal Apron Improvement	\$0	\$570,150	\$63,350	\$633,500
N. Taxiway B Construction	\$1,820,200	\$188,300	\$63,500	\$2,072,000
O. Taxiway A Run-Up Area Construction	\$0	\$202,500	\$22,500	\$225,000
P. Runway 4R-22L Extension	\$2,222,000	\$58,500	\$58,500	\$2,339,000
<b>TOTAL</b>	<b>\$22,678,540</b>	<b>\$14,660,482</b>	<b>\$5,423,181</b>	<b>\$42,762,203</b>

<sup>1</sup> ADOT Airport Loan Program  
SOURCE: Chandler Municipal Airport  
PREPARED: December 2006

**Table 6.3  
PHASE II (6 – 10 Years)**

Project	FAA Eligible	State Share	Local Share	Total Cost
G. South Airport Apron Construction	\$7,066,575	\$446,063	\$214,863	\$7,727,500
Q. Other Taxiway/Runway Modifications/Standards	\$3,040,000	\$80,000	\$80,000	\$3,200,000
R. South Airport Apron Access Improvements	\$3,332,600	\$87,700	\$87,700	\$3,508,000
S. Update Airport Master Plan	\$285,000	\$7,500	\$7,500	\$300,000
<b>TOTAL</b>	<b>\$13,724,175</b>	<b>\$621,263</b>	<b>\$390,063</b>	<b>\$14,735,501</b>

SOURCE: Chandler Municipal Airport  
PREPARED: December 2006

**Table 6.4  
PHASE III (11 – 20 Years)**

Project	FAA Eligible	State Share	Local Share	Total Cost
T. Aircraft Storage Facilities	\$0	\$625,000	\$1,875,000	\$2,500,000
U. Update FAR Part 150 Noise Compatibility Study	\$308,750	\$8,125	\$8,125	\$325,000
<b>TOTAL</b>	<b>\$308,750</b>	<b>\$633,125</b>	<b>\$1,883,125</b>	<b>\$2,825,000</b>

SOURCE: Chandler Municipal Airport and Wilbur Smith Associates  
PREPARED: December 2006

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

Phase II contains approximately \$14.74 million in total capital projects, as shown in Table 6.3. These projects include the completion of the south Airport apron development area, runway and taxiway modifications and standards, additional apron access improvements, and updating the Airport Master Plan. The sponsor share of the proposed development plan in Phase II is approximately \$390,063 while the state share is estimated at \$621,263. Table 6.4 lists the Phase III development that includes additional storage facilities and an update of the FAR Part 150 Study. Phase III capital costs are currently estimated at \$2.83 million.

When combined, the 20-year CIP for the Airport represents over \$60 million in development projects. Approximately 61 percent of the total is eligible for federal participation, 26 percent is eligible for state grants and loans, and 13 percent will need to be funded locally.

### **CAPITAL FUNDING SOURCES**

This section describes the various funding sources that are potentially available for Airport development initiatives and their respective eligibility criteria.

#### **FAA Funding**

From the inception of flight to the advent of the first airparks, the United States Government has been an active advocate for the establishment, maintenance, and growth of aviation throughout the country. Recognizing aviation's value as a resource for national defense, as well as its value in promoting interstate commerce, the Federal Government established a grant-in-aid funding program to units of State and local government following World War II. That early program, the Federal Aid Airport Program (FAAP), was authorized by the Federal Treasury Act of 1946 and provided its funding to airports directly from the U.S. Treasury.

However, it was not until the Airport and Airway Revenue Act of 1970 that a comprehensive aviation development program was formally established. This Act created the Airport and Airway Trust Fund (also known as the Aviation Trust Fund), which was funded exclusively through taxes on airline tickets, air freight, and aviation fuel. The purpose of the Aviation Trust Fund was to establish a source of funding collected only from the users of the nation's airport system that could be used to finance airport improvements at system airports. Through this trust fund, the Federal Government was able to provide grants for airport planning and for airport development throughout the country.

The current program, known as the Airport Improvement Program (AIP), was established by the Airport and Airway Improvement Act of 1982 (Public Law 97-248). Since then, the AIP has been amended several times, most recently with the passage of the Wendell H. Ford Aviation Investment and Reform Act for 21st Century (AIR-21). Administered by the FAA through its regional and airport district offices, the current AIP

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

legislation provides for two types of funding (entitlement funds and discretionary funds) that must be spent on FAA eligible projects as defined in FAA Order 5100.38C, *Airport Improvement Program Handbook*. In general, the handbook states the following:

- An airport receiving funding must be in the currently approved National Plan of Integrated Airport Systems (NPIAS)
- AIP provides up to 95 percent federal funding for most eligible public-use airport improvements
- Eligible projects include those that preserve or enhance safety, security, or capacity of the national air transportation system; reduce noise or mitigate noise impacts resulting from aircraft; and, if applicable, furnish opportunities for enhanced competition between or among air carriers
- Eligible projects must be shown on a current Airport Layout Plan
- General aviation terminal buildings, T-hangars, and corporate hangars and other private-use facilities may be eligible for federal funding, but are subject to other funding requirements

Specifically, AIP provides entitlement grants to eligible commercial service airports through a formula based primarily on passenger enplanements, and to eligible general aviation airports through non-primary entitlements and state apportionments. Within the entitlement amount granted, up to 95 percent of eligible project costs are funded, with the remaining 5 percent provided from other non-federal, local airport sources. The FAA also provides discretionary grants (also on a 95/5 basis), over and above entitlement funding, to airports for projects that have a high federal priority, such as for enhancing safety, security, and capacity of the airport, and would be difficult to fund otherwise. The amount that individual grants vary can be significant in comparison to entitlements and are awarded through an evaluation process based on need, the FAA's project priority ranking system, and the FAA's assessment of a project's significance within the national airport and airway system.

Other sources of funding within the FAA's budget appropriations include Facilities and Equipment (F&E) funding for the installation and maintenance of various navigational aids and equipment for the national airspace system, including facilities such as air traffic control towers, approach lighting systems, and some runway instrumentation. This funding is separate from the AIP program and typically requires no local match. It is provided on a discretionary basis by the FAA. Federal noise funds (Part 150 funds) may also be available for noise mitigation with an 80 percent federal and a 20 percent state and/or local share.

### **State Funding**

In support of the state aviation system, the State of Arizona also participates in airport improvement projects through its own grant program. The source for State airport improvement funds is the Arizona Aviation Fund administered by the Arizona Department of Transportation (ADOT) Aeronautics Division and funded mainly through

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

flight property taxes, aircraft lieu taxes and aviation fuel taxes. The State Transportation Board establishes the policies for distribution of these State funds across three major categories of airport development assistance:

- Airport Development Grants Program (including AIP, state and local funded projects)
- Airport Preventive Maintenance Services (APMS) (including projects maintaining and protecting aviation pavement surfaces)
- Airport Loan Program (including economic development/revenue generating loans, and grant match loans)

Specifically, the State's Airport Development Grants Program is designed to provide 50 percent of the local share for projects receiving federal AIP funding. Current sponsor obligations on federal projects are 5 percent of a project's total cost, making the state share 2.5 percent. The State's Airport Preventive Maintenance Services also may fund up to 90 percent of a primary airport project and 95 percent of a secondary airport project (primary and secondary are Arizona airport classifications) which is not eligible for AIP funding, such as pavement maintenance.

Additionally, ADOT Aeronautics Division has an Airport Loan Program, established to enhance the utilization of state funds and provide a flexible funding mechanism to assist airports in funding improvement projects. Eligible projects include runways, taxiways, aircraft parking ramps, aircraft storage facilities (hangars), fueling facilities, general aviation terminal buildings or pilot lounges, utility services (power, water, sewer, etc.) to the airport runway or taxiway lighting, approach aids (electronic or visual), ramp lighting, airport fencing, airport drainage, land acquisition, planning studies, and under certain conditions, the preparation of plans and specifications for airport construction projects. Projects not eligible for funding under other programs but are designed to improve an airport's ability to be financially self-sufficiency may also be considered.

There are three types of loans available through the program: Grant Advance, Matching Grant, or Revenue Generating. Grant Advance loan funds are provided when the airport can demonstrate the ability to accelerate the development and construction of a multi-phase project. The project(s) must be compatible with the Airport Master Plan and be included in the ADOT 5-year Airport Development Program. The Matching Grant loan funds are provided to meet the local matching fund requirement for securing federal airport improvement grants or other federal or state grants. These loans cannot be repaid with future airport development grant funds. The Revenue Generating loan funds are provided for airport related development/construction projects, which are not eligible for funding, in whole or part, under other programs and are designed to improve airport financial self-sufficiency.

## Sponsor Funding

### Airport Operating Revenues and Expenses

Airport revenues are typically generated through user fees charged by the airport for the facilities and services that are provided. These user fees are typically established by the airport based on market conditions in the area and vary airport-to-airport. Airport operating revenues are collected at Chandler Municipal Airport from the following primary sources:

- Fixed Leases (Hangar & Field Fees)
- Tie Down Fees
- Fuel Sales
- Concessions (Fuel Flowage Fee)
- Other Revenues

Landside facility development and levels of aviation activity are typically the primary factors affecting airport operating revenues. As additional development occurs, the number of based aircraft and itinerant aircraft operations increase and leases are updated at the Airport, it is likely that operating revenues will increase in a corresponding fashion. Projections of future Airport operating revenues are developed in a subsequent section.

Airport operating revenues are offset by operating expenses, typically referred to as Operation and Maintenance (O&M) costs. Airport operating expenses are comprised of the day-to-day costs incurred by operating the Airport. They do not include non-cash and capital costs associated with depreciation, debt service, and infrastructure development. Primary components of O&M costs at Chandler Municipal include the following:

- Salaries, Wages and Related
- Professional Services
- Operating Supplies (aviation fuel)
- Repairs and Maintenance
- Other Expenses

Like operating revenues, certain components of Airport operating expenses fluctuate with activity levels. However, there are some significant fixed expenses, such as personnel, that could be maintained at or near current levels while accommodating significant increases in Airport activity.

Historic Airport operating revenues and expenses for Chandler Municipal Airport over the five most recent fiscal years are presented in **Table 6.5**.

## *Chandler Municipal Airport/2007 Airport Master Plan Update*

**Table 6.5  
ON-AIRPORT OPERATING REVENUES AND EXPENSES**

Project	FY2002	FY2003	FY2004	FY2005	FY2006
<b>Operating Revenues</b>					
Fixed Leases	\$118,897	\$123,680	\$125,688	\$141,240	\$154,141
Tiedown Fees	\$337,108	\$335,135	\$368,380	\$380,041	\$400,311
Fuels Sales	\$227,574	\$293,506	\$346,321	\$362,203	\$405,329
Fuel Flowage Fees	\$48,746	\$44,682	\$38,485	\$47,936	\$49,448
Other Revenues	\$8,429	\$34,292	\$22,736	\$18,067	\$24,937
<b>Total Operating Revenues</b>	<b>\$740,754</b>	<b>\$831,295</b>	<b>\$901,610</b>	<b>\$949,487</b>	<b>\$1,034,166</b>
<b>Operating Expenses</b>					
Salaries, Wages and Related	\$156,997	\$217,702	\$249,285	\$295,100	\$402,846
Office / Utilities / Admin / Equip / Misc.	\$136,448	\$129,557	\$101,356	\$109,633	\$113,721
Repairs and Maintenance	\$17,200	\$25,414	\$29,011	\$40,935	\$27,962
Revenue Supplies (aviation fuel)	\$179,037	\$252,717	\$301,175	\$322,158	\$358,927
<b>Total Operating Expenses</b>	<b>\$489,682</b>	<b>\$625,390</b>	<b>\$680,827</b>	<b>\$767,826</b>	<b>\$903,456</b>
<b>Net Operating Income</b>	<b>\$251,072</b>	<b>\$205,905</b>	<b>\$220,783</b>	<b>\$181,661</b>	<b>\$130,710</b>
<b>Capital Improvements &amp; Annual Debt Service</b>					
Capital Airport Improvements	\$2,588,794	\$63,058	\$120,308	\$2,818,202	\$1,688,526
Internal Service Transfer (debt service)	\$161,039	\$137,605	\$12,840	\$11,833	\$4,456
ADOT Debt Service	\$68,911	\$68,911	\$68,911	\$68,911	\$126,350
<b>Total Improvements / Debt Service</b>	<b>\$2,818,744</b>	<b>\$269,574</b>	<b>\$202,059</b>	<b>\$2,898,946</b>	<b>\$1,819,332</b>

SOURCE: Chandler Municipal Airport  
PREPARED: November 2006

As shown in Table 6.5, while total operating revenues at the Airport increased between fiscal year (FY) 2002 and FY 2006 at an aggressive rate, operating expenses increased at a higher rate. Operating revenues at Chandler Municipal increased \$293,412 from FY 2002 to FY 2006, representing a compound annual growth rate of approximately 8.7 percent. Unfortunately, operating expenses increased \$413,774 over that same time period, representing a compound annual growth rate of approximately 16.55 percent. Over the same period, the net operating profit of the Airport, on an annual cash-flow basis, declined from a profit \$251,072 in FY 2002 to a profit of \$130,710 in FY 2006. Growth in operating revenues at the Airport has primarily been driven by increases in leases, leasing rates and fuel sales. The increase in Airport operating expenses experienced between FY 2002 and FY 2006 was realized primarily in increased aviation fuel costs and increased staff expenditures.

### Projected Operating Revenues and Expenses

The continued growth of Chandler Municipal Airport, in terms of activity, tenants, new leases and facility development, will impact the Airport's operating revenues and expenses over the planning period. Actual future financial outcomes will be determined

## Chandler Municipal Airport/2007 Airport Master Plan Update

by a variety of factors, many of which are impossible to identify at the current time. However, the projections developed in this evaluation depict future Airport operating revenues and expenses based on recent financial results, budgeted revenues and expenses for 2007, and activity and tenant growth trends identified in previous chapters.

Projections of future Airport operating revenues and expenses at Chandler Municipal for the period 2007 through 2025 are presented in **Table 6.6**. The following information for operating revenues was established through close consideration of historical trends, as well as of proposed Airport development initiatives and how they might impact those future revenues. In most cases, revenue projections resulted from normal growth factors refined to more closely reflect the unique circumstances of this Airport. On the operating expense side, increases in salaries and wages, as well as overall operational activities are based on normal growth (primarily a 3 percent annual growth), with a slightly higher growth factor for fuel costs in order to account for some of the volatility in that supply market.

**Table 6.6**  
**PROJECTED ON-AIRPORT OPERATING REVENUES AND EXPENSES**

Project	FY2007 (budget)	FY2010	FY2015	FY2020	FY2025
<b>Operating Revenues</b>					
Fixed Leases	\$235,680	\$292,200	\$364,500	\$454,900	\$567,300
Tiedown Fees	\$412,970	\$451,400	\$532,700	\$629,400	\$743,100
Fuels Sales	\$421,390	\$506,200	\$694,600	\$952,800	\$1,307,000
Fuel Flowage Fees	\$54,340	\$56,300	\$68,700	\$82,800	\$98,400
Other Revenues	23,610	\$26,600	\$32,300	\$37,100	\$40,800
<b>Total Operating Revenues</b>	<b>\$1,147,990</b>	<b>\$1,332,700</b>	<b>\$1,692,800</b>	<b>\$2,157,000</b>	<b>\$2,756,600</b>
<b>Operating Expenses</b>					
Salaries, Wages and Related	\$444,808	\$486,100	\$563,500	\$653,200	\$757,300
Office / Utilities / Admin / Equip / Misc.	\$210,515	\$230,000	\$266,700	\$309,100	\$358,400
Repairs and Maintenance	\$36,960	\$40,400	\$46,800	\$54,300	\$62,900
Revenue Supplies (aviation fuel)	\$328,750	\$394,300	\$548,200	\$761,900	\$1,059,200
<b>Total Operating Expenses</b>	<b>\$1,021,033</b>	<b>\$1,150,800</b>	<b>\$1,425,200</b>	<b>\$1,778,500</b>	<b>\$2,237,800</b>
<b>Net Operating Income</b>	<b>\$126,957</b>	<b>\$181,900</b>	<b>\$267,600</b>	<b>\$378,500</b>	<b>\$518,800</b>

SOURCE: Chandler Municipal Airport & Wilbur Smith Associates  
PREPARED: November 2006

The projected operating revenues presented in Table 6.6 are based on historical year-end financial results for fiscal years 2002-2006 and budgeted revenues for 2007. Additionally, forecasted increases in Airport based and itinerant aircraft activities, as well as Airport tenant populations presented earlier in this Master Plan, have been incorporated in these projections. Note that considerations have also been made regarding increasing tenant lease rates and the general growth in jet fuel services. Based on projected activity growth and assumptions regarding future tenant growth and

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

development at Chandler Municipal Airport, operating revenues are projected to increase from \$1,147,990 in 2007 to approximately \$2,756,600 by 2026.

Over the same period, Airport operating expenses are projected to increase from \$1,021,033 in 2007 to approximately \$2,237,800 in 2025. Based on these projections, the Airport's net operating outcome is projected to improve each year between 2007 and 2025, with the Airport having an operating income potential of approximately \$518,800.

### **Other Funding**

Other funding opportunities primarily encompass private development sources and/or public/private development partnerships. These investors may construct needed airport facilities as part of a lease agreement with the airport which would, in turn, provide for an adequate time frame to amortize their investments. For example, leasehold financing refers to a developer or tenant financed improvements which occur under a long-term ground lease. The obvious advantage of such an arrangement is that it relieves the community of all responsibility for raising the capital funds for improvements. This type of funding is particularly suitable for corporate hangar development and other privately owned projects in that these types of projects are not typically eligible for the FAA or state funding described above.

However, the private development of facilities based on a ground lease, particularly on property owned by a municipal agency, produces a unique set of problems. It is more difficult to obtain private financing in that only the improvements and the right to continue the lease can be claimed in the event of a default. Ground leases normally provide for the reversion of improvements to the lessor at the end of the lease term (typically 20 years), which reduces their potential value to a lender taking possession. Also, companies that want to own their property as a matter of financial policy may not locate where land is only available for lease.

Conversely, ground leases offer a substantial financial advantage to a private developer in that there are no up-front property acquisition costs and lease payments are fully deductible for tax purposes and can be depreciated. Additionally, this option could be structured as a straight ground lease or as a joint venture. Under a straight ground lease to a developer, the City would not be involved in the construction, financing, sale, or lease of buildings for tenants. However, there may be circumstances where the City will want to participate in the construction of facilities, either as part of a joint venture or to provide inducements to attract certain tenants. The simplest way to do this is to underwrite the construction and financing of those facilities, keeping them in City ownership and leasing them to tenants.

In a joint venture arrangement, the City would provide funds for construction and permanent financing. A joint venture could be structured so that the various benefits would be available for each partner according to their highest use; for example: tax benefits (such as depreciation) would go to the private developer while cash income

## ***Chandler Municipal Airport/2007 Airport Master Plan Update***

would go to the City. This could be used successfully to fund individual buildings for specific tenants, where lower rents could be charged in exchange for partial ownership, producing income from both rents and interest payments.

These financing techniques offer marketing inducements, as they assume the City can obtain lower-cost funds than are available in the private market. These lower costs can then be passed through to the development process to reduce lower rental rates. To avoid the appearance of unfairly competing with the private sector, it will be important to establish comparable market rental rates.

### **SUMMARY**

The primary goal is for Chandler Municipal Airport is to evolve into a facility that will best serve the air transportation needs of the region while simultaneously developing into a self-sustaining economic generator for the City of Chandler. This Master Plan Update can be best described as being the road map to helping the Airport achieve those goals. But it should be recognized that planning is a continuous process that does not end with completion of the Master Plan in that the fundamental basic issues that have driven this Master Plan will remain valid for many years. Therefore, the ability to continuously monitor the existing and forecast status of Airport activity will be a key ingredient in maintaining the applicability and relevance of this study.

In order to realize those goals through the successful implementation of Airport development projects, sound and measured decisions by the City of Chandler must be made. Two of the most important factors in influencing the decision to move forward with a specific improvement are Airport activity and funding timing. Both factors must be considered in the implementation of this Master Plan in that while Airport activity levels provide the “why” in the establishment of Airport improvements, the timing of funding provides the “how.” Through the course of this Master Plan effort, the “why” has been discussed in detail in previous chapters. This chapter has addressed the “how” by detailing the practical financial realities required to implement this overall Airport development program. However, it can not be understated that although every effort has been made in this effort to conservatively estimate when facility development may be needed, aviation demand will ultimately dictate when facility improvements need to be accelerated or delayed.