APPENDIX A: GLOSSARY OF TERMS

ABBREVIATIONS

A.R.S. – Arizona Revised Statutes

A4A – Airlines for America

AAAE – American Association of Airport Executives

AAC – Aircraft Approach Category

AC – Advisory Circular

ACA – Arizona Commerce Authority

ACIP – Airport Capital Improvement Program

ACRP – Airport Cooperative Research Program

ADFFM – Arizona Department of Forest and Fire Management

ADG – Airplane Design Group

ADO – Airports District Office

ADOT – Arizona Department of Transportation

ADRE – Arizona Department of Real Estate

ADS-B – Automatic Dependent Surveillance – Broadcast

AFB – Air Force Base

AGL – Above Ground Level

AIP – Airport Improvement Program

ALP – Airport Layout Plan

ALRIS – Arizona Land Resource Information System

ALS – Approach Lighting System

ALSF-1 – Approach Lighting System with Sequenced Flashing Lights

AMSL – Above Mean Sea Level

AOEO – Arizona Office of Economic Opportunity

AOPA – Aircraft Owners and Pilots Association

APMS – Airport Pavement Management System

APPP – Arizona Pavement Preservation Program

APV – Approach Procedure with Vertical Guidance

ARC – Airport Reference Code

ARFF – Airport Rescue and Fire Fighting

ASK – Available Seat Kilometer

ASM – Airport System Manager

ASM – Available Seat Mile

ASOS – Automated Surface Observing System

ASV – Annual Service Volume

ATADS – Air Traffic Activity Data System

ATC – Air Traffic Control

ATCT – Air Traffic Control Tower

ATIS – Automated Terminal Information Service

ATP – Airline Transport Pilot

AvGas – Aviation Gasoline (100LL)

AWOS – Automated Weather Observing System

AzAA – Arizona Airports Association

BIA – Bureau of Indian Affairs

BLM – Bureau of Land Management

CAAG – Central Arizona Association of Governments

CAGR – Compound Annual Growth Rate

CBP – Customs and Border Patrol

CFR – Code of Federal Regulations

CIP – Capital Improvement Program

CMG – Cockpit to Main Gear Distance

DA – Decision Altitude

DHS – Department of Homeland Security

DME – Distance Measuring Equipment

DOD – Department of Defense

DOT – Department of Transportation

DW – Dual Wheel

EA – Environmental Assessment

EAS – Essential Air Service

EIS – Environmental Impact Statement

EMS – Emergency Medical Services

EPA – The United States Environmental Protection Agency

FAA – Federal Aviation Administration

FAF – Final Approach Fix

FAR – Federal Aviation Regulation

FBO – Fixed Base Operator

FL – Flight Level

FSL – Federal/State/Local Matching

FTZ – Foreign Trade Zone

FY – Fiscal Year

GA – General Aviation

GAMA – General Aviation Manufacturers Association

GAO – Government Accountability Office

GCN – Grand Canyon National Park Airport

GCN SFRA – Grand Canyon Special Flight Rules Area

GDP – Gross Domestic Product

GIS – Geographic Information Systems

GPS – Global Positioning System

GRP – Gross Regional Product

HIRL – High Intensity Runway Lights

HITL – High Intensity Taxiway Lights

IAP – Instrument Approach Procedure

IFR – Instrument Flight Rules

ILS – Instrument Landing System

LCC – Low–Cost Carrier

LIRL – Low Intensity Runway Lights

LITL – Low Intensity Taxiway Lights

LNAV – Lateral Navigation

LOC – Localizer

LPV – Localizer Performance with Vertical guidance

MALS – Medium Intensity Approach Lighting System

MALSF – Medium Intensity Approach Lighting System with Sequence Flashing Lights

MALSR – Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights

MASP – Metropolitan Airport System Plan

MDA – Minimum Descent Altitude

MGW – Main Gear Width

MIRL – Medium Intensity Runway Lights

MITL – Medium Intensity Taxiway Lights

MOA – Military Operations Area

MoGas – Motor Gasoline

MON – Minimum Operational Network

MP – Master Plan

MRO – Maintenance, Repair, and Overhaul

MRZ – Military Reuse Zone

MSA – Metropolitan Statistical Area

MSL – Mean Sea Level

MTR – Military Training Route

NAFTA – North American Free Trade Agreement

NAS – National Airspace System

NASAO – National Association of State Aviation Officials

NAVAID – Navigational Aid

NBAA – National Business Aircraft Association

NDB – Non–Directional Beacon

NEPA – National Environmental Policy Act

NextGen – Next Generation Air Transportation System

NM – Nautical Mile

NPE – Non–Primary Entitlement

NPI – Non–Precision Instrument Approach

NPIAS – National Plan of Integrated Airport Systems

NPS – National Park Service

NSTD – Non–Standard

OFA – Object Free Area

OFZ – Obstacle Free Zone

OPBA – Operations Per Based Aircraft

OPSNET – FAA Operational Network

P2P – Planning to Programming

PAC – Planning Advisory Committee

PAPI – Precision Approach Path Indicator

PCC – Portland Concrete Cement

PCI – Pavement Condition Index

PFC – Passenger Facility Charge

PIR – Precision Instrument Runway

PL – Public Law

PPRN – Pavement Priority Rating Number

R – Restricted

RASP – Regional Airport System Plan

RDC – Runway Design Code

REIL – Runway End Identifier Lights

RIM – Runway Incursion Mitigation

RNAV – Area Navigation

RNP – Required Navigation Performance

ROI – Return on Investment

RPK – Revenue Passenger Kilometer

RPM – Revenue Passenger Mile

RPZ – Runway Protection Zone

RSA – Runway Safety Area

RVT – Remote or Virtual Tower

S.B. – Senate Bill

SANS 2000 – Arizona State Aviation Needs Study 2000

SAO – Special Area of Operations

SASP – State Aviation System Plan

SBAS – Satellite Based Approach Systems

SEAT – Single–engine Air Tankers

SL – State/Local

SPS – Standard Positioning Service

SR – State Route

STAR – Standard Terminal Arrival Procedure

STB – State Transportation Board

SW – Single Wheel

SWPPP – Storm Water Pollution Prevention Plan

TACAN – Tactical Area Navigation

TAF – Terminal Area Forecast

TDG – Taxiway Design Group

TFMSC – Traffic Flow Management System Counts

TRACON – Terminal Radar Approach Control

TSA – Transportation Security Administration

UAS – Unmanned Aerial Systems

UCP – Unified Cargo Processing

ULCC – Ultra Low–Cost Carrier

UNICOM – Universal Integrated Communication

USBP – United States Border Patrol

USDOT – United States Department of Transportation

USFS – United States Forest Service

VASI – Visual Approach Slope Indicator

VFR – Visual Flight Rules

VGSI – Visual Glide Slope Indicator

VHF – Very High Frequency

VMC – Visual Meteorological Conditions

VNAV – Vertical Navigation

VOR – Very High Frequency Omni–Directional Range Navigation System

WAAS – Wide Area Augmentation System

WHA – Wildlife Hazard Assessment

WHMP – Wildlife Hazard Management Plan

DEFINITIONS

Advisory Circular (AC) – An AC is a series of FAA publications providing guidance and standards for the design, operation, and performance of aircraft and airport facilities.

Air Traffic Control (ATC) – ATC is a service operated by the appropriate authority to promote the safe, orderly, and expeditious flow of air traffic. The ATC system includes ARTCCs, Towers, airport ground radar, and other elements such as navigational aids (NAVAIDs) to pilots.

Aircraft Approach Category (AAC) – ARC groups aircraft based on approach speed at the maximum certificated landing weight. The following categories describe the speed thresholds:

- Category A – Speed less than 91 knots
- Category B – Speed 91 knots or more, but less than 121 knots
- Category C – Speed 121 knots or more, but less than 141 knots
- Category D – Speed 141 knots or more, but less than 166 knots
- Category E – Speed 166 knots or more

Airlines for America (A4A) – A4A is an association and lobby group based in Washington D.C., that advocates for member airlines to shape policy and improve air travel.

Airplane Design Group (ADG) – ADG groups aircraft by wingspan and tail height and is described as follows:

- Design Group I – Tail Height: less than 20', Wingspan; less than 49'
- Design Group II – Tail Height: between 20' and 30', Wingspan; between 49' and 79'
- Design Group III – Tail Height: between 30' and 45', Wingspan; between 79' and 118'
- Design Group IV – Tail Height: between 45' and 60', Wingspan; between 118' and 171'
- Design Group V – Tail Height: between 60' and 66', Wingspan; between 171' and 214'
- Design Group VI – Tail Height: between 66' and 80', Wingspan; between 214' and 262'

Airport Capital Improvement Program (ACIP) – The ACIP serves as the primary planning tool for systematically identifying, prioritizing, and assigning funds to critical airport development and associated capital needs of an airport. The FAA relies on the ACIP to serve as the basis for the distribution of limited grant funds under the Airport Improvement Program (AIP).

Airport Improvement Program (AIP) – AIP is congressionally mandated program through which FAA provides funding assistance for the development and enhancement of airport facilities. AIP is periodically reauthorized by Congress through appropriations from the Aviation Trust Fund, which is funded through excise taxes on airline tickets, aviation fuel, etc.

Airport Layout Plan (ALP) – ALPs are scaled drawings of existing and proposed land and facilities necessary for the operation and development of the airport. The ALP shows boundaries and proposed additions to all areas owned or controlled by the airport operator for airport purposes, the location and nature of existing and proposed airport facilities and structures, as well as the location of existing and proposed non-aviation areas and improvements on the airport. An airport's ALP requires approval by the FAA if the airport is recognized in the NPIAS.

Airport Pavement Management System (APMS) – A program developed by ADOT in 2003 which provides pavement evaluation, design services, construction administration and construction management at more than 60 airports statewide.

Airport Pavement Preservation Program (APPP) – Arizona's grant eligible airports receive visual inspections on pavement surfaces every three years. Pavements are assigned numbers on the Pavement Conditions Index (PCI).

Airport Reference Code (ARC) – ARC is FAA design criteria comprised of the aircraft approach category (AAC) and airplane design group (ADG). Together, the ARC of an airport and/or design aircraft requires a minimum of 500 annual operations per year at an airport.

American Association of Airport Executives (AAAE) – AAAE is a professional organization that represents airport executives and management personnel. Members are provided with services, support, training, and development opportunities.

Approach Lighting System (ALS) – An ALS is a lighting system installed on the approach end of an airport runway and consists of a series of light bars, strobe lights, or a combination of the two that extends outward from the runway end. An ALS usually serves a runway that has an instrument approach procedure (IAP) associated with it and allows the pilot to visually identify the runway environment once he or she has arrived at a prescribed point on an approach.

Arizona Department of Real Estate (ADRE) – ADRE is a department under the Arizona state government that regulates real estate, sale of subdivisions, unsubdivided lands, timeshares, condominiums, membership campgrounds, and cemeteries.

Arizona Department of Transportation (ADOT) – ADOT is the Arizona state government agency charged with managing the state's highway system, public transportation, overseeing the aviation transportation system, and managing the Grand Canyon National Park Airport (GCN).

Arizona Revised Statues (A.R.S) – A.R.S. is a document that provides the governing framework for the laws by which citizens are expected to obey and live by. Title 28 – Chapter 25 establishes the guidance and requirements for the Aeronautics Division and the Director of Aviation to follow to encourage and advance the safe and orderly development of aviation in the state.

Automated Surface Observing System (ASOS) – An ASOS has automated sensors that record wind direction and speed, visibility, cloud ceiling, precipitation, etc. and sends that data automatically to the National Weather Service. At many locations, a computer-generated voice broadcasts the minute-by-minute weather reports to pilots on a discrete radio frequency.

Automated Weather Observing System (AWOS) – An AWOS provides airport weather observations (i.e. cloud height, visibility, wind speed and direction, temperature, dew point, etc.) to pilots on a discrete radio frequency via a computer-generated voice. Less sophisticated than ASOS, it is oftentimes installed using state or local funding.

Available Seat Mileage (ASM) – ASM is a measure of airline capacity, equal to the number of seats available multiplied by the number of miles flown.

Capital Improvement Program (CIP) – A CIP is a schedule of planned projects and costs for an airport typically prepared and adopted by the airport sponsor and other public agencies.

Distance Measuring Equipment (DME) – DME is a flight instrument that measures the line-of-sight distance of an aircraft from a navigational radio station in nautical miles.

Environmental Impact Statement (EIS) – An EIS is a document that provides a discussion of the significant environmental impacts which would occur because of a proposed project, and informs decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts. Public participation and consultation with other Federal, state, and local agencies is a cornerstone of the EIS process.

Federal Aviation Administration (FAA) – The FAA is a branch of the U.S. Department of Transportation responsible ensuring the safe and efficient use of the nation’s airspace, for fostering civil aeronautics and air commerce, and for supporting the requirements of national defense. In addition to regulating airports, aircraft manufacturing and parts certification, aircraft operation and pilot certification, the FAA operates Air Traffic Control, purchases and maintains navigation equipment, certifies airports and aids airport development, among other activities. The FAA also administers the AIP that provides for airport development.

Fixed Base Operator (FBO) – An FBO can be any aviation business duly licensed and authorized by written agreement with the airport owner to provide aeronautical activities at the airport under strict compliance with such agreement and pursuant to these regulations and standards. FBOs typically provide services such as hangar space, fuel, flight training, repair, and maintenance to general aviation airport users.

General Aviation (GA) – All civil aviation operations, other than scheduled air services and non-scheduled air transport operations for remunerations or hire, are considered general aviation. GA is often misunderstood to be only small, propeller-driven aircraft; even a large jet or cargo plane operated under FAR Part 91 can be a general aviation aircraft.

Global Positioning System (GPS) – In the SASP Update document, GPS is defined as a satellite-based navigation system operated by Department of Defense that provides extremely accurate position, time, and speed information to civilian and military users. Based on a "constellation" of 24 satellites, GPS will replace ground-based navigation systems (VOR, ILS) as the primary worldwide air navigation system in the 21st Century.

Instrument Flight Rules (IFR) – These are rules from Federal Aviation Regulations (14 CFR 91) that govern the procedures for conducting instrument flight. Pilots are required to follow these rules when operating in controlled airspace during Instrument Meteorological Conditions (i.e. visibility of less than three miles and/or ceiling lower than 1,000 feet). These procedures may also be used under visual conditions and provide for positive control by ATC.

Instrument Landing System (ILS) – ILS is designed to provide an exact approach path for alignment and descent of aircraft. Generally, an ILS consists of a localizer, glide slope, outer marker, middle marker, and approach lights. There are three types of ILS:

- Cat I – Category I ILS which provides for approach to a height above touchdown of not less than 200 feet and with visibility of not less than ½ mile or a Runway Visual Range (RVR) of not less than 2400 (RVR 1800 with operative touchdown zone and runway centerline lights)
- Cat II – Category II ILS approach procedure which provides for approach to a height above touchdown of not less than 100 feet and with a RVR of not less than 1200
- Cat III – Category III ILS approach procedure which provides for approaches to minima less than CAT II

Mean Sea Level (MSL) – Mean sea level is the average height of the surface of the sea for all stages of the tide over a 19-year period; MSL is used as a reference for elevations.

Metropolitan Airport System Plan (MASP) – MASP is a complimentary part of the Airport Systems Planning process that focuses specifically on strategic planning needs to address future concerns in a specific metropolitan area.

National Airspace System (NAS) – NAS is the common network of U.S. airspace, and includes air navigation facilities, equipment and services, airports or landing areas; aeronautical charts, information and services; rules, regulations and procedures, technical information, manpower, and material.

National Plan of Integrated Airport Systems (NPIAS) – NPIAS is an FAA program and planning document that identifies more than 3,300 airports that are significant to national air transportation and thus eligible to receive Federal grants under the Airport Improvement Program (AIP). It also includes estimates of the amount of AIP money needed to fund infrastructure development projects that will bring these airports up to current design standards and add capacity to congested airports. FAA is required to provide Congress with a five-year estimate of AIP eligible development every two years. The NPIAS comprises all commercial service airports, all reliever airports, and selected general aviation airports.

Navigational Aid (NAVAID) – NAVAID is a term used to describe any electrical or visual air navigational aids, lights, signs, and associated supporting equipment (i.e. PAPI, VASI, ILS, etc.).

Non-Directional Beacon (NDB) – NDB is a radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine their bearing to and from the station. When the radio beacon is installed in conjunction with the ILS marker, it is normally called a compass locator.

Object Free Area (OFA) – An object free area is an area on the ground centered on a runway, taxiway, or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be in the OFA for air navigation or aircraft ground maneuvering purposes.

Pavement Condition Index (PCI) – PCI rates pavement condition and is a numerical index between 0 and 100 used to indicate the condition of a selected portion of pavement, with 100 representing excellent pavement.

Precision Approach Path Indicator (PAPI) – PAPIs provide visual approach slope guidance to aircraft during an approach. It is similar to a Visual Approach Slope Indicator (VASI) but provides a sharper transition between the colored indicator lights.

Project Advisory Committee (PAC) – The PAC is a committee comprised of stakeholders from across the state with a broad range of knowledge and experience in airports, aviation and other statewide issues impacting airport systems whose, function is to help guide the SASP Update.

Runway End Identifier Light (REIL) – REILs are two synchronized flashing lights (one on each side of the runway threshold) that identify the approach end of the runway.

Runway Incursion Mitigation (RIM) – RIM describes an FAA program designed identify, prioritize, and develop strategies, related to airfield geometry, for Airport sponsors to mitigate risk associated with runway incursions.

Runway Protection Zone (RPZ) – An RPZ is a protected area off the runway end to enhance the safety of people and property on the ground. The RPZ is a trapezoidal shape. Its dimensions are determined by the aircraft approach speed, runway approach type, and visibility minima.

Runway Safety Area (RSA) – An RSA is a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

State Aviation System Plan (SASP) – A SASP is a guide to long-term aviation planning in the state, providing important insight into how the states airports can remain highly advanced, safe, and responsive to the public's needs.

State Transportation Board (STB) – STB has policy powers and duties in addition to serving in an advisory capacity to the Director of the Arizona Department of Transportation. The Board awards contracts and monitors the status of projects and has the exclusive authority to issue revenue bonds for financing needed transportation improvements throughout the state.

Terminal Area Forecast (TAF) – The TAF is the official forecast of aviation activity at FAA facilities, which are prepared to meet the budget and planning needs of FAA and provide information for use by state and local authorities, the aviation industry, and the public. The TAF includes forecasts for the following: FAA towered airports, federally contracted towered airports, nonfederal towered airports, and non-towered airports.

Transportation Security Administration (TSA) – TSA is an agency within the U.S. Department of Homeland Security and is responsible for security of the nation's transportation systems.

Unmanned Aerial Systems (UAS) – UAS – also called drones – are unmanned aerial systems that are controlled by an operator on the ground rather than a human pilot.

Visual Approach Slope Indicator (VASI) – A VASI is a visual aid for the final approach to the runway threshold consisting of two wing bars of lights located in tandem on either side of the runway. Each bar produces a split beam of light – the upper segment is white, the lower is red.

Visual Flight Rules (VFR) – VFR and procedures are specified in 14 CFR 91 for aircraft operations under visual meteorological conditions, or weather conditions with a ceiling of 1,000 feet above ground level and visibility of three miles or greater. Under VFR, it is the pilot's responsibility to maintain visual separation and not that of the air traffic controller.

Visual Glide Slope Indicator (VGSI) – VGSI is a system of lights on the side of the runway threshold near the touchdown zone that help to ensure that any obstructions in the approach area are cleared by indicating if the aircraft is higher than or lower than the appropriate glide slope angle. The two most common types of VGSIs are PAPIs and VASIs.