

U.S. DEPARTMENT OF TRANSPORTATION

**Federal Aviation Administration
Western-Pacific Region
Hawthorne, California**

RECORD OF DECISION

**PROPOSED
AIRPORT DEVELOPMENT PROGRAM**

**PHOENIX SKY HARBOR
INTERNATIONAL AIRPORT
Phoenix, Maricopa County, Arizona**



For further information:

*Jennifer Mendelsohn
U.S. Department of Transportation
Federal Aviation Administration
P.O. Box 92007
Los Angeles, California 90009-2007
Telephone: 310/725-3637*

April 7, 2006

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document contains the Federal Aviation Administration's (FAA) final agency determinations and approvals for those Federal actions by the FAA necessary for the proposed improvements at the Phoenix Sky Harbor International Airport (PHX). This document discusses all alternatives considered by FAA in reaching its decision, summarizes the analysis used to evaluate the alternatives, and briefly summarizes the potential environmental consequences of the PHX Airport Development Program (ADP) Alternative and the No-Action Alternative, which were the two alternatives evaluated in detail in the FEIS. This document also identifies the environmentally preferred alternative and selects the ADP Alternative for implementation at PHX. This document identifies applicable and required mitigation. This document also contains the FAA's responses to comments received on the FEIS.

BACKGROUND. In June 2005 the FAA prepared a Draft Environmental Impact Statement (DEIS). The DEIS addressed the potential environmental effects of the proposed PHX ADP Alternative and reasonable alternatives to that proposal. The DEIS was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA). FAA published the Notice of Availability for the DEIS on June 10, 2005. FAA received comments on the draft between June 10, 2005 and August 10, 2005.

FAA prepared the FEIS using the information in the 2005 DEIS and comments received during the public comment periods for the document. The FAA also specifically updated Section 4.2 of the FEIS to include an analysis of the air pollutant, particulate matter (PM_{2.5}). FAA published the Notice of Availability for the FEIS on February 10, 2006. FAA solicited comments concerning the PM_{2.5} analysis in the FEIS with the comment period closing on March 13, 2006.

Copies of this Record of Decision are available for inspection at various libraries in the Phoenix area, the FAA Headquarters Office in Washington, D.C. and its Western-Pacific Regional Office in Hawthorne, and at the administrative offices of Phoenix Sky Harbor International Airport. Chapter 7 of the FEIS provides the addresses for these locations.

WHAT SHOULD YOU DO? Read the Record of Decision to understand the actions that FAA will take relative to the PHX ADP Alternative.

WHAT HAPPENS AFTER THIS? The City of Phoenix may begin to carry out the ADP Alternative as approved.

TABLE OF CONTENTS

SECTION	PAGE
I. Introduction	1
II. Background	2
III. Proposed Federal Agency Actions and Approvals	3
IV. Public Involvement	4
V. Purpose and Need	5
VI. Description of Alternatives.....	13
VII. Alternatives Analysis	17
VIII. Environmental Consequences	25
IX. Mitigation.....	42
X. Agency Findings.....	48
XI. Decision and Orders	52
Figure 1: Airport Development Program Proposed Projects	12
Table 1 - Summary Of Existing PHX Terminal Facilities.....	3
Table 2 – Purpose and Need Summary.....	8
Table 3 – Characteristics of Other Airports in the Vicinity of PHX.....	14
Table 4 – Three-Level Alternatives Screening Analysis.....	18
Table 5 - Summary of Environmental Impacts.....	26
Appendix A – Responses to Comments on the Final EIS	A-1
Appendix B – Memorandum of Agreement	B-1
Appendix C – City of Phoenix Letter Regarding No-Action Alternative	C-1

This page intentionally left blank.

U.S. DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

RECORD OF DECISION

PROPOSED AIRPORT DEVELOPMENT PROGRAM
IMPROVEMENTS

PHOENIX SKY HARBOR INTERNATIONAL AIRPORT
Phoenix, Maricopa County, Arizona

I. INTRODUCTION

This Record of Decision (ROD) provides final agency determinations and approvals for those federal actions by the Federal Aviation Administration (FAA) necessary for proposed improvement of the Phoenix Sky Harbor International Airport (PHX), Phoenix, Arizona. The proposed improvements are described in the PHX Final Environmental Impact Statement (FEIS) published on February 10, 2006. These improvements are depicted on Figure 1 of this ROD. The proposed improvements include the following components:

- Demolition of Terminal 2 and ancillary facilities,
- West Terminal Development (33-gate terminal), garage and terminal roadways,
- Modifications to Terminal 4, Concourse N4 International Gates,
- Construction of Crossfield Taxiways Uniform "U" and Victor "V",
- Sky Harbor Boulevard modifications, and
- Construction of Automated People Mover (APM) Stage 2.

This ROD discusses all alternatives considered by FAA in reaching its decision, summarizes the criteria used to evaluate the alternatives and briefly summarizes the potential environmental consequences of the Airport Development Program (ADP) Alternative and the No-Action Alternative, which were the two alternatives evaluated in detail in the FEIS. This document also identifies the FAA's environmentally preferred alternative. The FAA selects the ADP Alternative, the environmentally preferred alternative, for implementation at PHX. This ROD discusses the practicable means to avoid or minimize environmental harm resulting from the ADP Alternative. The FAA arrived at the determinations and approvals identified in this ROD by reviewing the environmental analysis in the FEIS and all other relevant documents that comprise the Environmental Impact Statement Record, and thoughtful consideration of public comments provided throughout the process.

The Airport Layout Plan (ALP) for PHX depicts the existing facilities and the improvements proposed under the ADP Alternative, as described in the FEIS. The FAA's federal actions approved by this ROD include unconditional approval of those portions of the ALP for PHX. FAA's federal actions also include other actions and approvals as set forth in Section XI of this ROD.

This ROD completes the FAA's thorough and careful environmental decision-making process, including FAA's public disclosure and review by the FAA decision maker of the analysis of impacts described in the FEIS dated February 2006. This ROD has been prepared and issued by the FAA in compliance with the National Environmental Policy Act of 1969 (NEPA) [Title 42 of the United States Code (U.S.C.) Section 4321, et seq.], the implementing regulations of the Council

on Environmental Quality (CEQ), [Title 40 of the Code of Federal Regulations (CFR) Parts 1500-1508] and FAA directives [Orders 5050.4A, *Airport Environmental Handbook* and 1050.1E, *Environmental Impacts: Policies and Procedures*]. In addition, the ROD is used to demonstrate and document FAA's compliance with the procedural and substantive requirements and environmental, programmatic, and related statutes and regulations that apply to FAA decisions and actions on proposed airport development projects.

As described in the FEIS, an extensive process led to the ultimate identification of the selected alternative, disclosure of potential impacts, and selection of appropriate mitigation measures. The process began with the FAA's competitive selection of an independent EIS contractor, continuing throughout the preparation of the DEIS and FEIS, and culminating in this ROD. FAA furnished guidance and participated in the preparation of the EIS by providing input, advice, and expertise throughout the planning and technical analysis. FAA has independently evaluated the EIS and is responsible for its scope and contents. FAA has on file a disclosure statement from the environmental consultant that satisfies the requirement of 40 CFR § 1506.3(c).

The FAA identified the ADP Alternative as its preferred alternative in the FEIS. The FAA identifies the environmentally preferred alternative in this ROD. The FAA's specific decision and orders selecting the ADP Alternative to be implemented at PHX, required by 40 CFR § 1505.2, are described in detail in Section XI of this ROD.

II. BACKGROUND

As discussed in Section 1.1.3 of the FEIS, the City of Phoenix (City) owns and operates PHX, along with two general aviation reliever airports in Maricopa County, Phoenix Deer Valley Airport and Phoenix Goodyear Airport. PHX is designated by the FAA as a "large-hub air carrier airport." PHX serves a primary service area consisting of Maricopa and Pinal counties, and a secondary service area including most of the state of Arizona. PHX accommodates air carrier, commuter, air taxi, air cargo, general aviation and military aircraft operations. PHX is the largest commercial service airport in the state of Arizona in terms of scheduled departures, nonstop destinations and passengers enplaned. In 2001, PHX enplaned approximately 17.6 million passengers with annual aircraft operations of approximately 553,000. Twenty-six commercial air carriers service PHX. In 2004, PHX was ranked 7th busiest among United States airports in terms of passenger enplanements in the United States. The forecast of aviation activity for PHX indicates that passenger enplanements at the airport will increase from 18.6 million passengers in 2003 to approximately 25.2 million in 2015.

Currently, the airport encompasses approximately 3,175 acres of land located in the City of Phoenix in Maricopa County, Arizona. PHX is approximately five miles east of the central business district. The airfield at PHX consists of three parallel east-west runways that are served by a network of taxiways, aircraft parking aprons and hold areas. Two runways (Runways 7L/25R and 7R/25L) are located on the south side of the airfield and one runway (Runway 8/26) is located on the north side. Runway 7L/25R is 10,300 feet long by 150 feet wide; Runway 7R/25L is 7,800 feet long by 150 feet wide and Runway 8/26 is 11,489 feet long by 150 feet wide. The 3rd runway, Runway 7R/25L was constructed in October 2000 to enable the Airport to accommodate the demand for air passenger service in the Phoenix/Maricopa County area. The FAA published the "Final Environmental Impact Statement, Sky Harbor International Airport Master Plan Update Improvements" in November 1993, which addressed the impacts.

The existing passenger terminal complex at PHX consists of Terminals 2, 3 and 4. Terminal 1 was demolished in the early 1990's. Currently, Terminal 2 has 14 gates, Terminal 3 has 16 gates and Terminal 4 has 80 gates (including the addition of 8 gates in Concourse S2). As of 2005, the terminals have a combined gate capacity of 110 positions and 2,704,993 square feet of floor space as shown on Table 1 of this ROD. In April 2003, the FAA issued a Categorical Exclusion

for the construction of 16 new gates at Concourses S1 and S2 in Terminal 4. The addition of eight new gates at Concourse S2 was completed in 2005. Construction of eight new gates at Concourse S1 will begin in 2006 and be completed in 2007. Upon completion of the improvements at S1, the total number of gates at Terminal 4 will be 88 gates.

**TABLE 1
SUMMARY OF EXISTING PHX TERMINAL FACILITIES**

Terminal Facilities	Facility Area (Square Feet)		
	Terminal 2 ¹	Terminal 3 ²	Terminal 4 ²
Total Aircraft Gates	14	16	80^{1,3}
Airline Space	109,705	258,623	600,621
Concession Space	42,005	61,860	88,546
Public Space	104,540	141,967	493,786
Federal Inspection Services	0	0	83,872
Other Areas	60,669	179,465	477,366
Total Terminal Area	316,919	641,915	1,746,159³

¹ West Terminal Development Planning and Program Criteria Document, Landrum & Brown, October 2000.

² Terminal Area Demand/Capacity Analysis, DMJM Aviation/HDR, June 2004 (modified).

³ Terminal 4 gate total does not include 8 additional gates to be constructed on Concourse S1 that were previously approved by the FAA in a 2003 Categorical Exclusion (Cat Ex).

III. PROPOSED FEDERAL AGENCY ACTIONS AND APPROVALS

The Federal actions and approvals that require review pursuant to NEPA are listed below. The various projects that PHX requested approval to build under the ADP Alternative are depicted on Figure 1.1-2 of the FEIS, and are included on Figure 1 of this ROD.

The specific Federal actions that are the subject of this Record of Decision include the following:

1. Approval of the Airport Layout Plan (ALP) to depict the proposed airfield improvements and various other airfield development components pursuant to 49 U.S.C. § § 40103(b) and 47107(a)(16). The ALP, depicting the proposed improvements, has been processed by the FAA to determine conformance with FAA design criteria and implications for federal grant agreements. FAA conditionally approved the current ALP on May 9, 2001, pending environmental review of the West Terminal, Instrument Landing System for Runway 25R and Airport Traffic Control Tower.
2. Determination of the effects of the proposed projects upon the safe and efficient utilization of navigable airspace pursuant to 14 CFR Parts 77 and 157. The FAA performed an airspace review (Airspace Case No. 2005-AWP-527-NRA) of the proposed development at PHX. See 14 CFR Part 157, *Notice of Construction, Alteration, Activation and Deactivation of Airports* and FAA Order 7400.2E, Part 3, *Airport Airspace Analysis*. FAA has determined that the proposed development under the ADP Alternative is consistent with existing airspace utilization and procedures.
3. Determination under 49 U.S.C. § 44502(b) that the airport development is reasonably necessary for use in air commerce or in the interests of national defense.
4. Determinations under 49 U.S.C. §§ 47106 and 47107 relating to eligibility of the proposed project for Federal funding under the Airport Improvement Program (AIP) and under 49 U.S.C. § 40117, as implemented by 14 CFR § 158.25, to impose and use Passenger Facility Charges (PFC's) for the proposed project.
5. Approval of the appropriate amendments to the Phoenix Sky Harbor International Airport Certification Manual pursuant to 14 CFR Part 139 and to the Airport Security Plan pursuant to 14 CFR Part 107 (49 U.S.C. § 44706).

6. Continued close coordination with the City of Phoenix and appropriate FAA program offices, as required, to maintain aviation and airfield safety during construction pursuant to 14 CFR Part 139 (49 U.S.C. § 44706).

IV. PUBLIC INVOLVEMENT

In 2001, the FAA began the federal environmental impact analysis process for the ADP Alternative pursuant to NEPA and its implementing regulations found at 40 CFR Parts 1500-1508. The public was made aware of the initiation of the environmental review process on March 12, 2001, when a Notice of Intent to prepare an Environmental Impact Statement was published in the *Federal Register* (66 Fed. Reg. 14430) and in local newspapers.

Two scoping meetings for the public and governmental agencies were held on April 23, 2001 for the DEIS. See Appendix G of the FEIS for copies of the Notice of Intent published in the Federal Register, scoping notes and comments received, and the sign in sheets. In addition, a public workshop was conducted on October 16, 2002 to inform the public about the EIS process and the project status and to respond to questions. After considering the comments provided during the scoping period, the FAA identified a total of eight alternatives to the proposed project. Each alternative was evaluated using a three level evaluation and screening process. As discussed in Chapter 2 of the FEIS, those alternatives that did not satisfy the evaluation criteria or had substantial impacts were eliminated from further consideration. Alternatives retained for detailed study for potential environmental impacts include the No-Action and the ADP Alternatives.

Throughout the EIS process, the FAA coordinated with local and state agencies including the U.S. Fish and Wildlife Service, Arizona Game and Fish Department, Arizona Department of Environmental Quality, U.S. Environmental Protection Agency, Bureau of Reclamation, Salt River Project, State Historic Preservation Officer, Maricopa Association of Governments and City of Tempe. The FAA also coordinated with the Salt River Pima-Maricopa Indian Community, Gila River Indian Community, Fort McDowell Yavapai Nation, Hopi Tribe, Ak-Chin Indian Community, Yavapai-Prescott Indian Tribe and Tohono O'odham Nation during the EIS process and during development of the Memorandum of Understanding. Coordination letters are contained in Appendix A of the FEIS.

On June 10, 2005, the FAA published the DEIS for public review and comment. The U.S. Environmental Protection Agency (EPA) published the Notice of Availability on of the DEIS on June 10, 2005, in the *Federal Register* (70 Fed. Reg. 33901). The FAA held two public hearings on the DEIS in Phoenix on July 12 and 13, 2005. The comment period on the DEIS was originally scheduled to close on July 26, 2005. At the request of the City of Tempe, FAA agreed to extend the comment period to August 10, 2005, thereby providing a comment period of 62 days. EPA published a notice in the *Federal Register* announcing the extension of the comment period on August 5, 2005 (70 Fed. Reg. 45389).

FAA received 67 comment letters from governmental agencies and the public on the DEIS. The comments covered a wide range of issues, including letters supporting and opposing the project. Comments received and responses can be found in Appendix J of the FEIS. The FAA updated the DEIS based on comments received and incorporated the information into the FEIS.

In response to comments received on the DEIS, the FAA updated Section 4.2 of the FEIS to include an analysis of the air pollutant, particulate matter (PM_{2.5}). FAA published the FEIS on February 10, 2006. FAA published its own Notice of Availability of the FEIS in the *Federal Register* (71 Fed. Reg. 7109) and local newspapers on Friday, February 10, 2006. In the same issue of the *Federal Register*, the EPA published the required Notice of Availability of the FEIS (71 Fed. Reg. 7040).

FAA accepted comments on the updated section of the FEIS, Section 4.2, through March 13, 2006. Many comments received on the FEIS did not address the updated or refined information and analysis. FAA has prepared responses to the comments received on the entire FEIS, which are included in Appendix A to this ROD.

V. PURPOSE AND NEED

A. BACKGROUND

The decision to develop an airport is the responsibility of the airport sponsor. FAA does not direct the timing or nature of development at the nation's airports. Rather, the FAA influences and facilitates airport development by providing Federal financial assistance for eligible projects, developing Airport Design Standards, and reviewing and approving or disapproving revisions to Airport Layout Plans at Federally obligated airports.

In support of the FEIS, the Aviation Demand Forecast for PHX was updated in 2002 to provide operational projections for the planning period 2005 through 2015 (see Section 1.1.4 of the FEIS). FAA approved the Aviation Demand Forecast on January 6, 2003. Calendar year 2001 was established as the base year for the FEIS because it was the year FAA published the Notice of Intent to prepare the EIS, conducted scoping meetings and began the environmental impact analysis. Calendar year 2015 was selected as the end of the forecast period because the ADP Alternative construction is expected to be completed in 2014. Passenger activity at PHX is forecast to increase from approximately 17.6 million in 2001 to 25.2 million in 2015. This would reflect an average annual growth rate of approximately three percent. The relative percentage mix of international passengers at PHX is projected to increase from approximately 3.3 percent in 2001 to approximately 4.2 percent by 2015. This projected increase is anticipated to occur as a result of the increased development of direct international service to accommodate local demand. It is projected that the share of domestic regional passengers will increase from 4.7 percent to 6.7 percent by 2015 because of the continuation of the trend to use regional affiliates to serve markets with regional jet aircraft. The relative percentage of connecting passengers is projected to remain unchanged throughout the entire forecast period at approximately 41 percent.

Total aircraft operations at PHX are projected to increase from 553,310 in 2001 to 670,000 in 2015. This represents an average annual growth rate of about 1.5 percent. The average annual rate of growth for aircraft operations is less than that for passenger and cargo demand because it is assumed that as passenger demand increases within established markets, airlines will initially reallocate aircraft within their existing fleets to increase the size of the respective aircraft before adding flights. At the same time, the use of regional jets by the major and feeder airlines is anticipated to increase as a relative share of all commercial operations. The use of regional jets is anticipated to represent a continued trend in commuter and feeder airline service along intermediate-range city pair routes. There will be a continued trend to increase the average aircraft size and utilization for commercial operations, and it is assumed that average growth for non-commercial operations will be less than the growth for commercial operations.

In general, runway capacity may constrain growth in aviation activity when aircraft delays reach levels of between 18 and 20 minutes per operation. Estimated future average annual delay at PHX does not exceed 15 minutes at any point during the planned period for the EIS. Accordingly, the results of the capacity analysis indicate the three-runway system at PHX would be capable of accommodating growth in aviation activity as projected in the unconstrained demand forecast. As discussed in Section 1.2.1 of the FEIS, the projected growth in the number of aircraft operations at PHX is independent of the terminal facilities to be developed as part of the ADP Alternative and would also occur under the No-Action Alternative although the level of service to passengers would be significantly reduced.

B. SUMMARY OF PURPOSE AND NEED

With the existing terminal and airfield configuration at PHX, the ability of landside facilities to effectively and efficiently process passengers at the desired level of service is less than the capacity of the airfield to move passengers into and out of the airport. The differential between airfield capacity and the ability of the landside facilities to process passengers will become more severe as operations increase, resulting in a reduced level of service. Level of service refers to a range of established values, which combine both qualitative and quantitative criteria relative to comfort and convenience and provide an effective measure of how terminal facilities accommodate passenger demand. Based on the projected growth in passenger demand there is a demonstrated need for additional gate capacity at the airport.

Due to the poor condition of Terminal 2 and practical limitations to expanding existing terminals, the City of Phoenix has proposed the development of new terminal facilities that would accommodate projected levels of passenger demand through 2015. This would provide a balance between airfield capacity and passenger processing capabilities, and provide the ability for the airport to maintain a passenger level of service consistent with historical practice. The demand for airline service at PHX is created by the need for air transportation in the region, and not by the condition or size of the terminal facilities at the airport, as discussed in Section 1.2.1 of the FEIS. As a consequence, it is assumed in the FEIS that the same number of enplaned passengers and aircraft operations would be processed in 2015 under the No-Action as under any of the other alternatives evaluated in the FEIS. This assumption was confirmed by the City of Phoenix, who stated in a letter dated February 7, 2006, that they are committed to accommodating the projected 2015 demand at PHX by the use of hardstands or other appropriate means (Appendix C of this ROD). In addition to the terminal improvements, the City of Phoenix has proposed airfield and surface transportation improvements at PHX to more efficiently accommodate forecast passenger demand.

The various projects under the ADP Alternative are depicted on Figure 1.1-2 from the FEIS and are included on Figure 1 of this ROD. The City's proposal, the ADP Alternative, includes the following components:

- Demolition of Terminal 2 and ancillary facilities,
- West Terminal Development (33-gate terminal), garage and terminal roadways,
- Modifications to Terminal 4, Concourse N4 International Gates,
- Construction of Crossfield Taxiways Uniform "U" and Victor "V,"
- Sky Harbor Boulevard modifications, and
- Construction of Automated People Mover (APM) Stage 2.

In considering the City's proposal, the FAA took into account its statutory charter to ensure the safety of air commerce in the United States (49 U.S.C. § 40104) and the congressional policy to undertake airport construction and improvement projects to the maximum extent feasible to increase safety and efficiency and decrease delays (49 U.S.C. § 47101(a)(7)). The federal purpose and need for the proposed project is to 1) meet the needs of the National Airspace System, 2) improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers, 3) maintain the safety of aircraft ground operations and improve the efficiency of airfield operations by reducing aircraft operating time, and 4) improve access to the airport and the efficiency of the on-airport roadway system. The purpose and need for the proposed improvements are documented in detail in Chapter 1 of the FEIS. Table 2 of this ROD provides a summary of the purpose and need for each of the proposed improvements in relation to the overall project objectives. Consistent with the federal purpose and need, FAA evaluated the sponsor's proposal, as well as alternative means of reaching the sponsor's stated goals in the FEIS.

C. PURPOSE AND NEED FOR THE PROPOSED PROJECT

1. Demolition of Terminal 2 and Ancillary Facilities. The demolition of Terminal 2 and ancillary facilities is needed to improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers. Terminal 2 was originally constructed in 1962 with 14 gates and is the oldest of the three terminals at PHX. The existing configuration and condition of Terminal 2 are not conducive to modifications that would allow the installation of additional gates in response to passenger demand. Many of the structural and mechanical systems in the terminal are obsolete and out-of-date and would require significant retrofit to satisfactorily accommodate additional passenger activity.

The level of service currently provided in Terminal 2 and its ability to process additional passengers have been evaluated in the *Terminal 2 Deficiency Report*, which is included in Appendix H-2 of the FEIS. Results of the evaluation indicate the terminal is currently operating below the minimum service levels desired by the City. Results further suggest the current passenger activity level of 1.7 million annual enplaned passengers is at or close to the limit of Terminal 2 to efficiently process airline passengers. Additional increases in Terminal 2 passenger demand would reduce the level and quality of service provided to the traveling public. The projected future spoke domestic passenger activity levels for Terminal 2 airlines are approximately 3.4 million annual enplaned passengers. Accommodating this number of passengers with the existing Terminal 2 facilities would necessitate a significant reduction in efficiency and convenience to spoke domestic airline passengers. As a result of the physical limitations of Terminal 2 facilities and operational inefficiencies, airlines utilizing the terminal could be placed at a competitive disadvantage as compared to other airlines operating in Terminal 3 or Terminal 4.

In addition to the structural/operational deficiencies noted above, the southernmost gates of Terminal 2 preclude movement of aircraft larger than Airplane Design Group (ADG) IIIa on Taxiway "D", south of the terminal. Based on current taxiway design standards, the Taxiway Object Free Area for Taxiway "D" is 160 feet either side of the taxiway centerline. The existing distance between Taxiway "D" centerline and the southernmost edge of the Terminal 2 concourse is 155 feet. Because of this non-standard safety setback condition, certain aircraft, such as ADG V having a larger wingspans are required to utilize inner Taxiway "E" when taxiing north of, and parallel to, Runway 7L/25R. This requirement results in operational restrictions and capacity reductions on the parallel taxiway system.

**TABLE 2
PURPOSE AND NEED SUMMARY**

Proposed Action	Description of Proposed Project	Purpose and Need
Demolition of Terminal 2 and Ancillary Facilities	Demolition of existing Terminal 2 and associated facilities.	To more efficiently accommodate future aviation demand and improve the safety and efficiency of on-airport roadways.
Develop the West Terminal	A 33-gate facility located west of the existing Terminal 3. Terminal would be a multi-level central terminal facility with concourses containing 33 gates. The terminal would include a parking garage and other supporting facilities as required for passenger processing and air carrier operations.	To improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers.
Modifications to Terminal 4, Concourse N4 International Gates	N4 would be modified to better accommodate combined domestic and international operations of America West. Other international operations would be relocated to the new West Terminal.	To improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers.
Develop Crossfield Taxiways "U" and "V"	Construction of two Crossfield Taxiways "U" and "V."	To maintain the safety of aircraft ground operations and improve the efficiency of airfield operations by reducing aircraft operating time.
Sky Harbor Boulevard Modifications	Develop new primary airport access roadway system to and from I-10 and Buckeye Road via Sky Harbor Boulevard.	To improve access to the airport and efficiency of the on-airport roadway system.
Develop Stage 2 of the Automated People Mover (APM) System	Stage 2 APM would be constructed from the APM Stage 1 station in Terminal 3 westward to the West Terminal and Rental Car Center (RCC). Stage 2 would also be constructed from the APM Stage 1 at the East Economy Parking Garage northward to the Valley Metro Light Rail Transit (LRT) system.	To improve access to the airport and efficiency of the on-airport roadway system.

Source: URS, 2004.

2. West Terminal Development. The purpose of developing the West Terminal is to improve the efficiency of landside passenger handling facilities to accommodate forecast demand and maintain an acceptable level of service to passengers. Facility requirements for the West Terminal are based upon projected levels of passenger and airline activity through 2015, the number and types of airlines, airline requirements and local factors, such as the number of connecting versus origin and destination (O&D) passengers, vacation versus business travelers. The West Terminal would replace the 14 gates currently in Terminal 2 and would provide terminal facilities to accommodate excess demand from Terminal 3. When operational, all international arrivals and departures would be moved to the West Terminal from their present location in Terminal 4.

Construction and operation of the West Terminal is needed for the airport to accommodate the projected increase in enplanements without a reduction in the level of service provided to passengers. With the existing airfield and terminal configuration at PHX, there is an imbalance in the capacity of the airfield as compared to the ability of landside facilities to effectively and efficiently process passengers. The imbalance will become more severe as the number of operations at PHX increases as projected in the FAA approved forecast of aviation activity for the airport. If the West Terminal were not developed, the passenger demand from domestic airlines operating at PHX would exceed the capability of the existing terminal facilities by as much as 2.8 million passengers per year toward the end of the forecast period (2015) assuming the desired level of service at the airport is maintained. In addition, the growth of international air carrier service at PHX could be constrained due to limitations in passenger processing and Federal Inspection Service (FIS) facilities.

3. Modifications to Terminal 4, Concourse N4 International Gates. The purpose of the proposed project is to improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers. The improved efficiency of Concourse N4 would not in and of itself lead to increased operational levels at PHX, but would enable PHX to accommodate increased service provided by airlines at PHX in response to increased demand. Implementation of the proposed project would result in the relocation of all air carriers having international arrivals and departures (with the exception of American West) to the proposed West Terminal. New FIS would be constructed in the West Terminal to accommodate these operations.

All international arrivals and departures at PHX presently occur at six gates located at the north end of Concourse N4 on Terminal 4. These gates are also utilized for domestic operations, primarily by American West and Southwest Airlines. Southwest Airlines operations currently accommodated in Concourse N4 will move to the S2 concourse upon completion. During 2001, the number of enplaned international passengers at PHX was approximately 550,000. International passenger enplanements are forecast to grow at an annual rate of approximately 3.6 percent through 2015 to approximately 1,075,000 per year. To meet this projected demand, modifications to the existing international passenger facilities and development of new facilities within the West Terminal are needed to provide additional processing capacity, improve the level of service to international passengers, provide additional space for FIS operations, and support increases in service by tenant airlines in response to demand.

Within Concourse N4, FIS processing facilities for deplaning international operations are located on the apron and basement levels of the concourse. Due to the location, the potential to expand international passenger processing and security facilities is negligible. Both the limited size of the existing FIS facilities and the limited holdroom area on the concourse level, result in delays in the accommodation of international passengers service at PHX.

The proposed project would relocate all international operations, except those operated by American West, to the West Terminal. The increased terminal space for international operations available to American West would allow the air carrier to service an increased number of international destinations by the feeder routes and by transient operations at PHX in response to

increasing passenger demand at the desired level of service. Security and facility design parameters would preclude the use of these gates for domestic operations.

4. Construction of Dual Crossfield Taxiways. The purpose of dual crossfield taxiways (Taxiways "U" and "V") is to maintain the safety of aircraft ground operations and improve the efficiency of airfield operations by reducing aircraft operating time. The added taxiways would not increase the number of annual aircraft operations at PHX. However, development of dual crossfield taxiways would improve the ability of FAA air traffic control to move aircraft more effectively between the north and south sides of the airport. More efficient movement of aircraft would reduce delays and provide the added benefit of improving air quality by reducing taxi delays. The operational benefits of the proposed crossfield taxiways were evaluated in a simulation analysis performed by the City of Phoenix. This analysis simulated existing and future conditions based on forecast operation levels and the airfield, with and without the proposed taxiways. Specifically, the analysis provided information on the calculated average ground delay and average operating times for aircraft arrivals and departures.

The analysis results indicate that for the existing airfield, average operating time for ground operations at PHX would increase from 8.5 minutes per aircraft in 2002 to 16.8 minutes per aircraft in 2015. In the year 2015, the construction of the proposed crossfield taxiways and West Terminal will result in a reduction in the average operating time for all ground operations at PHX by an average of 0.6 minutes per aircraft. With proposed improvements, departing aircraft would experience the greatest reduction in average operating time with an average of 1.2 minutes per aircraft.

Results of the economic analysis indicate that the reduction in average operating time would result in substantial economic benefit to passengers and air carriers. The estimated economic benefits for airside operations include the value of passenger time travel savings and annualized per minute aircraft operating cost savings. Economic analysis indicates that construction of the proposed taxiways and West Terminal would result in a cumulative economic benefit of approximately \$154.9 million (present value). This economic benefit would result from aircraft operating time savings that would produce the greatest reductions in aircraft operating costs and increases in passenger travel time savings compared to the existing airfield. For this analysis, the airport-specific weighted per minute aircraft operating cost was calculated to be \$38.23 in 2015. A reduction in taxi time and ground delay would also provide for a reduction in air emissions. This would result from the reduced operating time required for aircraft to move to and from the terminal facilities and runways.

The southernmost gates on Terminal 2 are in a location that does not allow effective use of the existing taxiway system. Based on current taxiway design standards, the Taxiway Object Free Area (TOFA) for Taxiway D is 320 feet, or 160 feet either side of taxiway centerline. The existing distance between the Taxiway D centerline and the southernmost edge of the Terminal 2 concourse is 155 feet. Because of this non-standard safety setback condition, certain aircraft, such as ADG V having larger wingspans are required to utilize inner Taxiway E when taxiing north of, and parallel to, Runway 7L/25R. This requirement results in operational restrictions and capacity reductions on the parallel taxiway system. Improvements to the mid-field terminal system to eliminate such taxiing restrictions would optimize the capacity and throughput of the existing runway/taxiway system.

5. Sky Harbor Boulevard Modifications. The purpose of the Sky Harbor Boulevard modifications is to improve access to the airport and the efficiency of the on-airport roadway system. Sky Harbor Boulevard serves as the primary access route to PHX. The utilization of Sky Harbor Boulevard by airline passengers is projected to generate approximately 101,200 passenger trips per day by 2015. The number of daily employee trips and service/cargo/construction trips will also increase approximately 52,000 and 16,000 trips per day, respectively. Cut-through traffic presently accounts for approximately 22 percent of the daily traffic at PHX and is also expected to increase during the forecast period. Cut-through traffic is

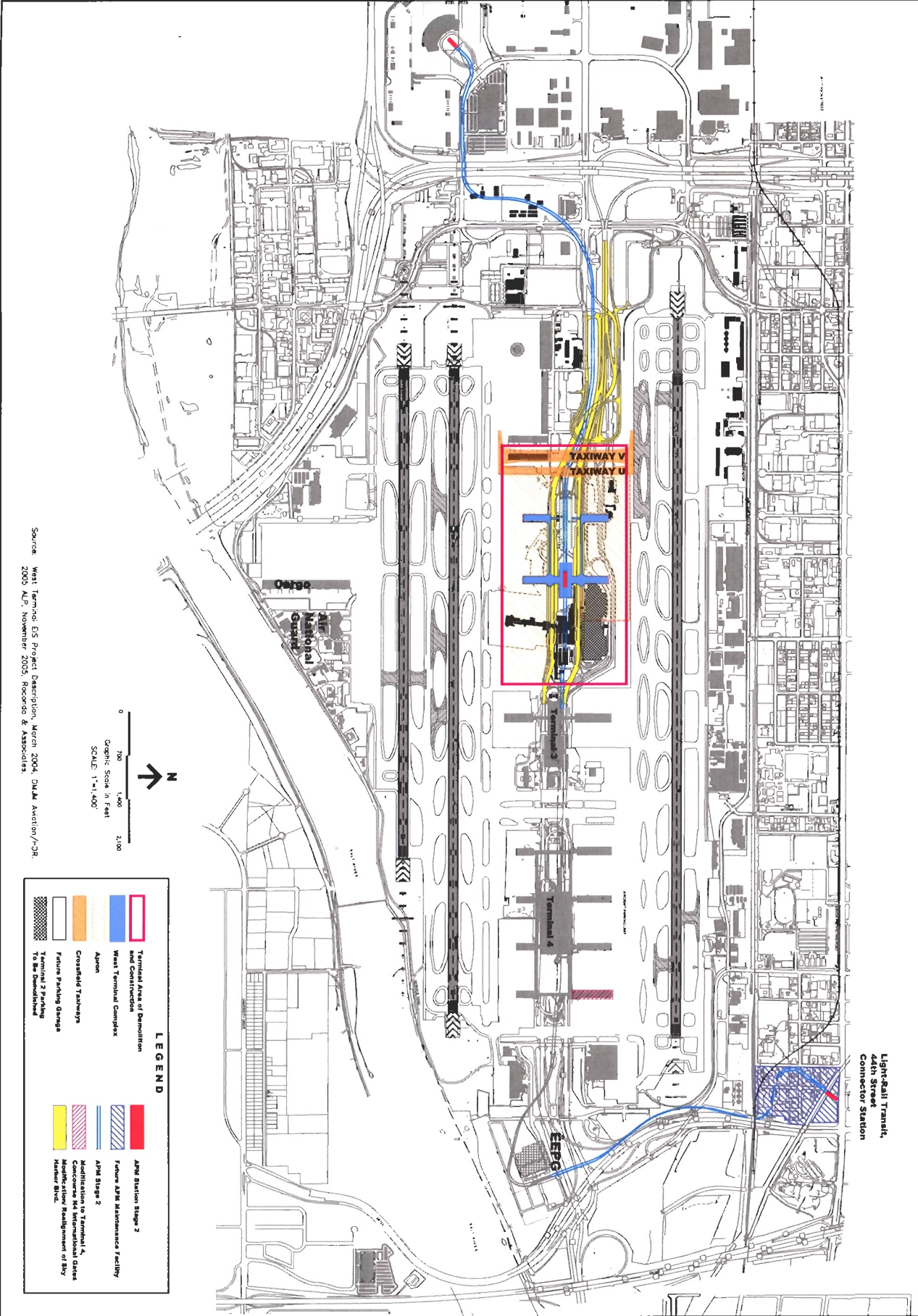
non-airport-related ground vehicle traffic passing through the airport without any intermediate stops for airport-related purposes. The reconfiguration of Sky Harbor Boulevard would facilitate construction of the dual crossfield taxiways "U" and "V." The functionality of the existing roadway system with projected future traffic volumes has been assessed by the City of Phoenix and validated by the FAA and FAA's third party contractor. Results of the assessment are summarized below:

- The Buckeye Road/24th Street, Buckeye Road/Copperhead Drive, and the Sky Harbor Boulevard/Terminal 2 Access Road Intersections would operate with unacceptable levels of delay in 2015.
- Several sections of Sky Harbor Boulevard are projected to experience high to severe levels of congestion during peak periods, particularly between the limits of Terminal 2 and Terminal 4.
- Traffic along Buckeye Road is projected to increase significantly in the future. This roadway would accommodate primarily passenger traffic to/from the south via I-10 as well as traffic using 24th Street.

Operation of the airport's roadway system at the levels indicated in the assessment report would negatively impact the level of service provided by the airport to passengers and tenant airlines.

6. Construction of Stage 2 of the Automated People Mover. The purpose of Stage 2 APM development is to improve access to the airport and efficiency of the on-airport roadway system. Stage 2 of the APM would also provide an eastward connection from the east terminus of APM Stage 1 at the East Economy Parking Garage to the Valley Metro Light Rail Transit system. This connection would allow airport passengers to access PHX from a number of locations throughout the area without using the roadway system, thus reducing roadway congestion. Any reduction of roadway traffic and congestion would also result in a reduction in vehicle emissions, and therefore, improve air quality. In addition, APM Stage 2 would encourage the development of intermodal connections set forth in Congress' mandate to FAA in 49 U.S.C. § 47101(a)(5).

Stage 1 APM is planned to extend from the existing East Economy Parking Garage westward to Terminals 3 and 4. Development of the Stage 1 APM is not part of the FEIS; however, the City of Phoenix prepared an Environmental Assessment to evaluate the impacts associated with this project. FAA issued a Finding of No Significant Impact and Record of Decision for Stage 1 of the APM on August 6, 2004. The FAA determined that Stage 1 APM has independent utility and will be built and operated, regardless of whether Stage 2 is built and operated.



Source: West Terminal EIS Project Description, March 2004, DMLA Auction-1/08
 2005 ALP, November 2005, Parsons & Associates

LEGEND

	Terminal Area of Demolition and Construction		APM Station Stage 2
	West Terminal Complex		Future APM Maintenance Facility
	Apron		APM Stage 2
	Crossfield Taxiways		Modification to Terminal 4 Concrete Mill Intermodal Gates
	Future Parking Garage		Identify and Realignment of Sky Master Blvd.
	Terminal 2 Parking 1, 2, 3, 4, 5, 6, 7, 8, 9, 10		

FIGURE 1

**Airport Development Program
 Proposed Projects**

Phoenix Sky Harbor
 INTERNATIONAL AIRPORT
 Environmental Impact Statement

VI. DESCRIPTION OF ALTERNATIVES

NEPA and its implementing regulations require that a range of alternatives be evaluated in the EIS. The range of alternatives includes all reasonable alternatives, which must be rigorously explored and objectively evaluated, as well as other alternatives, which are eliminated from detailed study with a brief discussion of the reasons for eliminating them. The range of alternatives considered include: Alternative 1 – Construct New Airport, Alternative 2 – Use of Existing Airports, Alternative 3 – No-Action, Alternative 4 – South Airport Site, Alternative 5 – West Airport Site, Alternative 6 – Airport Development Program (Proposed Project), Alternative 7 – Expansion of Existing Facilities and Alternative 8 – North Airport Site. The use of other modes of transportation (e.g., inter-city bus, roadway, conventional rail and/or high-speed rail) was identified early in the evaluation process but was not retained for further consideration.

A. ALTERNATIVE 1 - CONSTRUCT NEW AIRPORT

The FAA considered development of a new air carrier airport at a new site as an alternative. The major factors considered in evaluating a new airport site include operational authority to move aircraft operations, development cost of the new facility, development cost of new infrastructure, access to highways and mass transit facilities, availability of a sponsoring organization, community acceptance, financial feasibility, potentially significant environmental impacts, potential airspace conflicts and the willingness of the air carrier operators to locate there.

B. ALTERNATIVE 2 - USE OF EXISTING AIRPORTS

The FAA considered the use of other airports within the greater Phoenix area to accept some of the air carrier operations at PHX, thereby, reducing facility demand and improving the efficiency of passenger processing functions. There are eight airports in the vicinity of PHX, including one military airfield, Luke Air Force Base (AFB) that were considered, as shown in Table 3. Their locations are depicted in Figure 2.3.2-1 of the FEIS.

Designated Reliever (General Aviation) Airports and Luke Air Force Base

Phoenix Deer Valley, Phoenix Goodyear, Falcon Field, Chandler Municipal, Glendale Municipal and Scottsdale Municipal airports are designated reliever airports for general aviation operations in the FAA's National Plan for Integrated Airport Systems (NPIAS) and in the Regional Transportation Plan. Phoenix Goodyear, Glendale and Scottsdale each have a single runway. Phoenix Deer Valley, Falcon Field, and Chandler Municipal each have two parallel runways.

Scottsdale Municipal (Reliever)

Scottsdale Municipal is a base for and serves private aircraft, corporate jet aircraft, 14 charter services, helicopters and several flight schools. Scottsdale has a single runway and averages approximately 194,472 operations annually.

Williams Gateway Airports (Commercial Service Reliever)

Williams Gateway has three runways and is certified by the FAA to serve air carrier aircraft. It encompasses 3,019 acres of the former Williams Air Force Base with three northwest/southwest oriented runways. As shown in Table 3 below, Williams Gateway holds a Class IV certificate pursuant to 14 CFR Part 139. In this ROD, FAA is correcting a typographical error that appeared in Table 2.3-1 of the FEIS that showed Williams Gateway having a Class II certificate.

**TABLE 3
CHARACTERISTICS OF OTHER AIRPORTS IN THE VICINITY OF PHOENIX SKY HARBOR INTERNATIONAL AIRPORT**

Airport Characteristics	Phoenix Deer Valley	Falcon Field	Phoenix-Goodyear	Scottsdale	Williams Gateway	Chandler Municipal	Glendale Municipal	Luke AFB
<i>Location</i>	Phoenix	Mesa	Goodyear	Scottsdale	Mesa	Chandler	Glendale	Glendale
Owner/Operator	City of Phoenix Aviation Department	City of Mesa	City of Phoenix Aviation Department	City of Scottsdale	Williams Gateway Airport Authority	City of Chandler	City of Glendale	U.S. Air Force
FAA NPIAS Designation⁴	Reliever	Reliever	Reliever	Reliever	Reliever	Reliever	Reliever	Private
Approximate Distance and Direction from Phoenix CBD	16 miles North	19 miles East	17 miles West	15 miles Northeast	24 miles Southeast	19 miles Southeast	14 miles West-Northwest	18 miles West-Northwest
Number of Runways	2	2	1	1	3³	2	1	2
Runway Configuration	Parallel	Parallel	Single	Single	Parallel	Parallel	Single	Parallel
Part 139 Compliance	No	No	No	No	Class IV	No	No	n/a
Primary Runway:								
- Designation	7R/25L	4R/22L	3/21	3/21	12R/30L	4R/22L	01/19	3L/21R
- Length (ft)	8,208	5,102	8,500	8,249	10,401	4,850	7,150	10,012
- Width (ft)	100	100	150	100	150	75	100	150
- Material	Asphalt	Asphalt	Asphalt	Asphalt	Concrete	Asphalt	Asphalt	Asphalt
Secondary Runway:								
- Designation	7L/25R	4L/22R	---	---	12C/30C	4L/22R	---	3R/21L
- Length (ft)	4,500	3,801	---	---	10,201	4,401	---	9,904
- Width (ft)	75	75	---	---	150	75	---	150
- Material	Asphalt	Asphalt	---	---	Concrete/Asphalt	Asphalt	---	Asphalt
Runway Edge Lighting	Medium Intensity	Medium Intensity	Medium Intensity	Medium Intensity	High Intensity	Medium Intensity	Medium Intensity	High Intensity
Precision-Approach Path Indicators (PAPI)	2-Light	2-Light	No (2-Box VASI)	2-Light	4-Light	4-light (4R/22L) 2-Light VASI (4L/22R)	2-Light	4-Light
Capability								
- Based Aircraft ¹	923	947	198	439	53	301	269	n/a
- Annual Operations ²	389,309	281,742	132,681	194,472	182,009	219,671	88,449	100,000

n/a - not applicable.

Sources:¹ FAA Form 5010-1, Airport Master Record, August 5, 2004.

² Air Traffic Activity Data System (ATADS), AirNav.com, online, 2004.

³ Williams Gateway Airport has three parallel runways ranging from 9,301 to 10,401 feet in length.

⁴ National Plan of Integrated Airport Systems, FAA 2005.

C. ALTERNATIVE 3 - NO-ACTION ALTERNATIVE

For the purposes of 40 CFR § 1502.14(d), this alternative is identified as the No-Action Alternative. This alternative assumes that the proposed West Terminal Complex and associated improvements would not be developed. Terminals 2, 3, and 4 would continue to serve as the passenger processing facilities at PHX. Crossfield taxiways “U” and “V” and Stage 2 of the APM would not be constructed. Sky Harbor Boulevard would not be realigned or improved. The No-Action Alternative would necessitate the use of remote gates to accommodate the number of passenger enplanements projected for the future. It would also require use of buses to transfer passengers between aircraft and passenger processing facilities. Modifications would be made to Terminal 2 to upgrade existing facilities and to convert the terminal to a bus terminal. Facilities in Terminal 3 would be upgraded to accommodate existing contact gate positions and remote aircraft parking positions. Construction activities would largely be confined to the interior areas of Terminal 2 and a portion of Terminal 3; however, some additional outside aircraft parking apron lighting may be needed to accommodate the hardstand operations. The same number of enplaned passengers and aircraft operations would be processed in 2015 under the No-Action Alternative as under the other alternatives. (See Appendix C of this ROD).

D. ALTERNATIVE 4 - SOUTH AIRFIELD SITE

The triangular-shaped land area located on the south side of the airport was evaluated as a possible site for terminal development as an alternative to the proposed West Terminal. This site is bounded by I-10 to the southwest, Taxiway H to the north and the Salt River to the southeast. This site is approximately 185 acres in size and contains a variety of aviation-related facilities, including the Arizona Air National Guard (ANG), Office of Forestry, General Aviation Facilities and the Air Cargo Complex. The South Airfield site would include demolition of Terminal 2, development of the dual crossfield taxiways “U” and “V”, realignment of Sky Harbor Boulevard and development of the APM Stage 2.

E. ALTERNATIVE 5 - WEST AIRFIELD SITE

The development of terminal facilities at the west airfield site would be constructed and consistent with the purpose and need for the proposed project. New facilities would be sized to accommodate projected passenger demand and designed to meet the level of service guidelines established by the airport. This alternative would provide for development of the APM Stage 2 and provide connection with the existing APM Stage 1 at Terminal 3, the Rental Car Center and the Valley Metro Light Rail Transit System west of I-10 along Jefferson Street.

F. ALTERNATIVE 6 – AIRPORT DEVELOPMENT PROGRAM (ADP)

The Airport Development Program (ADP), or the City’s proposed alternative would replace the existing Terminal 2 and provide for the construction of a new West Terminal and associated improvements at PHX. The proposed West Terminal would be constructed west of Terminal 3 on the existing Terminal 2 site. This site is located in the central core of the airport along Sky Harbor Boulevard, between Runway 8/26 and Runway 7L/25R. The ADP Alternative consists of the following projects: demolition of Terminal 2 and ancillary facilities, construction of a new 33-gate West Terminal, modification to Terminal 4 Concourse N4 International Gates, construction of crossfield Taxiways Uniform “U” and Victor “V”, modification to Sky Harbor Boulevard and construction of APM Stage 2.

The West Terminal would be designed to accommodate operations from domestic airlines currently operating in Terminal 2, plus excess demand for domestic airlines currently operating in Terminal 3. In addition, all international airlines, except for America West’s international service would be located in the West Terminal. The proposed West Terminal consists of a central terminal with a 33-gate north/south concourse configuration. Concourses would be constructed and connected via bridges outfitted with moving sidewalks. The West Terminal will be designed

with 33-gates to replace the 14-gates to be lost due to demolition of Terminal 2, resulting in a net gain of 19 gates. This will improve the efficiency of terminal operations and allow the airport to function at an acceptable level of service. Vehicular roadways would surround the terminal with loading/unloading activity on the north and south sides. A parking garage would be associated with the proposed airport development projects. Federal Inspection Services facilities for international passenger processing would also be accommodated in the West Terminal. Stage 2 APM would connect to the Stage 1 APM at Terminal 3 and extend westward to the West Terminal and the Rental Car Center. Stage 2-East APM would connect to the proposed Valley Metro Light Rail Transit Station at 44th and Washington Streets. An APM station would be located in the lower portion of the West Terminal Complex. An underground hydrant fueling system would be developed to support aircraft operations at the West Terminal. The terminal complex could be expanded in the future to allow for future expansion as demand dictates. The existing airfield at PHX is designed to fully accommodate aircraft having Airport Reference Code D-V characteristics. The new crossfield taxiways will also be designed to accommodate Airplane Design Group V aircraft. Taxiway "V" would be designed to accommodate occasional operations by Airplane Design Group VI aircraft. International operations of airlines other than America West would be relocated to the new international gates and international passenger processing facilities in the new West Terminal. The majority of the existing Federal Inspection Service and other international passenger processing facilities currently in Concourse N4 would remain to accommodate international operations by America West. The international gates in Concourse N4 would be dedicated to that use.

G. ALTERNATIVE 7 - EXPANSION OF EXISTING FACILITIES

Under this alternative, Terminal 3 would be expanded to the extent achievable to accommodate the domestic airline operations currently located in Terminal 2. Terminal 2 would be demolished to allow construction of the proposed realignment of Sky Harbor Boulevard. Expansion of Terminal 3 would provide additional contact gates but would also require the use of remote gates or hardstand locations in order to meet the projected need for domestic passenger handling capacity. Stage 2 of the APM would be developed to connect with APM Stage 1, the Rental Car Center and the Valley Metro Light Rail Transit Station.

As a supplement to this alternative, the expansion of Terminal 3 was considered without the use of remote gates or hardstand operations.

H. ALTERNATIVE 8 - NORTH AIRFIELD SITE

The North Airport Site would involve the construction of a passenger terminal complex on a site located north of Runway 8/26. This site is bounded by East Washington Street to the north, 24th Street to the west and Hohokam Parkway (State Route (SR) 143) to the east. This area has been identified by the City as a future acquisition area to be designated for airport use and is currently in a voluntary acquisition program for residential properties. The North Airport Site contains 218 acres of land. Relocating the Union Pacific Railroad right-of-way to Washington Street, potentially in conjunction with the proposed City of Phoenix light rail system, would provide airfield access. Land use at this site is dominated by a mix of industrial and commercial properties. Approximately 57 single-family homes and 12 duplex residential units are located within the North Terminal Site. There are currently a number of long-term lease holders on the North Airport Site that have made a substantial capital investment in developing facilities on this property.

The development of terminal facilities at the North Airport Site would include demolition of Terminal 2, development of the dual crossfield Taxiways "U" and "V," realignment of Sky Harbor Boulevard and development of APM Stage 2. Although not required for the development of the new terminal, surface transportation and taxiway systems, Terminal 2 would be demolished because to leave it in place would not be a prudent use of public property. The space currently occupied by the terminal is within the central core of the airport and could be used in the future to

meet additional facility and/or operational needs. The Stage 2 APM would be developed to provide a connection from Terminal 3 to the new terminal facility and to the Rental Car Center. APM Stage 2 development would also include a connection from the East Economy Parking Garage northwest to the Valley Metro Light Rail Transit Station (44th Street and Washington Street).

VII. ALTERNATIVES ANALYSIS

A. ALTERNATIVES EVALUATION AND SCREENING PROCESS

The FAA completed a thorough and objective review of a range of reasonable alternatives to the City's proposed project at PHX in accordance with CEQ regulations (40 CFR § 1502.14). FAA then evaluated in detail all "reasonable" alternatives; alternatives that were practical or feasible from the technical and economic standpoint and using common sense. In reviewing alternatives, the FAA considered all pertinent factors including the environmental impact as well as the FAA statutory charter in 49 U.S.C. § 40101 et seq., formerly known as the Federal Aviation Act of 1958. The FAA identified a total of eight alternatives, five on-airport and two off-airport alternatives and the No-Action Alternative.

Section 2.1 of the FEIS describes the alternatives evaluation and screening process of the eight alternatives in the FEIS. The alternatives evaluation used a three-level evaluation and screening process. The Level 1 screening process evaluated each alternative for the ability to fully satisfy all the purpose and need criteria established in Chapter 1.0 of the FEIS. During the Level 2 screening process, FAA considered each of the remaining alternatives to determine if they could effectively and efficiently accommodate terminal facilities having sufficient capacity to meet the projected future demand. The Level 3 screening process evaluated the alternatives carried forward from the Level 2 evaluation in terms of constructability and environmental considerations. Those alternatives that did not satisfy the evaluation criteria or had substantial impacts were eliminated from further consideration. The detailed screening analysis is set forth in Section 2.4.1 of the FEIS. Table 4 of this ROD depicts the application of the evaluation criteria under the three-level screening process.

B. RESULTS OF THE ANALYSIS

1. Alternative 1 - Construct New Airport. This alternative would require a substantial capital investment and commitment of resources to provide the infrastructure required to support a major airport. The FAA determined that construction of a new airport is not a reasonable alternative because it failed to meet the Level 1 screening criteria; therefore, it was not retained for further analysis.

2. Alternative 2 - Use of Existing Airports. The potential for other airports within the Phoenix area to handle some of the forecast demand and thereby alleviate the congestion and shortfalls in the existing facilities at PHX was considered.

Background – There are eight potential supplemental airports in the vicinity of PHX, including one military airfield, Luke Air Force Base. The City of Phoenix owns Phoenix Deer Valley and Phoenix Goodyear Airports, as well as PHX. State, local and tribal governments own and operate the remaining five airports (Falcon Field – City of Mesa, Chandler Municipal – City of Chandler, Glendale Municipal – City of Glendale, Scottsdale Airport (SDL) – City of Scottsdale, and the Williams Gateway Airport (IWA) – Williams Gateway Airport Authority). The Federal Government owns and operates Luke Air Force Base (Luke AFB) exclusively for military purposes.

**TABLE 4
THREE-LEVEL ALTERNATIVES SCREENING ANALYSIS**

Evaluation Level	Evaluation Criteria	Alt. 1	Alt. 2	Alt. 3*	Alt. 4	Alt. 5	Alt. 6	Alt. 7	Alt. 8
		New Airport	Other Airports	No - Action* Alternative	South Airfield Site	West Airport Site	Central Core Sites		North Airfield Site
							Airport Development Program	Expansion of Existing Facilities	
Level 1 Purpose and Need	Improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers.	No	No	No	No	Yes	Yes	No	Yes
	Maintain safety and improve efficiency of aircraft ground movements.	No	No	No	Yes	Yes	Yes	No	Yes
	Improve access to the airport and efficiency of the on-airport roadway system.	No	No	No	Yes	Yes	Yes	No	Yes
Continue to Level 2? Yes or No		No	No	Yes	No	Yes	Yes	No	Yes
Level 2 Site Acceptability	Runway Configuration and Layout			Yes		No	Yes		Yes
	Proximity to Airfield and Runway Ends			Yes		No	Yes		Yes
	Ability to Meet Aircraft Fleet Mix Requirements			No		Yes	Yes		Yes
	Interstate and Regional Surface Access			Yes		Yes	Yes		Yes
	Reasonableness			No		No	Yes		Yes
Continue to Level 3? Yes or No				Yes		No	Yes		Yes
Level 3 Constructability and Environmental	Land acquisition (acres)			0			16		250
	Relocations: Residential (number)			0			0		39
	Commercial/Industrial (acres)			0			16		88
	Infrastructure impacts			No			Yes		Yes
	Maintenance of airport operations			Yes			Yes		Yes
	Section 303(c) sites: direct (#of sites)			0			0		0
	Historic resources: direct (#of sites)			0			0		--
	Wetland impacts (acres)			0			0		0
Floodplain impacts (acres)			0			Yes		Yes	
Hazardous materials/site contamination			No			Yes		No	
Analyze in Chapter 4: Environmental Consequences?				Yes			Yes		No

* No-Action Alternative will be retained for detailed analysis for comparative purposes and to fulfill CEQ regulations, Sections 1502.14 and FAA Orders 5050.4A and 1050.1E implementing NEPA.

Source: URS Corporation, 2004.

Designated Reliever (General Aviation) Airports and Luke AFB – Phoenix Goodyear, Glendale, and SDL each have a single runway. While Phoenix Deer Valley, Falcon Field and Chandler Municipal Airports each have two parallel runways, none have sufficient separation to permit dual-parallel simultaneous instrument approaches during instrument weather (poor visibility) conditions. Without such capability these airports will not have the capacity to substantially alleviate congestion and reduce the shortfall in terminal and other facilities at PHX in 2015.

The City of Phoenix and the cities that own Falcon Field, Chandler Municipal or Glendale Municipal Airports have no plans to upgrade their respective general aviation airports to serve air carriers during the forecast period. Luke AFB is currently in exclusive use for military operations and not open to the public. Similarly, the Federal Government has no plans to convert or close the base to permit civilian operations beginning in 2015. For these reasons, Phoenix Deer Valley, Phoenix Goodyear, Falcon Field, Chandler Municipal, Glendale Municipal and Luke AFB do not meet Level 1 purpose and need screening criteria. These airports were not retained for further consideration as reasonable alternatives to alleviate future congestion and shortfalls in terminal facilities at PHX.

Scottsdale Airport (SDL) – Among the other designated general aviation reliever airports in the Phoenix area, SDL alone had commercial airline sightseeing service and recently received expressions of interest from several air carriers. In the fall of 2005, the prospect of commercial service arose again at SDL. At this time, several air carriers expressed interest in starting commercial service from SDL. According to news media reports, the proposal to add commercial service was controversial. The business community and the Chamber of Commerce supported the proposed commercial service, but there were concerns about how planned commercial operations would impact general aviation. On November 1, 2005, after hearing protests from airport neighbors, homeowners' association directors and civic leaders about issues such as increased aircraft noise, the Scottsdale City Council voted not to apply for a new certificate under 14 CFR Part 139 at SDL. Due to the lack of service by air carriers operating large jet aircraft since at least 1978, recent local protests against renewed commercial service and the requisite Part 139 certification, and finally the sponsor's decision in November 2005 indicate that use of SDL is not a viable alternative.

Williams Gateway (IWA) – Williams Gateway Airport currently serves over 2,000 passengers annually. IWA has surplus capacity and facilities in place to accommodate an increased level of charter passenger service. The City of Phoenix believes that IWA could have a significant role in providing future air carrier service to the greater Phoenix/Maricopa County area. The City of Phoenix has accordingly supported the development of air carrier and cargo service at IWA. The FAA is currently working with the Williams Gateway Airport Authority to ensure that operations will be conducted safely and in accordance with FAA standards and procedures. Yet, the practical capacity of IWA to alleviate congestion at PHX beginning in 2015 is potentially limited by the proximity of its parallel runways and airspace conflicts with PHX. The centerlines of the two outermost runways are presently 1,000 feet apart, which is too close to permit dual-parallel simultaneous instrument approaches. As a result, IWA lacks the capacity to substantially alleviate congestion and reduce the shortfalls in terminal and other facilities at PHX in 2015. The Maricopa Association of Governments investigated the feasibility of building a new east/west runway or multiple parallel east/west runways at IWA to align traffic flows at PHX with IWA. Concerns about noise and other environmental impacts have been expressed as development continues in communities surrounding the airport such as the Towns of Gilbert and Queens Creek. A realignment of runways at IWA could also negatively impact the ability of the military to use airspace near Luke AFB to train pilots.

Airline Strategic Decisions – Finally any substantial redistribution of traffic from PHX to other airports such as Scottsdale and Williams Gateway would require airline strategic decisions that cannot be predicted or relied upon. The United States enacted Public Law 95-504, entitled the "Airline Deregulation Act of 1978," to deregulate the airline industry. As a result of deregulation,

natural supply and demand factors unique to air transportation govern the level of aviation activity demand at national, regional and local market levels. The Federal Government does not control where, when and how airlines provide their services. Rather, the aviation industry, in partnership with local and regional government and in response to market demand, determines where and how air travel demand is accommodated. Local governments like the City of Phoenix that own several airports have limited authority to specialize the roles of their airports and encourage use of those airports consistent with those roles. Because the Federal Government cannot direct airlines to serve Williams Gateway and/or Scottsdale and because Phoenix does not own or operate Williams Gateway or Scottsdale, any ability to use these airports to offset demand at PHX is speculative. Accordingly, for the reasons discussed above, use of Scottsdale and/or Williams Gateway Airports would not meet Level 1 purpose and need criteria to improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers. Use of these airports was not retained for detailed study in the EIS.

3. Alternative 3 - No-Action Alternative. The city of Phoenix has developed conceptual reduced scale alternatives for evaluating the possible No-Action scenarios at PHX should proposed improvements not be constructed. The No-Action Alternative would necessitate the use of remote gates to accommodate the number of passenger enplanements projected for the future and require the busing of passengers between aircraft and passenger processing facilities. The same number of enplaned passengers and aircraft operations would be processed in 2015 under the No-Action Alternative as under the other alternatives. The City of Phoenix has committed to processing the same number of enplaned passengers and aircraft operations in 2015 under the No-Action Alternative as under other alternatives (See February 7, 2006, letter from City of Phoenix in Appendix C to this ROD). Sky Harbor Boulevard would not be improved and Stage 2 of the APM would not be constructed.

The No-Action Alternative was not selected because it was determined not to meet the FAA's purpose and need (Level 1 screening criteria) to: 1) meet the needs of the National Airspace System, 2) improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers, 3) maintain the safety of aircraft ground operations and improve the efficiency of airfield operations by reducing aircraft operating time, and 4) improve access to the airport and efficiency of the on-airport roadway system. The No-Action Alternative would not improve the efficiency of landside passenger facilities at PHX to accommodate forecast demand nor maintain an acceptable level of service to passengers. The No-Action Alternative would necessitate the use of remote gates to accommodate the number of passenger enplanements projected for the future, and require the busing of passengers between aircraft and passenger processing facilities. The busing of passengers would impact the efficiency of airport operations and could subject passengers to the adverse conditions, including temperatures in excess of 100° F that exist in the Phoenix area during summer months. Busing and remote gate operations would also result in safety and security concerns that could significantly impede passenger processing activities and further reduce the level of service consistent with historical standards. Additional security systems and personnel could be required to move passengers between the terminal and hardstand aircraft locations. The need for additional security monitoring equipment could further reduce the amount of space available for passenger processing. In addition, without substantial modifications to the existing Terminal 2 facilities, the airport would not have the ability to assure compliance with Americans with Disabilities Act requirements relating to the ability to move disabled passengers between the terminal and aircraft at remote gate positions.

Under the No-Action Alternative, the dual crossfield taxiways and Stage 2 of the APM would not be constructed and Sky Harbor Boulevard would not be realigned. Surface transportation analysis for the No-Action Alternative indicates that the future increase in daily passenger traffic and employee and service traffic would result in high to severe levels of congestion on Sky Harbor Boulevard during peak traffic periods.

This alternative was retained for further analysis, pursuant to FAA Order 5050.4A and 40 CFR § 1502.14(d).

4. Alternative 4 - South Airfield Site. Results of the analysis indicate that the South Airport site is not practicable because it is too small for the development of terminal facilities and supporting infrastructure capable of meeting future passenger demand through 2015. Development in this area would also require relocation of existing facilities including general aviation, cargo and the ANG. The FAA relocated the Arizona Air National Guard (ANG) in the late 1990's to provide the necessary land for construction of a new runway in the southern portion of the PHX airport. Due to the significant capital expense and impact to the ongoing ANG mission, any additional relocation or modification of existing ANG facilities to accommodate PHX operations should be avoided. The ability to develop a surface transportation network having adequate capacity to serve the new terminal and associated facilities is severely restricted by the location of I-10 and the Salt River. The site does not contain adequate land area to develop the entrance and exits ramp structures needed to access the interstate system and other regional roadways. Accordingly, this alternative was not retained for detailed evaluation because it failed to meet Level 1 Purpose and Need criteria.

5. Alternative 5 - West Airfield Site. Development of passenger terminal facilities at this location may impact one or more critical local roadways that serve as regional access routes to and from the airport. In addition, this development could also present interconnectivity challenges with the existing centrally located terminal system and local, regional and interstate surface access system. The placement of terminal facilities at this site could require significant upgrade or modifications to the existing ground control and taxiway systems at PHX. These modifications could have a significant impact on airport operations and also limit future development and expansion. This alternative would not meet the Level 2 Site Evaluation criteria for the proposed project and was not carried forward for detailed evaluation.

6. Alternative 6 – Airport Development Program (ADP). The ADP Alternative is more effective and efficient than the No-Action Alternative in meeting the FAA's Purpose and Need. The ADP Alternative provides substantial improvements in efficiency of terminal and ground operations and in efficiency of on-airport roadways. The ADP Alternative would provide sufficient gate capacity to efficiently meet the forecast demand for domestic and international passengers through the 2015 forecast period while maintaining an acceptable level of service. The additional contact gates provided by the West Terminal would preclude the need to use remote gates and would provide a high level of service to passengers consistent with historical standards at PHX. The ADP Alternative would provide an opportunity to incorporate up-to-date security systems and layouts in the airport design. These up-to-date security systems would address a range of design considerations including airport access, passenger screening, and baggage monitoring systems.

Under the ADP Alternative, the development of the dual crossfield taxiways would be accomplished, and would improve the efficiency of airfield operations by facilitating the movement of aircraft between the north and south airfields and terminal complex. The ADP Alternative would reduce average operating time for all ground operations at PHX by an average of 0.6 minutes per aircraft as compared to the No-Action Alternative. Departing aircraft would experience the greatest reduction in average operating time of 1.2 minutes per aircraft. These gains in operation efficiency as compared to the No-Action Alternative would result in a cumulative economic benefit through the planning period of approximately \$154.9 million.

Under the ADP Alternative, the improvements to the airport's surface transportation system and development of Stage 2 of the APM would improve airport access and the efficiency of the on-airport roadway system. Fewer intersections would function at a level of service "F" under the ADP Alternative as compared to the No-Action Alternative in 2015. Development of Stage 2 of the APM would further reduce vehicular traffic on airport roadways as compared to the No-Action Alternative. Stage 2 APM connections to the City of Phoenix Light Rail Transit system would provide intermodal access to the airport.

This alternative met all three levels of the screening criteria and Chapter 4 of the FEIS contains a detailed evaluation of the impacts associated with this alternative.

7. Alternative 7 - Expansion of Existing Facilities. Alternative 7 would not improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand through the planning horizon and maintain an acceptable level of service to passengers. The use of remote gates would not be consistent with maintaining a level of service to passengers such as the ability to accommodate disabled passengers. The busing of passengers would impact the efficiency of airport operations and could subject passengers to the adverse weather conditions include temperatures over 100^o F as experienced in Phoenix during the summer months. The busing of passengers and use of remote gates would impact safety and security at the airport and further reduce the level of service afforded at PHX. There would be an increase in the use of buses to transport passengers between the terminal and remote gate positions.

As a supplement to this alternative the expansion of Terminal 3 was considered without the use of remote gates and hardstand operations. This Terminal 3 concept would provide sufficient gate and passenger processing facilities to meet forecast demand at PHX through 2012, but would not adequately meet airport needs through the 2015-planning horizon consistent with historical practice at the airport. Additional facilities would need to be constructed in the future to meet passenger needs and balance the operational abilities of the existing airside and landside facilities. Section 2.3.2.5 of the FEIS discloses the difficulties associated with expanding Terminal 3.

Based on this analysis, it was determined that the expansion of existing facilities did not meet the Level 1 Purpose and Need screening criteria.

8. Alternative 8 - North Airfield Site. This alternative would meet the Level 1 Purpose and Need screening criteria. Additionally, these new terminal facilities could be sized to accommodate projected passenger demand and designed to maintain an acceptable level of service to passengers, thus meet Level 2 Site Acceptability screening criteria. However, land acquisition for the Union Pacific right-of-way relocation costs associated with the development of this alternative have been separately estimated at over \$300 million. Additional costs associated with airport development in this area also include relocation and environmental cleanup of Honeywell facilities currently on long-term leased airport property. This site has been included by the EPA on their National Priorities List of Superfund sites. A rough order of magnitude costs for this has been separately estimated at \$500 million. Land requirements for this alternative include acquisition of approximately 220 acres. Land costs, based on recent acquisitions and appraisals in the area are included at a rough order of magnitude estimate of \$1 million per acre.

The North Airfield Site is developed predominately in commercial and industrial uses. Approximately 57 single family and 12 duplex residential units are located within the North Airport Site. Each of the units would have to be acquired and the families relocated. In addition, more aircraft activity would take place closer to residential and commercial areas north of Washington Street, which could have a detrimental effect on noise and air quality. Finally, several hundred acres of commercial/industrial property would be removed from local use, compared to the West Terminal alternative, potentially reducing economic activity in the area. Accordingly, it was determined that this alternative would not meet the Level 3 Constructability and Environmental screening criteria.

C. AGENCY PREFERRED ALTERNATIVE

The FAA identified the ADP Alternative as its preferred alternative in Section 2.6 of the FEIS because its impact to the surrounding community would be less than the No-Action Alternative with regard to a number of resource categories. The ADP Alternative will result in long-term reductions in air emissions of the following criteria pollutants: CO, NO_x, PM₁₀, PM_{2.5}, and VOC's.

In addition, the ADP Alternative would improve surface transportation patterns as compared to the No-Action Alternative. Under the ADP Alternative, the improvements to the airport's surface transportation system and development of the Stage 2 APM would improve airport access and the efficiency of the on-airport roadway system. Specifically, fewer intersections would function at a level of service "F" under the ADP Alternative as compared to the No-Action Alternative in 2015 (see Table 4.20.3-2 in the FEIS). Development of the Stage 2 APM would further reduce vehicular traffic on airport roadways as compared to the No-Action Alternative. The Stage 2 APM connection to the City of Phoenix Light Rail Transit would provide intermodal access to the airport, further reducing vehicle air emissions. The ADP Alternative would not change the level of noise impacts to the surrounding area when compared to the No-Action Alternative.

On the other hand, the ADP Alternative would require the acquisition of 16.4 acres, which would involve the relocation of 14 owner-operated businesses and 17 tenant-run businesses. The ADP Alternative has the potential to affect historic properties; however, any potential adverse effects would be mitigated through a Section 106 Memorandum of Agreement executed by the FAA, State Historic Preservation Officer, and other relevant agencies. The project would also result in short-term air emissions increases during peak periods of construction. The ADP Alternative would require development in the 100-year floodplain adjacent to the Grand Canal, but the encroachment would not be significant.

The ADP Alternative provides substantial improvements in efficiency of terminal and ground operations. The ADP Alternative would provide sufficient gate capacity to efficiently meet the forecast demand for domestic and international passengers through the 2015 forecast period while maintaining an acceptable level of service. Development of the ADP Alternative would provide an opportunity to incorporate up-to-date security systems and layouts in the airport design. These up-to-date security systems would address a range of design considerations including airport access, passenger screening, and baggage monitoring systems.

The ADP Alternative includes the development of the dual crossfield taxiways, which would improve the efficiency of airfield operations by facilitating the movement of aircraft between the north and south airfields and terminal complex. From a quantitative perspective, the ADP Alternative would reduce average operating time for all ground operations at PHX by an average of 0.6 minutes per aircraft as compared to the No-Action Alternative. These gains in operation efficiency as compared to the No-Action Alternative would result in a cumulative economic benefit through the planning period of approximately \$154.9 million.

D. ENVIRONMENTALLY PREFERRED ALTERNATIVE

In accordance with 40 CFR §1505.2(b), the environmentally preferred alternative should be identified in the ROD. The environmentally preferred alternative is the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves and enhances historic, cultural and natural resources. (See CEQ Memorandum, Questions and Answers about the NEPA Regulations, 46 Fed. Reg. 18026, March 23, 1981, as amended, 51 Fed. Reg. 15618, April 25, 1986, Question Number 6a). After considering these factors, including the long-term consequences of both alternatives, the FAA has determined the environmentally preferred alternative is the ADP Alternative for the following reasons.

In determining the environmentally preferred alternative, agencies must often do the difficult task of balancing one environmental value against another. Although the ADP Alternative will result in short-term impacts on air quality and solid waste during the construction of the proposed projects, those impacts are temporary. None of the air emissions increases or solid waste impacts are significant nor will the air emission increases exceed Federal standards. Moreover, the construction air emission increases will be minimized through various mandatory and voluntary

pollution reduction measures as described in Section IX of this ROD. The City of Phoenix has committed to additional, mandatory construction mitigation measures, as requested by the U.S. EPA in its letter dated March 13, 2006. Stage 2 of the APM of the ADP would cause an encroachment into the 100-year floodplain for the Grand Canal; however, the encroachment is not significant and will be minimized during final design. Furthermore, when the short-term impacts are balanced against the longer-term benefits of reduced air emissions and reduced energy demands, the ADP Alternative was clearly environmentally preferable. As shown in Table 5 of this ROD, when implemented the ADP Alternative will improve air quality. It will result in long-term reductions in air emissions of criteria pollutants due to the improved airfield operating characteristics, reduced delay times and the reduced demand for aircraft hardstand operations in the terminal area. Construction of the ADP would temporarily increase construction. In addition, improvements to the airport's surface transportation system and development of the Stage 2 APM associated with the ADP Alternative would reduce vehicular traffic, improve airport access and improve the efficiency of the on-airport roadway system.

In terms of non-environmental factors, the ADP Alternative may impact socioeconomic and historic and cultural resources however much of the potential impact will be mitigated through memorandum of agreements and other federal requirements. For example, landowners and tenants impacted by acquisition needed for the ADP Alternative would be compensated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. In addition, The ADP Alternative has the potential to affect historic properties; however, any potential adverse effects would be mitigated through a Section 106 Memorandum of Agreement executed by the FAA, State Historic Preservation Officer, and other relevant agencies. Lastly, any impact of the ADP Alternative on floodplain encroachment will be more than compensated for by the removal of existing structures with a greater footprint than the proposed ADP project encroachment. Therefore, after a careful balancing of the factors discussed above, the FAA identifies the ADP Alternative as the environmentally preferred alternative.

E. SELECTED ALTERNATIVE

All of the factors that led the FAA to identify the ADP Alternative as the preferred alternative equally support a decision to select it and approve the related federal actions necessary for its implementation at Phoenix Sky Harbor International Airport. In addition, the FAA selects the ADP Alternative for the following reasons.

First, the ADP Alternative is consistent with the FAA's statutory and policy obligations, specifically the charter to encourage the safety of air commerce in the United States (49 U.S.C. § 40104) and Congressional declarations of policy to (1) have as the highest priority the safe operation of the airport and airway system (49 U.S.C. § 47101(a)), (2) encourage the development of intermodal connections on airport property between aeronautical and other transportation modes and systems (49 U.S.C. § 47101(a)(5)), and (3) undertake airport construction and improvement projects to the maximum extent feasible to increase safety and efficiency and decrease delays (49 U.S.C. § 40101(a)(7)).

Second, the ADP Alternative has demonstrated the best ability to meet the FAA's Purpose and Need for the proposed project to: 1) meet the needs of the National Airspace System, 2) improve the efficiency of landside passenger handling facilities at PHX to accommodate forecast demand and maintain an acceptable level of service to passengers, 3) maintain the safety of aircraft ground operations and improve the efficiency of airfield operations by reducing aircraft operating time and 4) improve access to the airport and efficiency of the on-airport roadway system.

Third, in making this selection, the Agency was fully aware of the environmental consequences and the benefits as described throughout the FEIS and this ROD. Specifically, the FAA has identified the ADP Alternative as the environmentally preferred alternative. Additionally, the FAA gave full consideration to all comments regarding the DEIS and FEIS.

VIII. ENVIRONMENTAL CONSEQUENCES

In this ROD, the No-Action and ADP Alternatives are briefly discussed and compared in each environmental impact category. Table 5 of this ROD summarizes this information. Those actions or measures to avoid or minimize environmental harm that are practicable to implement are summarized in Section IX of this ROD. Detailed discussions for each environmental impact category are contained in Chapter 4 of the FEIS.

The DEIS and FEIS were prepared to disclose the impacts of the ADP Alternative and reasonable alternatives in accordance with the requirements of the NEPA, the implementing regulations of the Council on Environmental Quality (CEQ) [40 CFR Parts 1500-1508], FAA Orders 5050.4A, *Airport Environmental Handbook* and 1050.1E, *Environmental Impacts: Policies and Procedures*, and other applicable federal, state, and local regulations.

**TABLE 5
SUMMARY OF ENVIRONMENTAL IMPACTS**

Environmental Impact Categories	Level of Impact	
	No-Action Alternative	ADP Alternative
Air Quality		
• Operational Air Emissions Inventory (Annual Total - tpy)		
– CO	11,301	11,084
– NO _x	2,513	2,471
– PM ₁₀	111	108
– PM _{2.5}	108	105
– VOCs	1,187	1,150
Coastal Resources	No	No
Construction Impacts	No	Yes
Compatible Land Use		
• Number of Land Owner Businesses Acquired and/or Relocated	0	14
• Number of Tenant-Run Businesses to be Relocated	0	17
• Number of Residences Acquired	0	0
• Number of Property Owners	0	19
• Number of Parcels Impacted	0	92
• Property Acquisition (acres)	0	16.4
DOT Section 4(f)		
• Direct Impacts	No	Yes
• Indirect Impacts	No	Yes
Farmlands (acres)	0	0
Fish, Wildlife, and Plants (Number of Species / Acres)	0 / 0	0 / 0
Floodplains	No	Yes
Hazardous Materials	Yes	Yes
Solid Waste		
• Construction and Demolition Debris	No	Yes
• Landfill Proximity Conflicts	No	No
Historic, Architectural and Cultural	No	Yes
Light Emission	No	No
Visual	No	Yes
Natural Resources	No	No
Energy		
• 2015 Fuel Consumption* (million gal/yr)	55.6	53.6
• Electric Power Consumption	No	No
Noise (acres of non-compatible land use within the DNL 65+ dBA area)	295.1	295.1
Secondary (Induced) Impacts		
• Acquisitions and relocations (residential / businesses)	0 / 0	0 / 31
• Division or disruption of established communities	No	No
• Alteration of surface transportation patterns	No	Yes ²
• Disruption of orderly planned development	No	No
• Appreciable change in employment (additional employees at PHX)	No	5,400
Socioeconomic, Environmental Justice, Children's Health		
• Shifts in population movement and growth	No	No
• Changes in public service demands	No	No
• Changes in business and economic activity	No	Yes
• Environmental justice considerations	No	No
• Environmental health and safety risks to children	No	No
Water Resources		
• Water Consumption ¹	0	16.9 mg/y
• Water Quality	No	No
Wetlands (acres)	0	0
Wild and Scenic Rivers	No	No

Notes: tpy - tons per year Yes - Potential impacts, but not significant No - No impacts

¹ Net change in water consumption following demolition of Terminal 2 and development of the West Terminal.

² Sky Harbor Boulevard realignment will improve traffic flow and reduce congestion.

Source: URS Corporation, 2004.

A. AIR QUALITY: Section 4.2 of the FEIS describes the analyses conducted to evaluate potential air quality impacts of the ADP Alternative and the No-Action Alternative, and indicates that there will be no significant impact on the attainment or maintenance of air quality standards for either alternative. The U.S. EPA designated Maricopa County nonattainment for two criteria pollutants: ozone (O₃) 8-hour standard and particulate matter (PM₁₀). The area recently met the National Ambient Air Quality (NAAQS) for carbon monoxide (CO) and ozone 1-hour standard and was redesignated attainment/maintenance. Maricopa County is in attainment for PM_{2.5}, nitrogen oxides (NO₂), sulfur oxides (SO_x) and lead (Pb). The FAA updated Section 4.2 of the FEIS to include an analysis of the air pollutant, particulate matter (PM_{2.5}). Tables 4.2.3-1 and 4.2.4-1 of the FEIS were expanded to include calculated PM_{2.5} emissions, and the text was modified to include this pollutant in the narrative discussion.

Total air emissions at PHX are expected to increase in the future (2015). However, fewer emissions would occur with the ADP Alternative than without the proposed improvements in the long-term. This outcome is based on an air quality analysis conducted for airport sources of emissions and is largely attributable to the forecasted increase in aircraft operations at PHX. Total operational emissions for all pollutants are projected to be less in 2015 under the ADP Alternative than the No-Action Alternative primarily due to the improved airfield operating characteristics, reduced taxi and delay times and the reduced demand for aircraft hardstand operations in the terminal area. Construction of the ADP Alternative would temporarily increase construction air emissions. The City of Phoenix has agreed to implement various air quality mitigation measures to reduce emissions during construction as a condition of FAA's approval of this project. See Section IX, Mitigation of this ROD.

The sum of project-related construction and operational emissions for each year, from 2008 through 2015, are all below the *de minimis* thresholds of the General Conformity Rule. Table 4.2.5-4 of the FEIS presents project-related construction and operational emissions for each year, from 2008 through 2015, which are all below the *de minimis* thresholds of the General Conformity Rule. Table 4.2.5-2 of the FEIS is a comparison of the total 2015 operational air emissions inventory for the ADP and No-Action Alternatives. This table provides information on the following criteria pollutants: CO, NO_x, PM₁₀ and VOC. The total ADP Alternative project-related construction emissions are presented in Table 4.2.5-6 of the FEIS. Although the crossfield taxiway improvements become operational in 2012, the FEIS conservatively assumed that no project-related operational emissions would occur until 2015.

Project-related construction and operational emissions are less than 10 percent of the emissions inventory for the nonattainment area; therefore, the emissions are not regionally significant. As a result, no further demonstration is required to show that the ADP Alternative conforms to the State Implementation Plan. Since there are no roadway improvements connected with the ADP Alternative, which are funded or approved by the Federal Highway Administration or the Federal Transit Administration, the Transportation Conformity Rule does not apply.

In recent years the public and agency interest on the effects of Hazardous Air Pollutants (HAPS) on human health has increased. By letter dated March 13, 2006, the U.S. EPA concurred with FAA's determination that a HAPS analysis and human health risk assessment were not necessary for this project. FAA believes that the use of existing human health risk assessment protocols would not be scientifically sound as required under 40 CFR § 1502.24 or defensible given the limitations of the existing modeling tools and critical input data. Specifically, the computer models typically used in human health risk assessment protocols are unable to accurately represent chemical reactivity during transport of airborne pollutants, and the assumptions prescribed for HAPS exposure from stationary sources are not directly transferable to mobile sources. Furthermore, critical data concerning the absence of HAPS emissions data and the limitations of HAPS speciation profiles for all types of aircraft engines (i.e., commercial jets, military, general aviation, and air taxi) do not exist."

Moreover, the FEIS indicates that the proposed ADP Alternative is likely to reduce HAPS emissions in the long-term. As a result of the crossfield taxiways and improved surface transportation in the proposed ADP Alternative, overall operational emissions of VOCs and particulates would decrease in comparison to the No-Action Alternative in 2015. The trends in HAPS emissions generally correlate with those for VOC and PM₁₀ emissions. Emissions of individual HAPS due to the ADP Alternative are therefore expected to decrease as well. The U.S. EPA worked with the FAA as a cooperating agency on the Chicago O'Hare Modernization Program Environmental Impact Statement. The U.S. EPA concurred that limitations on modeling tools and data similarly precluded conducting a full human health risk assessment for that project. The FAA has agreed to discuss HAPS analysis with the EPA for future projects having significant adverse air quality impacts.

There are a number of air quality permits and regulatory requirements that would apply to the proposed ADP Alternative as listed below.

- **Stationary Source Permit** – The planned West Terminal Complex is the only component of the ADP Alternative that would likely involve the operation of a heating plant. As a stationary source of air emissions, the facility would be permitted separately from the FEIS by the City of Phoenix.
- **Dust Control Permit** – Activities, specifically including construction, which disturb more than 0.1 area of surface area are subject to Maricopa County Environmental Services Department (MCESD) Rule 310: Control of Air Contaminants – Fugitive Dust Sources. Among the requirements of Rule 310 are an Earthmoving Permit, a Dust Control Plan, adequate dust control measures and a Daily Log. Permits must be obtained prior to any disturbance of surface soil and be displayed at the site. Permits must be renewed annually if the project lasts for more than 1 year. The state and local regulations regarding minimizing dust can be found on the Maricopa County website: <http://www.maricopa.gov/aq/divisions/planning.aspx>.
- **Emergency Generator Permit** – If the emergency generator proposed for the West Terminal Complex exceeds the definitions for a standby emergency generator (operated at or below 500 hours per year and do not exceed 4,000 pounds of NO_x or CO emissions per year), then the provisions of MCESD Rule 200 Section 303 for a Non-Title V installation, operating and/or operational permit for new stationary sources would apply.

B. COASTAL ZONE MANAGEMENT AND COASTAL BARRIERS: The implementation of the ADP Alternative or the No-Action Alternative would not result in impacts within or affecting the coastal management zone or coastal barrier resources. There are no areas within Maricopa County in the state of Arizona that have been designated as coastal zones pursuant to the Coastal Zone Management Act as described in Section 4.3 of the FEIS. The Coastal Barriers Resources Act refers to undeveloped coastal barriers along the Atlantic and Gulf Coasts. The FEIS Alternatives do not create an impact to this geographic area.

C. COMPATIBLE LAND USE: Section 4.4 of the FEIS describes the impacts to compatible land use under both the ADP Alternative and the No-Action Alternative. The ADP Alternative would have no significant impacts on off-airport land use since most of the ADP Alternative would be constructed on airport property as described in Section 4.4 of the FEIS. Development of the APM Stage 2 and the connection to the Valley Metro Light Rail Transit system and APM maintenance facility would require the acquisition and conversion of approximately 16.4 acres of privately held property to airport use. The project site is surrounded by other airport commercial and light industrial land uses. Potential impacts associated with the relocation of businesses and facilities are discussed in Section 4.15 of the FEIS, below in this Section of the ROD under *Socioeconomic Impacts, Environmental Justice, and Children's Health*, and in Section IX of this ROD. Airport noise levels due to the ADP Alternative would not differ compared to the No-Action Alternative

and are not expected to result in new noise impacts to noise sensitive areas. Changes to on-airport land use would be minimal and result from the conversion and redevelopment of existing facilities to other airport uses. This conversion could affect prehistoric Hohokam archaeological sites that are eligible for the National Register for their potential to yield important information. Those impacts would be addressed in accordance with the executed Section 106 Memorandum of Agreement (See Appendix B of this ROD), as discussed in Section 4.11 of the FEIS. The potential issue of environmentally contaminated sites is discussed in Section 4.10 of the FEIS and below in this Section of the ROD under *Hazardous Materials and Solid Wastes*.

The FEIS has been developed in coordination with various public agencies. The Maricopa Association of Governments (MAG) is the designated Metropolitan Planning Authority for the Phoenix Metropolitan area and serves as the regional agency for the metropolitan Phoenix area. The ADP Alternative is consistent with the planning objectives of MAG's June 2004 Regional Aviation System Plan (RASP) Working Paper Number 6. The RASP discusses the regional aviation needs and considers various factors in the further development of aviation facilities include the demand for air transportation services.

MAG provided a provided a transportation conformity letter to the FAA on January 18, 2006. MAG is in the process of updating its RASP that addressed the aviation needs of the Phoenix area. The letter states that "As part of the MAG RASP Update, a number of alternatives have been evaluated for accommodating the air transportation needs of the region to 2025. The selected alternative includes the west area terminal and the people mover at Phoenix Sky Harbor International Airport. The MAG RASP Technical Advisory Committee met to consider the selected alternative and recommended that it be forwarded to the MAG RASP Policy. The Policy Committee will be meeting to consider action on the recommendation."

Further, the ADP Alternative is consistent with the City of Phoenix's 2001 General Plan and the City of Tempe's General Plan 2030. The Stage 2-East APM connection to the Light Rail and APM maintenance facility is consistent with the City of Phoenix Light Rail Transit development plans. FAA finds that the ADP Alternative has been developed in coordination with various public agencies. The City of Phoenix will take appropriate action to restrict, to the extent practicable, the use of land in the vicinity of the airport to purposes compatible with airport operations, as documented in the land use compatibility assurance letter provided to the FAA (Appendix A of the FEIS).

Under the No-Action alternative, there would be no changes in off-airport land use within the study area other than those resulting from the continuation of routine airport operations. There would be no increase or change in the level of impacts to off-airport land use in the area.

D. CONSTRUCTION IMPACTS: Construction impacts resulting from the implementation of the ADP Alternative at PHX would include temporary impacts related to noise, air quality, water quality, solid waste, hazardous waste and traffic congestion as described in Section 4.5 of the FEIS. These impacts would be minimized through the establishment and use of environmental controls and adherence to applicable regulations and standards. All on-airport construction activities would adhere to FAA Advisory Circular 150/5370-10A "*Standards for Specifying Construction of Airports*" and use of Best Management Practices. All contractors performing work at the airport are required to comply with the City of Phoenix's Arizona Pollution Discharge Elimination System Construction General Permit. Use of these measures would prevent or minimize any significant construction-related impacts to the environment and surrounding community. The city of Phoenix has committed to implement these and other measures as a condition of approval of this project as discussed in Section IX of this ROD. The demolition of Terminal 2 would result in the generation of hazardous waste through the removal of asbestos containing materials (ACM) present in the building. All ACM would be removed prior to demolition and would be performed following development and regulatory approval of a Terminal 2 Asbestos Abatement Plan. Asbestos abatement activities would be performed in compliance

with Section 112 of the Clean Air Act, Arizona Administrative Code R18-2-1101 and all other applicable Federal, state, and local regulations.

Under the No-Action Alternative, modifications would be made to Terminal 2 to upgrade existing out-of-date and obsolete facilities and to convert the terminal to an airfield bus terminal to serve remote aircraft parking positions. In addition, facilities in Terminal 3 would be upgraded to accommodate the existing contact gate positions as well as remote aircraft parking positions for ADG IIIa and smaller aircraft. Construction activities required under the No-Action Alternative would be largely confined to the interior areas of Terminal 2 and a portion of Terminal 3. Therefore, noise and water quality impacts, and impacts to surface transportation would not occur. Physical modifications to Terminal 2 would be complicated by the presence of large amounts of ACM. Removal and proper disposal of these materials would be required. Asbestos abatement activities would be performed in compliance with Section 112 of the Clean Air Act, Arizona Administrative Code R18-2-1101 and all other applicable Federal, state, and local regulations.

As described above for the No-Action Alternative, renovation and construction activities at Terminals 2 and 3 would generate additional solid wastes above that generated through routine terminal operations. Examples of construction-related solid wastes include empty construction supply containers, discarded shipping pallets, excess concrete batches, conduit, and excess electrical wiring materials. These construction materials would be transferred to a local transfer station for sorting and potentially to the Southwest Regional, Queen Creek, Northwest Regional, or Butterfield Station landfills for proper disposal.

E. DEPARTMENT OF TRANSPORTATION (DOT) ACT OF 1966, SECTION 4(f), as amended and U.S. DEPARTMENT OF INTERIOR LAND AND WATER CONSERVATION FUND ACT OF 1965, SECTION 6(f): Sections 3.8 and 4.6 of the FEIS disclose the potential impacts to properties protected under DOT Section 4(f) and Section 6(f) of the Land and Water Conservation Act (L&WCF). The ADP Alternative would not directly or constructively use any publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state or local significance. The ADP does have the potential to impact land of a historic site or national, State, or local significance; however; the ADP Alternative would not result in a physical or constructive use of these resources.

1. Park Resources. There are approximately 30 parks in the general study area. Three of these were acquired or developed by the City of Phoenix and City of Tempe using Land and Water Conservation funds. These parks are identified in Table 3.8.1-1 of the FEIS. They include Central Park (City of Phoenix), Papago Park and Tempe Beach Park (both City of Tempe resources). Both Section 4(f) and 6(f) protect the three parks acquired under the L&WCF Act. As shown on Figure 3.8.1-1 of the FEIS, PHX is located approximately 14,000 feet east of Central Park, 14,000 feet west of Papago Park and 16,000 feet west of Tempe Beach Park. The ADP Alternative would not result in direct or constructive use any of the parks in the general study area due to their distance from PHX. As there would be no direct or constructive use, there is no need to consider replacement of the three parks protected under Section 6(f) of the L&WCF Act.

2. Historic Properties. There are six historic Section 4(f) resources identified within the Area of Potential Effect for the ADP Alternative: *The Phoenix* mural, Grand Canal, Phoenix Main Line of the Southern Pacific Railroad, Sacred Heart Church, Pueblo Grande Museum and Archaeological Park and Tovrea Castle listed on Table 4.6.3-1. Under the ADP Alternative, *The Phoenix* mural would be relocated from Terminal 2 and be mounted elsewhere in a public place on the airport. The mural is an inherently moveable object of art and its historical artistic values are not based in the particular location in which it is currently displayed. The mural is owned by and would remain in the ownership of the City of Phoenix. The relocation of the mural would not substantially impair its value as a historic art object and not constitute a Section 4(f) direct or constructive use.

The Stage 2 APM would cross beneath the historic Phoenix main line of the Southern Pacific Railroad using the existing bridge that carries the railroad over the depressed Sky Harbor Expressway (SR 153). The Stage 2-East APM would span the historic Grand Canal on an elevated structure. The project would not acquire land from the canal or railroad right-of-way and would not substantially impair their historic values and ongoing uses. Therefore, the crossings of the canal and railroad would not constitute a direct or constructive use of this resource.

The elevated sections of the Stage 2-East APM facilities would be visible from the historic Sacred Heart Church, Tovrea Castle, and the Pueblo Grande Ruin and Irrigation Sites National Historic Landmark within the Pueblo Grande Museum and Archaeological Park as described in Section 4.6.3.2 of the FEIS. The Sacred Heart Church is about one-half mile from the closest proposed elevated section of the Stage 2 APM, and the Tovrea Castle is about one mile away. The project would not substantially alter the settings of these properties. The northern elevated section of the Stage 2-East APM guideways, station and the APM maintenance and control facility would be within 250 to 1,000 feet of the western edge of Pueblo Grande Museum and Archaeological Park. Sensitive design of elevated portions of the Stage 2-East APM facility in the vicinity of the park would minimize any incompatible visual intrusions and avoid any substantial impairment of the use of the park. The FAA in consultation with the Arizona State Historic Preservation Officer (SHPO) determined that a sensitive and compatible design would avoid adverse visual effect to the Pueblo Grande Museum and Archaeological Park. The ADP Alternative would not result in a Section 4(f) physical or constructive use of the Sacred Heart Church, Tovrea Castle or Pueblo Grande Museum and Archaeological Park.

Under the ADP Alternative final designs would be prepared in accordance with procedures defined in the Section 106 Memorandum of Agreement (MOA) between FAA, State Historic Preservation Officer, City of Phoenix, Bureau of Reclamation and Salt River Project executed on January 31, 2006. The Fort McDowell Yavapai Nation and Yavapai-Prescott Indian Tribe concurred with the MOA. As described in the MOA, the Museum Director and the City of Phoenix Historic Preservation Officer would be involved in the design of the Stage 2-East APM facilities to ensure they are sensitive to and compatible with the adjacent Pueblo Grande Museum and Archaeological Park and consider ways to have a beneficial impact by enhancing pedestrian access to the park. Construction techniques would be reviewed to reassess potential for construction-induced ground vibration to damage the Pueblo Grande Ruin. If warranted, a program to monitor vibrations would be implemented to avoid damage to the Pueblo Grande Ruin.

Under the No-Action Alternative there would be no direct or constructive use of historic Section 4(f) properties since construction activities required to accommodate hardstand operations would be largely confined to the interior areas of Terminals 2 and a portion of Terminal 3 and Stage 2 APM would not be built.

F. FARMLAND: Section 4.7 of the FEIS states that there are no existing agricultural operations on PHX or in the immediate vicinity of the airport. There are no prime or unique farmland areas located in or adjacent to the area that would be affected by the ADP Alternative. The No-Action Alternative would not involve any ground disturbing activities. Therefore, the ADP Alternative and the No-Action Alternative would not result in any impacts to protected farmlands or remove of any agricultural land from active production.

G. FISH, WILDLIFE AND PLANTS: Section 4.8 of the FEIS addresses the potential impacts of the No-Action Alternative and ADP Alternative on fish, wildlife and plants. Construction of the ADP Alternative would not significantly impact potential fish or wildlife habitat or threatened or endangered species. FAA consulted with the U.S. Fish and Wildlife Service and the Arizona Game and Fish Department to identify any potential impacts. No federally or state-listed threatened or endangered species are known or expected to occur in the project area. There is no proposed or designated critical habitat in the detailed study area.

The bed of the Salt River, which is located approximately 3,000 feet south of the project area, represents the only naturally occurring biotic community within the project area. It is primarily covered with large river rocks and gravel and some native vegetation. The project area is highly modified and is compatible with airport operations. Vegetation consists of landscaping along highway right-of-ways and the airport grounds. The Stage 2 APM would cross the Grand Canal near Washington Street and SR 153, northwest of the airport property. At this location the canal is concrete-lined and the adjacent area is primarily gravel with no vegetation associated with the canal. Waterfowl are infrequently observed in the canal. The proposed ADP Alternative would not impact the birds' ability to use the canal nor otherwise affect these and other species. There are no native plant communities associated with the area of disturbance and therefore no significant vegetative impact. The FAA determined that the ADP Alternative would not impact any federally listed threatened or endangered species.

The No-Action Alternative would not result in impacts to fish, wildlife and plants because the construction activities required would be largely confined to the interior areas of Terminals 2 and a portion of Terminal 3 and Stage 2 APM would not be built.

H. FLOODPLAINS: Section 4.9 of the FEIS states, for the ADP Alternative, potential floodplain encroachment is anticipated by the construction of the Stage 2 APM near the Grand Canal as shown on Figure 4.9.3-1 of the FEIS. However, the encroachment is not expected to be significant and the project will be designed to minimize potential harm to or within the floodplain. (See Section IX, Mitigation of this ROD). The APM structure will be elevated above the floodplain; however, some piers and support infrastructure (pilings) may be located in a 100-year floodplain. The footprint of the piles would be an equivalent area of approximately 236 square feet. This encroachment would be offset by the removal of the 3,750 square foot building from the floodplain. The potential impact of the APM and Valley Metro Light Rail platform over the Grand Canal is not expected to be substantial and would not be considered a significant encroachment, accordingly, no Federal finding is required. Based on the design of the project, mitigation measures may be required to satisfy local floodplain management ordinances.

The development of the Stage 2 APM conceptual alignment included consideration of the need to provide efficient service to airport facilities; integration with other modes of transportation; airport-related approach and/or setback requirements; and existing physical and environmental constraints. Providing linkage with other transportation systems east of the airport would involve crossing either the Salt River or the Grand Canal. No practicable alternative outside a floodplain was identified.

Under the No-Action Alternative there would be no ground construction or development activities within the 100-year floodplain; therefore, there would be no impacts to designated floodplains.

I. HAZARDOUS MATERIALS AND SOLID WASTE: The airport area planned for development of the ADP Alternative has been documented to contain environmental contamination resulting from activities associated with past land uses on or in the vicinity of the airport. As described in Section 4.10 of the FEIS, there are two known areas of environmental contamination in the vicinity of the proposed West Terminal, the Terminal 2 Fuel Plume and the West Sky Harbor Fuel Facility Fuel Plume. Figure 4.10-1 of the FEIS shows the location of these plumes. The nature of the contamination at these sites is well documented, and programs are in place or planned for the recovery and treatment of contaminated materials (e.g., fuel, soil and groundwater). Mandatory and voluntary pollution reduction measures for hazardous substances and solid waste are described in Section IX, Mitigation of this ROD.

Construction of the Stage 2 APM would require the City of Phoenix to purchase approximately 16.4 acres of privately held property in, and adjacent to, the APM right-of-way. As discussed in Section 3.7 of the FEIS, the Motorola 52nd Street National Priority List (NPL)/Honeywell 34th Street Facility site is located in the vicinity of the proposed Stage 2 APM. The Arizona Department of Environmental Quality approved a "Corrective Action Plan for the Honeywell 34th

Street Facility” on October 7, 2005. The potential for environmental contamination to airport property from the NPL site has not been determined. Due diligence audits and site surveys would be performed to verify the status of the property prior to acquisition.

During construction of the West Terminal and associated projects, or Terminals 2 and 3 renovations under the No-Action Alternative, the contractors would use various forms of materials on a temporary basis that are classifiable as hazardous or are otherwise regulated. As part of the Terminal 2 No-Action Alternative, the City (or subcontractor) would prepare and implement an asbestos abatement program. This program would be developed in full compliance with applicable Federal, state and local regulations including Section 112 of the Clean Air Act and Arizona Administrative Code R18-2-1101. The City of Phoenix has stated they will perform asbestos abatement activities in compliance with Arizona Administrative Code R18-2-1101 and all other applicable state and local regulations. Consisting primarily of fuels and other petroleum-based products, these materials would be stored, transported, and disposed of in accordance with applicable regulations and Best Management Practices. In a letter dated December 12, 2005, the City of Phoenix stated that they would perform all ADP development activities in full compliance with all applicable Federal, state and local regulations.

It is not expected that implementation of the ADP Alternative would substantially alter the types of hazardous materials and other regulated materials currently used at the airport. However, the amounts may increase in the future, under both the ADP Alternative and the No-Action Alternative, due to the forecasted increase in the number of aircraft operations and associated activity at PHX. Any construction activities that involve disturbance of the surface have the potential to expose and release previously unknown hazardous materials and wastes that may be located in the vicinity. In the event of a spill or unanticipated release of regulated materials including fuels, contractors will be required to cease work in the immediate area and report the release to the National Response Center.

The ADP Alternative would result in a temporary increase in construction and demolition waste at PHX. This would not significantly impact the ability of area landfills to accommodate this increase in capacity demand. The ADP Alternative has the potential to increase solid waste generation resulting from an increased availability of concessions and other passenger amenities in the new West Terminal. The ADP Alternative would not result in a significant impact to regional landfill capacity.

Under the No-Action Alternative, modifications to Terminal 2 and a portion of Terminal 3 would be required to support remote gate and hardstand operations. The Terminal 2 modifications would require demolition and renovation activities in areas that contain ACM. As part of the Terminal 2 No-Action Alternative, the City (or subcontractor) would prepare and implement an asbestos abatement program. This program would be developed in full compliance with applicable Federal, state and local regulations including Section 112 of the CAA and Arizona Administrative Code R18-2-1101. The City of Phoenix has stated they will perform asbestos abatement activities in compliance with Arizona Administrative Code R18-2-1101 and all other applicable state and local regulations. The No-Action Alternative would not result in a significant impact to regional landfill capacity.

J. HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES:

1. Area of Potential Effect (APE). Section 4.11 of the FEIS describes the potential impacts on archaeological and historic properties. Figure 3.9.2-1 of the FEIS displays the APE for construction and visual impacts. The APE for direct construction impacts was defined as the Area of Disturbance, which was delineated to facilitate analysis of direct ground disturbance and demolition impacts on all resources. The defined Area of Disturbance encompasses approximately 432 acres, including approximately 372 acres for the ADP Alternation on the airport and approximately 60 acres for the segment of the Stage 2-East APM off the airport. Not all this area may be physically disturbed. The APE for visual impacts was defined as the airport

property between 16th Street and the Hohokam Expressway (SR 143) on the west and east, respectively, and between the Union Pacific Railroad on the north and the Salt River and I-10 on the south. For the segment of the Stage 2-East APM beyond the airport boundaries, the area of potential effects for visual impacts was defined as an area extending north from the airport boundary between 42nd Street and the Hohokam Expressway (SR 143) and encompassing the first row of parcels north of Washington Street between 42nd Street and 44th Street and extending farther north to Van Buren Street between 44th Street and the Hohokam Expressway. The noncontiguous Tovrea Castle property, located east of the Hohokam Expressway also was included in the area of potential effects for visual impacts because this National Register-listed property is situated on a prominent hill.

2. Construction Effects. Construction impacts of the ADP Alternative on three historic properties, including: 1) *The Phoenix*, a mural by Paul Coze installed in Terminal 2 lobby, 2) the Grand Canal, and 3) the Phoenix Main Line of the Southern Pacific Railroad, are not considered adverse as described in Section 4.11.3.2 in the FEIS. Because the Paul Coze mural is an inherently moveable object of art, and its historical artistic values are not tied to location, the FAA, in consultation with the SHPO, has concluded that moving the mural to another public location on the airport would not adversely affect the historic values that make the mural eligible for the National Register. Both the Grand Canal (AZ T:7:167(ASM)) the Phoenix main line of the Southern Pacific Railroad (AZ T:10:84(ASM)) are considered eligible for the National Register under Criterion A. The Stage 2- East APM would cross beneath the Phoenix main line of the Southern Pacific Railroad using the existing bridge that carries the railroad over the depressed Sky Harbor Expressway (SR 153). The Stage 2 - East APM would cross over the Grand Canal on a proposed elevated guideway structure. An APM maintenance and control facility would be constructed between the railroad and canal. The railroad and canal would not be altered, and the ADP Alternative is not expected to adversely affect the historic qualities of the canal and railroad that make them eligible for the National Register.

Construction activities would result in short-term increases in noise levels, but those would comply with City of Phoenix regulations, and be restricted to the immediate vicinity of the construction zones. In an urban setting, such noise is not projected to have any potential permanent adverse effects on the identified historic properties. Construction techniques would be reviewed to reassess potential for construction-induced ground vibration to damage the Pueblo Grande Ruin. If warranted, a program to monitor vibrations would be implemented to avoid damage to the Pueblo Grande Ruin.

The ADP Alternative could disturb undiscovered parts of three large prehistoric Hohokam archaeological sites (Pueblo Salado, Dutch Canal Ruin, and Pueblo Grande), which may have associated human remains and funerary objects that are of concern to affiliated tribes. In addition, two other archaeological sites [AZ U:9:2 and 26(ASM)], where buried remnants of 19 Hohokam canals and the 1884 Joint Head Canal have been recorded, as well as other canals of the Hohokam irrigation canal Systems 2 and 10, also could be disturbed by construction activities. Modern development has masked those archaeological sites and the locations, condition and extent of potential impacts are ambiguous, but disturbance of intact deposits that have potential to yield information would be an adverse effect. Required mitigation measures to minimize impacts to historic and archaeological resources are in Section IX of this ROD.

The ADP Alternative would result in the FAA continuing to inventory, evaluate and assess effects in accordance with a Section 106 Memorandum of Agreement (MOA) between FAA, SHPO, City of Phoenix, Bureau of Reclamation and Salt River Project executed on January 31, 2006. The Fort McDowell Yavapai Nation and Yavapai-Prescott Indian Tribe concurred with the MOA. There is potential to satisfactorily mitigate adverse effects on archaeological sites by conducting studies to recover and preserve important information before they are disturbed. If associated human remains are found, they would be treated and repatriated in accordance with a 1995 burial agreement that the City of Phoenix has executed to comply with the Arizona Antiquities Act which is contained in Appendix C of the FEIS.

3. Visual Effects. The Tovrea Castle is listed in the National Register under Criterion A and C for its association with the history of resort and residential development in Phoenix, and the folk art style of the Castle and its surrounding cactus garden. The setting of the Castle within the rock wall that borders the property is being protected by the City of Phoenix, which has acquired and is developing the property for heritage tourism. Urban development and construction of the elevated Red Mountain Freeway (State Route (SR) 202) and Hohokam Expressway (SR 143) have substantially altered the historic setting of the property outside the rock wall. The Stage 2 - East APM facilities would be visible from the hill on which the Castle is located, on the opposite side of the elevated Hohokam Expressway (SR 143). The APM facilities would not be visible from lower elevations within the Tovrea Castle parcel. Because the Tovrea Castle is approximately 1 mile from the APM facilities, the project would result in only a minor change in views from the Castle. The ADP Alternative would not have an adverse effect on the historic qualities that make the Tovrea Castle eligible for the National Register. The one historic building on the airport is the Sacred Heart Church, which is approximately one-half mile from the Stage 2 - West APM alignment - the closest elevated element of the ADP Alternative. Within the context of the urban setting surrounding the airport, the Stage 2 - West APM would be a minor alteration of the existing landscape. The church is eligible for the National Register under Criterion A for its historic associations with the Golden Gate Barrio. The setting is not an important characteristic of the Sacred Heart Church because it was drastically altered when the surrounding residential areas and street grid were removed after the property was incorporated into the airport. Therefore, the ADP Alternative would have no adverse visual effect on the historic integrity of the building.

The project has potential to adversely affect the visual setting of the Pueblo Grande Ruin and Irrigation Sites National Historic Landmark within the Pueblo Grande Museum and Archaeological Park with construction of the elevated element of the Stage 2-East APM. Pursuant to the terms of a Memorandum of Agreement (as described in Section IX), the FAA and Phoenix Aviation Department would avoid potential visual effects on the Pueblo Grande Ruin and Irrigation Site Landmark within the Pueblo Grande Museum and Archaeological Park through sensitive design of the Stage 2-East APM facilities. The Museum Director, Phoenix City Historic Preservation Officer and State Historic Preservation Officer would be involved in defining design criteria and reviewing developing designs of the Stage 2-East APM station and maintenance facility. The FAA concluded, in consultation with the SHPO, that a sensitive design of the proposed facilities consider factors such as massing, style, color, texture, glare and potential for screening with vegetation, would result in the ADP Alternative having no adverse effect on the Pueblo Grande Museum and Archaeological Park. Further consultation between the FAA, Director of Pueblo Grande Museum and Archaeological Park, City of Phoenix Archaeologist, City of Phoenix Historic Preservation Officer (CHPO), and SHPO will occur throughout the design process to ensure that a sensitive design and compatible design will avoid adverse impacts to the Pueblo Grande Museum and Archaeological Park.

In accordance with 36 CFR Part 800, the FAA conducted the required consultation with the SHPO (Section 106 of the National Historic Preservation Act of 1966). The FAA provided the SHPO with its conclusions regarding the ADP Alternative's impacts on properties listed or eligible to be listed on the National Register. The SHPO concurred with FAA's determinations. The FAA has coordinated with the City Historic Preservation Officer, City Archaeologist, and the appropriate tribes (Salt River Pima-Maricopa Indian Community, Gila River Indian Community, Fort McDowell Yavapai Nation, Hopi Tribe, Ak-Chin Indian Community, Tohono O'Odham Nation, Yavapai-Prescott Indian Tribe) on the proposed project. The FAA, SHPO, City of Phoenix, Bureau of Reclamation and Salt River Project executed a Memorandum of Agreement in January 2006. The Fort McDowell Yavapai Nation and Yavapai-Prescott Indian Tribe concurred with the MOA.

The No-Action Alternative would have no impacts on any properties listed or eligible for listing on the National Register of Historic Places. There would be no ground disturbance. Construction

activities required to accommodate hardstand operations would be largely confined to the interiors of Terminal 2 and a portion of Terminal 3 and Stage 2 APM would not be built.

K. LIGHT EMISSIONS: Implementation of the ADP Alternative would result in additional light emissions as described in Section 4.12 of the FEIS. Light emissions are not expected to result in a significant visual impact to off-airport areas in the general vicinity of PHX. The City of Phoenix stated they will comply with Section 23-100 of the Phoenix city code related to light emissions. The ADP Alternative and associated developments are common features of an international airport and urban areas such as the City of Phoenix.

Development of the APM Stage 2 maintenance facility and APM Valley Metro Light Rail Transit Station, to be located in the northeast corner of PHX, could be visible to sensitive offsite cultural resources such as the Pueblo Grande Museum and Archeological Park and Tovrea Castle property. As set forth in the Memorandum of Understanding in Appendix C of this ROD, the City is required to coordinate with the SHPO and CHPO as the APM Stage 2 design documentation is being developed. The purpose behind this coordination would be to incorporate resource sensitive design concepts into the APM Stage 2 facility to minimize potential impacts to offsite resources. Potential visual impacts to these properties are discussed in Section 4.11, Historic, Architectural and Cultural Resources of the FEIS.

The No-Action Alternative would not result in significant impacts to light sensitive areas since no new facilities would be constructed and any additional lighting needed for hardstand operations would be limited to airfield and aircraft parking apron areas. The construction activities required to convert Terminal 2 to a bus terminal and accommodate remote gates and hardstand operations would be temporary and largely confined to the interior terminal areas. Stage 2 APM would not be built.

L. NATURAL RESOURCES AND ENERGY SUPPLY: Section 4.13 of the FEIS discusses the resource utilization and energy supply requirements based on aircraft, support equipment/vehicles and facilities such as terminals, parking and maintenance buildings. The number of aircraft operations at PHX is expected to be the same for the No-Action Alternative and the ADP Alternative through the 2015 study period. When compared to the No-Action Alternative, the consumption of aviation fuel under the ADP Alternative is expected to decrease slightly due to reduced aircraft taxi time and ground delays associated with the proposed crossfield taxiways as shown on Table 4.13.3-1 of the FEIS.

Demand for electrical and heating energy at PHX would increase approximately 21 percent with the implementation of the ADP Alternative due to the increased square footage of the West Terminal over existing Terminal 2 and development of additional lighted airfield surfaces. However, this demand for heating fuel and electrical power can be met without resulting in significant impacts to the region's energy supply, distribution networks and infrastructure. Design of the ADP Alternative facilities would be accomplished to incorporate systems to reduce electrical and heating energy demand. These systems could include the use of solar technology and other technologies as determined to be prudent and feasible with respect to construction cost and operational reliability.

There are no known sources of mineral or energy resources in the project area that would be adversely affected by the ADP Alternative. Development of any of these alternatives would not require the use of unusual materials or those that are in short supply in the Phoenix region. Since the ADP Alternative would not result in significant energy supply and natural resource impacts, mitigation is not required.

Under the No-Action Alternative the use of hardstand aircraft parking positions and the transfer of passengers between aircraft and terminal facilities by bus would be required. Fuel consumption for the No-Action Alternative will be higher due to hardstand operations and an increase in average taxi time without the construction of the crossfield taxiways. Electric power consumption

for terminal facilities would not be significantly increased with the No-Action Alternative since no new facilities would be constructed. Additional lighting would be required for the hardstand operations. The No-Action Alternative would result in no significant impacts to natural resources.

M. NOISE: Section 4.14 of the FEIS analyzes the noise impacts of the two alternatives on the surrounding community. There would be no change in aircraft operations between the No-Action Alternative and the ADP Alternative. Therefore, there would be no change in the noise exposure contours for the ADP Alternative when compared to those for the No-Action Alternative. In terms of possible impacts to land uses, off-airport acreage impacts would include approximately 243 acres of residential land use within the 65 Day-Night Average Sounds Level (DNL) contour for both the No-Action Alternative and the ADP Alternative in 2015. Approximately 1,880 housing units with approximately 5,975 people would be impacted within the DNL 65 dBA of the No-Action and ADP Alternatives.

There was a revision made to the flight track data presented in the DEIS for both the No-Action and ADP Alternative 2015 noise analysis to reflect the suspension of the Runway 25L Side-Step Procedure. The Side-Step Procedure was a mitigation measure included in FAA's Record of Decision dated January 18, 1994, as amended on September 13, 1994, for the third runway construction at PHX. On March 27, 2002, following the failure of the flight check of the Side-Step Procedure, its use was suspended by the FAA. On December 2, 2002, following an environmental review in accordance with FAA Order 1050.1D, *Policies and Procedures for Considering Environmental Impacts*, the FAA categorically excluded the Runway 25L Side-Step Procedure from further environmental review and documentation. The Side-Step Procedure was replaced with a straight-in Visual Approach to Runway 25L. In order to accurately depict and evaluate potential noise impacts resulting from the proposed project, the noise analysis presented in the DEIS was reevaluated. The noise exposure contours were rerun using the Integrated Noise Model Version 6.1 model and are presented in the FEIS. An assessment of the noise contours between the Side-Step Procedure and the straight-in Visual Approach flight tracks indicates no change in the 2015 noise contour. The straight-in flight tracks are illustrated in Figures B-1-21, B-1-22 and B-1-23 of Volume 2 of the FEIS. Results of the No-Action and ADP Alternatives noise analysis are presented in Section 4.14.3 of the FEIS. There will be no significant noise impacts as a result of the No-Action or ADP Alternatives since there would be no change in the noise exposure contours.

N. SECONDARY (INDUCED) IMPACTS: As described in Sections 4.15 of the FEIS, under the ADP and No-Action Alternatives, there would be no significant secondary impacts. Implementation of the ADP Alternative would not result in shifts in population movement and growth, changes in public services demands, or significant changes in business and economic activity or appreciable change in employment. As discussed in the Section O, Socioeconomic, Environmental Justice and Child Health, below, approximately 16.4 acres of land located within the acquisition area consisting of 92 parcels would be acquired. Within the acquisition area there are a total of 14 property owner-operated businesses (including two billboards) and 17 tenant-run businesses that would require relocation. These relocations would have no impact on social or economic makeup of the area. There would be no impacts to public services, such as police, fire and emergency services or municipal solid waste services. No residential land uses would be converted.

Induced impacts from the proposed action would include increased employment, output, and income benefits associated with the construction, operation and maintenance of the proposed projects. Induced impacts would spread throughout the Phoenix area and regional economy, as they would consist of the consumer expenditure effects arising from the increased income generated by new jobs required, directly, from the construction, operation, and maintenance outlays of the ADP Alternative. Employment, output and income impacts reverberating throughout the area would contribute to the anticipated long-term economic growth of the regional economy. Increase in jobs and population associated with the proposed actions would be able to be accommodated in the City of Phoenix and surrounding communities.

Under the No-Action Alternative, no new facilities associated with the ADP Alternative would be constructed. Therefore, there would be no significant secondary (induced) impacts.

O. SOCIOECONOMIC, ENVIRONMENTAL JUSTICE AND CHILD HEALTH: Section 4.16 of the FEIS describes the projected social impacts of the two alternatives. The ADP Alternative would result in socioeconomic impacts including property acquisition, business relocations, and alteration of surface transportation patterns. Approximately 16.4 acres of land located within the acquisition area consisting of 92 parcels would be acquired. Within the acquisition area there are a total of 14 property owner operated businesses (including two billboards) that would require relocation. These owner-operated businesses are characterized as industrial and commercial distribution, supply and service. None are known or expected to have specialty products or a customer base that are dependent upon the unique particulars of location at this site. Relocation of these businesses would not create any economic hardship for the local communities. In addition to the owner-operated businesses, there are 17 tenant-run businesses in the acquisition area that would need to be relocated. Landowners and tenants impacted by the acquisition would be compensated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. A review of land use and land availability indicates that sufficient property is available within the vicinity of PHX to support relocation of those displaced.

During the period of construction, the ADP Alternative would support short-term construction industry jobs. During the ADP Alternative design and construction phase, it is estimated that there would be a daily average of 1,000 persons employed in the development efforts. Terminal 2 operations support a fulltime workforce of 2,400 employees. In long-term ongoing operation of the West Terminal, it is estimated that in 2015 the average daily number of employees would be 7,800 (full and part-time). In addition to the increase in employment associated with the ADP Alternative, there will be an Airport wide increase in employment that will be required to service the projected increase in passengers in accordance with the aviation forecast.

Sections 3.3.2 and 4.16 of the FEIS disclose information relating to environmental justice impacts. Under the CEQ regulations, minority populations are identified where either (a) the minority population of the affected area exceeds 50 percent, or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. As shown in Table 3.3.2-3 of the FEIS, minority populations were identified where the minority population was greater than 50 percent in a census tract. The minority population of the generalized study area (or the "comparison population") was 59.1 percent. Therefore, FAA determined that by evaluating impacts on census tracts with a greater than 50 percent minority population, FAA was addressing both aspects of CEQ's definition. Further, FAA identified low-income populations where census tracts contained greater than 37.6 percent (the percent of all individuals below the poverty line in 1999 in the generalized study area) low-income population.

The number of aircraft operations for the ADP Alternative and the No-Action Alternative would be the same, and there would be no noise related impacts to minority or low-income populations resulting from the project's construction and operation. The land use on and adjacent to the acquisition area previously discussed is commercial, consisting of industrial and commercial distributing, supply and service vendors. There are no residential properties in the acquisition area. Information collected at the Maricopa County tax office indicates that the properties to be acquired are owned by 19 individual persons/entities. A number of the parcels are owned by persons/entities residing outside the Phoenix/Maricopa County area. The businesses located in the acquisition area do not have a product or customer base that is dependent on the unique particulars of site, and there is a high probability that suitable relocation areas within the vicinity of the airport would be available. FAA also considered other environmental impact categories including noise, air quality and construction impacts. Based on the information and analysis of impacts disclosed in Chapter 4 of the FEIS neither the proposed ADP Alternative nor the No-

Action Alternative would create a disproportionate high and adverse human health impact on minority or low-income populations in the acquisition area.

Neither alternative would result in impacts to children's health and safety. FAA evaluated two schools closest to the airport. The closest school (with children) is Ann Ott Elementary School approximately 2.5 miles west of the proposed West Terminal Complex. Barrios Unidos Park is approximately 2.4 miles west of the proposed West Terminal Complex. There would be no noise impacts as a result of the ADP Alternative, as compared to the No-Action Alternative, on these properties. In addition, air emissions will be reduced as a result of the ADP Alternative.

No off-airport construction/development activity would occur under the No-Action Alternative. Businesses would not be relocated and established communities and planned development would not be disrupted. A decrease in the level of service for Sky Harbor Boulevard would occur over time as operations at PHX increase and in response to population growth in the City of Phoenix and surrounding communities.

P. WATER RESOURCES: Section 4.17 of the FEIS discusses impacts to water resources. Implementation of the ADP Alternative would not have a significant impact on water and wastewater resources in the Phoenix/Maricopa County area.

As to impacts of the ADP implementation, the construction of new terminal facilities, demolition of existing structures, realignment of roadways, and change of aprons and taxiways would change the use of water and generation of wastewater at the airport. The increase in impervious surfaces resulting from the construction of these projects could also increase the generation of storm water runoff at the airport; however, the potential increase in runoff and pollution loads is expected to be minor.

The 2015 rate of water consumption in terminal facilities at PHX following construction of the ADP Alternative is estimated to be approximately 185.41 million gallons/year. This is a 16.9 million-gallon/year increase over the projected 2015 consumption rate for terminal facilities of 168.52 million gallons/year. This volume does not include the operational water requirements of running support infrastructure such as the demand for fire protection systems, vehicle maintenance and other airport operations.

Flooding has historically been a problem in the Salt River Valley and PHX is required to maintain and operate a stormwater collection and discharge system that can accommodate short duration/large rainfall intensities and runoff volumes. The Aviation Department was issued an Arizona Pollution Discharge Elimination System from Arizona Department of Environmental Quality on February 28, 2003. PHX's stormwater management plan is compliant with state and Federal stormwater standards and there have not been any regulatory actions or incidents over discharges to the Salt River associated with operations at PHX. The existing facilities, when operated in compliance with the City's approved Stormwater Pollution Prevention Plan should minimize the potential for stormwater impacts.

Under the No-Action Alternative water use and the generation of wastewater would increase from 2001 levels in response to the forecast increase in aircraft operations and enplanements. The increase in aircraft operations would result from the ongoing population and economic growth of the Phoenix/Maricopa County Area. During 2004, water use at the airport in support of terminal/passenger operations totaled 130.94 million gallons with an enplanement total of 19.75 million passengers. Water use will increase to approximately 168.52 million gallons/year in 2015 in response to the increase in enplanements, which are forecast to be over 25 million passengers in 2015.

The estimated 2015 water consumption rate with the No-Action Alternative is 168.52 million gallons per year. This represents an increase of approximately 37.6 million gallons/year. The rate of wastewater generation would increase by approximately 31.9 million gallons/year. Since

no new terminal facilities would be constructed, the increase in water use would be due to the projected increase in passenger enplanements and increase in airport maintenance and aircraft operations. Under the No-Action Alternative there would be some resurfacing of existing pavements to provide for aircraft parking at hardstand gate locations. There would not be any increase in the amount of impervious surface. There will be no significant impacts to water resources under the No-Action Alternative.

Q. WETLANDS: Section 4.18 of the FEIS states there are no wetlands are present within the immediate project area, therefore, none would be impacted by the ADP Alternative or the No-Action Alternative. A field review performed on August 11, 2004, confirmed that no wetlands were identified within the project site.

R. WILD AND SCENIC RIVERS: Section 4.19 of the FEIS states that there are no rivers or segments of rivers that are categorized as wild and scenic that would be affected by the ADP Alternative or the No-Action Alternative. There is only one Wild and Scenic River in the State of Arizona, a portion of the Verde River located about 100 miles north of the City of Phoenix. Due to the substantial distance between the airport and the river, the ADP Alternative and the No-Action Alternative would not impact any wild or scenic rivers.

S. SURFACE TRANSPORTATION: Section 4.20 of the FEIS discusses surface transportation impacts. The surface transportation improvements proposed under the ADP Alternative would generally improve the overall transportation system in the vicinity of PHX. Realignment of Sky Harbor Boulevard on the airport would disperse traffic volumes over several roadways and lessen the impact on Sky Harbor Boulevard compared to the No-Action Alternative. Cut-through traffic volumes and system deficiencies due to development and population growth would continue to increase in the vicinity of PHX. The realignment of Sky Harbor Boulevard, in conjunction with development of the APM Stage 2, would decrease congestion, increase speeds and reduce shuttle bus vehicle miles traveled on the roadway when compared to the No-Action Alternative.

A surface transportation analysis for the No-Action Alternative indicates the future increase in daily passenger traffic and employee and service traffic would result in high to severe levels of congestion on Sky Harbor Boulevard during peak traffic periods, with several intersections having a level of service "F" rating. Cut through traffic volumes and system deficiencies would continue to increase resulting in higher levels of congestion and intersections operating at unacceptable levels of delay in 2015. Without realignment of Sky Harbor Boulevard, increased congestion from slower traffic and/or stop and go traffic would increase air emissions.

T. DESIGN, ART, AND ARCHITECTURE: As stated in Section 4.23, the ADP Alternative would create a temporary visual disturbance during construction and long-term impacts to the visual aesthetic integrity of the area. Airside improvements would visually impact persons traveling along I-10. No residential area would experience visual impacts due to construction activities.

The ADP Alternative including the West Terminal Complex, crossfield taxiways, realignment of Sky Harbor Boulevard and the APM Stage 2 would be designed in accordance with FAA Advisory Circular 5300-13, *Airport Design*. In addition, the City of Phoenix has stated it will design these facilities in accordance with city and state building codes. The ADP Alternative will be designed in a manner that is compatible with the existing airport environs. Landscaping would be accomplished with native vegetation and the inclusion of architectural treatments, such as coloring of structural elements, buffer areas, and screening landscaping to minimize the visual impacts of the ADP Alternative.

Under the No-Action Alternative, no off-airport construction/development activity would occur and no new facilities associated with the ADP Alternative would be constructed. Therefore, there would be no significant impacts to design, art and architecture.

U. CONSISTENCY WITH PLANS, GOALS AND POLICIES: The ADP Alternative would not conflict with the objectives of Federal, regional, state or local land use plans, policies or controls

for the City of Phoenix area. The ADP Alternative is consistent with the City of Phoenix General Plan. The updated City of Phoenix General Plan was adopted by City Council Resolution on December 5, 2001, in accordance with action taken at its final public hearing on November 7, 2001. The City of Phoenix General Plan characterizes land use in the acquisition study area as industrial and the area is zoned as about 70 percent industrial and 30 percent light industrial. Development of the APM Stage 2 East connection to the Light Rail Transit System and APM maintenance facility would reflect a land use change, at least in part, to transit/public-quasi public, consistent with the PHX area and light rail along Washington Street. The area may be included in the transit overlay district, which currently abuts the north end of the land acquisition area. The land use change would be minor and consistent with the City of Phoenix LRT development plans.

The proposed ADP Alternative is consistent with development goals of the City of Tempe. The City of Tempe General Plan 2030 recognizes that PHX is an economic development, tourism, and marketing asset to Tempe. The Plan also identifies PHX as contributing to air quality degradation and noise pollution in the northern half of the City. However, the ADP Alternative would not change off-site noise or long-term air quality impacts resulting from aircraft operations. The forecast number of aircraft operations with the No-Action Alternative and ADP Alternative are the same. Moreover, the ADP Alternative would facilitate the intermodal movement of airport traffic, provide continued service to businesses and residents as a critical component of the regional transportation system, and support the orderly planned growth and development of the Phoenix/Maricopa County area. As a result of the improved efficiency in aircraft operations on the airport's taxiway system and the use of the APM, onsite air emissions from the airport would be reduced.

The No-Action Alternative is not consistent with the plans, goals and policies in that it would not allow the City of Phoenix to safely and efficiently meet the aviation goals of the airport.

V. DEGREE OF CONTROVERSY: The FAA has conducted two governmental agency and public Scoping Meetings, as well as a Public Information Workshop. A total of 10 persons registered for the Public Scoping Meeting and 9 persons registered for the October 16, 2002 Public Information Workshop. Public Workshop Measures and Public Hearings occurred after the release of the DEIS. There were 19 registered participants at the July 12, 2005 meeting/hearing and five registered participants at the July 13, 2005 meeting/hearing. During the comment period for the DEIS, a total of 67 comment letters were received from the public and regulatory agencies. FAA received no requests for a public meeting/hearing on the FEIS.

W. UNAVOIDABLE ADVERSE IMPACT AND IRREVERSIBLE COMMITMENT OF REOURCES: The construction and operation of the ADP Alternative would result in the use of resources and have environmental impacts that are unavoidable. The impacts associated with the proposed improvements are disclosed for specific impact categories in the FEIS. None of the impacts are considered to be significant. Mitigation for impacts associated with those categories affected by the proposed actions is presented in Chapter 5 of the FEIS and Section IX of this ROD. The No-Action Alternative would not result in the unavoidable use of resources or environmental impacts.

X. MAN'S RELATIONSHIP BETWEEN LOCAL SHORT-TERM OF HIS ENVIRONMENT AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY: The ADP Alternative would require use of the environment to achieve the long-term goals of improved terminal capacity and improved operational efficiency. Traffic delays, fugitive dust, and increased emissions from construction vehicles, visual and aesthetic impacts and additional construction noise would occur as a result of the proposed action. These impacts, short-term in nature, would be minimized through the establishment and use of environmental controls, such as Best Management Practices (BMPs) and Federal, and local construction standards. See Section IX of this ROD for detailed mandatory and voluntary mitigation measures.

Under the No-Action Alternative, modifications would be made to Terminal 2 and Terminal 3. Construction activities required under the No-Action Alternative would be largely confined to the interior areas of Terminal 2 and a portion of Terminal 3. Physical modifications to Terminal 2 would include the removal and proper disposal of large amounts of asbestos containing materials. Asbestos abatement activities would be performed in compliance with applicable Federal, state, and local regulations. These impacts, short-term in nature, would also be minimized through the establishment and use of environmental controls, such as BMPs and Federal, and local construction standards.

Y. CUMULATIVE IMPACTS: In accordance with the Council on Environmental Quality (CEQ) guidelines, the FEIS was prepared to consider both direct and cumulative impact for the proposed project and the consequences of subsequent related actions. According to CEQ, cumulative impacts represent the “impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR § 1508.7).”

The EIS was specifically designed to address the above requirements regarding cumulative impacts. The EIS considered, to the extent reasonable and practical, the possible impacts of the ADP Alternative and other developments, both on and off the airport that are related in terms of time or proximity.

In Section 4.22.4 of the FEIS, FAA evaluated past, present and reasonably foreseeable on- and off-airport projects to assess their potential for significant environmental impacts. In addition to the ADP Alternative, the FEIS considered impacts of other airport related projects including but not limited to the Airport Traffic Control Tower/Terminal Radar Control (TRACON), Stage 1 of the APM, Economy Parking Garage C, and concourses S-1 and S-2. Non-airport related projects, such as the Valley Metro Light Rail Transit system, Sky Harbor Freeway Extension, South Mountain Transportation Corridor Study and various proposed land development projects were considered in the FEIS. The ADP Alternative, when considered in conjunction with the other on- and off-airport projects, would have the potential to result in environmental impacts. However, with the exception of the East Economy Parking Garage C, Valley Metro Light Rail, and the South Mountain Transportation Corridor, construction schedules for the non-ADP Alternative projects do not coincide. Furthermore, although tentatively planned for the period of 2009 to 2015, the construction schedule for the South Mountain Transportation Corridor is highly suspect and contingent upon funding. Based on the potential level of impact and the significant difference in construction phasing, the ADP Alternative would not result in a significant cumulative impact to the GSA or Maricopa County.

IX. MITIGATION

A. REQUIRED MITIGATION MEASURES: In accordance with 40 CFR § 1505.3, the FAA will take appropriate steps, through Federal funding grant assurances and conditions, airport layout plan approvals, and contract plans and specifications, to ensure that the mitigation action is implemented during project development, and will monitor the implementation of these mitigation actions as necessary to assure that representations made in the FEIS with respect to mitigation are carried out. The approvals contained in this Record of Decision are specifically conditioned upon full implementation of these mitigation measures.

1. Historic and Archaeological Resources. The ADP Alternative project planning would continue and final designs would be prepared in accordance with procedures defined in the Section 106 Memorandum of Agreement (MOA) between the FAA, City of Phoenix, Bureau of Reclamation, Salt River Project and State Historic Preservation Officer (SHPO) to address improvements at the airport executed on January 31, 2006. The Fort McDowell Yavapai Nation

and Yavapai-Prescott Indian Tribe concurred with the MOA. The MOA identifies mitigation measures to ensure adverse impacts will be avoided (Appendix B of this ROD). The City would arrange to have archaeological testing or monitoring plans prepared and implemented as those final designs provide more details about the components of the ADP Alternative. If archaeological resources are discovered, they would be evaluated and measures to avoid, reduce, or mitigate impacts to National Register-eligible resources would be developed and implemented. Treatment plans would be prepared and are most likely to focus on studies to recover and preserve important archaeological information before significant archaeological resources are disturbed or destroyed by ground-disturbing construction activities. If human remains and funerary objects, sacred objects, or objects of cultural patrimony were encountered in association with archaeological sites, they would be treated and repatriated in accordance with a 1995 agreement that the City of Phoenix executed in compliance with the Arizona State Museum for tribes having traditional cultural affiliations within the Phoenix area. The agreement was developed to ensure that City of Phoenix projects are implemented in compliance with the Arizona Antiquities Act, which governs treatment of human remains and such objects found on lands owned or controlled by the City of Phoenix.

None of the buildings that would be demolished by implementation of the ADP Alternative are listed in or eligible for the National Register. However, The Phoenix, a mural by Paul Coze installed within the Terminal 2 lobby, is considered eligible for the National Register under Criterion C. The ADP Alternative would demolish Terminal 2 and replace it with a new West Terminal. The City would remove and preserve the mural prior to demolition of the terminal. In contrast to a historical building or structure, the mural is an inherently moveable object of art. The FAA, in consultation with the SHPO, has concluded that moving the mural and removing it in another public location at the airport would not adversely affect the historic values that make the mural eligible for the National Register. Before the Paul Coze mural is removed from Terminal 2, the mural would be photo-documented. The airport art curator would ensure that the mural is carefully removed to avoid damage to the multimedia mural. The Phoenix Aviation Department would remount the three panels of the mural together in an appropriate public location on the airport in a timely manner. The history of the mural would be documented and publicly interpreted when it is remounted. The FAA would consult the SHPO and Phoenix City Historic Preservation Officer (CHPO) as detailed plans for removing and remounting the mural are developed and implemented.

To specifically address potential visual effects on the Pueblo Grande Ruin and Irrigation Sites National Historic Landmark within the Pueblo Grande Museum and Archaeological Park, the FAA and Phoenix Aviation Department would work with the Museum Director, Phoenix CHPO, and SHPO in defining design criteria and reviewing developing designs of the Stage 2 - East APM station and maintenance facility. The FAA concluded, in consultation with the SHPO, that a sensitive design of the proposed facilities considering factors such as massing, style, color, texture, glare, and potential for screening with vegetation would have no adverse effect on the park. Construction techniques would be reviewed to reassess potential for construction-induced ground vibration to damage the Pueblo Grande Ruin. If warranted, a program to monitor vibrations would be implemented to avoid damage to the Pueblo Grande Ruin.

2. Socioeconomic. All acquisitions and relocations would be accomplished in accordance with the Uniform Relocation Assistance Real Property Acquisition Policies Act of 1970, as amended (42 U.S.C. § 4601 et seq.). This act establishes a standard process for Federally approved or supported projects for relocation activities and requires fair market value to be paid for properties acquired plus relocation costs. Fair market values for properties to be acquired for airport expansion purposes would be determined by appraisal of comparable properties, including properties whose selling price would not be affected by ADP Alternative.

The ADP Alternative would result in the acquisition of approximately 16.4 acres of land consisting of 92 parcels. Within the acquisition area there are a total of 14 property owner operated businesses (including two billboards) that would require relocation. These owner-operated

businesses are characterized as industrial and commercial distribution, supply and service. In addition to the owner-operated businesses, there are 17 tenant-run businesses in the acquisition area that would need to be relocated. Relocation of these businesses would not create any economic hardship for the local communities. Landowners and tenants impacted by the acquisition would be compensated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. A review of land use and land availability indicates that sufficient property is available within the vicinity of PHX to support relocation of those displaced.

3. Air Quality. During the construction phases, potential short-term impacts to air quality can be avoided, controlled minimized, and/or compensated for by the adherence to the following measures including but not limited to:

- All construction activities shall be carried out in full compliance with the pollution control provisions and specifications contained in FAA Advisory Circular (AC) 150/5370-10B, Standards for Specifying Construction of Airports, the airport's AZPDES Construction General Permit, and/or requirements by Maricopa County dust control rules, and any state or local guidelines or ordinances.
- Any required air quality permits for land clearing, earth moving, open burning, asphalt and concrete batch plants, etc. would be obtained by the General Contractor or Subcontractor before the commencement of related activities. The City of Phoenix Aviation Department would oversee this activity and has certified in writing that the required permits would be obtained in accordance with state and local regulations.
- Stockpiles of soil, dirt, rocks, and other raw materials shall be covered or stabilized by the General Contractor or Subcontractor to help prevent the generation of wind-blown particles and debris (e.g., fugitive dust), consistent with the airport's AZPDES Permit.
- Heavily used work sites (e.g., construction staging areas, haul roads, loading/unloading platforms) shall be shielded, treated, or otherwise maintained by the General Contractor or Subcontractor, in compliance with Maricopa County dust rules, to help prevent the generation and release of dust.
- The following provision shall be included in construction contracts for the proposed ADP projects: "Construction equipment (e.g., earthmovers, haul trucks, excavators, etc.) will be properly maintained and cleaned, as necessary, by the General Contractor or Subcontractor to help minimize excess exhaust emissions."
- Temporary degradation in air quality due to emissions from construction equipment, fugitive dust from excavated areas, and earth moving operations will be minimized through the enforcement of the terms and conditions of Dust Control Permit that will be issued to the contractor by Maricopa County prior to approval for construction.

4. Solid Waste. Minimization/preventative actions that might reduce or eliminate construction impacts (construction and demolition waste) include measures outlined in FAA Advisory Circular (AC) 150/5370-10B, *Standards for Specifying Construction at Airports*. According to the AC, the City's contractor shall submit a plan for disposal of waste materials prior to the start of construction.

The FAA is committed to insuring that the mitigation measures contained in this ROD are implemented per Council on Environmental Quality regulations, 40 CFR § 1505.3.

B. VOLUNTARY MITIGATION MEASURES: This section describes the voluntary mitigation measures that may be developed for the ADP Alternative to minimize potential air quality,

floodplain, hazardous substances, historic and archaeological resource, socioeconomic, water resource impacts and solid waste. As discussed in Chapter 4.0 of the FEIS, there are no significant environmental impacts associated with the ADP Alternative. In the long-term, the ADP Alternative would reduce air emissions at PHX resulting from aircraft engine and motor vehicle operations. The approvals in this ROD are not specifically conditioned upon full implementation of these mitigation measures.

1. Construction Pollution Reduction Measures. The following sections describe voluntary construction pollution reduction measures.

- **Air Quality** - To the extent feasible, staged construction schedules would be employed by the General Contractor or Subcontractor that would help reduce the exposure of wind-erodible soils to minimal amounts and time periods.
- **Floodplains** - As required by FAA and Department of Transportation (DOT) orders, FAA will continue to work with state and local officials to finalize the design of the Automated People Mover System (APM) station to minimize potential harm to or within the base floodplain. Under local laws, the final design must be approved by Maricopa County and in the unlikely event that a significant (>1 foot) elevation change is predicted, the City would have to apply for a letter of map revision and design specific pollution reduction measures consistent with County requirements.

The ADP Alternative requires plans for the APM to be reviewed by the Maricopa County Flood Control District (MCFCD) with specific attention to the crossing of the Grand Canal. PHX would be required to show that a bridge design would safely accommodate the design flood, withstand the attendant inundation, and perform satisfactorily. PHX would also need to either demonstrate that the structures will be constructed outside of Zone A or avoid a one-foot change in the base flood elevation of the affected area.

The design of the Stage 2 APM and associated station would include consideration of methods to minimize floodplain impacts. This may include, but not be limited to, designing and placing piers and support infrastructure in a manner to minimize restrictions on the flow of floodwaters and impacts to floodplain values; minimizing the amount of fill in the floodplain; and elevating facilities above the base flood elevation. Guidelines and regulations of the MCFCD would be followed in the final design of APM and the associated station. The permitting process required to construct this portion of the ADP Alternative would be initiated with the U.S. Army Corps of Engineers (USACE) and the Maricopa County Flood Control District during the final design phase. In addition, the design of the APM system would be coordinated with design efforts associated with the Valley Metro Light Rail Transit Station to be constructed at the intersection of 44th and Washington Streets. As documented in the Central Phoenix/East Valley Light Rail Transit FEIS, the light rail station will require construction in the floodplain. Potential impacts to the floodplain would be evaluated and mitigated in the future as the design of the station is developed.

- **Hazardous Substances** - Construction of the ADP Alternative would be conducted in areas of the airport that are known to contain environmental contamination. These include two fuel plumes in the vicinity of the proposed West Terminal complex and crossfield taxiways. It is not anticipated that the existing plumes would substantially interfere with the construction process nor is it expected that the project would impede the clean-up process. Construction plans and activities for the ADP Alternative would be developed, as appropriate, to prevent the spreading or migration of contaminants beyond the existing contaminant zones.

The potential risk to construction workers associated with exposures to petroleum-contaminated soils, groundwater, and fumes would be addressed in the planning and

design process and construction contract documents. During construction, work would be performed in accordance with the requirements of the Occupational Safety and Health Administration (OSHA). Any additional pollution reduction measures considered necessary to further reduce the impacts to the environment would be evaluated as the construction plans are developed.

Demolition of Terminal 2 would be complicated by the presence of large amounts of asbestos-containing materials (ACM). Removal and proper disposal of these materials would be required. Asbestos abatement activities would be performed in compliance with Section 112 of the Clean Air Act, Arizona Administrative Code R18-2-1101, and all other applicable Federal, state, and local regulations.

Should any additional and unexpected contaminated materials be encountered during the construction process, they would be addressed in accordance with Federal and state regulations. The use of hazardous materials (e.g., solvents, cleaners, coatings, paints, etc.) and other regulated substances (fuel, oil, hydraulic fluids, etc.) by the construction contractors could also be handled, stored, and disposed of following appropriate safeguards, guidelines, and work practices. As appropriate, spill prevention control and countermeasure (SPCC) plans would be developed for the handling and cleanup of potentially hazardous materials. Worker safety training would be conducted in accordance with OSHA regulations found at 29 CFR § 1926.

Any construction activities that involve disturbance of the surface have potential to expose and release previously unknown hazardous materials and wastes that may be located in the vicinity. In the event of a spill or unanticipated release of regulated materials including fuels, contractors will be required to cease work in the immediate area and report the release to the National Response Center (NRC). Special provisions will be included in the construction document to address the potential for encountering hazardous materials. All applicable Federal, state and local regulations will be followed for the cleanup and disposal of hazardous waste during construction activities. In addition, contractors will be required to maintain a "Spill Response Kit" on the project worksite. The kit would include items such as absorbent materials, absorbent pads, skimmer booms, shovels, and storage containers. These kits would be used to mitigate the spread of hazardous materials should a spill occur.

- **Socioeconomic** - Currently, as part of their ongoing noise mitigation program, PHX has a volunteer acquisition program working with property owners who currently want to sell their property. This program is being expanded to include properties within the APM Stage 2 right-of-way. In addition, PHX is working with business owners of the affected properties to evaluate means of providing assistance. A Maintenance of Traffic (MOT) plan could be developed during the design phase of the roadway project such that temporary traffic flow impacts would be minimized. During construction of the ADP projects, some lanes of Sky Harbor Boulevard could be closed at night from approximately 10:00 p.m. to 6:00 a.m. to accommodate construction. All lanes would likely remain open during the day to minimize on-airport traffic impacts during times of normal and peak airport activity. As part of the APM Stage 2 design process, planning would also be initiated to address any street abandonment that may be required as part of the project implementation.
- **Water Resources** - Temporary degradation of surface water quality from water turbidity that could occur during the construction period when excavated areas are exposed prior to paving would be mitigated by controls implemented prior to construction such as straw or baled hay barriers placed within turbidity curtains. Runoff of stormwater from the construction site will be controlled in accordance with the City of Phoenix Arizona Pollution Discharge Elimination System (AZPDES) Construction General Permit issued by the Arizona Department of Environmental Quality.

- **Solid Waste** - PHX would continue with the City of Phoenix initiative, “Phoenix Recycles.”

2. Operational Pollution Reduction Measures. The following sections describe the voluntary operational pollution reduction measures for implementation of the ADP Alternative.

- **Air Quality** - In an effort to continue to operate PHX in an environmentally sound manner, the City of Phoenix would continue to utilize the air quality emission reduction measures currently in place, and those which are inherent in the planning process. The ADP Alternative is intended to optimize the airfield layout consistent with existing and future aviation demand, thereby reducing aircraft emissions. The proposed surface transportation improvements to Sky Harbor Boulevard would improve the efficiency of the on-airport roadway system. Strategies to avoid or minimize areas or structures (e.g., terminal buildings, parking structures, etc.), which contribute to zones of restricted air movement and create localized “hot-spots” of air pollution would be implemented. The ADP Alternative would be designed to provide separation and placement of the primary support facilities (e.g., main terminal buildings) in a manner that helps prevent the build-up of pollutants. Creating open-space, or “buffer zones”, would provide distance between the air emission source locations (e.g., runway ends, taxiways, fuel facilities, parking garages) and any nearby potentially sensitive receptors (e.g., homes, schools, parks, etc.). Utilization of the Stage 2 APM system to access the RCC would reduce the number of passenger vehicles accessing the terminal areas, further reducing air emissions at the airport.
- **Hazardous Materials** - Airport operations following development of the ADP Alternative are not expected to substantially alter the types of hazardous and other regulated materials used at the airport. The use of fuel and other regulated substances necessary for routine operations at the airport would continue and is expected to increase due to the forecasted growth in operations at the airport. The storage and use of these materials is governed by a wide network of Federal and state regulations. Operations at PHX are conducted in full compliance with these regulations. When used in combination with technologies currently in place at the airport and safe work practices, the risks of causing environmental contamination are reduced.

Any construction activities that involve disturbance of the surface have potential to expose and release previously unknown hazardous materials and wastes that may be located in the vicinity. In the event of a spill or unanticipated release of regulated materials including fuels, contractors will be required to cease work in the immediate area and report the release to the National Response Center. Special provisions will be included in the construction document to address the potential for encountering hazardous materials. All applicable Federal, state and local regulations will be followed for the cleanup and disposal of hazardous waste during construction activities.

- **Water Resources** - Water quality for the City of Phoenix is regulated by a variety of permits and plans. All activities associated with development of the ADP Alternative would be performed in accordance with the airport’s AZPDES and Multi-Sector General Permit (MSGP) requirements, appropriate state and Federal regulations and standards.

Water conservation can offset the increased water demand from the ADP Alternative. The City can participate in the conservation effort with regard to this project by implementing the following: educate employees and tenants on correcting wasteful habits, install water efficient plumbing fixtures and maintain plumbing fixtures and pipes to prevent leaks. These permits, plans and conservation efforts, as described, have the potential to minimize water resource impacts associated with the ADP Alternative.

- **Solid Waste** - PHX would continue with the City of Phoenix recycling efforts, “Phoenix Recycles”, and work with local municipalities, businesses, and waste handlers to develop and implement source reduction strategies, resource recovery facilities, markets for recyclables, and waste to energy facilities to achieve a significant reduction in solid waste disposal volumes entering the landfill. CR Inc’s Phoenix Materials Recycling Facility and the Materials Recycling Facility at the 27th Avenue Solid Waste Management Facility could be utilized help reduce the amount of materials collected at PHX.

X. AGENCY FINDINGS

In accordance with paragraph 94 of FAA Order 5050.4A, the FAA makes the following findings and determinations for the proposed project. These findings are based upon appropriate evidence set forth in the FEIS and supporting administrative record.

1. The project is reasonably consistent with existing plans of public agencies for development of the area [49 U.S.C. § 47106(a) and Executive Order 12372].

The determination prescribed by this statutory provision is a precondition to agency approval of airport project funding applications. It has been the long-standing policy of the FAA to rely heavily upon actions of metropolitan planning organizations to satisfy the consistency requirement of 49 U.S. C. 47106(a)(1) [see, e.g., *Suburban O’Hare Com’n v. Dole*, 787 F.2d 186, 199 (7th Cir. 1986), cert. denied, 479 U.S. 847 (1986)]. Further, both the legislative history and consistent agency interpretations of this statutory provision make it clear that reasonable, rather than absolute consistency with these plans is all that is required.

Under the provisions of both Federal and state law, the Maricopa Association of Governments (MAG) is the designated Metropolitan Planning Authority for the Phoenix Metropolitan area and serves as the regional agency for the metropolitan Phoenix area. The ADP Alternative is consistent with the planning objectives of MAG’s, June 2004 Regional Aviation System Plan (RASP) Working Paper Number 6.

MAG provided a provided a transportation conformity letter to the FAA on January 18, 2006. MAG is in the process of updating its RASP that addressed the aviation needs of the Phoenix area. The letter states that “As part of the MAG RASP Update, a number of alternatives have been evaluated for accommodating the air transportation needs of the region to 2025. The selected alternative includes the west area terminal and the people mover at Phoenix Sky Harbor International Airport. The MAG RASP Technical Advisory Committee met to consider the selected alternative and recommended that it be forwarded to the MAG RASP Policy. The Policy Committee will be meeting to consider action on the recommendation.”

The FAA finds that the project is reasonably consistent with the existing plans of public agencies authorized by the state in which the airport is located to plan for the development of the area surrounding the airport. The FAA is satisfied that it has fully complied with 49 U.S.C. 47106(a)(1).

The proposed project/action is also reasonably consistent with comprehensive plans that have been adopted by jurisdictions in the vicinity of the airport as described in Section 4.21 of the FEIS. The City of Phoenix provided a letter on January 5, 2006 stating that the ADP Alternative is consistent with the City of Phoenix’s 2001 General Plan. The APM Stage 2 East connection to the Light Rail and APM maintenance facility is consistent with the City of Phoenix Light Rail Transit development plans.

FAA conducted an evaluation of the City of Tempe’s General Plan 2030 and determined that the proposed ADP Alternative is consistent with development goals of the City of Tempe. The City of Tempe General Plan 2030 recognizes that PHX is an economic development, tourism and marketing asset to Tempe. The Plan also identifies PHX as contributing to air quality degrading and noise pollution in the northern half of the city. The ADP Alternative would result in the

improved efficiency in aircraft operations on the airport's taxiway system, and the use of the APM, onsite air emissions from the airport would be reduced.

Appropriate action has been or will be taken to restrict, to the extent possible, the use of land in the vicinity of the airport to purposes compatible with airport operations. The City of Phoenix has also provided the required land use compatibility assurance letter to the FAA (Appendix A of the FEIS). FAA finds that the ADP Alternative has been developed in coordination with various public agencies.

In making its determination under 49 U.S.C. 47106(a)(1), the FAA reviewed and considered the plans, goals and policies of local governments and provided opportunities for local governments and the public to comment on the scope and findings of the EIS studies. Local municipalities such as the City of Phoenix and the City of Tempe and local planning organizations such as the Maricopa Association of Governments (MAG) provided comments on the scope of the study, and on both the DEIS and FEIS documents. In its decision to authorize the ADP Alternative at PHX, the FAA carefully considered the comments provided by these organizations. The FAA has also recognized the fact that non-proprietary local governments lack regulatory authority over airport operations, since long-established doctrines of Federal preemption preclude such local governments from regulating aircraft operations conducted at the proposed project/action site.

2. Fair consideration has been given to the interests of communities in or near the project location [49 U.S.C. § 47106(b)(2)].

The determination prescribed by this statutory provision is a precondition to agency approval of airport development project funding applications. Throughout the EIS preparation process, government officials, agencies, organizations, and residents of nearby communities have been consulted, or have participated in activities that have contributed to the preparation of the FEIS. Chapter 7 in Volume 1 of the FEIS identifies the persons and organizations that received the 2005 Draft EIS and the FEIS. The environmental process for this project-specific EIS, which began in 2001 and extended to the point of this decision, provided numerous opportunities for the expression of concerns by communities in and near the project location and response to those concerns. Nearby communities and their residents have had the opportunity to express their views during the DEIS public comment period, at public hearings, as well as during the review period following public issuance of the FEIS. The DEIS was made available to the public on June 10, 2005 (70 Fed. Reg. 33901). The public comment period on the DEIS ended on August 10, 2005. A total of 2 public hearings were held on July 12th and 13th, 2005 on the DEIS. The FAA's consideration of these views is set forth in Volume 4 of the FEIS, which contain copies of the comments FAA received and FAA's responses to these comments. The FAA also solicited comments concerning new air quality analysis included in the FEIS. Appendix A of this ROD summarizes the comments made on the FEIS and provides the FAA's responses to those comments.

Thus, the FAA has determined that throughout the environmental process, beginning in 2001, fair consideration was given to the interest of the communities in or near the project location.

3. Appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land in the vicinity of the airport to purposes compatible with airport operations [49 U.S.C. § 47107(a)(10)].

The FAA requires satisfactory assurances, in writing from the sponsor, that appropriate action, including the adoption of zoning laws, has been or will be taken to restrict, to the extent

reasonable, the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft.

The FEIS Section 4.4 describes the current status of zoning and land use planning for lands near the airport. As explained in the FEIS, development of the proposed project will not result in any significant noise impacts on non-compatible land uses.

On January 5, 2006, the City of Phoenix provided written assurance that appropriate action, including the adoption of zoning laws, has been or will be taken to the extent reasonable to restrict the use of land next to or near the airport to uses that are compatible with normal airport operations.

4. The proposed action involves the displacement and relocation of people and relocation assistance will be provided in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act [42 U.S.C. § 4601 et seq.].

These statutory provisions, imposed by Title II of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, require that state or local agencies, undertaking Federally-assisted projects that cause the involuntarily displacement of persons or businesses, must make relocation benefits available to those persons impacted.

As detailed in Section 4.16 of the FEIS, the ADP Alternative would result in property acquisition and business relocations. Approximately 16.4 acres of land located within the acquisition area consisting of 92 parcels would be acquired. Within the acquisition area there are a total of 14 property owner-operated businesses (including two billboards) that would require relocation. These owner-operated businesses are characterized as industrial and commercial distribution, supply and service. Relocation of these businesses would not create any economic hardship for the local communities. In addition to the owner-operated businesses, there are 17 tenant-run businesses in the acquisition area that would need to be relocated. Landowners and tenants impacted by the acquisition would be compensated in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policy Act of 1970, as amended (Uniform Act). Landowners and tenants impacted by the acquisition would be compensated in accordance with the Uniform Act is a condition of approval of this ROD. The FAA will require PHX to provide fair and reasonable relocation payments and assistance pursuant to Title II of the Uniform Act. Section 4.16.1 of Volume 1 of FEIS states that sufficient property is available within the vicinity of PHX to support relocation of those displaced. A review of land use and land availability indicates that sufficient property is available within the vicinity of PHX to support relocation of those displaced.

5. For actions that involve the use of lands subject to section 4(f) of the DOT Act, including significant historic sites, there is no feasible and prudent alternative to the use of such land, and the project includes all possible planning to minimize harm to such lands resulting from such use. [49 U.S.C. § 303(c)].

FAA has determined that the ADP Alternative does not result in a direct or constructive use of Section 4(f) properties. Thirty parks and six historic Section 4(f) resources were identified within the area of potential effects of the ADP Alternative. However, as discussed in Section IV of this ROD and Section 4.11 of the FEIS, FAA has determined that no physical or constructive use under Section 4(f) would occur to any of these identified Section 4(f) resources.

6. Any actions that significantly encroach on a floodplain. [Executive Order 11988 and DOT Order 5650.2].

The FAA has determined that the selected alternative would not involve a significant encroachment on a floodplain as defined in DOT Order 5650.2, which implements Executive Order 11988. These Orders establish a policy to avoid supporting construction within a 100-year floodplain where practicable, and where avoidance is not practicable, to ensure that the construction design minimizes potential harm to or within the floodplain.

Consistent with this policy, implementation of the ADP alternative, specifically the construction of the Stage 2 APM, would encroach, although the encroachment would not be significant, upon the floodplain of the Grand Canal. The FAA considered whether there were practicable alternatives to this encroachment. See Section 4.9 of the FEIS and Section IV of this ROD for further information. As discussed in Section 4.9 of the FEIS, the design of the APM support infrastructure (pilings) in the floodplain will consider methods to minimize adverse effects. In addition, the ADP Alternative would include the removal of an existing structure that displaces a greater square footage than the selected project within the floodplain, thereby reducing potential impacts of the ADP Alternative. As the encroachment would not be significant, no Federal finding under DOT Order 5650.2 is required.

7. The FAA has given this proposal the independent and objective evaluation required by the Council on Environmental Quality [40 CFR § 1506.5].

As described in the FEIS, a lengthy process led to the ultimate identification of the selected alternative, disclosure of potential impacts, and selection of appropriate mitigation measures. The process began with the FAA's competitive selection of an independent EIS contractor, continuing throughout the preparation of the DEIS and FEIS, and culminating in this ROD. FAA furnished guidance and participated in the preparation of the EIS by providing input, advice, and expertise throughout the planning and technical analysis, along with administrative direction and legal review of the project. FAA has independently evaluated the EIS, and takes responsibility for its scope and contents. FAA has on file a disclosure statement from the environmental consultant that satisfies the requirement of 40 CFR § 1506.3(c).

8. The air emissions resulting from the ADP Alternative of the FEIS have been determined by the FAA to conform with the State Implementation Plan for air quality pursuant to Section 176 (c)(1)(a) and (b) of the Federal Clean Air Act as amended in 1990.

The determination prescribed by this statutory provision is a precondition for Federal Agency support or approval of airport development projects. The U.S. EPA regulations generally governing the conformity determination process are found at 40 CFR Part 93, Subpart B, Sections 93.154 through 93.159; 40 CFR Part 50; and 40 CFR Part 51, Appendix W.

As described in Section 4.2 of the FEIS, there would be no change in aircraft operations between the No-Action and the ADP Alternatives. Total air emissions at PHX are expected to increase in the future (2015), but less with the proposed ADP Alternative than without the proposed improvements. This outcome is based on an air quality analysis conducted for airport sources of emissions and is largely attributable to the forecasted increase aircraft operations at PHX over the same timeframe. Total operational emissions are expected to be less in the future under the ADP Alternative than the No-Action Alternative primarily due to the improved airfield operating characteristics with the cross-field taxiways, reduced delay times and the lack of future need for aircraft hardstand operations in the terminal areas. A temporary increase in air emissions associated with the construction of the ADP Alternative would occur. The total ADP Alternative project-related construction emissions are presented in Table 4.2.5-6. The sum of project-related construction and operations emissions during the project period are all below the *de minimus* thresholds of the General Conformity Rule. In addition, these emissions are less than 10 percent of the emissions inventory for the nonattainment area; therefore, the emissions are not regionally significant. As a result, no further demonstration is required to show that the ADP Alternative conforms to the SIP.

9. Determination that the airport development is reasonably necessary for use in air commerce or in the interests of national defense pursuant to 49 U.S.C. § 44502(b).

The FAA has determined that the ADP Alternative would maintain the safety and improve the efficiency of PHX. PHX is designated by the FAA as a "large-hub air carrier airport." PHX serves a primary service area consisting of Maricopa and Pinal counties, and a secondary service area

including most of the State of Arizona. In 2004, PHX was ranked 7th busiest among United States airports in terms of passenger enplanements.

XI. DECISION AND ORDERS

In Section 2.6 of the FEIS, the FAA identified the ADP Alternative as the FAA's "preferred alternative." In this ROD the FAA identified the ADP Alternative as the environmentally preferred alternative. FAA must now select one of the following choices:

- Approve agency actions necessary to implement the proposed project, or
- Disapprove agency actions to implement the proposed project.

Approval would signify that applicable federal requirements relating to airport development and planning have been met and would permit the City of Phoenix to proceed with the proposed development and possibly receive federal funding and/or approval to impose and use Passenger Facility Charges for eligible items. In addition, the City of Phoenix is required to comply with FAA grant assurances upon acceptance of a grant offer. Not approving these agency actions would prevent the City of Phoenix from proceeding with implementation of the ADP Alternative.

Decision: I have carefully considered the FAA's goals and objectives in relation to the various aeronautical aspects of the proposed ADP Alternative at Phoenix Sky Harbor International Airport as discussed in the FEIS. The review included: the purpose and need that this project would serve; the alternative means of achieving the purpose and need; the environmental impacts of these alternatives; and the mitigation to preserve and enhance the human, cultural, and natural environment.

Under the authority delegated to me by the Administrator of the Federal Aviation Administration, I find that the project in the ROD is reasonably supported. I therefore direct that action be taken to carry out the following agency actions discussed more fully in the Proposed Federal Agency Actions and Approvals section of this Record of Decision including:

1. Approval of the Airport Layout Plan to depict the proposed airfield improvements and various other airfield development components pursuant to 49 U.S.C. §§ 40103(b) and 47107(a)(16). The ALP, depicting the proposed improvements, has been reviewed by the FAA to determine conformance with FAA design criteria and implications for Federal grant agreements (refer to Title 14, CFR Parts 77 and 157).
2. Determination and actions, through the aeronautical study process, of the effects of the proposed projects upon the safe and efficient utilization of navigable airspace pursuant to 14 CFR Parts 77 and 157.
3. Determination under 49 U.S.C. § 44502(b) that the airport development is reasonably necessary for use in air commerce or in the interests of national defense.
4. Eligibility for Federal funding under the Airport Improvement Program (AIP) under 49 U.S.C. §§ 47106 and 47107 and to impose and use Passenger Facility Charges (PFC's) under 49 U.S.C. § 40117, as implemented by 14 CFR § 158.25, for components of the ADP Alternative.
5. Approval of the appropriate amendments to the Phoenix Sky Harbor International Airport Certification Manual, pursuant to 14 CFR Part 139 and to the Airport Security Plan pursuant to 14 CFR Part 107 (49 U.S.C. § 44706).
6. Continued close coordination with the City of Phoenix and appropriate FAA program offices, as required, to maintain aviation and airfield safety during construction pursuant to 14 CFR Part 139 (49 U.S.C. § 44706).

William C. Withycombe

William C. Withycombe, Regional Administrator,
Western-Pacific Region, Federal Aviation Administration

APR 07 2006

Date

These decisions, including any subsequent actions approving a grant of Federal funds or approval of an application to impose and use Passenger Facility Charges to the City of Phoenix, Arizona, are taken pursuant to 49 U.S.C. § 40101 et seq. and 49 U.S.C. § 47101 et seq., and constitute orders of the Administrator which are subject to review by the Courts of Appeals of the United States in accordance with the provisions of 49 U.S.C. § Section 46110.