FINAL ENVIRONMENTAL ASSESSMENT

PROPOSED SKYBRIDGE AZ BUSINESS PARK

PHOENIX-MESA GATEWAY AIRPORT

Maricopa County, Arizona

Prepared for:

Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, Arizona 85212-0919

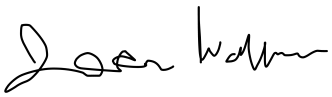
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
As lead Federal Agency pursuant to the *National Environmental Policy Act of 1969*

Prepared by:

Coffman Associates, Inc.
Scottsdale, Arizona

March 2020

This environmental assessment becomes a Federal document when evaluated, signed and dated by the responsible FAA Official.



03/27/2020

Responsible FAA Official **Date**

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document contains a Final Environmental Assessment (EA) for the proposed SkyBridge AZ Business Park at Phoenix-Mesa Gateway Airport (airport) in the City of Mesa, Maricopa County, Arizona. This document discloses the analysis and findings of the potential impacts of the Proposed Development (which includes the Proposed Federal Action) and No Action alternatives.

PROPOSED DEVELOPMENT: The airport seeks Federal Aviation Administration (FAA) approval to develop the SkyBridge site with mixed-use development that includes a joint United States (U.S.)-Mexico Customs inspection facility and air cargo hub and consists of both aeronautical and non-aeronautical land uses. Anticipated businesses include air cargo, aerospace and auto parts, food processing (dry goods and refrigerated products), e-commerce, office/research and development (R&D), retail, and a hotel.

Section 163 of the *FAA Reauthorization Act of 2018* has limited the FAA's review and approval authority for airport layout plans (ALPs) and associated review under the *National Environmental Policy Act* (NEPA). All items of development that are subject to FAA approval shall comply with the requirements of NEPA. For the proposed project at Phoenix-Mesa Gateway Airport, the FAA retains approval authority over the taxilane, aircraft hangar, and aircraft ramp.

The Proposed Federal Action, for which FAA retains approval authority, consists of the following project elements for the aeronautical portions of the project (approximately 154.8 acres):

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas; and
- Construct nine hangars (approximately 1.33 million square feet [sf] of hangar space on 84.8 acres).

The Proposed Development would also construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of R&D and 70,000 sf of hotel and retail development on 129.6 acres and approximately 68.4 acres of on-site roads, vehicular parking areas, landscaped open space areas and detention basins. Final use of the non-aeronautical space will be determined based on tenant needs within the constraints of the predetermined infrastructure (for example, roads, stormwater system).

WHAT SHOULD YOU DO? Read this Final EA on the Proposed Development (which includes the Proposed Federal Action) to understand the actions that the Phoenix-Mesa Gateway Airport Authority and FAA intend to take relative to the Proposed Development (which includes the Proposed Federal Action) at Phoenix-Mesa Gateway Airport.

WHAT HAPPENS AFTER THIS? Following review of the Final EA, the FAA will either issue a Finding of No Significant Impact (FONSI), a FONSI/Record of Decision (ROD), or decide to prepare a federal Environmental Impact Statement.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WESTERN-PACIFIC REGION

FINDING OF NO SIGNIFICANT IMPACT

Proposed Development of Skybridge Arizona Development
Phoenix-Mesa Gateway Airport
Phoenix-Mesa Gateway Airport Authority, Arizona

For further information:

Jean Wolfers-Lawrence
Environmental Protection Specialist
U.S. Department of Transportation
Federal Aviation Administration
Office of Airports Planning and Programming
800 Independence Ave, Washington D.C.

March 27, 2020

GENERAL INFORMATION ABOUT THIS DOCUMENT

WHAT'S IN THIS DOCUMENT? This document is the Federal Aviation Administration's (FAA) Finding of No Significant Impact (FONSI) for the proposed SkyBridge Arizona Development (Proposed Development). The purpose of the Proposed is to support a safe and viable airport now and into the future by providing unconditional approval of an update to the Airport Layout Plan (ALP) which includes the Proposed Development. This document includes the agency determinations and approvals for those proposed Federal actions described in the Final Environmental Assessment (Final EA) dated March 27, 2020. 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 Proposed Action and the No Action Alternative, which are evaluated in detail in this Final EA. This document also identifies the environmentally preferred alternative and the agency preferred alternative.

BACKGROUND. In December 2019, the Phoenix-Mesa Gateway Airport Authority (PMGAA) prepared a Draft Environmental Assessment (Draft EA) for the Proposed Development. The Draft EA addressed the potential environmental effects of the Proposed Development including various reasonable alternatives to that proposal. The Draft EA was prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) [Public Law 91-190, 42 USC §§ 4321-4347]; the implementing regulations of the Council on Environmental Quality (CEQ) [40 CFR Parts 1500-1508); and FAA Orders 1050.1F, *Environmental Impacts: Policies and Procedures*, and 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. PMGAA published the Notice of Availability for the Draft EA on January 27, 2020 and the document was available for review through February 25, 2020. No substantive comments were received on the Draft EA.

WHAT SHOULD YOU DO? Read the FONSI to understand the Federal actions that the FAA intends to take in connection with the Proposed Development at Phoenix-Mesa-Gateway Airport.

WHAT HAPPENS AFTER THIS? PMGAA may begin to implement the Proposed Action.

NOTE: This FONSI represents the FAA's determination that there are no significant environmental impacts associated with the Proposed Development requiring FAA action. In the EA, PMGAA evaluated the environmental effects of the entire Proposed Development; however, the FAA's Federal action is limited to airport layout plan (ALP) approval of only those portions of the Proposed Development that meet the criteria established in 49 U.S.C. § 47107(a)(16)(B), commonly referred to as Section 163(d) of the FAA Reauthorization Act of 2018. The FAA concluded that certain portions (specifically, the aircraft hangar and the staging ramp) of the Proposed Development meet the criteria of Section 163(d), while other portions do not. Therefore, the FAA will take the Federal action of approving only those portions

of the ALP that meet the Section 163(d) criteria.

By evaluating the entire Proposed Development, rather than only the proposed Federal Action, the EA represents a conservative disclosure of environmental effects because it examines impacts of activities that are not part of the Federal action subject to NEPA review or special purpose law compliance. For this reason, the EA will include the terminology of the Proposed Development when discussing the entirety of the development program that the airport sponsor proposes and that was evaluated in the EA. The Proposed Development includes those development components over which FAA does not have any Federal action of ALP approval. The EA will also use the terminology "Proposed Federal Action" to describe those subcomponents of the Proposed Development which represent portions of the ALP falling under the FAA's approval authority as limited by Section 163(d).

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

PROPOSED SKYBRIDGE ARIZONA DEVELOPMENT

PHOENIX-MESA GATEWY AIRPORT
PHOENIX-GATEWAY AIRPORT AUTHORITY, ARIZONA

1. Introduction

This document is a Finding of No Significant Impact (FONSI) on the environment for the proposed SkyBridge Arizona development at Phoenix-Mesa Gateway Airport (Proposed Development). The Phoenix-Mesa Gateway Airport Authority (PMGAA) is the sponsor for the Airport. The Federal Aviation Administration (FAA) must comply with the National Environmental Policy Act of 1969 (NEPA) before taking the Federal action of approving the portions of the Airport Layout Plan (ALP) that depicts components for which FAA has approval authority. Approving the ALP is authorized by the Airport and Airway Improvement Act of 1982, as amended (Public Laws 97- 248 and 100-223).

2. Project Purpose and Need

The Sponsor's purpose of the Proposed Development (which includes the Proposed Federal Action) is to support the long-term viability of the airport by providing a sustainable revenue source from a parcel of land that is currently undeveloped. Approximately 65 percent of the project site (i.e., 230 acres) is outside of the Air Operations Area (AOA)[1] and has been identified for non-aeronautical land use on the ALP (October 2018 revision). The Proposed Development will help to provide the airport's share of the funds needed for important airport capital improvement projects and to help cover the cost of operating the airport. The proposed 352.8-acre mixed-use development will provide an international air logistics and processing center and a balanced mix of market-driven uses to ensure the long-term viability of the airport.

The airport is currently pursuing several large capital improvement projects including the proposed relocation of the airport's passenger terminal complex and ancillary facilities to the northeast section of the airport, the relocation of the existing air traffic control tower, and the removal of non-standard airfield geometry. Due to the local revenue shares required for these future airfield projects, the airport needs additional sustainable local revenue sources to allow the projects to go forward.

The FAA's purpose for the Proposed Federal Action is to ensure the safe and efficient use of the U.S.'s navigable airspace. The FAA must respond to the Sponsor's request to change the Airport Layout Plan for the Proposed Development. The FAA review these change to ensure airspace obstructions to the airport or obstructions to safety areas would not occur.

3. Proposed Action and Federal Actions

The Proposed Development (which includes the Proposed Federal Action), known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility and air cargo hub and would consist of both aeronautical and non-aeronautical land uses. Anticipated businesses include air cargo, aerospace

[1] Air Operations Area (AOA) = All airport areas where aircraft can operate, either under their own power or while in tow. The AOA includes runways, taxiways, apron areas, and all unpaved surfaces within the airport's perimeter fence. FAA Advisory Circular 150/5210-24, *Airport Foreign Object Debris (FOD) Management* (9/30/2010), para. 1.1.a. .

and auto parts, food processing (dry goods and refrigerated products), e-commerce, office/research and development (R&D), retail, and a hotel.

Section 163 of the FAA Reauthorization Act of 2018 has limited the FAA's review and approval authority for Airport Layout Plans (ALP) and associated review under NEPA. All items of development that are subject to FAA approval shall comply with the requirements of NEPA. For the proposed project at Mesa-Gateway Airport, the FAA retains approval authority over the taxilane, aircraft hangar and aircraft ramp.

The Proposed Federal Action, for which FAA is making a Finding of No Significant Impact (FONSI) consists of the following project elements for the aeronautical portions of the project (approximately 154.8 acres[2]):

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas; and
- Construct nine hangars (approximately 1.33 million square feet [sf] of hangar space on 84.8 acres).

The Proposed Development also consists of the following project elements for the non-aeronautical portions of the project (approximately 129.6 acres). Final use of the non-aeronautical space will be determined based on tenant needs within the constraints of the predetermined infrastructure (for example, roads, stormwater system):

- Construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of R&D and 70,000 sf of hotel and retail development.

Additional project components (to be completed in phases by the developer prior to occupancy) would include:

- Import approximately 500,000 to 700,000 cubic yards (cy) of fill material to provide the necessary site elevations for development and site drainage;
- Construct four on-site detention basins (approximately 24.3 acres total) to control runoff from the project;
- Construct on-site roads, vehicular parking areas, and landscaped open space areas (44.1 acres);
- Extend utility infrastructure onto the project site to serve all areas of development; and
- Construct security checkpoints and a security fence around the perimeter of Taxilane L and between building openings.

The Federal Action necessary to carry out the proposed project includes:

> *Unconditional approval of the portion of the Phoenix-Mesa Gateway Airport Layout Plan (ALP) depicting the proposed taxilane, aircraft hangar and aircraft ramp space pursuant to 49 United States Code (USC) §§ 40103(b), 44718 and 47107(a)(16); and Title 14, Code of Federal Regulations (CFR) Part 77.*

4. Reasonable Alternatives Considered

The EA considered and carried forward two alternatives, the Proposed Development (which includes the Proposed Federal Action) and No Action alternatives. PMGAA, along with the developer, considered other available parcels within the airport property boundary as well as limiting the development to proposed aeronautical portions while holding the remaining portions for future aeronautical development.

[2] NOTE: The land acreage numbers for Area C of the Concept Master Plan (Table 4.3) include acreage that is within the taxiway object free area, but outside of the Proposed Action area.

The purpose of the Proposed Development (which includes the Proposed Federal Action) is to support the long-term viability of the airport by providing a sustainable source of revenue from airport land that is already designated for future non-aeronautical development on the ALP. The following criterion was considered in determining the reasonableness of the alternatives under consideration:

- Would the alternative support the long-term viability of the airport by providing a sustainable source of revenue from airport land that is currently undeveloped, a portion of which is located outside of the Air Operations Area (AOA) and has been previously identified for non-aeronautical land use?
- Would the alternative result in airspace obstructions to the airport or obstructions to safety areas?

Because none of the alternatives considered (other than the Proposed Development) passed the "reasonableness" test, criterion related to "feasibility" were not necessary.

The Proposed Development (which includes the Proposed Federal Action) best satisfies the criterion contained in the screening process (i.e., meeting the project need); therefore, it was carried forward for evaluation in the Final EA and is the Sponsor's "preferred" alternative.

Section 6-2.1(d) of FAA Order 1050.1F states in part: "*There is no requirement for a specific number of alternatives or a specific range of alternatives to be included in an EA. An EA may limit the range of alternatives to the proposed action and no action when there are no unresolved conflicts concerning alternative uses of available resources.*"

FAA did not examine other alternatives because the project does not involve any unresolved conflict of resources.

5. Assessment

The potential environmental impacts and possible adverse effects were identified and evaluated in a Final EA prepared in March 2020. The Final EA disclosed that the following environmental impact categories would not be affected by the Proposed Development (which includes the Proposed Federal Action): Coastal Resources, Department of Transportation Act (Section 4(f)), Farmlands, Land Use, Environmental Justice, Children's Environmental Health and Safety Risks, Visual Effects (light emissions), Visual Effects (Visual Resources/Visual Character), Wetlands, Floodplains and Wild and Scenic Rivers.

Section 4 of the Final EA identified the following environmental impact categories which were examined in detail:

A. **Air Quality** Section 4.3 of the Final EA presents the emission estimates of CO, SO, VOC, NO_x, PM2.5 and PM_{10} and demonstrates that during the construction period and subsequent operation of the Proposed Development (which includes the Proposed Federal Action), the emissions would not exceed the *de minimis* thresholds. Under the Clean Air Act (CAA) General Conformity Rule, when project-related emissions are below *de minimis* thresholds the project is assumed to conform to the State Implementation Plan. As such, the General Conformity requirements of the CAA are not applicable to the Proposed Development (which includes the Proposed Federal Action).

B. **Biological Resources (Migratory Birds)** Section 4.4.3 of the Final EA describes that the southeastern corner of the study area provides suitable habitat for nesting bird species (including Western Burrowing Owl [*Athene cunicularia hpugaea*] that are protected under the Migratory Bird Treaty Act. During the December 2018 survey, six active owl burrows and two potentially active burrows were observed.

   During construction ground bird nesting habitat would be impacted by project activities, including grading and vegetation removal. If the project activities are conducted between March and September, birds may be nesting within the construction area and individuals could be directly impacted. Direct impacts may also include loss of active nests during vegetation removal. FAA has not established a significance threshold for

non-listed species. However, avoidance measures identified in Section 4.4.4 of the Final EA would ensure compliance with the MBTA.

During operation no long-term (operation) impacts to migratory birds would occur due to the Proposed Development (which includes the Proposed Federal Action).

C. **Climate** Section 4.5 of the Final EA describes the types and amounts of greenhouse gases (GHG) potentially emitted as a result of construction and operation of the Proposed Development (which includes the Proposed Federal Action). Although there are currently no Federal standards for aviation-related GHG emissions, it is well-established that GHG emissions can affect climate. The Proposed Development (which includes the Proposed Federal Action) would contribute GHGs temporarily during construction and would also result in increased vehicular and aircraft GHG emissions during operation of the project. The estimates, presented in metric tons of CO2 equivalent (CO2e), are provided for disclosure purposes only.

D. **Hazardous Materials, Pollution Prevention, and Solid Waste** Section 4.6 of the Final EA notes that the project study area has been the subject of numerous extensive hazardous materials cleanup efforts. All areas of known contamination have been cleared. However, due to the presence of past contaminants, the potential exists for previously unknown contaminants to be uncovered during construction of the Proposed Development (which includes the Proposed Federal Action). The Sponsor would keep appropriate spill prevention and clean up kits on site and report discoveries of hazardous materials or accidental spill during construction per the mitigation and avoidance measures identified in Section 4.6.1.4 of the Final EA apply.

Occupied hangars within the project could contain various hazardous products routinely used in the maintenance of aircraft, for example, fuel, oil, and cleaning products. In addition, businesses located within the non-aeronautical portion of the project could use or generate hazardous products depending on the type of industry. However, no significant impacts related to hazardous materials would occur during operation.

The airport operates under existing applicable regulatory requirements for preventing and controlling the effects of pollution during its construction activities. Appropriate spill prevention and cleanup kits are readily available on-site and accidental spills are promptly cleaned up. For the Proposed Action alternative, the contractor would be required to follow those, and other standard hazardous materials containment procedures, should an inadvertent spill occur.

During construction, debris and incidental trash would be created. The project contractors would be responsible for hauling off construction debris and disposing of it properly at a local landfill or recycle and transfer station. No uncommon construction debris is anticipated.

Once constructed, individual businesses within the SkyBridge Arizona Business Park would coordinate with the city's Environmental Management & Sustainability Department to dispose their solid waste. No issues with providing solid waste collection and disposal are known at this time, and no significant impacts related to solid waste would occur.

The Proposed Development (which includes the Proposed Federal Action) would increase the amount of impervious surface within the project study area by approximately 90 percent. Conceptual site plans include approximately 310 acres of impervious surfaces comprised of buildings and pavement and approximately 40 acres of pervious surfaces comprised of open space or landscaping. Therefore, the airport's Storm-Water Pollution Prevention Plan (SWPPP) would be updated to include the newly developed areas. In addition, SkyBridge operators/businesses would have their own Multi-Sector General Permits (MSGPs), as applicable. No significant impacts related to pollution prevention would occur.

E. **Historic, Architectural, Archaeological and Cultural Resources** Section 4.7 of the Final EA notes that a total of 12 cultural properties have been identified within the Proposed Development's Area of Potential Affect (APE) including; two archaeological sites and 10 historic-era buildings and structures. The treatment for two archaeological sites is covered by an existing Programmatic Agreement between the USAF, State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation (ACHP), and concurring parties. Due to the completion of previous studies, the agreement does not require any further treatment. The FAA is not a party to that Programmatic Agreement. Of the 10 historic-era buildings and structures, three are in the direct APE and seven are in the APE for indirect effects (refer to Exhibit 3D in Chapter Three of the Final EA). None of these historic-era properties are eligible for listing in the National Register of Historic Place (NHRP).

The FAA made a finding of "no historic properties affected" for the proposed development and received concurrence from SHPO of this finding February 27, 2019. The FAA's consultation with SHPO is included in **Appendix D** of the Final EA.

FAA also conducted government-to-government tribal consultation with the following Native American Tribes in January 2019: Ak-Chin Indian Community; Salt River Pima-Maricopa Indian Community; Hopi Tribe; Gila River Indian Community; and Tohono O'odham Nation. No responses or comments from the tribes were received by FAA.

F. **Natural Resources and Energy Supply** As described in Section 4.8 of the Final EA, the Proposed Development's (which includes the Proposed Federal Action) effects on natural resources and energy supply are primarily related to the amount of fossil fuel, electricity and potable water and resources required by aircraft, motor vehicle traffic, and construction/development.

The city encourages the use of energy efficient building methods, as well as enforcing the 2009 Energy Conservation Code. Based on the draft SkyBridge Arizona Concept Master Plan, the use of alternative energy sources such as solar power in car parking areas, exterior lighting, and rooftops would also be encouraged, although glint and glare studies would be required and must be approved before any solar photovoltaic systems are allowed. Section 7.3.5 of the SkyBridge Arizona Concept Master Plan, in particular, addresses innovative strategies in incorporating renewable energy into the Proposed Development.

The Proposed Development (which includes the Proposed Federal Action) is not expected to create a demand that would exceed available or future water or other natural resource or energy supplies and, thus, have indirect impacts on the region.

G. **Noise and Compatible Land Use** As described in Section 4.9 of the Final EA, the construction phases of the Proposed Development (which includes the Proposed Federal Action) would involve earthwork/grading, the pouring of asphalt, and the construction of buildings and infrastructure. Construction noise is a temporary impact and would not be above DNL 65 dB for an extended period.

Once constructed, the Proposed Development (which includes the Proposed Federal Action) would result in additional aircraft operations at the airport. The Proposed Development and No Action alternative DNL 65, 70, and 75 dB noise exposure contours were prepared for forecast years 2025, 2030, 2035, and 2045. The noise exposure contours will increase in size through each of the Proposed Development (which includes the Proposed Federal Action) and No Action forecast years. With the additional cargo operations, the Proposed Development noise contours are larger when compared to that of the noise exposure contours of the corresponding No Action year. The noise exposure contour maps show that the DNL 65 dB noise contours extend off airport property to the northwest and southeast. However, they would not result in an increase in noise of DNL 1.5 dB or more, at or above the DNL 65 dB noise contour when comparing the Proposed Development (which includes the Proposed Federal Action) to the No Action, for any noise-sensitive areas. Based on a review of aerial photography, no noise-sensitive land uses are contained within

the DNL 65 dB contour. Therefore, the significant noise impact threshold for aircraft noise, as defined by the FAA, would not be exceeded.

Noise-sensitive land uses are not located close enough to be adversely impacted by land-based noise during operations. Noise from tenants within the SkyBridge development and/or vehicular traffic associated with their operations would not be a significant impact of the Proposed Development.

H. **Socioeconomics** As described in Section 4.10 of the Final EA the Proposed Development (which includes the Proposed Federal Action) would not disrupt or divide the physical arrangement of an established community or displace housing or businesses since it would be constructed in a vacant area within the airport's existing boundaries.

The Proposed Development (which includes the Proposed Federal Action) would provide jobs in the construction sector during the first to years of each of the three phases of construction for a period of six to 10 months per year. Construction employment is temporary and does not represent a change in the community tax base or a long-term opportunity to induce growth.

Construction traffic associated with the project would also occur during the first two years of each of the three phases of construction for a period of six to 10 months per year. The traffic would be temporary and would represent a minor percentage of the traffic experienced on the local and regional street network. No disruption of local traffic patterns or substantial reduction in level of service would occur.

The estimated long-term employment results of the Proposed Development (which includes the Proposed Federal Action) have been provided in the draft SkyBridge Arizona Concept Master Plan by phase of development occupancy (also called absorption). At full occupancy, the Proposed Development could accommodate over 6,400 full time jobs on-site. As stated in the Final EA these jobs are expected to pay an average of $77,000 per year, which is more than 40 percent above the countywide average. This is a positive impact, and one that has been planned for by the city.

For every on-site job created by the Proposed Development (which includes the Proposed Federal Action), it is estimated that another 1.4 jobs would be created nearby due to the spending activities of on-site businesses, their suppliers, and employees (ADM Group et al. 2018). As stated in the Final EA the Proposed Development's contribution to the gross regional product is projected to total $3.8 billion, including indirect and induced effects.

Site access to the Proposed Development (which includes the Proposed Federal Action) is planned to occur from two points: Velocity Way (Access A) and a proposed collector roadway (Access B) approximately 1,500 feet south of Velocity Way. The Proposed Action alternative is expected to generate approximately 15,193 total weekday trips upon completion in 2035. During the morning and evening peak hours, it would generate approximately 1,590 and 1,608 trips, respectively.

By year 2045, the intersections of Power Road/Ray Road and Power Road/Pecos Road are expected to have unacceptable delay predominately due to the high volumes of left turn movements at these intersections. Because these intersections are built to their ultimate geometry, no major improvements are recommended. However, as roadways are constructed to the east, as proposed in the *City of Mesa 2040 Transportation Plan*, motorists would redistribute on the roadway network and most likely equalize throughout the region. Certain regional infrastructure projects are expected as part of the city's future plans to provide for a more robust roadway network within the study area. This expanded roadway network is necessary to accommodate projected future traffic growth and regional development, including the Proposed Development (which includes the Proposed Federal Action). These include the widening and signalization of Sossaman Road/Pecos Road and the extension of SR 24 east to Ironwood Road. The Proposed Development includes transportation demand management strategies to reduce its peak hour

trip impacts on the regional street network. In addition, it would be required to contribute traffic impact fees for the completion of regional street improvements.

I. **Water Resources** As described in Section 4.11 of the Final EA, construction of the Proposed Development (which includes the Proposed Federal Action) would disturb approximately 352.8 acres. Erosion and sedimentation may cause degradation of water quality due to stormwater runoff during construction activities. An Arizona Pollutant Discharge Elimination System (AZPDES) Pollution General Construction permit would be required before construction activities commence. A Construction General Permit is dependent on the preparation of a Stormwater Pollution Prevention Plan (SWPPP) that contains specific best management practices to control the discharge of pollutants, including sediment, into the local surface water drainages.

The Proposed Development (which includes the Proposed Federal Action) would substantially increase the amounts of impervious surfaces and, thus, stormwater runoff from the project study area. As described in the Final EA conceptual site plans include approximately 310 acres of impervious surfaces, such as buildings and pavement, and 40 acres of previous surfaces, such as open space or landscaping. Pollutants and chemicals associated with the Proposed Development's activities, therefore, could run off the new taxilanes, roadways, parking lots, and other new impervious surfaces, potentially flowing into the stormwater system. These pollutants could include but are not limited to, heavy metals from auto or aircraft emissions, oil, grease, debris, and air pollution residues. Landscaping fertilizers and pesticides can cause further adverse effects on water quality. Accidental spills of pollutants, such as fuel, could also occur. If left untreated, contaminated stormwater can result in the incremental degradation of water quality.

The existing and proposed drainage system is not connected to a public drinking water supply, and no significant impacts to surface water quality would occur because of the proposed development. The airport's SWPPP would be updated to include the newly developed areas.

The groundwater table underlying the project study area is at an approximate depth of 140 feet below ground surface (bgs). At this depth, groundwater would not be encountered during construction. Operation of the Proposed Development (which includes the Proposed Federal Action) would not require the use of groundwater resources nor would it affect the underlying groundwater table. In terms of impacts to groundwater quality and/or recharge during operation of the Proposed Development (which includes the Proposed Federal Action), the increase in impervious surface would not substantially contribute to, or adversely affect, groundwater recharge and subsequent groundwater quality.

J. **Cumulative Impacts** As described in Section 4.12 of the Final EA, numerous past or present actions have occurred or are occurring at the airport. Future projects are planned in the airport's most recent five-year Capital Improvement Plan. Based on the city's planning website, there are several active development projects in proximity to the airport within an area generally bounded by Ray Road on the north; Power Road on the west; Pecos Road on the south; and Ellsworth Road on the east.

All of the past, present, and reasonably foreseeable future projects discussed previously have independent utility from, and are not connected with, the Proposed Development (which includes the Proposed Federal Action). Any future projects may require separate NEPA review and potential significant impacts would require mitigation in compliance with Federal law. When combined with the previously mentioned projects, the Proposed Development (which includes the Proposed Federal Action) would have a negligible cumulative environmental impact. Therefore, the Proposed Development (which includes the Proposed Federal Action) would not result in any significant cumulative impact.

6. Public Participation

Efforts were made to encourage public participation though a 30-day public review period of the Draft EA. The PMGAA published a notice in the *East Valley Tribune* on January 26, 2020. A copy of the Draft EA was made

available during the 30-day public review period at the Phoenix-Mesa Gateway Airport Authority, FAA Phoenix Airports District Office, Mesa Main Library, Southeast Regional Library and Queen Creek Library. Two comment letters were received during the comment period. Neither of which included substantive comments requiring a response or changes to the Draft EA. The comments letters are provided in Appendix F of Final EA. A copy of the newspaper Proof of Publication is provided in **Appendix F** of the Final EA.

7. Inter-Agency Coordination

In accordance with 49 USC § 47101(h), FAA has determined that no further coordination with the U.S. Department of Interior or the U.S. Environmental Protection Agency is necessary because the Proposed Development (which includes the Proposed Federal Action) does not involve construction of a new airport, new runway or major runway extension that has a significant impact on natural resources including fish and wildlife; natural, scenic and recreational assets; water and air quality; or another factor affecting the environment.

8. Reasons for the Determination that the Proposed Action will have No Significant Impacts

The attached Final EA examines each of the various environmental resources that were deemed present at the project location, or had the potential to be impacted by the Proposed Development (which includes the Proposed Federal Action). The Proposed Development (which includes the Proposed Federal Action) will not involve any environmental impacts that exceed the threshold of significance as defined by FAA Orders 1050.1F and 5050.4B.

Based on the information contained in this FONSI and supported by detailed discussion in the Final EA, the FAA has selected the Proposed Federal Action as described in Section 3 of this FONSI, the development of a taxilane, aircraft ramp and aircraft hangar space as part of the Proposed Development.

9. Finding of No Significant Impact

I have carefully and thoroughly considered the facts contained in the attached EA. Based on that information, I find the proposed Federal action is consistent with existing national environmental policies and objectives of Section 101(a) of the National Environmental Policy Act of 1969 (NEPA). I also find the Proposed Federal Action will not significantly affect the quality of the human environment or include any condition requiring any consultation pursuant to section 102(2)(C) of NEPA. As a result, FAA will not prepare an EIS for this action.

APPROVED:

Mike N. Williams
Manager
Phoenix Airports District Office

3-27-2020
Date

DISAPPROVED:

Mike N. Williams
Manager
Phoenix Airports District Office

Date

FINAL
ENVIRONMENTAL ASSESSMENT

For

SKYBRIDGE AZ BUSINESS PARK
PHOENIX-MESA GATEWAY AIRPORT
Maricopa County, Arizona

Prepared for

Phoenix-Mesa Gateway Airport Authority

U.S. Department of Transportation
Federal Aviation Administration

By

Coffman Associates, Inc.

MARCH 2020

SkyBridge Arizona

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Final
ENVIRONMENTAL ASSESSMENT
FOR PROPOSED SKYBRIDGE AZ BUSINESS PARK

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SkyBridge Arizona

Chapter One

PURPOSE AND NEED

Chapter One
PURPOSE AND NEED

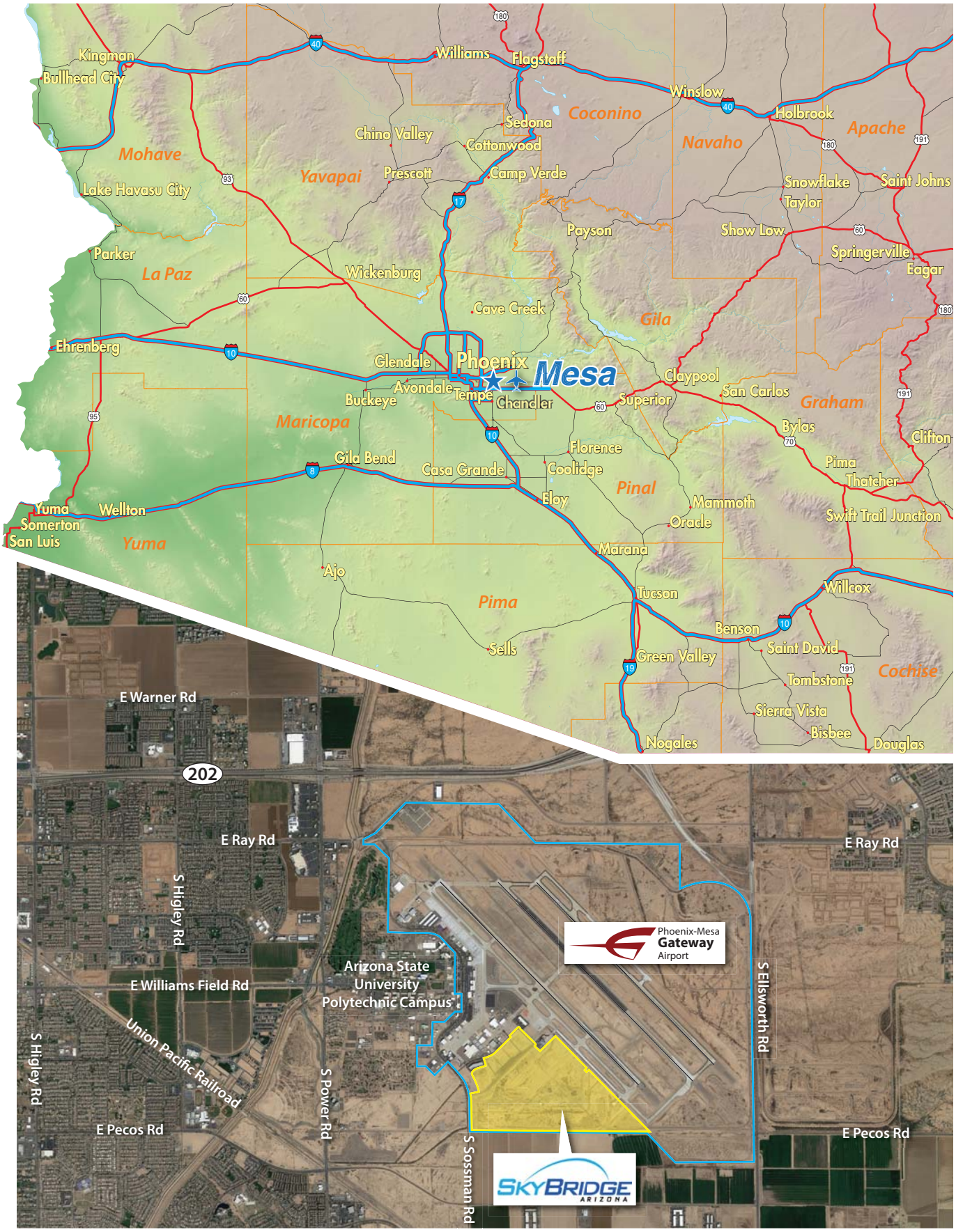
1.1 INTRODUCTION

Phoenix-Mesa Gateway Airport Authority (PMGAA) is the owner and operator of the Phoenix-Mesa Gateway Airport, which is located on approximately 3,000 acres within the City of Mesa in the southeast part of Maricopa County, Arizona (**Exhibit 1A**). PMGAA is seeking to develop 352.8 acres of the southwestern part of the airport with a mix of aeronautical and non-aeronautical land uses (Proposed Development [which includes the Proposed Federal Action]). Approval of a change to the airport layout plan (ALP) to depict the Proposed Development (which includes the Proposed Federal Action) constitutes a federal action.

This Environmental Assessment (EA) has been prepared pursuant to the requirements of Section 102(2)(c) of the *National Environmental Policy Act of 1969* (NEPA) (Title 42 United States Code [USC] Sections 4321 et seq.), the implementing regulations for NEPA (i.e., the President's Council on Environmental Quality [CEQ] Regulations) (Title 40 Code of Federal Regulations [CFR] Sections 1500-1508), and Section 509(b)(5) of the *Airport and Airway Improvement Act of 1982* (Public Law 97-248), as amended. This EA has also been prepared in accordance with Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures* (FAA 2015) and FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions* (FAA 2006). FAA is the lead federal agency to ensure compliance with NEPA for airport development actions.

This chapter provides background information on the airport and project site, identifies the project's purpose and need, describes the Proposed Development (which includes the Proposed Federal Action), lists associated federal actions, discusses the timeframe for project implementation, and outlines the EA's format. Following publication of a Draft EA, an agency/public review and comment period will occur, subject to proper noticing requirements. The Final EA will include an appendix that documents the public involvement process and that contains all comments received during the Draft EA comment period. Written responses to substantive comments will also be provided.

This EA is based on the conceptual site plan, development standards, and design guidelines of the *SkyBridge Arizona Concept Master Plan* (2018) (Concept Master Plan), which is available for review at: https://www.gatewayairport.com/Documents/DocumentLibrary/Current%20Planning%20Studies/181201%20SkyBridge%20Master%20Plan%20Report_Update-December2018.pdf?Uniquefier=2h56kfeOYT. The Concept Master Plan includes the Proposed Development (which includes the Proposed Federal Action) as well as other development already under construction (Phase 0 in the Concept Master Plan). The Proposed Development (which includes the Proposed Federal Action) (i.e., the remaining phases of the Concept Master Plan) would be phased over approximately 20 years. If


Kingman
Bullhead City
Williams
Flagstaff
Winslow
Holbrook
Coconino
Sedona
Chino Valley
Cottonwood
Navaho
Apache
Mohave
Yavapai
Prescott
Camp Verde
Lake Havasu City
Snowflake
Taylor
Saint Johns
Payson
Show Low
Springerville
Eagar
Parker
La Paz
Wickenburg
Cave Creek
Gila
Ehrenberg
Glendale
Phoenix
Mesa
Claypool
Avondale
Tempe
Chandler
Superior
San Carlos
Graham
Buckeye
Maricopa
Bylas
Clifton
Florence
Gila Bend
Casa Grande
Coolidge
Pima
Thatcher
Pinal
Eloy
Mammoth
Yuma
Wellton
Somerton
San Luis
Oracle
Swift Trail Junction
Marana
Ajo
Tucson
Willcox
Benson
Saint David
Sells
Green Valley
Tombstone
Cochise
Sierra Vista
Bisbee
Nogales
Douglas
E Warner Rd
202
E Ray Rd
S Higley Rd
Phoenix-Mesa Gateway Airport
Arizona State University Polytechnic Campus
E Williams Field Rd
S Ellsworth Rd
Union Pacific Railroad
S Power Rd
E Pecos Rd
S Sossman Rd
SkyBridge Arizona

necessary, any future revisions to the ALP as a result of the project will comply with FAA requirements for such ALP approvals.

1.2 BACKGROUND INFORMATION

1.2.1 Description of the Phoenix-Mesa Gateway Airport

As mentioned above, the airport is approximately 3,000 acres in size. Although the airport is located entirely within the City of Mesa, immediately adjacent to the west and south are the towns of Gilbert and Queen Creek, respectively. The City of Phoenix is located approximately 25 miles west of the airport. The airport is bordered on the west by Sossaman Road, to the south by Pecos Road, to the east by Ellsworth Road, and to the north by Ray Road and the Santan Freeway (also known as State Route Loop 202).

The airport was created as a result of the 1993 Base Realignment and Closure program. Williams Air Force Base (AFB) was an active training base for the United States (U.S.) Army Air Forces and the U.S. Air Force (USAF) from 1941 until 1993. In 1994, the base was officially reopened as the Williams Gateway Airport, with a 2008 name change to Phoenix-Mesa Gateway Airport. The airport currently hosts more than 40 companies, commercial air service to more than 45 cities, and contributes approximately $1.3 billion annually to the Arizona economy (FAA and PMGAA 2017).

The airport is designated as a "small hub" primary airport by the *National Plan of Integrated Airport Systems (2019-2023)* (NPIAS) (FAA 2018b). A small hub classification indicates that the airport accounts for between 0.05 percent and 0.25 percent of the total number of U.S. enplaned passengers. An airport must be listed in the NPIAS to be eligible for federal funding. According to the FAA's Air Traffic Activity System (ATADS), during the 12-month period ending on December 31, 2018, the airport experienced 288,218 total operations (FAA ATADS website 2019). Based on the FAA's most recent *Terminal Area Forecast* (TAF) for the airport, operations are anticipated to continue increasing by approximately 2,200 operations annually for the next 27 years (2045) (FAA TAF 2018).

The airport has three parallel runways (Runway 12R/30L, Runway 12L/30R, and Runway 12C/30C). Runway 12R/30L is 10,251 feet long, Runway 12L/30R is 9,301 feet long, and Runway 12C/30C is 10,201 feet long. All three runways are 150 feet wide. Taxiways A and B are part of an extensive taxiway and taxilane network. They provide a dual parallel taxiway system on the southwest side of Runway 12R/30L and are the primary access between the west side apron areas and facilities. Both taxiways are 75 feet wide.

The Phoenix-Mesa Gateway Airport is classified as an Airport Reference Code (ARC) D-V airport. The two components of the ARC are the Aircraft Approach Category (AAC) and the Airplane Design Group (ADG). An AAC of "D" indicates that the primary runway can accommodate aircraft with approach speeds of up to 165 knots; an ADG of "V" is used to determine the appropriate standards for taxiway and taxilane design. A typical aircraft operating at the airport that falls into the ADG V category is the Boeing 747-400.

The airport is zoned as Light Industrial (LI) by the City of Mesa. The airport is also shown as a Specialty District (sub-type Airport), a designated Economic Activity District, and a designated Foreign Trade Zone (FTZ)[1] (#221) within the *Mesa 2040 General Plan* (City of Mesa 2014).

1.2.2 Description of Project Site

The project site is a triangular site located in the southwestern corner of the airport (**Exhibit 1A**). Its primary roadway access is from Sossaman Road, which forms part of the site's western border. The longest site dimension is on the south side, where it is approximately 6,500 linear feet (lf) and is bordered by agricultural lands. To the west of the site is the Arizona State University Polytechnic Campus; to the north, northeast, and east is the airfield with Taxiway A parallel to the site's northeastern border. The Mesa Fire Station 215/Police Airport Unit is adjacent to the site in its northern corner. Other land uses in the general vicinity are the Union Pacific Railroad Company (UPRR) railroad tracks and the Roosevelt Water Conservation District (RWCD) Canal, both of which are located farther southwest.

The project site is in an area of the airport that was previously used as part of the Williams AFB and has several dirt roads and berms. There are two separate drainage areas on the site, including a large detention basin in the southwest corner, which currently serve to detain water from the airport runways and taxiways via drainage channels/swales that traverse the site. Elevations on the site range from 1,380 feet above mean sea level (msl) in the eastern corner to 1,345 feet above msl in the westernmost corner.

1.3 PURPOSE AND NEED FOR THE PROPOSED DEVELOPMENT (WHICH INCLUDES THE PROPOSED FEDERAL ACTION)

The purpose of the Proposed Development (which includes the Proposed Federal Action) is to support the long-term viability of the airport by providing a sustainable revenue source from a parcel of land that is currently undeveloped. Approximately 65 percent of the project site (i.e., 230 acres) is outside of the Air Operations Area (AOA)[2] and has been identified for non-aeronautical land use on the ALP (October 2018 revision). The Proposed Development (which includes the Proposed Federal Action) will help to provide the airport's share of the funds needed for important airport capital improvement projects and to help cover the cost of operating the airport. The proposed 352.8-acre mixed-use development will provide an international air logistics and processing center and a balanced mix of market-driven uses to ensure the long-term viability of the airport.

[1] The Foreign Trade Zone (FTZ) Program is a federal program administered by the U.S. Foreign Trades Zones Board, a division of the U.S. Department of Commerce. FTZs are secured areas, and merchandise in a zone is considered outside the customs territory of the U.S. for formal entry procedures only. Foreign merchandise admitted to a zone is within the territory and jurisdiction of the U.S. and is considered imported. FTZ sites remain within the jurisdiction of local, state, and federal governments or agencies. The FTZ program helps encourage activity and value-added at U.S. facilities in competition with foreign alternatives by allowing delayed or reduced duty payments on foreign merchandise, as well as other savings. The Grantee for the Mesa FTZ is the City of Mesa; the program is administered by the Office of Economic Development (City of Mesa Office of Economic Development 2018).

[2] Air Operations Area (AOA) = That area of the airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. The AOA includes the active runways, taxiways, ramp, and turf areas. The AOA is considered part of the Airport Restricted Area and is off-limits to the general public.

The airport is currently pursuing several large capital improvement projects including the proposed relocation of the airport's passenger terminal complex and ancillary facilities to the northeast section of the airport, the relocation of the existing air traffic control tower, and the removal of non-standard airfield geometry. Due to the large local revenue shares required for these future airfield projects, the airport needs additional sustainable local revenue sources to allow the projects to go forward.

FAA Purpose and Need

FAA's overall purpose and need is to fulfill its statutory mission and ensure the safe and efficient use of navigable airspace in the U.S. pursuant to 49 USC Section 47101 (a)(1). Specific to the Proposed Development (which includes the Proposed Federal Action), pursuant to 49 USC Section 47107(a)(16), the FAA must approve any revision to the ALP to ensure that airspace obstructions to the airport or obstructions to safety areas will not occur. FAA's determination of the Proposed Development (which includes the Proposed Federal Action)'s effects on the "safe and efficient use of navigable airspace" will be made through review of the required Form 7460, Obstruction Evaluation/Airport Airspace Analysis (OE/AAE) submittals for the various buildings or other structures. FAA will also review for approval the proposed taxilane, ramp, and hangar uses.

1.4 DESCRIPTION OF THE PROPOSED DEVELOPMENT (WHICH INCLUDES THE PROPOSED FEDERAL ACTION)

The Proposed Development (which includes the Proposed Federal Action), known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility and air cargo hub and would consist of both aeronautical and non-aeronautical land uses. The proposed site layout is shown in **Exhibit 1B**. Anticipated businesses include air cargo, aerospace and auto parts, food processing (dry goods and refrigerated products), e-commerce, office/research and development (R&D), retail, and a hotel.

Section 163 of the *FAA Reauthorization Act of 2018* has limited the FAA's review and approval authority for ALPs and associated review under NEPA. All items of development that are subject to FAA approval shall comply with the requirements of NEPA. For the proposed project at Phoenix-Mesa Gateway Airport, the FAA retains approval authority over the taxilane, aircraft hangar, and aircraft ramp.

The Proposed Federal Action, for which FAA retains approval authority consists of the following project elements for the aeronautical portions of the project (approximately 154.8 acres[3]) (**Exhibit 1C**):

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas; and

[3] NOTE: The land acreage numbers for Area C of the Concept Master Plan (Table 4.3) include acreage that is within the taxiway object free area, but outside of the Proposed Action area.

- Construct nine hangars (approximately 1.33 million square feet [sf] of hangar space on 84.8 acres).

The Proposed Development also consists of the following project elements for the non-aeronautical portions of the project (approximately 129.6 acres). Final use of the non-aeronautical space will be determined based on tenant needs within the constraints of the predetermined infrastructure (for example, roads, stormwater system) (**Exhibit 1C**):

- Construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of R&D and 70,000 sf of hotel and retail development.

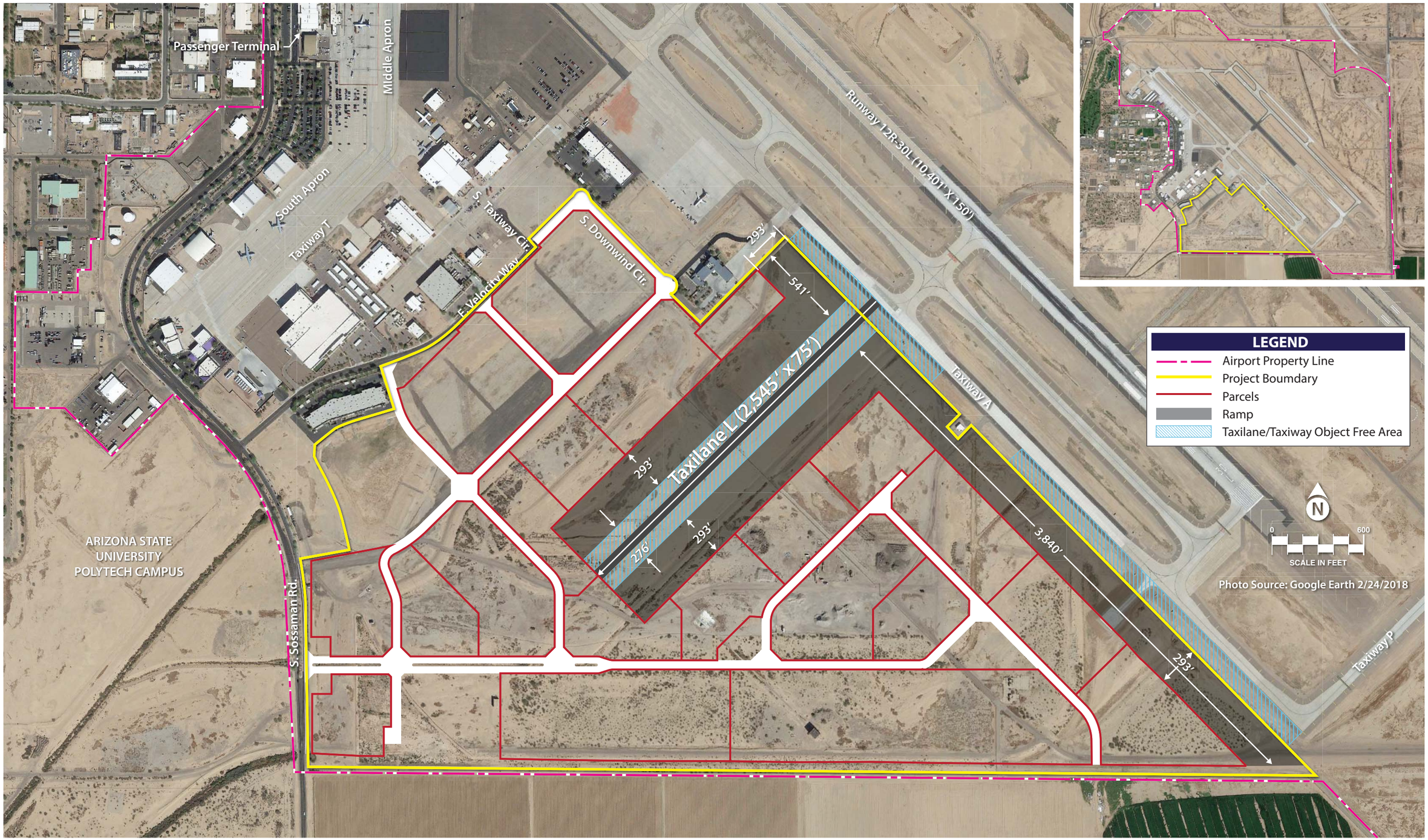
Additional project components (to be completed in phases by the developer prior to occupancy) would include:

- Import approximately 500,000 to 700,000 cubic yards (cy) of fill material to provide the necessary site elevations for development and site drainage;
- Construct four on-site detention basins (approximately 24.3 acres total) to control runoff from the project;
- Construct on-site roads, vehicular parking areas, and landscaped open space areas (44.1 acres);
- Extend utility infrastructure onto the project site to serve all areas of development; and
- Construct security checkpoints and a security fence around the perimeter of Taxilane L and between building openings.

The Federal Action necessary to carry out the proposed project includes:

> *Unconditional approval of the portion of the Phoenix-Mesa Gateway Airport Layout Plan (ALP) depicting the proposed taxilane, aircraft hangar and aircraft ramp space pursuant to 49 United States Code (USC) §§ 40103(b), 44718 and 47107(a)(16); and Title 14, Code of Federal Regulations (CFR) Part 77.*

Overall development of the site would be consistent with the proposed development standards and design guidelines of the SkyBridge Arizona Concept Master Plan (AECOM, Hatch, and Hilgart-Wilson 2018). These include requirements for: building setbacks, landscape buffers, lot coverage, floor to area ratios, building heights, parcel access, parking, signage, lighting, and landscaping. Architectural design guidelines are also included based on the type of land use, i.e., industrial, office/R&D, or retail/hotel. Final use of the non-aeronautical space, however, will be determined based on tenant needs within the constraints of the predetermined infrastructure (for example, roads, stormwater improvements, and utilities) at the time that the tenant enters into a lease with the airport.


Passenger Terminal
Middle Apron
South Apron
Taxiway T
S. Taxiway Cir.
E. Velocity Way
S. Downwind Cir.
Runway 12R-30L (10,401' X 150')
293'
541'
Taxilane L (2,545' X 75')
Taxiway A
293'
276'
293'
3,840'
293'
Taxiway P
ARIZONA STATE
UNIVERSITY
POLYTECH CAMPUS
S. Sossaman Rd.
LEGEND
Airport Property Line
Project Boumdary
Parcels
Ramp
Taxilane/Taxiway Object Free Area
N
0
600
SCALE IN FEET
Photo Source: Google Earth 2/24/2018

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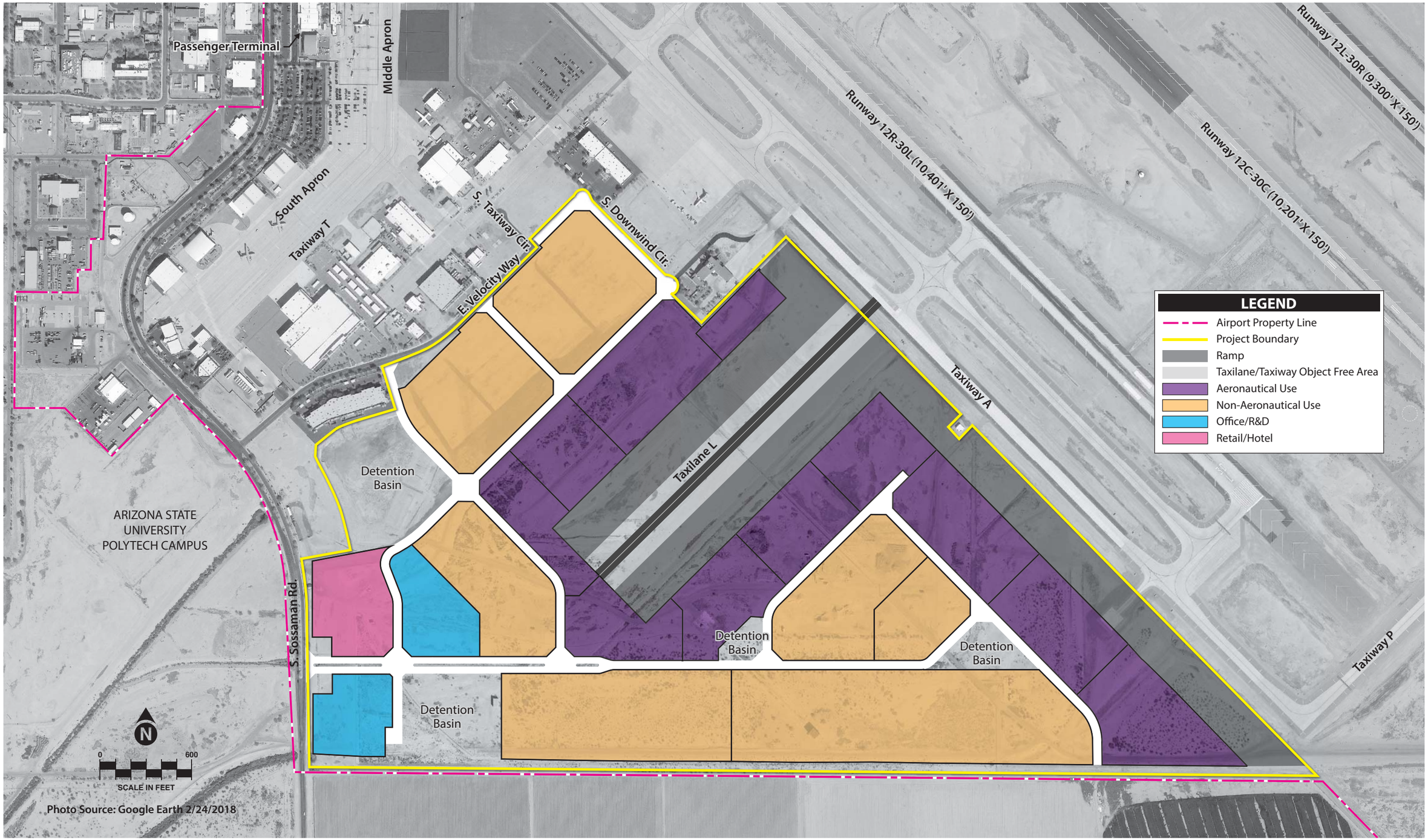
Passenger Terminal
Middle Apron
South Apron
Taxiway T
S. Taxiway Cir.
E. Velocity Way
S. Downwind Cir.
Runway 12R-30L (10,401' X 150')
Runway 12C-30C (10,201' X 150')
Runway 12L-30R (9,300' X 150')
Taxiway A
Taxilane L
Taxiway P
Detention Basin
Detention Basin
Detention Basin
Detention Basin
ARIZONA STATE UNIVERSITY POLYTECH CAMPUS
S. Sossaman Rd.
LEGEND
Airport Property Line
Project Boundary
Ramp
Taxilane/Taxiway Object Free Area
Aeronautical Use
Non-Aeronautical Use
Office/R&D
Retail/Hotel
N
0
600
SCALE IN FEET
Photo Source: Google Earth 2/24/2018

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The SkyBridge Arizona Concept Master Plan can be reviewed using the following link: https://www.gatewayairport.com/Documents/DocumentLibrary/Current%20Planning%20Studies/181201%20SkyBridge%20Master%20Plan%20Report_Update-December2018.pdf?Uniqueifier=2h56kfeOYT.

Exhibit 1D shows a conceptual visualization of four types of buildings as well as their proposed locations.

Building heights would vary from 40 to 120 feet (**Exhibit 1E**). Allowable building height is determined by both the City of Mesa Zoning Code requirements as well as FAA and airport restrictions. Whichever requirement is stricter would be applied. The proposed project includes two hangars that would be a maximum of 120 feet in height. These hangars would be located along Taxilane L and would accommodate a Boeing 747-400, which is the largest aircraft in the airport's cargo fleet that may occasionally use the new facilities.

1.5 TIMEFRAME OF THE PROPOSED DEVELOPMENT (WHICH INCLUDES THE PROPOSED FEDERAL ACTION)

If approved by FAA, the Proposed Development (which includes the Proposed Federal Action) would be constructed in three phases, each taking approximately two years during an overall five-year period (**Exhibit 1F**). Specific details are provided below:

- Phase 1 (Years 2020-2025) - approximately 360,000 cy of mass grading and 860,000 square feet (sf) of building construction completed in the first two years;
- Phase 2 (Years 2026-2030) - approximately 470,000 cy of mass grading and 1,755,000 sf of building construction and a 150-room hotel completed in the first two years; and
- Phase 3 (Years 2031-2035) - approximately 315,000 cy of mass grading and 1,008,000 sf of building construction completed in the first two years.

1.6 EA DOCUMENT ORGANIZATION

This EA evaluates the Proposed Development (which includes the Proposed Federal Action) by organizing the information as follows:

- Chapter 1, Purpose and Need - provides background information on the airport and the project site, the purpose and need for the Proposed Development (which includes the Proposed Federal Action), a brief description of the Proposed Development (which includes the Proposed Federal Action), requested federal actions, and the timeframe of the Proposed Development (which includes the Proposed Federal Action);
- Chapter 2, Alternatives - provides an overview of the identification and screening of alternatives considered as part of the environmental evaluation process;

- Chapter 3, Affected Environment - describes the regulatory setting and existing environmental conditions within the Proposed Development study area;

- Chapter 4, Environmental Consequences and Mitigation - discusses and compares the environmental impacts associated with the Proposed Development (which includes the Proposed Federal Action), the No Action alternative, other alternatives considered for analysis (if any), and avoidance, minimization, or mitigation measures, where applicable;

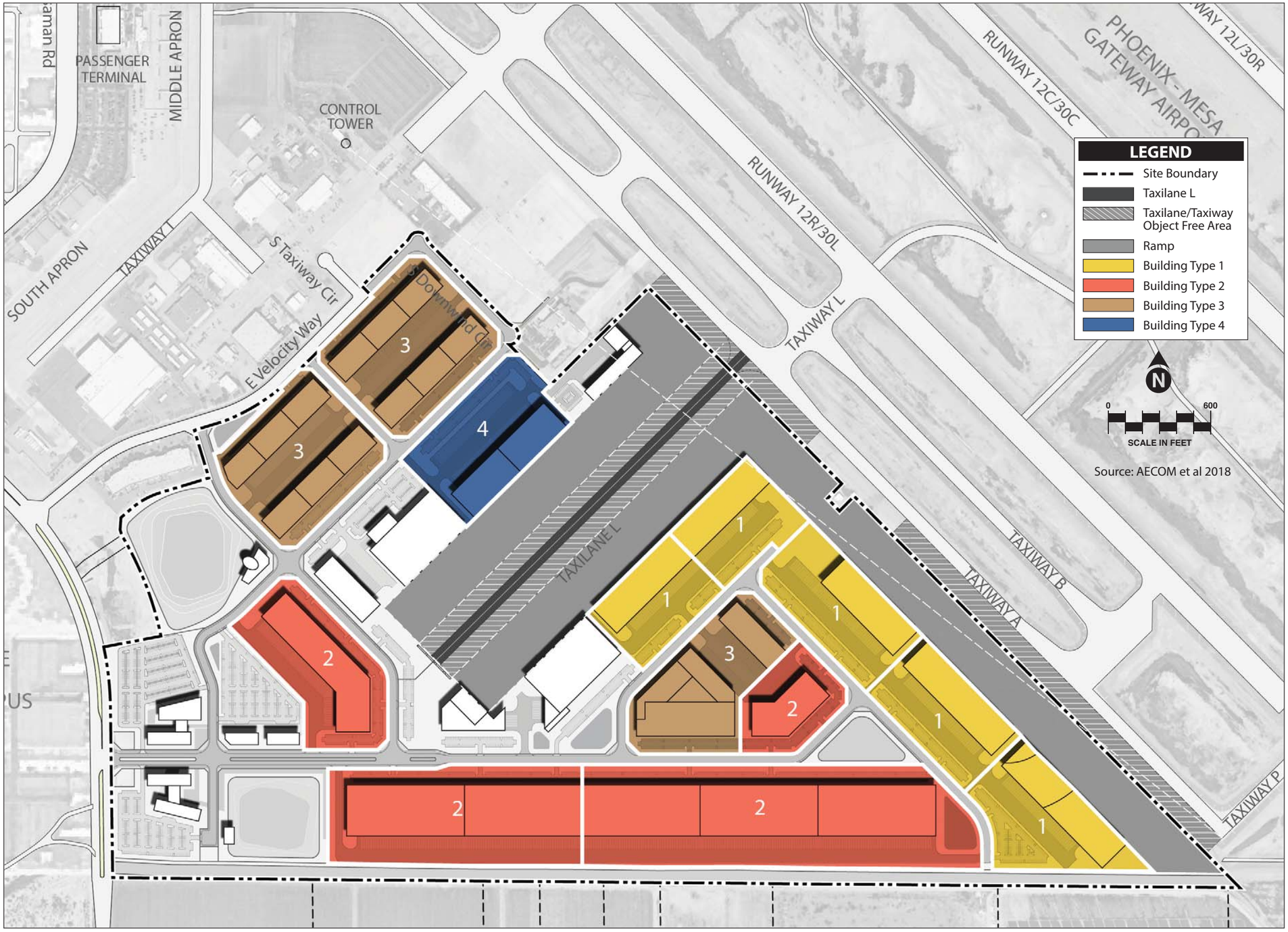
- Chapter 5, Coordination and Public Involvement - discusses the coordination and public involvement associated with the EA process. This section also presents a list of federal, state, and local agencies, and other interested parties that have been involved in the EA coordination efforts;

- Chapter 6, List of Preparers;

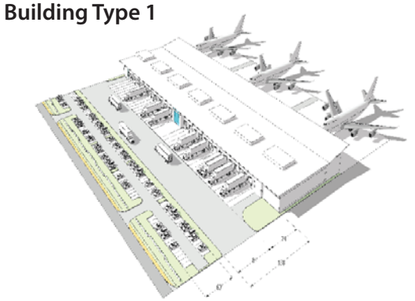
- Chapter 7, List of Abbreviations and Acronyms;

- Chapter 8, References; and

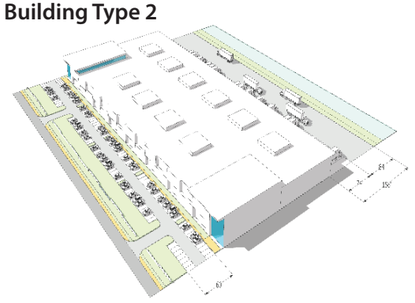
- The appendices contain a record of agency and public coordination activities.



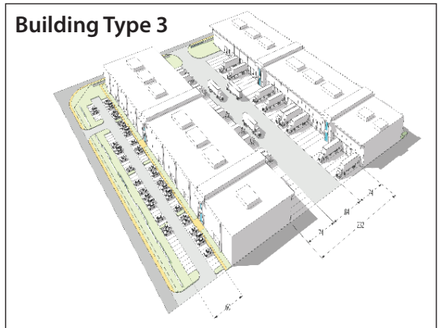
Building Type 1



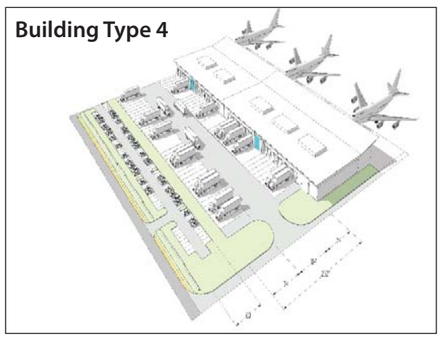
Building Type 2



Building Type 3



Building Type 4



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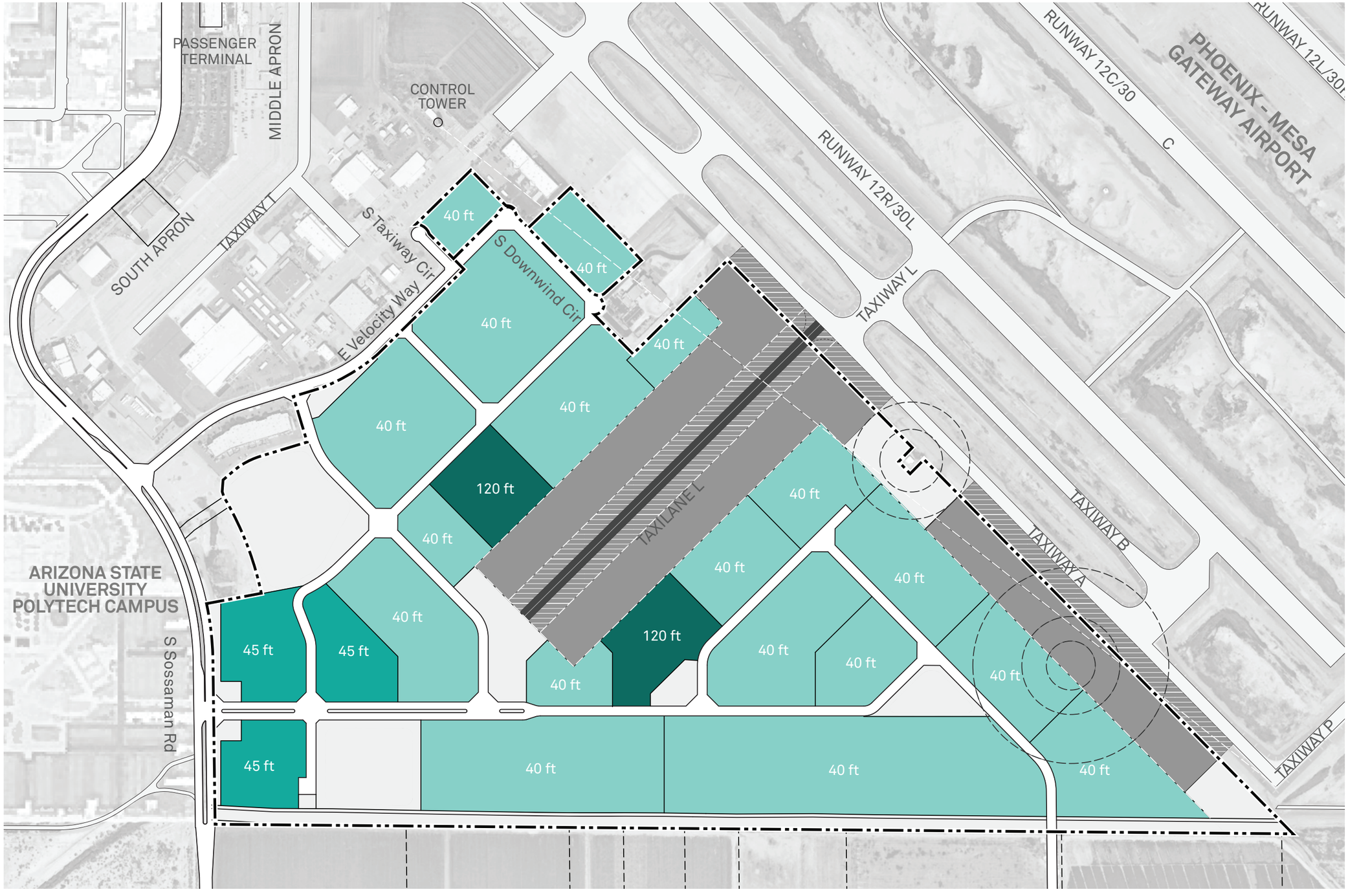

LEGEND

- Site Boundary
- Taxilane L
- Taxilane L OFA
- Ramp

- 0 - 40 ft
- 41 - 100 ft
- > 100 ft

N

0 600

SCALE IN FEET

Source: AECOM et al 2018
Last Modified: April 4, 2019

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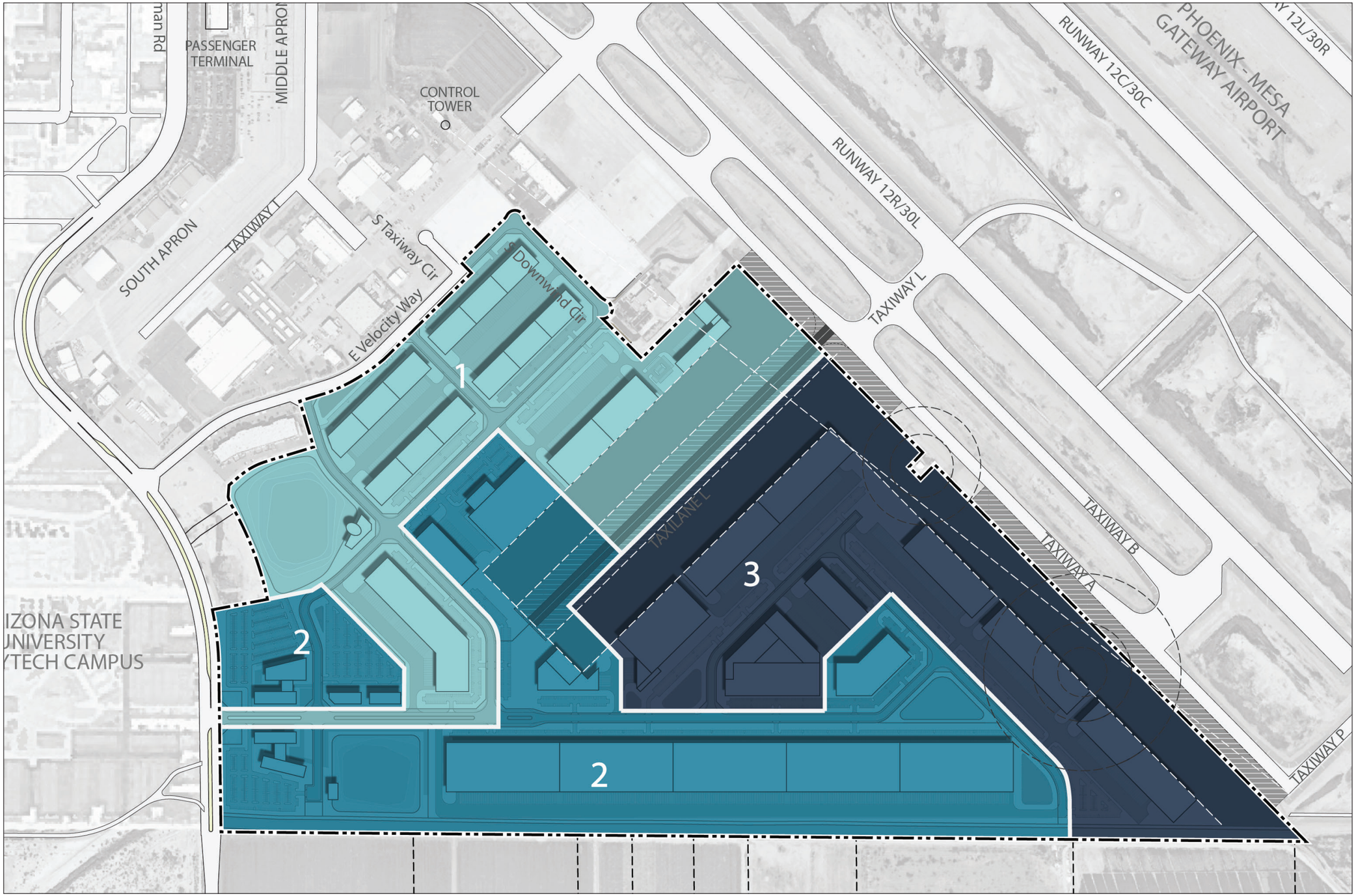

Source: AECOM et al 2018

Exhibit 1F
PROPOSED CONSTRUCTION PHASING

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SkyBridge Arizona

Chapter Two

ALTERNATIVES

Chapter Two ALTERNATIVES

2.1 INTRODUCTION

This chapter identifies reasonable alternatives for evaluation in this Environmental Assessment (EA) based on the purpose and need for the Proposed Development (which includes the Proposed Federal Action) identified in Chapter One. Council on Environmental Quality (CEQ) regulations (Title 40 Code of Federal Regulations [CFR] Section 1502.14) regarding implementation of the *National Environmental Policy Act* (NEPA) require that federal agencies perform the following tasks:

- Rigorously explore and objectively evaluate all reasonable alternatives and, for alternatives which were eliminated from detailed study, briefly discuss the reasons for having been eliminated;
- Devote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits;
- Include reasonable alternatives not within the jurisdiction of the lead agency; and
- Include the alternative of No Action.

As stated in Federal Aviation Administration (FAA) Order 5050.4B, para. 706 (d)(7), an alternative can be eliminated from further consideration when the alternative has been judged "not reasonable." Whether a proposed alternative is reasonable depends, in large part, upon the extent to which it meets the purpose and need for the proposed action (FAA Order 1050.1F, para. 7-1.1[e]). FAA Orders 1050.1F and 5050.4B also state that "an EA may limit the range of alternatives to the proposed action and no action when there are no unresolved conflicts concerning alternative uses of available resources." (FAA Order 1050.1F, para. 6-2.1[d]; FAA Order 5050.4B, para. 706[d][5]). As stated above, 40 CFR 1502.14(c) requires the evaluation of the No Action alternative regardless of whether it meets the stated purpose and need or is reasonable to implement.

2.2 ALTERNATIVES SCREENING PROCESS

The purpose of the Proposed Development (which includes the Proposed Federal Action) is to support the long-term viability of the airport by providing a sustainable source of revenue from airport land that is already designated for future non-aeronautical development on the airport layout plan (ALP). The following criterion was considered in determining the reasonableness of the alternatives under consideration:

- Would the alternative support the long-term viability of the airport by providing a sustainable source of revenue from airport land that is currently undeveloped, a portion of which is located outside of the Air Operations Area (AOA) and has been previously identified for non-aeronautical land use?

- Would the alternative result in airspace obstructions to the airport or obstructions to safety areas?

Because none of the alternatives considered (other than the Proposed Development [which includes the Proposed Federal Action]) passed the "reasonableness" test, criterion related to "feasibility" were not necessary.

2.3 ALTERNATIVES CONSIDERED

2.3.1 No Action Alternative

Under the No Action alternative, the project site would remain undeveloped. While the No Action alternative does not meet the purpose and need for the Proposed Development (which includes the Proposed Federal Action) and is, thus, not considered a "reasonable" alternative, in accordance with CEQ regulations under 40 CFR 1502.14(d), it is further analyzed with regard to its potential environmental impact in this EA. The No Action alternative serves as a baseline to compare the impacts of the Proposed Development (which includes the Proposed Federal Action) alternative. The No Action alternative would not result in future changes to the existing topography, drainage, or other environmental characteristics of the airport.

2.3.2 Proposed Development (which includes the Proposed Federal Action) Alternative

The Proposed Development (which includes the Proposed Federal Action), known as SkyBridge Arizona, is described in Section 1.4 and would be a mixed-use development that includes a joint United States (U.S.)-Mexico Customs inspection facility and air cargo hub and consists of both aeronautical and non-aeronautical land uses. Anticipated businesses include air cargo, aerospace and auto parts, food processing (dry goods and refrigerated products), e-commerce, office/research and development (R&D), retail, and a hotel. The Proposed Development (which includes the Proposed Federal Action) would construct approximately 154.8 acres of aeronautical land uses, including:

- A 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;

- Approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas; and

- Nine hangars (approximately 1.33 million square feet [sf] of hangar space) located along Taxilane L, two of which could accommodate a Boeing 747-400, which is the largest aircraft in the airport's cargo fleet that may occasionally use the new facilities.

The Proposed Development would also construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of R&D and 70,000 sf of hotel and retail development on 129.6 acres and approximately 68.4 acres of on-site roads, vehicular parking areas, landscaped open space areas and detention basins. Final use of the non-aeronautical space will be determined based on tenant needs within the constraints of the predetermined infrastructure (for example, roads, stormwater system).

The Proposed Development (which includes the Proposed Federal Action) best satisfies the criterion contained in the screening process (i.e., meeting the project need); therefore, it is carried forward for evaluation in Chapter Four of this EA and is the Sponsor's "preferred" alternative.

2.3.3 Alternative Development Locations

The airport is currently developed or reserved for safety areas such as runway protection zones at the ends of the runway system with two notable exceptions: the northeast corner of the airport; and the subject property (located in the southwest corner of the airport). The airport's approved Airport Master Plan (AMP), adopted December 2008, as well as the current ongoing AMP update and the most recently approved ALP, all include a commercial passenger terminal relocation and associated improvements in the northwest corner of the airport. This terminal relocation project was the subject of an EA leading to a Finding of No Significant Impact (FONSI) and Record of Decision (ROD), which was signed on March 21, 2017. Only the northeast corner of the airport met all project screening criteria for the passenger terminal complex and was retained for consideration in the EA. Thus, the northeast area of the airport is no longer available as an alternative location for the Proposed Development (which includes the Proposed Federal Action).

Off-airport development locations are not considered "reasonable" as alternatives for the Proposed Development (which includes the Proposed Federal Action). Constructing the Proposed Development (which includes the Proposed Federal Action) off the airport would not meet the basic purpose of the project, which is to provide the airport with a sustainable source of revenue from undeveloped airport land. Therefore, off-airport sites for the project are not considered further in this EA.

2.3.4 Aeronautical Development Reserve Alternative

This alternative would develop the proposed aeronautical portions of the Proposed Development (which includes the Proposed Federal Action) alternative and hold the remaining portions of the project site (i.e., those outside the AOA) in "reserve" for future aeronautical development should the airport exceed future forecast projections and need additional aeronautical lands. This alternative is not considered "reasonable" as it would not meet the purpose and need for the project to provide a sustainable source of revenue from airport land that is located outside of the AOA and is currently undeveloped. The proposed location in the southwest corner of the airport has been, and is currently, planned for a combination of aviation and non-aviation related land uses in all recent and ongoing planning documents.

2.4 PERMITS AND APPROVALS REQUIRED

Since the Proposed Development (which includes the Proposed Federal Action) will grade over one acre of land, a Construction General Permit (CGP) under the Arizona Pollutant Discharge Elimination System (AZPDES) program will be required per the *Clean Water Act* (CWA). For Arizona, this program is administered by the Arizona Department of Environmental Quality (ADEQ). In addition, the Maricopa County Air Quality Department will require a dust permit (for construction activity).

Building permits for all development, excluding infrastructure that is related to the development of taxiways and taxilanes, will be required from the City of Mesa. Development of the site will occur based on the *SkyBridge Arizona Concept Master Plan* development standards and design guidelines. Building improvements will be reviewed first by Phoenix-Mesa Gateway Airport Authority (PMGAA) and then forwarded to the City of Mesa for permitting.

FAA approval is required for each building through its Obstruction Evaluation/Airport Airspace Analysis (OE/AAA) program, which identifies potential aeronautical hazards, obstacles, obstructions, and objects. Prior to development, the developer will be required to file FAA Form 7460-1, Notice of Proposed Construction, and, after approval to proceed with construction, FAA Form 7460-2, Notice of Actual Construction.

2.5 LISTING OF FEDERAL LAWS AND REGULATIONS CONSIDERED

Table 2A includes a list of federal statutes, executive orders, regulations, FAA and U.S. Department of Transportation (DOT) orders, and FAA advisory circulars considered in the evaluation of Proposed Development (which includes the Proposed Federal Action) alternatives and throughout the preparation of this EA.

TABLE 2A
List of Applicable Federal Laws and Regulations

Federal Laws and Statutes
Airport and Airway Improvement Act of 1982, as amended (P.L. 97-248; 43 CFR 2640)
American Indian Religious Freedom Act of 1978 (42 U.S.C. §1996)
Archaeological and Historic Data Preservation Act of 1974 (P.L. 93-291, 16 USC 469)
Archaeological Resources Protection Act (16 U.S.C. §§470aa-470mm)
Aviation Safety and Capacity Expansion Act of 1990 (P.L. 101-508, as amended)
Aviation Safety and Noise Abatement Act of 1979 (P.L. 96-193; 49 USC App. 2101)
Bald and Golden Eagle Protection Act (16 U.S.C. §668 *et seq*)
Civil Rights Act of 1964, Title VI (42 U.S.C. §§2000d-2000d-7)
Clean Air Act of 1977 (as amended) (42 USC 7409 et seq.)
Comprehensive Environmental Response, Compensation, and Liability Act (42 USC 9601; P.L. 96-510)
Department of Transportation Act of 1966 – Section 4(f) (as amended by 49 U.S.C. §303, Policy on lands, wildlife and waterfowl refuges, and historic sites [P.L. 97-449])
Endangered Species Act of 1973 (P.L. 85-624; 16 U.S.C. §§661, 664 note, 1008 note)
FAA Reauthorization Act of 2018 (P.L. 115-254)
Federal Water Pollution Control Act Amendments for 1972, Section 404 (33 USC 1344; P.L. 92-500), as amended by the *Clean Water Act of 1977* (33 USC 1251; P.L. 95-217)
Hazardous Materials Transportation Act (42 U.S.C. §§5101-5128)

TABLE 2A (CONTINUED)
List of Applicable Federal Laws and Regulations

Federal Laws and Statutes (Continued)
Historic Sites Act of 1935 (16 U.S.C. §§461-467)
Land and Conservation Fund Act of 1965 (16 U.S.C. §§4601-4 *et seq.*)
Migratory Bird Treaty Act (16 U.S.C. §703 *et seq.*)
National Environmental Policy Act of 1969 (NEPA) (P.L. 91-190; 42 USC 4321 et seq.)
National Historic Preservation Act of 1966, Section 106, (55 USC 300101 et seq.)
Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. §§3011-3013)
Noise Control Act of 1972 (P.L. 92-574; 42 USC 4901)
Oil Pollution Act (33 U.S.C. §§2701-2762)
Resource Conservation and Recovery Act of 1976 (42 USC 6901, et seq.; P.L. 94-580, as amended by the *Solid Waste Disposal Act of 1980* [P.L. 96-482]; and the 1984 Hazardous and Solid Waste Amendments [P.L. 98-616]
Executive Orders
Executive Order 11514, *Protection and Enhancement of Environmental Quality* (dated March 4, 1970)
Executive Order 11593, *Protection and Enhancement of the Cultural Environment* (dated May 13, 1971)
Executive Order 13112, *Invasive Species*
Executive Order 13693, *Planning for Federal Sustainability*
14 CFR Part 150, *Airport Noise Compatibility Planning*
36 CFR Part 800 (39 FR 3365, January 25, 1974, and 51 FR 31115, September 2, 1986), *Protection of Historic Properties*
40 CFR Parts 1500-1508, *CEQ implementation of NEPA procedural provisions, establishes uniform procedures, terminology, and standards for implementing the procedural requirements of NEPA's section 102(2)*
FAA Advisory Circulars and Orders
AC 150/5020-1, *Noise Control and Compatibility Planning for Airports*
AC 150/5300-13A, *Airport Design*
AC 150/5320-6F, *Airport Pavement Design and Evaluation*
AC 150/5370-10H, *Standards for Specifying Construction of Airports*
FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*
FAA Order 5050.4B, *National Environmental Policy Act Implementing Instructions for Airport Actions*

AC	- Advisory Circular	FAA	- Federal Aviation Administration
CEQ	- Council on Environmental Quality	FR	- Federal Register
C.F.R.	- Code of Federal Regulations	P.L.	- Public Law
DOT	- U.S. Department of Transportation	U.S.C.	- United States Code

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SkyBridge Arizona

Chapter Three

AFFECTED ENVIRONMENT

Chapter Three
AFFECTED ENVIRONMENT

3.1 INTRODUCTION

The purpose of this chapter is to identify or highlight any important background information that describes the existing environment at the Phoenix-Mesa Gateway Airport (airport), the SkyBridge project site, and a cumulative study area, as defined in the next section. This Environmental Assessment (EA) uses the most current data available. The baseline year for identifying existing conditions in this chapter is generally 2018.

3.2 PROJECT STUDY AREAS

The project study area varies based on the impact category being analyzed and includes both potential direct and indirect impacts from the Proposed Development (which includes the Proposed Federal Action) and direct and indirect impacts from the No Action alternative. Cumulative study areas can also vary, as specified within the analysis contained in Chapter Four. The cumulative study area used to assess most cumulative impacts within this EA is the airport and land within 0.5 mile of the airport. However, some resource categories, such as air quality and vehicular traffic impacts, are broader in scope. For example, cumulative air quality impacts in this EA are discussed in the context of Maricopa County (county), while cumulative vehicular traffic impacts included streets and intersections generally bounded by State Route (SR) 202 and Ray, Power, Sossaman, Pecos, and Ellsworth roads.

3.3 ENVIRONMENTAL RESOURCES NOT AFFECTED

Sections within this chapter are based on impact categories required to be addressed in Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures*. The following impact categories are not discussed since, based on project scoping, a site visit, and internet research, they do not occur within the project study area:

- Coastal Resources. There are no coastal resources located within the project study area, the airport, or within the State of Arizona (state).

- Farmlands. Based on the United States (U.S.) Department of Agriculture, Natural Resources Conservation Service's Web Soil Survey, the soils on airport property are classified as prime farmland, if irrigated. However, the project study area was previously used by the United States Air Force (USAF) for aviation purposes and is not irrigated nor has it been previously farmed. In addition, the airport and the project study area are listed by the U.S. Census Bureau as an "urbanized area." Therefore, the *Farmland Protection Policy Act*, which is intended to minimize the impact federal

programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses, does not apply.

- Wetlands. Based on a field survey, the project study area does not contain wetlands or other waters of the U.S. Biological field surveys indicate that there are no aquatic habitats (including wetlands or stock ponds) or broadleaf deciduous riparian vegetative communities within the project study area (SWCA Environmental Consultants [SWCA] 2019a). Although the National Wetland Inventory categorizes two on-site drainages as "riverine" (i.e., river or stream channels), on-site drainages are human-made swales that collect intermittent stormwater runoff and convey it to on-airport stormwater detention ponds with no connectivity to federal jurisdictional waters.

- Floodplains. The airport is mapped by the Federal Emergency Management Agency (FEMA) as Zone D, an "Area of Undetermined Flood Hazard" (FIRM Panel 04013C2770L) (FEMA 2013). No 100-year floodplains are identified for the project study area. In addition, the Flood Control District of Maricopa County (FCDMC) was consulted during the scoping process for this EA. FCDMC responded on December 18, 2018, with a statement that it had no comments or concerns regarding the proposed project (**Appendix A**).

- Wild and Scenic Rivers. There are no wild and scenic rivers or other rivers under study for designation to the National System within the project study area (National Park Service website 2019). The nearest designated river segment is on the Verde River, located more than 25 miles north of the airport (National Wild and Scenic Rivers System website 2019).

The affected environment related to the remaining impact categories is presented in the following sections in the order they are listed within Section 4-1 of FAA Order 1050.1F.

3.4 AIR QUALITY

3.4.1 Regulatory Setting

Under the *Clean Air Act*, the U.S. Environmental Protection Agency (EPA) establishes National Ambient Air Quality Standards (NAAQS) based on health risks for the following pollutants:

- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb)
- Ozone (O_3)
- "Inhalable coarse" particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10})
- "Fine" particulate matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$)

An area with ambient air concentrations exceeding the NAAQS for a criteria pollutant is said to be a nonattainment area for the pollutant's NAAQS, while an area where ambient concentrations are below the NAAQS is an attainment area. U.S. EPA requires that areas designated as nonattainment

demonstrate how they will attain the NAAQS by an established deadline. To accomplish this, states are required to prepare State Implementation Plans (SIPs). SIPs are typically a comprehensive set of reduction strategies and emissions budgets designed to bring the area into attainment. The following plans are established by the Maricopa Association of Governments (MAG) and apply to the airshed:

- CO - *MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area*[1]
- O_3 - *MAG 2017 Eight-Hour Ozone Moderate Area Plan for the Maricopa Nonattainment Area*
- PM_{10} - *MAG 2012 Five Percent Plan for PM-10 for the Maricopa County Nonattainment Area*

An airport action may also be subject to the General Conformity requirements of the *Clean Air Act* if it will occur in a nonattainment or maintenance area. The General Conformity Rule of the *Clean Air Act* establishes the procedures and criteria for determining whether certain federal actions conform to state or federal air quality implementation plans. Under the General Conformity Rule, all reasonably foreseeable *direct* and *indirect* emissions occurring due to federally supported actions should be quantified and compared against *de minimis* thresholds in what is known as an applicability test. The applicability test is only conducted on pollutants for which the area is classified as either maintenance or nonattainment.

3.4.2 Affected Environment

The project study area for air quality is the airshed located in Maricopa County, Arizona, which is a moderate nonattainment area for eight-hour O_3 and a serious nonattainment area for PM_{10}. The county has operated under a maintenance plan for CO since 2005 (see Footnote 1); it is in attainment for all other federal criteria pollutants (SO_2, NO_2, Pb, and $PM_{2.5}$) (U.S. EPA 2019a).

The project study area itself does not generate air quality emissions (with the exception of occasional dust) as it is vacant, and no construction, vehicular, or aircraft emissions are associated with its use. Based on the analysis completed for this EA using the FAA's Aviation Environmental Design Tool (AEDT) (see Section 4.3.1 for a discussion of the AEDT model), emissions associated with aircraft operations at the airport in 2018 are as follows (**Appendix B**):

[1] Section 175A(b) of the *Clean Air Act* requires that eight years after redesignation of an area as an attainment area, an additional plan revision for maintaining the primary air quality standard for ten years after the expiration of the initial ten-year period must be submitted to EPA. In accordance with the *Clean Air Act*, the *MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area* has been prepared. The plan demonstrates continued maintenance of the CO standards through 2025 with a maximum eight-hour concentration of 4.0 parts per million and establishes a 2025 motor vehicle emissions budget of 559.4 metric tons per day for the CO maintenance area. According to the *MAG 2013 Carbon Monoxide Maintenance Plan for the Maricopa County Area*, "There have been no violations of the one-hour CO standard since 1984 and no violations of the eight-hour standard since 1996. The Revised MAG 1999 Serious Area Carbon Monoxide Plan demonstrated attainment by 2000 and was submitted to EPA in 2001. The MAG Carbon Monoxide Redesignation Request and Maintenance Plan demonstrated maintenance of the CO standards through 2015 and was submitted to EPA in 2003. On March 9, 2005, EPA published final approval of the Serious Area Plan, Maintenance Plan, and redesignation of the Maricopa County area to attainment status, effective April 8, 2005."

- CO - 365.26 tons/year
- NOx - 10.46 tons/year
- SO_2 - 11.49 tons/year
- PM_{10} - 10.96 tons/year
- $PM_{2.5}$ - 11.13 tons/year
- VOC - 42.55 tons/year

The Arizona Department of Environmental Quality (ADEQ) operates air quality monitoring sites in the Phoenix metropolitan area that measure criteria air pollutants. Several of these stations, their locations relative to the project study area, and a tabulation of pertinent recent monitoring data are provided in **Table 3A**.

TABLE 3A
Local Monitoring Station Data

Monitoring Station Name	Monitoring Station Number	Address	Distance from Project Study Area	Pollutant Standard	# of Exceedances of Primary Standard		
					2016	2017	2018
Mesa	04-013-1003	310 S. Brooks Mesa, AZ	13.8 miles northwest	CO 8-hour 1971	0	0	0
				O_3 8-hour 2015	14	21	23
				PM_{10} 24-hour 2006	0	0	2
Falcon Field	04-013-1010	4530 E. McKellips Road	11 miles northwest	O_3 8-hour 2015	5	17	22
West Chandler	04-013-4004	275 S. Ellis Chandler, AZ	13 miles west	CO 8-hour 1971	0	0	2
				O_3 8-hour 2015	3	8	0
				PM_{10} 24-hour 2006	0	1	7
Higley	04-013-4006	2207 S. Higley Road Gilbert, AZ	3.75 miles west	PM_{10} 24-hour 2006	NA*	0	5
A J Maintenance Yard	04-021-3001	305 E. Superstition Blvd. Apache Junction, AZ	10 miles northeast	O_3 8-hour 2015	6	14	5
Apache Junction Fire Station	04-021-3002	3955 E. Superstition Blvd. Apache Junction, AZ	11.5 miles northeast	PM_{10} 24-hour 2006	0	0	1
Combs	04-021-3009	301 E. Combs Road Queen Creek, AZ	8.25 miles southeast	PM_{10} 24-hour 2006	2	1	3

Source: U.S. EPA 2016, 2017, 2018. Air Data: Air Quality Data Collected at Outdoor Monitors Across the U.S. - Annual Summary Data. Available at: https://aqs.epa.gov/aqsweb/airdata/download_files.html#Annual, accessed February 2019.
CO = carbon monoxide; O_3 = ozone; PM_{10} = inhalable coarse particulate matter with an aerodynamic diameter of 10 microns or less
NA* = not applicable; no information is available.

3.5 BIOLOGICAL RESOURCES

3.5.1 Regulatory Setting

U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements of the federal *Endangered Species Act* (ESA), specifically Section 7, which sets forth requirements for consultation to determine if a proposed action "may affect" a federally endangered or threatened species. If an agency determines that an action "may affect" a federally protected species, then Section 7(a)(2) requires the agency to consult with USFWS to ensure that any action the agency authorizes, funds, or carries out is not likely to jeopardize the continued existence of any federally listed endangered or threatened species, or result in the destruction or adverse modification of critical habitat. If a species has been listed as a candidate species, Section 7(a)(4) states that each agency must confer with USFWS.

The *Migratory Bird Treaty Act* (MBTA) protects all migratory birds, including their eggs, nests, and feathers. The MBTA was originally drafted to put an end to the commercial trade in bird feathers popular in the latter part of the 1800s. The MBTA is enforced by USFWS, and potential impacts to species protected under the MBTA are evaluated by USFWS in consultation with other federal agencies. The current U.S. Government administration has recently released an interpretation of the MBTA known as the M-Opinion, which concludes that the take of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds. On April 11, 2018, USFWS issued guidance on the recent "M-Opinion" affecting MBTA implementation. Working with other federal agencies on migratory bird conservation is an integral mission of the USFWS; therefore, USFWS maintains that potential impacts to migratory birds resulting from federal actions should be addressed under the *National Environmental Policy Act* (NEPA).

The *Bald and Golden Eagle Protection Act* (BGEPA) prohibits the take (defined as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb") of bald and golden eagles, including their parts, nests, or eggs, without a permit. Thus, this Act protects bald and golden eagles from unauthorized capture, purchase, or transportation of birds, their nests, or their eggs.

Executive Order (E.O.) 13312, *Invasive Species,* aims to prevent the introduction of invasive species as a result of a proposed action.

3.5.2 Affected Environment

General Biological Conditions

The project study area is located within the Lower Colorado River Valley subdivision of the Sonoran Desertscrub biotic community (Brown 1994). Elevation of the project study area ranges from 1,345 to 1,380 feet above mean sea level (msl). The project study area for biological resources is the 352.8-acre project development area and is disturbed with much of the area previously paved or bladed. Large detention basins occur in the southwest and northwest portions of the project study area. A human-made drainage flows south from the northeastern boundary of the project study area, then cuts west into a culvert

under an existing road. A narrow band of vegetation consisting of velvet mesquites (*Prosopis velutina*) with some blue paloverdes (*Parkinsonia florida*) occurs surrounding this drainage.

The vegetation in the southern portion of the project study area, which has been previously bladed, is dominated by turpentine bush (*Ericameria laricifolia*) and desert broom (*Baccharis sarothroides*). The southeastern portion of the project study area contains creosote bush (*Larrea tridentata* var. *tridentata*) scrub. No large trees, agaves (*Agave* spp.), aquatic habitats (including wetlands or stock ponds), broad-leaf deciduous riparian vegetation communities (i.e., communities containing willow [*Salix* spp.], cottonwood [*Populus* spp.], or ash [*Fraxinus* spp.], etc.), or potential bat roost sites (e.g., natural caves or mine features) occur in the project study area. **Table 3B** lists the vegetation observed during a site visit conducted by a field biologist on December 12, 2018 (SWCA 2019a).

TABLE 3B
Plant Species Observed in the Project Study Area during the Site Visit

Common Name	Scientific Name	Common Name	Scientific Name
Bermudagrass	*Cynodon dactylon*	Lambsquarters	*Chenopodium album*
Blue paloverde	*Parkinsonia florida*	London rocket	*Sisymbrium irio*
Brittlebush	*Encelia farinosa*	Mule-fat	*Baccharis salicifolia*
Cheeseweed mallow	*Malva parviflora*	Needle grama	*Bouteloua aristidoides*
Coue's cassia	*Senna covesii*	Purple threeawn	*Arisitida purpurea*
Creosote bush	*Larrea tridentata* var. *tridentata*	Prickly Russian thistle	*Salsola tragus*
Desert broom	*Baccharis sarothroides*	Red-stem stork's bill	*Erodium cicutarium*
Desert globemallow	*Sphaeralcea ambigua*	Silverleaf nightshade	*Solanum elaeagnifolium*
Desert Indianwheat	*Plantago ovata*	Lambsquarters	*Chenopodium album*
Evening primrose	*Oenothera* sp.	Tree tobacco	*Nicotiana glauca*
Fringed twinevine	*Funastrum cynanchoides* ssp. *cynanchoides*	Tumble windmill grass	*Chloris verticillata*
Goldeneye	*Viguiera* sp.	Turpentine bush	*Ericameria laricifolia*
Jerusalem thorn	*Parkinsonia aculeata*	Woolly tidestromia	*Tidestromia lanuginosa*
Johnsongrass	*Sorghum halepense*	Velvet mesquite	*Prosopis velutina*

Source: SWCA 2019a

Wildlife observed in the project study area (except avian species, which are addressed in a subsequent paragraph), included coyote (*Canis latrans*), black-tailed jackrabbit (*Lepus californicus*), and desert cottontail (*Sylvilagus audubonii*).

Federally Listed Species under the ESA

Based on the USFWS Information for Planning and Consultation (IPAC) online database, there are 17 federally listed species identified for the county (**Appendix C**). None of these species have the potential to occur in the project study area nor have they been documented by the Arizona Heritage Geographic Information System (AZHGIS) database as occurring within three miles of the project study area (Arizona Game and Fish Department [AGFD] 2018). The project study area is either clearly beyond the known geographic or elevational range of these species or it does not contain vegetation or landscape features known to support these species, or both (SWCA 2019a). Furthermore, there is no proposed or designated critical habitat in or near the project study area.

Federally Protected Species under the MBTA and/or BGEPA

Fourteen avian species were observed in the project study area during the December 12, 2018 site visit (**Table 3C**) (SWCA 2018a). In central Arizona, some bird species are multi-clutch species, which means that they nest multiple times during the nesting season, generally March through late August, depending on the species and habitat; for raptors it is generally January through late June. American cliff swallow (*Petrochelidon pyrrhonota*) nests, which were inactive and old, occurred on the sides of an old bore sighting bunker (Building 1051). The AZHGIS results indicate that there are occurrence records for bald eagle (*Haliaeetus leucocephalus*), Sonoran Desert population, within three miles of the project study area. However, no suitable bald eagle nesting or foraging habitat is in or near the project study area, and no tall trees suitable for eagle perching are located within the project study area.

Numerous burrows suitable for use by western burrowing owls (*Athene cunicularia hypugaea*) occur in the project study area, particularly within the southeastern portion of the project study area, which contains suitable habitat and many burrows (**Exhibit 3A**) (SWCA 2019a). Six active burrows (i.e., those containing fresh whitewash, fresh pellets, feathers, or nest ornamentation) were observed in the project study area, along with nine potentially active burrows (i.e., suitable for use, but no signs of recent activity). One burrowing owl individual was also observed.

TABLE 3C
Avian Species Observed in the Project Study Area during the Site Visit

Common Name	Scientific Name	Common Name	Scientific Name
Abert's towhee	*Pipilo aberti*	Mourning dove	*Zenaida macroura*
American kestrel	*Falco sparverius*	Northern harrier	*Circus hudsonius*
Anna's hummingbird	*Calypte anna*	Red-tailed hawk	*Buteo jamaicensis*
Cooper's hawk	*Accipiter cooperii*	Say's phoebe	*Sayornis saya*
Curve-billed thrasher	*Toxostoma curvirostre*	Verdin	*Auriparus flaviceps*
Greater roadrunner	*Geococcyx californianus*	Western burrowing owl	*Athene cunicularia hypugaea*
Loggerhead shrike	*Lanius ludovicianus*	White-crowned sparrow	*Zonotrichia leucophrys*

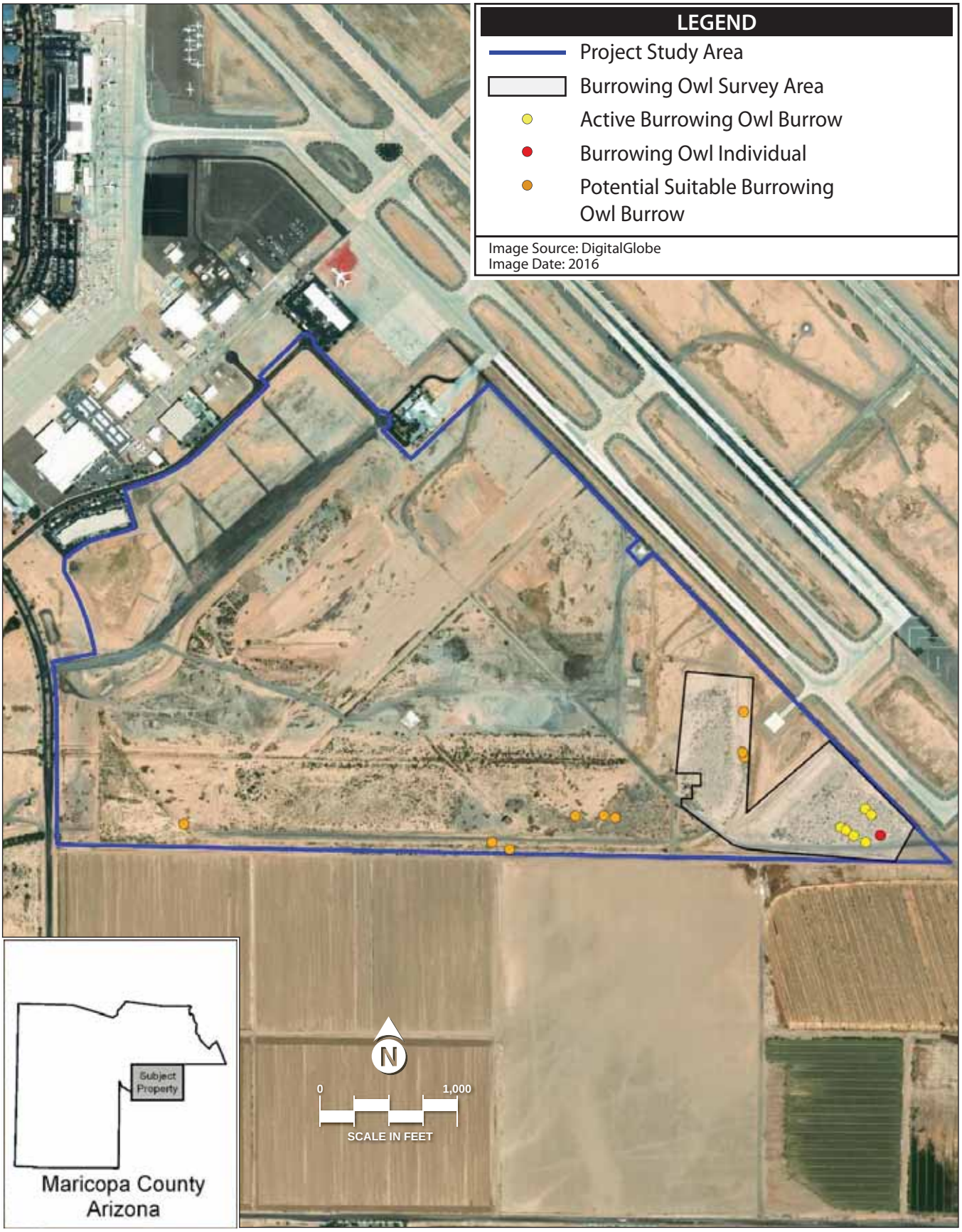
Source: SWCA 2019a

3.6 CLIMATE

3.6.1 Regulatory Setting

Scientific measurements show that Earth's climate is warming, with concurrent impacts such as warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events. Research has also shown that there is a direct correlation between fuel combustion and greenhouse gas (GHG) emissions, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

The U.S. Global Change Research Program (USGCRP) was established by Presidential initiative in 1989 and by Congress through the *Global Change Research Act (GCRA) of 1990*. Its mandate is to develop and coordinate "a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." In November 2018, the Fourth U.S. National Climate Assessment (NCA4) was released by the USGCRP. The NCA4 addresses diverse climate change issues for the Southwest region such as



Source: SWCA 2019a (Based on burrowing owl survey in December 2018.)

drought, a decrease in surface water resources, hotter temperatures, heat-related deaths, damaging wildfires, heat stress for agricultural products, impacts to indigenous peoples, and a loss of efficiency for water-cooled electric power plants (USGCRP 2018: pp. 148-151). To address these issues – and others associated with climate change – Arizona is working toward statewide GHG emissions reductions. The state is currently focusing its efforts on the U.S. EPA's Clean Power Plan (CPP) program, which was announced on August 3, 2015. The CPP requires states to develop and implement a plan that will reduce CO_2 emissions from existing fossil fuel-fired power plants to levels established by the U.S. EPA (ADEQ website 2019).

Federal regulations specific to the aviation sector regarding the reduction of GHG emissions have yet to be approved. Similarly, statewide GHG emission reductions are not focused on mobile emissions, such as aircraft or vehicular emissions, at this time. For FAA project-level actions, the affected environment for climate is highly dependent on the project itself and is defined as the entire geographic area that could be either directly or indirectly affected by the Proposed Development (which includes the Proposed Federal Action). For airport actions, the study area is defined by the extent of the project changes (i.e., immediate vicinity of the airport) and should reflect the full extent of aircraft movements as part of the project changes. Analysis of GHG emissions should be quantitatively assessed in certain circumstances, but otherwise may be qualitatively assessed.

3.6.2 Affected Environment

CO_2 is the most important anthropogenic (human made) GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years. Increasing concentrations of GHGs in the atmosphere affect global climate; this climate change due to GHG emissions, while a global phenomenon[2], can also have local impacts. The International Panel on Climate Change (IPCC) (2014) estimates that aviation accounts for 4.1 percent of global transportation GHG emissions. U.S. EPA data indicates that commercial aviation contributed 6.6 percent of total CO_2 emissions in 2013, compared with other sources, including the remainder of the transportation sector (20.7 percent), industry (28.2 percent), commercial (16.9 percent), residential (16.9 percent), agricultural (9.7 percent), and U.S. territories (0.05 percent) (U.S. EPA 2015). Scientific research is ongoing to better understand climate change, including any incremental atmospheric impacts that may be caused by aviation.

As noted above, the project study area for climate is the portion of the airshed within the immediate vicinity of the airport. The airport, itself, generates GHG emissions typical for a Part 139 airport. As outlined in FAA's *Aviation Emissions and Air Quality Handbook* (FAA 2015:15), "GHG emissions associated with aviation are principally in the form of CO_2 and are generated by aircraft, APUs (auxiliary power units), GSE (ground support equipment), motor vehicles, and an assortment of stationary sources. For the most part, CO_2 emissions from these sources arise from the combustion of fossil fuels (e.g., jet fuel, Avgas, diesel, gasoline, compressed natural gas [CNG]) and are emitted as by-products contained in the engine exhausts. Other GHGs associated with airport operations include CH_4 and N_2O, water vapor (H_2O), soot, and sulfates - but are emitted by airports to a far lesser extent than CO_2. Emissions of HFCs

[2] As explained by the U.S. EPA, "greenhouse gases, once emitted, become well-mixed in the atmosphere, meaning U.S. emissions can affect not only the U.S. population and environment but other regions of the world as well; likewise, emissions in other countries can affect the United States." U.S. EPA, Climate Change Division, Office of Atmospheric Programs, 2009.

(hydrofluorocarbons), PFCs (perfluorinated chemicals), and SF_6 (sulfur hexafluoride) are most commonly linked with refrigeration, air conditioning, and other coolants."

Based on the analysis completed using the FAA's AEDT (see Section 4.3.1 for a discussion of the AEDT model), GHG emissions specifically associated with aircraft operations at the airport in 2018 are approximately 54,019 metric tons per year of "carbon dioxide equivalent" (i.e., CO_{2e})[3]. The project study area itself does not generate GHG emissions as it is vacant, and no construction, vehicular, or aircraft emissions are associated with its use.

3.7 *DEPARTMENT OF TRANSPORTATION ACT*, SECTION 4(f)

3.7.1 Regulatory Setting

Section 4(f) of the *Department of Transportation Act of 1966*, which was recodified and renumbered as Section 303(c) of Title 49 United States Code (USC), provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a historic site, park, recreation area, or waterfowl and wildlife refuge of national, state, regional, or local importance unless there is no feasible and prudent alternative to the use of such land, and the project includes all possible planning to minimize harm resulting from the use. Section 4(f) protects against both the physical and constructive use of Section 4(f) resources.

3.7.2 Affected Environment

The project study area for Section 4(f) resources is the 352.8-acre project development area, as well as a one-mile radius. There are no wildlife or waterfowl refuges or publicly owned parks and recreation areas within or adjacent to the project study area.

One historic resource, AZ U:10:69(ASM), is partly within the project study area and has been the subject of numerous testing and data recovery projects. It remains listed in the National Register of Historic Places (NRHP) because small portions of the site, outside the project study area, are known to contain buried archaeological deposits that have yet to be subjected to data recovery investigation. However, the portion of AZ U:10:69(ASM) within the project study area was determined in 2002 to be non-contributing to the site's NRHP status and not worthy of further preservation efforts (Foster 2002). FAA has made a determination of "no historic properties affected" for the Proposed Development (which includes the Proposed Federal Action). See Section 3.9.2 and **Appendix D** for more information.

[3] Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e) and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 25, meaning its global warming effect is 25 times greater than carbon dioxide on a molecule-per-molecule basis.

The following potential Section 4(f) resources are located off the airport to the west of the project study area approximately 0.25 to 1.0 mile, but would not be physically or constructively used, or substantially impaired, by use of the project site:

- Four World War II-era airport hangars[4] are approximately 0.25 mile west of the project study area;
- Neighborhood open space and playground equipment within the Arizona State University (ASU) Polytechnic Campus' South Desert Village housing are approximately 0.4 to 0.9 mile west of the project study area;
- ASU Polytechnic Campus practice and athletic fields are northwest approximately 0.75 to 1.0 mile from the project study area;
- Toka Sticks Golf Club driving range is northwest approximately 1.0 mile from the project study area.

There are no properties within the project study area that were acquired under Section 6(f) of the *Land and Water Conservation Fund Act of 1965*, which provides federal funds for buying or developing public use recreational lands. The project study area was originally part of the Williams AFB.

3.8 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

3.8.1 Regulatory Setting

Hazardous Materials

Disturbing areas that contain hazardous materials or contaminates can cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources. In addition, exposure to hazardous materials can cause health risks to humans. Four primary federal laws govern the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes of most importance to airport projects are the *Resource Conservation Recovery Act* (RCRA) (as amended by the *Federal Facilities Compliance Act of 1992*) and the *Comprehensive Environmental Response, Compensation, and Liability Act* (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes; CERCLA provides for cleanup of any release of a hazardous substance into the environment. These laws may extend to past and future landowners of properties containing these materials.

Locations identified as Superfund sites are listed on the National Priorities List (NPL). Deletion of sites from the NPL may occur once all response actions are complete and all cleanup goals have been

[4] According to the *Twentieth Annual Report of Historic Properties at the Phoenix-Mesa Gateway Airport, Mesa, Arizona* (PMGAA and SWCA 2019), all four hangars have completed Historic American Building Survey documentation. Three of the hangars (S-24, S-31, and S-32) were part of the original demolition plans approved by the USAF, PMGAA and the State Historic Preservation Office (SHPO) but were never removed. T-37 has been also approved for demolition and is scheduled to be removed in 2019 (PMGAA and SWCA 2019: page 5).

achieved. Since U.S. EPA is the lead agency that enforces federal regulations impacting public health as it relates to the environment, it is responsible for processing deletions with concurrence from the appropriate state. A Partial Deletion site is a portion of an NPL site that has met the cleanup criteria. Rather than wait until cleanup of an entire NPL site is completed, these areas are designated as Partial Deletion sites (https://www.epa.gov/superfund/superfund-npl-deletion-guidance-and-policy).

Other federal laws related to hazardous materials include the *Hazardous Materials Transportation Act*, which regulates the handling and transport of hazardous materials and wastes, and the *Toxic Substances Control Act*, which regulates and controls the use of polychlorinated biphenyls (PCBs), as well as other chemicals or toxic substances in commercial use. In addition, the air toxin provisions of the *Clean Air Act* give authority to U.S. EPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. Per Section 112 of the *Clean Air Act*, U.S. EPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAP), which include both asbestos and lead. These air toxin regulations specify work practices that must be followed during building demolition and renovations.

At the state level, the ADEQ Waste Programs Division implements federal and state hazardous waste management laws (ADEQ Waste Programs Division website 2018). The Waste Programs Division is responsible for inspecting facilities that generate hazardous and solid waste, as well as facilities with underground storage tanks (USTs). Arizona Revised Statutes (A.R.S.) 49-822 establishes a remedial program, known as the Water Quality Assurance Revolving Fund (WQARF), to facilitate the conservation and cleanup of Arizona drinking water and water resources. WQARF was created under the *Environmental Quality Act of 1986* to support hazardous substance cleanup efforts in the state.
The state's Pollution Prevention (P2) program seeks to eliminate or reduce the generation of hazardous wastes and the use of toxic substances. The P2 program requires all industrial facilities that exceed certain thresholds of hazardous waste generation and toxic substance use to analyze potential P2 opportunities and to file an annual P2 plan (ADEQ 2015).

Solid Waste

U.S. EPA also regulates household, industrial, and manufacturing solid waste under RCRA. RCRA's goals are to protect public health and the environment from the hazards of solid waste disposal; to conserve energy and natural resources through recycling and recovery efforts; to reduce or eliminate waste; and to clean up waste that may have spilled, leaked, or been improperly disposed. Under RCRA Subtitle D, states are encouraged to develop comprehensive plans to manage nonhazardous industrial solid and municipal waste. Subtitle D also establishes criteria for municipal solid waste landfills and prohibits the open dumping of solid waste.

At the state level, Arizona Administrative Code Title 18, Chapter 13, Solid Waste Management regulates solid waste management practices. Maricopa County Waste Resources and Recycling Management Department administers solid waste transfer services within the county. The city's Solid Waste Management Department is responsible for enforcing regulations pertaining to solid waste disposal units (i.e., landfills, old burn dumps, etc.) within the city limits.

Pollution Prevention

Spill prevention, control, and countermeasure (SPCC) plans are required for facilities with certain thresholds of oil storage capabilities under Section 311 of the *Clean Water Act* (CWA) if there is a potential for a discharge to reach waters of the U.S. through pathways of spill conveyance (such as a storm drain, drainage ditch, or sheet flow). Thresholds include total aboveground oil storage capacity of 1,320 gallons (or 42,000 gallons or greater if stored in USTs). Tanks and containers with individual oil storage capacity of 55 gallons or greater, and not associated with propulsion of a vehicle (i.e., its gas tank), are included in the determination, as is oil that is distributed from vehicles operating solely within the confines of the airport (Transportation Research Board 2017). In 1990, the *Oil Pollution Act* amended the CWA to require significant oil storage facilities to prepare and submit a Facility Response Plan to EPA that outlines the facility's plan for addressing a worst-case discharge of oil.

Section 402 of the CWA created the National Pollutant Discharge Elimination System (NPDES) program to authorize point source discharges of pollutants to waters of the U.S. consistent with the CWA. In terms of water pollution, a point source is a single discharge source, such as a pipe coming from a wastewater treatment plant. However, the federal *Water Quality Control Act of 1987* amended the CWA to include regulation of certain discharges of pollutants in stormwater runoff under the NPDES program. Federal regulations (Title 40 Code of Federal Regulations [CFR] 122.26) require certain industrial facility owners and/or operators to obtain stormwater discharge permits. The specific types of facilities that need coverage are dependent upon the facility's Standard Industrial Classification Code. In Arizona, NPDES permitting authority has been delegated to ADEQ, as part of its Arizona Pollutant Discharge Elimination System (AZPDES) program.

Individual construction projects that have a potential for one acre or more of ground disturbance are required to obtain AZPDES coverage under the state's Construction General Permit. Permit conditions typically related to use of the AZPDES Construction General Permit include best management practices (BMPs) to reduce erosion and sedimentation through implementation of a construction-specific stormwater pollution prevention plan (SWPPP). The construction SWPPP is a project-specific document which deals primarily with reducing pollutant sources associated with erosion and sediment transfer and chemicals used at construction sites.

3.8.2 Affected Environment

Hazardous Materials

The project study area for hazardous material is the 352.8-acre project development area. The project study area contains remnants of its use as the former Williams AFB as well as past remediation activities as a Superfund site. On-site features include: a former fire training area (FT02), including a fire training structure, decontamination pad and fire hydrant, a fence-enclosed soil vapor extraction system, a foam fire suppression apparatus, and an underground water storage tank; a former firing-in buttress (Facility 1020); a former sighting bunker (Facility 1051); a paint storage and paint testing concrete pad; abandoned miscellaneous concrete pads; and several abandoned and active groundwater monitoring wells.

Immediately adjacent to the project study area is one in-use aboveground diesel tank with a secondary containment.[5]

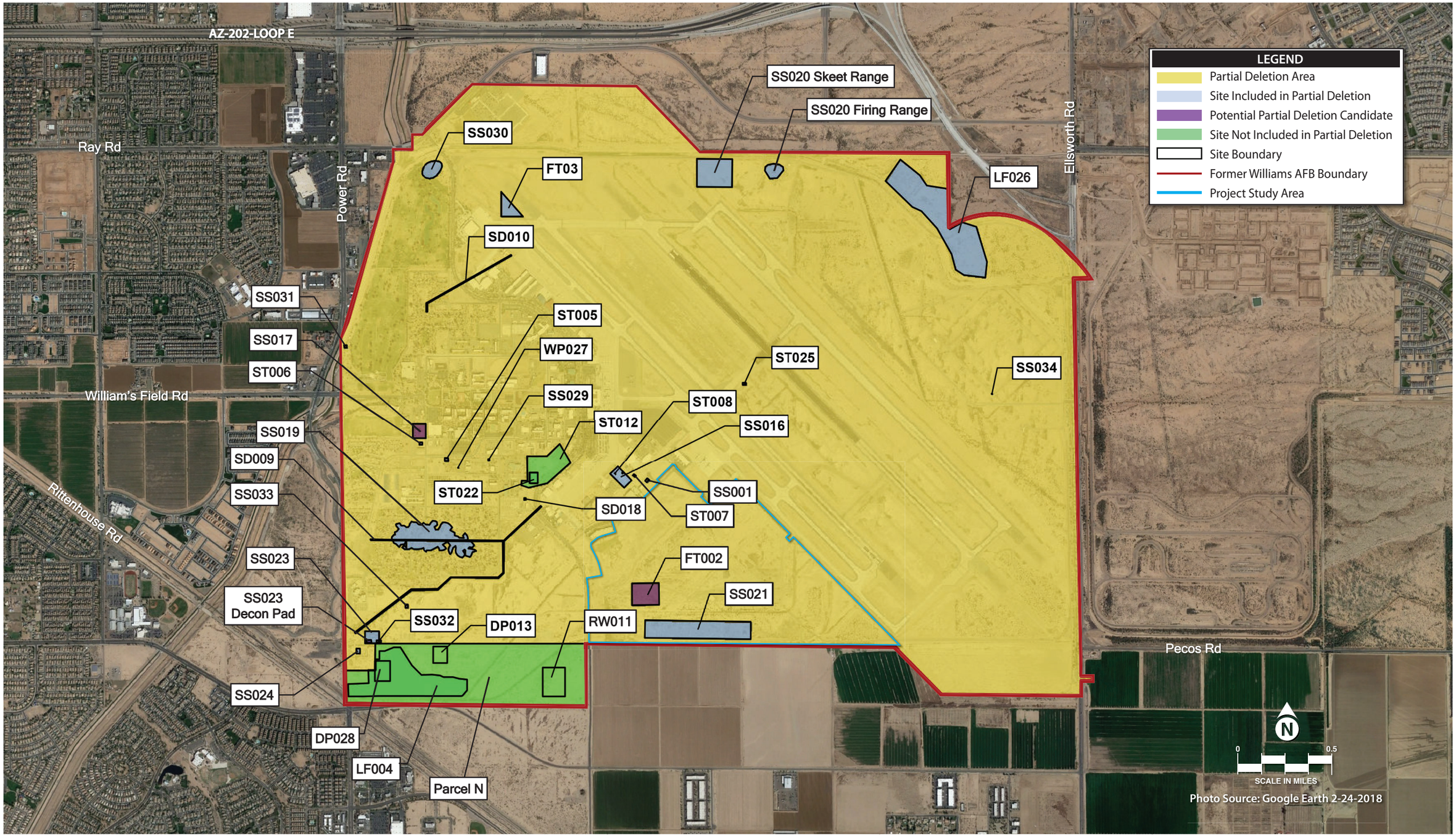
The former Williams AFB was designated a Superfund site (EPA Registry Id: 110000609066) on November 21, 1989 and has been the object of remediation efforts for many years (**Table 3D**). As part of the formal base closure in 1994, a basewide Environmental Baseline Survey (EBS) was prepared by USAF to document the physical condition of the property with respect to the storage, use, and disposal of petroleum substances and petroleum products and their derivatives. The most commonly used hazardous materials were jet and motor fuels, other types of petroleum products, paints, thinners, adhesives, cleaners, lead-acid batteries, pesticides, hydraulic fluids, and halogenated and non-halogenated solvents.

Seventy-eight (78) USTs were also located at Williams AFB (USAF 1993). The remediation action was divided into Operable Units (OUs), which were then divided into location-specific subsites. Remediation activities at the former Williams AFB have included, among other things, the implementation of an Installation Restoration Program (IRP), groundwater sampling, remediation, and monitoring, and the removal of all USTs.

The USAF has also recently prepared a work plan to test for perfluoroctonic acid (PFOAs) and perfluorooctane sulfonate (PFOSs) in soil and groundwater at all USAF bases, including the former Williams AFB. On February 14, 2019, U.S. EPA announced its own *Per- and Polyfluoroalkyl Substances (PFAS) Action Plan* (https://www.epa.gov/pfas/epas-pfas-action-plan) and is considering the addition of PFAS chemicals to the Toxic Releases Inventory (U.S. EPA 2019a). The USAF has recently installed three groundwater monitoring wells within the project study area to determine the presence or absence of PFAS in the groundwater in exceedance of U.S. EPA health advisory limits of 0.07 micrograms per liter (µg/L). A preliminary assessment identified 19 potential aqueous film forming foam (AFFF) areas on the airport. Only one of these areas (FT02) is located within the project study area (see discussion below) (Aerostar SES 2018).

There are two specific areas of former contamination within the project study area: a portion of OU-2 - Fire Training Area Number 2 (FT02); and OU-4 - SS021, which includes Facility 1020 (firing-in buttress) and Facility 1051 (sighting bunker). Both areas are identified as either a Partial Deletion site (SS021) or as a Partial Deletion Candidate (FT02) (FAA and Phoenix-Mesa Gateway Airport Authority [PMGAA] 2017: Exhibit 3-4) (**Exhibit 3B**).

[5] Secondary containment systems, e.g., dikes, berms, or curbs, provide temporary containment of discharged oil until the appropriate actions are taken to abate the source of the discharge and remove oil from areas where it has accumulated.



Source: FAA and PMGAA 2017

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TABLE 3D
Former Williams Air Force Base Site Remediation History

Years	Description
1941-1948	The base was constructed in 1941 and served as a training facility, primarily pilot training. At the time the base was constructed, the site was surrounded by irrigated farmland and desert. Industrial activities at Williams Air Force Base (AFB) included heavy maintenance of aircraft and ground equipment in support of pilot training. The former Williams AFB played a strategic role in America's aviation history. Over a span of 52 years, more than 26,500 men and women earned their wings at Williams. Gearing up for the combat pilot demands of World War II, the Army Air Corps broke ground in southeast Mesa for its Advanced Flying School on July 16, 1941. In February 1942, the growing military base's name was changed to Williams Field to honor Charles Linton Williams, an Arizona-born pilot. The facility was re-designated as Williams AFB in January 1948. Williams AFB was the United States (U.S.) Army Corp's foremost pilot training facility, graduating more student pilots and instructors than any other base in the country and supplying 25 percent of the AFs pilots annually. Contaminants from base activities included organic solvents and paint strippers, petroleum spills and leaks, metal plating wastes, hydraulic fluids, pesticides, and radiological wastes. Discharges and disposals at Williams AFB have resulted in soil and groundwater contamination.
1983	Site investigations initiated in 1983 under the auspices of the U.S. Department of Defense (DOD) installation restoration program identified thirteen potentially contaminated areas including: two fire training areas, a fuel storage area, two surface storm drainage areas, a hazardous material storage area, a landfill, a pesticide burial pit, a radiological disposal area, and four underground storage tanks.
1989	Williams AFB was placed on the National Priority List (NPL) on November 21st. Remedial investigations (RIs) initiated under the *Comprehensive Environmental Response Compensation and Liability Act* (CERCLA) discovered several new areas of contamination that were added to the existing list of sites.
1991-1993	Williams AFB was closed in 1993. After the announcement of closure in 1991, the community immediately began work to redevelop the base. Upon closing, Williams AFB was transferred to the Air Force Base Conversion Agency (AFBCA). AFBCA assumed responsibilities for the restoration and reuse of the base and worked with the Restoration Advisory Board (RAB) and Williams Redevelopment Partnership to maximize reuse of the land. For cleanup purposes, the former base was divided into six Operable Units (OUs), OU-1 through OU-6. Each OU consists of many sites of potential concern; the following lists only the sites of primary interest for each OU: OU-1 contains the main base landfill (LF004) for which a Record of Decision (ROD) was signed in 1994. The remedy specified a permeable cap (soil) and monitor wells. At the time of the ROD, only low levels of contaminants were present in the wells. In 1997, higher levels of contamination were discovered in the landfill monitor wells and a follow-on RI was conducted in 2000. Concentrations of contaminants in some of the monitor wells installed during the follow-on RI are the highest ever seen at the site and indicate that contamination is migrating off of the former base. OU-2 addresses the groundwater and soil contamination at the ST012. The results of the RI at ST012 have confirmed that the primary contaminant is JP-4, jet fuel and aviation gas (AVGAS). There is a groundwater plume at ST012 which resulted from the leakage of an unknown quantity of JP-4 and AVGAS. The U.S. Environmental Protection Agency (EPA) believes as much as 12 million gallons may be in the soil and groundwater. Rising groundwater in the area, 40 feet over the last ten years, has covered the fuel and smeared it across many feet of deep soil making access to the plume (for remediation) increasingly difficult. The ROD for OU-2 was signed in December 1992. The U.S. Air Force (USAF) has yet to implement a groundwater remedy at the site. OU-3 formerly addressed the vadose zone beginning 25 feet below land surface down to the water table at ST012 which is now part of OU-2. The primary site of concern at OU-3 now is the former fire training site (FT02). The 25,000 cubic yards of contaminated deep soils at the site were treated in place by enhancing natural bacterial breakdown of contaminants with bioventing. The ROD for OU-3 was signed in late June 1996. The standards agreed to in the ROD have not been achieved. However, the USAF, in accordance with new state rules has conducted a risk assessment which determined that the cleanup levels attained do not pose a risk to human health or environment.

TABLE 3D (CONTINUED)
Former Williams Air Force Base Site Remediation History

Years	Description
1991-1993 (Cont.)	OU-4 includes South Desert Village (SDV), which is currently serving as student housing for Arizona State University (ASU) East. Beneath SDV is a former six-station skeet range which was demolished and graded in 1950, prior to construction of the SDV. Contamination in the form of lead pellets in soil associated with the former skeet range underlies 85 housing units in the SDV. Since complete removal of contaminated soils would have required demolition of this valuable housing, a compromise solution involved removal of the top six inches of contaminated soil and installation of six inches of clean soil. The replacement soil is considered a protective cap over the remaining contamination, and will be subject to repair and maintenance, as well as land use restrictions in the form of a voluntary environmental mitigation and use restriction (VEMUR). The VEMUR defines the affected area as non-residential, and places deed restrictions to bind occupants to maintain the protective cap. OU-5 was set up to address nine soil sites which were closed out through expedited removal fill actions. No groundwater contamination is known to exist at any of the OU-5 sites. The OU-5 ROD was signed in February.
1998	OU-6 was established to address three sites requiring additional investigation. The site of primary concern (SS-17 Old Pesticide/Paint Shop) at OU-6 revealed soil contamination (dieldrin and volatile organic compounds [VOCs]). A removal action of dieldrin contaminated soil was completed and backfilled with clean soil following verification of clean up goals. The dieldrin contaminated soil was transported to a temporary treatment facility constructed near the former base landfill to undergo bioremediation.
1998-2004	OU-3 primary concern was the FT02. Bioventing utilized at the site did not attain residential cleanup levels. The USAF disagrees with the regulatory agencies' (Arizona Department of Environmental Quality [ADEQ] and U.S. EPA) determination that a Declaration of Environmental Use Restrictions (DEUR) was required for the site. Changes (November 2004) in the USAF's policy regarding acceptable risk and reliance on a 1998 USAF "receptor evaluation" (risk assessment) led to an USAF's decision that the site was suitable for unrestricted use.
2004-2005	OU-2 addressed groundwater and soil contamination at ST012. The USAF and subcontractors completed design of the groundwater and vadose zone remedies. The vadose zone remedy consisted of a full-scale soil vapor extraction (SVE) system. The SVE system began operation in April 2005. The groundwater remedy consisted of a process called Thermal Enhanced Extraction (TEE). As of December 2004, the construction was 90 percent complete. However, the USAF decided to withdraw the funding for completion of construction and operation of the TEE system. The USAF notified the regulators of the funding withdrawal in February 2005. At that time, the USAF had already spent approximately $3,000,000 in the design and construction of the TEE system. U.S. EPA and ADEQ issued a formal letter of dispute regarding USAF failure to implement the remedial action at ST012.
2006	OU-1 contains LF004. Over the past two years, numerous monitor wells had shown a marked increase in trichloroethylene (TCE) and tetrachloroethylene (PCE). Contaminants appeared to be moving offsite.
2007	The first phase (soil vapor investigation) of the RI to find the source and extent of VOCs in the groundwater at LF004 was begun. Additionally, three offsite borings were drilled, and groundwater samples collected to determine where offsite groundwater monitor wells may be needed. In November, the dieldrin-contaminated soil from the Old Pesticide/Paint Shop (SS-17) was removed northeast of the LF004 following an unsuccessful attempt at bioremediation. A total of approximately 6,000 cubic yards of contaminated soil and amendments were removed from the site and disposed of under an approved work plan. Following removal of the contaminated soil and amendments, confirmation sampling of the underlying soil indicated five "hot spots" where additional soil removal is required. SVE continued to remove JP-4 from the vadose zone at ST012. Construction continued on the TEE pilot project, which was designed to remove the fuel from the groundwater. The building 760 site, the site of gasoline releases from the former base service station, was being redeveloped by ASU East. Five groundwater monitor wells were abandoned to make way for building construction. The USAF proposed replacement of the monitor wells, as well as installation of SVE wells and construction of a soil vapor treatment system. [Note: ADEQ's Underground Storage Tank Program (UST) assumed oversight of this project.] DEURs were completed for SS021, Facility 1013 (a leaking underground storage tank site).

TABLE 3D (CONTINUED)
Former Williams Air Force Base Site Remediation History

Years	Description
2008	The schedule for the RI to find the source and extent of VOCs in the groundwater at LF004 was extended. The USAF completed the soil vapor investigation fieldwork. TCE found in soil gas samples and increasing concentrations of TCE in one groundwater monitor well caused the USAF to expand the investigation in the area northeast of the landfill and delay submittal of the RI report. Additional borings to sample deep soil and groundwater were planned. A peer review committee was assembled by the USAF to review the work to date and plans for additional investigation of the site, and to advise the USAF and its contractor regarding data gaps, locations for additional groundwater monitor wells, and potential remedial technologies. Four new monitor wells were installed at the site. SVE to remove JP-4 from the vadose zone continued at ST012. The TEE pilot project, designed to remove the fuel and fuel components from the groundwater, began operation. Steam injection into the lower saturated zone (the deeper of two water bearing units that are to undergo treatment) began on October 28th, (with steam injection into the upper water bearing zone scheduled to occur approximately two weeks later). The project is scheduled to last approximately one year. Six new groundwater monitor wells were installed at the site. The DEURs were completed for FT02, ST012, and SS020 to facilitate dispersal of the property to the Gateway Airport.
2009	Base-wide activities included publishing an update to the Base-wide sampling and Analysis Plan and a Base-wide Waste Management Plan and recording a DEUR on SS016 (Bldg. 1085) to complete the ROD requirements. The transfer of SS016 to the Phoenix-Mesa Gateway Airport was completed. The USAF performed the following activities: ▪ Conducted and reported semi-annual groundwater monitoring in accordance with the ROD; ▪ Conducted significant landfill maintenance; ▪ Conducted a final field effort to supplement the RI in which one area was found where there was a surface soil to groundwater contamination connection; ▪ Installed 31 new groundwater monitoring wells at LF004; ▪ Produced a LF004 Groundwater Monitoring Work Plan; ▪ Conducted a bench scale ozone sparging test; ▪ Conducted operations at ST012 performing Steps 2 through 5 of the TEE Work Plan; ▪ Collected post TEE application samples following test operations; ▪ Conducted and reported four quarters of groundwater monitoring; ▪ Produced a ST012 Groundwater Monitoring Work Plan; ▪ Conducted and reported annual groundwater monitoring at SS017; ▪ Produced a SS017 Groundwater Monitoring Work Plan; ▪ Finalized a work plan to conduct step-out excavations at the temporary treatment facility (TTF) and awarded a contract to conduct the step-out excavations; ▪ Published the Parcel N Debris Area preliminary assessment/site inspection (PA/SI) work plan and initiated work on it; ▪ Completed installation of a fence around Parcel N; ▪ Published a final Interim N PA report; ▪ Awarded a contract to complete the Parcel N Debris PA/SI; ▪ Conducted and reported four quarters of groundwater monitoring at ST035; ▪ Produced a ST035 Groundwater Monitoring Work Plan; ▪ Installed five new groundwater monitoring wells; ▪ Completed installation of an SVE system; and ▪ Discarded military munitions.
2010	Efforts at the former Williams AFB progressed on many fronts: ▪ The completion of a Supplemental RI report for LF004 that included a draft Focused Feasibility Study; ▪ Parcel N underwent an investigation searching for munition constituents as well as sampling and testing at selected locations for CERCLA contaminants. A more detailed investigation is planned for a section of Parcel N that has been identified as one of great concern and is scheduled for 2011;

TABLE 3D (CONTINUED)
Former Williams Air Force Base Site Remediation History

Years	Description
2010 (Cont.)	▪ A report evaluating the pilot test of the TEE system at ST012 was submitted for review. The SVE system continues to remove contaminants from soils below the former fuel storage area; ▪ A pilot SVE system was constructed at the site of the former automobile gas station. The system was designed and constructed to blend into the surrounding ASU campus and its operation to be non-obtrusive; ▪ The USAF completed a program to replace groundwater monitoring wells that have become submerged by rising groundwater. Additional wells to monitor the different groundwater formations at the site were also located in the various hydrographic layers at the site. New wells were also installed to delineate groundwater contamination on the project site; and ▪ Groundwater monitoring at the site continues to be conducted to evaluate the remedial effort.
2011	The USAF performed the following activities: ▪ The USAF hired AMEC Corporation as their performance-based remediation (PBR) contractor; ▪ Performed routine groundwater monitoring, inspections, and operation and maintenance of remedial systems; ▪ Work plans, groundwater monitoring reports, operation and maintenance (performance) reports, and inspection reports were completed as required; ▪ Completed installation of groundwater monitoring wells at ST035 and LF004, and abandonment of wells at FT02; ▪ Finalized the OU-6 removal action completion report; ▪ Finalized the ST012 containment study work plan; and ▪ Held a public meeting and completed the OU-6 amended proposed plan.
2012	The USAF performed the following activities: ▪ Performed routine groundwater monitoring, inspections, and operation and maintenance of remedial systems; ▪ Work Plans, groundwater monitoring reports, operation and maintenance (performance) reports, and inspection reports were completed as required; ▪ Five off-base groundwater monitoring wells were installed south of the landfill site (LF004) to monitor for possible offsite migration of contamination; ▪ A Five-Year Review (FYR) was completed; ▪ Began operation of ST012 groundwater containment system, an interim remedial action designed to operate until the full-scale steam enhanced extraction system is designed and constructed; ▪ Completed a new base-wide quality assurance project plan and standard operating procedures; ▪ Performed and reported on the final site inspection and munitions and explosives of concern clearance (Phase 3) munitions response at XU403a; ▪ Completed a Finding of Suitability to Transfer (FOST) for the Air Force Research Laboratory (AFRL), Mesa Research Site; and ▪ Completed the final in-well air stripping and monitoring well installation work plan for ST035 and installed one remediation well and two groundwater monitoring wells.
2013	The USAF completed several items during this period: **SDV** Two semi-annual Protective Cap Inspection Reports were released (dated Sept. 19, 2012 and Jan. 3, 2013). **Facility 1013** One annual FT02 DEUR report was submitted.

TABLE 3D (CONTINUED)
Former Williams Air Force Base Site Remediation History

Years	Description
2013 (Cont.)	**FT02** ▪ One annual FT02 DEUR was submitted; and ▪ The USAF initiated a program to systematically sample its active and closed bases for perfluorinated compounds (PFCs) at fire training areas as the unregulated chemicals gained increasing regulatory attention for their potential risks to human health and the environment. **LF004** ▪ A draft ROD Amendment for OU-1; ▪ Well installation as part of the Pre-Design Investigation field activities; ▪ Annual and period specific groundwater monitoring reports; ▪ A Technical Memorandum for the April 2013 Cap Maintenance; ▪ An Annual Landfill Inspection Report dated October 10, 2012; ▪ An Amended Proposed Plan for Operable Unit 1, Landfill 004; ▪ A Focused Feasibility Study for LF004; and ▪ An LF004 Offsite Well Inspection and Sampling Report. **OU6** A Revised OU-6 Removal Action Completion Report (RACR). **SS017** ▪ A Groundwater Monitoring report for the 2012 Annual Event; and ▪ A draft Supplemental Risk Assessment for soil removal action. **ST012** ▪ A Focused FS for OU-2 remedial alternatives; ▪ A draft Remedial Design and Remedial Action Work Plan; ▪ A ROD Amendment 2 for OU-2 groundwater; ▪ Documents discussing select groundwater well installations/modifications; ▪ A report detailing amendments added to the ST012 groundwater treatment system; ▪ Annual and period specific groundwater monitoring reports; ▪ Annual and period specific groundwater containment system reports; ▪ Annual and period specific soil vapor extraction system operation and result reports; and ▪ A memorandum documenting research on potential contamination encountered during previous construction work in Avoca Street near ST012. **ST035** ▪ One groundwater monitoring well (MW-21) installation notification; ▪ Select well modification notifications; ▪ Annual and period specific groundwater monitoring reports; and ▪ Annual and period specific soil vapor extraction system operation and result reports.

TABLE 3D (CONTINUED)
Former Williams Air Force Base Site Remediation History

Years	Description
2013 (Cont.)	**Site-wide and Miscellaneous Areas** ▪ A site characterization and corrective action completion report was submitted for underground storage tank closure actions completed at the Base's navigation beacon facility; and ▪ A site-wide groundwater monitoring report for August 2012.
2014	The USAF completed several items during this period: **LF004** ▪ Initiated a site remedy consisting of soil vapor extraction, in-well air stripping (IWAS) and chemical oxidation; ▪ Landfill cover inspections and maintenance; ▪ Landfill cover drainage pattern maintenance and cover erosion control maintenance; ▪ Annual and period specific groundwater monitoring reports; ▪ Final Annual 2013 Groundwater Monitoring Report; ▪ Final Remedial Design and Remedial Action Work Plan for Operable Unit 1 Groundwater and Soil Gas Remedies, Site LF004; ▪ Final Annual Landfill Cap Inspection and Maintenance Report, September and November 2013 Events, Site LF004; ▪ Final Pre-Design Oxidant Test Work Plan (Addendum 1 to the Final Pre-Design Investigation Work Plan, Site LF004); ▪ Final Record of Decision Amendment, OU-1; ▪ Final Technical Memorandum on LF004 Groundwater Monitoring Program Optimization, Site LF004; ▪ Final Groundwater Monitoring Report, May 2013 Event; ▪ Amended Proposed Plan for Operable Unit 1, Landfill 004; ▪ An offsite well inspection and sampling report; and ▪ Select well modification notifications. **Parcel N Debris Area (XU403a)** Excavation, investigation and removal of: ▪ Unexploded ordnance; ▪ Discarded military munitions; ▪ Munitions constituents; and ▪ Empty chemical weapons (mustard gas oil) training sample vials. **ST012** ▪ Installed and initiated a steam enhanced extraction system; ▪ Final Remedial Design and Remedial Action Work Plan for Operable Unit 2 Revised Groundwater Remedy; ▪ Final Soil Vapor Extraction System Operation and Maintenance Report, July through September 2013; ▪ Final Soil Vapor Extraction System Operation and Maintenance Report, April through June 2013; ▪ Final Soil Vapor Extraction System Operation and Maintenance Report, January through March 2013; ▪ Final Containment System Status and Shutdown Report, July through October 2013; ▪ Final Containment System Status Report, April through June 2013; ▪ Final 2012 Annual Containment System Status Report;

TABLE 3D (CONTINUED)
Former Williams Air Force Base Site Remediation History

Years	Description
2014 (Cont.)	▪ Final Containment System Status Report, January through March 2013; ▪ DEUR for ST012 for 2013; ▪ Final Annual 2012 Groundwater Monitoring Report; ▪ Final Soil Extraction System Operation and Maintenance 2012 Annual Performance Report; ▪ Final Soil Vapor Extraction System Operations and Maintenance, July through September 2012; ▪ Final Record of Decision Amendment 2, Groundwater, OU-2; and ▪ Select well modification notifications. **FT02** Installed and re-initiated a soil vapor extraction system. **SDV** ▪ Released Semi-annual Protective Cap Inspection Report conducted July 15, 2014; ▪ Released Semi-annual Protective Cap Inspection Report conducted January 21, 2014; and ▪ Released Semi-annual Protective Cap Inspection Report conducted August 9, 2013. **Site-wide and Miscellaneous areas** A site-wide groundwater monitoring report for August 2013. **OU-6 and SS17** ▪ Final Groundwater Monitoring Report, 2013 Annual Event; ▪ Final Groundwater Monitoring Report, 2012 Annual Event; and ▪ A final supplemental risk assessment relating to the Old Pesticide/Paint Shop soil removal action. **ST035** ▪ Annual and period specific groundwater monitoring reports; ▪ Annual and period specific soil vapor extraction system operation and result reports; ▪ Final Annual 2013 Groundwater Monitoring Report; ▪ Final Groundwater Monitoring Report August 2013 Event; ▪ Final Groundwater Monitoring Report, May 2013 Event; ▪ Final Groundwater Monitoring Report, February 2013 Event; ▪ Final Annual 2012 Groundwater Monitoring Report; ▪ Field Variance Memorandum regarding Monitoring Well Installation; ▪ Final Soil Vapor Extraction System Operation and Maintenance Report, July through September 2013; ▪ Final Soil Vapor Extraction System Operation and Maintenance Report, April through June 2013; ▪ Final Soil Vapor Extraction System Operation and Maintenance Report, January through March 2013; ▪ Final Soil Vapor Extraction System Operation and Maintenance 2012 Annual Performance Report; ▪ Final Soil Vapor Extraction System Operation and Maintenance, July through September 2012; and ▪ Final Soil Vapor Extraction System Operation and Maintenance, April through June 2012.

Source: ADEQ website 2017. Former Williams Air Force Base/Site History. Available at: https://azdeq.gov/former-williams-air-force-base-site-history, accessed February 2019.

The following is a summary of the cleanup efforts and status for each area:

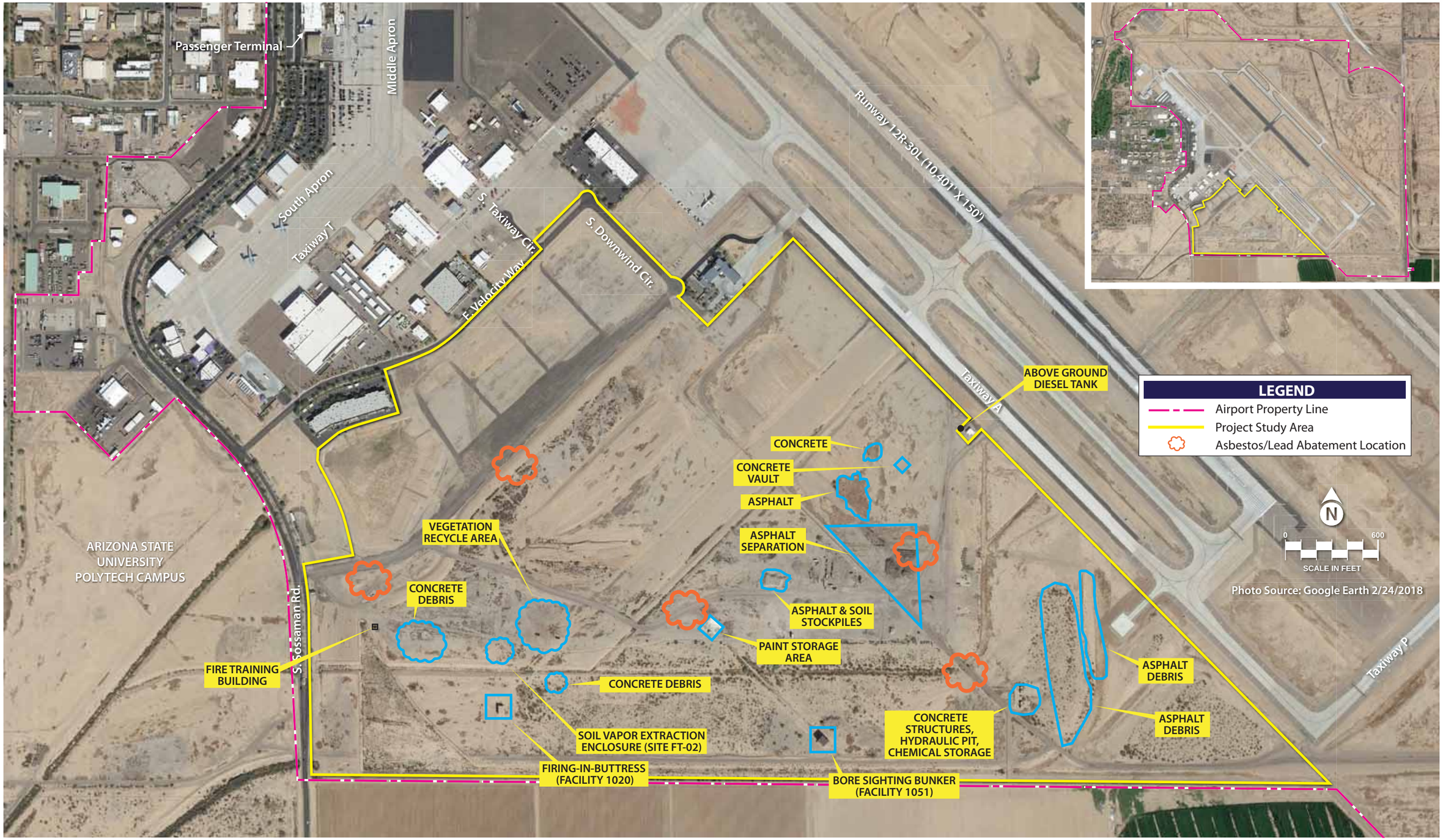
- FT02. FT02 covers approximately 8.5 acres near the southern boundary of the Williams AFB and was used for fire training activities from 1958 to 1991. It consisted of two unlined pits (the Western and Eastern Burn Pits) where flammable liquid wastes were burned as fire training. Originally, waste solvents, hydraulic fluid, oils, and fuels were burned for fire training exercises. JP-4 (a type of jet fuel commonly used by the USAF) was used beginning in 1968. In 1983, the burn pits were lined with concrete; however, water and extinguishing agents would fill the liners and overflow material would volatize or drain into the surrounding soil. After the end of training activities in 1991, the concrete liners and associated tanks, sumps, and piping were excavated and removed. The Eastern Burn Pit was excavated to 17 feet in diameter and over five feet deep. The Western Burn Pit was excavated to 62 feet in diameter and approximately six feet deep. A plastic liner was installed approximately two feet below ground surface at the Western Burn Pit and about six inches below ground surface at the Eastern Burn Pit. The area was then brought to grade. The area is now a flat field with sparse vegetation (Aerostar SES 2018: p. 10).

The main hazardous materials concern for FT02 was the potential migration of soil contaminants to groundwater. After the closure of Williams AFB, approximately 25,000 cubic yards (cy) of contaminated deep soils were treated in place by enhancing natural bacteria breakdown of contaminants with bio-venting to reduce benzene, chloroform, and 1,4-dichlorobenzene residual concentrations to cleanup levels. PFCs were also detected, leading to further study by the USAF regarding potential risks to human health (ADEQ 2017). Based on state rules, a risk assessment has been conducted which determined that the cleanup levels attained do not pose a risk to human health or environment (AMEC 2015: p. 26). Similarly, concentrations of PFOA and PFOS within the soil did not exceed the established USAF risk-based soil screening levels (Aerostar SES 2018: p. 46).

- SS021. Facility 1020 (firing-in buttress) and Facility 1051 (sighting bunker) were firing ranges, primarily used for test firing and sighting in aircraft-mounted 50-caliber machine guns. Backstop material from these facilities was removed and spread out in a thin layer near each facility, leaving spend lead bullets scattered on the ground. Subsequent to the transfer of property to the city, the city filed Declarations of Environmental Use Restrictions (DEUR) with ADEQ for several areas on the airport, including area SS021 within the project study area. The DEUR limits the use of area SS021 to non-residential use[6] (Air Force Real Property Agency 2007).

In March 2018, PMGAA coordinated asbestos-containing material (ACM) and lead-based paint (LBP) removal activities at five work areas within the project study area (**Exhibit 3C**). Identified ACM included a construction debris pile containing asbestos cement pipe, asbestos cement board, and asbestos cement liner. Identified LBP included white paint on a decontamination water rack and yellow paint on booth walls and on a concrete slab. Following removal, "clearance" activities were conducted, which indicate

[6] According to the DEUR for SS021, the maximum concentration of lead detected at Facility 1020 is 136 milligrams/kilogram of soil (mg/kg) (at 0.83 feet below ground surface). This amount is below the soil remediation levels for residential areas (400 mg/kg); however, the OU-4 Record of Decision (ROD) requires a deed restriction for non-residential use because of the presence of extended bullet fragments remaining on the ground and because the CERCLA response action only evaluated the site assuming residential future land use (USAF 2007: Exhibit 5).



Source: Four Corners Environmental. Inc 2018

Exhibit 3C
EXISTING PROJECT STUDY AREA HAZARDOUS AND SOLID WASTE FEATURES

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that the work areas meet re-occupancy standards. All waste was properly bagged and labeled for transport and disposal, as required (FM Group, Inc. 2018).

A Phase One environmental site assessment was completed on the project study area to determine if there were other recognized environmental conditions (RECs) (as defined by the American Society for Testing and Materials [ASTM] Designation E-1527-13, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process"). The report identifies one additional REC for the project study area - a historic potential leaking underground storage tank (LUST) located cross-gradient to the subject property (Facility ID 0-005338; Leak ID 0293.10). The tank contained petroleum products and was registered by PMGAA in 1995 (Four Corners Environmental, Inc. 2018). It was closed on June 11, 2018 (ADEQ 2019).

The Phase One environmental site assessment also states that groundwater-impacted areas within the Williams AFB NPL site are not adjacent or upgradient of the project study area nor is the project study area within the Williams AFB groundwater plume located to the northwest and southwest. This conclusion is based on a new Basewide Potentiometric Surface Map completed by ADEQ, dated July 7, 2017. The project study area is not part of the state's WQARF list nor are sites identified on the WQARF list within one mile of the project study area.

Solid Waste

The project study area for solid waste is the 352.8-acre project development area, as well as the closest landfills, as noted below. The city's Environmental Management & Sustainability Department provides trash and recycling services to businesses within the community, including metal bins for cardboard or blue barrel service for mixed recyclables; 20-, 30-, and 40-cy roll-off containers are available for construction, roofing, and other large-scale projects (City of Mesa website 2019). The project study area contains large stockpiles of asphalt, debris, concrete debris, and vegetative debris (**Exhibit 3C**). Multiple roll-off waste bins are also present.

The closest landfills to the project study area are the Apache Junction Landfill located approximately 8.5 miles northeast and the City of Chandler Landfill located approximately 10 miles southwest (ADEQ eMaps 2019).

Pollutant Prevention

The project study area for pollutant prevention is the airport. The airport has a SWPPP in place pursuant to the AZPDES permitting program (for a Multi-Sector General Permit for Industrial Operations) under the *Clean Water Act.* This SWPPP is updated annually and includes airport tenants. Several of the control measures contained in the airport's SWPPP pertain to hazardous materials, including, but not limited to, secondary containment, spill cleanup kits, other procedures and equipment for the cleanup of spills and accidental releases, training, record keeping, auditing, and other work practices (FAA and PMGAA 2017: p. 3-30). As previously noted, an on-airport aboveground diesel fuel storage tank located adjacent to the project study area is protected by secondary containment features.

3.9 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

3.9.1 Regulatory Setting

Determination of a project's environmental impact to historic and cultural resources is made under guidance in the *National Historic Preservation Act of 1966* (NHPA), as amended, the *Archaeological and Historic Preservation Act of 1974*, the *Archaeological Resources Protection Act*, and the *Native American Graves Protection and Repatriation Act of 1990*. In addition, the *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* also protect historical, architectural, archaeological, and cultural resources. Impacts may occur when the proposed project causes an adverse effect on a property which has been identified (or is unearthed during construction) as having historical, architectural, archaeological, or cultural significance. Determining adverse effects on historic resources is based on criteria established in 36 CFR 800 of the Advisory Council on Historic Preservation (ACHP) regulations.

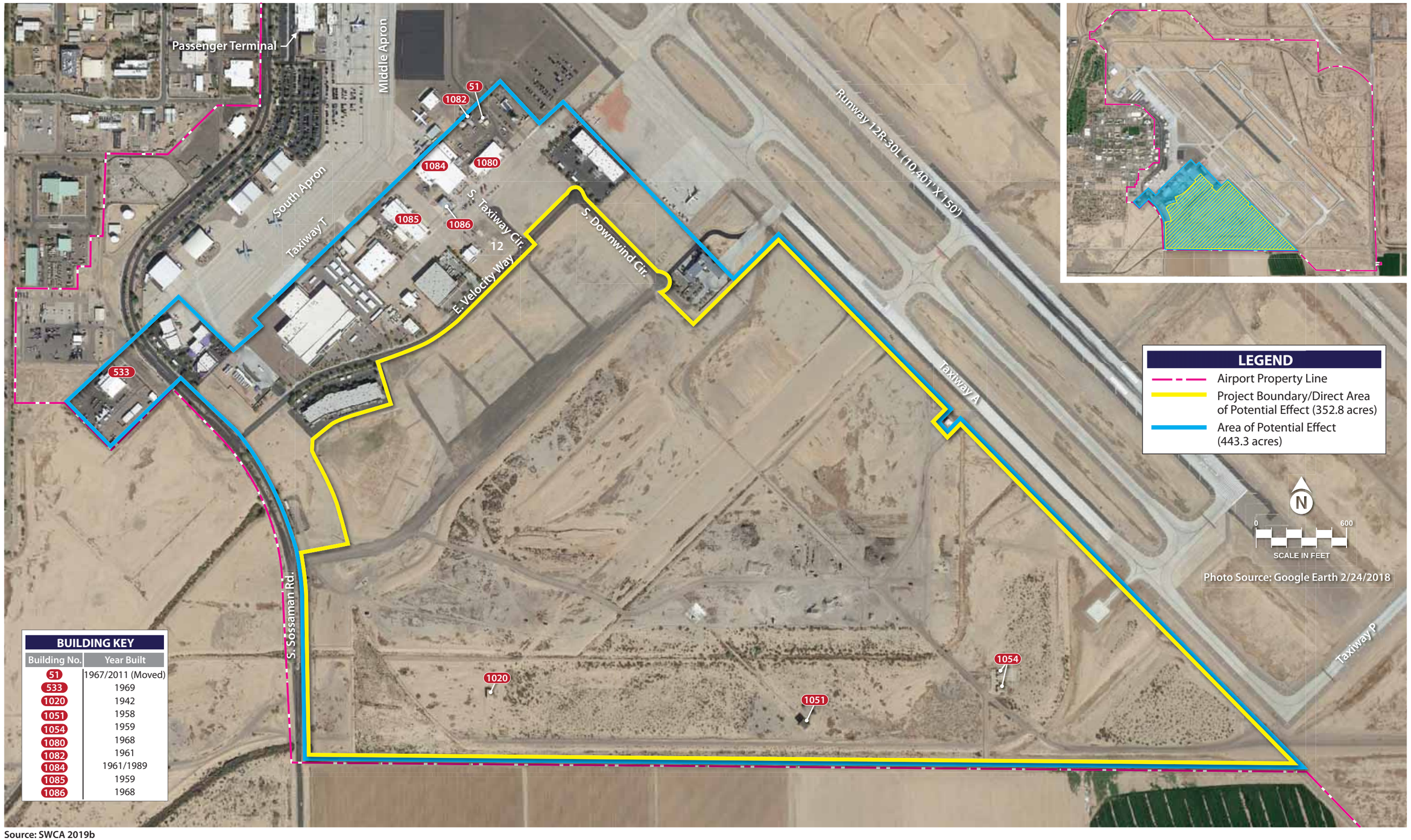
3.9.2 Affected Environment

The project study area for historical, architectural, archaeological, and cultural resources is the 352.8-acre project development area, as well as buildings located immediately to the west of the project. This area is known as the Area of Potential Effect (APE) under the NHPA (**Exhibit 3D**).[7] The airport has a long history of archaeological investigations, ranging from inventory work to data recovery programs. As early as 1974, the National Park Service conducted an intensive pedestrian survey of the property for the Arizona Air National Guard (Clonts 1974). Substantial cultural materials were recorded, at least on the surface, in the vicinity of the site known today as AZ U:10:69(ASM).

In 1993, Williams AFB was officially closed pursuant to the *Base Closure and Realignment Act of 1990* and the recommendations of the Defense Base Closure and Realignment Commission. Although subsequently operated as Williams Gateway Airport after the closure of Williams AFB, the property remained under USAF ownership until May 1998. The base closure was a federal undertaking, which required the USAF to consider the effects of their actions on historic properties. To address these obligations, the USAF sponsored a series of inventories to identify significant archaeological sites and historic buildings and structures. In total, these studies documented 23 historic properties (nine archaeological sites and 14 historic buildings or structures) throughout the former AFB (Greenwald, Anduze, and Walsh-Anduze (editors) 1994; Woodward, Osmon, and Richards 1992).

In order to manage the effects on the historic properties, a Programmatic Agreement (PA) between the USAF, the State Historic Preservation Office (SHPO), the ACHP, and concurring parties (which included the Gila River Indian Community, Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, Tohono O'odham Nation, Hopi Tribe, ASU, Maricopa Community College District, Salt River Project,

[7] The APE is "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking." See 36 C.F.R. §800.16(d). The APE must include all direct and reasonably foreseeable indirect effects but does not have to be one contiguous area.



BUILDING KEY

Building No.	Year Built
51	1967/2011 (Moved)
533	1969
1020	1942
1051	1958
1054	1959
1080	1968
1082	1961
1084	1961/1989
1085	1959
1086	1968

Source: SWCA 2019b

Exhibit 3D
HISTORIC- ERA STRUCTURES WITHIN THE AREA OF POTENTIAL EFFECT

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Bureau of Land Management, and PMGAA [formerly Williams Gateway Airport Authority]) was negotiated and executed in May 1995. In accordance with the PA, an umbrella Historic Properties Treatment Plan was developed for the protection, preservation, and investigation of the historic properties on the Williams AFB (SWCA and Ryden Architects 1995). Following the execution of the PA and in accordance with the Historic Properties Treatment Plan, several archaeological testing projects were conducted in response to ground disturbances in and near NRHP-listed archaeological sites.

Based on previous surveys, a total of 12 cultural properties have been identified within the APE: two archaeological sites and 10 historic-era buildings and structures (SWCA 2019b). The two archaeological sites (AZ U:10:60[ASM] and AZ U:10:69[ASM], also known as AZ U:10:25[ASU]) are in, or partly within, the direct APE. These sites were listed in the NRHP in 1995, but AZ U:10:60(ASM) was removed from the NRHP in 2008 after being subjected to several phases of archaeological testing and data recovery (SWCA 2018a). AZ U:10:69(ASM), which falls only slightly within the APE, has also been the subject of numerous testing and data recovery projects. It remains listed in the NRHP because small portions of the site, outside the APE, are known to contain buried archaeological deposits that have yet to be subjected to data recovery investigation. However, the portion of AZ U:10:69(ASM) within the APE was determined in 2002 to be non-contributing to the site's NRHP status and not worthy of further preservation efforts (Foster 2002).

Of the 10 historic-era buildings and structures, three are in the direct APE and seven are in the APE for indirect effects. None of these historic-era properties are eligible for listing in the NHRP. Seven of the historic properties were recorded and determined ineligible as the results of previous projects (Woodward et al. 1992; Hesse 2018). Three of the properties, Building 533, Structure 1051, and the mostly dismantled Structure 1054, constructed between 1989 and 1969, are newly recorded properties (SWCA 2019b). The 10 historic-era properties are described more fully in Section 4.7.3 of this EA.

3.10 LAND USE

3.10.1 Regulatory Setting

Pursuant to 49 USC 47107(a)(10), an airport sponsor is required to provide written assurance that appropriate action has been taken, or will be taken, to ensure that existing and planned land uses adjacent to or near an airport are compatible with normal airport operations. The airport's "land assurance" letter is attached to this EA as **Appendix E**. An airport is also required, per 49 U.S.C. 47106(a)(1), to ensure that its proposed actions would be consistent with existing land use plans.

3.10.2 Affected Environment

The project study area for existing and planned/future land use is the 352.8-acre project development area and the immediately surrounding areas, both on and off the airport.

Existing Land Use

The airport is in the southernmost part of the city. The project study area is currently vacant, but portions of the project study area contain debris piles, trash, piles of old asphalt, and evidence of previous military use, including a bunker that was previously used in military testing activities. Large detention basins occur in the southwest and northwest portions of the project study area. A human-made drainage flows south from the northeastern boundary of the project study area, then cuts west into a culvert under an existing road.

The project study area is bordered by Taxiway A of the airport's airfield system, the aircraft rescue and firefighting (ARFF) facility/Mesa Fire Station/Police Airport Unit, and an U.S. Forest Service/U.S. Department of Homeland Security Immigration and Customs Enforcement (ICE) building on the north and northeast; by an industrial complex off Velocity Way on the west; by the runway protection zone of Runway 30L on the east; and by open space planned for use by ASU and agricultural land on the southwest and south (**Exhibit 3E**).

Planned and Future Land Use

As previously described in Section 1.2.1, the airport is zoned as Light Industrial (LI) by the city. The airport is also shown as a Specialty District (sub-type Airport), a designated Economic Activity District (Gateway), and a designated Foreign Trade Zone (#221) within the *Mesa 2040 General Plan* (City of Mesa 2014). Each designated Economic Activity District contains "unique assets and provides a concentration of one or more of Mesa's industries of opportunity." According to the city's general plan, the Gateway Employment Center provides the largest opportunity for new growth in Mesa and identifies the airport as an area anchor, due in part to its available developable land (City of Mesa 2014: pp. 5-7 through 5-12). Planned land uses in proximity to the project study area are shown in **Exhibit 3F**.

The approved airport layout plan (ALP) for the airport includes the project study area and identifies it as a "Future South Industrial Area Aeronautical/Non-Aeronautical Development" (FAA and PMGAA 2015).

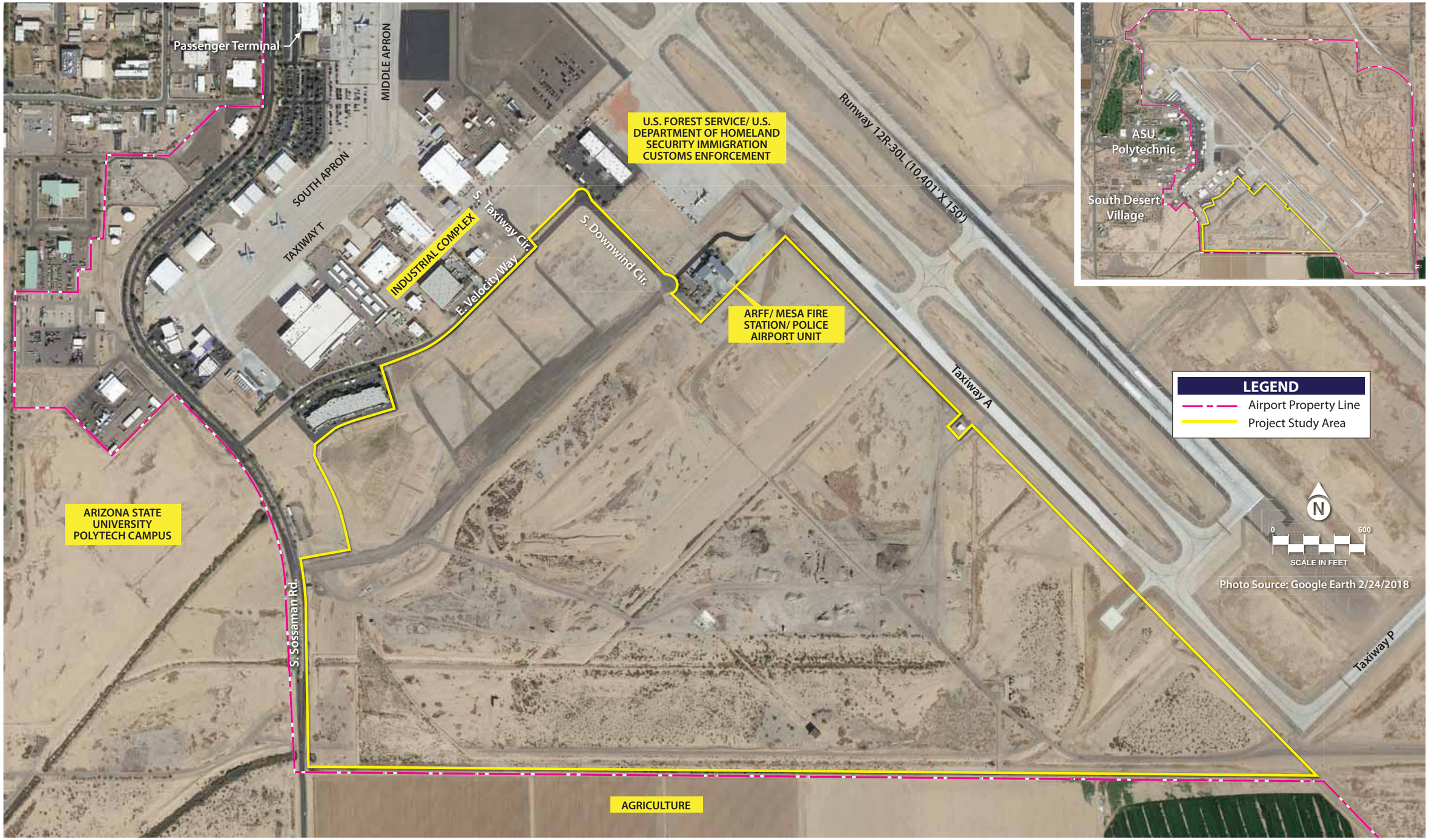
3.11 NATURAL RESOURCES AND ENERGY SUPPLY

3.11.1 Regulatory Setting

The federal government's commitment to sustainability in terms of natural resources and energy usage has been reaffirmed through E.O. 13693, *Planning for Federal Sustainability*, which sets goals for all federal agencies to promote energy conservation, efficiency, and management.

3.11.2 Affected Environment

The project study area for natural resources and energy supply is the 352.8-acre project development area, as well as the closest utility hookups and sources of aggregate, as noted below. The airport is supplied by electricity, natural gas, and water. Electric service near the project study area is provided by the Salt River Project, which delivers 12-kilovolt (kV) service via underground electrical trenches on Sossaman Road. The project study area also contains existing overhead distribution lines.


Passenger Terminal
MIDDLE APRON
SOUTH APRON
TAXIWAY T
INDUSTRIAL COMPLEX
S. Taxiway Cir.
E. Velocity Way
S. Downwind Cir.
U.S. FOREST SERVICE/ U.S. DEPARTMENT OF HOMELAND SECURITY IMMIGRATION CUSTOMS ENFORCEMENT
Runway 12R-30L (10,401' X 150')
ARFF/ MESA FIRE STATION/ POLICE AIRPORT UNIT
Taxiway A
ASU Polytechnic
South Desert Village
ARIZONA STATE UNIVERSITY POLYTECH CAMPUS
S. Sossaman Rd.
AGRICULTURE
Taxiway P
LEGEND
Airport Property Line
Project Study Area
N
0
600
SCALE IN FEET
Photo Source: Google Earth 2/24/2018

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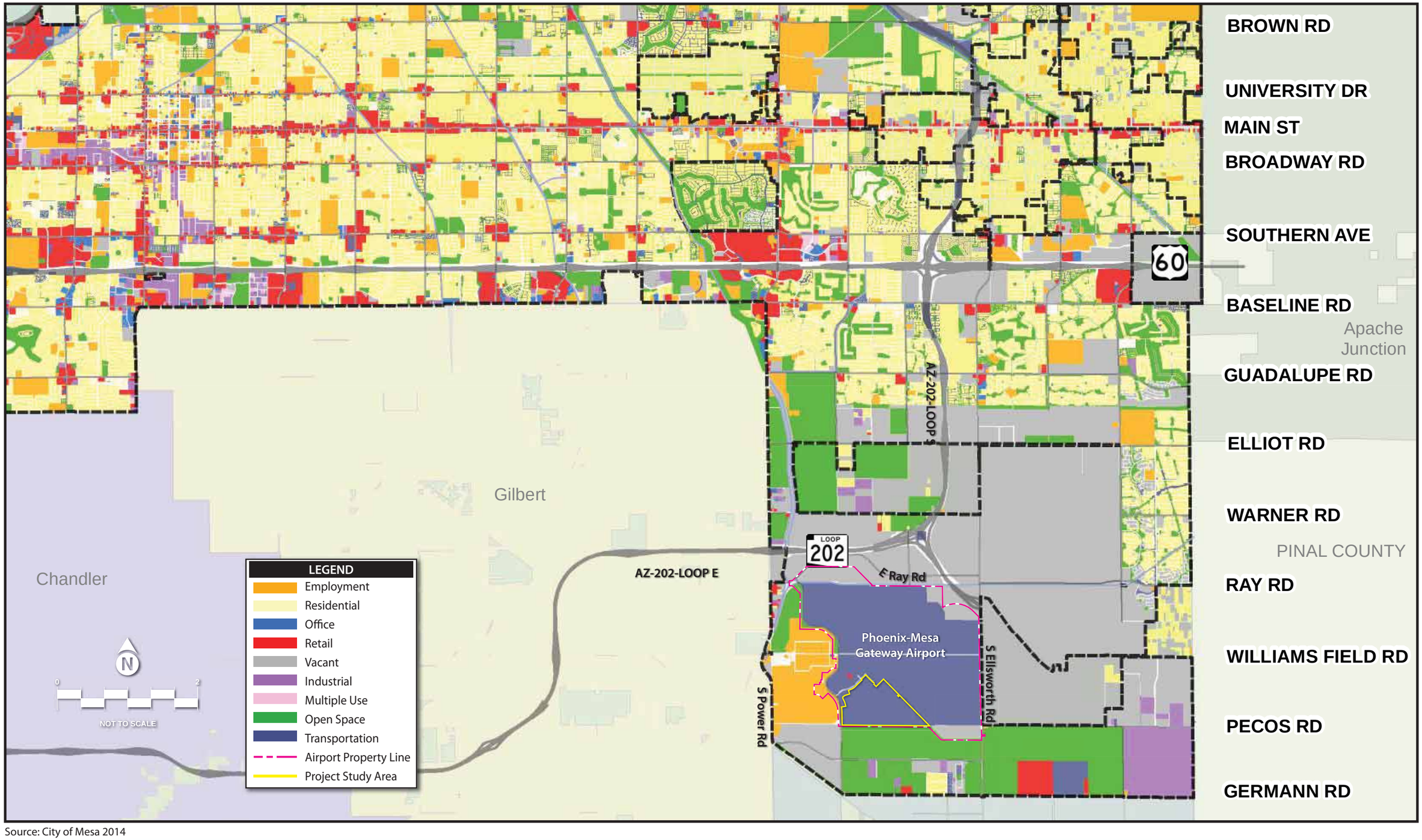

Source: City of Mesa 2014

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The city provides natural gas and water. Currently, natural gas service is provided to areas adjacent to the project site by Southwest Gas via an existing six-inch-diameter, 60-pounds per square inch (psi) gas line along Sossaman Road and a four-inch-diameter, 60-psi gas line in Velocity Way and Taxiway Circle.

The city's water distribution network includes a 16-inch-diameter water main in Sossaman Road and a 12-inch-diameter water main in Velocity Way and Downwind Circle. In addition, the airport has a fire protection system that includes two water storage tanks with a total of 961,000 gallons of storage capacity.

Numerous sources of aggregate are located within the county, including several operations along the Salt River. Gila River Sand and Gravel is located approximately 15 miles southwest of the project study area on the Gila River Indian Reservation.

3.12 NOISE AND COMPATIBLE LAND USE

3.12.1 Regulatory Setting

Noise is considered unwanted sound that can disrupt activities, for example, sleeping and student learning, in addition to causing annoyance. Aviation noise is caused primarily from aircraft operations, including departures, arrivals, overflights, taxiing, and engine run-ups. Most often, it is rural and suburban residential areas that are affected by airport noise exposure due to their inherently low ambient noise level, as compared to more urbanized areas. There are also special noise sensitivities regarding certain uses, such as national parks or significant historic or cultural resources.

Federal land use compatibility guidelines are established under 14 CFR 150, *Airport Noise Compatibility Planning* (Part 150). According to Part 150, residential land use and schools are not considered compatible with a day-night average sound level (DNL) 65 decibel (dB) noise exposure contour or higher. Religious facilities, hospitals, or nursing homes within a DNL 65 dB contour are generally compatible if an interior noise level reduction of 25 dB is incorporated into the design and construction of the structure.[8]

3.12.2 Affected Environment

The project study area for noise and compatible land use is the area within the existing and future 65 and higher noise contours. Existing DNL 65, 70, and 75 dB noise contours associated with existing condition airport operations are shown on **Exhibit 3G**. The associated aircraft operations and fleet mix are shown in **Table 3E**. Additional information regarding preparation of the noise exposure contours may be found in **Appendix B**.

[8] Noise-sensitive receptors are generally residences, churches/places of worship, hospitals and healthcare facilities, and educational facilities. Churches/places of worship are defined as permanently established facilities intended solely for use as places of worship and not meant to be converted to other potential uses. For a hospital/health care facility to be considered a noise-sensitive medical facility, it must provide for overnight stays or provide for longer recovery periods, where rest and relaxation are key considerations for use of the facility. Schools are facilities that provide full time use for instruction and training to students.

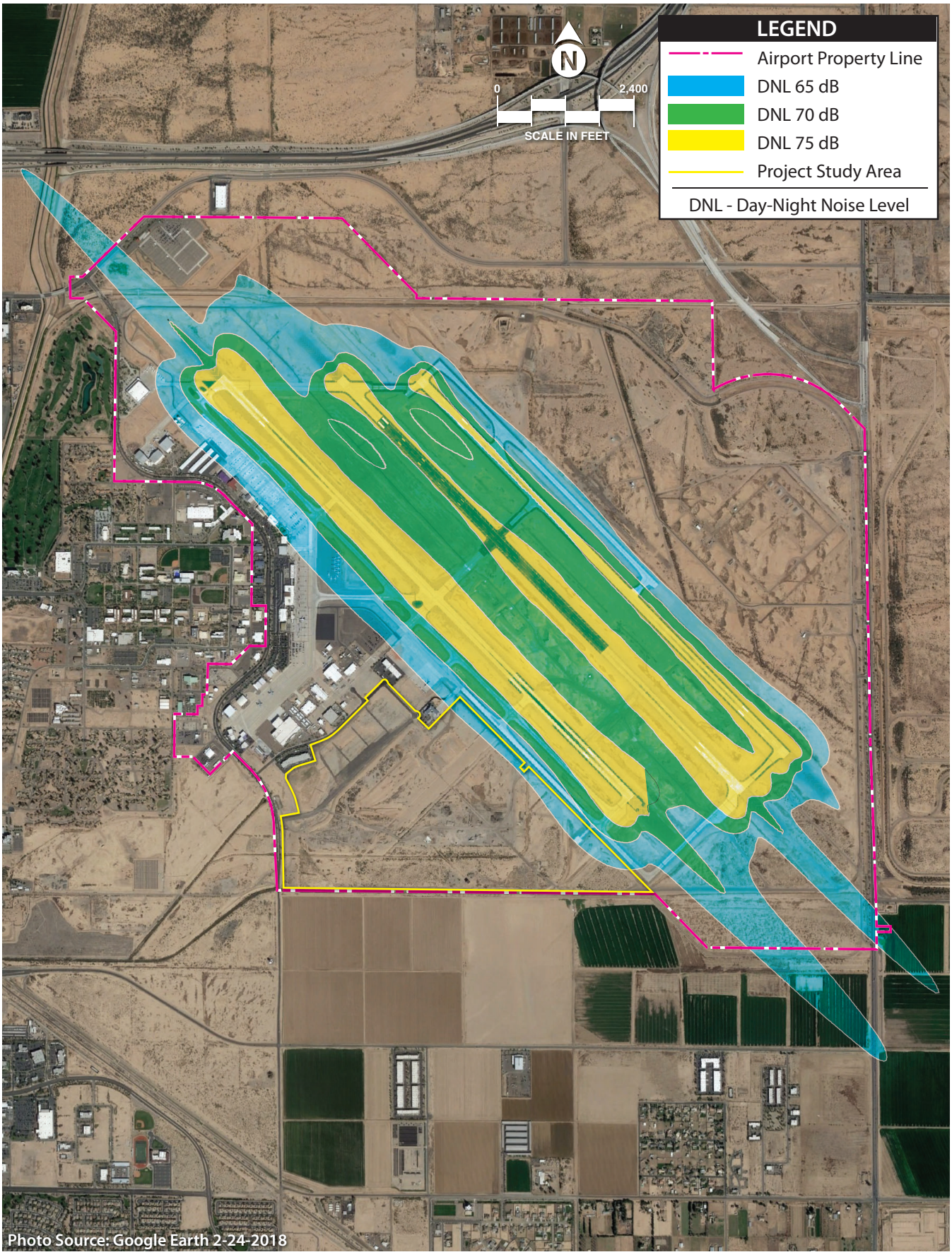

LEGEND
Airport Property Line
DNL 65 dB
DNL 70 dB
DNL 75 dB
Project Study Area
DNL - Day-Night Noise Level
N
0
2,400
SCALE IN FEET
Photo Source: Google Earth 2-24-2018

TABLE 3E
Existing Condition (2018) Fleet Mix
Phoenix-Mesa Gateway Airport

Itinerant			Local		
Aircraft Type	**AEDT Designator**	**2018 Operations**	**Aircraft Type**	**AEDT Designator**	**2018 Operations**
General Aviation					
Small Jet	CL601	455	Small Jet	CL601	1,120
Small Jet	CNA500	2,602	Small Jet	CNA500	6,400
Small Jet	CNA750	2,407	Small Jet	CNA750	5,920
Small Jet	EMB145	1,756	Small Jet	EMB145	4,320
Small Jet	F10062	260	Small Jet	F10062	640
Small Jet	GV	130	Small Jet	GV	320
Small Jet	LEAR35	781	Small Jet	LEAR35	1,920
Small Jet	MU3001	1,366	Small Jet	MU3001	3,360
Prop/Turbo Prop	BEC58P	10,798	Prop/Turbo Prop	BEC58P	26,559
Prop/Turbo Prop	CNA208	40,459	Prop/Turbo Prop	CNA208	99,516
Prop/Turbo Prop	CNA441	1,301	Prop/Turbo Prop	CNA441	3,200
Prop/Turbo Prop	DHC8	650	Prop/Turbo Prop	DHC8	1,600
Helicopter	R44	2,082	Helicopter	R44	5,120
Military					
Heavy Jet	767300	144	Heavy Jet	767300	120
Heavy Jet	MD9028	16	Heavy Jet	MD9028	13
Small Jet	CL601	54	Small Jet	CL601	45
Small Jet	CNA500	121	Small Jet	CNA500	101
Small Jet	CNA750	45	Small Jet	CNA750	37
Small Jet	LEAR35	144	Small Jet	LEAR35	120
Small Jet	MU3001	32	Small Jet	MU3001	27
Prop/Turbo Prop	BEC58P	32	Prop/Turbo Prop	BEC58P	27
Prop/Turbo Prop	CNA208	118	Prop/Turbo Prop	CNA208	99
Prop/Turbo Prop	CNA441	32	Prop/Turbo Prop	CNA441	27
Prop/Turbo Prop	DHC8	137	Prop/Turbo Prop	DHC8	115
Heavy Jet	C130E	517	Heavy Jet	C130E	433
Heavy Jet	F16GE	778	Heavy Jet	F16GE	651
Heavy Jet	F-18	198	Heavy Jet	F-18	166
Heavy Jet	KC-135	399	Heavy Jet	KC-135	334
Heavy Jet	T-38A	198	Heavy Jet	T-38A	166
Helicopter	S70	226	Helicopter	S70	190
Air Carrier					
Heavy Jet	737800	122			
Heavy Jet	737700	122			
Heavy Jet	A319-131	6,443			
Heavy Jet	A320-211	5,349			
Heavy Jet	MD83	122			
Air Taxi					
Small Jet	CL600	1,806			
Small Jet	CL601	271			
Small Jet	CNA500	406			
Small Jet	CNA750	1,806			
Small Jet	EMB145	3,477			
Small Jet	LEAR35	226	**Itinerant Total**		**125,555**
Small Jet	MU3001	2,168	**Local Total**		**162,663**
Prop/Turbo Prop	BEC58P	542	**TOTAL**		**288,218**
Prop/Turbo Prop	CNA208	30,661			
Prop/Turbo Prop	CNA441	90			
Prop/Turbo Prop	DHC8	858			
Prop/Turbo Prop	DO328	1,806			
Helicopter	S76	1,039			

Source: FAA Air Traffic Activity System (ATADS) (January 2018-December 2018). Air Carrier Fleet Mix derived from 2018 Landing Reports. Coffman Associates analysis.
AEDT = Aviation Environmental Design Tool

3.13 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

3.13.1 Regulatory Setting

Socioeconomics in the context of NEPA, and as defined in FAA Order 1050.1F, focuses on characteristics of the human environment such as population, housing, employment, and public services, including surface transportation and traffic. Federal regulations include the *Uniform Relocation Assistance and Real Property Acquisitions Policy Act of 1970*, which contains provisions that must be followed if people or businesses will be displaced.

E.O. 12898, *Federal Action to Address Environmental Justice in Minority Populations and Low-Income Populations*, its accompanying Presidential Memorandum, and DOT Order 5610.2, *Environmental Justice* require FAA to provide for meaningful public involvement by minority and low-income populations, as well as analysis that identifies and addresses potential impacts on these populations that may be disproportionately high and adverse. Under Title VI of the *Civil Rights Act*, FAA is also required to ensure that no person is denied benefits or subjected to discrimination under any program or activity receiving federal financial assistance on the grounds of race, color, or national origin.

Pursuant to E.O. 13045, *Protection of Children from Environmental Health Risks and Safety Risks,* FAA is required to make it a high priority to identify and assess environmental health risks that may disproportionately affect children.

3.13.2 Affected Environment

Socioeconomics - Economic Activity and Income, Employment, Population, and Housing

The project study area for economic activity and income, employment, population, and housing is the 352.8-acre project development area and the immediately surrounding areas, both on and off the airport. There are no businesses, housing, or population located or residing within the project development area. Thus, the project development area does not currently support employment or economic activity. The airport currently collects rent taxes that are then dispersed amongst the various taxing entities. However, no state and local taxes are assessed against the project development area at this time.

According to the city's general plan, in 2010, the airport and the area immediately west (between Sossaman Road and Power Road) supported approximately 1,761 jobs, primarily in the office and public sectors; by 2040, the same area is projected to support 6,502 jobs, including jobs in the industrial sector as well as the office and public sectors (City of Mesa 2014: Figures 5-2 and 5-3).

Socioeconomics - Surface Transportation/Traffic

The project study area for surface transportation/traffic is bounded by three city roadways: Sossaman Road; Velocity Way; and Downwind Circle. Traffic continues from these three roads to the regional and city transportation system. These streets and highways are described below.

- SR Loop 202 (Santan Freeway) is an Arizona Department of Transportation (ADOT) owned, operated, and maintained facility that provides regional connectivity to the southeast valley. SR Loop 202 consists of three through lanes and an auxiliary lane in both directions. The posted speed limit on SR Loop 202 is 65 miles per hour (mph) near the project study area.

- Power Road has a north/south alignment and is classified as an arterial per the *City of Mesa 2040 Transportation Plan* (Functional Classification Map 2.2.14). Near the project study area, Power Road is owned, operated, and maintained by three governmental agencies: Maricopa County Department of Transportation; Town of Gilbert; and City of Mesa. Near the vicinity of the project site, Power Road is constructed as a six-lane roadway with three lanes and a bike lane in each direction separated by a raised median. The posted speed limit is 45 mph.

- Sossaman Road has a north/south meandering alignment and is owned, operated, and maintained by the City of Mesa near the project study area. It is classified as an arterial by the *City of Mesa 2040 Transportation Plan* (Functional Classification Map 2.2.14). Sossaman Road is a four-lane roadway with two northbound lanes and two southbound lanes separated by raised medians near the project study area. The posted speed limit on Sossaman Road near the project study area is 35 mph.

- Ellsworth Road has a north/south alignment and is owned, operated, and maintained by the City of Mesa near the project study area. Ellsworth Road is classified as an arterial by the *City of Mesa 2040 Transportation Plan* (Functional Classification Map 2.2.14). Ellsworth Road is a four-lane roadway with two lanes in each direction separated by a raised median. The posted speed limit of Ellsworth Road near the project study area is 45 mph.

- Ray Road has an east/west meandering alignment and is owned, operated, and maintained by the City of Mesa near the project study area. Ray Road is classified as an arterial by the *City of Mesa 2040 Transportation Plan* (Functional Classification Map 2.2.14). It is constructed as a two-lane roadway with one lane in each direction separated by a raised median. The posted speed limit on Ray Road near the project site is 45 mph.

- Velocity Way has a northeast/southwest alignment and is a collector road. It is three lanes with one northeast bound lane and one southwest bound lane separated by a two-way left-turn lane. Velocity Way terminates at its intersection with Downwind Circle, which continues in the southeast/northwest directions. The posted speed limit along Velocity Way near the project study area is 25 mph.

- Downwind Circle has a southeast/northwest alignment and is a collector road. It is two lanes with one southeast bound lane and one northwest bound lane. Downwind Circle ends in a cul-de-sac at the existing ARFF/Mesa Fire Station/Airport Police Department. The posted speed limit along Downwind Circle near the project study area is 25 mph.

- Pecos Road has an east/west alignment and is owned, operated, and maintained by the City of Mesa near the project study area. Pecos Road is classified as an arterial by the *City of Mesa 2040 Transportation Plan* (Functional Classification Map 2.2.14). Pecos Road is constructed as a two-lane roadway with one lane in each direction. The posted speed limit along Pecos Road near the project study area is 45 mph.

Exhibit 3H depicts the traffic study area (identified as the area around the airport generally bounded by SR Loop 202 and Ray, Power, Pecos, and Ellsworth roads) streets and intersections. **Table 3F** shows the average daily traffic (ADT) on street segments.

TABLE 3F
2018 Average Daily Traffic (ADT) Volumes

Roadway	ADT
SR Loop 202 near Power Road	58,700
Ray Road between Sossaman Road and Hawes Road	4,500
Sossaman Road between Ray Road and Williams Field Road	11,800*
Sossaman Road between Williams Field Road and Pecos Road	7,400*
Pecos Road between Sossaman Road and Hawes Road	6,200
Pecos Road between Hawes Road and Ellsworth Road	5,500
Ellsworth Road between Pecos Road and Williams Field Road	54,000*
Ellsworth Road between Williams Field Road and Ray Road	53,300*

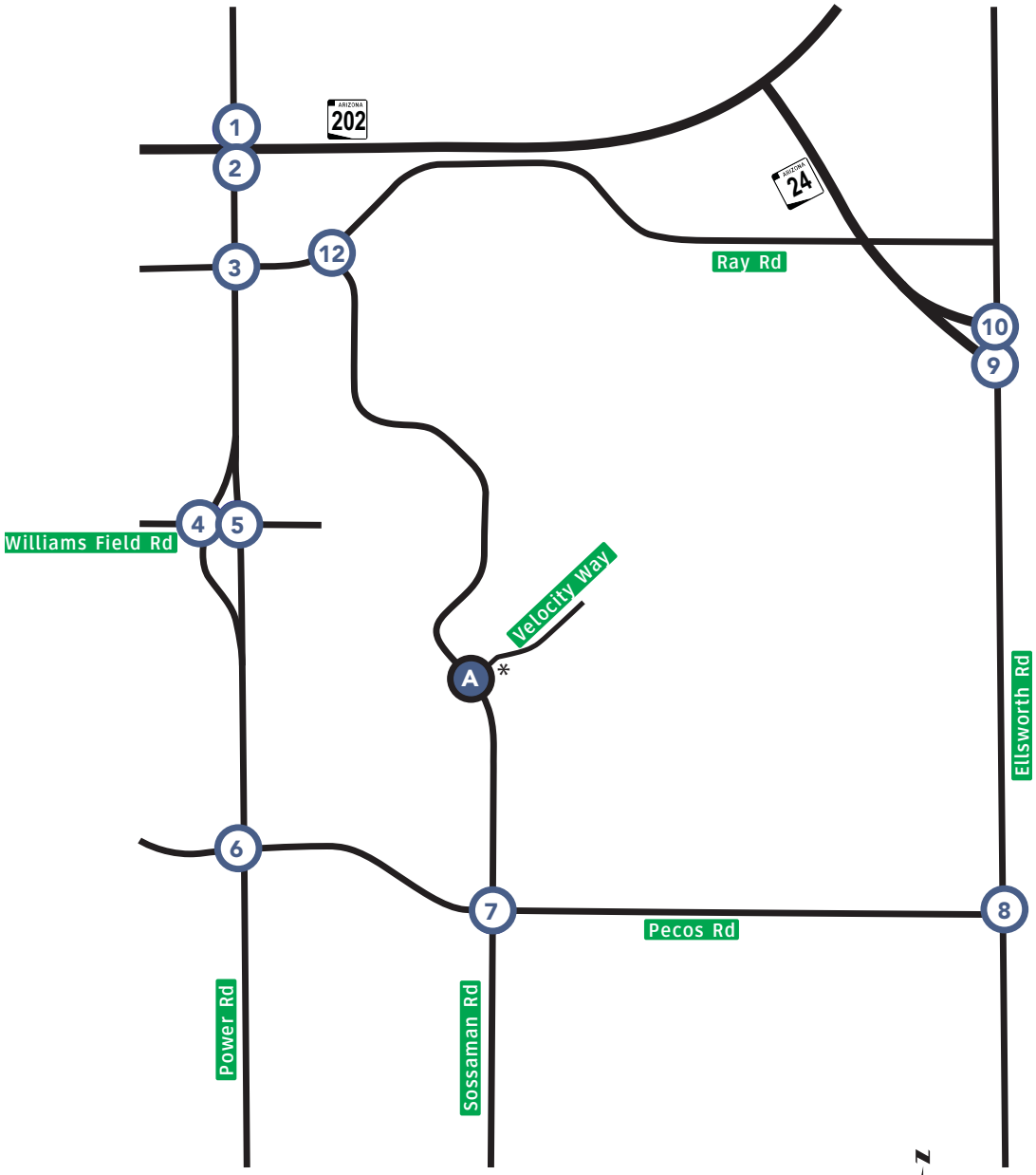
Source: United Civil Group 2019 (Table 3).
SR = State Route
* Construction was in the area when traffic count was taken.

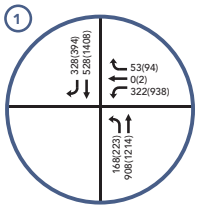
Levels of service (LOS) for the AM and PM peak hours at 12 study intersections are shown in **Table 3G**. LOS is a qualitative measure of the traffic operations at an intersection or on a roadway segment. It is ranked from LOS A, which signifies little or no congestion, to LOS F, which signifies congestion and traffic jam conditions. City guidelines strive to obtain LOS D or better for both signalized and unsignalized intersection operations overall; intersections with a LOS E or LOS F may warrant intersection improvements or traffic reductions. As can be seen in **Table 3G**, one intersection within the traffic study area currently experiences LOS E during the PM peak hour. This intersection (Power Road/Pecos Road) is signalized, but experiences over a minute of delay per vehicle during the PM peak by motorists attempting left turns on all approaches (United Civil Group 2019).

TABLE 3G
2018 Existing Intersection Delay and Level of Service (LOS)

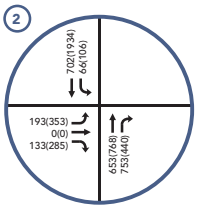
		AM Peak Hour		PM Peak Hour	
Intersection Location	Intersection Control	Average Delay (vehicles/seconds)	LOS	Average Delay (vehicles/seconds)	LOS
Power Road/SR Loop 202 WB Ramp	Signal	16.94	B	27.31	C
Power Road/SR Loop 202 EB Ramp	Signal	13.32	B	16.93	B
Power Road/Ray Road	Signal	26.38	C	28.94	C
Power Road/Williams Field Road (west)	Signal	25.46	C	18.97	B
Power Road/Williams Field Road (east)	Signal	15.11	B	29.27	C
Power Road/Pecos Road	Signal	33.24	C	67.35	E
Sossaman Road/Pecos Road	All-way Stop	14.72	B	20.53	C
Ellsworth Road/Pecos Road	Signal	6.38	A	18.30	B
Ellsworth Road/SR 24 Off-ramp	Signal	22.44	C	44.14	D
Ellsworth Road/SR 24 On-ramp	Signal	42.95	D	24.81	C
Sossaman Road/Velocity Way	One-way Stop	12.99	*	10.94	*
Sossaman Road/Ray Road	Signal	19.69	B	22.01	C

Source: United Civil Group 2019.
SR = State Route; WB = westbound; EB = eastbound
* An overall LOS letter grade is not assigned for one-way or two-way stop-controlled intersections (HCM 2010).

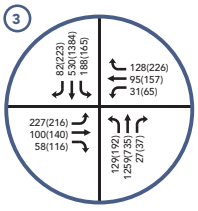




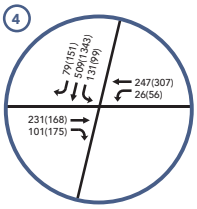
WB SR202 Loop/Power Rd



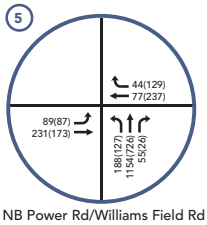
EB SR202 Loop/Power Rd



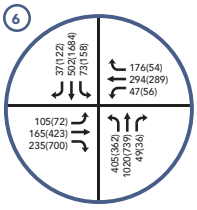
Power Rd/Ray Rd



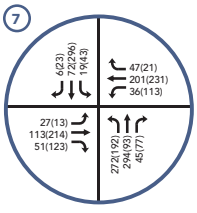
SB Power Rd/Williams Field Rd



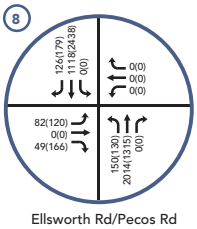
NB Power Rd/Williams Field Rd



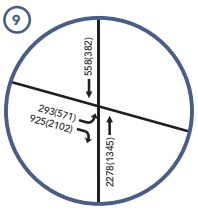
Power Rd/Pecos Rd



Sossaman Rd/Pecos Rd



Ellsworth Rd/Pecos Rd



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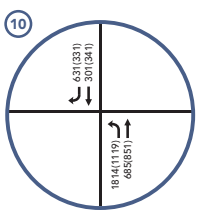
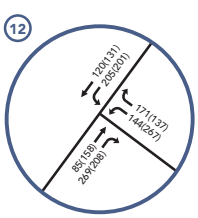
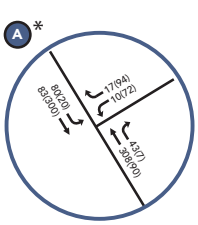


Ellsworth Rd/WB SR24



Sossaman Rd/Ray Rd



Sossaman Rd/Velocity Way

*Intersection 11 is denoted as A

Source: United Civil Group 2019

Environmental Justice

The project study area for environmental justice populations is the area within the same block group as the project development area. **Table 3H** provides context for this information by comparing population characteristics for the city, the county, and the state, based on 2017 American Community Survey (ACS) estimates conducted by the U.S. Census Bureau. As indicated, approximately 13.5 percent of the population in the city is at least partially from a minority race, while 27.4 percent of the population consider themselves Hispanic or Latino. The county and the state overall have approximately 19 percent minority population and 31 percent of the population are Hispanic or Latino. **Exhibit 3I** shows the percent of minority population by block group in and around the airport, including the project study area. The block group containing the project study area is approximately 19 percent minority population and includes ASU family housing to the west (U.S. EPA 2016).

TABLE 3H
Population Characteristics (2017 Estimates)
City of Mesa, Maricopa County, and State of Arizona

Characteristic	City of Mesa	Maricopa County	State of Arizona
Total Population	458,860	4,155,501	6,809,946
Race (alone or in combination with one or more other races)			
White	86.5%	81.0%	80.5%
Black or African American	4.7%	6.6%	5.4%
American Indian and Alaska Native	3.2%	2.8%	5.6%
Asian	2.9%	5.0%	4.1%
Native Hawaiian/Pacific Islander	0.7%	0.5%	0.4%
Other	5.3%	7.9%	7.8%
Hispanic or Latino (of any race)	27.4%	30.6%	30.9%

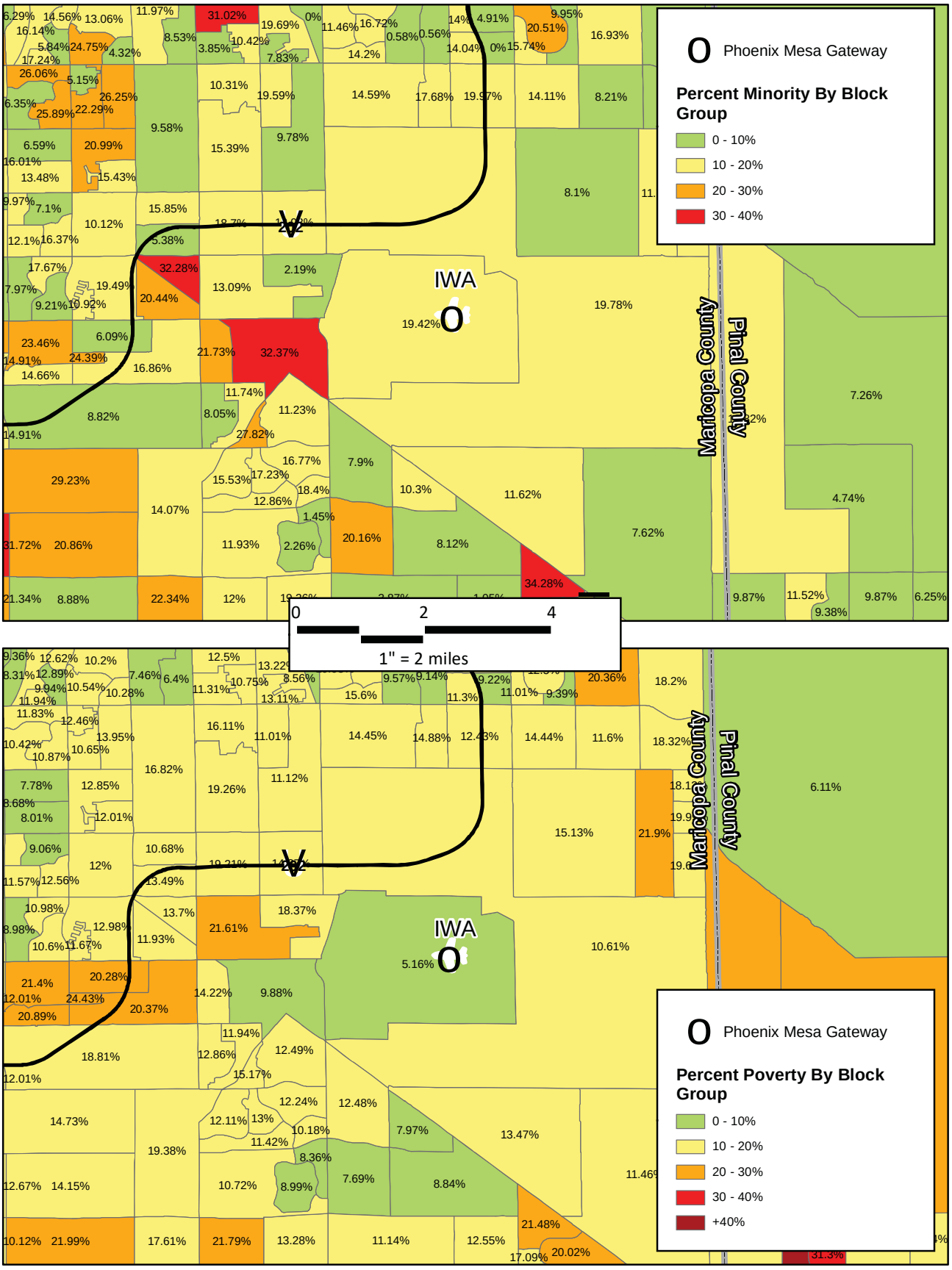
Source: U.S. Census Bureau, American FactFinder website 2019. Table DP05, ACS Demographic and Housing Estimates, 2013-2017 ACS 5-Year Estimates.

Table 3I summarizes economic characteristics of the city, county, and state overall using 2017 ACS estimates. As can be seen in this table, the city has a lower median household and per capita income than either the county or the state, and its unemployment rate is the same as the county but slightly less than the state. The city's percentage of families living below the poverty level is higher than the county but less than the state. **Exhibit 3I** shows the percentage of the population below poverty level by block group in areas at and near the project study area. The block group in and around the airport, including the project study area, has approximately five percent of its families living below the poverty level and includes ASU family housing to the west (U.S. EPA 2016).

TABLE 3I
Economic Characteristics (2017 Estimates)
City of Mesa, Maricopa County, and State of Arizona

Characteristic	City of Mesa	Maricopa County	State of Arizona
Median Household Income	$52,155	$58,580	$53,510
Families Below the Poverty Level	12.0%	11.4%	12.3%
Unemployment (civilians)	6.0%	6.0%	7.1%
Per Capita Income	$26,535	$30,186	$27,964

Source: U.S. Census Bureau, American FactFinder website 2019. Table DP03, Selected Economic Characteristics, 2013-2017 ACS 5-Year Estimates.



Source: U.S. Census Bureau ACS 2016 5-Year Estimate

Children's Environmental Health and Safety Risks

The project study area for children's environmental health and safety risks is the area within 0.5 mile of the 352.8-acre project development area. Based on the 2016 ACS, as reported by U.S. EPA's EJScreen summary report (2019), approximately 359 people live within 0.5 mile of the project study area. This number includes 54 children age 0-4 and 93 children age 0-17. Approximately 1,167 people live within one mile of the project study area. This number includes 151 children age 0-4 and 301 children age 0-17. There are no reported persons or children living within 0.25 mile of the project study area. The nearest primary or secondary school is Higley High School, located approximately 1.85 mile from the project study area.

3.14 VISUAL EFFECTS

3.14.1 Regulatory Setting

Visual effects deal broadly with the extent to which the proposed development or alternative(s) would either: 1) produce light emissions that create annoyance or interfere with activities; or 2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment. Visually-protected areas can include visually-protected coastal areas, rivers protected under the *Wild and Scenic Rivers Act*, sensitive wildlife species, and Section 106 (*NHPA*), Section 4(f) (*Department of Transportation Act of 1966*), and Section 6(f) (*Land and Water Conservation Fund Act of 1965*) properties that are located within or near a project area and could be affected by light emissions and/or changes to visual resources and the visual character.

3.14.2 Affected Environment

The project study area for visual effects is the area within and immediately adjacent to the 352.8-acre project development area. There is no airport lighting located within the project study area; street lighting, airfield lighting, and outdoor building security lighting is present adjacent to the project study area. Adjacent lands are vacant (southwest and east), used for agriculture (south and southeast), or contain airport-related infrastructure and a business park (north and west, respectively). The project study area is not located in proximity to an area that is considered sensitive to light emissions.

No scenic roadways are present within the project study area or the airport environs. The project study area is a vacant, previously disturbed part of the airport, and much of the project study area has been previously paved or bladed. The area surrounding or in proximity to the project study area is not considered visually important and does not contain unique scenic qualities.

3.15 WATER RESOURCES

The project study area for water resources related to wetlands, floodplains, and protected rivers is the area within the 352.8-acre project development area and a 0.25-mile radius (for protected rivers only). Based on a biological field survey, the project study area shows no indication of hydric soils, hydrology, or hydrophilic vegetation (i.e., wetlands) nor are there waters of the U.S., as evidenced by a lack of

drainages connected to natural water features (SWCA 2019a). There are no mapped 100-year floodplains, designated wild and scenic rivers segments, or other National River Inventory (NRI) river features in proximity to the project study area (FEMA 2013; National Wild and Scenic Rivers System website 2019; National Park Service website 2019). These categories of water resources were discussed in Section 3.3 of this chapter and do not warrant further discussion. The following discussion focuses on surface waters and groundwater.

3.15.1 Regulatory Setting

The *Clean Water Act* provides the authority to establish water quality standards, control discharges, develop waste treatment management plans and practices, and regulate other issues concerning water quality. Water quality concerns related to airport development most often involve the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum products, solvents, etc. Additionally, Congress has mandated (under the *Clean Water Act*) the National Pollutant Discharge Elimination System. Permits and certain procedures are required to prevent contamination of water bodies from stormwater runoff.

As discussed previously in Section 3.8.1, NPDES permitting authority in Arizona has been delegated to ADEQ, as part of its AZPDES program. Individual construction projects that have a potential for one acre or more of ground disturbance are required to obtain AZPDES coverage under the state's Construction General Permit. Permit conditions typically related to use of the AZPDES Construction General Permit include BMPs to reduce erosion and sedimentation through implementation of a construction specific SWPPP.

Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term aquifer is used to describe the geologic layers that store or transmit groundwater, such as to wells, springs, and other water sources. Examples of direct impacts to groundwater could include withdrawal of groundwater for operational purposes or reduction of infiltration or recharge area due to new impervious surfaces. The federal *Safe Drinking Water Act* (SDWA) applies to every public water system in the U.S.[9] The SDWA prohibits federal agencies from funding actions that would contaminate a U.S. EPA-designated sole source aquifer[10] or its recharge area.

In the state, A.R.S. 49-822 establishes a remedial program, known as WQARF, to facilitate the conservation and cleanup of Arizona drinking water and water resources. Groundwater in the state is primarily regulated through the Arizona Department of Water Resources (ADWR), which enforces and manages the state's *1980 Groundwater Management Act*. The Act and subsequent rules require, among other things, that municipal water providers within Active Management Areas (AMAs) demonstrate a 100-year assured water supply. In 2007, the Arizona Legislature authorized counties and cities outside of AMAs to adopt similar requirements (ADWR website 2019a).

[9] Airports are typically classified as noncommunity water systems, which indicates they have a public water system that serves the public but does not serve the same people year-round.
[10] A sole source aquifer is an aquifer that supplies at least 50 percent of the drinking water consumed in the area it overlays.

3.15.2 Affected Environment

The project study area for surface and groundwater is the local watershed. The airport is located within the Middle Gila watershed. The closest sole source aquifer is the Upper Santa Cruz and Avra Basin, located approximately 40 miles southeast. There are no impaired waters in the area (ADEQ eMaps 2019).

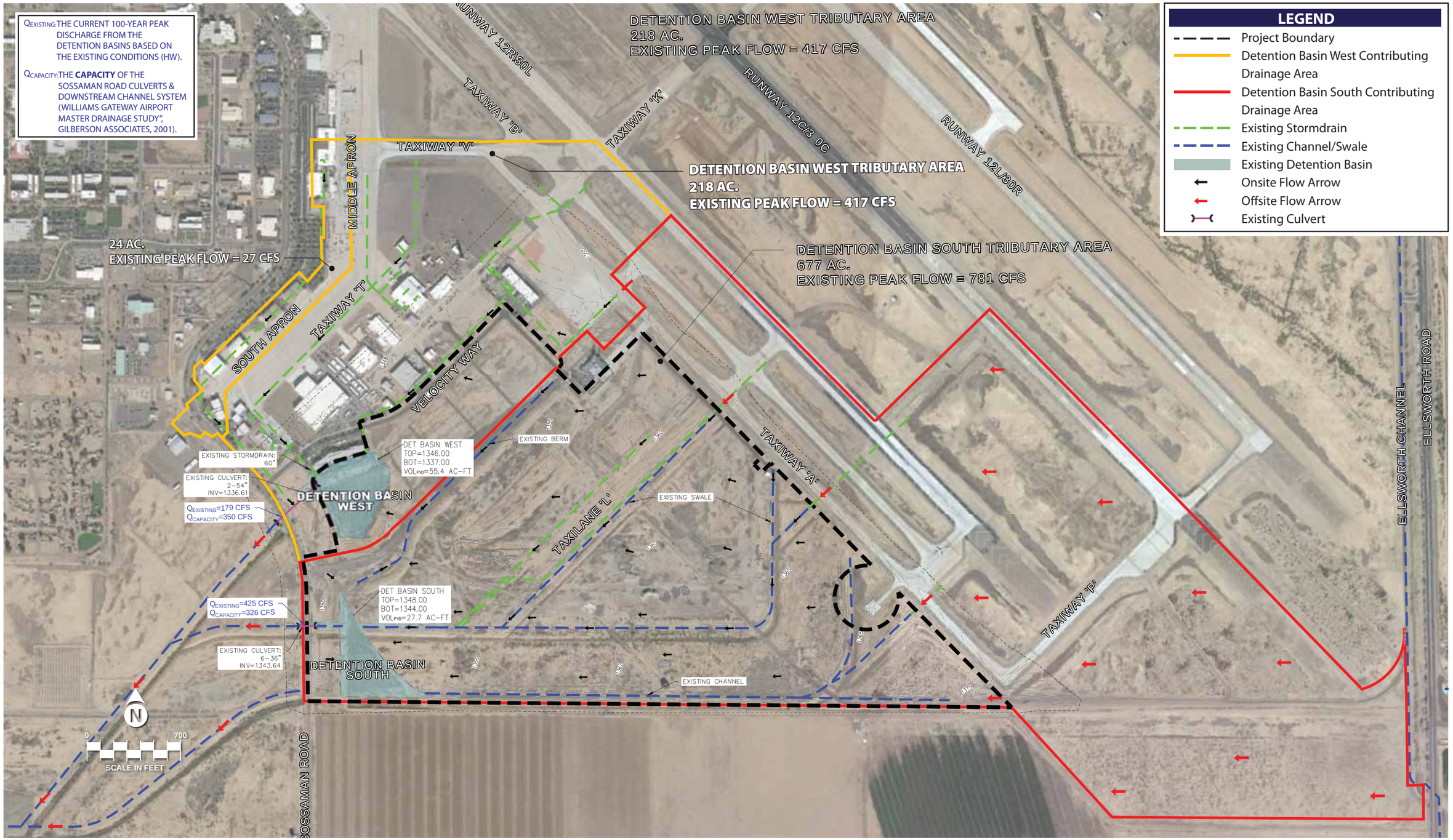
The region surrounding the project study area generally slopes downwards to the west. Under existing conditions, runoff crossing the project study area originates west of the Ellsworth Channel within the airport limits. Runoff from this area, which has all been graded but remains only partially developed, flows westward and combines with a portion of the runoff produced by the airport runway and taxiway surfaces. The combined runoff continues west, via sheet flow, until reaching the eastern boundary of the project study area. The runoff then combines with the runoff produced within the project study area and continues westward via sheet flow and through the various on-site storm drain/swales. Most of this runoff is directed toward an existing detention basin located near the southwestern corner of the site, herein referred to as Detention Basin South.

The remaining runoff, along with that produced by a portion of the airport located just north of the project study area, is directed to another existing detention basin located near the northwestern corner of the project study area, Detention Basin West. The portion of the airport that contributes to Detention Basin West does so via an existing storm drain system.

Both existing detention basins drain to existing culverts constructed under Sossaman Road. Flows passing through the culverts continue onwards into an existing channel system located west of Sossaman Road that eventually discharges to the Rittenhouse Channel. According to previous drainage studies for the airport and the general area, the channels located west of Sossaman Road have capacities of 350 cubic feet per second (cfs) in the northernmost channel and 326 cfs for the southern channel. The existing on-site detention basins have been sized accordingly (**Exhibit 3J**) (ADM Group, AECOM, Hatch, and Hilgart-Wilson 2018: Sections 7.1 et seq.).

The project study area is within the Phoenix AMA. The Phoenix AMA has a statutory goal of achieving safe yield by 2025, which means maintaining a long-term balance between the amount of groundwater withdrawn in the AMA and the annual amount of natural and artificial recharge (ADWR website 2019b). Groundwater in the vicinity of the property study area flows east, subparallel to the flow of the Salt River (Rascona 2005). A total of 21 wells are located within a 10-acre radius of the project study area; wells with depths of 0 to 363 feet below ground surface (bgs) indicate groundwater at approximately 182 feet bgs. Based on an interview with the EPA, groundwater levels have risen 80 feet within the Williams AFB since 1990, (i.e., from 230 feet bgs to 150 feet bgs) due to urbanization, retirement of large-scale agricultural areas, and local recharge projects (Four Corners Environmental, Inc. 2019: p. 7-3). Based on a 2018 report, groundwater below the project study area is currently 140 feet bgs and flows in an easterly direction (Aerostar SES 2018: Table 3).

Seven former groundwater monitoring wells were located within the project study area, all of which have have been abandoned. As discussed previously in Section 3.8.2, groundwater-impacted areas



Source: ADM Group et al. 2018

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within the Williams AFB NPL site are not adjacent or upgradient of the project study area nor is the project study area within the Williams AFB groundwater plume. The project study area is not part of the state's WQARF list nor are sites identified on the WQARF list within one mile of the project study area. The USAF has recently installed three new monitoring wells to determine the presence or absence of PFAS in the groundwater in exceedance of U.S. EPA health advisory limits of 0.07 µg/L.

3.16 CUMULATIVE IMPACTS

FAA Order 5050.4B states that the Affected Environment chapter of an EA should include background information of past, present, and reasonably foreseeable future actions. For this EA, past projects are defined as those which occurred between 2014 and 2018. Ongoing projects are those that are occurring in 2019. Reasonably foreseeable future actions are defined as those which are likely to become a reality, such as projects that have been included within the airport's five-year 2018 airport capital improvement program (ACIP) or are approved or pending approval by the city and are likely to occur concurrent to buildout of the Proposed Development (which includes the Proposed Federal Action).

3.16.1 On-Airport Development Projects

Numerous past or present actions have occurred or are occurring at the airport. Future projects are planned in the airport's most recent five-year ACIP. **Table 3J** contains a list of projects that have been completed or are planned at the airport from 2014 through 2024.

3.16.2 Off-Airport Development Projects

Based on the city's planning website, there are several active development projects in proximity to the airport within an area generally bounded by Ray Road on the north; Power Road on the west; Pecos Road on the south; and Ellsworth Road on the east. **Exhibit 3K** identifies projects that have recently completed construction or have approved permits, site plans, or rezones.

TABLE 3J
On-Airport Development Projects

Year	Project	Type of Project	Status of Project
2014	Taxiway Victor "V"	Reconstruction	Complete
2015	Runway 30 Left (First 3,000 feet)	Reconstruction	Complete
2015	Car Care Center	Repave; building enhancements	Complete
2015	Detention basin (Phase I)	New construction	Complete
2016	Runway 30 Center (First 3,000 feet)	Reconstruction	Complete
2018	Taxiway Alpha "A"	Reconstruction	Complete
2018	Fuel Farm (Phase II) upgrades	New construction; reconstruction	Complete
2019	Gateway Aviation Center	Remodel	Construction underway
2019	Taxiway Charlie "C" (Phase III) (Last 3,600 feet)	New construction	Construction underway
2019	Ellsworth Channel relocation	New construction	Construction pending
2019	Baggage make up improvements	New construction	Complete
2019	Baggage claim improvements	New construction	Complete
2019	Terminal roadway improvements	New construction	Complete
2019	Able Engineering (Phase II)	New construction	Construction underway
2019	Industrial complex	New construction	Construction pending
2019	Air cargo complex	New construction	Construction pending
2020	Runway Incursion Mitigation, Taxiway Kilo "K" Hot Spot 1	New construction	Planned
2020	New air traffic control tower	New construction	Planned
2020	Taxiway Hotel "H" between B-12R	Reconstruction	Planned
2020	Self-service fuel station for unleaded and diesel	New construction	Planned
2020-21	Gateway Executive Park Hangars	New Construction	Planned
2021	Runway 12R/30L	Reconstruction	Planned
2022	Alpha apron (Phase III)	New construction	Planned
2022	Taxiway Whiskey "W"	Reconstruction	Planned
2023	Eastside airport & terminal access road and infrastructure (for northeast terminal relocation)	New construction	Planned
2024	Eastside apron (Phase I)	New construction	Planned
2024	Taxiway Lima "L" between Runways 30L and 30C	New construction	Planned

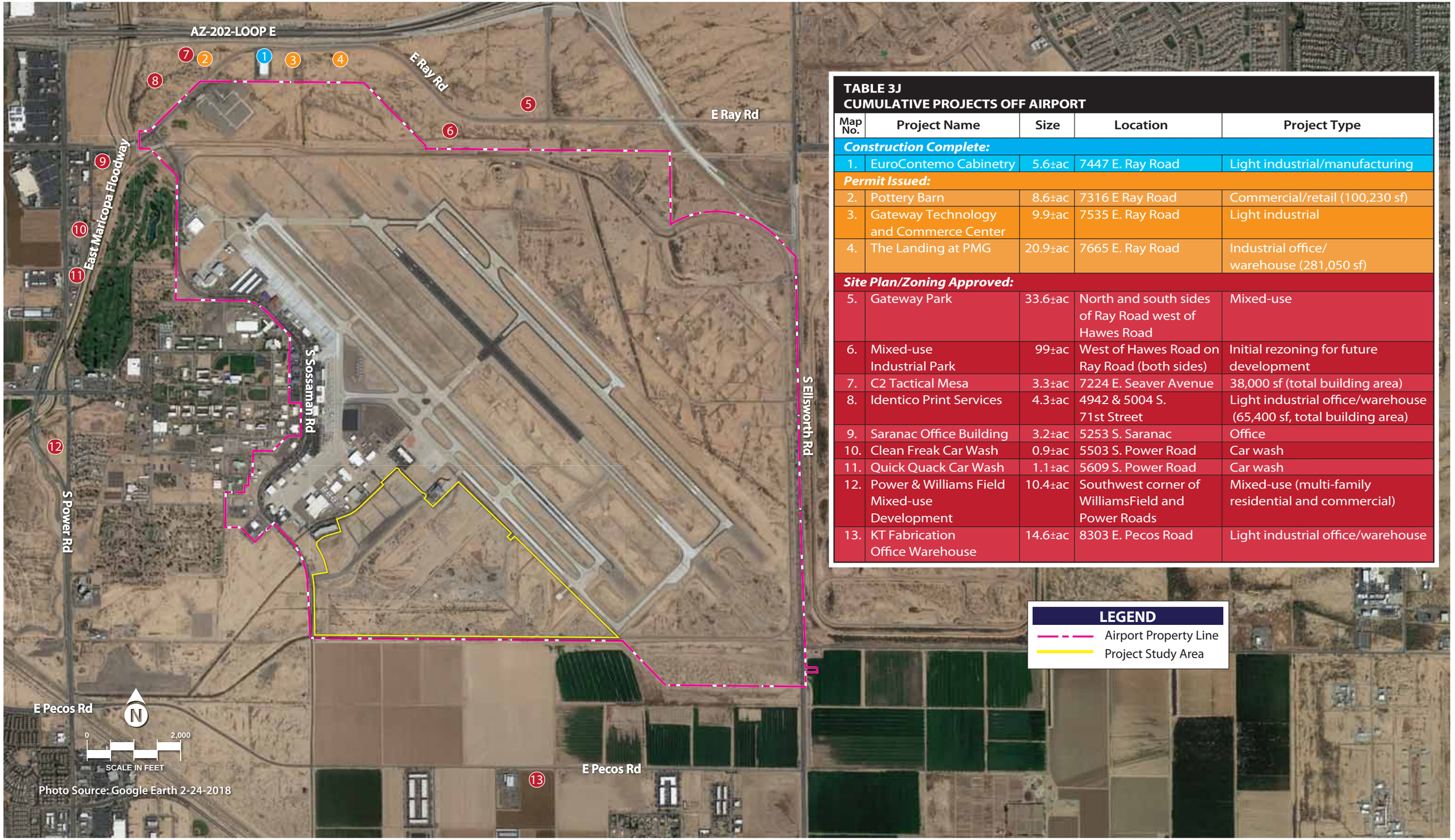

TABLE 3J
CUMULATIVE PROJECTS OFF AIRPORT

Map No.	Project Name	Size	Location	Project Type
Construction Complete:				
1.	EuroContemo Cabinetry	5.6±ac	7447 E. Ray Road	Light industrial/manufacturing
Permit Issued:				
2.	Pottery Barn	8.6±ac	7316 E Ray Road	Commercial/retail (100,230 sf)
3.	Gateway Technology and Commerce Center	9.9±ac	7535 E. Ray Road	Light industrial
4.	The Landing at PMG	20.9±ac	7665 E. Ray Road	Industrial office/ warehouse (281,050 sf)
Site Plan/Zoning Approved:				
5.	Gateway Park	33.6±ac	North and south sides of Ray Road west of Hawes Road	Mixed-use
6.	Mixed-use Industrial Park	99±ac	West of Hawes Road on Ray Road (both sides)	Initial rezoning for future development
7.	C2 Tactical Mesa	3.3±ac	7224 E. Seaver Avenue	38,000 sf (total building area)
8.	Identico Print Services	4.3±ac	4942 & 5004 S. 71st Street	Light industrial office/warehouse (65,400 sf, total building area)
9.	Saranac Office Building	3.2±ac	5253 S. Saranac	Office
10.	Clean Freak Car Wash	0.9±ac	5503 S. Power Road	Car wash
11.	Quick Quack Car Wash	1.1±ac	5609 S. Power Road	Car wash
12.	Power & Williams Field Mixed-use Development	10.4±ac	Southwest corner of WilliamsField and Power Roads	Mixed-use (multi-family residential and commercial)
13.	KT Fabrication Office Warehouse	14.6±ac	8303 E. Pecos Road	Light industrial office/warehouse

Source: City of Mesa Development Sites Online Map

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SkyBridge Arizona

Chapter Four

ENVIRONMENTAL CONSEQUENCES AND MITIGATION

Chapter Four
ENVIRONMENTAL CONSEQUENCES AND MITIGATION

4.1 INTRODUCTION

Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures* (Order 1050.1F) and Order 5050.4B*, National Environmental Policy Act* (NEPA) *Implementing Instructions for Airport Actions* (Order 5050.4B) define the form and content of Environmental Assessments (EAs). Environmental impacts for this EA have been determined by comparing the anticipated environmental conditions within the project study area and at the Phoenix-Mesa Gateway Airport (airport) after development (Proposed Development [which includes the Proposed Federal Action] alternative) to the environmental conditions should no project be developed (No Action alternative). Data regarding the existing condition is provided within Chapter Three of this EA.

As discussed in Chapter Two of this EA, the following alternatives are addressed within this chapter:

- Proposed Development (which includes the Proposed Federal Action). Construct the SkyBridge AZ Business Park, a mixed-use development that includes a joint United States (U.S.)-Mexico Customs inspection facility and air cargo hub and consists of both aeronautical and non-aeronautical land uses.

- No Action. Continue to hold the project site in reserve for development in the future. Although the No Action alternative does not meet the purpose and need considerations for the project, it is retained per Title 40 Code of Federal Regulations (CFR) Section 1502.14(c) to provide a reference point upon which the impacts of the Proposed Development (which includes the Proposed Federal Action) alternative can be compared.

The environmental consequences discussed under each impact category for the above alternatives include consideration of the following:

- **Direct effects** – Direct effects are defined as those which are caused by the proposed action and occur at the same time and place (40 CFR 1508.8[a]).

- **Indirect effects** – Indirect effects are defined as those which are caused by the proposed action and are later in time or farther removed in distance but are still reasonably foreseeable (40 CFR 1508.8[b]).

- **Cumulative effects** – Cumulative effects are defined as the impact on the environment which results from the incremental impact of the proposed action when added to other past, present,

and reasonably foreseeable future actions, regardless of what agency or person undertakes the other actions (40 CFR 1508.7). Section 3.15 lists the past, present, and reasonably foreseeable future actions considered for this EA's analysis; a cumulative impact analysis is then provided in Section 4.12.

Where necessary, mitigation (or avoidance) measures are listed which will reduce or eliminate anticipated environmental impacts for each of the alternatives. Special purpose laws and local programs and policies that protect various environmental resources are also identified, as applicable.

4.2 RESOURCES NOT IMPACTED BY PROJECT ALTERNATIVES

Based on the results of project site visits, database searches, scoping, and research undertaken for the preparation of Chapter Three, the Proposed Development (which includes the Proposed Federal Action) alternative would have no direct, indirect, or cumulative impact to the following categories because these resources do not occur within or in proximity to the project study area. **Table 4A** provides the environmental resource categories that have been eliminated from further consideration and evaluation in this EA.

TABLE 4A
Resource Categories Not Affected by the Proposed Development (which includes the Proposed Federal Action) and Alternatives

Resource Category	Rationale	Effect/Impact
Biological Resources (federally listed species and critical habitat)	No suitable habitat or federally listed species have been observed in the project study area. There is no critical habitat located in the project study area.	No Effect
Coastal Resources	There are no coastal resources located within the project study area or the airport.	No Impact
Department of Transportation Act, Section 4(f)	There are no wildlife or waterfowl refuges, publicly owned parks and recreation areas within or adjacent to the project study area. FAA has also determined (with SHPO concurrence) that there are "no historic properties affected" as a result of the Proposed Development (which includes the Proposed Federal Action) (**Appendix D**). Thus, there will not be a Section 4(f) use of significant historic resources. The Proposed Development (which includes the Proposed Federal Action) would not result in physical or constructive use or substantial impairment of Section 4(f) resources.	No Use
Farmlands	The project study area was previously used by the United States Air Force (USAF) for aviation purposes and is not irrigated nor has it been previously farmed. The airport and the project study area are listed by the U.S. Census Bureau as an "urbanized area." The *Farmland Protection Policy Act* does not apply.	No Impact
Land Use	The project study area is entirely on airport property. No land use/zoning changes would be necessary. The airport's Land Assurance letter is provided in **Appendix B**.	No Impact
Environmental Justice	The project study area is entirely on airport property and the closest residential area is more than 0.35 mile away. No significant environmental impacts have been identified that would cause disproportionate impacts to minority and low-income populations.	No Impact

TABLE 4A (CONTINUED)
Resource Categories Not Affected by the Proposed Development (which includes the Proposed Federal Action) and Alternatives

Resource Category	Rationale	Effect/Impact
Children's Environmental Health and Safety Risks	The project study area is entirely on airport property and the closest residential area, recreational area, or school is more than 0.35 mile away. No significant environmental impacts have been identified that would cause disproportionate health and safety risks to children (such as air or water quality impacts). The construction site would be fenced off to prevent access to the site by unauthorized personnel.	No Impact
Visual Effects (Light Emissions)	There are no sensitive land uses (for example, residences) in proximity to the project site that would be adversely affected by project lighting. This lighting would be primarily building and security lighting that is directed downward with little or no light spillage off the SkyBridge property.	No Impact
Visual Effects (Visual Resources/ Visual Character)	No scenic qualities or roadways are present within the project study area or the airport environs. The project study area is a vacant, previously disturbed part of the airport and much of the project study area has been previously bladed. Adjacent lands are vacant (southwest and east), used for agriculture (south and southeast), or contain airport-related infrastructure and a business park (north and west, respectively). The project would continue the character of the developed portions of the City of Mesa (city) in keeping with the city's general plan and would not affect, obstruct, substantially alter, or remove visual resources that are visually important or have unique characteristics.	No Impact
Wetlands (and Other Jurisdictional Waters)	Biological field surveys indicate that there are no aquatic habitats (including wetlands or stock ponds) or broadleaf deciduous riparian vegetative communities within the project study area (SWCA Environmental Consultants [SWCA] 2019a). The project study area does not contain wetlands or other waters of the U.S. On-site drainages are human-made swales that collect intermittent stormwater runoff and convey it to on-airport stormwater detention ponds with no connectivity to federal jurisdictional waters.	No Impact
Floodplains	The airport is mapped by the Federal Emergency Management Agency as Zone D, an "Area of Undetermined Flood Hazard" (Panel 04013C2770L). No 100-year floodplains are identified for the project study area. In addition, the Flood Control District of Maricopa County (FCDMC) was consulted during the scoping process for this EA. FCDMC responded on December 18, 2018, with a statement that FCDMC had no comments or concerns regarding the proposed project (**Appendix A**).	No Impact
Wild and Scenic Rivers	There are no wild and scenic rivers or other rivers under study for designation to the National System within the project study area. The nearest designated river segment is on the Verde River, located more than 25 miles north of the airport.	No Impact

4.3 AIR QUALITY

4.3.1 Methodology

Under federal air quality modeling and analysis guidelines, the No Action alternative represents the baseline condition to which the Proposed Development (which includes the Proposed Federal Action) alternative is compared. A construction and passenger vehicle emissions inventory for the Proposed Development (which includes the Proposed Federal Action) was prepared using the U.S. EPA's Motor Vehicle Emissions Simulator (MOVES14B). This methodology is identified in FAA's *Aviation Emissions and Air Quality Handbook* as the "current EPA-approved model used to compute motor vehicle emissions rates representative of various types of vehicles and activities." (FAA Office of Environment and Energy 2015). The MOVES14B model produces emissions factors which are used to calculate emissions expressed in tons per year based on miles driven for on-road vehicles, such as dump trucks or passenger cars, and hours of activity for off-road equipment, such as bulldozers or loaders. For the purposes of modeling construction equipment activity, preliminary engineering estimates provided by the project proponent were used. Modeling inputs regarding on-road vehicle fleets, speeds, fuel formulation, and other local conditions were derived from MOVES14B inputs provided by the Maricopa Association of Governments (MAG) that were originally developed for the Maricopa County (county) ozone (O_3) and 10-micron coarse particulate matter (PM_{10}) conformity analyses dated February 2019 (MAG 2019). Operational emissions related to vehicular traffic associated with the Proposed Development (which includes the Proposed Federal Action) were also modeled using the MOVES14B model.

Fugitive dust was modeled using U.S. EPA's AP-42, *Compilation of Air Pollution Emission Factors* for fugitive dust emissions using the methodology described in A6.2.4 of the FAA *Aviation Emissions and Air Quality Handbook,* Equation A6-3, Fugitive Dust Construction PM_{10} Emissions and Equation A6-4, Fugitive Dust Construction $PM_{2.5}$ Emissions. The modeling assumed a 112-acre project area in Phase 1, a 145-acre project area in Phase 2, and a 98-acre project area in Phase 3. It is assumed that ground disturbance would occur in Year 1 of each phase.

Evaporative emissions were modeled using U.S. EPA, *Emission Inventory Improvement Program*, Asphalt Paving, Chapter 17, Volume III, April 2001 and FAA *Aviation Emissions and Air Quality Handbook* Equation A6-5, Fugitive Asphalt VOC Construction Emissions. The modeling assumed 4.75 acres of asphalt placement in Phase 1, 5.6 acres of asphalt placement in Phase 2, and 3.2 acres of asphalt placement in Phase 3. It is assumed that asphalt placement would occur in Year 2 of each phase.

FAA's Aviation Environmental Design Tool (AEDT), which is its preferred method of calculating aircraft operational emissions inventories for airport and related aviation projects, was used to estimate aircraft emissions that are anticipated to occur due to the Proposed Development (which includes the Proposed Federal Action). The AEDT analysis compared the future No Action and Proposed Development (which

includes the Proposed Federal Action) buildout for the year 2038. See **Appendix B** for the operational forecasts and fleet mix.[1]

4.3.2 Thresholds of Significance

A significant air quality impact occurs under NEPA when emissions from a project or action exceeds one or more of the National Ambient Air Quality Standards (NAAQS).

An airport action may also be subject to the General Conformity requirements of the *Clean Air Act* (CAA) if it would occur in a nonattainment or maintenance area. The General Conformity Rule of the CAA establishes the procedures and criteria for determining whether certain federal actions conform to state or federal air quality implementation plans. Under the General Conformity Rule, all reasonably foreseeable *direct* and *indirect* emissions occurring due to federally supported actions should be quantified and compared against *de minimis* thresholds in what is known as an applicability test. The applicability test is only conducted on pollutants for which the area is classified as either maintenance or nonattainment. As discussed in Chapter Three, the county is a moderate nonattainment area for eight-hour O_3 and a serious nonattainment area for PM_{10} (U.S. EPA 2019b).

Ground-level O_3 is not emitted directly into the air but is created by chemical reactions between oxides of nitrogen (NO_X) and volatile organic compounds (VOCs) in the presence of sunlight. As a result, NO_X and VOC emissions are used to estimate ozone emissions. The *de minimis* thresholds for VOC and NO_x in moderate ozone nonattainment areas are 100 tons per year. In serious nonattainment areas, the *de minimis* threshold for coarse particulate matter (PM_{10}) is 70 tons per year (FAA Office of Environment and Energy 2015).

4.3.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. **Table 4B** summarizes the emissions inventory for the Proposed Development (which includes the Proposed Federal Action) alternative. As outlined in Chapter One, the Proposed Development (which includes the Proposed Federal Action) would be constructed in three phases, each taking approximately two years during an overall five-year period. Construction emissions were calculated for each for these years. As previously discussed, it is anticipated that fugitive dust emissions associated with grading and site preparation would occur in Year 1 of each phase and the evaporative emissions associated with paving would occur in Year 2 of each phase. Emissions associated with these activities were included to reflect these assumptions.

[1] As detailed further in **Appendix B**, the existing year total operations count is from FAA Air Traffic Activity System (January 2018-December 2018) and the No Action forecast operations are from the FAA's Terminal Area Forecast, dated January 2018. The existing air carrier fleet mix derived from 2018 landing reports provided by airport staff. The remaining portions of the existing and future fleet mix were derived *Phoenix-Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015.

Total construction emissions per year were compared to the *de minimis* thresholds as further explained in the Conclusion section below.

TABLE 4B
Proposed Development (which includes the Proposed Federal Action) Alternative Construction Emissions Inventory
Phoenix-Mesa Gateway Airport

Emissions Source	NAAQS (Tons Per Year)					
	CO	NOx[1]	SO_2	PM_{10}	$PM_{2.5}$	VOC[1]
NAAQS *De Minimis* Thresholds	**N/A**	**100**	**N/A**	**70**	**N/A**	**100**
CONSTRUCTION-RELATED EMISSIONS[2]						
Phase 1, Year 1 Non-Road (2020)	5.050	12.410	0.020	0.700	0.680	0.770
Phase 1, Year 1 On-Road (2020)	0.495	0.007	0.002	0.001	0.001	0.004
Phase 1, Year 1 Fugitive Dust[3] (2020)	-	-	-	22.900	2.300	-
Phase 1, Year 2 Non-Road (2021)	2.250	5.140	0.010	0.320	0.310	0.370
Phase 1, Year 2 On-Road (2021)	0.221	0.002	0.001	0.000	0.000	0.001
Phase 1, Year 2 Evaporative[4] (2021)	-	-	-	-	0.250	-
Phase 2, Year 1 Non-Road (2025)	7.830	19.420	0.030	1.070	1.040	1.170
Phase 2, Year 1 On-Road (2025)	0.722	0.010	0.003	0.002	0.001	0.006
Phase 2, Year 1 Fugitive Dust[3] (2025)	-	-	-	25.300	2.500	-
Phase 2, Year 2 Non-Road (2026)	2.950	6.930	0.010	0.410	0.400	0.470
Phase 2, Year 2 On-Road (2026)	0.265	0.002	0.001	0.001	0.000	0.002
Phase 2, Year 2 Evaporative[4] (2026)	-	-	-	-	0.300	-
Phase 3, Year 1 Non-Road (2030)	6.470	16.030	0.030	0.880	0.850	0.960
Phase 3, Year 1 On-Road (2030)	0.599	0.009	0.002	0.001	0.001	0.005
Phase 3, Year 1 Fugitive Dust[3] (2030)	-	-	-	12.500	1.200	-
Phase 3, Year 2 Non-Road (2031)	2.640	6.140	0.010	0.370	0.360	0.430
Phase 3, Year 2 On-Road (2031)	0.240	0.002	0.001	0.000	0.000	0.002
Phase 3, Year 2 Evaporative[4] (2031)	-	-	-	-	0.170	-
TOTAL CONSTRUCTION EMISSIONS[2]						
Phase 1 Year 1 Total (2020)	5.545	12.417	0.022	23.601	2.981	0.774
Phase 1 Year 2 Total (2021)	2.471	5.142	0.011	0.320	0.560	0.371
Phase 2 Year 1 Total (2025)	8.552	19.430	0.033	26.372	3.541	1.176
Phase 2 Year 2 Total (2026)	3.215	6.932	0.011	0.411	0.700	0.472
Phase 3 Year 1 Total (2030)	7.069	16.039	0.032	13.381	2.051	0.965
Phase 3 Year 2 Total (2031)	2.880	6.142	0.011	0.370	0.530	0.432

Source: Detailed model printouts are on file with the Phoenix-Mesa Gateway Airport Authority.
NAAQS = National Ambient Air Quality Standards; N/A - not applicable - Airshed is in attainment for this criteria pollutant.

[1] Ground-level ozone is not emitted directly into the air but is created by chemical reactions between NO_X and VOCs in the presence of sunlight. As a result, NO_X and VOC emissions are used to estimate ozone emissions.

[2] No construction emissions would occur in the No Action alternative. Therefore, the Proposed Development (which includes the Proposed Federal Action) construction emissions and the net increase when compared to the No Action alternative are the same.

[3] Modeled using U.S. EPA's AP-42, *Compilation of Air Pollution Emission Factors* for fugitive dust emissions using the methodology described in A6.2.4 of the FAA *Aviation Emissions and Air Quality Handbook,* Equation A6-3, Fugitive Dust Construction PM_{10} Emissions and Equation A6-4, Fugitive Dust Construction $PM_{2.5}$ Emissions (FAA Office of Environment and Energy 2015). Assumes 112-acre project area in Phase 1, 145-acre project area in Phase 2, and 98-acre project area in Phase 3. It is assumed that ground disturbance would occur in Year 1 of each phase.

[4] Modeled using U.S. EPA, *Emission Inventory Improvement Program*, Asphalt Paving, Chapter 17, Volume III (April 2001) and FAA *Aviation Emissions and Air Quality Handbook*, Equation A6-5, Fugitive Asphalt VOC Construction Emissions. Assumes 4.75 acres of asphalt placement in Phase 1, 5.6 acres of asphalt placement in Phase 2, and 3.2 acres of asphalt placement in Phase 3. It is assumed that asphalt placement would occur in Year 2 of each phase.

NOTE: Numbers may not sum to total due to rounding.

Vehicular Operational Emissions. Vehicular operational emissions associated with the Proposed Development (which includes the Proposed Federal Action) were calculated using the traffic study discussed further in Section 4.10 and the MOVES14B emissions factors described above. Vehicular emissions result from employee and customer trips and haul trips to and from the site once it is developed. Following completion of each phase, the vehicular operational emissions were summed with the construction emissions for comparison to the *de minimis* thresholds. The results of the analysis are presented in **Table 4C**. The table also includes emissions totals which account for the passenger vehicle trip reductions resulting from transportation demand management (TDM) strategies discussed in Section 4.10.3.

TABLE 4C
Operational Emissions By Phase (On-Road Vehicles and Aircraft)
Phoenix-Mesa Gateway Airport

Emissions Source	NAAQS (Tons Per Year)					
	CO	NO_x[1]	SO_2	PM_{10}	$PM_{2.5}$	VOC[1]
NAAQS *De Minimis* Thresholds	**N/A**	**100**	**N/A**	**70**	**N/A**	**100**
On-Road Vehicle Emissions[2]						
Phase 1 On-Road (2025)	31.553	0.469	0.128	0.070	0.063	0.255
Phase 2 On-Road (2030)	98.272	0.944	0.387	0.200	0.178	0.675
Phase 3 On-Road (2035)	36.978	0.548	0.150	0.083	0.074	0.299
On-Road Vehicle Emissions with Trip Reduction[2]						
Phase 1 On-Road with Trip Reduction[3] (2025)	28.797	0.462	0.118	0.066	0.059	0.241
Phase 2 On-Road with Trip Reduction[3] (2030)	93.257	0.932	0.368	0.191	0.170	0.649
Phase 3 On-Road with Trip Reduction[3] (2035)	34.877	0.543	0.142	0.079	0.070	0.288
Aircraft Only Emissions						
Proposed Development (which includes the Proposed Federal Action)	427.27	11.95	13.12	12.51	12.70	73.64
Less No Action	(422.60)	(11.60)	(12.71)	(12.10)	(12.29)	(53.01)
Proposed Development (which includes the Proposed Federal Action) Net Increase	**4.67**	**0.35**	**0.41**	**0.41**	**0.41**	**20.63**

Source: Detailed model printouts are on file with the Phoenix-Mesa Gateway Airport Authority.
NAAQS = National Ambient Air Quality Standards; N/A - not applicable - Airshed is in attainment for this criteria pollutant.
[1] Ground-level ozone is not emitted directly into the air but is created by chemical reactions between NO_X and VOCs in the presence of sunlight. As a result, NO_X and VOC emissions are used to estimate ozone emissions.
[2] No vehicular emissions would occur under the No Action alternative. Therefore, the Proposed Development (which includes the Proposed Federal Action) vehicular emissions and the net increase when compared to the No Action alternative are the same.
[3] Includes passenger vehicle trip reductions resulting from TDM strategies. See Section 4.10.3.
NOTE: Numbers may not sum to total due to rounding.

Aircraft Operational Emissions. Air pollutant emissions associated with aircraft operations were calculated using FAA's AEDT based on the aircraft operational assumptions described for the noise exposure contours discussed in Section 4.9. Air pollutant emissions were estimated for the future Proposed Development (which includes the Proposed Federal Action) and No Action alternative scenarios. The Proposed Development (which includes the Proposed Federal Action) scenario includes emissions from both forecast increases in activity at the airport and aircraft emissions associated with operational increases attributed to the Proposed Development (which includes the Proposed Federal Action). The No Action scenario only includes increases in activity at the airport. Therefore, the difference between the two scenarios is the net increase due to only the Proposed Development (which includes the Proposed

Federal Action), which was used for comparison to the *de minimis* thresholds. The results of the analysis are presented in **Table 4C** and further explained in the Conclusion section below.

Conclusion. **Table 4D** summarizes the construction and operational (vehicle and aircraft) emissions by phase for the proposed improvements. As noted in the table, operational emissions occurring during Phase 2 and Phase 3 are reported with and without the TDM strategies discussed in Section 4.10.3. Implementation of the Proposed Development (which includes the Proposed Federal Action) alternative would not result in air pollutant emissions above one or more of the NAAQS *de minimis levels* for any of the time periods analyzed.

TABLE 4D
Total Emissions By Phase
Phoenix-Mesa Gateway Airport

Emissions Source	NAAQS (Tons Per Year)					
	CO	NOx[1]	SO_2	PM_{10}	$PM_{2.5}$	VOC[1]
NAAQS *De Minimis* Thresholds	**N/A**	**100**	**N/A**	**70**	**N/A**	**100**
Phase 1 Construction Emissions[2]						
Phase 1 Year 1 Total (2020)	5.545	12.417	0.022	23.601	2.981	0.774
Phase 1 Year 2 Total (2021)	2.471	5.142	0.011	0.320	0.560	0.371
Phase 2 Construction Emissions + Phase 1 Vehicle Operational Emissions[2]						
Phase 2 Year 1 Total (2025)	40.105	19.900	0.161	26.442	3.604	1.431
Phase 2 Year 2 Total (2026)	34.768	7.402	0.139	0.481	0.763	0.727
Phase 2 Year 1 Total with Trip Reduction[3] (2025)	37.349	19.893	0.150	26.437	3.600	1.417
Phase 2 Year 2 Total with Trip Reduction[3] (2026)	32.012	7.395	0.129	0.476	0.759	0.713
Phase 3 Construction Emissions + Phase 1 & 2 Vehicle Operational Emissions[2]						
Phase 3 Year 1 Total (2030)	136.894	17.452	0.547	13.651	2.292	1.895
Phase 3 Year 2 Total (2031)	132.706	7.556	0.526	0.641	0.771	1.362
Phase 3 Year 1 Total with Trip Reduction[3] (2030)	129.122	17.433	0.518	13.638	2.280	1.854
Phase 3 Year 2 Total with Trip Reduction[3] (2031)	124.934	7.536	0.496	0.627	0.759	1.321
Full Buildout (2035) with Vehicle and Aircraft Operational Emissions						
Proposed Development (which includes the Proposed Federal Action)	594.074	13.912	13.785	12.863	13.014	74.869
Less No Action (Aircraft Emissions)	(422.600)	(11.600)	(12.710)	(12.100)	(12.290)	(53.010)
Proposed Development (which includes the Proposed Federal Action) Net Increase[2]	**171.474**	**2.312**	**1.075**	**0.763**	**0.724**	**21.859**
Exceeds Threshold[4]	N/A	**No**	N/A	**No**	N/A	**No**

N/A - not applicable - Airshed is in attainment for this criteria pollutant.
[1] Ground-level O_3 is not emitted directly into the air but is created by chemical reactions between NO_X and VOCs in the presence of sunlight. As a result, NO_X and VOC emissions are used to estimate ozone emissions.
[2] To be compared to *de minimis* thresholds. No construction or vehicular emissions would occur under the No Action alternative. Therefore, the Proposed Development (which includes the Proposed Federal Action) construction or vehicular emissions and the net increase when compared to the No Action alternative are the same.
[3] Includes passenger vehicle trip reductions resulting from TDM strategies. See Section 4.10.3.
[4] Comparison to the *de minimis* threshold is only conducted on pollutants for which the area is classified as either maintenance or non-attainment.
NOTE: Numbers may not sum to total due to rounding.

The Proposed Development (which includes the Proposed Federal Action) alternative would also generate fine particulate matter, carbon monoxide and sulfur dioxide emissions for a limited period. However, the airport area is in attainment for these types of criteria pollutants; thus, construction and operation of the Proposed Development (which includes the Proposed Federal Action) alternative would have *de minimis* effects only.

No federal air quality significance thresholds per FAA Order 1050.1F, Exhibit 4-1 would be exceeded.

Indirect Impacts. Indirect impacts to air quality could result from the operation of individual machinery contained within the Proposed Development (which includes the Proposed Federal Action). These stationary source emissions cannot be determined at this time. However, the Maricopa County Air Quality Department requires permits for these types of pollutant outputs. Review of potential impacts will be taken during the permitting process.

No Action Alternative

The No Action alternative would not change airport operations or aircraft and vehicle traffic patterns and would, thus, have no change over local or regional air quality in the long term. In the short term, no construction emissions would occur. No significant impact to air quality would occur under the No Action alternative.

4.3.4 Mitigation (or Avoidance) Measures

As discussed in Section 4.3.3, emissions from construction and operation of the Proposed Development (which includes the Proposed Federal Action) alternative would be below the applicable thresholds. The following avoidance measure would further minimize short-term construction fugitive dust. TDM strategies, discussed in Section 4.10.3, would further reduce operational emissions associated with the project's on-road vehicle activity.

AQ-1: A county dust control permit shall be required since the Proposed Development (which includes the Proposed Federal Action) alternative disturbance would be more than 0.1 acre, and all dust control requirements shall be followed (Maricopa County Air Quality Department website 2019). Implementation of the following measures are required to satisfy the county and state requirements to avoid fugitive dust:

- **Implement dust abatement techniques (e.g., water application) on unpaved or unvegetated surfaces to minimize airborne dust during construction;**
- **Revegetate disturbed open space areas as soon as possible after disturbance; and**
- **Cover construction materials and stockpiled soils if they are a source of fugitive dust.**

4.4 BIOLOGICAL RESOURCES (MIGRATORY BIRDS)

4.4.1 Methodology

Federally listed species known to occur in Maricopa County were researched using the United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPAC) and the Arizona Game and Fish Department's (AGFD) Arizona Heritage Geographic Information System (AZHGIS) databases. A biological resources survey was then performed on the project study area on December 12, 2018 to determine if appropriate habitat for listed species is present within the project study area. Birds protected by the *Migratory Bird Treaty Act* (MBTA) and the *Bald and Golden Eagle Protection Act* (BGEPA), as well as their habitat, were similarly researched and their presence or absence documented during the field survey.

4.4.2 Thresholds of Significance

Biotic resources are the various types of flora (plants) and fauna (animals) and the habitat supporting those species located in a particular area. FAA Order 1050.1F, Exhibit 4-1, states that a significant impact to federally listed threatened or endangered species occurs when the USFWS determines the Proposed Development (which includes the Proposed Federal Action) would be likely to jeopardize the continued existence of a federally listed threatened or endangered species or would result in the destruction or adverse modification of federally designated critical habitat.

FAA has not established a significance threshold for non-listed species. However, a factor to consider is if the Proposed Development (which includes the Proposed Federal Action) would have the potential for adverse impacts to special status species (e.g., state species of concern, species proposed for listing, migratory birds, or bald and golden eagles) or their habitats.

4.4.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. The project study area, particularly the southeastern corner, provides suitable habitat for nesting bird species (including western burrowing owl [*Athene cunicularia hypugaea*]) that are protected under the MBTA. During the December 2018 survey, six active owl burrows and two potentially active burrows were observed (Exhibit 3A). Ground bird nesting habitat would be impacted by project activities, including grading and vegetation removal. If the project activities are conducted between March and September, birds may be nesting within the construction area and individuals could be directly impacted. Direct impacts may also include loss of active nests during vegetation removal. FAA has not established a significance threshold for non-listed species. However, avoidance measures identified in Section 4.4.4 would ensure compliance with the MBTA.

No suitable eagle nesting or foraging habitat is in or near the project area, and no tall trees suitable for eagle perching are located within the project study area. Thus, no impacts to species protected under

the BGEPA would occur due to the Proposed Development (which includes the Proposed Federal Action) alternative.

Operation Impacts. No long-term (operation) impacts to migratory birds would occur due to the Proposed Development (which includes the Proposed Federal Action) alternative. Once the project study area has been cleared and graded, the area would no longer be suitable habitat for most migratory birds. Those that choose to nest or roost once the project study area is developed are already acclimated to a developed environment.

Indirect Impacts. Project activities conducted between March and September could also indirectly impact migratory birds that may be nesting adjacent to the construction area. Mitigation and avoidance measures identified in Section 4.4.4 would apply.

No Action Alternative

No impacts related to biological resources would occur due to the No Action alternative. No construction or changes to the existing airport environment and operating procedures would occur.

4.4.4 Mitigation (or Avoidance) Measures

As a result of the mitigation and avoidance measures listed below, no adverse impacts related to biological resources would occur as a result of the Proposed Development (which includes the Proposed Federal Action) alternative:

BIO-1: If ground disturbance activities are planned during the migratory bird nesting season (generally March through September), measures to avoid active bird nests at that time shall be taken to maintain compliance with the MBTA since suitable nesting habitat for migratory bird species is present in the project area. This includes nests outside, but within proximity to, the project study area.

BIO-2: Burrowing owl clearance surveys conducted according to AGFD protocols shall occur before construction in the southeastern portion of the project area (Exhibit 3A), which contains high-quality habitat for this species. The AGFD guidance shall be followed to the extent feasible, including the following:

- **Avoid project initiation in March due to the possibility of new owls arriving during construction.**
- **Burrowing owl surveyors should be certified by AGFD through attending a burrowing owl certification workshop.**
- **If owls are present at the time of construction, they shall be relocated prior to disturbing active burrows or conservation measures must be implemented to protect them on-site. A**

permit from the USFWS is required prior to relocating burrowing owls and only a permitted handler may conduct the relocation.

- **Potential conservation measures include: 1) collapsing all unoccupied burrows of suitable dimensions by a USFWS-permitted individual; 2) identifying open space areas to be protected as a buffer around occupied and suitable owl burrows; 3) passive exclusion of owls; or 4) translocation of owls by a USFWS-permitted individual.**

- **A 35-meter (100-foot) radius buffer that excludes all heavy machinery and foot traffic should be set up around all active burrow entrances during construction as a conservation measure until relocation efforts or other protection measures are implemented.**

4.5 CLIMATE

4.5.1 Methodology

The following climate analysis uses a quantitative approach to model greenhouse (GHG) emissions for purposes of comparison to the No Action and Proposed Development (which includes the Proposed Federal Action) alternatives. The analysis assumes an operational buildout year of 2035. (See **Appendix B** for the operational forecasts and fleet mix.) Since there are no applicable significance thresholds, this analysis is provided for informational purposes only (see Section 4.5.2). The methodology used to estimate GHG emissions is the same as was used for modeling other types of air emissions. Refer to Section 4.3.1.

4.5.2 Thresholds of Significance

FAA has not identified significance thresholds for GHG emissions, and there are currently no accepted methods of determining significance applicable to aviation projects given the small percentage of emissions they contribute.

4.5.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. **Table 4E** summarizes the GHG emissions[2] inventory for the Proposed Development (which includes the Proposed Federal Action) alternative. As outlined in Chapter One, the

[2] The GHGs that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases, such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are primarily determined by natural processes, such as oceanic evaporation. GHGs are emitted by both natural processes and human activities. Of these gases, CO_2, CH_4 and N_2O are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely byproducts of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes.

Proposed Development (which includes the Proposed Federal Action) would be constructed in three phases, each taking approximately two years during an overall five-year period. Construction-related GHG emissions were calculated for each for these years.

TABLE 4E
Proposed Development (which includes the Proposed Federal Action) Alternative Construction Greenhouse Gases Inventory
Phoenix-Mesa Gateway Airport

Emissions Source	Metric Tons (MT) Per Year			
	CO_2	CH_4	N_2O	CO_2e[1]
CONSTRUCTION-RELATED EMISSIONS[2]				
Phase 1, Year 1 Non-Road (2020)	2,396.851	0.042	-[3]	2,398.939
Phase 1, Year 1 On-Road (2020)	111.286	0.002	0.001	111.514
Phase 1, Year 2 Non-Road (2021)	856.988	0.019	-[3]	857.459
Phase 1, Year 2 On-Road (2021)	44.997	0.001	<0.001	45.090
Phase 2, Year 1 Non-Road (2025)	3,644.514	0.064	-[3]	3,646.112
Phase 2, Year 1 On-Road (2025)	162.400	0.003	0.001	162.733
Phase 2, Year 2 Non-Road (2026)	1,151.857	0.024	-[3]	1,152.466
Phase 2, Year 2 On-Road (2026)	53.525	0.001	<0.001	53.635
Phase 3, Year 1 Non-Road (2030)	2,978.775	0.052	-[3]	2,980.085
Phase 3, Year 1 On-Road (2030)	135.176	0.002	0.001	135.453
Phase 3, Year 2 Non-Road (2031)	10,18.091	0.022	-[3]	1,018.638
Phase 3, Year 2 On-Road (2032)	48.594	0.001	<0.001	48.693
TOTAL CONSTRUCTION EMISSIONS[2]				
Phase 1 Year 1 Total (2020)	2,508.137	0.044	0.001	2,510.454
Phase 1 Year 2 Total (2021)	901.986	0.019	<0.001	902.549
Phase 2 Year 1 Total (2025)	3,806.914	0.067	0.001	3,808.845
Phase 2 Year 2 Total (2026)	1,205.382	0.025	<0.001	1,206.101
Phase 3 Year 1 Total (2030)	3,113.951	0.055	0.001	3,115.538
Phase 3 Year 2 Total (2031)	1,066.685	0.022	<0.001	1,067.332
OVERALL CONSTRUCTION-RELATED EMISSIONS[2]	**12,603.055 MT**	**0.232 MT**	**0.003 MT**	**12,610.819 MT**

Source: Detailed model printouts are on file with the Phoenix-Mesa Gateway Airport Authority.
[1] Emissions of CO_2, CH_4, and N_2O were converted to CO_2e using global warming potentials of 1, 25, and 298, respectively (IPCC 2014).
[2] No construction emissions would occur in the No Action alternative. Therefore, the Proposed Development (which includes the Proposed Federal Action) construction emissions and the net increase when compared to the No Action alternative are the same.
[3] MOVES14B does not include non-road emissions factors for N_2O.NOTE: Numbers may not sum to total due to rounding.

Vehicular Operational Emissions. Vehicular operational GHG emissions associated with the Proposed Development (which includes the Proposed Federal Action) were calculated using the traffic study discussed in Section 4.10 and the MOVES14B emissions factors described in Section 4.3. Vehicular GHG emissions would result from haul trips to and from the site and from employee and customer trips once it is developed. Following completion of each phase, the vehicular operational GHG emissions were summed with the construction emissions. The results of the analysis are presented in **Table 4F**. The table also includes GHG emissions totals which account for the passenger vehicle trip reductions resulting from TDM strategies discussed in Section 4.10.3.

Aircraft Operational Emissions. Greenhouse gas emissions associated with aircraft operations were calculated using FAA's AEDT based on the aircraft operational assumptions described for the noise exposure contours discussed in Section 4.9. GHG emissions were estimated for the future Proposed Development (which includes the Proposed Federal Action) and No Action alternative scenarios. The Proposed Development (which includes the Proposed Federal Action) scenario includes GHG emissions from both forecast increases in activity at the airport and aircraft emissions associated with operational increases attributed to the Proposed Development (which includes the Proposed Federal Action). The No Action

scenario only includes increases in activity at the airport. Therefore, the difference between the two scenarios is the net increase due to only the Proposed Development (which includes the Proposed Federal Action). The results of the analysis are presented in **Table 4F** and further explained in the Conclusion section below.

TABLE 4F
Operational Greenhouse Gases By Phase (On-Road Vehicles and Aircraft)
Phoenix-Mesa Gateway Airport

Emissions Source	Metric Tons Per Year			
	CO_2	CH_4	N_2O	CO_2e[1]
On-Road Vehicle Emissions[2]				
Phase 1 On-Road (2025)	7,199.085	0.122	0.039	7,213.871
Phase 2 On-Road (2030)	20,360.265	0.267	0.118	20,402.053
Phase 3 On-Road (2035)	8,430.355	0.143	0.046	8,447.670
On-Road Vehicle Emissions with Trip Reduction[2]				
Phase 1 On-Road with Trip Reduction (2025)	6,705.886	0.119	0.036	6,719.661
Phase 2 On-Road with Trip Reduction (2030)	19,462.805	0.261	0.112	19,502.753
Phase 3 On-Road with Trip Reduction (2035)	8,054.392	0.141	0.044	8,070.936
Aircraft Only Emissions (2035)				
Proposed Development (which includes the Proposed Federal Action)	83,820.356	-[3]	-[3]	83,820.356
Less No Action	(67,899.402)	-[3]	-[3]	(67,899.402)
Proposed Development (which includes the Proposed Federal Action) Net Increase	15,920.953	-[3]	-[3]	15,920.953

Source: Detailed model printouts are on file with the Phoenix-Mesa Gateway Airport Authority.
[1] Emissions of CO_2, CH_4, and N_2O were converted to CO_2e using global warming potentials of 1, 25, and 298, respectively (IPCC 2014).
[2] No vehicular emissions would occur under the No Action alternative. Therefore, the Proposed Development (which includes the Proposed Federal Action) vehicular emissions and the net increase when compared to the No Action alternative are the same.
[3] AEDT does not include emissions factors for CH_4 or N_2O.
NOTE: Numbers may not sum to total due to rounding.

Conclusion. **Table 4G** summarizes the construction and operational (vehicle and aircraft) GHG emissions by phase for the proposed improvements. As noted in the table, operational emissions occurring during Phase 2 and Phase 3 are reported with and without the TDM strategies discussed in Section 4.10.3.

The Proposed Development (which includes the Proposed Federal Action) alternative would contribute GHGs temporarily during construction and would also result in increased vehicular and aircraft GHG emissions during operation of the project. FAA has not established thresholds of significance for GHGs.

Indirect Impacts. Similar to the air quality analysis in Section 4.3, indirect impacts related to the generation of GHGs could result from the operation of individual machinery contained within the Proposed Development (which includes the Proposed Federal Action). These stationary source emissions cannot be determined at this time. However, the Maricopa County Air Quality Department requires permits for these kinds of pollutant outputs.

TABLE 4G
Total Greenhouse Gas Emissions By Phase
Phoenix-Mesa Gateway Airport

Emissions Source	Metric Tons Per Year			
	CO_2	CH_4	N_2O	CO_2e[1]
Phase 1 Construction Emissions[2]				
Phase 1 Year 1 Total (2020)	2,508.137	0.044	0.001	2,510.454
Phase 1 Year 2 Total (2021)	901.986	0.019	<0.001	902.549
Phase 2 Construction Emissions + Phase 1 Vehicle Operational Emissions[2]				
Phase 2 Year 1 Total (2025)	11,005.999	0.189	0.040	11,022.716
Phase 2 Year 2 Total (2026)	8,404.466	0.147	0.040	8,419.972
Phase 2 Year 1 Total with Trip Reduction[3] (2025)	10,512.800	0.186	0.037	10,528.506
Phase 2 Year 2 Total with Trip Reduction[3] (2026)	7,911.267	0.144	0.037	7,925.761
Phase 3 Construction Emissions + Phase 1 & 2 Vehicle Operational Emissions[2]				
Phase 3 Year 1 Total (2030)	30,673.301	0.444	0.158	30,731.462
Phase 3 Year 2 Total (2031)	28,626.035	0.412	0.157	28,683.256
Phase 3 Year 1 Total with Trip Reduction[3] (2030)	29,282.641	0.435	0.149	29,337.952
Phase 3 Year 2 Total with Trip Reduction[3] (2031)	27,235.375	0.403	0.149	27,289.745
Full Build Out (2035) with Vehicle and Aircraft Operational Emissions				
Proposed Development (which includes the Proposed Federal Action)	119,810.061	-[4]	-[4]	119,810.061
Less No Action (Aircraft Emissions)	(103,889.107)	-[4]	-[4]	(103,889.107)
Net Increase	15,920.954	-[4]	-[4]	15,920.954

[1] Emissions of CO_2, CH_4, and N_2O were converted to CO_2e using global warming potentials of 1, 25, and 298, respectively (IPCC 2014).
[2] No construction or vehicular emissions would occur under the No Action alternative. Therefore, the Proposed Development (which includes the Proposed Federal Action) construction and vehicular emissions and the net increase when compared to the No Action alternative are the same.
[3] Includes passenger vehicle trip reductions resulting from TDM strategies. See Section 4.10.3.
[4] AEDT does not include emissions factors for CH_4 or N_2O.
NOTE: Numbers may not sum to total due to rounding.

No Action Alternative

The No Action alternative would not change airport operations or aircraft and vehicle traffic patterns and would, thus, have no change over the generation of GHGs in the long term. Similarly, since no construction would occur with the No Action alternative, no short-term GHGs would be generated.

4.5.4 Mitigation (or Avoidance) Measures

None are necessary. TDM strategies are already incorporated into the project (Section 4.10.3).

4.6 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

4.6.1 Hazardous Materials

4.6.1.1 Methodology

For preparation of this EA, federal and state online databases related to the presence and/or cleanup of hazardous materials, as well as available information on known airport hazardous or formerly hazardous conditions, have been accessed relative to the project study area. The potential for the proposed project

to create or result in increased risk of exposing surrounding populations or the environment to hazardous materials was assessed in light of the following: (1) the existing regulatory environment for the handling, storage, and disposal of hazardous materials and waste; and (2) the airport's previous hazardous cleanup actions.

4.6.1.2 Thresholds of Significance

FAA has not established a significance threshold for this impact category. However, per FAA Order 1050.1F, Exhibit 4-1, consideration should be given to the Proposed Development (which includes the Proposed Federal Action)'s potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials management;
- Involve a contaminated site, including, but not limited to, a site listed on the National Priorities List (NPL);
- Produce an appreciably different quantity or type of hazardous waste; or
- Adversely affect human health and the environment.

4.6.1.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. During construction, the contractors would use equipment and vehicles that utilize fossil fuels and other potential hazardous materials. All construction activity would be subject to existing permit procedures for the handling, transporting, and disposal of such materials. See mitigation and avoidance measures in Section 4.6.1.4 that would apply in case of an accidental spill.

The project study area has been the subject of numerous extensive hazardous materials cleanup efforts, as described in Section 3.8.2 and Table 3D. All areas of known contamination have been cleared. However, due to the presence of past contaminants within the project study area, the potential exists for previously unknown contaminants to be uncovered during construction of the Proposed Development (which includes the Proposed Federal Action) alternative. Mitigation and avoidance measures identified in Section 4.6.1.4 would apply.

Operation Impacts. Occupied hangars within the project could contain various hazardous products routinely used in the maintenance of aircraft, for example, fuel, oil, and cleaning products. In addition, businesses located within the non-aeronautical portion of the project could use or generate hazardous products depending on the type of industry. However, no significant operational impacts related to hazardous materials would occur. The Maricopa County Environmental Services Department, as well as the Arizona Department of Environmental Quality (ADEQ) and the U.S. EPA, regulate the various aspects

of hazardous materials handling, storage, and disposal. In addition, the airport enforces compliance with applicable regulations through the conditions of its lease agreements.

Indirect Impacts. No indirect impacts related to hazardous materials would occur. The airport enforces compliance with applicable regulations through the conditions of its lease agreements. This would include regulations concerning the transport of hazardous products or wastes off the airport.

No Action Alternative

No impacts related to the use, transport, or disposal of hazardous materials resources would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.6.1.4 Mitigation (or Avoidance) Measures

As a result of the mitigation and avoidance measures listed below, no potentially significant impacts related to hazardous materials would occur due to the Proposed Development (which includes the Proposed Federal Action) alternative.

HAZ-1: Appropriate spill prevention and cleanup kits shall be readily available on-site and accidental spills shall be promptly cleaned up. The contractor shall follow standard hazardous materials containment procedures and other best management practices (BMPs) should an inadvertent spill occur, as required by FAA Advisory Circular (AC) 150/5370-10H, Item C-102, *Standards for Specifying Construction of Airports* (FAA 2018a).

HAZ-2: During construction, if previously unknown contaminants are discovered or a spill occurs, work shall be halted, and the National Response Center notified, where applicable. At a minimum, the city's Engineering, Environmental Management and Sustainability Division and the airport administration shall be notified. If necessary, FAA and ADEQ shall also be notified.

4.6.2 Solid Waste

4.6.2.1 Methodology

Potential solid waste impacts were addressed qualitatively in the following analysis since specific tenants and their waste generation are not known at this stage of the project.

4.6.2.2 Thresholds of Significance

FAA has not established a significance threshold for this impact category. However, per FAA Order 1050.1F, Exhibit 4-1, consideration should be given to the Proposed Development (which includes the Proposed Federal Action)'s potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding solid waste management; or

- Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity.

4.6.2.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. During construction, construction debris and incidental trash would be created. The project contractors would be responsible for hauling off construction debris and disposing of it properly at a local landfill or recycle and transfer station. No uncommon construction debris is anticipated. The project study area has already been cleared of known asbestos and lead paint as described in Section 3.8.2.

Operation Impacts. Once constructed, individual businesses within the SkyBridge AZ Business Park would coordinate with the city's Environmental Management & Sustainability Department to dispose their solid waste (City of Mesa website 2019). No issues with providing solid waste collection and disposal are known at this time, and no significant impacts related to solid waste would occur.

Indirect Impacts. No known indirect impacts would occur related to the collection and disposal of solid waste.

No Action Alternative

No impacts related to the generation of solid waste would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.6.2.4 Mitigation (or Avoidance) Measures

None are necessary.

4.6.3 Pollution Prevention

4.6.3.1 Methodology

The airport's existing pollution prevention procedures have been referenced for applicability to the Proposed Development (which includes the Proposed Federal Action). See Section 3.8.2.

4.6.3.2 Thresholds of Significance

FAA has not established a significance threshold for this impact category. However, per FAA Order 1050.1F, Exhibit 4-1, consideration should be given to the Proposed Development (which includes the Proposed Federal Action)'s potential to:

- Adversely affect human health and the environment.

4.6.3.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. The airport operates under existing applicable regulatory requirements for preventing and controlling the effects of pollution during its construction activities. For example, during construction, if previously unknown contaminants are discovered or a spill occurs, work is halted and the National Response Center notified, where applicable. At a minimum, the city's Engineering, Environmental Management and Sustainability Division and the airport administration are notified. If necessary, FAA and ADEQ are also notified. Appropriate spill prevention and cleanup kits are readily available on-site and accidental spills are promptly cleaned up. For the Proposed Development (which includes the Proposed Federal Action) alternative, the contractor would be required to follow those, and other standard hazardous materials containment procedures, should an inadvertent spill occur. See HAZ-1 (Section 4.6.1.4).

As described in Section 3.8.1, the contractor would be responsible for obtaining Arizona Pollutant Discharge Elimination System (AZPDES) coverage under the state's Construction General Permit. Permit conditions typically related to use of the AZPDES Construction General Permit include BMPs to reduce erosion and sedimentation through implementation of a construction-specific stormwater pollution prevention plan (SWPPP). BMPs specified in FAA AC 150/5370-10H, Item C-102, would also be required.

Operation Impacts. The Proposed Development (which includes the Proposed Federal Action) alternative would increase the amount of impervious surface within the project study area by approximately 90 percent. Conceptual site plans include approximately 310 acres of impervious surfaces comprised of buildings and pavement and approximately 40 acres of pervious surfaces comprised of open space or landscaping (ADM Group, AECOM, Hatch, and Hilgart-Wilson 2018: Table 4-3). Therefore, the airport's SWPPP would be updated to include the newly developed areas. In addition, SkyBridge operators/businesses would have their own Multi-Sector General Permits (MSGPs), as applicable. No significant impacts related to pollution prevention would occur. See Section 4.11.1.3 for more information regarding stormwater drainage.

Indirect Impacts. No known indirect impacts would occur related to off-site pollution. Existing regulations are in place to prevent indirect impacts related to pollution from occurring off the project site.

No Action Alternative

No impacts related to the pollution prevention at the airport would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.6.3.4 Mitigation (or Avoidance) Measures

None are necessary.

4.7 HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

4.7.1 Methodology

For purposes of determining adverse impacts to historical, architectural, archaeological, and cultural resources and for conducting Section 106 consultation under the *National Historic Preservation Act of 1966* (NHPA), an Area of Potential Effect (APE) has been established for the Proposed Development (which includes the Proposed Federal Action) (Exhibit 3D, Chapter Three). The project study area is co-located with the direct APE; however, the APE also includes an additional 90 acres located northwest of the project study area that could be affected indirectly. For example, would the project change the character of a protected resource's use or the physical features of its setting that contribute to its historic significance, or would the project introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic feature? Potential resources within the project's direct and indirect APE have been evaluated for their eligibility for listing on the National Register of Historic Places (NRHP) either as part of this study or as part of previous studies. See Section 4.7.3.

4.7.2 Thresholds of Significance

Determination of a Proposed Development (which includes the Proposed Federal Action)'s environmental impact to historic and cultural resources is made under guidance contained in the NHPA, as amended, and the *Archaeological and Historic Preservation Act of 1974*. Section 106 of the NHPA requires federal agencies to consider the effects of their undertaking (or action) on properties listed on or eligible for listing on the NRHP. The FAA has not established a significance threshold for Historical, Architectural, Archaeological, and Cultural Resources. However, a factor to consider is if the Proposed Development (which includes the Proposed Federal Action) would result in a finding of "adverse effect" through the Section 106 process.

4.7.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction and Operation Impacts. A total of 12 cultural properties have been identified within the Proposed Development (which includes the Proposed Federal Action)'s APE: two archaeological sites and 10 historic-era buildings and structures (SWCA 2019b). As previously discussed in Section 3.9.2, AZ

U:10:69 is within the direct APE, while AZ U:10:69(ASM) is partly within the direct APE. AZ U:10:60(ASM) was removed from the NRHP in 2008 after being subjected to several phases of archaeological testing and data recovery (SWCA 2018a). AZ U:10:69 has also been the subject of numerous testing and data recovery projects and remains listed in the NRHP because small portions of the site, outside the project study area, are known to contain buried archaeological deposits that have yet to be subjected to data recovery investigation. However, the portion of AZ U:10:69(ASM) within the APE was determined in 2002 to be non-contributing to the site's NRHP status and not worthy of further preservation efforts (Foster 2002). The two archaeological sites are part of a Programmatic Agreement between the USAF, State Historic Preservation Office (SHPO), Advisory Council on Historic Preservation (ACHP), and concurring parties, and no additional treatment is recommended for the portions of the archaeological sites within the APE.

Of the 10 historic-era buildings and structures, three are in the direct APE and seven are in the APE for indirect effects (refer to Exhibit 3D in Chapter Three). None of these historic-era properties are eligible for listing in the NHRP, as explained further below.

Three of the properties, Building 533, Structure 1051, and the mostly dismantled Structure 1054, constructed between 1958 and 1969, are newly recorded properties as part of this study (SWCA 2019b). Structure 1051 and what remains of Structure 1054 are in the direct APE; Building 533 is in the indirect APE. Constructed after 1945, they are not associated with Williams Field as a World War II training and defense airfield or as contributors to a post–World War II, Cold War-era historic district (36 CFR 800, Criterion A - events that have made a significant contribution to broad patterns of our history). They are also not associated with the lives of persons significant in our past (36 CFR 800, Criterion B). These properties are also not individually eligible, as they are of utilitarian design that favors function over form (36 CFR 800, Criterion C), and they have not yielded, and are unlikely to yield through further study, information important in history (36 CFR 800, Criterion D).

Structure 1020, a World War II-era firing-in buttress, is also within the direct APE and was one of the historic-era properties identified and evaluated by Woodward, Osmon, and Richards (1992) for the planned closing of Williams AFB. At that time, according to its Historic Building Survey (HBS), it was determined ineligible for listing in the NRHP since "although the original integrity of the structure remains intact, it is not significant as a good representative of its associated historic context and therefore is recommended as not potentially eligible for listing on the NRHP."

Six of the seven historic properties within the indirect APE were recorded and determined ineligible as the result of a previous project. Buildings 51, 1080, 1082, 1084, 1085, and 1086 were identified as historic-era properties for a proposed industrial complex at the airport. Subsequent evaluation of their NRHP eligibility (Hesse 2018) led to an FAA determination of ineligibility, with SHPO concurrence (SHPO Project No. 2018-1321), for all six buildings (**Appendix D**). According to the Historic Property Inventory Forms (HPIFs) submitted to SHPO, none of the buildings are associated with an important event, important person, or are the principal source of any important information that further study might yield that would otherwise meet the criteria for individual significance. In addition, because the former Williams AFB, as a potential historic district from the Cold War era, has lost its historic integrity due to

accelerated development of the modern Williams (*sic. Phoenix-Mesa*) Gateway Airport, the buildings are not contributing resources to any NRHP-eligible district.

FAA made a finding of "no historic properties affected" for the Proposed Development (which includes the Proposed Federal Action) and received concurrence from SHPO of this finding on February 27, 2019 (**Appendix D**). FAA also conducted government-to-government tribal consultation with the following Native American Tribes in January 2019: Ak-Chin Indian Community; Salt River Pima-Maricopa Indian Community; Hopi Tribe; Gila River Indian Community; and Tohono O'odham Nation (**Appendix D**). No responses or comments from the tribes were received by FAA for the proposed undertaking.

Indirect Impacts. Indirect impacts have been addressed through the establishment of an indirect APE as discussed in the sections above. (See Section 4.7.1 above for potential impacts that could have occurred.) Since no NRHP-eligible historic resources are in the indirect APE, no adverse impacts would occur.

No Action Alternative

No impacts related to historical, architectural, archaeological, and cultural resources would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.7.4 Mitigation (or Avoidance) Measures

If unknown cultural resources are discovered during construction, the following procedures shall be followed to avoid impacts to the resource:

HIS-1: *Unanticipated Discovery Measure* - In the event that cultural resources are encountered during project activities, all construction shall be halted and FAA and SHPO shall be notified as soon as possible to determine the appropriate course of action.

4.8 NATURAL RESOURCES AND ENERGY SUPPLY

4.8.1 Methodology

The Proposed Development (which includes the Proposed Federal Action)'s anticipated water demand has been calculated in accordance with the design criteria listed in the city's *2017 Engineering and Design Standards* (City of Mesa Engineering Department 2017). For purposes of defining water demand for planning purposes, the draft SkyBridge Arizona Concept Plan assumes that five percent of the overall floor area for industrial and warehouse buildings would be used for offices with a water usage of 0.4 gallons per day per square foot (gpd/sf). Commercial and retail portions of the project are assumed to use a water demand factor of 0.2 gpd/sf; hotel rooms are assumed to use 150 gpd per room. Landscaping water demand has been calculated using the city's turf/irrigation water demand factor of 4,400 gpd per acre and is not peaked (i.e., water use for open spaces are anticipated to remain constant over time).

The Proposed Development (which includes the Proposed Federal Action)'s anticipated energy demand has been developed from template energy models of the proposed land use types. These models are based on the city's minimum building standards for energy efficiency (International Code Council [ICC] 2009) and assume gas would be used for space and water heating. Projected growth in workplace electric vehicle (EV) charging has been factored into the anticipated demand as well.

Potential impacts for other consumable natural resources (for example, building materials) have been addressed qualitatively in the following analysis since the specific demand for these other natural resources is not known at this time.

4.8.2 Thresholds of Significance

FAA has not established a significance threshold for the Natural Resources and Energy Supply impact category (FAA Order 1050.1F, Exhibit 4-1). However, a factor to consider is if an action has the potential to cause demand to exceed available or future natural resource or energy supplies.

4.8.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. Non-potable water is used to control construction dust and would be provided using portable water tanks or water trucks supplied by the contractor. Fossil fuel for construction and employee vehicles would be available from private vendors within the city and along major roadways and highway corridors. Other consumable natural resources used as building materials, such as aggregate, lumber, and steel, are not known to be in short supply in the county. The use of these types of building materials by the Proposed Development (which includes the Proposed Federal Action) alternative would also be subject to the market factors of supply and demand.

Operation Impacts. Once the project is constructed, water (potable) and energy sources (for example, fossil fuel and electricity) would be obtained from local utility providers and distributors under the prevailing market conditions. The airport is currently supplied with electricity, natural gas, and potable water.

Anticipated water demand at full buildout of the Proposed Development (which includes the Proposed Federal Action) alternative is shown in **Table 4H**.

TABLE 4H
Water Demand Summary

Average Day Demand	Maximum Day Demand	Peak Hour Demand
223,306 gpd	330,451 gpd	437,597 gpd

Source: ADM Group et al. 2018 (Table 7.3). Based on water demand factors from *2017 Engineering and Design Standards* (City of Mesa 2017).
gpd = gallons per day

Anticipated energy demand at full buildout of the Proposed Development (which includes the Proposed Federal Action) alternative is shown in **Table 4I**.

TABLE 4I
Energy Demand Summary

Average Day Demand	Peak Hour Demand
443.8 MWh	26 MW

Source: ADM Group et al. 2018 (Table 7.6). Based on City of Mesa minimum building standards for energy efficiency (ICC 2009).
MWh = megawatt hours; MW = megawatt
NOTE: These estimates assume that future land uses could include industrial uses that may require high process loads. If this does not occur, the energy demands from the project could be much less.

The use of water, fossil fuel, and electricity by the Proposed Development (which includes the Proposed Federal Action) alternative would not cause a statistically significant increase in water, fuel, or energy consumption for the county, and there is no indication that water, fossil fuel, or electricity would be in short supply. As discussed in Section 3.14.1, the state's *1980 Groundwater Management Act* and subsequent rules require that municipal water providers within Active Management Areas (AMAs) demonstrate a 100-year assured water supply (Arizona Department of Water Resources [ADWR] website 2019a). The design guidelines contained in the draft SkyBridge Arizona Concept Master Plan include the following water conservation measures (ADM Group et al. 2018):

- Encourage low water use by selecting native planting that is drought-tolerant and adapted to the local climate; and

- Group plantings by similar water needs in irrigation zones that share the same water quantity and frequency requirements.

The city encourages the use of energy efficient building methods, as well as enforcing the 2009 Energy Conservation Code. Based on the draft SkyBridge Arizona Concept Master Plan, the use of alternative energy sources such as solar power in car parking areas, exterior lighting, and rooftops would also be encouraged, although glint and glare studies would be required and must be approved before any solar photovoltaic systems are allowed (ADM Group et al. 2018). Section 7.3.5 of the SkyBridge Arizona Concept Master Plan, in particular, addresses innovative strategies in incorporating renewable energy into the project.

Indirect Impacts. The Proposed Development (which includes the Proposed Federal Action) alternative is not expected to create a demand that would exceed available or future water or other natural resource or energy supplies and, thus, have indirect impacts on the region. Development of the project site with urban land uses has been planned for by the city in its general plan and zoning processes.

No Action Alternative

No impacts related to water demand, energy demand, or other consumable natural resources used at the airport would result from the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.8.4 Mitigation (or Avoidance) Measures

None are necessary.

4.9 NOISE AND COMPATIBLE LAND USE

4.9.1 Methodology

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. FAA has approved AEDT Version 2d for aircraft noise environmental documentation. A variety of user-supplied input data is required to use the AEDT. This includes the airport elevation, a geographic definition of the airport runways, the mathematical description of ground tracks above which aircraft fly, and the assignment of specific aircraft activity to individual flight tracks. The assumptions for preparation of the noise exposure contours used in this EA are included in **Appendix B**.

Output data from AEDT are day-night average sound level (DNL) noise contours. The DNL is a measure of the 24-hour noise level of a community to allow for comparison between the No Action and Proposed Development (which includes the Proposed Federal Action) alternative. In accordance with FAA Order 1050.1F, DNL 65, 70, and 75 decibel (dB) noise contours were produced for each alternative. The noise contours consider the Proposed Development (which includes the Proposed Federal Action) alternative at full buildout/occupancy, anticipated to occur by 2038, and include additional operations as estimated by the project applicant (see Operation Impacts in Section 4.9.3). Future airport operations for the No Action alternative were identified based on the FAA Terminal Airport Forecast (TAF).

The noise impact analysis evaluated the potential for short-term or long-term noise increases from the Proposed Development (which includes the Proposed Federal Action) in relation to the presence of noise-sensitive areas within proximity (0.5 mile) of the project site. As described in Chapter Three, there are no noise-sensitive land uses located in the immediate vicinity of the airport within the DNL 65 dB or higher contour. The closest such land uses are two housing areas associated with the Arizona State University (ASU) Polytech Campus located between Power Road and the airport.

4.9.2 Thresholds of Significance

FAA Order 1050.1F, Exhibit 4-1, states that a significant noise increase occurs when the Proposed Development (which includes the Proposed Federal Action) would increase noise by DNL 1.5 dB or more for a noise-sensitive area (such as residents, schools, hospitals, and places of worship) that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a 1.5 dB or greater increase, when compared to the No Action alternative for the same timeframe.

4.9.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. The construction phases of the Proposed Development (which includes the Proposed Federal Action) alternative would involve earthwork/grading, the pouring of asphalt, and the construction of buildings and infrastructure. **Table 4J** provides average noise levels at 50 feet from the construction site for the type of construction equipment used based on information available from the Federal Highway Administration (FHWA). Construction delivery vehicular noise would also occur. (NOTE: The noise levels given in **Table 4J** are in A-weighted decibels (dBA), which are an expression of the relative loudness of sounds in air as perceived by the human ear. In comparison, FAA noise thresholds are expressed in DNL dB, which is an annual average sound level. These noise metrics are not equivalent. Thus, **Table 4J** is provided for informational purposes only and is not intended for use in determining an impact based on FAA significance thresholds.)

Construction noise is a temporary impact and would not be above 65 dB for an extended period. As sound travels away from its source, the sound is absorbed to a certain extent by both the atmosphere and by intervening vegetation. For example, at 700 feet, the project's equipment noise would be reduced by four to five dB; at 1,500 feet, the reduction would be closer to 10 dB. The nearest noise-sensitive land uses (residences located west of the project site that are associated with the ASU Polytech Campus) are approximately 0.3 mile (1,500 feet) from the project site. No exceedances of FAA DNL noise thresholds would occur.

TABLE 4J
Construction Equipment and Associated Noise Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source
Air Compressor	81
Backhoe	80
Concrete Mixer	85
Concrete Vibrator	76
Crane Mobile	83
Generator	81
Grader	85
Loader	85
Paver	89
Roller	74
Saw	76
Scraper	89
Shovel	82
Truck	88

Source: FHWA 2006.

Operation Impacts. Once constructed, the Proposed Development (which includes the Proposed Federal Action) alternative would result in additional aircraft operations at the airport. **Appendix B** includes the assumptions used for future aviation activity related to the Proposed Development (which includes the

Proposed Federal Action) alternative.

Proposed Development (which includes the Proposed Federal Action) and No Action alternative DNL 65, 70, and 75 dB noise exposure contours were prepared for forecast years 2025, 2030, 2035, and 2045 which are depicted on the exhibits listed below:

Exhibit 4A – Future (2025) Noise Contours
Exhibit 4B – Future (2030) Noise Contours
Exhibit 4C – Future (2035) Noise Contours
Exhibit 4D – Future (2045) Noise Contours

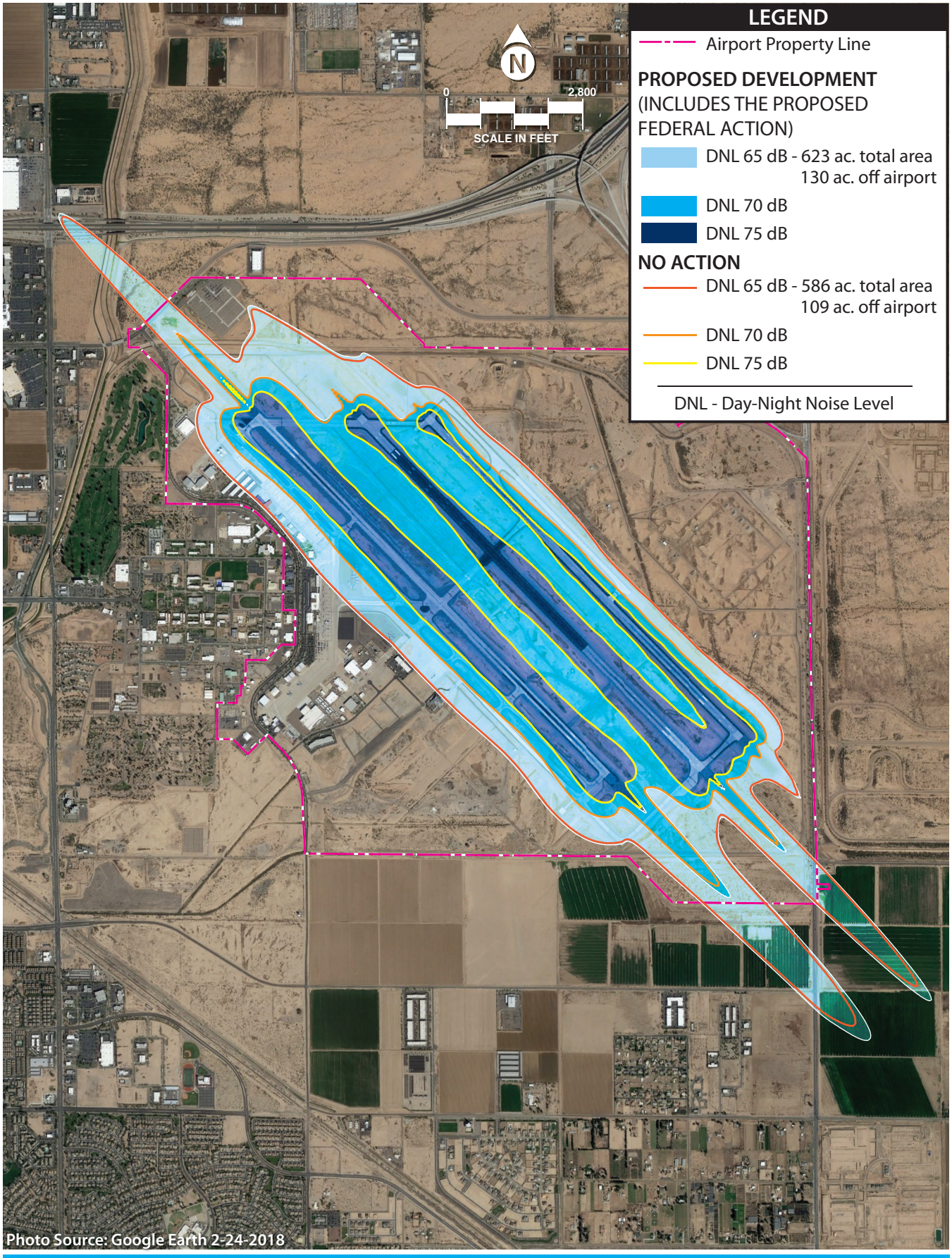
Air cargo operations are forecast to increase with the Proposed Development (which includes the Proposed Federal Action). Based on information provided by the project proponent, additional air cargo operations will be conducted with Boeing 747 and 767 aircraft. **Table 4K** summarizes the annual air cargo operations for these aircraft associated with the Proposed Development (which includes the Proposed Federal Action). These operations were included in the modeling for each of the Proposed Development (which includes the Proposed Federal Action) scenarios.

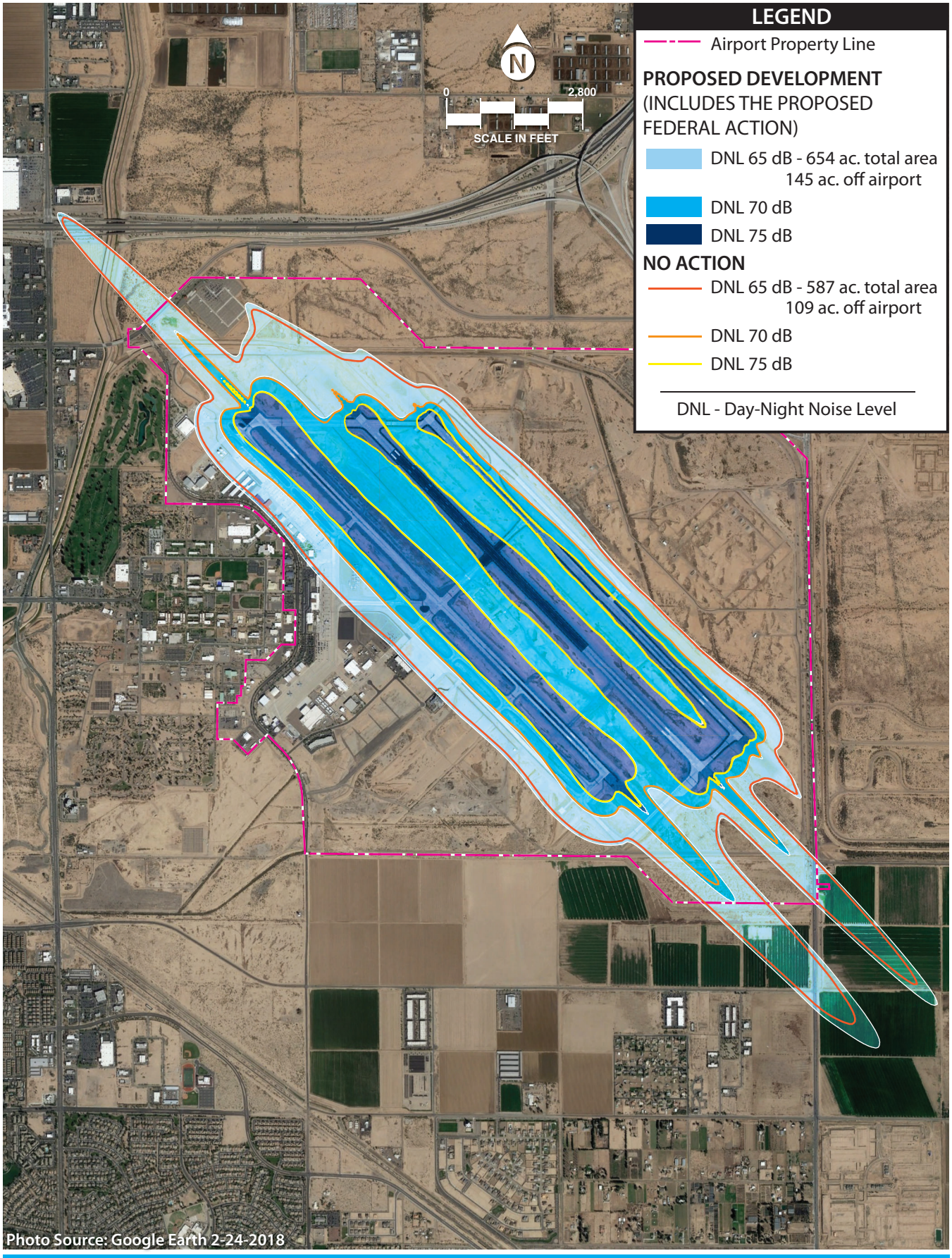
TABLE 4K
Forecast Annual Cargo Operations – Proposed Development (which includes the Proposed Federal Action)
SkyBridge Arizona

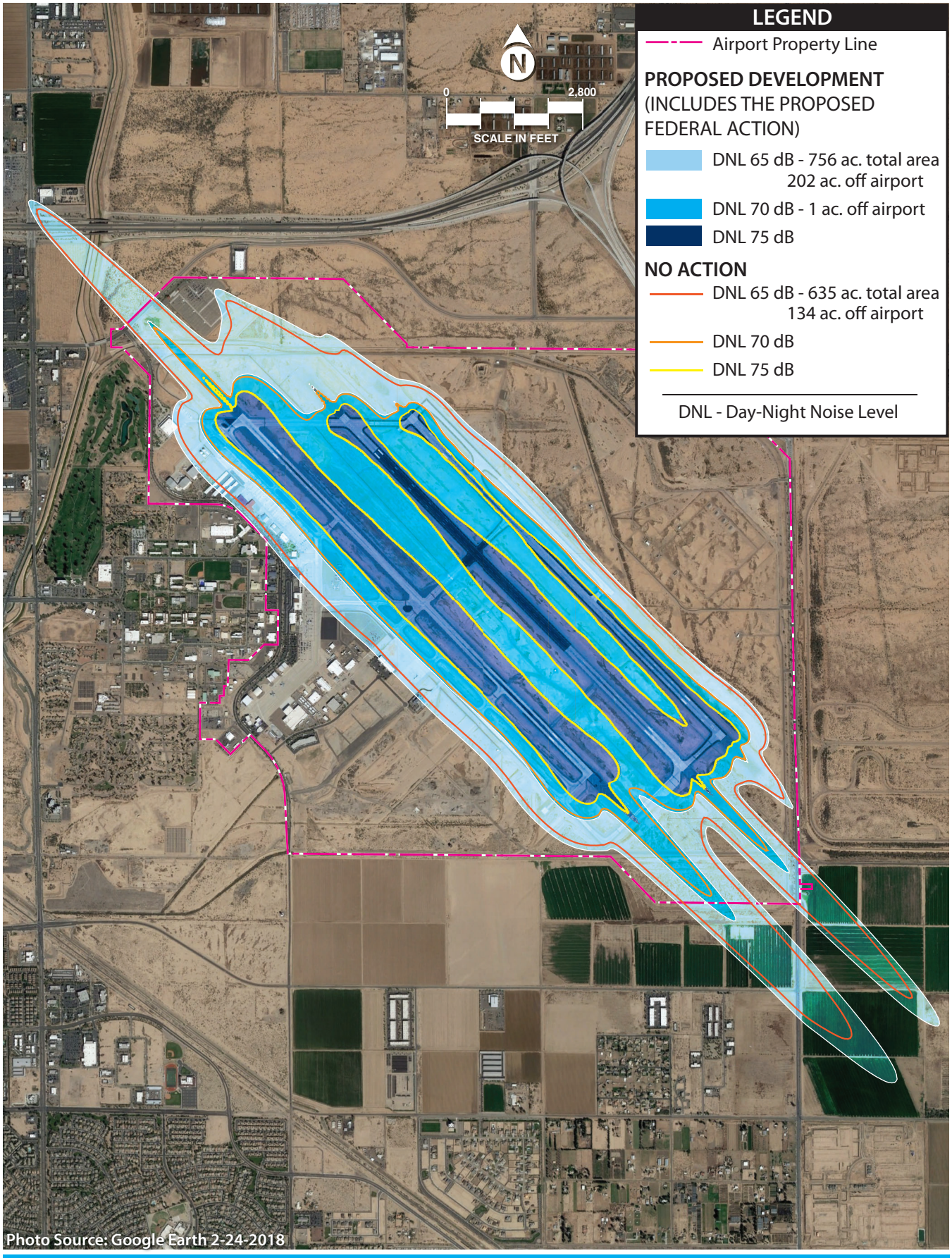
Year	747 Annual Operations	767 Annual Operations
2025	416	750
2030	832	2,250
2035	1,456	3,750
2040	1,456	4,500

Source: SkyBridge Arizona 2018. SkyBridge Air Cargo 20 Year Forecasts.

As summarized in **Table 4L** and depicted on **Exhibits 4A** through **4D**, the noise exposure contours will increase in size through each of the Proposed Development (which includes the Proposed Federal Action) and No Action forecast years. With the additional cargo operations, the Proposed Development (which includes the Proposed Federal Action) noise contours are larger when compared to the noise exposure contours of the corresponding No Action year. The noise exposure contour exhibits show that the DNL 65 dB noise contours extend off airport property to the northwest and southeast. However, they would not result in an increase in noise of DNL 1.5 dB or more, at or above the DNL 65 dB noise contour when comparing the Proposed Development (which includes the Proposed Federal Action) to the No Action, for any noise-sensitive areas. The table presents acreages for the total noise exposure contours and the portions off airport property. The portions off airport property encompass roadways and agricultural lands.


LEGEND
Airport Property Line
PROPOSED DEVELOPMENT
(INCLUDES THE PROPOSED FEDERAL ACTION)
DNL 65 dB - 623 ac. total area
130 ac. off airport
DNL 70 dB
DNL 75 dB
NO ACTION
DNL 65 dB - 586 ac. total area
109 ac. off airport
DNL 70 dB
DNL 75 dB
DNL - Day-Night Noise Level
N
0
2,800
SCALE IN FEET
Photo Source: Google Earth 2-24-2018


N
0
2,800
SCALE IN FEET
LEGEND
Airport Property Line
PROPOSED DEVELOPMENT
(INCLUDES THE PROPOSED
FEDERAL ACTION)
DNL 65 dB - 654 ac. total area
145 ac. off airport
DNL 70 dB
DNL 75 dB
NO ACTION
DNL 65 dB - 587 ac. total area
109 ac. off airport
DNL 70 dB
DNL 75 dB
DNL - Day-Night Noise Level
Photo Source: Google Earth 2-24-2018


LEGEND
Airport Property Line
PROPOSED DEVELOPMENT
(INCLUDES THE PROPOSED
FEDERAL ACTION)
DNL 65 dB - 756 ac. total area
202 ac. off airport
DNL 70 dB - 1 ac. off airport
DNL 75 dB
NO ACTION
DNL 65 dB - 635 ac. total area
134 ac. off airport
DNL 70 dB
DNL 75 dB
DNL - Day-Night Noise Level
N
0
2,800
SCALE IN FEET
Photo Source: Google Earth 2-24-2018

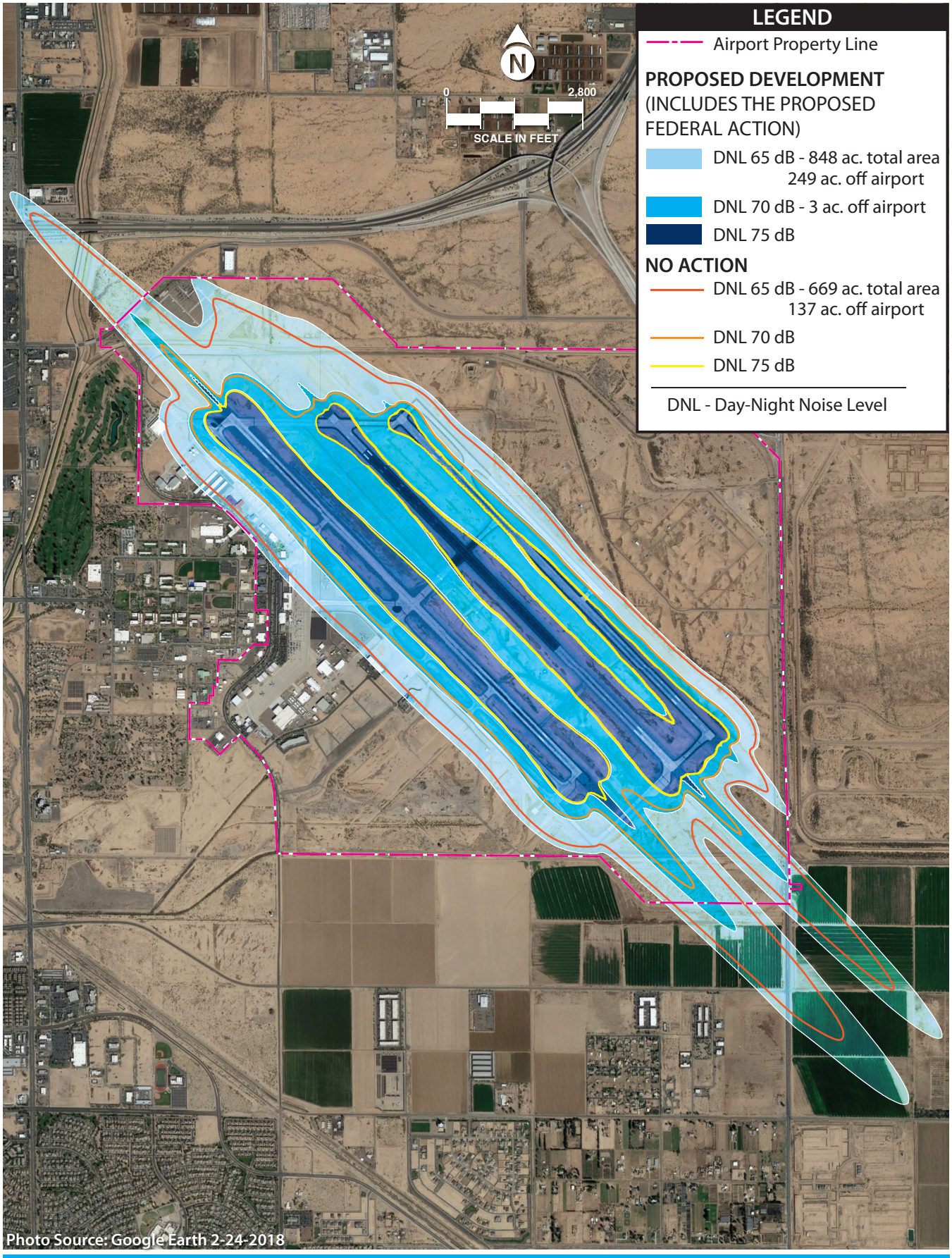

LEGEND
Airport Property Line
PROPOSED DEVELOPMENT
(INCLUDES THE PROPOSED FEDERAL ACTION)
DNL 65 dB - 848 ac. total area
249 ac. off airport
DNL 70 dB - 3 ac. off airport
DNL 75 dB
NO ACTION
DNL 65 dB - 669 ac. total area
137 ac. off airport
DNL 70 dB
DNL 75 dB
DNL - Day-Night Noise Level
N
0
2,800
SCALE IN FEET
Photo Source: Google Earth 2-24-2018

TABLE 4L
Noise Exposure Contour Acreage Summary
SkyBridge Arizona

Scenario	Total Area DNL 65 dB Contour	DNL 65 dB off Airport Property	DNL 70 dB off Airport Property
Existing	509.24	58.06	0.00
2025 Action	623.40	130.53	0.00
2025 No Action	586.40	108.71	0.00
2030 Action	653.78	144.82	0.00
2030 No Action	586.73	108.84	0.00
2035 Action	756.00	201.76	1.03
2035 No Action	634.68	133.54	0.00
2045 Action	847.68	249.17	3.28
2045 No Action	669.54	137.16	0.00

Source: AEDT analysis by Coffman Associates, December 2019

Based on a review of aerial photography, no noise-sensitive land uses are contained within the DNL 65 dB contour. Therefore, the significant noise impact threshold for aircraft noise, as defined by the FAA, would not be exceeded.

Indirect Impacts. Noise from tenants within the SkyBridge development and/or vehicular traffic associated with their operations would not be considered a significant indirect impact of the Proposed Development (which includes the Proposed Federal Action) alternative. There are no noise-sensitive land uses located close enough to be adversely impacted by land-based operational noise. The project site is bordered by the airport's airfield system, the aircraft rescue and firefighting facility/Mesa Fire Station/Police Airport Unit, and an U.S. Forest Service/U.S. Department of Homeland Security Immigration and Customs Enforcement building on the north and northeast; by an industrial complex off Velocity Way on the west; by the runway protection zone of Runway 30L on the east; and by open space planned for use by ASU and agricultural land on the southwest and south.

No Action Alternative

No impacts related to construction or operational aircraft noise for noise-sensitive land uses would result from the No Action alternative. As depicted on **Exhibits 4A** through **4D**, the future DNL 65 dB contour would extend off airport property to the northwest and southeast under the No Action alternative. However, no noise-sensitive land uses are contained within the DNL 65 dB contour.

4.9.4 Mitigation (or Avoidance) Measures

No FAA noise thresholds would be exceeded, and no mitigation is necessary.

4.10 SOCIOECONOMIC IMPACTS

The Proposed Development (which includes the Proposed Federal Action) would not disrupt or divide the physical arrangement of an established community or displace housing or businesses since it would be constructed in a vacant area within the airport's existing boundaries. Therefore, the following

discussion focuses on the potential for the project to induce economic growth or a change in the community tax base or to disrupt local traffic patterns and substantially reduce the level of service (LOS) on roads serving the airport and its surrounding communities.

4.10.1 Methodology

The estimated fiscal impacts of the Proposed Development (which includes the Proposed Federal Action) have been provided in the draft SkyBridge Arizona Concept Master Plan (ADM Group et al. 2018). Because the Proposed Development (which includes the Proposed Federal Action) would generate additional traffic, a traffic impact analysis (TIA) was completed as part of this EA (United Civil Group 2019). These two sources have been used to complete this section of the EA.

Estimates of the traffic volumes that could be generated by the Proposed Development (which includes the Proposed Federal Action) alternative were determined from data provided in *Trip Generation*, 10th Edition (Institute of Transportation Engineers [ITE] 2017). The ITE rates express trips per unit of land use type. The analysis of the Proposed Development (which includes the Proposed Federal Action) alternative, which would have several different types of land uses, included the following ITE land use types.

- Industrial Park (Land Use 130)
- General Office Building (Land Use 710)
- Hotel (Land Use 310)
- Research and Development Center (Land Use 760)
- Shopping Center (Land Use 820)

Operational truck trips were estimated using the National Cooperative Highway Research Program (NCHRP) Synthesis 298, *Truck Trip Generation Data* (2001). Table D-2b of this publication provides daily commercial vehicle trip factors per 1,000 square feet (TSF) of building space for various land uses. However, because the proposed facility would be located adjacent to the airport, some shipments would arrive, clear customs, and leave without the need for heavy vehicle transportation. Therefore, the Airport Cooperative Research Program (ACRP) Synthesis 80, *Estimating Truck Trip Generation for Airport Air Cargo Activity* (2017) was also reviewed.

The Proposed Development (which includes the Proposed Federal Action) alternative was analyzed as a multi-phase development with study horizons of 2025 (Phase 1), 2030 (Phase 2), and 2035 (Phase 3). (Year 2045 was also analyzed in the TIA to identify traffic impacts 10 years after buildout per the city's Engineering Department's *Engineering and Design Standards Manual* [2017].)
The traffic study area was defined according to the city's guidelines and based on information and discussions with city traffic engineering staff (United Civil Group 2019). The traffic study area covers approximately two miles around the project study area and includes the following 12 intersections and related street segments:

- Power Road/State Route (SR) Loop 202 westbound (WB) ramps
- Power Road/ SR Loop 202 eastbound (EB) ramps
- Power Road/Ray Road

- Power Road/Williams Field Road (west intersection)
- Power Road/Williams Field Road (east intersection)
- Power Road/Pecos Road
- Sossaman Road/Pecos Road
- Ellsworth Road/Pecos Road
- Ellsworth Road/SR 24 (off-ramp)
- Ellsworth Road/SR 24 (on-ramp)
- Sossaman Road/Velocity Way
- Sossaman Road/Ray Road

Intersection LOS was determined using methodologies provided in the Transportation Research Board's 2010 *Highway Capacity Manual* (HCM). Roadway LOS used MAG planning level, urban roadway capacities and ARTPLAN, a LOS roadway planning software. Existing conditions relied on both published data, field observations, and existing turning movement counts conducted on May 30, 2018 by United Civil Group for the TIA study. Further details regarding the TIA methodology is included in the full traffic report on file with the airport.

The TIA included a growth factor to estimate the amount of additional traffic that would occur within the traffic study area even if the Proposed Development (which includes the Proposed Federal Action) alternative is not constructed. This allows a comparison of the Proposed Development (which includes the Proposed Federal Action) alternative to the No Action alternative, as required by 40 CFR 1502.14(c). Based on the city's reported daily traffic volumes for the traffic study area in 2010 and 2018, regional growth in the area has been occurring at approximately three percent per year. The TIA assumes that area growth in terms of traffic would continue to grow by three percent per year until approximately 2030. It was then assumed that development would slow to approximately two percent per year after 2030 through project buildout. This is, in part, due to the anticipated completion of regional traffic improvements, such as a planned extension of SR 24, which would allow existing traffic to bypass many of the streets within the traffic study area.[3]

4.10.2 Thresholds of Significance

The FAA has not established a significance threshold for this impact category (FAA Order 1050.1F, Exhibit 4-1). However, factors to consider if they are interrelated with natural or physical environmental impacts, include, but are not limited to, situations in which the Proposed Development (which includes the Proposed Federal Action) or alternative(s) would have the potential to:

- Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area);

- Produce a substantial change in the community tax base; or

[3] Specifically, the TIA assumes that existing traffic on Ellsworth Road would shift and disburse to the SR 24 intersections of Williams Field Road, Signal Butte Road, and others outside of the study area. The SR 24 Design Concept Report from Ellsworth Road to Ironwood Road (Civtech 2016) was used to estimate 2025 traffic volumes on SR 24 north and south of Ellsworth Road and the distribution of trips at the connecting five roadways.

- Disrupt local traffic patterns and substantially reduce the LOS on roads serving an airport and its surrounding communities.

4.10.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. The Proposed Development (which includes the Proposed Federal Action) alternative would provide jobs in the construction sector during the first two years of each of the three phases of construction for a period of six to 10 months per year. Construction employment is temporary and does not represent a change in the community tax base or a long-term opportunity to induce growth.

Construction traffic associated with the project would also occur during the first two years of each of the three phases of construction for a period of six to 10 months per year. The traffic would be temporary and would represent a minor percentage of the traffic experienced on the local and regional street network. No disruption of local traffic patterns or substantial reduction in LOS would occur.

Operation Impacts. The estimated long-term employment results of the Proposed Development (which includes the Proposed Federal Action) alternative have been provided in the draft SkyBridge Arizona Concept Master Plan by phase of development occupancy (also called absorption) (**Table 4M**). Employment estimates have also been separated out based on the type of land use (**Table 4N**). At full occupancy, the Proposed Development (which includes the Proposed Federal Action) could accommodate over 6,400 full time jobs on-site. These jobs are expected to pay an average of $77,000 per year, more than 40 percent above the countywide average (ADM Group et al. 2018). This is a positive result of the project, and one that has been planned for by the city. As discussed in Section 3.13.2, by 2040, the city anticipated that the area containing the airport would support over 6,500 jobs.

TABLE 4M
Direct Employment by Phase of Occupancy[1, 2]
SkyBridge Arizona

Phase of Occupancy[2]	Non-Aeronautical Industrial Use	Aeronautical Industrial Use	Office/Research & Development (R&D)	Retail	Hotel	Total
Phase I	683	139	0	0		822
Phase II	924	186	0	0		1,110
Phase III	807	225	0	118	30	1,180
Phase IV	1,012	0	222	0		1,234
Phase V	812	0	222	0		1,034
Phase VI	847	196	0	0		1,043
Total	5,085	746	444	118	30	6,423

Source: ADM Group et al. 2018 (Table 2.7) (Differences in totals compared to the Concept Master Plan are due to rounding).
[1] Phases I - III would occur in the latter stages of Construction Phases 1 - 3; Phases IV - VI would occur after Construction Phase 3 is completed.
[2] Employment density (square feet per full-time employee): Non-Aeronautical - 600; Aeronautical - 1,023; Office/R&D - 450: Retail - 170

TABLE 4N
Average Income by Job Based on Land Use[1]
SkyBridge Arizona

Land Use	Direct Jobs	Average Annual Labor Income (2018 dollars)/Job
Warehouse	3,552	$90,000
Light Industrial/Flex	1,525	$76,000
Customs Facility	30	$69,000
Air Cargo Operations	748	$85,000
Office	444	$76,000
Hotel	30	$42,000
Retail/Other	118	$37,000
TOTAL	6,447	$77,000
	County Average	$54,000
	Difference	+43%

Source: ADM Group et al. 2018 (Table 2.9) (Differences in totals compared to the Concept Master Plan are due to rounding).
NOTE: Total direct jobs differs from **Table 4M** due to full-time equivalent rounding procedures used to calculate direct jobs by land use.

The influx of additional jobs, income, and spending would also increase the community tax base. The airport would collect transaction taxes on the ground lease income provided to the airport by the SkyBridge development. SkyBridge (or its affiliate) would collect transaction taxes on the facilities that they develop and lease out. The collected taxes would then be dispersed amongst the various taxing entities.

Traffic anticipated to be generated by the Proposed Development (which includes the Proposed Federal Action) alternative is shown in **Table 4O**. Overall, it is expected that the project would generate approximately 15,193 daily trips by full buildout, with roughly 12 percent of the trips occurring during each peak hour.

Approximately seven percent of the project's daily trips were assumed to be heavy duty vehicles with the remaining 93 percent passenger vehicles. Figures 10 through 15 of the TIA show the detailed trip distribution per study horizon year of both passenger and heavy vehicle trips related to the proposed project. It should be noted that heavy vehicles would not be permitted north from the project site on Sossaman Drive.

TABLE 4O
Project-Generated Vehicular Traffic Estimates

Year/Land Use	Daily Trips	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Phase 1 (Year 2025)							
Industrial Park - Aeronautical (198 TSF)							
Passenger Vehicles	632	61	14	75	15	60	75
Trip Reduction (5%)	-32	-3	-1	-4	-1	-3	-4
Heavy Vehicles	36	3	1	4	1	3	4
Industrial Park - Non-Aeronautical (662 TSF)							
Passenger Vehicles	2,112	203	47	250	53	197	250
Trip Reduction (10%)	-211	-20	-5	-25	-5	-20	-25
Heavy Vehicles	119	12	3	15	3	12	15
All Vehicles	1,061	103	17	120	18	96	114
Subtotal Phase 1 (Year 2025)	2,656	256	59	315	66	249	315

TABLE 4O (CONTINUED)
Project-Generated Vehicular Traffic Estimates

Year/Land Use	Daily Trips	AM Peak			PM Peak		
		In	Out	Total	In	Out	Total
Phase 2 (Year 2030)							
Hotel (150 rooms)							
All Vehicles	1,254	42	29	71	46	44	90
Less Internal Capture of 20% Hotel*	-251	-9	-6	-15	-9	-9	-18
Research & Development							
All Vehicles	1,126	31	11	42	7	42	49
Shopping Center (20 TSF)							
All Vehicles	2,012	100	62	162	79	86	165
Less Internal Capture of 30% Retail*	-603	-29	-19	-48	-24	-26	-50
Subtotal Phase 2 (Year 2030)	9,326	692	201	893	234	677	911
Phase 3 (Year 2035)							
Industrial Park - Aeronautical (851 TSF)							
Passenger Vehicles	2,716	261	61	322	68	255	323
Trip Reduction (5%)	-136	-13	-3	-16	-3	-13	-16
Heavy Vehicles	153	15	4	19	4	14	18
Industrial Park - Non-Aeronautical (157 TSF)							
Passenger Vehicles	500	48	11	59	12	47	59
Trip Reduction (10%)	-50	-5	-1	-6	-1	-5	-6
Heavy Vehicles	28	3	1	4	1	3	4
Subtotal Phase 3 (Year 2035)	3,211	309	73	382	81	301	382
Proposed Development (which includes the Proposed Federal Action) Alternative Total	**15,193**	**1,257**	**333**	**1,590**	**381**	**1,227**	**1,608**

Source: United Civil Group 2019
TSF = thousand square foot (feet)
*Per the ITE handbook, internal trips within a mixed-use development tend to interact and thus attract a portion of each other's trip generation. Thus, internal capture rates were applied to the retail and hotel trips at the rates shown above.

The Maricopa County Air Quality Department requires that trip reduction plans be submitted for all businesses with more than 50 employees (Butler, K., Planning and Analysis Manager, Maricopa County Air Quality Department 2019). Trip reduction is a form of TDM that focuses on identifying alternatives to single occupant vehicle use, particularly during commute hours (i.e., morning and evening peaks). The project applicant (SkyBridge) is committed to implementing various TDM measures for the industrial park portions of the project, including:[4]

- telecommuting;
- varying shift hours (for example, 5AM - 2 PM and 2PM - 11PM);
- promoting car and vanpooling;
- incentives for rideshare; and
- bicycle facilities.

[4] Although additional TDM measures may be implemented by individual tenants of the project's office and retail development, these would be harder to implement by the project applicant.

The following trip reduction rates have been included in this analysis: [5]

- 10 percent trip reduction for non-aeronautical industrial uses; and
- 5 percent trip reduction for aeronautical industrial uses.

Figures 16 through 19 of the TIA show the detailed trip distribution per study horizon year of future background traffic. The total traffic for years 2025, 2030, 2035, and 2045 are presented in Figures 20 through 23 of the TIA. These total traffic volumes (i.e., future background and project-related trips) have been used to determine potential LOS and capacity impacts, as well as appropriate traffic control needs and roadway improvements for each of the study horizon years analyzed.

As previously mentioned in Section 3.13.2, city guidelines consider an acceptable LOS to be LOS D or better for intersections and LOS E or better for roadways. **Table 4P** compares study intersection LOS for the Proposed Development (which includes the Proposed Federal Action) alternative to the No Action alternative for each of the horizon study years.[6]

TABLE 4P
Intersection Level of Service (LOS)* - Study Years 2025, 2030, 2035, and 2045
Comparison of No Action and Proposed Development (which includes the Proposed Federal Action) Alternatives

Intersection Location	LOS - 2025	LOS - 2030	LOS - 2035	LOS - 2045
	No Action/ Proposed Development	No Action/ Proposed Development	No Action/ Proposed Development	No Action/ Proposed Development
Power Road/SR Loop 202 WB Ramp				
AM Peak Hour	B/B	B/C	B/C	C/C
PM Peak Hour	D/C	D/D	D/***E***	***F/F***
Power Road/SR Loop 202 EB Ramp				
AM Peak Hour	B/B	C/C	C/D	D/***E***
Power Road/Ray Road				
AM Peak Hour	C/C	C/***E***	D/***F***	D/***F***
PM Peak Hour	C/D	D/***F***	D/***F***	***E/F***
Power Road/Williams Field Road (west)				
AM Peak Hour	C/C	C/C	C/C	C/C
PM Peak Hour	B/C	C/C	C/C	C/C
Power Road/Williams Field Road (east)				
AM Peak Hour	B/B	B/B	B/B	B/B
PM Peak Hour	C/C	C/C	C/C	C/C

[5] TDMs such as varying shift times, incentives for ridesharing, and bicycle facilities can be accommodated for the aeronautical type land uses. However, for the non-aeronautical type land uses, the same TDMs can be accommodated plus telecommuting. Therefore, a higher trip reduction rate is appropriate for non-aeronautical uses.

[6] Based on regional transportation planning, future background conditions in the TIA assume the following street improvements will be in place with or without the Proposed Development (which includes the Proposed Federal Action) alternative:
Year 2025: Signalization of Sossaman Road/Pecos Road intersection with improvements to the intersection configuration; lengthening of SR 24 to Ironwood Road with two lanes in each direction and exclusive left turn and right turn lanes at six intersections east along the corridor; and restriping of Power Road/Pecos Road intersection to accommodate dual left turn lanes on the southbound, eastbound, and westbound approaches.
Year 2035: Restriping of Ellsworth Road/Pecos Road intersection to accommodate dual left turn lanes in the northbound and southbound directions.

TABLE 4P (CONTINUED)
Intersection Level of Service (LOS)* - Study Years 2025, 2030, 2035, and 2045
Comparison of No Action and Proposed Development (which includes the Proposed Federal Action) Alternatives

Intersection Location	LOS - 2025	LOS - 2030	LOS - 2035	LOS - 2045
	No Action/ Proposed Development	No Action/ Proposed Development	No Action/ Proposed Development	No Action/ Proposed Development
Power Road/Pecos Road				
AM Peak Hour	C/C	C/D	D/D	D/D
PM Peak Hour	***F/F***	***F/F***	***F/F***	***F/F***
Sossaman Road/Pecos Road				
AM Peak Hour	C/C	C/C	C/D	C/C
PM Peak Hour	C/C	C/C	C/C	C/C
Ellsworth Road/Pecos Road				
AM Peak Hour	A/A	A/A	A/B	A/B
PM Peak Hour	B/B	B/D	B/C	C/D
Ellsworth Road/SR 24 Off-ramp				
AM Peak Hour	C/C	C/C	D/D	***E/E***
PM Peak Hour	D/D	***F/F***	***F/F***	***F/F***
Ellsworth Road/SR 24 On-ramp				
AM Peak Hour	***F/F***	***F/F***	***F/F***	***F/F***
PM Peak Hour	C/C	C/C	D/D	D/***E***
Sossaman Road/Velocity Way				
AM Peak Hour	**/**	**/A	**/A	**/A
PM Peak Hour	**/**	**/C	**/C	**/C
Sossaman Road/Ray Road				
AM Peak Hour	B/B	C/C	B/C	C/C
PM Peak Hour	C/C	C/C	C/C	C/C
Sossaman Road/Project Access B				
AM Peak Hour	NA/**	NA /C	NA /C	NA /B
PM Peak Hour	NA /**	NA /C	NA /C	NA /C

Source: United Civil Group 2019 (Tables 10-13 and 17-20)
SR = State Route; WB = westbound; EB = eastbound; NA = not applicable
NOTE: ***Bold black italicized*** text indicates an intersection expected to operate at LOS E or F during one or both peak hours.
* The LOS presented is for the worst-case turning movement.
** An overall LOS letter grade is not assigned for one-way or two-way stop-controlled intersections (TRB 2010).

By the 2025 to 2045 horizon study years, the following intersections are expected to operate below acceptable LOS D under the Proposed Development (which includes the Proposed Federal Action) alternative:

- Power Road/SR Loop 202 WB Ramp: 2035
- Power Road/SR Loop 202 EB Ramp: 2035
- Power Road/Ray Road: 2030
- Power Road/Pecos Road: 2025
- Ellsworth Road/SR 24 Off-ramp: 2030
- Ellsworth Road/SR 24 On-ramp: 2025

These intersections are also expected to operate below acceptable LOS under the No Action alternative due to anticipated regional growth. Therefore, regional street improvements would be necessary to fully address regional traffic congestion. The city implements traffic mitigation fees for all development

projects located within its city limits. The proposed SkyBridge development would pay the required portion of these fees. **Table 4Q** identifies the estimated percentage of future traffic volumes for each intersection studied in this analysis.

TABLE 4Q
Proposed Development (which includes the Proposed Federal Action) Alternative Intersection Usage Percentages

Approach	Background Volume (vph)		Site Generated Volume (vph)		Total Volume (vph)		Percent of Total Volume Generated by Proposed Development Alternative	
	AM	PM	AM	PM	AM	PM	AM	PM
Power Road/Ray Road								
Phase 1 (Year 2025)	3,510	4,497	165	164	3,675	4,661	4%	4%
Phase 2 (Year 2030)	4,081	5,229	629	638	4,710	5,867	13%	11%
Phase 3 (Tear 2035)	4,365	5,593	816	827	5,181	6,420	16%	13%
SB Power Road/Williams Field Road								
Phase 1 (Year 2025)	1,628	2,289	42	32	1,670	2,861	3%	1%
Phase 2 (Year 2030)	1,892	3,287	147	129	2,039	3,416	7%	4%
Phase 3 (Year 2035)	2,026	3,518	195	177	2,221	3,695	9%	5%
NB Power Road/Williams Field Road								
Phase 1 (Year 2025)	2,262	1,852	9	34	2,271	1,886	0%	2%
Phase 2 (Year 2030)	2,630	2,151	33	120	2,663	2,271	1%	5%
Phase 3 (Year 2035)	2,814	2,303	43	159	2,857	2,462	2%	6%
Power Road/Pecos Road								
Phase 1 (Year 2025)	3,823	5,773	107	102	3,930	5,875	3%	2%
Phase 2 (Year 2030)	4,444	6,713	391	400	4,835	7,113	8%	6%
Phase 3 (Year 2035)	4,757	7,188	512	518	5,269	7,706	10%	7%
Sossaman Road/Ray Road								
Phase 1 (Year 2025)	1,223	1,355	151	152	1,374	1,507	11%	10%
Phase 2 (Year 2030)	1,423	1,575	592	601	2,015	2,176	29%	28%
Phase 3 (Year 2035)	1,522	1,687	763	774	2,285	2,461	33%	31%
Sossaman Road/Velocity Way								
Phase 1 (Year 2025)	631	673	219	218	850	891	26%	24%
Phase 2 (Year 2030)	709	751	844	858	1,553	1,609	54%	53%
Phase 3 (Year 2035)	748	790	1,142	1,106	1,890	1,896	60%	58%
Sossaman Road/Pecos Road								
Phase 1 (Year 2025)	1,455	1,769	174	168	1,629	1,937	11%	9%
Phase 2 (Year 2030)	1,691	2,058	643	682	2,334	2,740	28%	25%
Phase 3 (Year 2035)	1,810	2,201	840	849	2,650	3,050	32%	28%
Ellsworth Road/Pecos Road								
Phase 1 (Year 2025)	2,611	3,209	67	63	2,678	3,272	3%	2%
Phase 2 (Year 2030)	3,036	3,731	252	256	3,288	3,987	8%	6%
Phase 3 (Year 2035)	3,248	3,847	328	331	3,576	4,178	9%	8%

Source: United Civil Group 2019 (Table 22).
vph = vehicles per hour; SB = southbound; NB = northbound

Site access to the proposed project is planned to occur from two points: Velocity Way (Access A) and a proposed collector roadway (Access B) approximately 1,500 feet south of Velocity Way. Velocity Way currently provides full turning movements at its intersection with Sossaman Road. The proposed Access B would also be designed for full turning movements per the city's Engineering and Design Standards. Based on the traffic signal analysis provided in the TIA, traffic signals would be warranted at both

intersections by the year 2030. This conclusion will be re-evaluated once Phase 2 is built out and actual traffic volumes can be collected at each intersection.

Table 4R compares average daily traffic volumes on Sossaman Road, Velocity Way, and the new proposed site access point (Access B) for the Proposed Development (which includes the Proposed Federal Action) alternative to the No Action alternative for each of the horizon study years. Since Velocity Way is currently constructed as a two-lane roadway that accesses existing industrial uses and is constrained by the existing facilities, no changes to the configuration of the roadway are proposed. The main site entry would be at Access B, which would be constructed as a major collector roadway with two lanes in each direction and a center median. No changes in LOS would occur on these roadways due to the Proposed Development (which includes the Proposed Federal Action) alternative.

TABLE 4R
Projected Traffic Volume/Level of Service (LOS) - Study Years 2025, 2030, 2035, and 2045
Comparison of No Action and Proposed Development (which includes the Proposed Federal Action) Alternatives

Roadway	Capacity	2025		2030		2035		2045	
		No Action	Proposed Development	No Action	Proposed Development	No Action	Proposed Development	No Action	Proposed Development
Sossaman Road north of Velocity Way	43,600	14,500/ LOS A	15,600/ LOS A	16,800/ LOS A	21,000/ LOS A	18,500/ LOS A	23,700/ LOS A	22,600/ LOS A	27,800/ LOS B
Sossaman Road south of Velocity Way	43,600	9,100/ LOS A	10,700/ LOS A	10,500/ LOS A	18,300/ LOS A	11,600/ LOS A	21,600/ LOS A	14,200/ LOS A	24,200/ LOS A
Velocity Way (Access A)	20,000	2,500/ LOS A	3,600/ LOS A	2,900/ LOS A	7,700/ LOS A	3,200/ LOS A	8,500/ LOS A	3,900/ LOS A	9,200/ LOS A
Access B	43,600	NA	1,600/ LOS A	NA	7,200/ LOS A	NA	9,900/ LOS A	NA	9,200/ LOS A

Source: United Civil Group 2019 (Tables 14 and 21)
NA = not applicable. Without the Proposed Development (which includes the Proposed Federal Action) alternative, Access B would not occur.

Conclusion. The Proposed Development (which includes the Proposed Federal Action) alternative is expected to generate approximately 15,193 total weekday trips upon completion in 2035. During the morning and evening peak hours, it would generate approximately 1,590 and 1,608 trips, respectively. Commercial/heavy vehicles would account for 639 of the total daily trips with 81 in the morning peak hour and 80 in the evening peak hour. Using existing roadway intersection geometry and traffic volumes, all study intersections would operate at a LOS D or better in the morning and evening peak hours for the existing condition. However, as traffic increases regionally, the interchange of SR Loop 202/Power Road and intersection of SR 24/Ellsworth Road are expected to begin to degrade to unacceptable LOS in peak hours. Once SR 24 is constructed to its ultimate condition as a freeway, the intersections would become the on-and off-ramps and improve LOS.

By year 2045, the intersections of Power Road/Ray Road and Power Road/Pecos Road are expected to have unacceptable delay predominately due to the high volumes of left turn movements at these intersections. Because these intersections are built to their ultimate geometry, no major improvements are recommended. However, as roadways are constructed to the east, as proposed in the *City of Mesa 2040*

Transportation Plan, motorists would redistribute on the roadway network and most likely equalize throughout the region. Certain regional infrastructure projects are expected as part of the city's future plans to provide for a more robust roadway network within the study area. This expanded roadway network is necessary to accommodate projected future traffic growth and regional development, including the Proposed Development (which includes the Proposed Federal Action) alternative. These include the widening and signalization of Sossaman Road/Pecos Road and the extension of SR 24 east to Ironwood Road.

The Proposed Development (which includes the Proposed Federal Action) includes TDM strategies to reduce its peak hour trip impacts on the regional street network. In addition, it would be required to contribute traffic impact fees for the completion of regional street improvements. See Section 4.10.4 below. No significant unmitigated impacts to surface streets, therefore, would occur.

Indirect Impacts. For every on-site job created by the Proposed Development (which includes the Proposed Federal Action) alternative, it is estimated that another 1.4 jobs would be created nearby due to the spending activities of on-site businesses, their suppliers, and employees (ADM Group et al. 2018). The Proposed Development (which includes the Proposed Federal Action) alternative's contribution to the gross regional product is projected to total $3.8 billion, including indirect and induced effects (ADM Group et al. 2018). **Table 4S** shows indirect employment anticipated to occur from the Proposed Development (which includes the Proposed Federal Action). The traffic related to the indirect employment has been included in the overall background traffic estimates for future buildout years.

No Action Alternative

No impacts related to employment, fiscal impacts, or traffic would result from the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

In terms of traffic, regional growth would still occur even if the Proposed Development (which includes the Proposed Federal Action) alternative is not implemented. Thus, future background growth without the Proposed Development (which includes the Proposed Federal Action) represents the No Action alternative in **Tables 4P** and **4R**.

TABLE 4S
Indirect Employment by Phase[1, 2]
SkyBridge Arizona

Phase of Occupancy	Non-Aeronautical Industrial Use	Aeronautical Industrial Use	Office/Research & Development (R&D)	Retail	Hotel	Total
Phase I	888	209	0	0		1,097
Phase II	1,201	279	0	0		1,480
Phase III	1,049	337	0	59	12	1,457
Phase IV	1,315	0	333	0		1,648
Phase V	1,055	0	333	0		1,388
Phase VI	1,101	293	0	0		1,394
Total	6,609	1,118	666	59	12	8,464

Source: ADM Group et al. 2018 (Table 2.8) (Differences in totals compared to the Concept Master Plan are due to rounding).
[1] Phases I - III would occur in the latter stages of Construction Phases 1 - 3; Phases IV - VI would occur after Construction Phase 3 is completed.
[2] Indirect multipliers: Non-Aeronautical - 1.3; Aeronautical - 1.5; Office/R&D - 1.5: Retail - 0.5; Hotel - 0.4

4.10.4 Mitigation (or Avoidance) Measures

As discussed above in Section 4.10.3, the project applicant has incorporated various TDM measures into the industrial portions of the project to reduce project-related traffic, especially trips during peak hours.

In addition, the city will require the following mitigation measure:

TR - 1: The proposed SkyBridge development shall pay the City of Mesa its required portion of applicable traffic mitigation fees.

4.11 WATER RESOURCES

FAA Order 1050.1F identifies the following subcategories of impact under the overall topic of water resources: wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers. The project study area does not contain wetlands or other jurisdictional waters, floodplains, or rivers, including designated wild and scenic rivers. Therefore, the following discussion is focused on potential surface waters and groundwater impacts.

4.11.1 Surface Waters

4.11.1.1 Methodology

Federal and state regulations and regulatory programs for evaluating water quality impacts have been reviewed. The proposed methods for handling and conveying stormwater runoff from the project are described and the change in impervious surfaces within the project study area identified.

4.11.1.2 Thresholds of Significance

Per FAA Order 1050.1F, Table 4-1, an action will have significant impacts to surface waters if it would:

- Exceed water quality standards established by federal, state, local, and tribal regulatory agencies; or
- Contaminate public drinking water supply such that public health may be adversely affected.

4.11.1.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. During and immediately after construction activities, erosion and sedimentation can cause a degradation of water quality due to stormwater runoff. A Construction General Permit is dependent on the preparation of a SWPPP that contains specific BMPs to control the discharge of pollutants, including sediment, into the local surface water drainages. Specific BMPs may include, but are not

limited to berms, silt fencing, fiber mats or rolls, mulches, slope drains, and other erosion control methods. All exposed slopes should be hydroseeded or provided with other landscape cover.

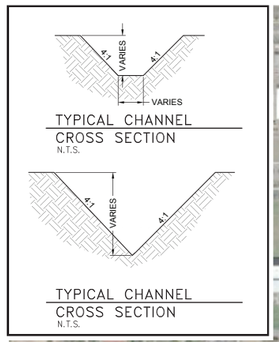
Construction of the Proposed Development (which includes the Proposed Federal Action) would disturb approximately 352.8 acres; therefore, an AZPDES General Construction permit would be required before construction activities commence. A Notice of Intent would be submitted to ADEQ, in conjunction with the preparation and implementation of a project-specific SWPPP. Contractors for the Proposed Development (which includes the Proposed Federal Action) would be required to comply with all applicable regulations and permit conditions. Proposed construction activities would also comply with the Maricopa County Stormwater Quality Management and Discharge Control Regulation to minimize or eliminate impacts from erosion and sedimentation.

Due to the AZPDES permit requirements, local stormwater regulations, and the ongoing implementation of the airport's BMPs and overall SWPPP, potential impacts of construction under the Proposed Development (which includes the Proposed Federal Action) alternative would be less than significant.

Operation Impacts. The Proposed Development (which includes the Proposed Federal Action) alternative would substantially increase the amounts of impervious surfaces and, thus, stormwater runoff from the project study area. Conceptual site plans include approximately 310 acres of impervious surfaces, such as buildings and pavement, and 40 acres of previous surfaces, such as open space or landscaping (ADM Group et al. 2018: Table 4-3). Pollutants and chemicals associated with the Proposed Development (which includes the Proposed Federal Action) alternative's activities, therefore, could run off the new taxilanes, roadways, parking lots, and other new impervious surfaces, potentially flowing into the stormwater system. These pollutants could include but are not limited to heavy metals from auto or aircraft emissions, oil, grease, debris, and air pollution residues. Landscaping fertilizers and pesticides can cause further adverse effects on water quality. Accidental spills of pollutants, such as fuel, could also occur. If left untreated, contaminated stormwater can result in the incremental degradation of water quality.

Exhibit 4E shows the proposed drainage plan for the Proposed Development (which includes the Proposed Federal Action) alternative. The drainage plan has been developed in accordance with the city and FAA's drainage design standards and would allow the existing drainage patterns to be maintained. The ultimate development of the project study area with industrial types of land uses up to 90 percent impervious has been included in the airport's drainage reports and modeling since 2010 (Dibble Engineering 2010) and the existing storm drains have been sized accordingly. A detention system, similar to the existing system, would be used to manage the runoff produced by the Proposed Development (which includes the Proposed Federal Action) alternative and the area to the east. The two existing detention basins (Detention Basin West and Detention Basin South) would be modified/reconfigured to accommodate for the site layout and the expected runoff. Similar to the existing conditions, the detention basins would be sized to not exceed the allowable peak discharges into the adjacent channels, as established in the airport's previous drainage studies.

To make the drainage system more efficient (primarily to utilize the excess capacity in Detention Basin West and reduce the peak discharge from Detention Basin South to an acceptable level), a high-capacity



LEGEND

- Project Boundary
- Detention Basin West Contributing Drainage Area
- Detention Basin South Contributing Drainage Area
- Existing Stormdrain
- Existing Channel
- Proposed Drainage Conveyance Infrasructure
- Proposed/Modified Detention Basin
- Proposed Channel/Swale
- Phase 1
- Phase 2
- Phase 3
- Onsite Flow Arrow
- Offsite Flow Arrow
- Storm Drain Arrow
- Existing/Proposed Culvert

Note:
1. The drainage infrastructure illustrated is conceptual and will be refined as the development proceeds.

RUNWAY 12R/30L
TAXIWAY 'B'
TAXIWAY 'K'
RUNWAY 12C/30C
RUNWAY 12L/30R
TAXIWAY 'V'
MIDDLE APRON
SOUTH APRON
TAXIWAY 'T'
VELOCITY WAY
TAXILANE 'L'
TAXIWAY 'A'
TAXIWAY 'P'
ELLSWORTH CHANNEL
ELLSWORTH ROAD
SOSSAMAN ROAD

DETENTION BASIN WEST TRIBUTARY AREA
218 AC.
EXISTING PEAK FLOW = 417 CFS
PROPOSED PEAK FLOW = 471 CFS

24 AC.
EXISTING PEAK FLOW = 27 CFS
PROPOSED PEAK FLOW = 27 CFS

DETENTION BASIN SOUTH TRIBUTARY AREA
677 AC.
EXISTING PEAK FLOW = 781 CFS
FUTURE PEAK FLOW = 1,384 CFS

EXISTING STORMDRAIN: 60"
EXISTING CULVERT: 2-54" INV=1336.61
$Q_{EXISTING}$=179 CFS
$Q_{PROPOSED}$=288 CFS
$Q_{CAPACITY}$=350 CFS
DETENTION BASIN WEST
PROPOSED STORMDRAIN: 3-48"
$Q_{EXISTING}$=425 CFS
$Q_{PROPOSED}$=325 CFS
$Q_{CAPACITY}$=326 CFS
EXISTING CULVERT (TO BE MODIFIED): 6-36" INV=1343.64
DETENTION BASIN SOUTH
Q_{100}=228 CFS
PROPOSED SOUTHERN CHANNEL

$Q_{EXISTING}$: THE CURRENT 100-YEAR PEAK DISCHARGE FROM THE DETENTION BASINS BASED ON THE EXISTING CONDITIONS (HW).
$Q_{PROPOSED}$: THE **PROPOSED** 100-YEAR PEAK DISCHARGED FROM THE DETENTION BASIN BASED ON FUTURE CONDITIONS (HW).
$Q_{CAPACITY}$: THE **CAPACITY** OF THE SOSSAMAN ROAD CULVERTS & DOWNSTREAM CHANNEL SYSTEM (WILLIAMS GATEWAY AIRPORT MASTER DRAINAGE STUDY", GILBERSON ASSOCIATES, 2001).

N
0
800
SCALE IN FEET

Source: ADM Group et al. 2018

DETENTION BASIN SOUTH

	Existing	Proposed
Top (ft):	1348	1348
Bottom(ft):	1344	1340
Depth (ft):	4	8
Area (ac):	8.4	8.4
Volume (ac-ft):	27.7	55.5

DETENTION BASIN WEST

	Existing	Proposed
Top (ft):	1346	1346
Bottom(ft):	1337	1337
Depth (ft):	9	9
Area (ac):	9	9
Volume (ac-ft):	55.4	55.4

NOTE: Actual dimensions are shown under each scenario, indicating that there are no changes in several of the dimensions between the "Existing" and "Proposed" scenarios.

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storm drain system, which has been preliminarily sized as 3- to 48-inch pipes, would connect the two detention basins. Under proposed conditions, the runoff discharged into Detention Basin South would be directed and dewatered through Detention Basin West during regular storm events. Routing through both basins would provide additional storage time thereby further attenuating flows. During major storm events (i.e., 100-year design storm event), a portion of the runoff discharged into Detention Basin South would continue to be directed to Detention Basin West. Collectively, the two detentions basins would provide a volume of approximately 111 acre-feet. The proposed detention system would dewater from full in less than 36 hours, which meets FAA standards.

Based on the results of the preliminary proposed conditions modeling, the peak flow discharged into the northern channel would be approximately 288 cubic feet per second (cfs) and the peak flow discharged into the southern channel would be approximately 325 cfs. These flow rates are lower than the 350 cfs and 326 cfs capacities established for each outfall, respectively.

The existing and proposed drainage system is not connected to a public drinking water supply, and no significant impacts to surface water quality would occur because of the Proposed Development (which includes the Proposed Federal Action) alternative. The airport's SWPPP would be updated to include the newly developed areas.

Indirect Impacts. As discussed above under Operation Impacts, no indirect impacts related to off-site surface water quality and runoff would occur. The Proposed Development (which includes the Proposed Federal Action) alternative's anticipated flow rates would be lower than the 350 cfs and 326 cfs capacities established for the existing off-site outfalls.

No Action Alternative

No impacts related to surface water quantities or quality at the airport would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.11.1.4 Mitigation (or Avoidance) Measures

WQ-1: To minimize temporary water quality impacts, BMPs shall be employed by the contractor and could include temporary measures to control water pollution, soil erosion, and siltation through berms, fiber mats, gravels, mulches, slope drains, and other erosion control methods. In addition to BMPs to minimize adverse effects during construction, the contractor shall prepare a SWPPP for all construction actions involving one or more acres of ground disturbance in compliance with the *Clean Water Act*.

WQ-2: To address operation water quality impacts, the airport's overall SWPPP shall be updated to incorporate the new impervious surfaces constructed due to the Proposed Development (which includes the Proposed Federal Action) alternative. New operators shall obtain their own MSGPs, which include their own SWPPP.

4.11.2 Groundwater

4.11.2.1 Methodology

Federal and state regulations and regulatory programs for evaluating groundwater quality impacts have been reviewed. The proposed methods for handling and conveying stormwater runoff from the project are described and any change in amount of groundwater recharge within the project study area identified.

4.11.2.2 Thresholds of Significance

Per FAA Order 1050.1F, Table 4-1, an action will have significant impacts to groundwater if it would:

- Exceed groundwater quality standards established by federal, state, local, and tribal regulatory agencies; or
- Contaminate an aquifer used for public water supply such that public health may be adversely affected.

4.11.2.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Construction Impacts. The groundwater table underlying the project study area is at an approximate depth of 140 feet below ground surface (bgs). At this depth, groundwater would not be encountered during construction.

In terms of groundwater quality, construction activities due to the Proposed Development (which includes the Proposed Federal Action) alternative would not substantially contribute to, or adversely affect, groundwater recharge. There are only two areas within the project study area where surface water is retained. FAA AC 150/5200-33B states that stormwater detention ponds should be designed, engineered, constructed, and maintained for a maximum 48-hour detention period after the design storm and remain completely dry between storms. Therefore, the project study area does not serve as an effective groundwater recharge area and no impacts to groundwater quality would occur due to construction activities.

Operation Impacts. Operation of the Proposed Project alternative would not require the use of groundwater resources nor would it affect the underlying groundwater table. In terms of impacts to groundwater quality and/or recharge during operation of the Proposed Development (which includes the Proposed Federal Action) alternative, the increase in impervious surface would not substantially contribute to, or adversely affect, groundwater recharge and subsequent groundwater quality. As previously noted, the project study area does not serve as an effective groundwater recharge area; the proposed detention system would dewater from full in less than 36 hours. No impacts to groundwater quality would occur

in the long term because of the Proposed Development (which includes the Proposed Federal Action) alternative.

Indirect Impacts.

No Action Alternative

No impacts related to groundwater quality would occur due to the No Action alternative. No changes to the existing airport environment and operating procedures would occur.

4.11.2.4 Mitigation (or Avoidance) Measures

None are necessary.

4.12 CUMULATIVE IMPACTS

4.12.1 Methodology

Cumulative impacts are evaluated on the following time horizons: past actions, present actions, and reasonably foreseeable future actions. Past actions are those known to have occurred within the five years immediately prior to the year of project implementation. Present actions are those projects which are ongoing and would continue during the implementation of the Proposed Development (which includes the Proposed Federal Action). Reasonably foreseeable future actions are those that have: 1) received local approval for implementation, such as a building permit, and are expected to occur within the five years immediately after project implementation; or 2) are programmed into the five-year airport capital improvement program (ACIP). Projects without a building permit, such as those outlined within a community's general plan or specific plan, are not considered reasonably foreseeable as part of this analysis.

Cumulative impact analysis considers connected actions (i.e., similar actions or projects having a common geography or timing) together with impacts related to the proposed airport project. Section 3.16 lists the projects and spatial boundaries considered under the cumulative analysis of this EA. For this analysis, past, present, and reasonably foreseeable future actions were selected based on several criteria: projects within the airport boundaries that could contribute to physical changes and, thus, incremental disturbance of the airport environment; off-airport projects within the surrounding area that could contribute to incremental impacts; and regional growth that could contribute to incremental traffic impacts.

4.12.2 Thresholds of Significance

Specific thresholds for cumulative impacts are not established in FAA Order 1050.1F as the significance threshold varies according to the affected resources. In evaluating cumulative impacts, the impact of the Proposed Development (which includes the Proposed Federal Action) alternative has been added to the impacts of other past, present, and reasonably foreseeable future actions to determine if the significant impact threshold would be exceeded as a result of incremental impacts.

4.12.3 Comparison of the Proposed Development (which includes the Proposed Federal Action) and the No Action Alternatives

Proposed Development (which includes the Proposed Federal Action) Alternative

Air Quality and Climate (Greenhouse Gases). The Proposed Development (which includes the Proposed Federal Action), in conjunction with other past, present, and reasonably foreseeable future actions, would generate emissions of O_3, and PM_{10}, which would contribute to the nonattainment status of the county for these criteria pollutants, as well as GHGs. These emissions can occur both during the construction, as well as the operation (for those projects that generate vehicular traffic), of other projects. All actions would be, or have been, evaluated against the county's thresholds and permitting procedures. Airport project emissions would continue to be evaluated by FAA as part of its CAA conformity requirements. Implementation of the following measures are required to satisfy the county and state requirements to avoid fugitive dust:

- Implement dust abatement techniques (e.g., water application) on unpaved or unvegetated surfaces to minimize airborne dust during construction;
- Revegetate disturbed areas as soon as possible after disturbance; and
- Cover construction materials and stockpiled soils if they are a source of fugitive dust.

No air quality thresholds of significance are anticipated to be exceeded due to incremental impacts from the Proposed Development (which includes the Proposed Federal Action) alternative in conjunction with past, present, and reasonably foreseeable future actions due to the permitting requirements and state and county regulations already in place. Countywide trip reduction procedures would also reduce GHG emissions. No further mitigation is necessary.

Biological Resources (Migratory Birds). Cumulative impacts to migratory birds could occur due to past, present, and reasonably foreseeable future actions occurring on or off the airport. However, these incremental impacts, in conjunction with the Proposed Development (which includes the Proposed Federal Action) alternative, would be less than significant. Under the MBTA, preconstruction nesting bird surveys or other protective measures are required prior to development, as necessary, to avoid the nesting season and migratory bird nests.

Hazardous Materials, Solid Waste, and Pollution Prevention. The cumulative impact area for hazardous materials, solid waste, and pollution prevention is the airport and the location of the off-airport projects on the cumulative list. Hazardous and solid wastes would be generated by the Proposed Development (which includes the Proposed Federal Action) alternative, as well as by other past, present, and reasonably foreseeable future actions during the construction phase. The federal, state, and local governments have established policies and programs that require the proper disposal and handling of hazardous materials and waste products. Due to mandatory compliance with existing programs and regulations, incremental impacts related to hazardous materials, solid waste, and pollution prevention occurring due to cumulative projects in conjunction with the Proposed Development (which includes the Proposed

Federal Action) alternative would not occur. All future cumulative projects would be required by ADEQ to comply with the conditions of all applicable permit(s).

Natural Resources and Energy Supply. Past, present, and reasonably foreseeable future actions would result in incremental demand for natural resources and energy. The city encourages the use of water and energy conservation through its Low Impact Development (LID) Toolkit (see Water Resources below), energy efficient building methods, and enforcement of the 2009 Energy Conservation Code. Due to the incorporation of water and energy conservation measures into the Proposed Development (which includes the Proposed Federal Action) and other past, present, and reasonably foreseeable future actions, no significant incremental impacts related to Natural Resources and Energy Supply would occur.

Noise and Compatible Land Use. Construction noise from on- and off-airport past, present, and reasonably foreseeable future actions, in conjunction with the Proposed Development (which includes the Proposed Federal Action) alternative, would contribute incrementally to noise levels within the cumulative study area. However, all off-airport cumulative project construction activities would be required to comply with the city's Noise Ordinance (Title 6, Chapter 12, Offensive, Excessive, and Prohibited Noises), as identified below. This would ensure that incremental construction noise impacts from off-airport past, present, and reasonably foreseeable future actions do not occur. There are no noise-sensitive land uses close enough to the airport to be adversely affected by construction noise from other on-airport past, present, and reasonably foreseeable future actions projects.

1. Schedule for construction activities producing exterior noise in a residential zone or within 500 feet of a residential zone.

   Normal Construction Days and Times not requiring a permit in the months of October through April (aka winter hours):

   a) Days of week Monday through Saturday.
   b) Start time for all construction activities is 6:00 AM.
   c) End time for all construction activities is 8:00 PM.

2. All construction activity not in or near a residential zone is allowed 24 hours a day – seven days a week without a permit.

3. Normal Construction Days and Times not requiring a permit in the months of May through September (aka summer hours):

   a) Days of the week Monday through Saturday.
   b) Start time for Concrete placement and installation of roof coverings is 4:00 AM.
   c) Start time for all other construction activities is 5:00 AM.
   d) End time for all construction activities is 8:00 PM.

4. Construction projects needing to work other than the days and times specified above would need an after-hours work permit approved by the city's Building Official.

None of the past, present, and reasonably foreseeable future actions identified in Section 3.15 would contribute to an increase in the airport's DNL noise contours beyond what is already included in the airport's projected overall growth in airport operations. Anticipated airport's future growth (based on FAA's Terminal Area Forecast) have been included in the future noise contours shown in **Exhibits 4A** through **4D** (Section 4.9.3).

Socioeconomics (Induced Growth, Changes to Community Tax Base, and Traffic). As previously discussed in Section 4.10.1, regional growth in the area has been occurring at approximately three percent per year. The Arizona Department of Transportation (ADOT), as well as MAG, the county, and the city have planned community services and regional transportation improvements to handle this future growth. The proposed project, as well as other past, present, and reasonably foreseeable future actions, would be required to contribute developer impact fees to ensure that such growth is accommodated.

Water Resources (Surface Waters and Groundwater). The proposed project, as well as other past, present, and reasonably foreseeable future actions, would manage their stormwater runoff in accordance with required AZPDES permits and other state and local stormwater regulations. In addition, the city has developed and adopted a LID Toolkit which may be included in future cumulative development. The implementation of LID offers a sustainable approach that supplements, and sometimes reduces the need for, traditional methods for stormwater management. No significant impacts to surface water as a result of incremental impacts of the Proposed Development (which includes the Proposed Federal Action) in conjunction with other past, present, and reasonably foreseeable future actions would occur.

The project study area is not a significant groundwater recharge area and other cumulative projects are primarily airport maintenance or in-fill development. Thus, no significant cumulative impacts to groundwater would occur.

No Action Alternative

No cumulative impacts would occur with the No Action alternative, in conjunction with other past, present, and reasonably foreseeable future actions, since this alternative would not result in any physical change at the airport.

SkyBridge Arizona

Chapter Five

COORDINATION AND PUBLIC INVOLVEMENT

Chapter Five
COORDINATION AND PUBLIC INVOLVEMENT

5.1 AGENCY AND PUBLIC SCOPING PROCESS

At the onset of this Environmental Assessment (EA), letters were sent to resource agencies and local jurisdictions seeking input regarding potential environmental resources which could be impacted by the Proposed Development (which includes the Proposed Federal Action). A list of the agencies contacted, a copy of the information sent, and the responses received are included in this EA in **Appendix A**.

Responses to the scoping materials were received from the following agencies:

- United States (U.S.) Forest Service, Tonto National Forest, Phoenix Interagency Fire Center, dated December 18, 2018 - Stated a concern regarding how an increase in commercial air traffic would affect their emergency operations. Asked for future discussions regarding how the U.S. Forest Service's on-airport operations would be managed in connection with the Proposed Development (which includes the Proposed Federal Action).

- U.S. Department of Transportation, Federal Highway Administration, dated December 18, 2018 - Stated that they have no data to provide and no comments on the development at this time. Asked that they and the Arizona Department of Transportation Project Manager for the North South Corridor Study be kept informed as the Proposed Development (which includes the Proposed Federal Action) progresses.

- Arizona Game and Fish Department, dated January 9, 2019 - Stated that western burrowing owl (*Athene cunicularia hypugaea*) has been recorded in the vicinity of the project and recommended that surveys for nesting birds and western burrowing owl be conducted if suitable habitat is present within or adjacent to the project area. Identified requirements of the *Arizona Native Plant Law*.

- Flood Control District of Maricopa County, Planning and Project Management Division, dated December 18, 2018 - Stated they had no comments or concerns.

- Maricopa County Department of Transportation, Environmental Program Branch Manager, dated January 2, 2019 - Stated they had no comments or concerns. Mentioned that they had encountered western burrowing owls on a neighboring project.

- City of Phoenix Aviation Department, Planning and Environmental, dated December 11, 2018 - Provided future contacts and procedures for communication with the City of Phoenix Aviation

Department. Asked specific questions related to project-related traffic improvements, types and frequency of project-related aircraft operations and associated environmental effects, storm-water detention and associated wildlife hazard management, the land use balance proposed between aeronautical and non-aeronautical uses on the project site, and the age of an existing on-airport structure. (NOTE: Subsequent to receipt of this comment letter, the airport contacted the author of the comment letter to provide the requested information.)

- Town of Queen Creek, Arizona, dated December 19, 2018 - Stated they had no concerns.

5.2 DRAFT ENVIRONMENTAL ASSESSMENT'S AVAILABILITY FOR REVIEW

All organizations and interested parties previously contacted during the EA's scoping process or that submitted comments on the EA scope were sent notice of the availability of a Draft EA for review. A link to download the Draft EA was also given. Any agencies requesting a hard copy of the report or the report on compact disc or USB drive were provided these items as well.

A Notice of Availability (NOA) was published in *The East Valley Tribune* on January 26, 2020. The Draft EA was available for review by the general public and interested parties for 30 days at: http://www.gatewayairport.com, and at the following physical locations:

Federal Aviation Administration (FAA) Phoenix Airports District Office	3800 North Central Avenue, Suite 1025, 10th Floor Phoenix, AZ 85012
Phoenix-Mesa Gateway Airport Authority	5835 South Sossaman Road Mesa, AZ 85212-0919
Mesa Main Library	64 East 1st Street Mesa, AZ 85201
Southeast Regional Library	775 North Greenfield Road Gilbert, AZ 85234
Queen Creek Library	21802 South Ellsworth Road Queen Creek, AZ 85142

Anyone wishing to comment on the Draft EA could submit written comments by letter or email to the following physical or email addresses:

Mr. Carl D'Acosta, Environmental and Safety Coordinator
Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, AZ 85212-0919
cdacosta@gatewayairport.com

The cutoff date for comment submission was not later than **5:00 PM – Mountain Standard Time, February 25, 2020**.

All agency and/or public comment letters received during the official comment period are included in the Final EA (**Appendix F**). No substantive comments were received. Based on the content of the EA and the comments received, the FAA will issue a *National Environmental Policy Act* (NEPA) finding. The Final EA and FAA's finding will be available to the public and all who commented on the EA.

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Chapter Six

LIST OF PREPARERS

Chapter Six
LIST OF PREPARERS

Persons responsible for preparation of this Environmental Assessment (EA) document and significant supporting background analysis and materials are listed below.

NAME	EXPERTISE	PROFESSIONAL EXPERIENCE
FEDERAL AVIATION ADMINISTRATION (FAA) REVIEWER		
Jean Wolfers-Lawrence	Environmental Protection Specialist	Master of Environmental Management and Sustainability (M.S.), Natural Resources Management; Bachelor of Science (B.S.), Biology. Senior *National Environmental Policy Act* (NEPA) practitioner within FAA's Office of Airports Planning and Programming Division. Responsible for implementing NEPA on behalf of FAA.
AIRPORT REVIEWER		
Carl D'Acosta	Environmental & Safety Coordinator, Phoenix-Mesa Gateway Airport Authority	Master of Science (M.S.), Leadership: Disaster Preparedness and Crisis Management; B.S., Biology. Responsible for Environmental Health and Occupational Safety compliance and permitting programs. Manages airport project compliance with the NEPA.
EA PREPARERS		
Coffman Associates		
James Harris	Airport Master Planning; Environmental Analysis; and Airport Management	B.S., Civil Engineering. Responsible for master planning, noise and land use compatibility planning, and environmental documentation for airports. Extensive experience throughout the western U.S..
Judi Krauss, AICP	Land Use Planning; Environmental Analysis/Documentation; Socioeconomics	M.A., Economics; B.A., Environmental Studies. Transportation and land use planning, socioeconomic studies, and environmental analysis/documentation. Manages complex, multi-disciplined, environmental studies under the NEPA.
Kory Lewis	Noise Modeling and Assessment; Land Use Planning; Environmental Analysis/Documentation; Air Quality and Greenhouse Gas Emission Analysis	Master of Urban Planning; B.A., Geography. Experienced in land use management, air quality and noise assessment, preparation of environmental documentation for airport projects, and air quality, noise, and visual impact computer modeling.
SWCA Environmental Consultants		
Jerome Hesse	Project Manager/Tucson Cultural Resources Program Lead	B.S./M.S. Geology. 20+ years of experience as an archaeologist. Has authored and contributed to numerous cultural resources survey and excavation reports, developed archaeological research designs for prehistoric and historical archaeological projects, and contributed to NEPA documents.
Eleanor Gladding	Senior Biologist/Project Manager	M.S., Biology. 20+ years of biological experience and 15 years of environmental consulting experience, including 10 years of experience doing environmental resource work for airport projects. Typical projects include biological evaluations; threatened and endangered species surveys; mitigation monitoring; and noxious weed surveys.

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Chapter Seven

LIST OF ACRONYMS AND ABBREVIATIONS

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LIST OF ACRONYMS AND ABBREVIATIONS

AAC - Aircraft Approach Category
AC - Advisory Circular
ACHP - Advisory Council on Historic Preservation
ACIP - airport capital improvement program
ACM - asbestos-containing material
ACRP - Airport Cooperative Research Program
ACS - American Community Survey
ADEQ - Arizona Department of Environmental Quality
ADG - Airplane Design Group
ADOT - Arizona Department of Transportation
ADT - average daily traffic (or trips)
ADWR - Arizona Department of Water Resources
AEDT - Aviation Environmental Design Tool
AFB - Air Force Base
AFBCA - Air Force Base Conversion Agency
AFFF - aqueous film forming foam
AFRL - Air Force Research Laboratory
AGFD - Arizona Game and Fish Department
AIP - Airport Improvement Program
aka - also known as
ALP - airport layout plan
AMA - Active Management Area
AMP - Airport Master Plan
AOA - Air Operations Area
APE - Area of Potential Effect
AQ - Air Quality
ARC - Airport Reference Code
ARFF - aircraft rescue and firefighting
A.R.S. - Arizona Revised Statutes
ASTM - American Society for Testing and Materials
ASU - Arizona State University
ATADS - Air Traffic Activity System
AVGAS - aviation gas
AZHGIS - Arizona Heritage Geographic Information System
AZPDES - Arizona Pollutant Discharge Elimination System

bgs - below ground surface
BGEPA - *Bald and Golden Eagle Protection Act*
BIO - Biological Resources
BMP - best management practice

CAA - *Clean Air Act*
CEQ - President's Council on Environmental Quality
CERCLA - *Comprehensive Environmental Response, Compensation, Liability Act*
CFR - Code of Federal Regulations
CH_4 - methane
cfs - cubic feet per second
city - City of Mesa
CO - carbon dioxide
CO_2 - carbon dioxide
CO_2e - carbon dioxide equivalent
county - Maricopa County
CPP - Clean Power Program
CUL - Cultural Resources
CWA - *Clean Water Act*
cy - cubic yard(s)

dB - decibel(s)
dBA - A-weighted decibel(s)
DEUR - Declarations of Environmental Use Restrictions
DNL - day-night average sound level
DOD - Department of Defense
DOT - Department of Transportation

E. - East
EA - Environmental Assessment
EB - eastbound
EBS - Environmental Baseline Survey
E.O. - Executive Order
EPA - Environmental Protection Agency
ESA - *Endangered Species Act*
EV - electric vehicle

FAA - Federal Aviation Administration
FCDMC - Flood Control District of Maricopa County
FHWA - Federal Highway Administration
FONSI - Finding of No Significant Impact
FOST - Finding of Suitable Transfer
FR - Federal Register
FTZ - Foreign Trade Zone
FYR - Five-Year Review

GHG - greenhouse gas
gpd - gallons per day
GWP - global warming potential

HAZ - Hazardous Materials
HCM - *Highway Capacity Manual*
HFC - hydrofluorocarbon

ICC - International Code Council
ICE - Immigration and Customs Enforcement
IPAC - Information for Planning and Consultation
IPCC - International Panel on Climate Change
IRP - Installation Restoration Program
ITE - Institute of Transportation Engineers
IWA - Phoenix-Mesa Gateway Airport

kg - kilogram
kV - kilovolt

L - liter
LBP - lead-based paint
lf - linear feet (foot)
LI - Light Industrial
LID - low impact development
LOS - level of service
LUST - leaking underground storage tank

MAG - Maricopa Association of Governments
MBTA - *Migratory Bird Treaty Act*
mg - milligram
MOVES14B - Motor Vehicle Emissions Simulator model
mph - miles per hour
MSGP - Multi-Sector General Permit
msl - mean sea level
MW - megawatt
MWh - megawatt hour(s)

NA - not applicable
NAAQS - National Ambient Air Quality Standards
NB - northbound
NCA4 - Fourth U.S. National Climate Assessment
NCHRP - National Cooperative Highway Research Program
NEPA - *National Environmental Policy Act*
NESHAP - National Emission Standards for Hazardous Air Pollutants

NHPA - *National Historic Preservation Act*
NO_2 - nitrogen dioxide
NOx - oxides of nitrogen
N_2O - nitrous oxide
NOA - Notice of Availability
NPDES - National Pollutant Discharge Elimination System
NPIAS - *National Plan of Integrated Airport Systems*
NPL - National Priorities List
NRHP - National Register of Historic Places
NRI - National River Inventory

O_3 - ozone
OE/AAA - Obstruction Evaluation/Airport Airspace Analysis
OU - Operable Unit

p. - page
P2 - Pollution Prevention program (State of Arizona)
Part 150 - 14 CFR 150, *Airport Noise Compatibility Planning*
PA/SI - preliminary assessment/site investigation
Pb - lead
PBR - performance-based contractor
PCB - polychlorinated biphenyl
PCE - tetrachloroethylene
PFC -perfluorocarbon or perfluorinated compounds
PFOA - perfluoroctonic acid
PFOS - perfluorooctane sulfonate
P.L. - Public Law
$PM_{2.5}$ - “Fine” particulate matter with an aerodynamic diameter of 2.5 microns or less
PM_{10} - “Inhalable coarse” particulate matter with an aerodynamic diameter of 10 microns or less
PMGAA - Phoenix-Mesa Gateway Airport Authority
pp. - pages
psi - pounds per square inch

RACR - Removal Action Completion Report
RCRA - *Resource Conservation Recovery Act*
R&D - research and development
REC - recognized environmental condition
RI - remedial investigation
ROD - Record of Decision
RWCD - Roosevelt Water Conservation District

S. - South
SB - southbound
SDV - South Desert Village

SDWA - *Safe Drinking Water Act*
sf - square feet (foot)
SF_6 - sulfur hexafluoride
SHPO - State Historic Preservation Office
SIP - State Implementation Plan
SO_2 - sulfur dioxide
SPCC - spill prevention, control, and countermeasure
SR - State Route
state - State of Arizona
SVE - soil vapor extraction
SWCA - SWCA Environmental, Inc.
SWPPP - stormwater pollution prevention program

TAF - Terminal Area Forecast
TCE - trichloroethylene
TDM - transportation demand management
TEE - Thermal Enhanced Extraction
TIA - traffic impact analysis
TR - Traffic
TRB - Transportation Research Board
TSF - thousand square feet
TTF - temporary treatment facility

UPRR - Union Pacific Railroad
U.S. - United States
USAF - United States Air Force
USC - United States Code
USFWS - United States Fish and Wildlife Service
USGCRP - United States Global Change Research Program
UST - underground storage tank

VEMUR - voluntary environmental mitigation and use restriction
VOC - volatile organic compound
vph - vehicles per hour

WB - westbound
WQ - Water Quality
WQARF - Water Quality Assurance Revolving Fund

µg - microgram

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Chapter Eight

REFERENCES

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REFERENCES

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SKYBRIDGE ARIZONA

Appendix A

AGENCY COORDINATION AND SCOPING PROCESS

APPENIDIX A
PHOENIX MESA GATEWAY AIRPORT
AGENCY CONTACT LIST

The following agencies were provided a scoping packet containing information on the Environmental Assessment (EA for the proposed Skybridge project and soliciting input regarding the Proposed Action. The scoping packet and all responses received are included within this appendix.

FEDERAL

Ms. Cheryl Lambert, State Environmental Coordinator
United States (U.S.) Department of Agriculture - Natural Resources Conservation Service
230 N. First Avenue, Suite 509
Phoenix, AZ 85003

Mr. Alan Hansen, Team Leader
U.S. Department of Transportation Federal Highway Administration - Arizona Division - Planning, Environmental, Air Quality, Realty, and Civil Rights (PEARC) Team
4000 N. Central Avenue, Suite 1500
Phoenix, AZ 85012

Mr. Matthew Huse, Forest Aviation Officer
U.S. Forest Service
6335 S. Downwind Circle
Mesa, AZ 85212

STATE

Mr. Timothy Franquist, Director
Arizona Department of Environmental Quality (ADEQ) - Air Quality Division
1110 W. Washington St.
Phoenix, AZ 85007

Ms. Laura Malone, Director
ADEQ Waste Programs Division
1110 W. Washington St.
Phoenix, AZ 85007

Mr. Trevor Baggiore, Deputy Director
ADEQ Water Quality Division
1110 W. Washington St.
Phoenix, AZ 85007

Mr. Don Kriz, P.E., Acting Aeronautics Group Manager/State Engineer
Arizona Department of Transportation
1801 W. Jefferson St., Mail Drop 426M
Phoenix, AZ 85007

Mr. Thomas Buschatzke, Director
Arizona Department of Water Resources
3550 N. Central Ave., 2nd Fl.
Phoenix, AZ 85012

Ms. Cheri Boucher, Project Evaluation Program (PEP) Specialist
Arizona Game and Fish Department - WMHB-PEP
5000 W. Carefree Hwy
Phoenix, AZ 85086-5000

Ms. Lisa Atkins, Commissioner
Arizona State Land Department
1616 W. Adams
Phoenix, AZ 85007

Ms. Latonja West, Real Estate Manager
Arizona State University (ASU) - University Real Estate Development
ASU Tempe Campus, Mail Code 3908
Tempe, AZ 85281

REGIONAL/LOCAL

Mr. Bryant Powell, City Manager
Apache Junction
300 E. Superstition Blvd.
Apache Junction, AZ 85119

Mr. Chris Brady, City Manager
City of Mesa
50 E. Civic Center Drive
Gilbert, AZ 85296

Mr. Jim Bennett, Aviation Director
City of Phoenix
3400 E. Sky Harbor Blvd., Suite 3300
Phoenix, AZ 85003

Mr. Eric Anderson, Executive Director
Maricopa Association of Governments
302 N. 1st Ave., Suite 300
Phoenix, AZ 85003

Mr. Tim Strow, Transportation Policy and Planning Director
Maricopa Association of Governments
302 N. 1st Ave., Suite 200
Phoenix, AZ 85003

Mr. Alfred Erives, Division Manager
Maricopa County Department of Transportation (MCDOT)
2901 W. Durango
Phoenix, AZ 85009

Mr. Scott Vogel, Chief Engineer & General Manager
Maricopa County Flood Control District
2801 W. Durango St.
Phoenix, AZ 85009

Ms. Jennifer Pokorski, Director
Maricopa County - Planning & Development Department
501 N. 44th St., Suite 200
Phoenix, AZ 85008

Mr. Leo Lew, Assistant County Manager
Pinal County Development Services
PO Box 827
Florence, AZ 85132

Mr. Patrick Banger, Town Manager
Town of Gilbert
50 E. Civic Center Dr.
Gilbert, AZ 85296

Mr. John Kross, Town Manager
Town of Queen Creek
22350 S. Ellsworth Road
Queen Creek, AZ 85242

PHOENIX-MESA GATEWAY AIRPORT AUTHORITY
5835 SOUTH SOSSAMAN ROAD
MESA, ARIZONA 85212-6014
PHONE (480) 988 7600
FAX (480) 988 2315

December 3, 2018

Ms. Cheryl Lambert, State Environmental Coordinator
United States (U.S.) Department of Agriculture –
Natural Resources Conservation Service
230 N. First Avenue, Suite 509
Phoenix, AZ 85003

RE: Request for Resource Information and Comments
Proposed SkyBridge Arizona Business Park Environmental Assessment
Phoenix-Mesa Gateway Airport, Maricopa County, Mesa, Arizona

Dear Ms. Lambert:

The Phoenix-Mesa Gateway Airport Authority (PMGAA), in cooperation with the Federal Aviation Administration (FAA), is initiating the preparation of an Environmental Assessment (EA) on the development of approximately 352.8 acres of undeveloped land located in the southwestern part of the airport property. The Airport is in Mesa, Arizona as shown on **Exhibit 1A**. The EA document will be prepared pursuant to the requirements of FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures,* FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions,* and other laws relating to the quality of the natural and human environments.

The Proposed Action, known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility and air cargo hub and consists of both aeronautical and non-aeronautical land uses. The proposed site layout is shown in **Exhibit 1B**. Anticipated businesses include air cargo, aerospace and auto parts, food processing (dry goods and refrigerated products), e-commerce, office/research and development (R&D), retail, and hotels. The Proposed Action consists of the following project elements (**Exhibit 1C**):

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;

- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas;

- Construct nine hangars (approximately 1.33 million square feet [sf] of hangar space); and

- Construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of R&D and 70,000 sf of hotel and retail development.

- Connected actions would include the import of fill material to provide the necessary site elevations for development and site drainage; the construction of four onsite detention basins; the construction of onsite roads and vehicular parking; the extension of utility infrastructure; and the implementation of security checkpoints and installation of security fencing.

The FAA is the Lead Agency for the project under the *National Environmental Policy Act* (NEPA). The Proposed Action requires FAA approval of a change to the Airport Layout Plan (ALP) to depict the proposed development, which constitutes a federal action.

As part of the public and agency coordination for this EA, the PMGAA and the FAA are respectfully seeking your comments and identification of any specific areas of concern related to this Proposed Action. We appreciate your assistance and request that your comments are returned within 30 days or at your earliest convenience.

Please send any written comments to my attention at the following mailing or email address:

Mailing Address: Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, AZ 85212-0919
Attn. Carl D'Acosta, Environmental and Safety Coordinator

Email Address: cdacosta@gatewayairport.com

If you would like additional information on this project, or would like to speak with me directly, please do not hesitate to contact me at 480-988-7612 or by email at cdacosta@gatewayairport.com. Your prompt response is appreciated so that the project may proceed as scheduled. Thank you for your consideration of this request.

Sincerely,

Carl D'Acosta
Environmental and Safety Coordinator

CC: Dee Phan, Environmental Protection Specialist, FAA, Phoenix Airports District Office

Attachments: Exhibit 1A, Project Location Map
Exhibit 1B, Proposed Site Layout
Exhibit 1C, Proposed Land Use

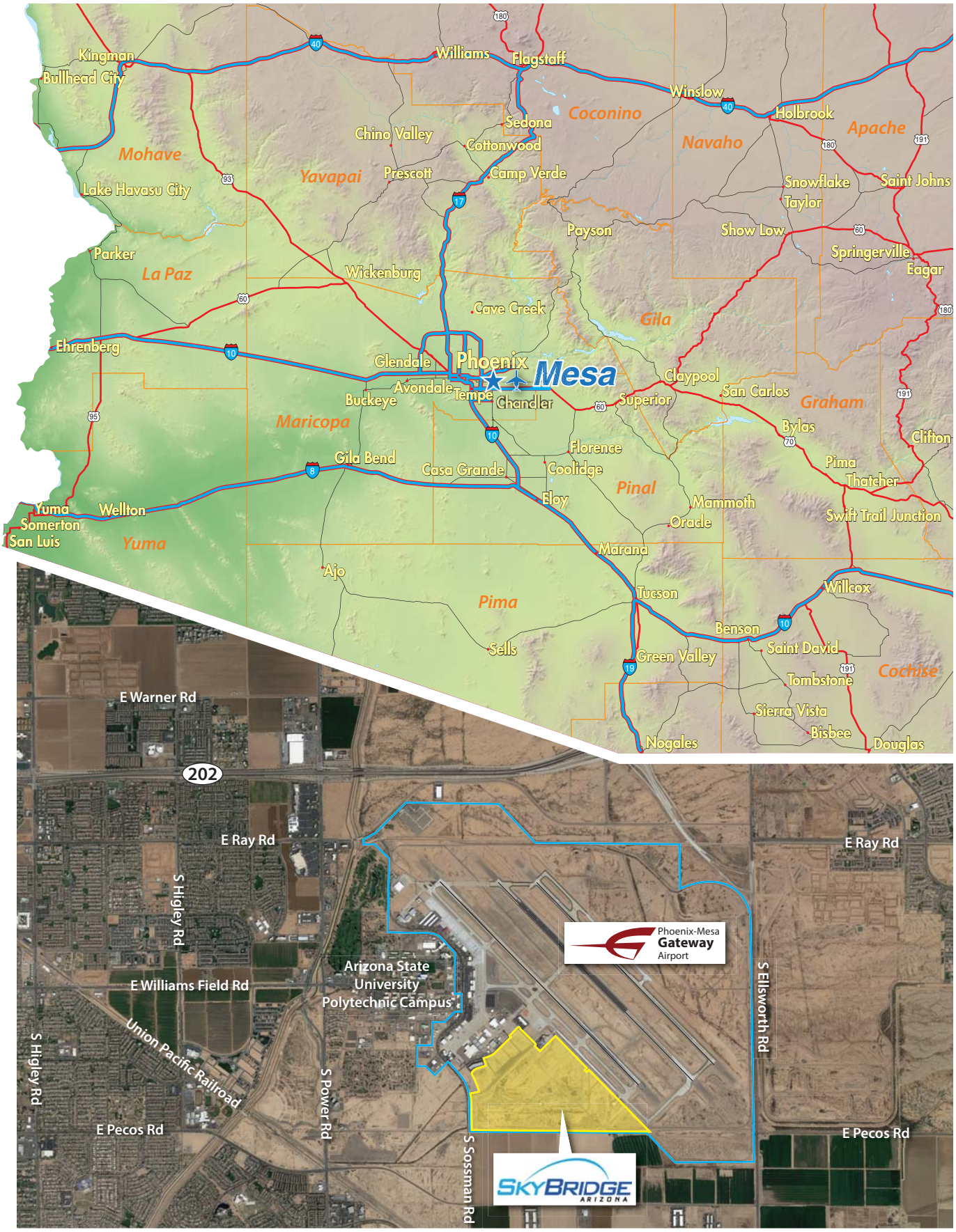

Exhibit 1A
PROJECT LOCATION MAP

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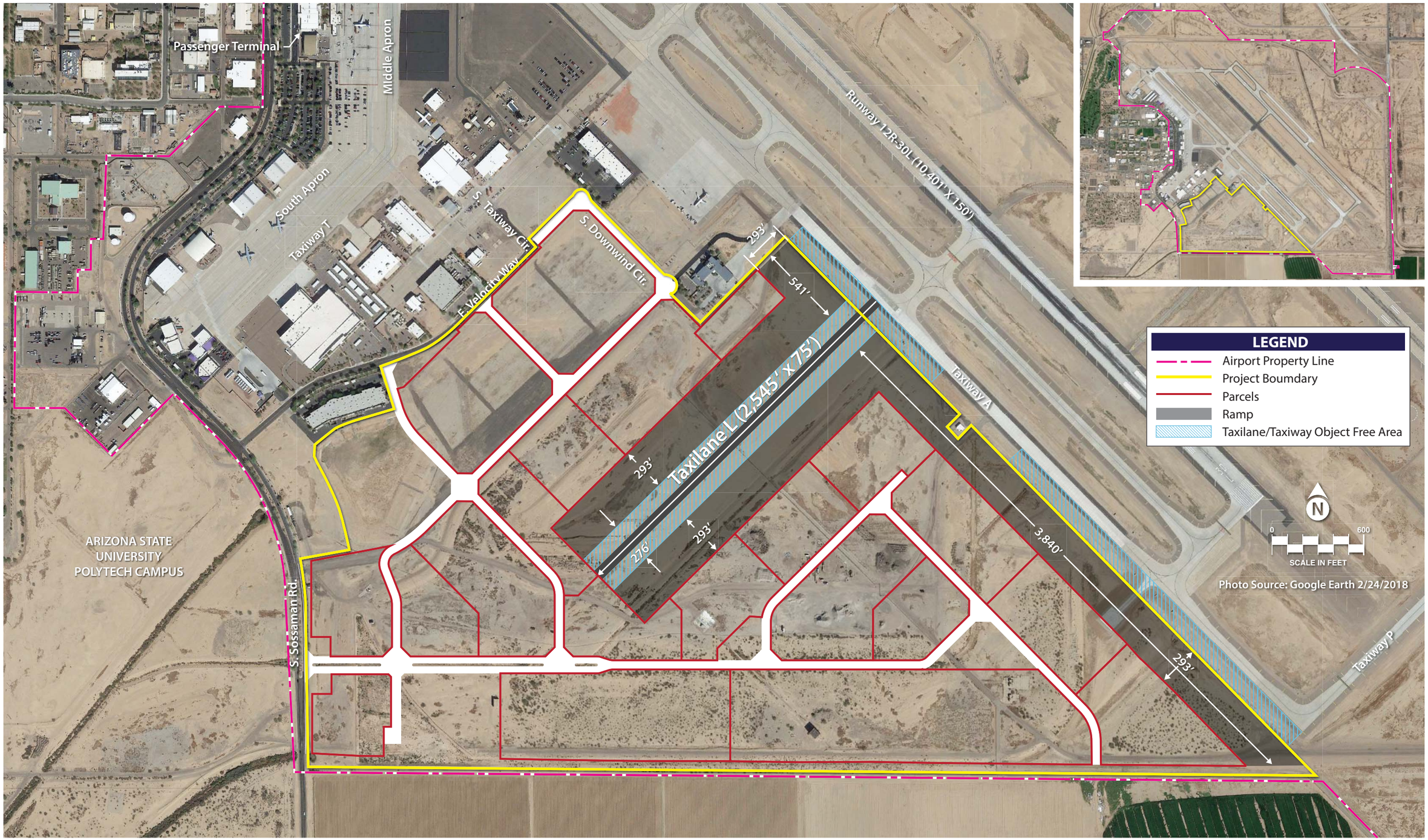


Exhibit 1B
PROPOSED SITE LAYOUT

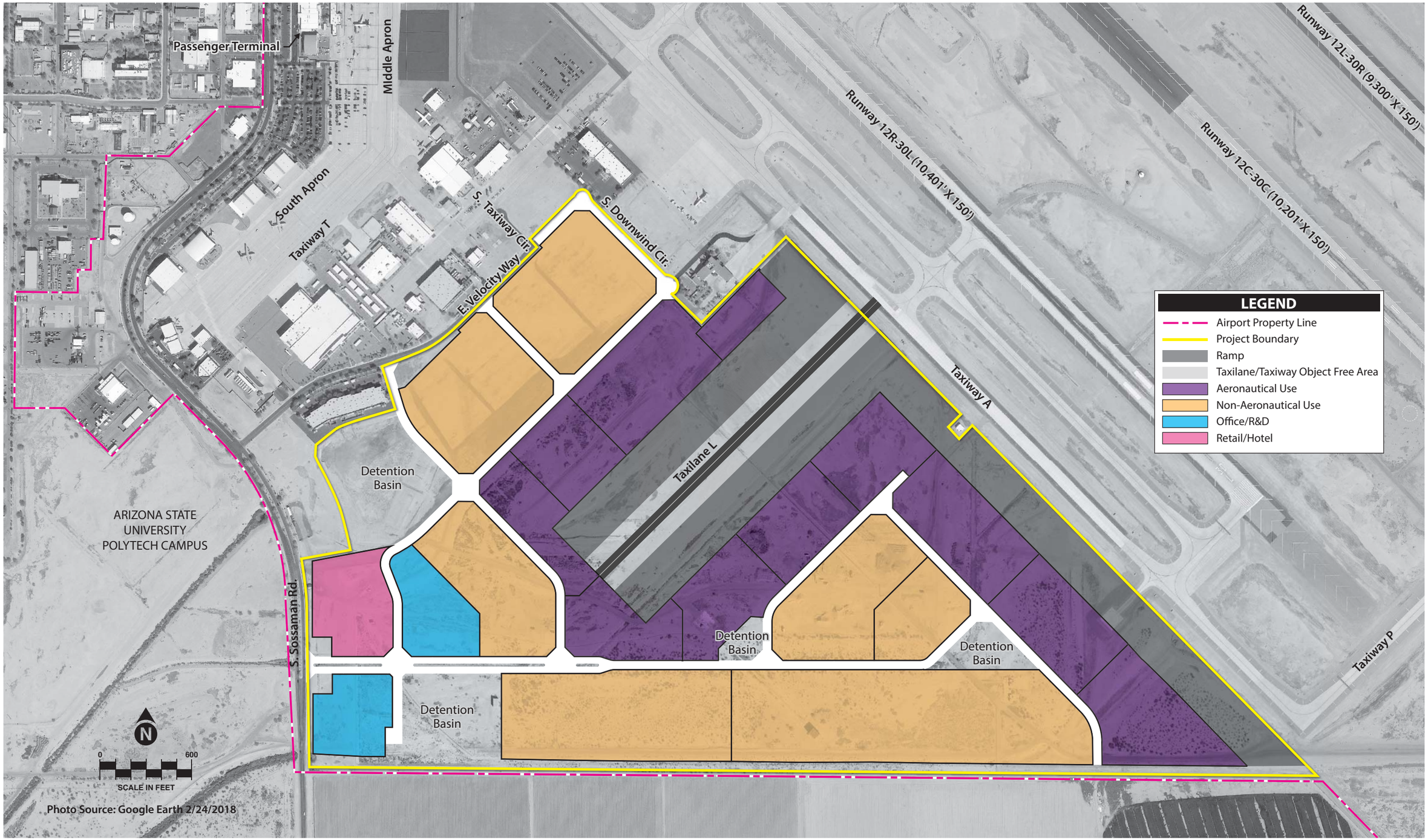


Exhibit 1C
PROPOSED LAND USE

SCOPING RESPONSES - SKYBRIDGE AZ ENVIRONMENTAL ASSESSMENT

From: Gilbert, Rocky -FS <rgilbert@fs.fed.us>
Sent: Tuesday, December 18, 2018 2:55 PM
To: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Subject: New contact for Phoenix Fire Center

Carl, I received your letter for comments for the SkyBridge Project, that was addressed to Matt Huse. Matt has accepted a new job and I am overseeing operations at Phoenix Interagency Dispatch Center. We will be filling his job in the next couple months but I just wanted to introduce myself and let you know you can contact me for anything that might impact our operations our any information I can provide about our operations.

We are always for the development of quality businesses that can improve the economic outlook of the communities we work in. The only concern we have is how the increase in commercial air traffic will affect our emergency air operations. At some point during its development we would like to be part of discussions with the airport and FAA on how our operation will be managed.

Thanks for your time.

Sincerely,

Rocky Gilbert, OSC1
Deputy Fire Staff Officer
Forest Service
Tonto National Forest, Phoenix Interagency Fire Center
p: 480-457-1575
c: 480-684-4109
rocky.gilbert@usda.gov
6335 S Downwind Circle
Mesa, AZ 85212
www.fs.fed.us
Caring for the land and serving people

unauthorized interception of this message or the use or disclosure of the information it contains may violate the law and subject the violator to civil or criminal penalties. If you believe you have received this message in error, please notify the sender and delete the email immediately.

U.S. Department of Transportation
Federal Highway Administration

ARIZONA DIVISION

4000 North Central Avenue
Suite 1500
Phoenix, Arizona 85012-3500
Phone: (602) 379-3646
Fax: (602) 382-8998
http://www.fhwa.dot.gov/azdiv/index.htm

December 18, 2018

In Reply Refer To:
TRAP 01

Mr. Carl D'Acosta
Environmental and Safety Coordinator
Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, AZ 85212-0919

Dear Mr. D'Acosta:

The Federal Highway Administration Arizona Division (FHWA) received your request for resource information and comments on the Proposed SkyBridge Arizona Business Park Environmental Assessment (EA). FHWA does not have any data to provide and no comments on the development of the EA at this time. We do ask that you keep us and the Arizona Department of Transportation Project Manager, Carlos Lopez (CLopez@azdot.gov), for the North South Corridor Study (https://www.azdot.gov/planning/transportation-studies/north-south-corridor-study) informed as your project progresses.

Thank you for providing FHWA the opportunity to participate in the development of your project. If you need anything additional, please contact Alan Hansen, FHWA PEARC Team Leader, at 602-382-8964 or Alan.Hansen@dot.gov.

Sincerely,

for Karla S. Petty
Division Administrator

ecc:
AHansen

January 9, 2019

Carl D'Acosta
Phoenix-Mesa Gateway Airport Authority
5835 South Sossaman Road
Mesa, Arizona 85212-6014

Re: Review of the SkyBridge Arizona Business Park project

Dear Mr. D'Acosta:

The Arizona Game and Fish Department (Department) reviewed your Project Evaluation Request dated December 7, 2018, regarding the proposed SkyBridge Arizona Business Park in Mesa, Arizona. As seen on the Department's Heritage Data Management System (HDMS)'s Online Environmental Tool report created for you on December 13, 2018, western burrowing owls (*Athene cunicularia hypugaea*) have been reported in the vicinity of your proposed project.

Based on the information provided, the Department offers the following general recommendations:

- The western burrowing owl (*Athene cunicularia hypugaea*), a special status species that is regulated under the Migratory Bird Treaty Act (MBTA), has been recorded in the vicinity of your project. If suitable habitat for this species is present within or adjacent to your project area, the Department recommends conducting an occupancy survey for western burrowing owl to determine if this species occurs within your project footprint. Guidelines for conducting this survey are found in *Burrowing Owl Project Clearance Guidance for Landowners* which can be accessed on-line through the Department's website. Please note that the survey should be conducted by a surveyor that is certified by the Department. If an active burrowing owl burrow is detected, please contact the Department and the U.S. Fish and Wildlife Service for direction, in accordance with the *Burrowing Owl Project Clearance Guidance for Landowners*.
  http://www.azgfd.gov/pdfs/w_c/owl/BurrowingOwlClearanceProtocol.pdf
- The trees and/or vegetation within the project area may provide nesting opportunities for avian species that are regulated under the Migratory Bird Treaty Act (MBTA). A qualified biologist should conduct a survey for nesting birds within the project area prior to removal or trimming of trees/vegetation during the breeding season. Breeding season for birds is generally March through late August, depending on the species and habitat, and for raptors it is generally January through late June. If you anticipate your project will not be in compliance with MBTA, the Department recommends you contact the U.S. Fish and Wildlife Service (USFWS) for their Technical Assistance. The USFWS will provide options to comply with the MBTA.

- If proposed ground disturbance (both temporary and permanent), in areas with native vegetation, will meet or exceed 0.25 acre, please comply with the Arizona Native Plant Law regulations. Please determine if a Native Plant Inventory should be conducted to identify, record, and coordinate plant salvage efforts for species that are Protected under the Arizona Native Plant Law. In addition, the applicable land management agencies should be consulted regarding guidelines for revegetation efforts.
  https://agriculture.az.gov/plantsproduce/native-plants
  http://riester-az-agriculture.pantheonsite.io/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf

The Department appreciates the opportunity to provide an evaluation of impacts to wildlife or wildlife habitats associated with the SkyBridge Arizona Business Park project. If you have any questions regarding this letter, please contact me at (623) 236-7615, and visit our website for additional guidelines at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Sincerely,

Cheri A. Bouchér
Project Evaluation Program Specialist, Habitat Branch
Arizona Game and Fish Department

cc: Ginger Ritter, Project Evaluation Program Manager
Kelly Wolff, Habitat Program Manager, Region VI

AGFD# M18-12133501

Arizona Environmental Online Review Tool Report

Arizona Game and Fish Department Mission
To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:

M18-12133501 SkyBridge Arizona Business Park

Project Description:

M18-12133501 SkyBridge Arizona Business Park

Project Type:

Transportation & Infrastructure, Airports, Construction of new runways, terminals/concourses, other facilities

Contact Person:

Victoria Kearney

Organization:

Arizona Game and Fish Department

On Behalf Of:

FAA

Project ID:

HGIS-08467

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

Locations Accuracy Disclaimer:
Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
   Project Evaluation Program, Habitat Branch
   Arizona Game and Fish Department
   5000 West Carefree Highway
   Phoenix, Arizona 85086-5000
   Phone Number: (623) 236-7600
   Fax Number: (623) 236-7366
   Or
   PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

M18-12133501 SkyBridge Arizona Business Park

USA Topo Basemap With Locator Map

Project Boundary

Buffered Project Boundary

Project Size (acres): 318.34

Lat/Long (DD): 33.2968 / -111.6620

County(s): Maricopa

AGFD Region(s): Mesa

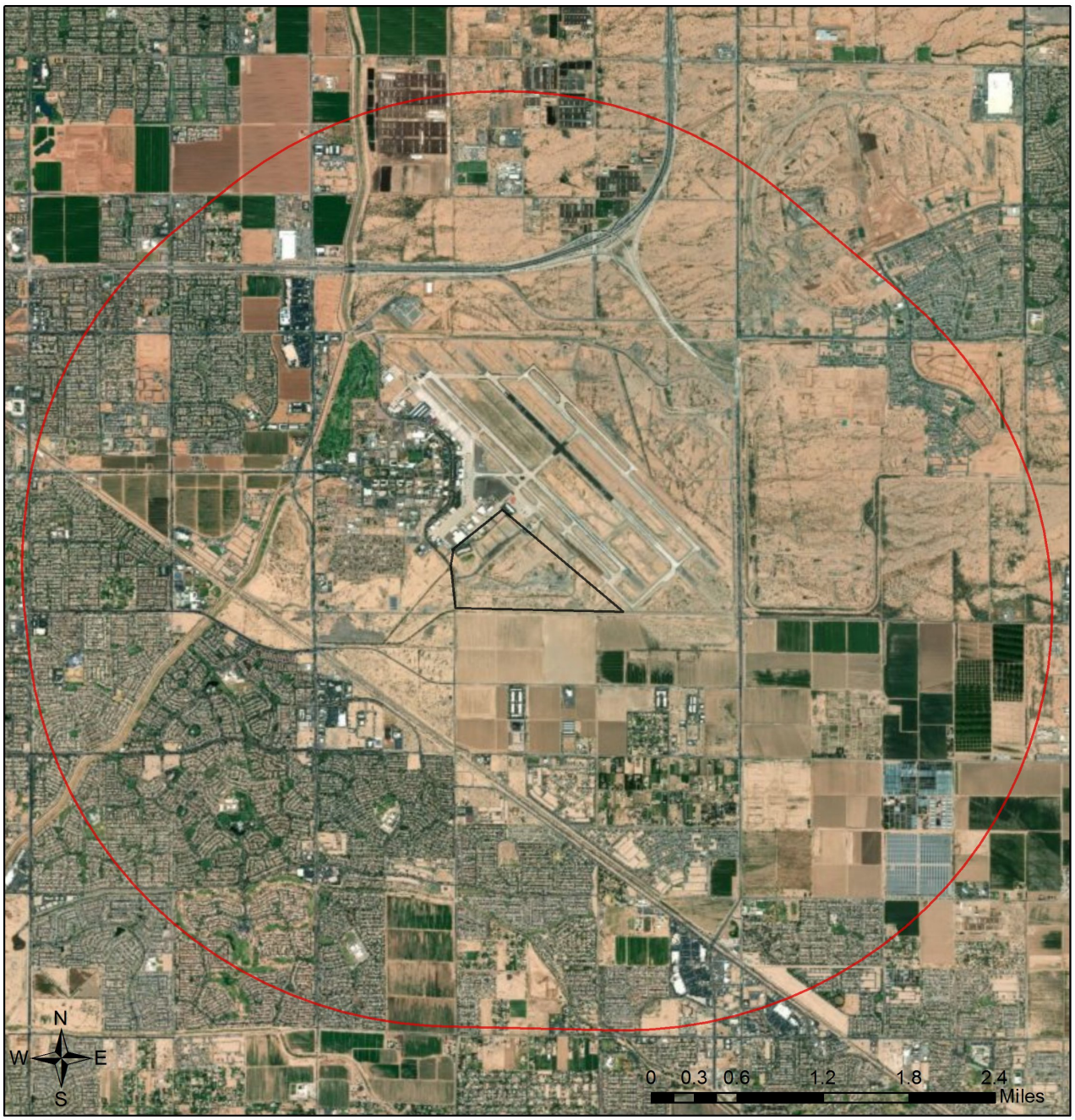
Township/Range(s): T1S, R7E

USGS Quad(s): HIGLEY

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, ©

M18-12133501 SkyBridge Arizona Business Park

Web Map As Submitted By User



Project Boundary

Buffered Project Boundary

Project Size (acres): 318.34

Lat/Long (DD): 33.2968 / -111.6620

County(s): Maricopa

AGFD Region(s): Mesa

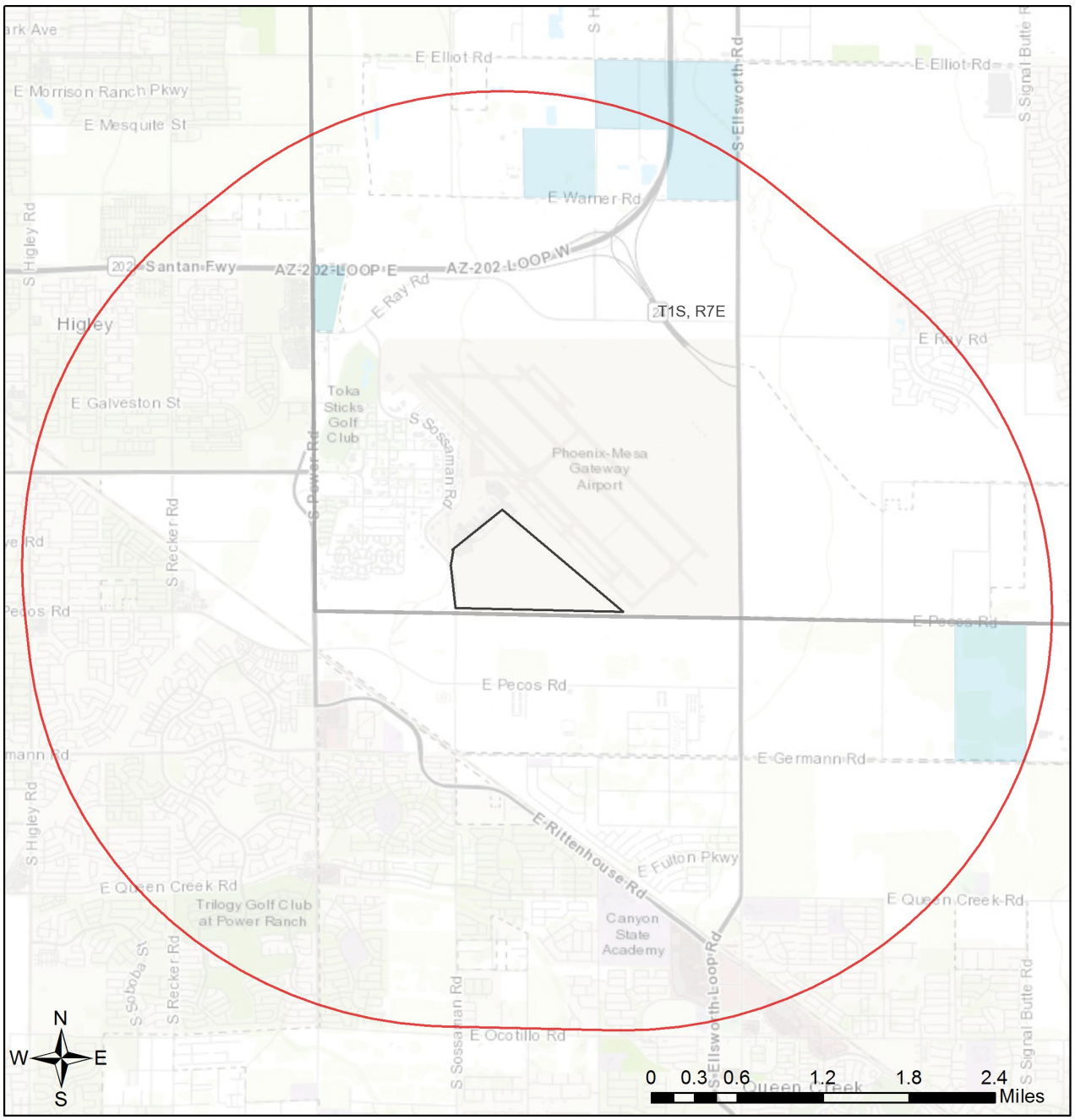
Township/Range(s): T1S, R7E

USGS Quad(s): HIGLEY

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

M18-12133501 SkyBridge Arizona Business Park

Topo Basemap with Township/Ranges, Land Ownership, Critical Habitats, Wildlife Corridors



- Project Boundary
- Buffered Project Boundary
- Township/Ranges
- Wildlife Corridors
- Critical Habitat

Land Ownership

- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military
- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge

Project Size (acres): 318.34

Lat/Long (DD): 33.2968 / -111.6620

County(s): Maricopa

AGFD Region(s): Mesa

Township/Range(s): T1S, R7E

USGS Quad(s): HIGLEY

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

Special Status Species and Special Areas Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Haliaeetus leucocephalus pop. 3	Bald Eagle - Sonoran Desert Population	SC, BGA	S	S		1A

Note: Status code definitions can be found at https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/
.

Species of Greatest Conservation Need
Predicted within 3 Miles of Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Aix sponsa	Wood Duck					1B
Ammospermophilus harrisii	Harris' Antelope Squirrel					1B
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Botaurus lentiginosus	American Bittern					1B
Buteo regalis	Ferruginous Hawk	SC		S		1B
Calypte costae	Costa's Hummingbird					1C
Chilomeniscus stramineus	Variable Sandsnake					1B
Chionactis occipitalis klauberi	Tucson Shovel-nosed Snake	SC				1A
Cistothorus palustris	Marsh Wren					1C
Colaptes chrysoides	Gilded Flicker			S		1B
Coluber bilineatus	Sonoran Whipsnake					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus tigris	Tiger Rattlesnake					1B
Empidonax wrightii	Gray Flycatcher					1C
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1A
Haliaeetus leucocephalus	Bald Eagle	SC, BGA	S	S		1A
Heloderma suspectum	Gila Monster					1A
Incilius alvarius	Sonoran Desert Toad					1B
Kinosternon sonoriense sonoriense	Desert Mud Turtle			S		1B
Lasiurus blossevillii	Western Red Bat		S			1B
Lasiurus xanthinus	Western Yellow Bat		S			1B
Leopardus pardalis	Ocelot	LE				1A
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A
Lepus alleni	Antelope Jackrabbit					1B
Macrotus californicus	California Leaf-nosed Bat	SC		S		1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolnii	Lincoln's Sparrow					1B

Species of Greatest Conservation Need
Predicted within 3 Miles of Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Melozone aberti	Abert's Towhee		S			1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Panthera onca	Jaguar	LE				1A
Passerculus sandwichensis	Savannah Sparrow					1B
Phrynosoma goodei	Goode's Horned Lizard					1B
Phrynosoma solare	Regal Horned Lizard					1B
Phyllorhynchus browni	Saddled Leaf-nosed Snake					1B
Progne subis hesperia	Desert Purple Martin			S		1B
Setophaga petechia	Yellow Warbler					1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella breweri	Brewer's Sparrow					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Toxostoma lecontei	LeConte's Thrasher			S		1B
Troglodytes pacificus	Pacific Wren					1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Project Type: Transportation & Infrastructure, Airports, Construction of new runways, terminals/concourses, other facilities

Project Type Recommendations:
During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife. Guidelines for many of these can be found at: https://www.azgfd.com/wildlife/planning/wildlifeguidelines/.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

Consider tower designs and/or modifications that reduce or eliminate impacts to migratory birds (i.e. free standing, minimally lighted structures).

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

Based on the project type entered, coordination with State Historic Preservation Office may be required (http://azstateparks.com/SHPO/index.html).

Based on the project type entered, coordination with Arizona Department of Environmental Quality may be required (http://www.azdeq.gov/).

Based on the project type entered, coordination with U.S. Army Corps of Engineers may be required (http://www.usace.army.mil/)

Based on the project type entered, coordination with County Flood Control district(s) may be required.

Based on the project type entered, coordination with U.S. Fish and Wildlife Service (Migratory Bird Treaty Act) may be required (http://www.fws.gov/southwest/es/arizona/).

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly. PEP@azgfd.gov

Project Location and/or Species Recommendations:
HDMS records indicate that one or more listed, proposed, or candidate species or Critical Habitat (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at http://www.fws.gov/southwest/es/arizona/ or:

Phoenix Main Office
2321 W. Royal Palm Rd, Suite 103
Phoenix, AZ 85021
Phone: 602-242-0210
Fax: 602-242-2513

Tucson Sub-Office
201 N. Bonita Suite 141
Tucson, AZ 85745
Phone: 520-670-6144
Fax: 520-670-6155

Flagstaff Sub-Office
SW Forest Science Complex
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
Phone: 928-556-2157
Fax: 928-556-2121

HDMS records indicate that Western Burrowing Owls have been documented within the vicinity of your project area. Please review the western burrowing owl resource page at:
https://www.azgfd.com/wildlife/speciesofgreatestconservneed/burrowingowlmanagement/.

From: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Sent: Tuesday, December 18, 2018 8:00 AM
To: Don Rerick - FCDX
Cc: Judi Krauss
Subject: RE: SkyBridge At Phx-Mesa Gateway Airport

Don,
Thank you for your response.
Regards,
Carl

From: Don Rerick - FCDX <djr@mail.maricopa.gov>
Sent: Tuesday, December 18, 2018 7:58 AM
To: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Cc: Don Rerick - FCDX <djr@mail.maricopa.gov>
Subject: SkyBridge At Phx-Mesa Gateway Airport

Mr. D'Acosta:

I have reviewed the information on the subject project sent to Scott Vogel on Dec. 3. The footprint for the planned improvements are located in the southwest area of the airport. These proposed improvements are located away from flood control project features along the west side of Ellsworth Road and the Powerline Floodway Channel along the north side of the airport property. Therefore, because there appears to be no impacts to these flood control features, the District has no comments or concerns regarding these proposed improvements.

Thank you for giving us an opportunity to review this plan.

Don Rerick, P.E.
Manager
Planning and Project Management Division
Flood Control District of Maricopa County
2801 W Durango St, Phoenix, AZ 85009
(O) 602-506-4878 (C) 602-819-1639
djr@mail.maricopa.gov
www.fcd.maricopa.gov

How are we doing? Click here to leave your feedback.

From: Joe Pinto - MCDOTX <joepinto@mail.maricopa.gov>
Sent: Wednesday, January 02, 2019 2:55 PM
To: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Subject: Request for Resource Information and Comments on the Proposed SkyBridge Arizona Business Park

Mr. Acosta, the Maricopa County Department of Transportation does not have any concerns with/comments on the SkyBridge project pertaining to how it may affect the way we do business.
We did however want to make you aware that we encountered Western Burrowing Owls in the fields to the west of Ellsworth (between Pecos and Ray) during our Ellsworth Road widening project, and therefore there is a high probability you may encounter them as well during your investigations/construction.
Feel free to reach out to me if you have any questions or would like further clarification.
Thank you

Joe Pinto
Environmental Program Branch Manager
Environmental Program Branch
O: 602.506.8068 ▪ F: 602.506.4882
Maricopa County Department of Transportation
2901 W. Durango Street ▪ Phoenix, AZ 85009
joepinto@mail.maricopa.gov

Maricopa County
Department of Transportation

Please consider the environment before printing this e-mail

From: Jordan D Feld <jordan.feld@phoenix.gov>
Sent: Tuesday, December 11, 2018 2:25 PM
To: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Subject: KIWA "Sky Bridge" EA – Agency Comments

Carl,

Thank you for the agency comment request letter dated 12/3/18, I received the letter earlier this morning. Overall, the City of Phoenix Aviation Department supports the project and its potential positive impact on the region's economy and air transportation infrastructure. I offer the following NEPA procedural requests and substantive review comments, below:

Procedural Requests (1-2)

1. *Going forward, I will be your point of contact for the EA, please address all future NEPA-related project requests to my attention.*

2. *Whenever possible, please use email, FTPs and other digital communication whenever possible to provide me adequate review time.*

Substantive Review (1-5)

1. *What future off-site (or on-site ROW) local or regional transportation projects (ie, connected actions) are necessary to support the project at buildout? Given the significant traffic generation from the project, off-site improvements would seem necessary.*

2. *What types and frequency of aircraft operations are expected to result from development and will this activity be analyzed for environmental affects (particularly noise, 4f and wetlands)?*

3. *Will environmental analysis look at safety impacts, specifically in terms of wildlife hazard management as the storm-water management approach (ex.1C – land use) appears to utilize 3 large common detention parcels, in lieu of parcel-by-parcel "on-site" detention, which may effect large areas of water ponding and related wildlife activity in close proximity to the AOA.*

4. *The land use plan (ex.1c) appears to show more than half of the project area being utilized for non-aero development with no apparent ability to extend the proposed taxiway or otherwise convert non-aero parcels to aero (with taxi-lane access) if KIWA GA, military, carrier or cargo demand exceeds current projections; were land use concepts providing this flexibility over time considered or were land use plan alternatives developed for the project?*

5. *What is the existing feature (age, use) shown on the aerial below and what is the impact of the project to it?*

Please let me know if you would like to further discuss, I look forward to your timely response to the requests and comments above.

Respectfully,

Jordan D. Feld, CM, AICP
Deputy Aviation Director - Planning & Environmental
City of Phoenix Aviation Department
jordan.feld@phoenix.gov
602-273-4072

From: Carl D'Acosta
Sent: Wednesday, January 9, 2019 5:47 PM
To: Jordan D Feld <jordan.feld@phoenix.gov>
Subject: RE: KIWA "Sky Bridge" EA – Agency Comments

Jordan,
Thank you for your responding to Gateway's agency comment request letter regarding the Proposed SkyBridge Arizona Business Park Environmental Assessment. Your comments, concerns, and questions will be considered and will be addressed during the draft EA process. You will be provided an opportunity to review the draft EA when it becomes available.

At any time, I am free to discuss any inquires you may have and will be available for discussion.
Thank you Jordan,
Carl

Carl J. D'Acosta, M.S.
Environmental & Safety Coordinator
Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, Arizona 85212-0919
Office: 480-988-7612
Cell: 480-815-1070
Fax: 480-988-2315
cdacosta@gatewayairport.com
www.gatewayairport.com

just plane easy.®

Please note that my email address has changed and update your records.

Please be advised that our office hours are Monday - Thursday 7 a.m. to 6 p.m. We are closed Fridays.

TOWN OF
QUEEN CREEK
ARIZONA

December 19, 2018

Mr. Carl D'Acosta
Environmental and Safety Coordinator
Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, Arizona 85212-6014

RE: Request for Resource Information and Comments
Proposed SkyBridge Arizona Business Park Environmental Assessment
Phoenix-Mesa Gateway Airport, Maricopa County, Mesa, Arizona

Dear Mr. D'Acosta,

Thank you for the opportunity to comment on and identify areas of concern relative to the initiation of the Environmental Assessment on the development of approximately 352.8 acres of land located in the southwestern portion of the airport property. Currently, the Town of Queen Creek does not have any concerns. We look forward to receiving additional information as this project advances to future phases of the assessment. Should you need anything further from my office, please don't hesitate to reach out at (480) 358-3900.

Sincerely,

John Kross
Town Manager

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Appendix B

AIRCRAFT NOISE AND AIR QUALITY MODELING

Appendix B
AIRCRAFT NOISE AND AIR QUALITY MODELING

The standard methodology for analyzing noise conditions at airports involves the use of a computer simulation model. The Airport Environmental Design Tool, Version 2d (AEDT) is required by the Federal Aviation Administration (FAA) for developing noise exposure contours. AEDT is designed to predict annual average aircraft noise conditions at a given geographic location. The purpose of the noise model is to produce noise exposure contours that are overlain on a map of the airport and vicinity to graphically represent aircraft noise conditions.

Noise contours were prepared using the yearly day-night level sound level (DNL), which is FAA's primary noise metric. DNL accounts for the increased sensitivity during nighttime hours (10:00 p.m. to 7:00 a.m.). A 10-decibel weighting is applied to noise events occurring at night. DNL is a summation metric which allows for objective analysis and can describe noise exposure comprehensively over a large area. The primary benefit of using the DNL metric is that it accounts for the average community response to noise as determined by the actual number and types of noise events and the time of day they occur.

To achieve an accurate representation of an airport's noise conditions, the AEDT incorporates a combination of industry standard information and user-supplied inputs specific to the airport. The software provides noise characteristics, standard flight profiles, and manufacturer-supplied flight procedures for aircraft within the U.S. civil and military fleets, including those which commonly operate at Phoenix-Mesa Gateway Airport (airport). As each aircraft has different design and operating characteristics (number and type of engines, weight, and thrust levels), each aircraft emits different noise levels. The most common way to spatially represent the noise levels emitted by an aircraft is with a noise exposure contour.

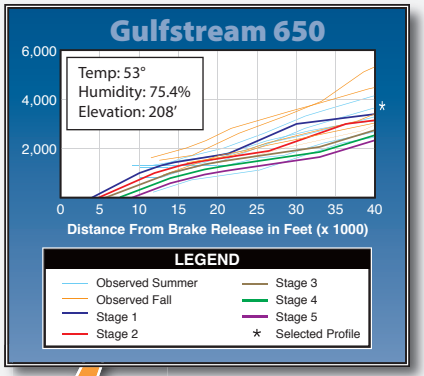
Based on AEDT-provided and user inputs shown on **Exhibit B1**, aircraft sound exposure for the annual average day is calculated for the points in a grid covering the airport and surrounding areas. The grid values, represented with the DNL, at each intersection point on the grid represent a noise level for that geographic location. To create the noise contours, a line linking equal values, similar to those on a topographic map, is drawn which connects points of the same DNL noise value. In the same way that a topographic contour represents the same elevation, the noise contour identifies equal noise exposure.

The AEDT contains database tables correlating noise, thrust settings, and flight profiles for most of the civilian aircraft and many common military aircraft operating in the United States. This database, often referred to as the noise curve data, has been developed under FAA guidance based on rigorous noise monitoring in controlled settings. This information was developed through more than a decade of research, including extensive field measurements of more than 10,000 aircraft operations. The database also includes performance data for each aircraft to allow for the computation of airport-specific flight profiles (rates of climb and descent).

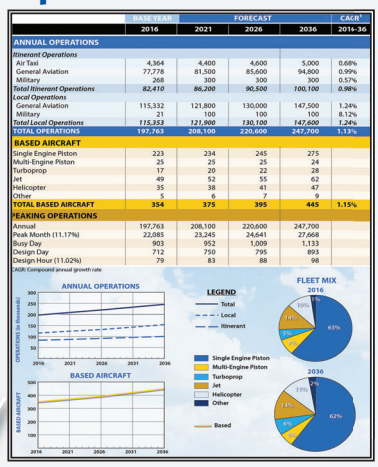
AEDT PROCESS

Flight Tracks/Runway Use

Aircraft Profile Analysis



Existing & Forecast Operations/Fleet Mix

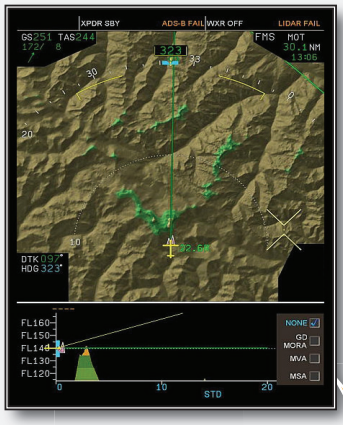


	BASE YEAR	FORECAST			CAGR*
	2016	2021	2026	2036	2016-36
ANNUAL OPERATIONS					
Itinerant Operations					
Air Taxi	4,364	4,400	4,600	5,000	0.68%
General Aviation	77,778	81,500	85,600	94,800	0.99%
Military	268	300	300	300	0.57%
Total Itinerant Operations	*82,410*	*86,200*	*90,500*	*100,100*	*0.98%*
Local Operations					
General Aviation	115,332	121,800	130,000	147,500	1.24%
Military	21	100	100	100	8.12%
Total Local Operations	*115,353*	*121,900*	*130,100*	*147,600*	*1.24%*
TOTAL OPERATIONS	197,763	208,100	220,600	247,700	1.13%
BASED AIRCRAFT					
Single Engine Piston	223	234	245	275	
Multi-Engine Piston	25	25	25	24	
Turboprop	17	20	22	28	
Jet	49	52	55	62	
Helicopter	35	38	41	47	
Other	5	6	7	9	
TOTAL BASED AIRCRAFT	354	375	395	445	1.15%
PEAKING OPERATIONS					
Annual	197,763	208,100	220,600	247,700	
Peak Month (11.17%)	22,085	23,245	24,641	27,668	
Busy Day	903	952	1,009	1,133	
Design Day	712	750	795	893	
Design Hour (11.02%)	79	83	88	98	

*CAGR: Compound annual growth rate

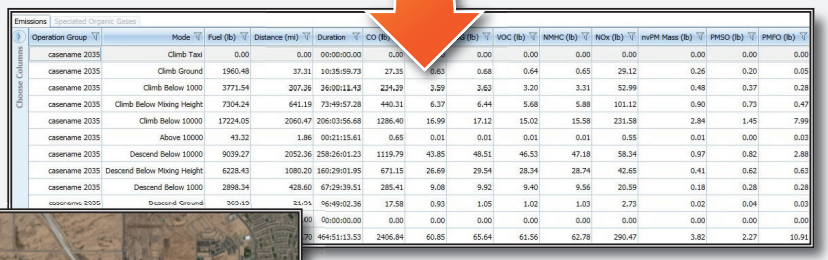
Time of Day

Terrain



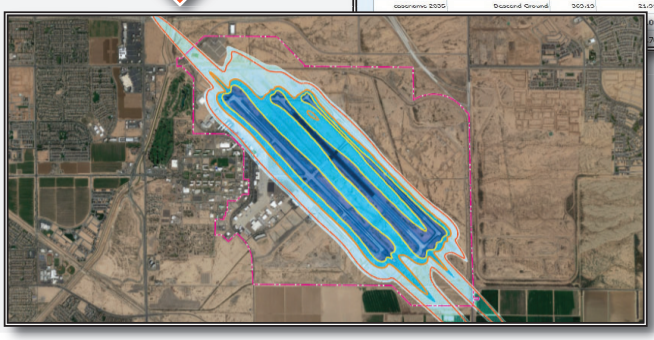
FEDERAL AVIATION ADMINISTRATION (FAA)
AIRPORT ENVIRONMENTAL DESIGN TOOL (AEDT)

Air Pollutant Emissions



Operation Group	Mode	Fuel (lb)	Distance (mi)	Duration	CO (lb)	(lb)	VOC (lb)	NMHC (lb)	NOx (lb)	nvPM Mass (lb)	PMSO (lb)	PMFO (lb)
casename 2035	Climb Taxi	0.00	0.00	00:00:00.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00
casename 2035	Climb Ground	1960.48	37.31	10:35:59.73	27.35	9.63	0.68	0.64	0.65	29.12	0.26	0.20	0.05
casename 2035	Climb Below 1000	3771.54	307.26	36:00:11.43	234.29	3.99	2.63	3.20	3.31	52.99	0.48	0.37	0.28
casename 2035	Climb Below Mixing Height	7304.24	641.19	73:49:57.28	440.31	6.37	6.44	5.68	5.88	101.12	0.90	0.73	0.47
casename 2035	Climb Below 10000	17224.05	2060.47	206:03:56.68	1286.40	16.99	17.12	15.02	15.58	231.58	2.84	1.45	7.99
casename 2035	Above 10000	43.32	1.86	00:21:15.61	0.65	0.01	0.01	0.01	0.01	0.55	0.01	0.00	0.03
casename 2035	Descend Below 10000	9039.27	2052.36	258:26:01.23	1119.79	43.85	48.51	46.53	47.18	58.34	0.97	0.82	2.88
casename 2035	Descend Below Mixing Height	6228.43	1080.20	160:29:01.95	671.15	26.69	29.54	28.34	28.74	42.65	0.41	0.62	0.63
casename 2035	Descend Below 1000	2898.34	428.60	67:29:39.51	285.41	9.08	9.92	9.40	9.56	20.59	0.18	0.28	0.28
casename 2035	Descend Ground	360.19	34.01	96:49:02.36	17.58	0.93	1.05	1.02	1.03	2.73	0.02	0.04	0.03
				00:00:00.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
				464:51:13.53	2406.84	60.85	65.64	61.56	62.78	290.47	3.82	2.27	10.91

Noise Contours



Airport-specific information, including runway configuration, flight paths, aircraft fleet mix, runway use distribution, elevation, atmospheric conditions, and numbers of daytime and nighttime operations, are also used as modeling inputs. Specific modeling assumptions for Phoenix-Mesa Gateway Airport are discussed in the following sections.

AIRCRAFT FLEET MIX AND OPERATIONS

Database Selection

Noise emissions from an aircraft vary by the type and number of engines, as well as the airframe. AEDT provides more than 3,000 engine and airframe combinations to represent many of the aircraft operating in the United States. **Tables B1** and **B2** list the existing condition and 20-year forecast operations by aircraft type for the airport. The existing year total operations count is from FAA Air Traffic Activity System (January 2018-December 2018). Forecast operations are interpolated and extrapolated from the aviation forecasts prepared as part of the Phoenix-Mesa Gateway Airport Master Plan Update approved by the Federal Aviation Administration on December 7, 2018.The existing air carrier fleet mix derived from 2018 landing reports provided by airport staff. The remaining portions of the existing and future fleet mix were derived *Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015. As noted in the table, the future Proposed Action contours were modeled with additional Boeing 747-700 and Boeing 767-300 aircraft which are anticipated to operate at the airport as a result of the proposed SkyBridge development.

TABLE B1
Aircraft Fleet Mix and Operations (2018, 2025, and 2030)
Phoenix Mesa Gateway Airport

	AEDT Designator	Existing (2018)[1]	No Action (2025)[2]	Proposed Action (2025)[2]	No Action (2030)[2]	Proposed Action (2030)[2]
Itinerant – Air Carrier[3, 4]						
Heavy Jet	767300	0	543	1,293	605	2,855
Heavy Jet	737800	122	168	168	187	187
Heavy Jet	737700	122	375	375	418	418
Heavy Jet	A319-131	6,443	3,518	3,518	3,916	3,916
Heavy Jet	A320-211	5,349	4,824	4,824	5,370	5,370
Heavy Jet	747700	0	0	416	0	832
Heavy Jet	CRJ9-ER	0	1,164	1,164	1,296	1,296
Heavy Jet	EMB190	0	2,341	2,341	2,606	2,606
Heavy Jet	MD83	122	0	0	0	0
Itinerant – Air Taxi						
Small Jet	CL600	1,806	2,085	2,085	2,188	2,188
Small Jet	CL601	271	313	313	328	328
Small Jet	CNA500	406	469	469	492	492
Small Jet	CNA750	1,806	2,085	2,085	2,188	2,188
Small Jet	EMB145	3,477	4,014	4,014	4,212	4,212
Small Jet	LEAR35	226	261	261	273	273
Small Jet	MU3001	2,168	2,502	2,502	2,625	2,625
Prop/Turbo Prop	BEC58P	542	625	625	656	656
Prop/Turbo Prop	CNA208	30,664	35,392	35,392	37,139	37,139

TABLE B1 (CONTINUED)
Aircraft Fleet Mix and Operations (2018, 2025, and 2030)
Phoenix Mesa Gateway Airport

	AEDT Designator	Existing (2018)[1]	No Action (2025)[2]	Proposed Action (2025)[2]	No Action (2030)[2]	Proposed Action (2030)[2]
Itinerant – Air Taxi (continued)						
Prop/Turbo Prop	CNA441	90	104	104	109	109
Prop/Turbo Prop	DHC8	858	990	990	1,039	1,039
Prop/Turbo Prop	DO328	1,806	2,085	2,085	2,188	2,188
Helicopter	S76	1,039	1,199	1,199	1,258	1,258
Itinerant – General Aviation						
Small Jet	CL601	455	507	507	533	533
Small Jet	CNA500	2,602	2,900	2,900	3,044	3,044
Small Jet	CNA750	2,407	2,682	2,682	2,816	2,816
Small Jet	EMB145	1,756	1,957	1,957	2,055	2,055
Small Jet	F10062	260	290	290	304	304
Small Jet	GV	130	145	145	152	152
Small Jet	LEAR35	781	870	870	913	913
Small Jet	MU3001	1,366	1,522	1,522	1,598	1,598
Prop/Turbo Prop	BEC58P	10,798	12,034	12,034	12,633	12,633
Prop/Turbo Prop	CNA208	40,459	45,091	45,091	47,334	47,334
Prop/Turbo Prop	CNA441	1,301	1,450	1,450	1,522	1,522
Prop/Turbo Prop	DHC8	650	725	725	761	761
Helicopter	R44	2,082	2,320	2,320	2,435	2,435
Itinerant – Military						
Heavy Jet	767300	144	182	182	182	182
Heavy Jet	MD9028	16	20	20	20	20
Small Jet	CL601	54	69	69	69	69
Small Jet	CNA500	121	154	154	154	154
Small Jet	CNA750	45	57	57	57	57
Small Jet	LEAR35	144	182	182	182	182
Small Jet	MU3001	32	41	41	41	41
Prop/Turbo Prop	BEC58P	32	41	41	41	41
Prop/Turbo Prop	CNA208	118	150	150	150	150
Prop/Turbo Prop	CNA441	32	41	41	41	41
Prop/Turbo Prop	DHC8	137	174	174	174	174
Heavy Jet	C130E	517	656	656	656	656
Heavy Jet	F16GE	778	989	989	989	989
Heavy Jet	F-18	198	251	251	251	251
Heavy Jet	KC-135	399	507	507	507	507
Heavy Jet	T-38A	198	251	251	251	251
Helicopter	S70	226	288	288	288	288
Local – General Aviation						
Small Jet	CL601	1,120	1,242	1,242	1,304	1,304
Small Jet	CNA500	6,400	7,099	7,099	7,449	7,449
Small Jet	CNA750	5,920	6,566	6,566	6,890	6,890
Small Jet	EMB145	4,320	4,792	4,792	5,028	5,028
Small Jet	F10062	640	710	710	745	745
Small Jet	GV	320	355	355	372	372
Small Jet	LEAR35	1,920	2,130	2,130	2,235	2,235

TABLE B1 (CONTINUED)
Aircraft Fleet Mix and Operations (2018, 2025, and 2030)
Phoenix Mesa Gateway Airport

	AEDT Designator	Existing (2018)[1]	No Action (2025)[2]	Proposed Action (2025)[2]	No Action (2030)[2]	Proposed Action (2030)[2]
Local – General Aviation (Continued)						
Small Jet	MU3001	3,360	3,727	3.727	3,911	3,911
Prop/Turbo Prop	BEC58P	26,559	29,459	29,459	30,912	30,912
Prop/Turbo Prop	CNA208	99,516	110,383	110,383	115,828	115,828
Prop/Turbo Prop	CNA441	3,200	3,549	3,549	3,724	3,724
Prop/Turbo Prop	DHC8	1,600	1,775	1,775	1,862	1,862
Helicopter	R44	5,120	5,679	5,679	5,959	5,959
Local – Military						
Heavy Jet	767300	120	155	155	155	155
Heavy Jet	MD9028	13	17	17	17	17
Small Jet	CL601	45	59	59	59	59
Small Jet	CNA500	101	131	131	131	131
Small Jet	CNA750	37	48	48	48	48
Small Jet	LEAR35	120	155	155	155	155
Small Jet	MU3001	27	35	35	35	35
Prop/Turbo Prop	BEC58P	27	35	35	35	35
Prop/Turbo Prop	CNA208	99	128	128	128	128
Prop/Turbo Prop	CNA441	27	35	35	35	35
Prop/Turbo Prop	DHC8	115	148	148	148	148
Heavy Jet	C130E	433	559	559	559	559
Heavy Jet	F16GE	651	842	842	842	842
Heavy Jet	F-18	166	214	214	214	214
Heavy Jet	KC-135	334	431	431	431	431
Heavy Jet	T-38A	166	214	214	214	214
Helicopter	S70	190	245	245	245	245
Itinerant Total		**125,555**	**141,603**	**142,769**	**149,246**	**152,328**
Local Total		**162,666**	**180,917**	**180,917**	**189,670**	**189,670**
Total		**288,221**	**322,520**	**323,686**	**338,916**	**341,998**

[1] Total operations count is from FAA Air Traffic Activity System (January 2018-December 2018)
[2] Forecast operations interpolated (2025, 2030, 2035) and extrapolated (2045) Phoenix-Mesa Gateway Airport Master Plan Update approved by the Federal Aviation Administration on December 7, 2018.[3] Existing air carrier fleet mix derived from 2018 landing reports
[4] Future fleet mix derived from *Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015, and project proponent.
Source: AEDT analysis by Coffman Associates, December 2019.

TABLE B2
Aircraft Fleet Mix and Operations (2035 and 2045)
Phoenix Mesa Gateway Airport

	AEDT Designator	No Action (2035)[2]	Proposed Action (2035)[2]	No Action (2045)[2]	Proposed Action (2045)[2]
Itinerant – Air Carrier[3, 4]					
Heavy Jet	767300	669	4,419	798	5298
Heavy Jet	737800	207	207	247	247
Heavy Jet	737700	462	462	551	551
Heavy Jet	A319-131	4,333	4,333	5,167	5,167
Heavy Jet	A320-211	5,942	5,942	7,086	7,086
Heavy Jet	747700	0	1,456	0	1,456
Heavy Jet	CRJ9-ER	1,434	1,434	1,710	1,710
Heavy Jet	EMB190	2,883	2,883	3,438	3,438
Heavy Jet	MD83	0	0	0	0
Itinerant – Air Taxi					
Small Jet	CL600	2,301	2,301	2,558	2,558
Small Jet	CL601	345	345	384	384
Small Jet	CNA500	518	518	576	576
Small Jet	CNA750	2,301	2,301	2,558	2,558
Small Jet	EMB145	4,430	4,430	4,924	4,924
Small Jet	LEAR35	288	288	320	320
Small Jet	MU3001	2,761	2,761	3,070	3,070
Prop/Turbo Prop	BEC58P	690	690	767	767
Prop/Turbo Prop	CNA208	39,062	39,062	43,423	43,423
Prop/Turbo Prop	CNA441	115	115	128	128
Prop/Turbo Prop	DHC8	1,093	1,093	1,215	1,215
Prop/Turbo Prop	DO328	2,301	2,301	2,558	2,558
Helicopter	S76	1,323	1,323	1,471	1,471
Itinerant – General Aviation					
Small Jet	CL601	559	559	622	622
Small Jet	CNA500	3,196	3,196	3,557	3,557
Small Jet	CNA750	2,956	2,956	3,290	3,290
Small Jet	EMB145	2,157	2,157	2,401	2,401
Small Jet	F10062	320	320	356	356
Small Jet	GV	160	160	178	178
Small Jet	LEAR35	959	959	1,067	1,067
Small Jet	MU3001	1,678	1,678	1,867	1,867
Prop/Turbo Prop	BEC58P	13,264	13,264	14,761	14,761
Prop/Turbo Prop	CNA208	49,699	49,699	55,311	55,311
Prop/Turbo Prop	CNA441	1,598	1,598	1,778	1,778
Prop/Turbo Prop	DHC8	799	799	889	889
Helicopter	R44	2,557	2,557	2,846	2,846
Itinerant – Military					
Heavy Jet	767300	182	182	182	182
Heavy Jet	MD9028	20	20	20	20
Small Jet	CL601	69	69	69	69
Small Jet	CNA500	154	154	154	154
Small Jet	CNA750	57	57	57	57
Small Jet	LEAR35	182	182	182	182
Small Jet	MU3001	41	41	41	41

TABLE B2 (CONTINUED)
Aircraft Fleet Mix and Operations (2035 and 2045)
Phoenix Mesa Gateway Airport

	AEDT Designator	No Action (2035)[2]	Proposed Action (2035)[2]	No Action (2045)[2]	Proposed Action (2045)[2]
Prop/Turbo Prop	CNA208	150	150	150	150
Prop/Turbo Prop	CNA441	41	41	41	41
Prop/Turbo Prop	DHC8	174	174	174	174
Heavy Jet	C130E	656	656	656	656
Heavy Jet	F16GE	989	989	989	989
Heavy Jet	F-18	251	251	251	251
Heavy Jet	KC-135	507	507	507	507
Heavy Jet	T-38A	251	251	251	251
Helicopter	S70	288	288	288	288
Local – General Aviation					
Small Jet	CL601	1,371	1,371	1,524	1,524
Small Jet	CNA500	7,835	7,835	8,709	8,709
Small Jet	CNA750	7,247	7,247	8,056	8,056
Small Jet	EMB145	5,288	5,288	5,879	5,879
Small Jet	F10062	783	783	871	871
Small Jet	GV	392	392	435	435
Small Jet	LEAR35	2,350	2,350	2,613	2,613
Small Jet	MU3001	4,113	4,113	4,572	4,572
Prop/Turbo Prop	BEC58P	32,513	32,513	36,144	36,144
Prop/Turbo Prop	CNA208	121,827	121,827	135,429	135,429
Prop/Turbo Prop	CNA441	3,917	3,917	4,355	4,355
Prop/Turbo Prop	DHC8	1,959	1,959	2,177	2,177
Helicopter	R44	6,268	6,268	6,967	6,967
Local – Military					
Heavy Jet	767300	155	155	155	155
Heavy Jet	MD9028	17	17	17	17
Small Jet	CL601	59	59	59	59
Small Jet	CNA500	131	131	131	131
Small Jet	CNA750	48	48	48	48
Small Jet	LEAR35	155	155	155	155
Small Jet	MU3001	35	35	35	35
Prop/Turbo Prop	BEC58P	35	35	35	35
Prop/Turbo Prop	CNA208	128	128	128	128
Prop/Turbo Prop	CNA441	35	35	35	35
Prop/Turbo Prop	DHC8	148	148	148	148
Heavy Jet	C130E	559	559	559	559
Heavy Jet	F16GE	842	842	842	842
Heavy Jet	F-18	214	214	214	214
Heavy Jet	KC-135	431	431	431	431
Heavy Jet	T-38A	214	214	214	214
Helicopter	S70	245	245	245	245
Itinerant Total		**157,413**	**162,619**	**175,925**	**181,881**
Local Total		**199,314**	**199,314**	**221,182**	**221,182**
Total		**356,727**	**361,933**	**397,107**	**403,063**

[1] Total operations count is from FAA Air Traffic Activity System (January 2018-December 2018)
[2] Forecast operations interpolated (2025, 2030, 2035) and extrapolated (2045) Phoenix-Mesa Gateway Airport Master Plan Update approved by the Federal Aviation Administration on December 7, 2018.
[3] Existing air carrier fleet mix derived from 2018 landing reports
[4] Future fleet mix derived from *Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015, and project proponent.
Source: AEDT analysis by Coffman Associates, December 2019.

Time-of-Day

The time of day which aircraft operations occur is important as input to the AEDT due to the 10-decibel nighttime (10:00 p.m. to 7:00 a.m.) weighting of flights. In calculating airport noise exposure, one operation at night has the same noise emission value as 10 operations during the day by the same aircraft.

Time-of-day information was derived from *Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015. **Table B3** summarizes the nighttime operations assumptions for the DNL nighttime hours.

TABLE B3
DNL Nighttime Activity Percentages
Phoenix Mesa Gateway Airport

Operation Type	DNL Nighttime Percentage (Arrivals)	DNL Nighttime Percentage (Departures)
Itinerant – Air Carrier	20%	15%
Itinerant – Air Taxi	10%	10%
Itinerant – General Aviation	10%	10%
Itinerant – Military	10%	10%
Local – General Aviation	10%	10%
Local – Military	10%	10%

Source: Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions, November 2015.

Runway and Helipad Use

Runway use indicates the typical paths aircraft fly when arriving or departing from the airport. **Table B4** summarizes the runway use assumptions used in this analysis which are based on *Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015.

TABLE B4
Runway Use Percentages
Phoenix-Mesa Gateway Airport

Runway	Air Carrier	Air Taxi	General Aviation	Military	Local
Departures					
12R	25.8%	25.8%	25.8%	15.0%	17.7%
30L	29.7%	29.7%	29.7%	40.0%	26.8%
12C	3.8%	3.8%	3.8%	5.0%	2.8%
30C	32.0%	32.0%	32.0%	20.0%	46.4%
12L	1.2%	1.2%	1.2%	10.0%	1.0%
30R	7.5%	7.5%	7.5%	10.0%	5.3%
Arrivals					
12R	11.6%	11.6%	11.6%	11.6%	-
30L	28.7%	28.7%	28.7%	28.7%	-
12C	1.4%	1.4%	1.4%	1.4%	-
30C	49.4%	49.4%	49.4%	49.4%	-
12L	1.0%	1.0%	1.0%	1.0%	-
30R	7.9%	7.9%	7.9%	7.9%	-

Source: *Source: Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015 and Coffman Associates analysis

Flight Tracks

Flight patterns can be categorized within the following types: arrivals, departures, and local or touch-and-go. Arrivals and departures correspond to itinerant traffic traveling to or from the airport, while local operations represent those operations conducted within the local traffic pattern. The touch-and-go nomenclature refers to an aircraft landing briefly on the runway and then resuming flight. Pilots use this technique to practice landings or other procedures. These paths are included in the model to indicate where each aircraft type operates.
The AEDT arrival, departure, and local flight tracks and operations distribution for this report are based on the flight tracks included in *Phoenix -Mesa Gateway Airport, Airport Land Use Compatibility Plan Update Briefing Paper 2 – Noise Exposure and Potential Noise Policy Revisions*, November 2015.

Flight Profiles

The standard arrival profile used in the AEDT program is a three-degree approach. No indication was given by airport staff that there was any variation on this standard procedure for civilian aircraft. Therefore, the standard approach was included in the model as representative of local operating conditions.

AIR POLLUTANT EMISSIONS

Air quality in a given location is described by the concentrations of various pollutants in the atmosphere. For Criteria Pollutants, the significance of a pollutant concentration is determined by comparing it to the federal and state ambient air quality standards. The Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), sulphur dioxide (SO_2), ozone (O_3), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). Based upon both federal and state air quality standards, a specific geographic area can be classified under the federal and state *Clean Air Act* (CAA) as either being an “attainment,” “non-attainment,” or “maintenance” area for each criteria pollutant. The criterion for non-attainment designation varies by pollutant.

Air quality analyses are not required by FAA as part of the airport master planning process; therefore, this information is presented for informational purposes only. In addition to noise modeling, AEDT may also be used to calculate air pollutant emissions related to aircraft operations. Using the aircraft operational assumptions described for the noise exposure contours, air pollutant emissions were calculated for the Proposed Action and No Action alternatives and summarized in Chapter Four.

GREENHOUSE GAS EMISSIONS (GHGs)

Increasing concentrations of GHGs in the atmosphere are thought to cause global climate change, a phenomenon that can also have local impacts (IPCC 2014; U.S. Global Change Research Program 2009). Scientific measurements show that Earth’s climate is warming; concurrent atmospheric events include warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events.

In addition, research has shown there is a direct correlation between fuel combustion and GHG emissions (U.S. EPA 2009). As outlined in FAA's *Aviation Emissions and Air Quality Handbook* (FAA 2015b: p. 15), "GHG emissions associated with aviation are principally in the form of CO_2 and are generated by aircraft, APUs (auxiliary power units), ground support equipment (GSE), motor vehicles, and an assortment of stationary sources. For the most part, CO_2 emissions from these sources arise from the combustion of fossil fuels (e.g., jet fuel, Avgas, diesel, gasoline, and compressed natural gas [CNG]) and are emitted as by-products contained in the engine exhausts. Other GHGs associated with airport operations include CH_4 and N_2O, water vapor (H_2O), soot, and sulfates - but are emitted by airports to a far lesser extent than CO_2. Emissions of HFCs (hydrofluorocarbons), PFCs (perfluorinated chemicals), and SF_6 (sulfur hexafluoride) are most commonly linked with refrigeration, air conditioning, and other coolants."

In terms of U.S. contributions, the U.S. Government Accountability Office (GAO) reports that "domestic aviation contributes about 3 percent of total carbon dioxide emissions, according to EPA data," compared with other industrial sources, including the remainder of the transportation sector (20 percent) and power generation (41 percent) (U.S. GAO 2009). The International Civil Aviation Organization (ICAO) also estimates that GHG emissions from aircraft account for roughly three percent of all anthropogenic GHG emissions globally (ICAO 2010).

As previously discussed, FAA's AEDT was used to calculate existing and future airport emissions. GHG emissions associated with the Proposed Action and No Action are summarized in Chapter Four.

SKYBRIDGE ARIZONA

Appendix C

UNITED STATES FISH AND WILDLIFE SERVICE INFORMATION FOR PLANNING AND CONSULTATION (IPAC) LIST

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
Phone: (602) 242-0210 Fax: (602) 242-2513
http://www.fws.gov/southwest/es/arizona/
http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html

In Reply Refer To: December 10, 2018
Consultation Code: 02EAAZ00-2019-SLI-0221
Event Code: 02EAAZ00-2019-E-00503
Project Name: Skybridge AZ Business Park

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The Fish and Wildlife Service (Service) is providing this list under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). The list you have generated identifies threatened, endangered, proposed, and candidate species, and designated and proposed critical habitat, that may occur within one or more delineated United States Geological Survey 7.5 minute quadrangles with which your project polygon intersects. Each quadrangle covers, at minimum, 49 square miles. In some cases, a species does not currently occur within a quadrangle but occurs nearby and could be affected by a project. Please refer to the species information links found at:
http://www.fws.gov/southwest/es/arizona/Docs_Species.htm
http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf .

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to consult with us if their projects may affect federally listed species and/or designated critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, we recommend preparing a biological evaluation similar to a Biological Assessment to determine whether the project may

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If the Federal action agency determines that listed species or critical habitat may be affected by a federally funded, permitted or authorized activity, the agency must consult with us pursuant to 50 CFR 402. Note that a "may affect" determination includes effects that may not be adverse and that may be beneficial, insignificant, or discountable. You should request consultation with us even if only one individual or habitat segment may be affected. The effects analysis should include the entire action area, which often extends well outside the project boundary or "footprint." For example, projects that involve streams and river systems should consider downstream effects. If the Federal action agency determines that the action may jeopardize a proposed species or adversely modify proposed critical habitat, the agency must enter into a section 7 conference. The agency may choose to confer with us on an action that may affect proposed species or critical habitat.
Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend considering them in the planning process in the event they become proposed or listed prior to project completion. More information on the regulations (50 CFR 402) and procedures for section 7 consultation, including the role of permit or license applicants, can be found in our Endangered Species Consultation Handbook at:
http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

We also advise you to consider species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668 et seq.). The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when authorized by the Service. The Eagle Act prohibits anyone, without a permit, from taking (including disturbing) eagles, and their parts, nests, or eggs. Currently 1026 species of birds are protected by the MBTA, including species such as the western burrowing owl (Athene cunicularia hypugea). Protected western burrowing owls are often found in urban areas and may use their nest/burrows year-round; destruction of the burrow may result in the unpermitted take of the owl or their eggs.

If a bald eagle (or golden eagle) nest occurs in or near the proposed project area, you should evaluate your project to determine whether it is likely to disturb or harm eagles. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles:
https://www.fws.gov/migratorybirds/pdf/management/
nationalbaldeaglenanagementguidelines.pdf
https://www.fws.gov/birds/management/managed-species/eagle-management.php.

The Division of Migratory Birds (505/248-7882) administers and issues permits under the MBTA and Eagle Act, while our office can provide guidance and Technical Assistance. For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following: https://www.fws.gov/birds/policies-and-regulations/incidental-take.php. Guidance for minimizing impacts to migratory birds for communication tower projects (e.g. cellular, digital

television, radio, and emergency broadcast) can be found at: https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

Activities that involve streams (including intermittent streams) and/or wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We recommend that you contact the Corps to determine their interest in proposed projects in these areas. For activities within a National Wildlife Refuge, we recommend that you contact refuge staff for specific information about refuge resources.
If your action is on tribal land or has implications for off-reservation tribal interests, we encourage you to contact the tribe(s) and the Bureau of Indian Affairs (BIA) to discuss potential tribal concerns, and to invite any affected tribe and the BIA to participate in the section 7 consultation. In keeping with our tribal trust responsibility, we will notify tribes that may be affected by proposed actions when section 7 consultation is initiated.

We also recommend you seek additional information and coordinate your project with the Arizona Game and Fish Department. Information on known species detections, special status species, and Arizona species of greatest conservation need, such as the western burrowing owl and the Sonoran desert tortoise (Gopherus morafkai) can be found by using their Online Environmental Review Tool, administered through the Heritage Data Management System and Project Evaluation Program https://www.azgfd.com/Wildlife/HeritageFund/.

For additional communications regarding this project, please refer to the consultation Tracking Number in the header of this letter. We appreciate your concern for threatened and endangered species. If we may be of further assistance, please contact our following offices for projects in these areas:

Northern Arizona: Flagstaff Office 928/556-2001
Central Arizona: Phoenix office 602/242-0210
Southern Arizona: Tucson Office 520/670-6144

Sincerely,
/s/ Steven L. Spangle Field Supervisor

Attachment

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
(602) 242-0210

Project Summary

Consultation Code: 02EAAZ00-2019-SLI-0221

Event Code: 02EAAZ00-2019-E-00503

Project Name: Skybridge AZ Business Park

Project Type: DEVELOPMENT

Project Description: Phoenix-Mesa Gateway Airport is proposing to develop a 358-acre Skybridge AZ Business Park in Mesa, Maricopa County, Arizona. Although it is a non-aeronautical project, the FAA still requires approval and a NEPA process; thus, SWCA is preparing a Biological Resources Study report for the project.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/33.27640141344745N112.7678457265711W

Counties: Maricopa, AZ

Endangered Species Act Species

There is a total of 18 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Ocelot *Leopardus (=Felis) pardalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4474	Endangered
Sonoran Pronghorn *Antilocapra americana sonoriensis* Population: U.S.A. (AZ), Mexico No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4750	Experimental Population, Non-Essential
Sonoran Pronghorn *Antilocapra americana sonoriensis* Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4750	Endangered

Birds

NAME	STATUS
California Least Tern *Sterna antillarum browni*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	
Mexican Spotted Owl *Strix occidentalis lucida*	Threatened
There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/129/office/22410.pdf	
Southwestern Willow Flycatcher *Empidonax traillii extimus*	Endangered
There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	
Yellow-billed Cuckoo *Coccyzus americanus*	Threatened
Population: Western U.S. DPS There is **proposed** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	
Yuma Clapper Rail *Rallus longirostris yumanensis*	Endangered
No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3505	

Fishes

NAME	STATUS
Colorado Pikeminnow (=squawfish) *Ptychocheilus lucius* Population: Salt and Verde R. drainages, AZ No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3531	Experimental Population, Non-Essential
Desert Pupfish *Cyprinodon macularius* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7003	Endangered
Gila Topminnow (incl. Yaqui) *Poeciliopsis occidentalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1116	Endangered
Razorback Sucker *Xyrauchen texanus* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/530	Endangered
Spikedace *Meda fulgida* There is **final** critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6493	Endangered
Woundfin *Plagopterus argentissimus* Population: Gila R. drainage, AZ, NM No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/49	Experimental Population, Non-Essential

Flowering Plants

NAME	STATUS
Acuna Cactus *Echinomastus erectocentrus var. acunensis* There is **final** critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5785	Endangered
Arizona Cliffrose *Purshia (=Cowania) subintegra* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/866	Endangered
Arizona Hedgehog Cactus *Echinocereus triglochidiatus var. arizonicus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1702	Endangered
Nichol's Turk's Head Cactus *Echinocactus horizonthalonius var. nicholii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5343	Endangered

Critical habitats

There are 5 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Acuna Cactus *Echinomastus erectocentrus var. acunensis* https://ecos.fws.gov/ecp/species/5785#crithab	Final
Mexican Spotted Owl *Strix occidentalis lucida* https://ecos.fws.gov/ecp/species/8196#crithab	Final
Razorback Sucker *Xyrauchen texanus* https://ecos.fws.gov/ecp/species/530#crithab	Final
Southwestern Willow Flycatcher *Empidonax traillii extimus* https://ecos.fws.gov/ecp/species/6749#crithab	Final
Yellow-billed Cuckoo *Coccyzus americanus* https://ecos.fws.gov/ecp/species/3911#crithab	Proposed

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SkyBridge Arizona

Appendix D

STATE HISTORIC PRESERVATION OFFICE (SHPO) SECTION 106 AND TRIBAL CONSULTATION

2018-1943 (147283)

U.S. Department of Transportation
Federal Aviation Administration

Western-Pacific Region
Airports Division
Phoenix Airports District Office

3800 N. Central Avenue
Suite 1025, 10th Floor
Phoenix, AZ 85012

February 26, 2019

Kathryn Leonard
State Historic Preservation Officer
Arizona State Parks
1100 West Washington Street
Phoenix, AZ 85007

RE: Proposed SkyBridge Arizona Business Park
Phoenix-Mesa Gateway Airport, Mesa, Maricopa County, Arizona
Section 106 Consultation- ***"No Historic Properties Affected"***

Dear Ms. Leonard:

The Phoenix-Mesa Gateway Airport Authority (PMGAA), in cooperation with the Federal Aviation Administration (FAA), is proposing to develop approximately 352.8 acres of undeveloped land, known as SkyBridge Arizona, in southwestern part of the Phoenix-Mesa Gateway Airport (Airport). The proposed development would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility, air cargo hub, aerospace and auto parts, food processing, e-commerce, office/research and development, retail and hotels. As the proposed project will require the FAA approval of the Airport Layout Plan change, it constitutes a federal undertaking subject to review under Section 106 of the National Historic Preservation Act as amended, and its implementing regulations, 36 CFR Part 800.

The FAA has conducted Government-to-Government consultation with five Native American Tribes: Hopi Tribe, Tohono O'odham Nation, Salt River Pima-Maricopa Indian Community, Ak-Chin Indian Community, and the Gila River Indian Community (see attached). No responses or comments from Native American Tribes have been received by the FAA for the proposed undertaking.

The proposed undertaking includes the following aeronautical and non-aeronautical elements:

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas;
- Construct nine hangars (approximately 1.33 million square feet (sf) of hangar space);
- Construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of Research and Development and 70,000 sf of hotel and retail development. Building heights would vary from 40 to 120 feet.
- Construct onsite roads, vehicular parking, and associated extension of utility infrastructure and four onsite detention basins (see attached project exhibits).

To account for potential direct and indirect effects, the FAA defines the area of potential effect (APE) to encompass a total of 443-acre area within the Airport property; 352.8 acres of this total is the direct APE which consists of the project area (see attached exhibit). A 2018 cultural survey conducted for the APE by SWCA identified two previously recorded archeological sites (Hohokam artifact scatter and features), AZ U:10:60(ASM) and AZ U:10:69(ASM), and 10 historic-era buildings/structures (see Table 3 of the attached report). AZ U:10:60(ASM) was removed from the National Register of Historic Places (NRHP) in 2008 after several phases of archeological testing and data recovery. AZ U:10:69(ASM) remains listed in the NRHP because of small portions of the site, outside of the APE, are known to contain buried archeological deposits. A small portion of this site within the APE was determined in 2002 to be non-contributing to the site's NRHP status due to numerous archeological testing and data recovery. No additional archeological treatment is recommended for the two archeological sites within the APE.

Ten historic-era buildings/structures are located within the undertaking's APE: three abandoned structures and seven in-use buildings (see Table 3 of the attached report). Seven of these properties were previously recoded and determined ineligible as the results of the previous projects. Three of these properties, Building 533, Structure 1051, and Structure 1054, constructed between 1958 and 1969, are newly recorded properties. These properties were constructed after 1945 and are not associated with Williams Field as a World War II training and defense airfield. Further, these properties are not eligible to a post-World War II, Cold War-era historic district due to facilities alternation and/or removal following the closure of the Williams Air Force Base. These properties are also not individual eligible as they are of utilitarian design that favors function over form (see attached report for additional information). Based on the above, there are no listed or eligible NRHP properties within the APE, the FAA has made a finding of "***no historic properties affected***" for this undertaking. If previous undocumented cultural materials are encountered during construction, work shall cease immediately at that location and FAA and SHPO will be notified as soon as possible to determine the appropriate course of action.

Please review the information provided in this letter, attached project exhibits, and the survey report. If you agree with the above determinations, please respond with a concurrence. Should you have any questions or require additional information, please contact me at (602) 792-1066 or email dee.phan@faa.gov.

Sincerely,

Dee Phan

Dee Phan
Environmental Protection Specialist

CONCUR

27 FEB 19

Arizona State Historic Preservation Office

Attachments

Copy (by email): David Jacobs, Compliance Specialist, State Historic Preservation Office

U.S Department
of Transportation

**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports

Federal Aviation Administration
777 So. Aviation Blvd. Suite 150
El Segundo, CA 90245

JAN - 9 2019

Robert Miguel
Chairman
Ak-Chin Indian Community
42507 West Peters & Nall Road
Maricopa, AZ 85138

Proposed SkyBridge Arizona Business Park,
Phoenix-Mesa Gateway Airport,
Mesa, Maricopa County, Arizona
Government-to-Government Consultation Initiation

Dear Chairman Miguel:

Government-to-Government Consultation Initiation

The Federal Aviation Administration (FAA) and the Phoenix-Mesa Gateway Airport Authority (PMGAA) are preparing an Environmental Assessment (EA) evaluating the potential environmental effects resulting from the proposed development of approximately 352.8 acres of undeveloped land located in the southwestern part of the Phoenix-Mesa Gateway Airport (Airport). The proposed project, known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.- Mexico Customs inspection facility and air cargo hub, and consists of both aeronautical and non-aeronautical land uses. The FAA is the lead Federal Agency for Government-to-Government consultation for the proposed project. Tribal sovereignty, culture, traditional values and customs will be respected at all times during the consultation process.

Purpose of Government-to-Government Consultation

The primary purpose of Government-to-Government consultation, as described in Federal Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, and FAA Order 1210.20, *American Indian and Alaska Native Tribal Consultation Policy and Procedures*, is to ensure that Federally Recognized Tribes are given the opportunity to provide meaningful and timely input regarding proposed FAA actions that uniquely or significantly affect the Tribes. I am the FAA Official with the responsibility of coordinating Government-to-Government consultations with Tribes under FAA Order 1210.20.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to proposed airport improvements. Early identification of Tribal concerns, or known properties of traditional, religious, and cultural importance, will allow the FAA to consider ways to avoid or minimize potential impacts to Tribal

resources as project planning and alternatives are developed and refined. We are available to discuss the details of the proposed project with you.

Project Information

The PMGAA is proposing to develop approximately 352.8 acres of undeveloped land, known as SkyBridge Arizona, in southwestern part of the Airport. The proposed development would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility, air cargo hub, aerospace and auto parts, food processing, e-commerce, office/research and development, retail and hotels. The proposed project includes the following aeronautical and non-aeronautical elements:

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas;
- Construct nine hangars (approximately 1.33 million square feet (sf) of hangar space);
- Construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of Research and Development and 70,000 sf of hotel and retail development. Building heights would vary from 40 to 120 feet.
- Construct onsite roads, vehicular parking, and associated extension of utility infrastructure and four onsite detention basins.

Enclosed please find four (4) exhibits depicting the Project Location and Area of Potential Effects to help illustrate the proposed undertaking.

Confidentiality

We understand that you may have concerns about the confidentiality of information on areas or resources of traditional, religious, and cultural importance to your Tribe. We are available to discuss these concerns and develop procedures to ensure the confidentiality of such information is maintained.

FAA Contact Information

Your timely response within 30-days of receipt of this correspondence will greatly assist us in incorporating your concerns into project planning. If you wish to provide comments related to this proposed project, please contact Ms. Dee Phan, Environmental Protection Specialist, at 602-792-1066 or by email at dee.phan@faa.gov. Please feel free to contact me directly at 424-405-7300 or mark.mcclardy@faa.gov.

Sincerely,

for Mark A. McClardy
Director, Office of Airports
Western-Pacific Region

Enclosures

U.S Department
of Transportation

**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports

Federal Aviation Administration
777 So. Aviation Blvd. Suite 150
El Segundo, CA 90245

JAN - 9 2019

Martin Harvier
President
Salt River Pima-Maricopa Indian Community
10005 East Osborn Road
Scottsdale, AZ 85256

Proposed SkyBridge Arizona Business Park,
Phoenix-Mesa Gateway Airport,
Mesa, Maricopa County, Arizona
Government-to-Government Consultation Initiation

Dear President Harvier:

Government-to-Government Consultation Initiation

The Federal Aviation Administration (FAA) and the Phoenix-Mesa Gateway Airport Authority (PMGAA) are preparing an Environmental Assessment (EA) evaluating the potential environmental effects resulting from the proposed development of approximately 352.8 acres of undeveloped land located in the southwestern part of the Phoenix-Mesa Gateway Airport (Airport). The proposed project, known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.- Mexico Customs inspection facility and air cargo hub, and consists of both aeronautical and non-aeronautical land uses. The FAA is the lead Federal Agency for Government-to-Government consultation for the proposed project. Tribal sovereignty, culture, traditional values and customs will be respected at all times during the consultation process.

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The primary purpose of Government-to-Government consultation, as described in Federal Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments*, and FAA Order 1210.20, *American Indian and Alaska Native Tribal Consultation Policy and Procedures*, is to ensure that Federally Recognized Tribes are given the opportunity to provide meaningful and timely input regarding proposed FAA actions that uniquely or significantly affect the Tribes. I am the FAA Official with the responsibility of coordinating Government-to-Government consultations with Tribes under FAA Order 1210.20.

Consultation Initiation

With this letter, the FAA is seeking input on concerns that uniquely or significantly affect your Tribe related to proposed airport improvements. Early identification of Tribal concerns, or known properties of traditional, religious, and cultural importance, will allow the FAA to consider ways to avoid or minimize potential impacts to Tribal

resources as project planning and alternatives are developed and refined. We are available to discuss the details of the proposed project with you.

Project Information

The PMGAA is proposing to develop approximately 352.8 acres of undeveloped land, known as SkyBridge Arizona, in southwestern part of the Airport. The proposed development would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility, air cargo hub, aerospace and auto parts, food processing, e-commerce, office/research and development, retail and hotels. The proposed project includes the following aeronautical and non-aeronautical elements:

- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
- Construct approximately 277,330 square yards of ramp outside of the Taxilane L and Taxiway A object free areas;
- Construct nine hangars (approximately 1.33 million square feet (sf) of hangar space);
- Construct approximately 2.34 million sf of non-aeronautical development, including 200,000 sf of Research and Development and 70,000 sf of hotel and retail development. Building heights would vary from 40 to 120 feet.
- Construct onsite roads, vehicular parking, and associated extension of utility infrastructure and four onsite detention basins.

Enclosed please find four (4) exhibits depicting the Project Location and Area of Potential Effects to help illustrate the proposed undertaking.

Confidentiality

We understand that you may have concerns about the confidentiality of information on areas or resources of traditional, religious, and cultural importance to your Tribe. We are available to discuss these concerns and develop procedures to ensure the confidentiality of such information is maintained.

FAA Contact Information

Your timely response within 30-days of receipt of this correspondence will greatly assist us in incorporating your concerns into project planning. If you wish to provide comments related to this proposed project, please contact Ms. Dee Phan, Environmental Protection Specialist, at 602-792-1066 or by email at dee.phan@faa.gov. Please feel free to contact me directly at 424-405-7300 or mark.mcclardy@faa.gov.

Sincerely,

for Mark A. McClardy
Director, Office of Airports
Western-Pacific Region

Enclosures

U.S Department
of Transportation

**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports

Federal Aviation Administration
777 So. Aviation Blvd. Suite 150
El Segundo, CA 90245

JAN - 9 2019

Timothy L. Nuvangyaoma
Chairman
Hopi Tribe
P.O. Box 123
Sells, AZ 85634

Proposed SkyBridge Arizona Business Park,
Phoenix-Mesa Gateway Airport,
Mesa, Maricopa County, Arizona
Government-to-Government Consultation Initiation

Dear Chairman Nuvangyaoma:

Government-to-Government Consultation Initiation

The Federal Aviation Administration (FAA) and the Phoenix-Mesa Gateway Airport Authority (PMGAA) are preparing an Environmental Assessment (EA) evaluating the potential environmental effects resulting from the proposed development of approximately 352.8 acres of undeveloped land located in the southwestern part of the Phoenix-Mesa Gateway Airport (Airport). The proposed project, known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.- Mexico Customs inspection facility and air cargo hub, and consists of both aeronautical and non-aeronautical land uses. The FAA is the lead Federal Agency for Government-to-Government consultation for the proposed project. Tribal sovereignty, culture, traditional values and customs will be respected at all times during the consultation process.

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The PMGAA is proposing to develop approximately 352.8 acres of undeveloped land, known as SkyBridge Arizona, in southwestern part of the Airport. The proposed development would be a mixed-use development that includes a joint U.S.-Mexico Customs inspection facility, air cargo hub, aerospace and auto parts, food processing, e-commerce, office/research and development, retail and hotels. The proposed project includes the following aeronautical and non-aeronautical elements:

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Sincerely,

for Mark A. McClardy
Director, Office of Airports
Western-Pacific Region

Enclosures

U.S Department
of Transportation

**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports

Federal Aviation Administration
777 So. Aviation Blvd. Suite 150
El Segundo, CA 90245

JAN – 9 2019

Stephen Roe Lewis
Governor
Gila River Indian Community
P.O. Box 97
Sacaton, AZ 851047

Proposed SkyBridge Arizona Business Park,
Phoenix-Mesa Gateway Airport,
Mesa, Maricopa County, Arizona
Government-to-Government Consultation Initiation

Dear Governor Lewis:

Government-to-Government Consultation Initiation

The Federal Aviation Administration (FAA) and the Phoenix-Mesa Gateway Airport Authority (PMGAA) are preparing an Environmental Assessment (EA) evaluating the potential environmental effects resulting from the proposed development of approximately 352.8 acres of undeveloped land located in the southwestern part of the Phoenix-Mesa Gateway Airport (Airport). The proposed project, known as SkyBridge Arizona, would be a mixed-use development that includes a joint U.S.- Mexico Customs inspection facility and air cargo hub, and consists of both aeronautical and non-aeronautical land uses. The FAA is the lead Federal Agency for Government-to-Government consultation for the proposed project. Tribal sovereignty, culture, traditional values and customs will be respected at all times during the consultation process.

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Sincerely,

for Mark A. McClardy
Director, Office of Airports
Western-Pacific Region

Enclosures

U.S Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Office of Airports

Federal Aviation Administration
777 So. Aviation Blvd. Suite 150
El Segundo, CA 90245

JAN – 9 2019

Edward D. Manuel
Chairman
Tohono O'odham Nation
P.O. Box 837
Sells, AZ 85634

Proposed SkyBridge Arizona Business Park,
Phoenix-Mesa Gateway Airport,
Mesa, Maricopa County, Arizona
Government-to-Government Consultation Initiation

Dear Chairman Manuel:

Government-to-Government Consultation Initiation

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resources as project planning and alternatives are developed and refined. We are available to discuss the details of the proposed project with you.

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- Construct a 75-foot-wide by 2,545-foot-long taxilane (Taxilane L) southwest from Taxiway A;
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Sincerely,

for Mark A. McClardy
Director, Office of Airports
Western-Pacific Region

Enclosures

SKYBRIDGE ARIZONA

Appendix E

LAND ASSURANCE LETTER

PHOENIX-MESA GATEWAY AIRPORT AUTHORITY
5835 SOUTH SOSSAMAN ROAD
MESA, ARIZONA 85212-6014

PHONE (480) 988 7600
FAX (480) 988 2315

March 11, 2019

Mr. Mike Williams
Manager, Phoenix Airports District Office
Federal Aviation Administration
3800 N. Central Avenue
Suite 1025
Phoenix, AZ 85012

SUBJECT: LAND USE ASSURANCE LETTER-SKYBRIDGE ARIZONA BUSINESS PARK ENVIRONMENTAL ASSESSMENT.

Dear Mike,

The Phoenix-Mesa Gateway Airport Authority (PMGAA), a Joint Powers Authority representing the Cities of Mesa, Phoenix, and Apache Junction, the Towns of Queen Creek and Gilbert, and the Gila River Indian Community, makes the following statement of land use assurance as required by Section 511(a)(5) of the Airport and Airway Improvement Act of 1982, as amended.

Phoenix-Mesa Gateway Airport (IWA) is physically located within the City of Mesa, Arizona, which has the authority to regulate and control land use and zoning within the City of Mesa municipal boundaries. IWA is bordered by the Town of Gilbert to the west, the Town of Queen Creek to the south. Areas of unincorporated Maricopa County remain to the north and east, but are within the City of Mesa's planning area for future land use authority. The City of Apache Junction lies further to the east.

PMGAA provides assurance that appropriate action has been and will be taken, to the extent reasonable, to restrict the use of land under PMGAA ownership and control to activities and purposes compatible with normal airport operations, both existing and in the future. Moreover, within the municipal limits of the City of Mesa, the height and location of structures and natural objects within the vicinity of IWA are regulated by ordinances described within the Mesa City Code. Chapter 19 of the Mesa Zoning Ordinance includes Airfield Overlay District maps and regulations relating to permitted land uses within these districts. The Towns of Gilbert and Queen Creek have similar overlays based on boundaries established in the 1996 Williams Regional Planning Study and updated with the 2000 Part 150 Study. Unincorporated areas of Maricopa County bordering the airport to the east also have Airport District Zoning in place that provides land use protections.

PMGAA works with the municipalities having jurisdiction over land adjacent to, or in the immediate vicinity, of IWA and encourages the adoption of zoning laws, to the extent

reasonable, to restrict the land uses in these areas to activities and purposes compatible with airport operations. PMGAA is involved with neighboring communities and municipalities in coordinating and promoting compatible land uses as evidenced by Part 150 noise mitigation efforts. PMGAA is committed to ensuring land use compatibility with the area surrounding IWA and proposed land use developments are routed for airport review in neighboring communities as it affects IWA.

Sincerely,

J. Brian O'Neill, A.A.E
Executive Director/CEO

Appendix F

NOTICE OF AVAILABILITY OF DRAFT ENVIRONMENTAL ASSESSMENT AND COMMENTS RECEIVED

APPENDIX F
PHOENIX-MESA GATEWAY AIRPORT
AGENCY CONTACT LIST

The following agencies were provided a Notice of Availability containing a link to the Draft Environmental Assessment and notification of the agency and public review period.

FEDERAL

Mr. Todd Solem, State Environmental Coordinator
United States (U.S.) Department of Agriculture - Natural Resources Conservation Service
230 N. First Avenue, Suite 509
Phoenix, AZ 85003

Mr. Alan Hansen, Team Leader
U.S. Department of Transportation Federal Highway Administration - Arizona Division - Planning, Environmental, Air Quality, Realty, and Civil Rights (PEARC) Team
4000 N. Central Avenue, Suite 1500
Phoenix, AZ 85012

Mr. Rocky Gilbert, OSC1, Deputy Fire Staff Officer
U.S. Forest Service
Tonto National Forest, Phoenix Interagency Fire Center
6335 S. Downwind Circle
Mesa, AZ 85212

STATE

Mr. Daniel Czecholinska, Director
Arizona Department of Environmental Quality (ADEQ) - Air Quality Division
1110 W. Washington St.
Phoenix, AZ 85007

Ms. Laura Malone, Director
ADEQ Waste Programs Division
1110 W. Washington St.
Phoenix, AZ 85007

Mr. Trevor Baggiore, Deputy Director
ADEQ Water Quality Division
1110 W. Washington St.
Phoenix, AZ 85007

Mr. Don Kriz, P.E., Aeronautics Group Manager
Arizona Department of Transportation
1801 W. Jefferson St., Mail Drop 426M
Phoenix, AZ 85007

Mr. Carlos Lopez
Project Manager for the North South Corridor Study
Arizona Department of Transportation
CLopez@azdot.gov

Mr. Thomas Buschatzke, Director
Arizona Department of Water Resources
1110 W. Washington Street, Suite 310
Phoenix, AZ 85007

Ms. Cheri Boucher, Project Evaluation Specialist
Arizona Game and Fish Department - WMHB-PEP
5000 W. Carefree Hwy
Phoenix, AZ 85086-5000

Ms. Lisa Atkins, Commissioner
Arizona State Land Department
1616 W. Adams
Phoenix, AZ 85007

Ms. Latonja West, Real Estate Manager
Arizona State University (ASU) - University Real Estate Development
ASU Tempe Campus, Mail Code 3908
Tempe, AZ 85281

REGIONAL/LOCAL

Mr. Bryant Powell, City Manager
Apache Junction
300 E. Superstition Blvd.
Apache Junction, AZ 85119

Mr. Chris Brady, City Manager
City of Mesa
P.O. Box 1466
Mesa, Az 85211

Mr. Jim Bennett, Aviation Director
City of Phoenix
2485 E. Buckeye Road
Phoenix, AZ 85034

Mr. Jordan Feld, CM, AICP
Deputy Aviation Director – Planning and Environmental
City of Phoenix
2485 E. Buckeye Road
Phoenix, AZ 85034

Mr. Eric Anderson, Executive Director
Maricopa Association of Governments
302 N. 1st Ave., Suite 300
Phoenix, AZ 85003

Mr. Tim Strow, Transportation Policy and Planning Director
Maricopa Association of Governments
302 N. 1st Ave., Suite 200
Phoenix, AZ 85003

Mr. Alfred Erives, Division Manager
Maricopa County Department of Transportation (MCDOT)
2901 W. Durango
Phoenix, AZ 85009

Mr. Joe Pinto, Environmental Program Environmental Program Branch Manager
Maricopa County Department of Transportation (MCDOT)
2901 W. Durango
Phoenix, AZ 85009

Mr. Scott Vogel, Chief Engineer & General Manager
Maricopa County Flood Control District
2801 W. Durango St.
Phoenix, AZ 85009

Mr. Don Rerick, P.E.
Manager
Maricopa County Flood Control District Planning and Project Management Division
2801 W. Durango St.
Phoenix, AZ 85009

Ms. Jennifer Pokorski, Director
Maricopa County - Planning & Development Department
501 N. 44th St., Suite 200
Phoenix, AZ 85008

Mr. Himanshu Patel, Director
Pinal County Community Development
PO Box 2973
Florence, AZ 85132

Mr. Patrick Banger, Town Manager
Town of Gilbert
50 E. Civic Center Dr.
Gilbert, AZ 85296

Mr. John Kross, Town Manager
Town of Queen Creek
22350 S. Ellsworth Road
Queen Creek, AZ 85242

Phoenix-Mesa Gateway Airport Authority
5835 South Sossaman Road
Mesa, AZ 85212-6014
Phone (480) 988 7600
Fax (480) 988 2315

Notice of Availability of a Draft Environmental Assessment
for the Proposed SkyBridge AZ Business Park
at Phoenix-Mesa Gateway Airport

Pursuant to Title 49, United States Code, Section 47106(c)(1)(A), notice is hereby given that the Phoenix-Mesa Gateway Airport Authority (PMGAA) proposes to seek Federal Aviation Administration (FAA) approval of the Airport Layout Plan for the Phoenix-Mesa Gateway Airport for the proposed SkyBridge AZ Business Park project. FAA will also approve the proposed taxilane, ramp, and hangar uses. The proposed project is a mixed-use development that includes a joint United States (U.S.)-Mexico Customs inspection facility and air cargo hub and consists of both aeronautical and non-aeronautical land uses. Anticipated businesses include air cargo, aerospace and auto parts, food processing (dry goods and refrigerated products), e-commerce, office/research and development (R&D), retail, and a hotel.

A Draft Environmental Assessment (EA) has been prepared to evaluate the potential environmental impacts of the proposed action and has been prepared pursuant to the requirements of Section 102(2)(c) of the *National Environmental Policy Act* (NEPA), and Section 509(b)(5) of the *Airport and Airway Improvement Act of 1982*, as amended. The FAA is the Lead Agency to ensure compliance with NEPA for airport development actions. The Draft EA was prepared in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. Pursuant to the federal *Clean Water Act*, *Clean Air Act*, the *National Historic Preservation Act*, and the *Department of Transportation Act*, the Draft EA includes an analysis of prudent or feasible alternatives, potential impacts, and mitigation measures, as appropriate.

Beginning **January 27, 2020**, a copy of the Draft EA will be available for review at http://www.gatewayairport.com or at the following locations during normal business hours through **February 25, 2020:**

- Phoenix-Mesa Gateway Airport Authority, 5835 S. Sossaman Road, Mesa AZ 95212-0919
- FAA Phoenix Airports District Office, 3800 N. Central Avenue, Suite 1025, Phoenix, AZ 85012
- Mesa Main Library, 64 E. 1st Street, Mesa, AZ 85201
- Southeast Regional Library, 775 N. Greenfield Road, Gilbert, AZ 85234
- Queen Creek Library, 21802 S. Ellsworth Road, Queen Creek, AZ 85142

Any written comments on the Draft EA should be submitted to the following address:

Mr. Carl D'Acosta, Environmental and Safety Coordinator
Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, AZ 85212-0919
cdacosta@gatewayairport.com

The cutoff date for comment submission is not later than **5:00 PM – Mountain Standard Time, February 25, 2020.** Please allow enough time for mailing. All comments must be **received** by the deadline, not simply postmarked by that date.

Before including your name and telephone number, email, or other personal identifying information in your comment, be advised that your entire comment - including your personal identifying information - may be made publicly available at any time. While you can ask FAA in your comment to withhold from public review your personal identifying information, FAA cannot guarantee that it will be able to do so.

AFFP
NOA Notice 0120 final 4x4.86

Affidavit of Publication

STATE OF ARIZONA }
COUNTY OF MARICOPA } SS

Steve Strickbine, being duly sworn, says:

That he is Steve Strickbine of the East Valley Tribune, a weekly newspaper of general circulation, printed and published in Mesa, Maricopa County, Arizona; that the publication, a copy of which is attached hereto, was published in the said newspaper on the following dates:

January 26, 2020

That said newspaper was regularly issued and circulated on those dates.
SIGNED:

Steve Strickbine

Subscribed to and sworn to me this 26th day of January 2020.

Lori Dionisio, Office Manager, Maricopa County, Arizona

My commission expires: January 23, 2021

LORI DIONISIO
Notary Public – Arizona
Maricopa County
My Comm. Expires Jan 23, 2021

00006178 00027756

Carl J. D'Acosta, M.S. Environmental & Safety Coordi
Phoenix-Mesa Gateway Airport Authority
5835 S Sossaman Rd
MESA, AZ 85212

Notice of Availability of a Draft Environmental Assessment
for the Proposed SkyBridge
AZ Business Park at Phoenix-Mesa Gateway Airport
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Published: East Valley Tribune, Jan. 26, 2020 / 27756

Judi Krauss

From: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Sent: Monday, February 3, 2020 7:13 AM
To: Judi Krauss
Subject: FW: Sky Bridge AZ Draft EA

From: Don Rerick (FCD) [mailto:Don.Rerick@Maricopa.Gov]
Sent: Friday, January 31, 2020 7:26 AM
To: Carl D'Acosta <CD'Acosta@gatewayairport.com>
Cc: Don Rerick (FCD) <Don.Rerick@Maricopa.Gov>
Subject: Sky Bridge AZ Draft EA

Mr. D'Acosta,

We continue to have no concerns or issues with the subject project as it does not appear to have any impacts on FCD facilities. Our review back in December 2018 resulted in the same conclusion.

Thank you,

Don Rerick, P.E.
Manager
Planning and Project Management Division
Flood Control District of Maricopa County
2801 W Durango St, Phoenix, AZ 85009
(O) 602-506-4878 (C) 602-819-1639
djr@mail.maricopa.gov
www.fcd.maricopa.gov

How are we doing? Click here to leave your feedback.

USDA

United States Department of Agriculture

Mr. Carl D'Acosta
Environmental and Safety Coordinator
Phoenix-Mesa Gateway Airport Authority
5835 S. Sossaman Road
Mesa, Arizona 85212-0919

RE: Proposed Sky Bridge AZ Business Park at Phoenix-Mesa Gateway Airport

Dear Mr. D'Acosta:

The Natural Resources Conservation Service (NRCS) has reviewed your Notice of Availability of a draft Environmental Assessment for the Proposed SkyBridge AZ Business Park at Phoenix-Mesa Gateway Airport and acknowledge your request to determine whether your project has potential for environmental impacts that affect farmland as defined in Sec. (658.2 a) of the Code of Federal Regulations (CFR) dealing with the Farmland Protection Policy Act (FPPA).

The NRCS acts as the national Farmland Protection Policy Act (FPPA) steward in reviewing and documenting conversion of farmland (i.e., Prime, Statewide Importance, and /or Local Importance) to non-agricultural use when the project utilizes federal funds.

After reviewing your project proposal, the following is noted:

The proposed project is exempt in FPPA; therefore, no further action is needed.

If you have any questions, please contact D'andre Yancey at (602)-280-8817 or via email at DAndre.Yancey@usda.gov

Sincerely,

D'ANDRE YANCY
State Soil Scientist

Natural Resources Conservation Service
230 N. First Avenue, Suite 509, Phoenix, Arizona 85003-1733
Tel. (602) 280-8801 • Fax (855) 844-9178

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www.coffmanassociates.com

KANSAS CITY
(816) 524-3500

237 N.W. Blue Parkway
Suite 100
Lee's Summit, MO 64063

PHOENIX
(602) 993-6999

4835 E. Cactus Road
Suite 235
Scottsdale, AZ 85254