

# INTRODUCTION

The City of Glendale, Arizona, owns and operates Glendale Regional Airport (GEU). GEU is situated on 514 acres of property at an elevation of 1,071 feet above mean sea level (MSL) and is located approximately five miles west of downtown Glendale and 1.5 miles west of Loop 101. According to the FAA's National Plan of Integrated Airport Systems (NPIAS), GEU is classified as a Regional Reliever airport, supporting Phoenix Sky Harbor International Airport (PHX) and the Phoenix metropolitan area. In addition to its reliever capabilities, GEU offers a wide variety of general aviation activities, including (but not limited to) recreational flying, flight training, business aviation, and aviation maintenance services. With a 7,150-foot runway, GEU is capable of accommodating a large variety of aircraft, including large corporate jets. The airport experiences more than 125,000 annual operations and approximately 355 aircraft are based at the airport.

GEU serves as a vital infrastructure component that supports economic development and quality of life for residents in and around the City of Glendale and the region. This master plan process is being undertaken at GEU to provide the city with proper guidance for future development that will satisfy aviation demands while maintaining compatibility with the environment and communities that surround and support the airport.

## *WHAT IS A MASTER PLAN?*

An airport master plan is a comprehensive study of the airport and typically describes short-term, intermediate-term, and long-term plans for airport development. According to the FAA, the goal of a master plan is to provide the framework needed to guide future airport development that will cost-effectively satisfy aviation demand while considering potential environmental and socioeconomic impacts. The master plan establishes development objectives, provides for a 20-year planning period, and details the rationale for various study elements, including airfield configuration, facility development, on-airport land use recommendations, and support facilities. It also serves as a strategic tool for justifying the need for federal and state funding assistance.

The Federal Aviation Administration (FAA) recommends that airports update their long-term planning documents every seven to 10 years or as necessary to address local changes at the airport. The last master plan for GEU was completed in 2009 and an airport layout plan (ALP) update with narrative was completed in 2018. The City of Glendale, the sponsor of the airport, received an Airport Infrastructure Grant (AIG) under the *Infrastructure Investment and Jobs Act* (IIJA) to update the airport master plan. The grant requires the FAA to cover 95 percent of the project cost, with the Arizona Department of Transportation (ADOT) Aeronautics Group and the City of Glendale each covering 2.5 percent of the cost.

The master plan follows a systematic approach outlined by the FAA and is intended to be a proactive document that identifies and plans for future facility needs well in advance of each actual need. This is done to ensure the City of Glendale can coordinate project approvals, design, financing, and construction in a timely manner prior to experiencing the detrimental effects of deteriorating or inadequate facilities. An important outcome of the master plan process is a preferred development plan, which reserves sufficient areas for future facility needs. It should be noted that this master plan update has a specific objective of reexamining the recommended development direction of the previous master plan and subsequent planning efforts while incorporating subsequent changes where conditions and circumstances may have invalidated previous recommendations. Concepts that are still valid may be retained, while new concepts will be developed for alternatives that are no longer valid or are considered to be unacceptable or unworkable. Overall, the intended outcome of this study is a detailed airport land use concept that outlines specific uses for all areas of airport property, including strategies resulting from the previously mentioned reexamination efforts.

The preparation of this master plan demonstrates that the City of Glendale recognizes the importance of the airport to the surrounding region and the associated challenges inherent in providing for its unique operating and improvement needs. The cost of maintaining an airport is an investment that yields impressive benefits to the local community. With a sound and realistic master plan, GEU can maintain its role as an important link to the regional, state, and national air transportation systems. Moreover, the plan aids in supporting decisions for directing limited and valuable city resources for future airport development. The continued investments in the airport will ultimately allow the city to reap the economic benefits generated by historical investments.

Some common questions regarding what a master plan is and is not are answered in the following graphic.

**AN AIRPORT MASTER PLAN IS…**

- A comprehensive, long-range study of the airport and all air and landside components, that describes plans to meet FAA safety standards and future aviation demand.
- Required by the FAA to be conducted every 7-10 years to ensure plans are up to date and reflect current conditions and FAA regulations.
- Funded 95% by an *Infrastructure Investment and Jobs Act* (IIJA) grant derived from the FAA Airport Infrastructure Grant (AIG) program. The remaining 5% is split evenly between the City of Glendale and the ADOT Aeronautics Group.
- A local document that will ultimately be presented for approval from the City of Glendale. The FAA approves only two elements of the master plan: the aviation demand forecasts and the airport layout plan (ALP) drawing set.
- An opportunity for airport stakeholders and the public to engage with airport staff on issues related to the airport, its current and future operations, and environmental and socioeconomic impacts. Three (3) public information workshops will be conducted during the master plan process to facilitate this public outreach effort.

**AN AIRPORT MASTER PLAN IS *NOT*…**

- A guarantee that the airport will proceed with any planned projects. Master plans are guides that help airport staff plan for future development; however, the need/demand for certain projects might never materialize.
- A guarantee that the City of Glendale, the FAA, or the ADOT Aeronautics Group will fund any planned projects. Project funding is considered on a case-by-case basis and requires appropriate need and demand. Certain projects may require the completion of a benefit-cost analysis.
- A binding or static plan. Elements of the master plan may be updated to reflect changes in aviation activity at the airport, the economic conditions of the region, or the goals of the City of Glendale.
- Environmental clearance for specific projects. The master plan includes an environmental overview, which identifies potential environmental sensitivities per *National Environmental Policy Act of 1969* (NEPA) guidelines. Most planned projects will require a separate environmental study prior to construction.

## *WHO IS PREPARING THE MASTER PLAN?*

The City of Glendale has contracted with Coffman Associates, a Pape-Dawson Company, to undertake the airport master plan. Coffman Associates is an airport consulting firm that specializes in master planning and environmental studies. Coffman Associates will serve as the prime consultant responsible for all aspects of the master plan, including airport planning, environmental analysis, land use planning, capital improvement planning, and the ALP update. Coffman Associates will lead the planning team, with support from the following firms:

- **Martinez Geospatial** will provide aerial photography, ground survey, and geographic information systems (GIS) products to meet FAA requirements for Airport Geographic Information Systems (AGIS) data submittal.
- **C&S Companies** will provide engineering support, primarily to develop cost estimates for airport development projects, analyze the New River re-channelization, and evaluate the potential for a self-service fuel facility.
- **SWCA Environmental Consultants** will provide environmental evaluations associated with a biological desktop review, a cultural resources survey, and an aquatic resources delineation.

- **Compass Rose Communications** will provide public outreach services and targeted stakeholder engagement in support of the study process.

- **Southwest GIS** will analyze the feasibility of enhanced instrument approach procedures and capabilities.

The airport master plan update will be prepared in accordance with FAA requirements, including Advisory Circular (AC) 150/5300-13B, *Airport Design*, Change 1, and AC 150/5070-6B, *Airport Master Plans*. The plan will be closely coordinated with other planning studies relevant to the area and with aviation plans developed by the FAA and ADOT Aeronautics Group. The plan will also be coordinated with the City of Glendale and other local and regional agencies, as appropriate.

## *GOALS, OBJECTIVES, AND ASSUMPTIONS*

The primary goal of this master plan is to establish a framework to guide future airport development that will cost-effectively satisfy aviation demand while accounting for potential environmental and socioeconomic impacts. Accomplishing this goal requires an evaluation of the existing airport to decide what actions should be taken to maintain a safe, adequate, and reliable facility. A long-range planning study also requires several baseline assumptions that will be used throughout the analysis. Specific objectives and assumptions for this study are as follows.

**OBJECTIVES**

- Follow FAA guidelines for development of an airport master plan.
- Reexamine the recommended development direction of the previous master plan and subsequent planning efforts while incorporating subsequent changes when conditions and circumstances may have invalidated previous recommendations.
- Research factors likely to affect air transportation demand segments at GEU and the regional area over the next 20 years, including the development of forecasts for based aircraft, aircraft operations, and other existing and potential demand segments.
- Determine projected needs of airport users for the next 20 years, taking into consideration recent revisions to FAA design standards, the airport's conformance requirements, and the impact of aircraft fleet transitions on design standards.
- Recommend improvements which will enhance the airport's ability to satisfy future aviation needs, taking into consideration the potential for increased traffic and the introduction of new demand segments.
- Recommend improvements that will enhance the landside area's ability to satisfy future aviation needs, taking into consideration the potential for commercial/charter services, advanced air mobility (AAM), and general aviation/air taxi needs. Consideration will also be given to non-aviation uses that can maximize airport revenue streams.
- Analyze the airfield system to determine the existing and ultimate runway and taxiway conditions, as well as safety areas and overall airfield geometry, based on FAA design criteria required to satisfy the airport's critical aircraft. This analysis will include future improvements necessary to aid in supporting forecasted demand.
- Produce current and accurate airport base maps, ALP drawings, and an Exhibit 'A' Airport Property Map consistent with FAA Standard Operating Procedures (SOPs) No. 2.00 and 3.00 and FAA AC 150/5300-13B, *Airport Design*.
- Review future use and zoning of airport property and approaches to each runway for future protection. This will involve the development of new noise exposure contours.
- Establish a schedule of development priorities and a program for improvements proposed in the master plan, consistent with the FAA's capital improvement program planning.
- Consider sustainability efforts, specifically waste and recycling improvements, as part of the FAA's updated standards.
- Evaluate/reevaluate declared distances and existing/ultimate airfield operating procedures.
- Develop productive public involvement throughout the planning process that includes the formulation of a planning advisory committee (PAC) and public information workshops.

**ASSUMPTIONS**

- GEU will continue to accommodate the diverse needs of general aviation users.
- This master plan is not a noise study.
- The aviation industry will develop through the planning period as projected by the FAA. Specifics of projected changes in national aviation industries will be described in Chapter Two.
- The socioeconomic characteristics of the region will generally change as forecast.
- A federal and state airport improvement program will be in place throughout the planning period to assist in funding future capital development needs.

## *MASTER PLAN ELEMENTS AND PROCESS*

The master plan includes 10 elements that are designed to assist in the evaluation of future facility needs and provide the supporting rationale for their implementation. **Exhibit iA** graphically depicts the study process.

**Element 1 – Study Initiation, Organization, and Project Management** includes the development of the scope of services, schedule, and study website. The planning advisory committee (PAC) is also established at this stage and is comprised of various airport stakeholders who will serve as advisors throughout the master plan process. General background information, including an outline of the master plan's goals and objectives, will be established.

**Element 2 – Inventory of Existing Conditions** is focused on collecting and assembling relevant data pertaining to the airport and the area it serves. Information is collected on existing facilities and operations. Local economic and demographic data is collected to define the local growth trends and environmental information is gathered to identify potential environmental sensitivities that might affect future improvements. Planning studies that may have relevance to the master plan are also collected.

**Element 3 – Aviation Demand Forecasts** examines the potential aviation demand at GEU. The analysis utilizes local socioeconomic information and national air transportation trends to quantify the levels of aviation activity that can reasonably be expected to occur at GEU over a 20-year period. Analysis is also conducted to quantify levels of aviation activity that have the potential to occur at GEU over the planning period, such as charter operations or commercial service. An existing and ultimate critical design aircraft, based on AC 150/5000-17, *Critical Aircraft and Regular Use Determination*, will also be established to determine future planning design standards. The results of this effort are used to determine the types and sizes of facilities needed to accommodate the projected aviation demand at the airport through the planning period. This element is one of two elements that are submitted to the FAA for approval.

**Element 4 – Facility Requirements** determines the available capacities of various facilities at the airport, assesses their compliance with FAA standards, and identifies what facility updates or additions will be necessary to comply with FAA requirements and/or the projected 20-year demand.

**Element 5 – Airport Development Alternatives** considers a variety of solutions to accommodate the projected airside and landside facility needs through the long-term planning period. An analysis will be completed to identify the strengths and weaknesses of each proposed development alternative, with the

## PROJECT WORK ELEMENTS

Planning Advisory Committee #1

### INITIATION
- Establish project goals/objectives
- Planning Advisory Committee
- Study website

### INVENTORY
- Airport facilities
- Airspace and air traffic control
- Area socioeconomic data
- Local planning and land use
- Airport access and parking, utilities,and aerial photography

### FORECASTS
- Based aircraft and fleet mix
- Critical aircraft determination
- Annual operations
- Commercial/charter potential




Planning Advisory Committee #2

Public Information Workshop #1

### FACILITY REQUIREMENTS
- Runways
- Taxiways
- Airfield capacity
- Hangar facilities
- Design categories
- Support facilities
- Terminal functions
- Aprons
- Navigational aids

### AIRPORT ALTERNATIVES
- Evaluate development scenarios (airside, landside, support)
- Airport traffic control tower analysis

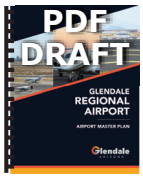



Planning Advisory Committee #3

Public Information Workshop #2

### RECOMMENDED MASTER PLAN CONCEPT/ ENVIRONMENTAL OVERVIEW
- Detailed master plan facility and land use plans
- Review evaluation of NEPA environmental categories
- Recycling plan

### FINANCIAL PLAN/CAPITAL IMPROVEMENTS
- Airport development schedule (CIP)
- Cost estimates
- Funding sources

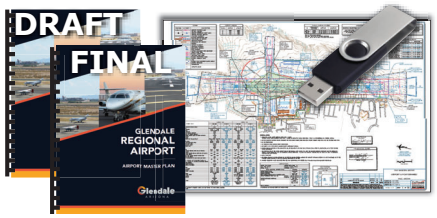



Planning Advisory Committee #4

Public Information Workshop #3

### AIRPORT LAYOUT PLANS
- Airport layout plan
- Landside drawing
- Airspace/approach drawings
- On-airport land use plan
- Property map
- Land use plan

### FINAL DOCUMENTATION/DELIVERABLES
- Draft Master Plan Report
- Master Plan/ALP Approvals
- Final Master Plan Report



goal of selecting a single direction for development. During the analysis, consideration will also be given to previous planning studies, such as the eastside development plan, when developing the alternatives for this master planning process. The airspace around GEU will be evaluated with the aim of assessing the feasibility of improving the instrument approach procedures at the airport. Additionally, a basic airport traffic control tower (ATCT) site selection and line-of-sight (LOS) analysis for potential ATCT locations will be conducted in this element.

**Element 6 – Recommended Master Plan Concept** provides graphic and narrative descriptions of the recommended plan for the use, development, and operation of the airport. This element includes airside and landside recommendations, as well as on-airport land use classifications. An environmental overview based on *National Environmental Policy Act* (NEPA) guidelines will be conducted under this element, providing an evaluation of the potential impacts on environmental resources as defined within FAA Order 1050.1F, along with an airport recycling plan developed from the *FAA Modernization and Reform Act of 2012*. An update to the Public Airport Disclosure Map will also be included in this element.

**Element 7 – Capital Improvement Program (CIP) and Financial Plan** recommends a 20-year capital program for GEU, analyzing the benefits and costs associated with the recommended master plan described in Element 6. Specific costs are established for each project to ensure logical staging of improvements. Potential funding sources are also identified, including the FAA Airport Improvement Program (AIP), *Infrastructure Investment and Jobs Act* (IIJA), ADOT, and local match.

**Element 8 – GIS and Data Collection Services** provides data collection for the airport, conducted to comply with Table 2-1 of AC 150/5300-18B, column Airport Layout Plan, for Airport Data Information Portal (ADIP) submission and used for the development of the ALP set defined in Element 9.

**Element 9 – Airport Layout Plans** is the preparation of the official ALP drawings based on the recommended development concept. The ALP set is used by the FAA for determining grant eligibility. This element is the second element of the study that is submitted to the FAA for approval. The ALP will be developed in accordance with FAA SOP 2.00, *Standard Procedure for FAA Review and Approval of Airport Layout Plans*. The Exhibit 'A' Airport Property Map will be developed in accordance with FAA SOP 3.00, *Standard Procedure for FAA Review of Exhibit 'A' Airport Property Inventory Maps*.

**Element 10 – Final Reports and Approvals** provides documents that depict the findings of the study efforts and presents the study and its recommendations to appropriate local organizations. The final document incorporates the revisions to previous working papers prepared under earlier elements into a usable master plan document.

## *COORDINATION AND OUTREACH*

This study is of interest to many within the local community and region, including local citizens, local businesses, community organizations, city officials, airport users, airport tenants, and aviation organizations. As a component of the regional, state, and national aviation systems, GEU is of importance to state and federal agencies responsible for overseeing the air transportation system.

The PAC has been established to assist in the development of the master plan. PAC members will meet up to four times at designated points during the study to review study materials and provide comments to help ensure a realistic, viable plan is developed. Draft working paper materials will be prepared at various milestones in the planning process. This allows for timely input and review during each step of the master plan's development to ensure all issues are fully addressed.

A series of three open-house public information workshops is also planned as part of the study coordination and outreach efforts. Workshops are designed to allow all interested persons to learn about and provide input on the master plan process. Notices of meeting times and locations will be advertised through local media outlets. All draft working papers, reports, meeting notices, and materials will be made available to the public on a study-specific website: **www.glendale.airportstudy.net**

## *SWOT ANALYSIS*

A SWOT analysis is a strategic business planning technique used to identify **S**trengths, **W**eaknesses, **O**pportunities, and **T**hreats associated with an action or plan. This technique involves identifying an action, objective, or element, and then identifying the internal and external forces that are positively and negatively impacting that action, objective, or element in a given environment. A SWOT analysis was conducted at the first PAC meeting, the findings of which are summarized in **Table iA**.

**TABLE iA: GEU SWOT Analysis**

| | | |
|---|---|---|
| **STRENGTHS** | • Airport is an asset for large entertainment events at Westgate<br>• Development potential of 120 acres on the airport's east side<br>• Airport commission is comprised of long-serving individuals committed to creating a better facility | • Continued support from the City of Glendale and experience of city staff; cooperation within city departments<br>• Over 7,000 feet of runway length accommodates corporate traffic |
| **WEAKNESSES** | • Airport serves general aviation activity only, which may limit economic impact to the City of Glendale<br>• GEU's location between Luke AFB and Phoenix TRACON and vicinity to Deer Valley results in complex airspace<br>• Lack of sufficient air traffic control staff; aircraft may be turned away during busy periods<br>• Limited by one runway and adjacent airspace<br>• Airport security systems need upgrades (i.e., cameras and access gate improvements) | • Limited apron space during special events (i.e., Superbowl)<br>• Glendale Avenue and the New River channel are constraining factors to the runway environment<br>• The footprint of the airport is limited with no significant expansion opportunities<br>• There is a single point of access into the airport from Glendale Avenue |
| **OPPORTUNITIES** | • 120 acres available for development east of the runway; East Side Development Plan prepared in 2025<br>• Industrial developments west of the airport are compatible with aviation activity/utilization<br>• The City of Glendale has experienced significant growth over the last 6-7 years | • The City is updating its General Plan and Transportation Plan<br>• VAI Resort will bring potential clientele<br>• Property north of Glendale Avenue and New River Road has potential for a fire station |
| **THREATS** | • Minimal positive economic impact for the City as of current<br>• Noise complaints from residents in and around Glendale<br>• Airspace constraints due to Luke AFB and PHX TRACON | • Industrial facilities (i.e., mining operation) surrounding the airport limit potential growth/expansion and could cause air pollutants<br>• The Metroplex planning study of PHX pattern may impact the airport |