

**ENVIRONMENTAL IMPACT STATEMENT (EIS)
FOR THE
PROPOSED AIRFIELD SAFETY ENHANCEMENT
PROJECT AND LAND TRANSACTIONS
AT
TUCSON INTERNATIONAL AIRPORT**

Scoping Meeting Package

September 22, 2016

**Tucson Executive Terminal
(At the base of the old Airport Traffic Control Tower
building with "TUCSON" on the side)
7081 South Plumer Avenue
Tucson, AZ 85756**

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I. BACKGROUND AND PURPOSE AND NEED

BACKGROUND

The Tucson Airport Authority (TAA) is the owner and operator of the Tucson International Airport (TUS or Airport). The TAA developed a set of improvements to TUS which includes the Proposed Airfield Safety Enhancement Project (ASEP) including real property transactions. TAA has depicted the Proposed Action on the Airport Layout Plan (ALP) for TUS. Pursuant to the Federal Aviation Act of 1958, as amended, the Federal Aviation Administration (FAA) must approve the proposed project as depicted on the ALP. FAA approval of the ALP is a Federal action that must comply with the *National Environmental Policy Act (NEPA) of 1969*, as amended (42 United States Code [U.S.C.] §4321 et seq). The FAA issued a Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) in the *Federal Register* on August 19, 2016.

The FAA is the lead Federal agency for preparation of the EIS and will do so in compliance with NEPA and Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40, Code of Federal Regulations (CFR) Parts 1500-1508). The preparation of the EIS will follow FAA regulations and policies for implementing NEPA published in FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*; as well as documentation necessary for all substantive environmental studies. The FAA has invited the U.S. Air Force (USAF) and the National Guard Bureau to participate as cooperating agencies under 40 CFR § 1508.5.

As a requirement of FAA Orders 1050.1F and 5050.4B, a scoping process must be conducted to provide the opportunity for public and agency participation during the preparation of an EIS. Guidelines for conducting such scoping processes are contained within the CEQ Regulations, 40 CFR § 1501.7, which states that "*there shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action. This process shall be termed scoping.*" In an effort to aid participation in the scoping process this scoping package has been prepared to help all scoping participants to understand the Proposed Action and the NEPA process.

PRELIMINARY UNDERSTANDING OF PURPOSE AND NEED

The following describes the purpose and need for the Proposed Action at TUS and identifies FAA regulations and policies for aviation safety. FAA Order 5050.4B requires that an EIS fully address and convey the purpose and need for a proposed action.

FAA Order 1050.1F states that the purpose and need of an EIS *"briefly describes the underlying purpose and need for the Federal action. It presents the problem being addressed and describes what the FAA is trying to achieve with the proposed action. It provides the parameters for defining a reasonable range of alternatives to be considered."*

The purpose and need for the proposed action must be clearly explained and stated in terms that are understandable to individuals who are not familiar with aviation or commercial aerospace activities. Where appropriate, the responsible FAA official should initiate early coordination with cooperating agencies in developing purpose and need."

The purpose and need serves as the foundation for the identification of reasonable alternatives to the Proposed Action and the comparative evaluation of impacts of development. In order for an alternative to be considered viable and carried forward for detailed evaluation within the NEPA process and the EIS, it must address the needs.

Sponsor's Purpose and Need

The TAA has conducted various planning studies leading up to the preparation of this EIS. The TAA's goals and objectives were most recently stated in the 2015 Airfield Safety Enhancement Implementation Study.¹

- **The need to enhance the safety of the airfield and eliminate existing "hot spots".**

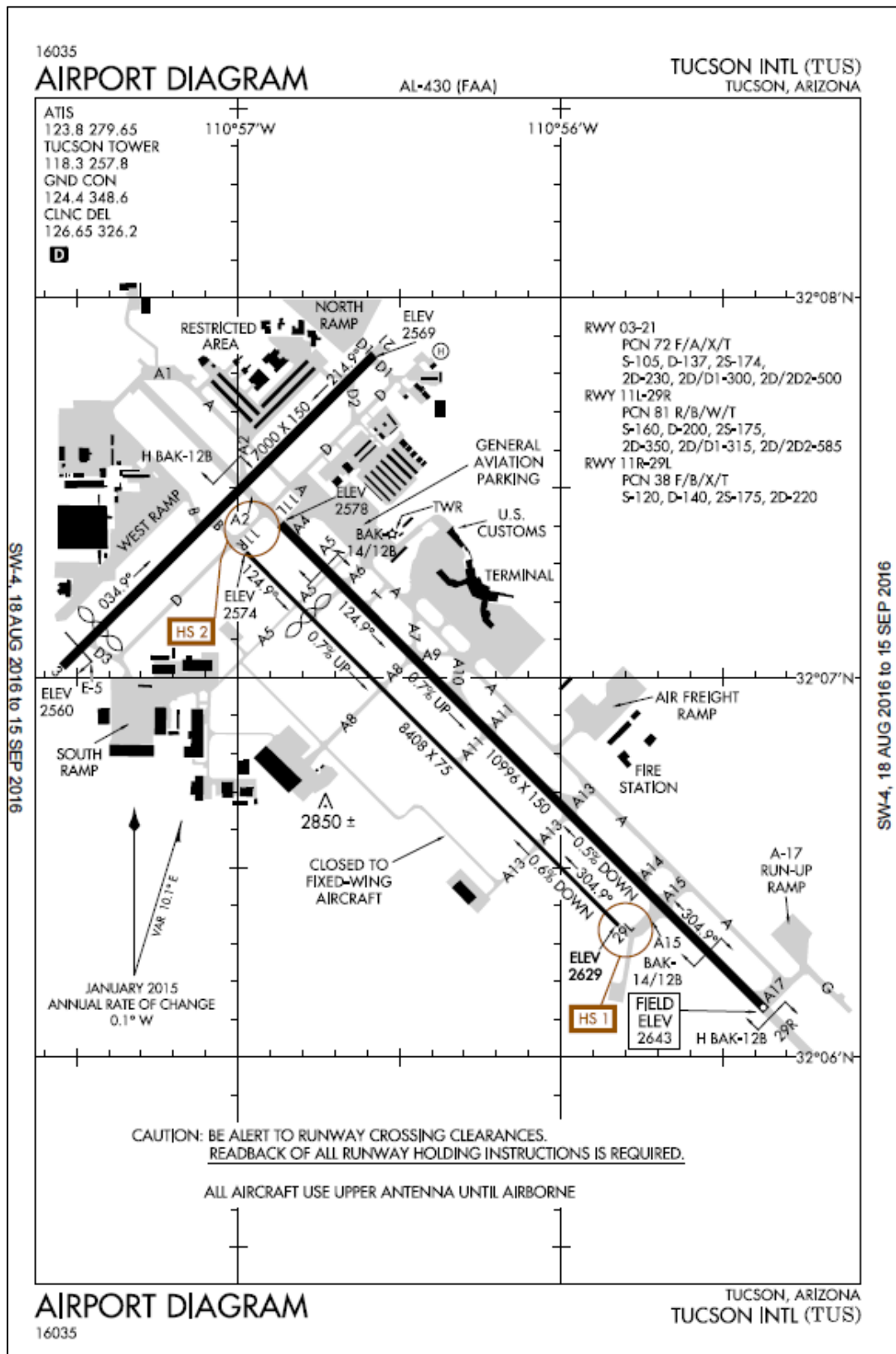
The FAA defines a "hot spot" as a runway safety related problem area or intersection on an airport. Typically, it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. A confusing condition may be compounded by a miscommunication between an air traffic controller and a pilot, and may compromise aircraft separation standards. The hot spot may have a history of surface incidents or the potential for surface incidents.

The FAA has identified two existing hot spots at the Airport (see **Exhibit 1**). One hot spot is located along Taxiway D between with Runway 11L/29R and Runway 11R/29L. At this location pilots taxiing along Taxiway D have crossed the approach path for Runway 11L/29R or Runway 11R/29L without clearance. Another hot spot is located at the approach (South) end of Runway 29R. This has been a historical point of confusion between Runways 29L and 29R and Runway 29R and Taxiway A. On several occasions pilots on approach during west flow have mistaken Runway 29R for Runway 29L and Taxiway A for Runway 29R, landing on the wrong runway or on Taxiway A. Therefore, the purpose of the Proposed Action is to enhance safety and remove existing FAA identified hot spots.

¹ Tucson Airport Authority, *Airfield Safety Enhancement Implementation Study Final Report*, May 2015.

**TUCSON INTERNATIONAL AIRPORT
ENVIRONMENTAL IMPACT STATEMENT**

**Exhibit 1
EXISTING HOT SPOTS AT TUCSON INTERNATIONAL AIRPORT**



- **The need to prevent aircraft from crossing directly between two parallel runways as recommended in FAA Engineering Brief 75, *Incorporation of Runway Incursion Prevention into Taxiway and Apron Design*.**

The FAA recommends Airport Sponsors find ways to reduce the probability of potential runway incursions. One way to do that is by increasing runway separation distance and creating a safety buffer to prevent straight runway crossings. A parallel taxiway between runways minimizes the potential for pilots to cross an active runway by forcing them to first turn onto the taxiway and wait for Airport Traffic Control Tower (ATCT) clearance to cross the other runway. A center parallel taxiway increases the margin of safety by providing opportunity to move aircraft runway crossings to lower risk areas and also provides space for aircraft to queue prior to crossing runways. Therefore, the purpose of the Proposed Action is to enhance safety by providing additional parallel taxiways.

- **The need to maintain operational capabilities when there is a temporary closure of Runway 11L/29R.**

As a primary commercial airport within the National Airspace System, TUS's commercial operations and military training operations will be disrupted if the primary Runway 11L/29R is closed for any amount of time. The Airport has experienced maintenance or reconstruction activities of Runway 11L/29R, disabled aircraft occupying Runway 11L/29R, and military aircraft operations that cause Runway 11L/29R to be closed to commercial service. The use of Runway 3/21 or existing 11R/29L would limit the takeoff length available to aircraft and effectively limits the airport's capabilities. Runway 11L/29R is 10,996 feet long by 150 feet wide. Runway 11R/29L is 8,408 long by 75 feet wide; and Runway 3/21 is 7,000 feet long by 150 feet wide. Runway 3/21 is used only during cross-wind weather conditions.

Therefore, the purpose of the Proposed Action is to maintain aircraft operational capabilities during times when Runway 11L/29R is not available by providing additional runway capabilities that can accommodate all the diverse aircraft that operate at TUS.

- **The need to develop currently under-utilized land that is compatible with FAA airspace restrictions and design standards.**

One of TAA's goals is to promote compatible land uses to preserve and grow major employment centers and leverage reasonable revenue enhancement opportunities. Therefore, the purpose of the Proposed Action is to promote land uses that benefit the surrounding community and enhance revenue to promote the Airport's financial sustainability.

FAA Purpose and Need

The FAA has identified the following need:

- **The need to operate TUS in the safest manner possible pursuant to 49 U.S.C. § 47101(1), and reduce the potential risk of runway incursions to the extent practicable.**

The FAA's statutory mission is to ensure the safe and efficient use of navigable airspace in the United States pursuant to 49 U.S.C. § 47101(a)(1). The FAA is charged with carrying out a policy ensuring "that the safe operation of the airport and airway system is the highest aviation priority." In issuing grants to airport sponsors to achieve this mission, sponsors must accomplish the improvement in accordance with an FAA-approved ALP and various grant-in-aid assurances.

USAF Purpose and Need

- **The need to maintain Air Force Plant 44 operational capabilities.**

The USAF owns land, known as Air Force Plant 44 (AFP 44), adjacent to the Airport. The USAF currently leases this land to Raytheon Missile Systems, who operates AFP 44, which is primarily used for research, development, manufacturing, and testing of various munitions/missile systems. AFP 44 consists of administrative and industrial facilities that support missile production operations. Additionally, operations at AFP 44 include the safe storage of munitions, providing security for the Plant and for the munitions, and providing the required explosive safety areas around munitions facilities to make sure the public is sufficiently protected in the unlikely event of a mishap. Therefore, the purpose of the Proposed Action is to maintain AFP 44's current operational capabilities.

National Guard Bureau Purpose and Need

- **The need to maintain National Guard Bureau (NGB) operational capabilities.**

The 162nd Wing of the Arizona Air National Guard currently maintains Munitions Storage Areas (MSA) as part of their operational capability at Tucson Air National Guard Base immediately adjacent to TUS. The 162nd Wing needs additional areas to maintain the safe storage of munitions and provide safety areas consistent with USAF standards to ensure the public is not in close proximity to any munitions in the event of a mishap. Therefore, the purpose of the Proposed Action is to release airport land for use by the Arizona Air National Guard to develop a new MSA and associated roadway system to maintain its current operational capabilities at TUS.

II. PROPOSED ACTION

The Airport is located in Tucson, Arizona south of the City's central business district. The Airport is in close proximity to Interstate 10 and Interstate 19 through Valencia Road and S. Tucson Road as shown on **Exhibit 2**. Davis-Monthan Air Force Base is located in Pima County approximately four miles northeast of TUS.

The airfield at TUS consists of two parallel, northwest/southeast oriented runways spaced approximately 700 feet apart and one crosswind runway as shown on **Exhibit 3**. As noted above, Runway 11L/29R is the longest runway on the airfield at 10,996 feet by 150 feet wide. Runway 11R/29L is 8,408 feet in length by 75 feet wide. Runway 3/21 is 7,000 feet in length by 150 feet wide. The passenger terminal at TUS is located at the center of the airfield north of Runways 11L/29R and 11R/29L. The Airport hosts the Tucson Air National Guard base, a 92-acre complex on the northeast corner of the airfield. The west ramp, located north of Runway 3/21 and west of the primary parallel runways, is the oldest area of the Airport and still maintains three hangars which were once used to house B-24 bombers during the Korean War.

As shown on **Exhibit 4**, the Proposed Action includes the construction of a new center parallel and connecting taxiway system; a replacement Runway 11R/29L (proposed to be 11,000 feet long by 150 feet wide); acquisition of land for the runway object free area, taxiway object free area, runway safety area, and runway protection zone from AFP 44. The proposed action includes relocation of navigational aids and development and/or modification of associated arrival and departure procedures for the relocated runway. The Proposed Action also includes demolition of 12 Earth Covered Magazines (ECM) on AFP 44 and their replacement elsewhere on AFP 44. The EIS will also evaluate the proposed release of airport land from Federal obligations. A portion of this land has been proposed for construction of a Munitions Storage Area to include ECMs and access road, for the 162nd Wing at the Arizona Air National Guard Base.

**TUCSON INTERNATIONAL AIRPORT
ENVIRONMENTAL IMPACT STATEMENT**

**Exhibit 2
AIRPORT LOCATION**

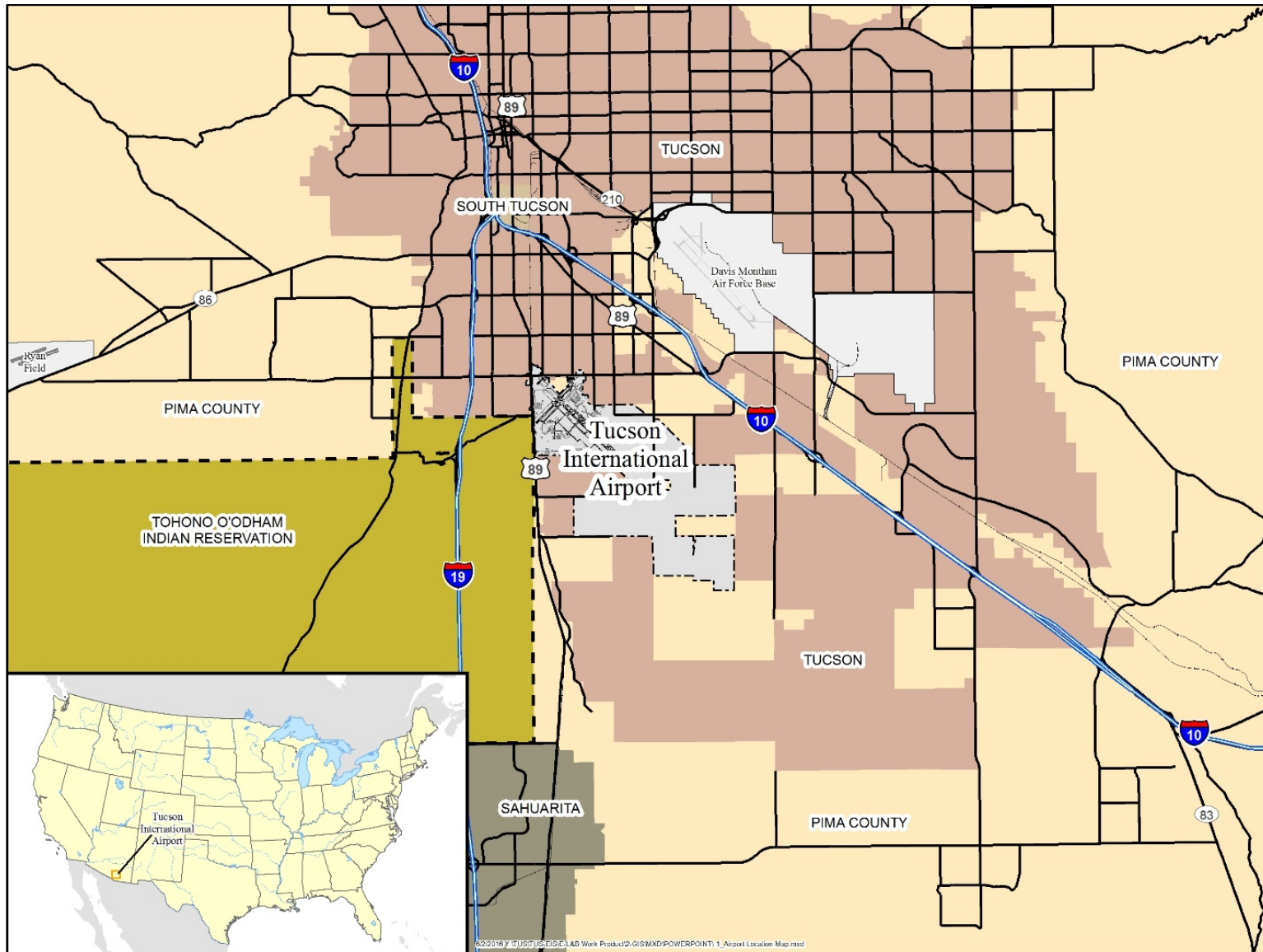
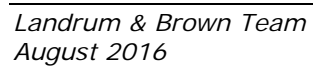
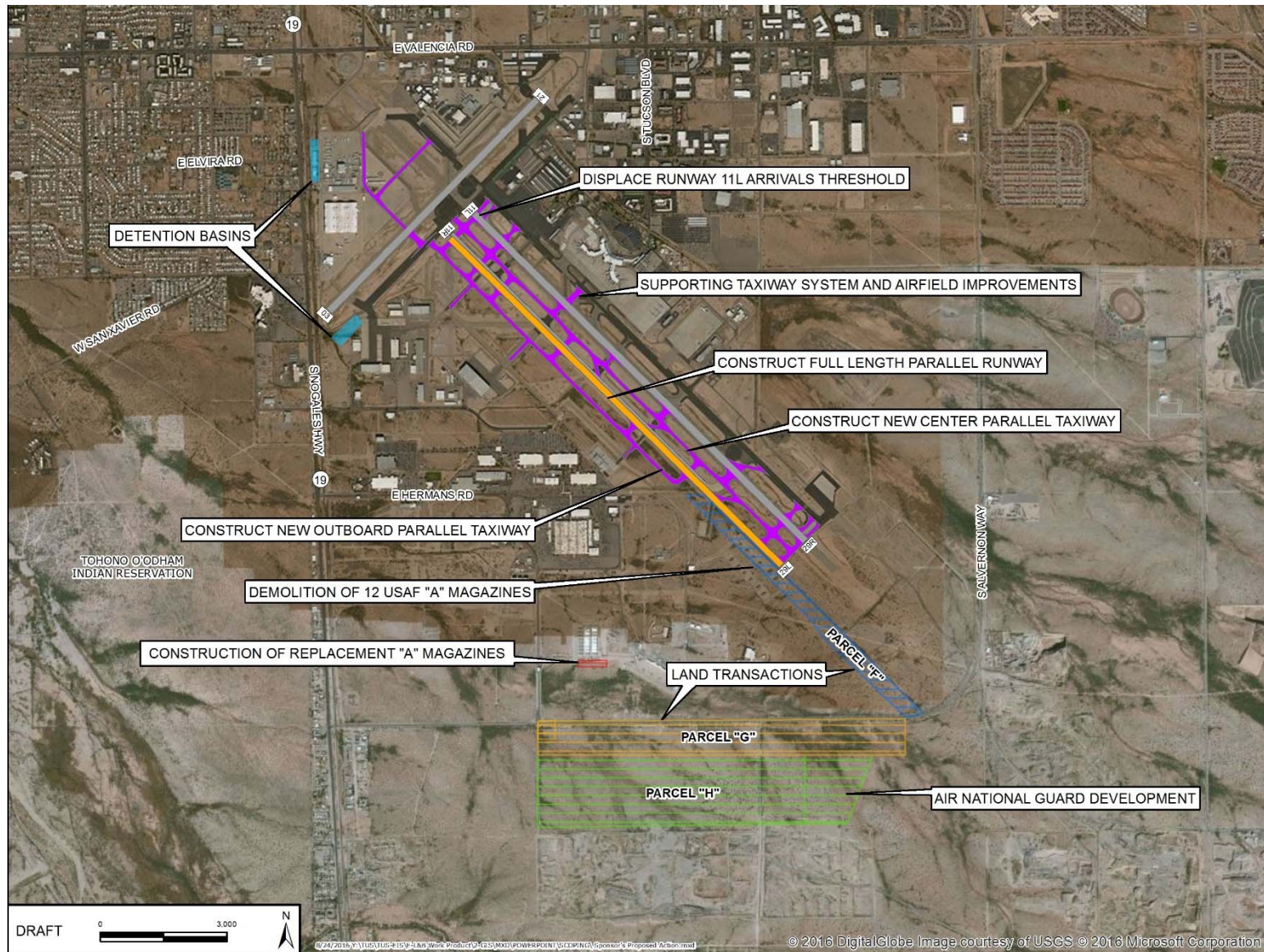


Exhibit 3

EXISTING AIRFIELD



**Exhibit 4
PROPOSED ACTION**



III. RANGE OF ALTERNATIVES

In addition to the Proposed Action, the EIS will evaluate a comprehensive range of alternatives. This is necessary to ensure that other alternatives that satisfy the proposed purpose and need, while having a less detrimental effect on the environment, have not been prematurely dismissed from consideration.

Within the EIS, FAA proposes to consider a range of alternatives that could potentially meet the purpose and need to enhance airfield safety at TUS including, but not limited to, the following:

Alternative One – Proposed Action: Acquire 58 acres of land along the shared property boundary between the Tucson International Airport and AFP 44, construction of a new centerline parallel and connecting taxiway between Runway 11L/29R and Runway 11R/29L; construction of a relocated Runway 11R/29L about 100 feet to the southwest, creating a centerline separation of 800 feet between the existing Runway 11L/29R and the relocated Runway 11R/29L. The relocated Runway 11R/29L will be 11,000 feet long by 150 feet wide. The relocation of Runway 11R/29L will include removal and reinstallation of associated navigational aids. This alternative includes demolition of 12 ECMs on AFP 44 and construction of replacement ECMs, elsewhere on AFP 44; release of airport land from Federal obligations between the former East Hughes Access Road and Aerospace Parkway. A portion of this land would be ultimately transferred to the USAF, on behalf of the NGB, for construction of a Munitions Storage Area to include ECMs and an access road for the 162nd Wing based at Arizona Air National Guard Base.

Alternative Two – Alternative Airfield Development at Tucson: Extending and upgrading the current general aviation Runway 11R/29L to an air carrier runway, maintaining a 700-foot centerline separation between the current air carrier Runway 11L/29R and the extended and upgraded Runway 11R/29L.

Alternative Three – Use of Other Existing Airports: The possible use of other existing area airports including, but not limited to, Ryan Airfield and Marana Regional Airport will be evaluated.

Alternative Four – Use of Other Modes of Transportation: Use of intercity bus line, rail, and automobile transportation will be evaluated.

No Action Alternative – Under this alternative, the existing airport would remain unchanged. No land acquisition and transfer between the Tucson International Airport and AFP 44 and no demolition and replacement of ECMs would occur; no new center taxiway would be constructed, and Runway 11R/29L would remain in its current configuration. FAA would not release land between the former East Hughes Access Road and Aerospace Parkway, no new Munitions Storage Area and access road for the 162nd Wing of the Arizona Air National Guard would be constructed on land between the former East Hughes Access Road and Aerospace Parkway.

This comprehensive range of alternatives will be subjected to qualitative evaluation techniques that will serve to identify a short-list of alternatives to be considered for more detailed analysis. These evaluations will focus on the ability of the alternatives to satisfy the proposed purpose and need.

REFINEMENT OF ALTERNATIVES

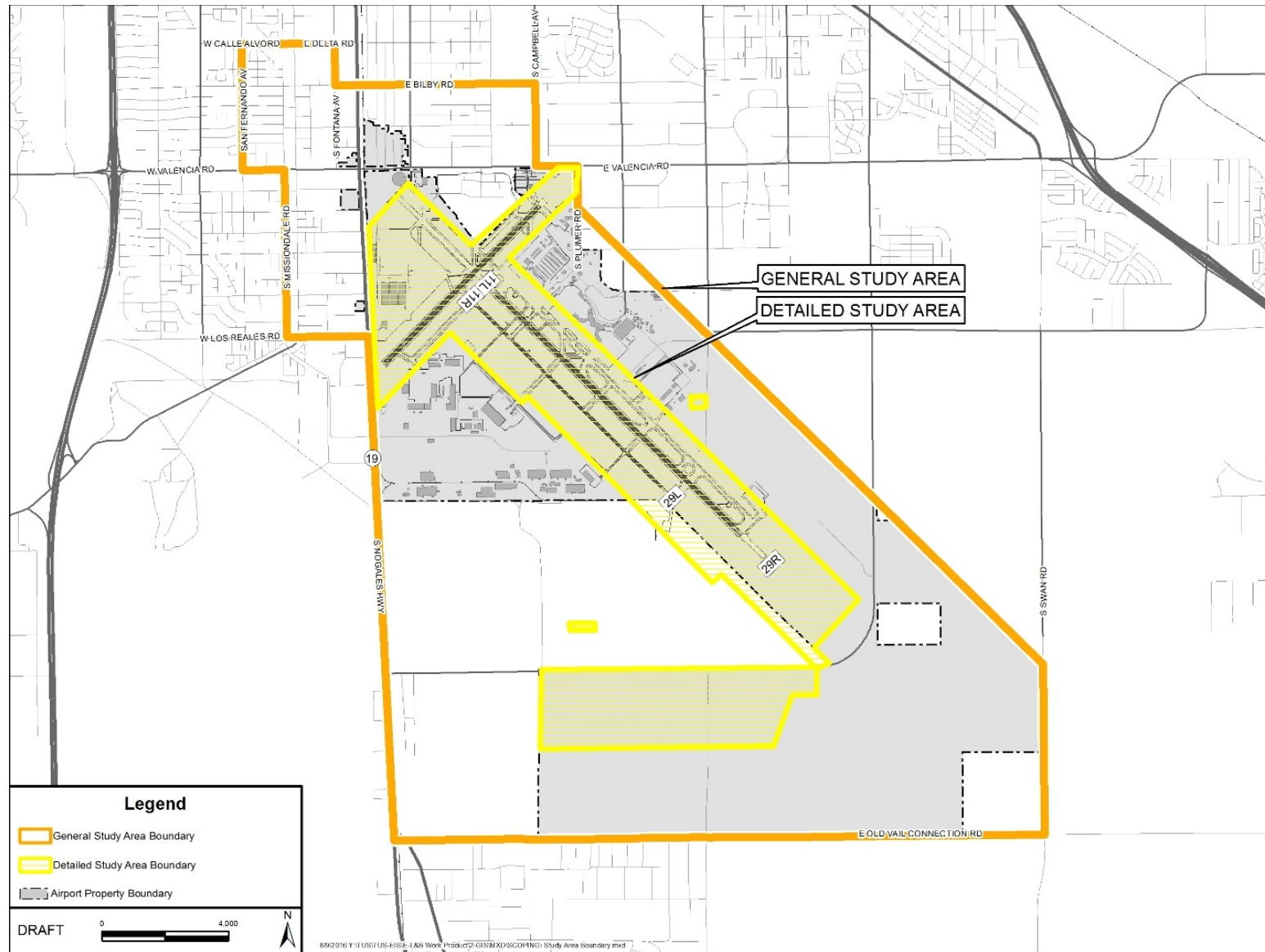
In preparation for detailed environmental evaluation, refinement of the alternatives may include preliminary engineering to establish longitudinal and transverse gradients, drainage features, and temporary construction areas/easements. This level of detail provides information on implementation and constructability, operational feasibility, and the feasibility and reality of obtaining and applying for environmental permits (i.e., local, state, Federal) for construction.

DEVELOPMENT OF STUDY AREA BOUNDARIES

For the purposes of this EIS, it is anticipated that two study areas will be developed. Exhibits will be created using digital mapping and Geographic Information System (GIS) to show the study areas with existing political jurisdictions, noise-sensitive land uses, compatible land uses, major and minor streets and roadways, and major physical, geographic, and natural features, along with selected place names, road names, and names of geographic features.

The General Study Area will cover a broad area so that the potential impacts due to the Proposed Action and its alternatives can be adequately assessed, in particular for the assessment of potential noise impacts. The General Study Area will be developed using a composite of previous airport noise contours including the 2032 contour (out to the 65 DNL). A substantial buffer area will then be added to allow for any potential increase in the size of the future noise contour. The General Study Area boundary lines will be squared off to follow roadways where available. The Detailed Study Area will be smaller than the General Study Area and will focus on the more detailed analysis of construction and development-related impacts that would result from the Proposed Action and its alternatives. **Exhibit 5** depicts the initial study areas.

**Exhibit 5
STUDY AREAS**



IV. EIS PROCESS

The role of the FAA as the lead Federal agency on the EIS is to ensure proposed actions meet NEPA goals and policies. The FAA will also be responsible for conducting a process that provides for an independent review of the Proposal and other reasonable and feasible alternatives and that achieve the project's purpose. The FAA has selected a team of consulting firms to assist with the preparation of the EIS and to prepare technical work. The FAA is responsible for directing the work performed by these consultants.

The role of the USAF and the National Guard Bureau as cooperating agencies is to assist the FAA to prepare the EIS and ultimately adopt the EIS to satisfy their NEPA requirements for their Federal actions. The TAA, as the Airport Sponsor, assists the FAA with acquiring data and with the public involvement and outreach components of the EIS.

The role of the regulatory agencies in the EIS process is to:

- Help identify potentially significant environmental impacts
- Review and comment on EIS finding
- Issue environmental permits where applicable
- Review proposed mitigation strategies where applicable
- Ensure compliance with local, state, and Federal environmental regulations

To ensure all significant issues related to the Proposed Action are identified, one (1) public scoping meeting and one (1) governmental agency scoping meeting will be held. A governmental agency scoping meeting for all Federal, state, and local regulatory agencies which have jurisdiction by law or have special expertise with respect to any potential environmental impacts associated with the proposed action will be held on Thursday, September 22, 2016. This meeting will take place at 1:00 p.m. The public scoping meeting will be held from 6:00 p.m. to 8:00 p.m. on Thursday, September 22, 2016. Both meetings will be held on the first floor of the Tucson Executive Terminal, at the base of the old Airport Traffic Control Tower building with "TUCSON" on the side, 7081 South Plumer Avenue, Tucson, Arizona.

As the initial step in the preparation of the EIS, the scoping process is an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to the proposed action. Additional public coordination will occur throughout the EIS process. Additional agency coordination will formally occur with the Federal, state, and local agencies at key milestones in the EIS process.

Results of Key Environmental Studies/Mitigation

Agencies will be informed as to the findings of biological, hazardous materials, wetland, and cultural resource surveys, air quality and noise modeling methodologies, and results. Any mitigation necessary for the Proposed Action would be coordinated with the appropriate agencies to comply with Federal, state, and local regulations and to identify suitable mitigation strategies.

Development of the Draft EIS

The status of the development of the Draft EIS, the data, analysis, findings, and mitigation recommendations will be presented to the agencies for review, comment, and input.

V. ASSESSING ENVIRONMENTAL IMPACTS

In accordance with FAA Order 1050.1F and FAA Order 5050.4B, the EIS shall assess the environmental impacts of the following categories:

- Air Quality
- Biological Resources (Fish, Wildlife, and Plants)
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historic, Architectural, Archaeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Noise-Compatible Land Use
- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)
- Cumulative Impacts

Based on an initial review of the Proposed Action, there are no potential impacts likely to occur for coastal resources, farmlands, or wild and scenic rivers. The following environmental categories may have potential impacts due to the Proposed Action or the alternatives and will be the focus of the EIS environmental analysis.

Air Quality

An air quality assessment will be conducted to determine the rate of air emissions (tons per year) of the U.S. EPA's criteria pollutants of concern from airport-related sources. Official agency correspondence to obtain comments, relevant data, guidance, and assessment methodology will be solicited from the various Federal, state and other agencies. A review of existing studies relating to air quality at TUS and in Pima County will be conducted to obtain all relevant and available data in order to maximize the technical understanding of current and past air quality conditions. Data relating to airport sources of emissions that may be affected would then be obtained and developed into spreadsheets for evaluation and for modelling. The resulting data will be used in conjunction with the FAA's Aviation Environmental Design Tool (AEDT) to determine the potential air quality impacts.

Since Pima County is currently maintenance for Carbon Monoxide (CO) and considered nonattainment for Particulate Matter (PM10) each of the emission inventories for the alternatives will be compared to the future no action conditions of the same year. The result of the comparative analysis will determine the relative increase or decrease in net emissions under the various alternatives. Where an increase in net emissions occurs, the increase will be compared to the associated threshold levels established under the Clean Air Act, referred to as the *de minimis* thresholds. Where any alternative equals or exceeds any of the *de minimis* thresholds, further agency coordination will be required to determine whether additional analysis, such as dispersion analysis for comparison to the NAAQS, will be required.

Biological Resources

The FAA will query the online environmental review tools and State Database Management System to determine whether any special status species or special management areas have been documented as occurring within three miles of the project limits and the Information for Planning and Conservation (IPaC, USFWS) to review species and critical habitat occurring within one or more delineated US Geological Survey 7.5 minute quadrangles intersecting the project area. This information will form the basis for potential state sensitive species, and Federally threatened and endangered species in the project area to ensure compliance with the Sikes Act; Endangered Species Act (ESA); Migratory Bird Treaty Act; other applicable Federal, state and local laws and regulations; and related directives.

Based on preliminary research, the most sensitive wildlife species recorded in the project area include:

- Pima pineapple cactus
- Lesser long-nosed bat
- Cactus ferruginous pygmy-owl
- Western burrowing owl
- Sonoran Desert tortoise

The FAA will conduct a preliminary site assessment on Airport property to determine if any PPC or any of the specific species of concern are present. The results of this preliminary assessment will be documented in a Biological Assessment, which will include the following:

- A description and mapping of vegetation communities;
- A discussion of wildlife habitats on the project site and in the immediate area (within 500 feet of the project boundaries);
- A listing of all wildlife, birds and plant species observed; and
- An assessment of the wildlife habitats on the property and in the immediate area in relation to potential sensitive species that could be affected by the proposed project.

FAA will also utilize information prepared by the USAF and Pima County for location of PPC on AFP 44 and between the old East Hughes Access Road and new Aerospace Parkway.

The draft Biological Assessment and briefing materials will be provided to the USFWS. If the findings and agency coordination undertaken for this EIS provide a basis that a Federally-listed species uses or inhabits all or part of the Detailed Study Area, that the species will be adversely impacted by any of the alternatives, and that those adverse impacts are unavoidable, formal consultations with the USFWS under Section 7 of the ESA will be conducted.

Climate

According to the Intergovernmental Panel on Climate Change, aviation emissions comprise a small but potentially important percentage of human made greenhouse gases and other emissions that contribute to global warming. Greenhouse gases are gases that trap heat in the earth's atmosphere. Both naturally occurring and man-made greenhouse gases primarily include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Sources that require fuel or power at an airport are the primary sources that would generate greenhouse gases. Aircraft are probably the most often cited air pollutant source, but they produce the same types of emissions as ground access vehicles (GAV). Different chemical species that are emitted such as CO₂, CH₄, and N₂O have a different effect on climate. The equivalency method will be used in the EIS as a way to show relative impacts on climate change of different chemical species.

Analysis will be prepared that will consider how the Proposed Action and alternatives may or may not increase the factors that result in climate change. An emissions inventory will be prepared for potential GHG emissions from the alternatives. Although there are no Federal standards for aviation-related GHG emissions, it is well-established that GHG emissions can affect climate.

Department of Transportation Act, Section 4(f)

The EIS analysis will include the identification of Department of Transportation, Section 4(f) resources within the project area which includes public lands such as parks, historic/cultural sites, recreation areas, and wildlife refuges and sanctuaries through agency coordination (State Historic Preservation Office [SHPO], local repositories, officials with jurisdiction over any Section 4(f) properties) and GIS mapping. Both primary and secondary impacts to Department of Transportation, Section 4(f) resources will be evaluated and disclosed for each alternative. The evaluation will also include evidence that applicable requirements of Section 6(f) of the Land and Water Conservation Fund, 26 U.S.C. §4601-8(f) have been met by the alternatives.

Hazardous Materials, Solid Waste, and Pollution Prevention

The EIS analysis will identify the presence of any sites within the General Study Area listed or under consideration for listing on the Comprehensive Environmental Response Compensation, and Liability Act - National Priorities List. In addition, the absence or presence of areas containing hazardous substances and/or environmental contamination will be identified in the General Study Area.

A Phase I Environmental Due Diligence Audit (EDDA) investigation and report will be completed in accordance with the USEPA standards on all appropriate inquiry (40 CFR Part 312) and the current ASTM Standard E1527-13. A written report that incorporates the information obtained during the EDDA will be prepared that provides conclusions as to whether the land is, was, or has the potential for hazardous substances and/or environmental contamination.

If the potential for hazardous material and/or environmental contamination is found on an alternative site, a Phase II investigation will be conducted to verify and identify the existence of the materials found during the Phase I investigation and characterize the extent of hazardous material and/or environmental contamination as necessary. Limits of alternatives would be overlaid on the base mapping of potential sites, and the number, type, and nature of disturbance impacts would be quantified. In this way, the concerns over potential costs, conflicts, and delays associated with hazardous materials and contaminated sites can be disclosed.

Historic, Architectural, Archeological, and Cultural Resources

Archaeological and historic surveys will be performed as part of the EIS analysis for the Area of Potential Effect (APE). According to 36 CFR 800.16(d), the APE is the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. The APE is influenced by the scale and nature of the undertaking and may be different for different kinds of effects caused by the undertaking. Consensus on the APE(s) for cultural resources between the FAA, cooperating agencies, and the SHPO will occur prior to the identification of any archaeological or historical resources that may occur. In addition to the APE an Indirect APE will also need to be established that will include

a larger area where indirect effects, such as aircraft noise or visual effects, could occur. After defining the APEs, a file search (equivalent to a Class I survey) will be conducted to identify any previously known studies or sites that may occur within any of the APEs. The search will identify the location and eligibility determination of sites in the APE for the National Register of Historic Places (NRHP).

In accordance with 36 CFR Part 800 and as required by SHPO, the FAA will also perform additional field surveys (Class III surveys) of any areas that have not been previously surveyed to identify any prehistoric or historic properties located within the APEs that could adversely be impacted. If a project area has not been previously surveyed or was surveyed over five years from the start of project evaluation, a pedestrian cultural resources survey will be necessary to determine if cultural resources occur and whether they may be impacted by construction activities. A report will be prepared detailing the pre-field results, the results of the field survey, site eligibility for the NRHP, and further recommendations for each historic property. A copy of the report will be coordinated with the SHPO.

The FAA will make a determination of eligibility for any properties found during the surveys. Subsequently, FAA will make a finding of effect by the proposed undertaking on those properties. An effect occurs when an action alters the characteristics of a property that may make a property eligible for inclusion in the NRHP or alters features of a property's location, setting, or use that contribute to its significance (see 36 CFR §60.4). At that point the SHPO and Advisory Council on Historic Preservation (ACHP) consultation process generally begins. Section 106 requires the FAA to afford the ACHP a reasonable opportunity to comment on undertakings (36 CFR 800.1). If no adverse effect is found and the SHPO concurs, the report is forwarded to the ACHP for their comment. The FAA must take into account ACHP's opinions in reaching a final decision. If no effect is found and the SHPO does not object, then the FAA takes no further steps in the Section 106 process.

If an effect is found, then a determination of adverse or no adverse effect is recommended to the SHPO following the criteria of adverse effect:

- Destruction or alteration,
- Isolation from or alteration of environment,
- Intrusive elements (visual, audible, or atmospheric),
- Neglect, and
- Transfer, lease, or sale of property.

The SHPO or ACHP may stipulate conditions for concurrence. If an adverse effect is found, it must be avoided or mitigated. Avoidance measures can include altering the undertaking to avoid the adverse effect, using an alternative design, pursuing an alternative undertaking, or no action. Mitigation measures can include alternative design; altering the location of the undertaking; limiting the magnitude of the undertaking; rehabilitating (rather than demolishing) some historic properties;

adopting a planned program of preservation and maintenance; moving historic properties; donating, selling, or leasing historic properties; or documenting a historic property before destroying it (including architectural, engineering, historical, and archaeological documentation).

Once the means of resolving adverse effects are agreed upon by the consulting parties, they may be formalized in a Memorandum of Agreement (MOA). The MOA serves four purposes: (1) specifies the mitigation or alternatives agreed to by the consulting parties, (2) identifies who is responsible for carrying out the specified measures, (3) renders ACHP comment, and (4) serves as an acknowledgement by the signatories that, in their collective view, the FAA has taken into account the effects of the undertaking on historic properties.

Land Use

The EIS analysis will consider the potential impact of the alternatives on existing and planned future land use. It will also consider whether the alternatives may potentially conflict with the objectives of Federal, regional, tribal, state, and local land use plans, policies, and controls for the affected areas. Existing land uses, future land use plans, and zoning regulations will be reviewed to determine the potential for land use impacts associated with the alternatives.

Natural Resources and Energy Supply

The EIS analysis will determine the potential effects of each alternative on natural resources and energy supplies in terms of increased draw upon utilities, consumption of combustible fuels, and consumption of construction materials.

Noise and Noise-Compatible Land Use

The potential change of noise impacts as a result of the Proposed Action and the alternatives will be examined through modeling using the FAA's AEDT and preparation of future noise contours for the No Action and Proposed Action noise levels, and by considering approved FAA guidelines for land use compatibility determinations. Quantification of impacts will be assessed through the use of a GIS database and will include a quantification of impacts of housing units, population, and other noise sensitive land uses, such as school, churches, nursing homes, and U.S. DOT Section 4(f) properties. These impacts will be evaluated in accordance with 14 C.F.R. Part 150 Land Use Compatibility Guidelines.

Socioeconomic; Environmental Justice; and Children's Environmental Health and Safety Risks

Data will be collected as part of the EIS analysis in order to characterize existing socioeconomic conditions including recent trends, in terms of population movement and growth patterns, public service demands, and general business and economic conditions in the neighborhoods in the General Study Area.

Census data will be obtained from the U.S. Census to determine the potential impacts to population and population characteristics within the General Study Area and to identify the potential impacts to low income and minority communities.

Visual Effects (including Light Emissions)

The visual resource analysis in the EIS will determine if the alternatives would cause potential impacts to the visual character of the Airport environs. In addition, a light emissions impact evaluation will consider the extent to which any lighting associated with each alternative would create an annoyance or interfere with normal activities of people in the vicinity of the Proposed Action.

Water Resources (including wetlands, floodplains, surface waters, and groundwater)

The EIS analysis will determine if the alternatives would cause potential impacts to water resources including impacts to surface waters, floodplains, groundwater, hydrology, and drainage in the General Study Area.

Wetlands and Surface Water

A site-specific investigation of vegetation, soils, and hydrology will be conducted by qualified wetland delineation specialists to determine the presence of potential wetlands, streams, or other water features in the area of potential disturbance. Wetlands will be identified and delineated by use of the routine onsite inspection methods of the U.S. Army Corps of Engineers in accordance with the 1987 "*Corps of Engineers Wetlands Delineation Manual*" and the 2006 "*Corps of Engineers Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*," and any additional regional or national Army Corps of Engineers guidance or regulations that may be issued up to the time the field work is conducted. Analysis of impacts will also be accomplished in accordance with Executive Order 11990, *Protection of Wetlands*, and Department of Transportation Order 5660.1A, *Preservation of the Nation's Wetlands*.

The baseline conditions will be thoroughly investigated through pedestrian surveys and formal surveying of the extent of all wetlands (using GPS) within study area. GIS maps (shape file) of each identified wetland boundaries will be created. Each wetland or other sampling area potentially within Clean Water Act jurisdiction such as desert washes, will be fully described (e.g., plant lists, wetland indicator status, soil characteristics, hydrology), classified, photographed, and mapped.

The EIS evaluation will consider potential impacts to both jurisdictional and non-jurisdictional wetland features from each of the alternatives. Primary and secondary impacts to wetlands (i.e., non-isolated) and watercourses (i.e., streams, washes) resulting from implementation of each alternative will be quantified by laying the disturbance footprint (edge of grading, fill, cuts, etc., associated with development of the project site) over mapped wetlands.

Wetland impacts will be quantified by wetland type, area of fill, and volume of fill placed within the delineated boundaries.

Impacts to surface water quality attributable to development and operation of the alternatives will be evaluated in terms of stormwater management, authorized discharges, and current and future operational water quality impacts in accordance with applicable water quality standards. The impact analysis will include a description of the stormwater management system for each alternative that will control runoff volumes.

Floodplains

The effect of the alternatives under consideration on floodplains and floodways will be evaluated in accordance with Executive Order 11988, *Floodplain Management* and DOT Order 5650.2, *Floodplain Management and Protection*. Floodplain and floodway impacts will be quantified in terms of volume of fill placed or removed and in changes in floodplain surface area.

Groundwater

Potential impacts to groundwater quality will be assessed in the EIS. This will consider the potential for spills of petroleum products and hazardous materials to reach aquifers in the area.

Cumulative Impacts

The discussion and disclosure of Cumulative Impacts will include the following:

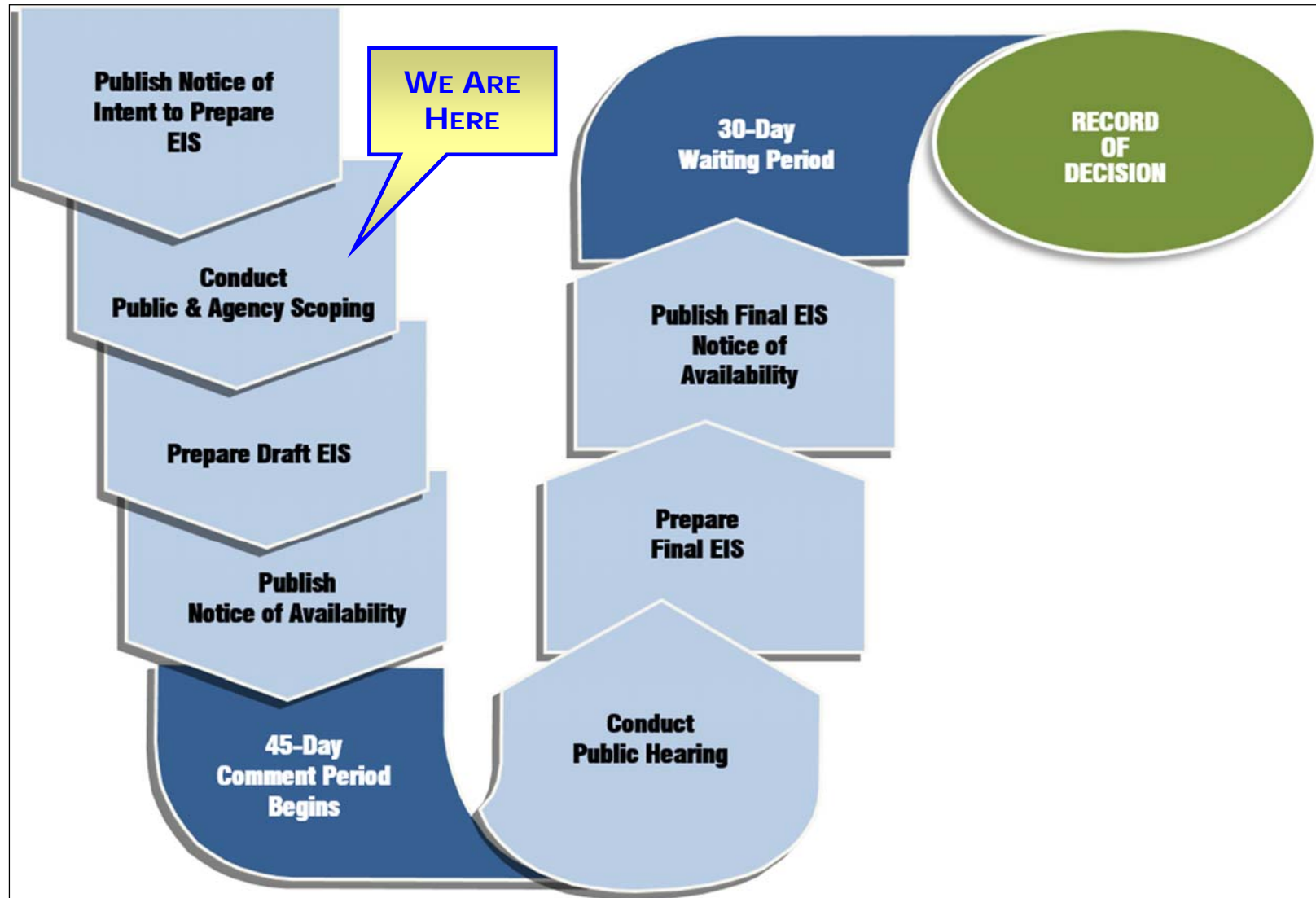
- Identification of the study area, which should be defined as the entire geographic area with the potential to be either directly or indirectly impacted by the proposed action or alternative(s)
- Identification of relevant past, present, and reasonably foreseeable future actions, whether Federal or non-Federal
- Analysis of the incremental interaction the Proposed Action may have with other actions
- Comparison of cumulative impacts against the applicable significant threshold for the resource analyzed

VI. EIS SCHEDULE

The EIS process as shown on **Exhibit 6** is expected to be completed in less than 30 months from issuance of the Notice of Intent until a final decision is reached. Permits and other mitigation requirements if necessary are likely to extend beyond that timeframe. The schedule will be monitored throughout the study and coordinated with appropriate parties.

The next milestone for the study is to finalize the purpose and need and alternatives and the initiation of the preparation of the Draft EIS, which will lead up to the public release of the Draft EIS. Your agency will receive a copy of the Draft EIS with instructions for the submission of comments.

Exhibit 6
EIS PROCESS



VII. OPPORTUNITY TO COMMENT ON THE EIS SCOPE OF WORK

Comments and suggestions are invited from all interested parties to ensure that the full range of issues related to the Proposed Action are addressed, and that all concerns are identified. The FAA has not made a final decision on the EIS's content. Please submit any written comments not later than 5:00 p.m. Pacific Daylight Time, **Monday, October 3, 2016** to the following:

Mr. David B. Kessler, M.A., AICP
Federal Aviation Administration
Western-Pacific Region-Airports Division, AWP-610.1
P.O. Box 92007
Los Angeles, CA 90009-2007