APPENDIX A: GLOSSARY OF TERMS

Introduction

Combining the extremely technical language of airports and aviation with the bureaucratic language of government organizations can create a myriad of unusual words and term. The combination of technical language and "governmentese" often results in many short-hand phrases or acronyms. This appendix presents many of the terms and acronyms used throughout the master plan.

Glossary of Terms

ABOVE GROUND LEVEL (AGL): The elevation of a point or surface above the ground.

ACCELERATE-STOP DISTANCE AVAILABLE (ASDA): See 'declared distances.'

ADVISORY CIRCULAR (AC): Publications issued by the FAA providing recommendations relative to policy, guidance, and information on specific aviation subject. The recommendations in these publications are considered mandatory requirements for airports that have received federal grants.

AIR CARRIER: An operator that: (1) performs at least five round trips per week between two or more points and publishes flight schedules specifying the times, days of the week, and places between which such flights are performed; or (2) transports mail by air under a current contract with the U.S. Postal Service. Certified in accordance with Federal Aviation Regulation (FAR) Parts 121 and 127.

AIRCRAFT OPERATION: The landing, takeoff, or touch-and-go procedure by an aircraft on a runway at an airport.

AIRCRAFT OPERATIONS AREA (AOA): A restricted and secure area on airport property designed to protect all aspects of aircraft operations.

AIRCRAFT OWNERS AND PILOTS ASSOCIATION (AOPA): A private organization serving the interests and needs of general aviation pilots and aircraft owners.

AIRCRAFT APPROACH CATEGORY (AAC): A grouping of aircraft based on 1.3 times their stall speed in landing configuration at their maximum certificated landing weight. The AAC categories are as follows:

- 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 greater than 166 knots.

AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF): An airport service and facility that provides emergency vehicles, extinguishing agents, and personnel responsible for minimizing the impacts of an aircraft accident or incident.

AIRFIELD: The portion of an airport that contains facilities necessary for aircraft operations.

AIRLINE HUB: A category of commercial service airports or group of commercial service airports in a metropolitan or urban area based on the percentage of annual national enplanements at the airport or airports. The categories are large hub, medium hub, small hub, or non-hub. The categories form the basis for the apportionment of entitlement funds.

AIRPLANE CLASSIFICATION NUMBER (ACN): An international method that expresses the effect of an individual aircraft on different pavements with a unique number that varies according aircraft weight and configuration, pavement type, and subgrade strength.

AIRPLANE DESIGN GROUP (ADG): A grouping of aircraft based on wingspan. The groups are:

- Group I: Up to but not including 49 feet.
- Group II: 49 feet up to but not including 79 feet.
- Group III: 79 feet up to but not including 118 feet.
- Group IV: 118 feet up to but not including 171 feet.
- Group V: 171 feet up to but not including 214 feet.
- Group VI: 214 feet or greater.

AIRPORT AUTHORITY: A quasi-governmental organization responsible for setting the policies governing the management and operation of an airport or system of airports under its jurisdiction.

AIRPORT BEACON: A navigational aid located at an airport that displays a rotating light beam to identify the type of airport.

AIRPORT CAPITAL IMPROVEMENT PLAN (ACIP): The Federal Aviation Administration planning program that identifies, prioritizes, and distributes airport development funds required to meet the needs of the National Airspace System as specified by national goals and objectives.

AIRPORT ELEVATION: The highest point on the runway system at an airport expressed in feet above mean sea level (MSL).

AIRPORT IMPROVEMENT PROGRAM (AIP): A program created under the Airport and Airway Improvement Act of 1982 to provide funding for airport planning and development.

AIRPORT LAYOUT PLAN (ALP): A technical drawing which depicts boundaries and proposed additions to all areas owned or controlled by the sponsor for airport purposes, including the location and nature of existing and proposed future airport facilities and structures, and the location on the airport of existing and proposed non-aviation areas and improvements.

AIRPORT MASTER PLAN (AMP): A long-range plan to aid in the development of an airport. Includes several elements with varying data, analysis, exhibits and which ultimately results in the development of the ALP.

AIRPORT OBSTRUCTION CHART: A scaled drawing depicting the Federal Aviation Regulation (FAR) Part 77 surfaces, with representation of objects that penetrate these surfaces, runway, taxiway, and ramp areas, navigational aids, buildings, roads, and other airport vicinity details.

AIRPORT REFERENCE CODE (ARC): A coding system used to relate airport design criteria to the operational (Aircraft Approach Category) and physical characteristics (Airplane Design Group) of the most demanding airplanes projected to operate at an airport.

AIRPORT REFERENCE POINT (ARP): The latitude and longitude of the approximate center of the airport.

AIRPORT REFERENCE TEMPERATURE: The mean maximum temperature of the hottest month.

AIRPORT SPONSOR: The entity legally responsible for the management and operation of an airport, including the fulfillment of the requirements of applicable laws and regulations.

AIRPORT SURFACE DETECTION EQUIPMENT (ASDE): A radar system providing air traffic controllers with a visual representation of aircraft and other vehicles ground movements on the airfield.

AIRPORT SURVEILLANCE RADAR (ASR): The primary radar located at an airport or in an air traffic control terminal area that depicts the location of aircraft in the air. The signal only provides the azimuth and range of aircraft from the location of the antenna.

AIRPORT TRAFFIC CONTROL TOWER (ATCT): A central operations facility in the terminal air traffic control system, consisting of a tower, including an associated instrument flight rule (IFR) room if radar equipped, using air to ground communications and/or radar, visual signaling and other methods to provide safe and expeditious movement of terminal air traffic.

AIRPORTS GEOGRAPHIC INFORMATION SYSTEM (AIRPORTS GIS or AGIS): Used by the FAA to collect airport and aeronautical data to support the FAA's next generation (NextGen) aviation system. AGIS provides standards for surveying and data collection to assist the FAA in the development of instrument approaches and provides the basis for electronic ALPs (eALP).

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC): A facility established to provide air traffic control service to aircraft operating on an IFR flight plan within controlled airspace and principally during the enroute phase of flight.

AIRSIDE: The portion of an airport containing the facilities necessary for the operation of aircraft. This normally includes, runways, taxiways, aprons, and hangar areas.

AIRSPACE: The volume of space above the surface of the ground provided for the safe operation of aircraft.

AIR TAXI: An air carrier certificated in accordance with FAR Part 121 and FAR Part 135 and authorized to provide on demand, public transportation of persons and property by aircraft. Generally, operates small aircraft "for hire" for specific trips.

AIR TRAFFIC CONTROL (ATC): A service operated by an appropriate FAA designated organization for the purpose of providing for the safe, orderly, and expeditious flow of air traffic.

AIR TRANSPORT ASSOCIATION OF AMERICA (ATA): An organization that represents the interests of the airline industry on major aviation issues before federal, state, and local government bodies. The ATA promotes air transportation safety by coordinating industry and governmental safety programs and serves as a focal point for industry efforts to standardize practices and enhance the efficiency of the air transportation system.

ALERT AREA: See 'special-use airspace.'

ALTITUDE: The vertical distance measured in feet above mean sea level or above ground level.

APPROACH LIGHTING SYSTEM (ALS): An airport lighting facility that provides visual guidance to landing aircraft by radiating light beams by which the pilot aligns the aircraft with the extended centerline of the runway on their final approach and landing.

APPROACH MINIMUMS: The altitude below which an aircraft may not descend while on an Instrument Flight Rules (IFR) approach unless the pilot has the runway in sight.

APPROACH SURFACE: See 'Part 77.'

APRON: A specified portion of the airfield used for passenger, cargo, or freight loading and unloading, aircraft parking, and the refueling, maintenance, and servicing of aircraft.

AREA NAVIGATION (RNAV): The air navigation procedure that provides the capability to establish and maintain a flight path on an arbitrary course.

AUTOMATED TERMINAL INFORMATION SERVICE (ATIS): The continuous broadcast of recorded non-control information at towered airports. Information typically includes wind speed, direction, and runway in use.

AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS): A reporting system that provides frequent airport ground surface weather observation data through digitized voice broadcasts and printed reports.

AUTOMATED WEATHER OBSERVATION STATION (AWOS): Equipment used to automatically record and relay weather conditions (i.e. cloud height, visibility, wind speed and direction, temperature, dew point, etc.)

AUTOMATIC DEPENDENT SURVEILLANCE – BROADCAST (ADS-B): A major component of the FAA's NextGen system, where aircraft equipped with GPS receivers can transmit their location and altitude to other nearby aircraft and to air traffic control.

AUTOMATIC DIRECTION FINDER (ADF): An aircraft radio navigation system that senses and indicates the direction to a non-directional radio beacon (NDB) ground transmitter.

AVIGATION EASEMENT: A contractual right or property interest in land over which the unobstructed right of flight in the airspace is established.

AZIMUTH: Horizontal direction expressed as the angular distance between true north and the direction of a fixed point (as the observer's heading).

BASE LEG: See 'traffic pattern.'

BASED AIRCRAFT: The total number of active general aviation aircraft that use or may be expected to use a specific airport as a home base.

BEARING: The horizontal direction to or from any point, usually measured clockwise from true north or magnetic north.

BLAST FENCE: A barrier used to divert or dissipate jet blast or propeller wash.

BLAST PAD: A prepared surface beyond the end of a runway for the purpose of eliminating ground surface erosion caused by the wind generated by aircraft engines at the initiation of a takeoff.

BUILDING RESTRICTION LINE (BRL): A theoretical line on an airport layout plan beyond which airport buildings must not be located in order to maintain safe aircraft operations.

CAPITAL IMPROVEMENT PLAN (CIP): A program for the design and construction of airport improvements needed to accommodate the operational and passenger activity at an airport.

CEILING: The cloud height above the ground surface, which is reported as either broken or overcast.

CIRCLING APPROACH: A pilot maneuver to align the aircraft with the runway for landing when flying a predetermined circling instrument approach procedure under IFR.

CLASS A, B, C, D, E, G AIRSPACE: See 'Controlled Airspace.'

CLEAR ZONE: See 'Runway Protection Zone.'

COMMERCIAL SERVICE AIRPORT: A public airport providing scheduled passenger service that enplanes at least 2,500 annual passengers.

COMMON TRAFFIC ADVISORY FREQUENCY (CTAF): A radio frequency designated for the purpose of transmitting airport advisory information and procedures while operating to or from an uncontrolled airport.

COMPASS LOCATOR (LOM): A low power, low/medium frequency radio-beacon installed in conjunction with the instrument landing system at one or two of the marker sites.

CONICAL SURFACE: See 'Part 77.'

CONTROLLED AIRPORT: An airport that has an operating airport traffic control tower.

CONTROLLED AIRSPACE: Airspace of defined dimensions within which air traffic control services are provided to instrument flight rules (IFR) and visual flight rules (VFR) flights. Controlled airspace in the United States is designated as follows:

- **CLASS A**: Generally, the airspace from 18,000 feet mean sea level (MSL) up to but not including flight level FL600 (60,000 feet). All pilots must operate their aircraft under IFR.
- **CLASS B**: Generally, the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports. The configuration of Class B airspace is unique to each airport, but typically consists of two or more layers of airspace and is designed to contain all published instrument approach procedures to the airport. An air traffic control clearance is required for all aircraft operating in the area.
- **CLASS C**: Generally, the airspace from the surface to 4,000 feet above the airport elevation (reported as MSL) surrounding those airports that have an operational control tower and radar approach control and are served by a qualifying number of IFR operations or passenger enplanements. Although individually tailored for each airport, Class C airspace typically consists of a surface area with a five nautical mile (nm) radius and an outer area with a 10 nautical mile radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Two-way radio communication is required for all aircraft.
- **CLASS D**: Generally, that airspace from the surface to 2,500 feet above the airport elevation (reported as MSL) surrounding airports that have an operational control tower. Class D airspace is individually tailored and configured to encompass published instrument approach procedures. Unless otherwise authorized, all pilots must establish two-way radio communication.
- **CLASS E**: Generally, controlled airspace that is not classified as Class A, B, C, or D. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Class E airspace encompasses all Victor Airways. Only aircraft following instrument flight rules are required to establish two-way radio communication with air traffic control.
- **CLASS G**: Generally, that airspace not classified as Class A, B, C, D, or E. Class G airspace is uncontrolled for all aircraft. Class G airspace extends from the surface to the overlying Class E airspace.

CONTROLLED FIRING AREA: See 'special-use airspace.'

CROSSWIND: A wind that is not parallel to a runway centerline or to the intended flight path of an aircraft.

CROSSWIND COMPONENT: The component of wind that is at a right angle to the runway centerline or the intended flight path of an aircraft.

CROSSWIND LEG: See 'traffic pattern.'

DECIBEL: A unit of noise representing a level relative to logarithmic scale.

DECISION HEIGHT: The height above the runway surface at which a decision must be made to either continue the approach or execute a missed approach.

DECLARED DISTANCES: The distances declared available for an airplane's: takeoff runway; takeoff distance; accelerate-stop distance; and landing distance requirements as defined below:

- **TAKEOFF RUNWAY AVAILABLE (TORA)**: The runway length declared available and suitable for the ground run of an airplane taking off;
- **TAKEOFF DISTANCE AVAILABLE (TODA)**: The TORA plus the length of any remaining runway and/or clearway beyond the far end of the TORA;
- **ACCELERATE-STOP DISTANCE AVAILABLE (ASDA)**: The runway plus stopway length declared available for the deceleration of an aircraft aborting a takeoff; and
- **LANDING DISTANCE AVAILABLE (LDA)**: The runway length declared available and suitable for landing.

DEPARTMENT OF TRANSPORTATION (DOT): The federal government organization, including the Federal Aviation Administration, which was established to promote the coordination of federal transportation programs and to act as a focal point for research and development efforts in transportation.

DISCRETIONARY FUNDS: Federal grant funds that may be appropriated to an airport as designation by the Secretary of Transportation or Congress to meet a specified national priority such as enhancing capacity, safety, and security, or mitigating noise.

DISPLACED THRESHOLD: A threshold that is located at a point on the runway other than the physical beginning of the runway.

DISTANCE MEASURING EQUIPMENT (DME): Equipment (airborne and ground-based) used to measure in nautical miles, the slant range distance of an aircraft from the DME navigational aid.
DNL: (Day/Night Level) The 24-hour A-weighted average aircraft sound level between 10 PM and 7 AM as averaged over a span of one year. It is the FAA standard metric for deter mining the cumulative exposure of individuals to noise.

DOWNWIND LEG: see 'traffic pattern.'

EASEMENT: The agreed upon legal right of one party to use a portion of the real estate rights of another party as specified in the easement document.

ELEVATION: The vertical distance measured in feet above mean sea level.

ENROUTE: The portion of a flight between departure and arrival terminal areas.

ENPLANED PASSENGERS: The total number of revenue passengers boarding air craft, including originating, stop-over, and transfer passengers, in scheduled and non-scheduled services.

ENPLANEMENT: The loading of passengers, cargo, freight, or mail on an aircraft.

ENTITLEMENT: Federal funds for which a commercial service airport may be eligible based on its annual passenger enplanements.

ENVIRONMENTAL ASSESSMENT (EA): An environmental analysis performed in accordance with the National Environmental Policy Act (NEPA) to determine whether an action would significantly affect the environment and thus require a more detailed environmental impact statement.

ENVIRONMENTAL AUDIT: An assessment of a party's compliance with the applicable environmental requirements of an authority's environmental compliance policies, practices, and controls.

ENVIRONMENTAL IMPACT STATEMENT (EIS): A National Environmental Policy Act (NEPA) document required of federal agencies for major projects or legislative proposals affecting the environment. The EIS is a decision-making tool describing the positive and negative effects of a proposed action.

ESSENTIAL AIR SERVICE (EAS): A federal program that guarantees air carrier service to selected small communities by providing subsidies as needed to prevent these cities from losing such service.

FEDERAL AVIATION REGULATIONS (FAR): The rules established by the executive departments and agencies of the Federal Government for aviation. FAR's are the aviation subset of the Code of Federal Regulations.

FINAL APPROACH: See 'traffic pattern.'

FINDING OF NO SIGNIFICANT IMPACT (FONSI): A public document prepared by a Federal agency that presents the rationale why a proposed action will not have a significant effect on the environment and for which an environmental impact statement will not be prepared.

FIXED BASE OPERATOR (FBO): A provider of services to airport users. Such services include, but are not limited to: aircraft storage; fueling; flight training; repair; and maintenance.

FLIGHT LEVEL: An altitude designation within controlled airspace.

FLIGHT SERVICE STATION (FSS): An operations facility in the national flight advisory system that uses data interchange facilities for the collection and dissemination of Notices to Airmen, weather, and administrative data. An FSS provides pre-flight and in-flight advisory services to pilots through air and ground based communication facilities.

FRANGIBLE NAVAID: A navigational aid that retains its structural integrity and stiffness up to a designated maximum load, but on impact from a greater load, breaks, distorts, or yields in such a manner as to present the minimum hazard to aircraft.

GENERAL AVIATION: That portion of civil aviation that encompasses all facets of aviation except commercial or military aircraft.

GLIDESLOPE (GS): The electronic component of an Instrument Landing System (ILS) system that emits signals providing vertical guidance using airborne instruments during instrument approaches during approach and landing.

GLOBAL POSITIONING SYSTEM (GPS): A system of satellites that enables navigators equipped with GPS receivers to determine their latitude, longitude, and altitude.

GROUND ACCESS: The transportation system on and around the airport that provides access to and from the airport by ground transportation vehicles for passengers, employees, cargo freight, and airport services.

HELIPAD: A designated area for the takeoff, landing, and parking of helicopters.

HIGH INTENSITY RUNWAY LIGHTS (HIRL): The highest intensity or brightness of lights that delineate the lateral boundaries of a runway.

HIGH-SPEED EXIT TAXIWAY: A long radius taxiway designed to expedite aircraft movement off runways after landing (at speeds up to 60 knots), thus reducing runway occupancy time.

HORIZONTAL SURFACE: See 'Part 77.'

INSTRUMENT APPROACH: An approach to an airport with the intent to land an aircraft in accordance with an IFR flight plan when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude.

INSTRUMENT APPROACH PROCEDURE (IAP): A series of predetermined maneuvers under instrument flight conditions which guide an aircraft for a landing, or to a point from which a landing may be made visually.

INSTRUMENT FLIGHT RULES (IFR): Procedures for the conduct of flight in weather conditions below Visual Flight Rules (VFR) weather minimums. The term IFR is often also used to define weather conditions and the type of flight plan under which an aircraft operates.

INSTRUMENT LANDING SYSTEM (ILS): A precision instrument approach system that normally consists of the following electronic components and visual aids:

1. Localizer;
2. Glide Slope;
3. Outer Marker;
4. Middle Marker;
5. Approach lights.

INSTRUMENT METEOROLOGICAL CONDITIONS (IMC): Specific visibility and ceiling conditions that are less than the minimums specified for visual meteorological conditions.

ITINERANT OPERATIONS: Arrivals and departures by aircraft to or from a location greater than 20 miles from the airport.

KNOTS: A unit of speed used in navigation that is equivalent to the number of nautical miles traveled in one hour.

LAND AND HOLD SHORT OPERATIONS (LAHSO): An air traffic control procedure intended to increase airport capacity without compromising safety that allows pilots to land and hold short of an intersecting runway, an intersecting taxiway, or some other designated point on a runway.

LANDSIDE: The portion of an airport that provides the facilities necessary for the processing of passengers, cargo, freight, and ground transportation vehicles.

LANDING DISTANCE AVAILABLE (LDA): See 'declared distances.'

LARGE AIRPLANE: An airplane that has a maximum certified takeoff weight in excess of 12,500 pounds.

LOCAL AREA AUGMENTATION SYSTEM (LAAS): A differential GPS system that provides localized measurement correction signals to the basic GPS signals to improve navigational accuracy, integrity, continuity, and availability.

LOCAL OPERATIONS: Aircraft operations performed by aircraft based at the airport and operating in the local traffic pattern or within sight of the airport, including aircraft known to be departing for or arriving from flights in local practice areas within a prescribed distance from the airport, or that execute simulated instrument approaches at the airport.

LOCAL TRAFFIC: Aircraft operating in the traffic pattern or within sight of the tower, or aircraft known to be departing or arriving from the local practice areas, or aircraft executing practice instrument approach procedures. Typically, this includes touch-and-go training operations.

LOCALIZER (LOC): The component of an ILS that provides course guidance to the runway.

LOCALIZER TYPE DIRECTIONAL AID (LDA): A facility of comparable utility and accuracy to a localizer, but not part of a complete ILS and not aligned with the runway.

LOCALIZER PERFORMANCE WITH VERTICAL GUIDANCE (LPV): A Global Positioning System (GPS) runway instrument approach procedure providing horizontal and vertical guidance. Accuracy levels are 16 meters horizontally and 20 meters vertically.

LOW INTENSITY RUNWAY LIGHTS (LIRL): The lowest intensity or brightness of lights designated for use in delineating the sides of a runway.

MEDIUM INTENSITY RUNWAY LIGHTS MIRL: The middle intensity or brightness of lights designated for use in delineating the sides of a runway.

MILITARY OPERATIONS: Aircraft operations performed by military aircraft.

MILITARY OPERATIONS AREA (MOA): See 'special-use airspace.'

MILITARY TRAINING ROUTE: An air route depicted on aeronautical charts for the conduct of military flight training at speeds above 250 knots.

MISSED APPROACH COURSE (MAC): The flight route to be followed if, after an instrument approach, a landing is not completed. Missed approaches normally occur:

1. When an aircraft has descended to the decision height but has not established visual confirmation of the runway; or
2. When directed by air traffic control to pull up or to go around.

MOVEMENT AREA: The runways, taxiways, and other areas of an airport used for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At airports with an airport traffic control tower, air traffic control clearance is required for entry onto the movement area.

NATIONAL AIRSPACE SYSTEM (NAS): The network of air traffic control facilities, air traffic control areas, and navigational facilities through the U.S.

NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS (NPIAS): The national airport system plan developed by the Secretary of Transportation on a biannual basis for the development of public use airports to meet national air transportation needs.

NATIONAL TRANSPORTATION SAFETY BOARD (NTSB): A federal government organization established to investigate and determine the probable cause of transportation accidents, to recommend equipment and procedures to enhance transportation safety, and to review on appeal the suspension or revocation of any certificates or licenses issued by the Secretary of Transportation.

NAUTICAL MILE: A unit of distance used in navigation that is equivalent to the distance spanned by one minute of arc in latitude, that is, 1,852 meters or 6,076 feet. It is equal to approximately 1.15 statute mile.

NAVIGATIONAL AID (NAVAID): A term used to describe lights, signs, and associated supporting electronic equipment (e.g., PAPI, VASI, ILS, etc.) to aid in aircraft navigation.

NEXT GENERATION AIR TRANSPORTATION SYSTEM (NextGen): An umbrella term for the FAA's ongoing upgrade to the National Airspace System from a ground-based system of air traffic control to a satellite-based system of air traffic management.

NOISE CONTOUR: A continuous line on a map of the airport vicinity connecting all points of the same noise exposure level.

NON-DIRECTIONAL BEACON (NDB): A radio beacon transmitting electronic signals in a 360-degree pattern. Pilots of an aircraft equipped with direction finding equipment can determine their bearing to/from the radio beacon and home on, or track to, the station. When the radio beacon is installed in conjunction with the ILS marker, it is normally called a Compass Locator.

NON-PRECISION APPROACH PROCEDURE: A standard instrument approach procedure using horizontal but no vertical course guidance, such as VOR, TACAN, NDB, or LOC.

NOTICE TO AIRMEN (NOTAM): A time sensitive notice to pilots containing information concerning the establishment, condition, or change in any component of or hazard in the National Airspace System that is considered essential to flight operations personnel.
Ex: NOTAMS are issued when runway closures occur for repair, construction, events, etc.

OBJECT FREE AREA (OFA): An area on the ground free of objects, except those required for air navigation or aircraft ground maneuvering purposes, centered on a runway, taxiway, or taxilane to enhance the safety of aircraft operations.

OBSTACLE FREE ZONE (OFZ): The airspace below 150 feet above the established airport elevation and along the runway and extended runway centerline that provides clearance for aircraft landing or taking off from the runway, and for missed approaches. The OFZ is required to be kept clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function.

OPERATION: A take-off or a landing.

OUTER MARKER (OM): An ILS navigation facility located four to seven miles from the runway threshold on the extended centerline, indicating the pilot is passing over the facility and can begin final approach.

PART 77: Federal laws under Title 14 of the Code of Federal Regulations (CFR) identifying standards for the Safe, Efficient Use and Preservation of the Navigable Airspace. Several different imaginary airspace surfaces are defined under Part 77 for purposes of identifying an obstruction to air navigation:

- **PRIMARY SURFACE:** An imaginary surface defined in FAR Part 77 that is specified as a rectangular surface longitudinally centered about a runway. The specific dimensions of this surface are determined by the type of approaches existing or planned for the runway.
- **APPROACH SURFACE:** An imaginary surface defined in FAR Part 77 that is longitudinally centered on an extended runway centerline and extends outward and upward from the primary surface at each runway end at a designated slope and distance based on the type of available or planned approach by aircraft to a runway.
- **TRANSITIONAL SURFACE:** An imaginary surface extending outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the sides of the primary surface and from the sides of the approach surfaces.
- **HORIZONTAL SURFACE:** An imaginary airspace surface with the horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs.
- **CONICAL SURFACE:** An imaginary surface defined in FAR Part 77 that extends from the edge of the horizontal surface outward and upward at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

PAVEMENT CONDITION INDEX (PCI): A numerical index between 0 and 100 which is used to indicate the general condition of a pavement. Surveying processes and calculation methods are standardized for airport pavements.

PAVEMENT CLASSIFICATION NUMBER (PCN): An international method of expressing the load-carrying capacity of a pavement as a single unique number, without specifying a particular aircraft or detailed information about the pavement structure.

PILOT CONTROLLED LIGHTING: Airport runway lighting systems controlled by pilots activating their microphone on a specified radio frequency.

PRECISION APPROACH: A standard instrument approach procedure that provides runway alignment and descent (glide slope) information. Precision approaches are categorized as:

- **CATEGORY I (CAT I):** A precision approach providing a decision height of not less than 200 feet and visibility of not less than 1/2 mile or Runway Visual Range (RVR) 2400 (RVR 1800) with operative touchdown zone and runway centerline lights.
- **CATEGORY II (CAT II):** A precision approach that provides a decision height of not less than 100 feet and visibility not less than 1200 feet RVR.
- **CATEGORY III (CAT III):** A precision approach that provides approaches with a decision height and visibility lower than Category II.

PRECISION APPROACH PATH INDICATOR (PAPI): A lighting system providing visual approach slope guidance to aircraft during a landing approach. It is similar to a VASI but provides a sharper transition between the colored indicator lights.

PRECISION APPROACH RADAR (PAR): A radar facility in the terminal air traffic control system used to detect and display with a high degree of accuracy the direction, range, and elevation of an aircraft on the final approach to a runway.

PRECISION OBJECT FREE AREA (POFA): An area centered on the extended runway centerline, beginning at the runway threshold and extending beyond the runway threshold that is 200 feet long by 800 feet wide. The POFA is a clearing standard that requires the POFA to be kept clear of above ground objects protruding above the runway safety area edge elevation (except for frangible N AVAIDS). The POFA applies to all new authorized instrument approach procedures with less than 3/4 mile visibility.

PRIMARY AIRPORT: A commercial service airport that enplanes at least 10,000 annual passengers.

PRIMARY SURFACE: See 'Part 77.'

PROHIBITED AREA: See 'special-use airspace.'

PVC: Poor visibility and ceiling. Used in determining Annual Service Volume. PVC conditions exist when the cloud ceiling is less than 500 feet and visibility is less than one mile.

RADIAL: A radio signal generated by a Very High Frequency Omni-directional Range (VOR) station that is defined as an azimuth from the station.

REGRESSION ANALYSIS: A statistical technique used to identify and quantify the relationships between forecast factors.

REMOTE COMMUNICATIONS OUTLET (RCO): An unstaffed transmitter receiver/facility remotely controlled by air traffic personnel. RCOs serve flight service stations (FSSs)and are established to provide ground-to-ground communications between air traffic control specialists and pilots at satellite airports for delivering enroute clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times.

REMOTE TRANSMITTER/RECEIVER (RTR): RTRs serve ATCTs. See 'remote communications outlet.'

RELIEVER AIRPORT: An airport serving general aviation aircraft that might otherwise use a congested air-carrier airport.

REQUIRED NAVIGATION PERFORMANCE (RNP): A type of performance-based navigation that enables aircraft with required on-board navigation performance monitoring and alerting equipment to fly a specific path between defined points, fundamentally similar to RNAV.

RESTRICTED AREA: See 'special-use airspace.'

RNAV: Area navigation: airborne equipment that permits flights over determined tracks within prescribed accuracy tolerances without the need to over-fly ground-based navigation facilities. Used enroute and for approaches to an airport.

RUNWAY: A defined rectangular area on an airport prepared for aircraft landing and takeoff. Runways are normally numbered in relation to their magnetic direction, rounded off to the nearest 10 degrees. For example, a runway with a magnetic heading of 180 degrees would be designated Runway 18. The heading on the opposite end of the runway is 180 degrees from that runway end. For example, the opposite runway heading for Runway 18 would be Runway 36 (magnetic heading of 360 degrees). Aircraft can takeoff or land from either end of a runway, depending on wind direction.

RUNWAY ALIGNMENT INDICATOR LIGHT (RAIL): A series of high intensity, sequentially flashing lights installed on the extended runway centerline, usually in conjunction with an approach lighting system.

RUNWAY END IDENTIFIER LIGHTS (REIL): Two synchronized flashing lights, one on each side of the runway threshold, that provide rapid and positive identification of the approach end of a particular runway.

RUNWAY GRADIENT: The average slope, measured in percent, between the two ends of a runway.

RUNWAY PROTECTION ZONE (RPZ): An area off the runway end to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape with dimensions determined by the aircraft approach speed and runway approach type and minima.

RUNWAY SAFETY AREA (RSA): 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.

RUNWAY VISIBILITY ZONE (RVZ): A specified area on the airport to be kept clear of permanent objects that provides an unobstructed line-of-site from any point five feet above the runway centerline to any point five feet above an intersecting runway centerline within the specified area.

RUNWAY VISUAL RANGE (RVR): An electronically-derived value in feet, representing the horizontal distance a pilot can see down the runway.

SPECIALIZED AVIATION SERVICE OPERATOR (SASO): Sometime known as single-service providers or special FBOs, a SASO is a commercial service provider on an airport typically providing a single specialized aeronautical service that does not meet the minimum standards of a full service fixed based operator (FBO).

SCOPE: The document that identifies and defines the tasks, emphasis, and level of effort associated with a project or study.

SEGMENTED CIRCLE: Visual indicators designed to provide traffic patter n Information at airports without operating control towers.

SHOULDER: An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface that supports aircraft running off the pavement; provides enhanced drainage; and blast protection.

SLANT-RANGE DISTANCE: The straight line distance between an aircraft and a point on the ground.

SMALL AIRPLANE: An airplane that has a maximum certified takeoff weight of up to 12,500 pounds.

SPECIAL-USE AIRSPACE: Airspace of defined dimensions identified by a surface area where activities must be confined because of their nature and/or where limitations may be imposed on aircraft operations that are not a part of those activities. Special-use airspace classifications include:

- **ALERT AREA**: Airspace that may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.
- **CONTROLLED FIRING AREA**: Airspace where activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons or property on the ground.
- **MILITARY OPERATIONS AREA (MOA)**: Designated airspace with defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from instrument flight rule (IFR) traffic and to identify for visual flight rule (VFR) traffic where these activities are conducted.
- **PROHIBITED AREA**: Designated airspace within which aircraft flight is prohibited.
- **RESTRICTED AREA**: Airspace designated under Federal Aviation Regulation (FAR) 73, where the flight of aircraft, while not wholly prohibited, is subject to restrictions. Most restricted areas are designated joint use. When not in use by the using agency, IFR/VFR operations can be authorized by the controlling air traffic control facility.
- **WARNING AREA**: Airspace that may contain hazards to nonparticipating aircraft.

STANDARD INSTRUMENT DEPARTURE (SID): A preplanned IFR departure routing, preprinted for pilot use in graphic and textual form.

STANDARD TERMINAL ARRIVAL (STAR): A pre-planned IFR arrival routing, preprinted for pilot use in graphic and textual or textual form only.

STOP-AND-GO: Procedures wherein an aircraft will land, make a complete stop on the runway, and then takeoff. A stop-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

STOPWAY: An area beyond the end of a takeoff runway designed to support aircraft during an aborted takeoff without causing structural damage to the aircraft. It is not to be used for takeoff, landing, or taxiing of aircraft.

STRAIGHT-IN LANDING/APPROACH: A landing aligned within 30 degrees of the final approach course following completion of an instrument approach.

TACTICAL AIR NAVIGATION (TACAN): An ultra-high frequency electronic air navigation aid providing suitably equipped aircraft with a continuous indication of bearing and distance to the TACAN station.

TAKEOFF RUNWAY AVAILABLE (TORA): See 'declared distances.'

TAKEOFF DISTANCE AVAILABLE (TODA): See 'declared distances.'

TAXILANE: The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.

TAXIWAY: A defined path established for the taxiing of aircraft from one part of an airport to another.

TAXIWAY SAFETY AREA (TSA): A defined surface on each side of the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

TERMINAL INSTRUMENT PROCEDURES: Published flight procedures for conducting instrument approaches to runways under instrument meteorological conditions.

TERMINAL RADAR APPROACH CONTROL (TRACON): An element of the air traffic control system responsible for monitoring the enroute and terminal segment of air traffic in the airspace surrounding airports with moderate to high levels of air traffic.

TETRAHEDRON: A device used as a landing direction indicator. The small end of the tetrahedron points in the direction of landing.

THRESHOLD: The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.

TOUCH-AND-GO: An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. A touch-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

TOUCHDOWN: The point at which a landing aircraft makes contact with the runway surface.

TOUCHDOWN ZONE (TDZ): The first 3,000 feet of the runway beginning at the threshold.

TOUCHDOWN ZONE ELEVATION (TDZE): The highest elevation in the touchdown zone.

TOUCHDOWN ZONE (TDZ) LIGHTING: Two rows of transverse light bars located symmetrically about the runway centerline normally at 100-foot intervals. The basic system extends 3,000 feet along the runway.

TRAFFIC PATTERN: The traffic flow prescribed for aircraft landing at or taking off from an airport. The components of a typical traffic pattern are the upwind leg, crosswind leg, downwind leg, base leg, and final approach, described as follows:

- **UPWIND LEG**: A flight path parallel to the landing runway in the direction of landing.
- **CROSSWIND LEG**: A flight path at right angles to the landing runway off its upwind end.
- **DOWNWIND LEG**: A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg.
- **BASE LEG**: The flight path at right angles to the landing runway off its approach end. The base leg normally extends from the down-wind leg to the intersection of the extended runway centerline.
- **FINAL APPROACH**: A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway.

UNCONTROLLED AIRPORT: An airport without an airport traffic control tower where Visual Flight Rules traffic is performed.

UNCONTROLLED AIRSPACE: Airspace within which aircraft are not subject to air traffic control.

UNIVERSAL COMMUNICATION (UNICOM): A non-government airport communications facility that may provide airport information. Locations and frequencies of UNICOM's are shown on aeronautical charts and publications.

UPWIND LEG: See 'traffic pattern.'

VECTOR: A heading issued to an aircraft to provide radar navigational guidance.

VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION (VOR): A ground-based electronic navigation aid transmitting very high frequency radio signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the national airspace system. The VOR periodically identifies itself by Morse Code and may have an additional voice identification feature.

VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION/ TACTICAL AIR NAVIGATION (VORTAC): A navigation aid providing co-located VOR azimuth, TACAN azimuth, and TACAN distance-measuring equipment (DME).

VICTOR AIRWAY: A control area or portion thereof established in the form of a corridor, whose centerline is defined by radio navigation aids.

VISUAL APPROACH: An aircraft approach conducted in VFR conditions.

VISUAL APPROACH SLOPE INDICATOR (VASI): An airport approach aid providing visual approach slope guidance to aircraft during a landing approach. The VASI emits a directional pattern of high intensity red and white focused light beams that indicate to the pilot they are on path when seeing red/white, above

path if white/white, and below path if red/red. Some airports serving large aircraft have three-bar VASI's that provide two visual glide paths to the same runway.

VISUAL FLIGHT RULES (VFR): Rules that govern the procedures for conducting flight under visual conditions. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, pilots and controllers use VFR to indicate the type of flight plan.

VISUAL METEOROLOGICAL CONDITIONS: Meteorological conditions expressed in terms of specific visibility and ceiling conditions equal to or greater than the threshold values for instrument meteorological conditions.

VOR: See 'Very High Frequency Omnidirectional Range Station.'

VORTAC: See 'Very High Frequency Omnidirectional Range Station/Tactical Air Navigation.'

WARNING AREA: See 'special-use airspace.'

WIDE AREA AUGMENTATION SYSTEM (WAAS): An enhancement of the Global Positioning System that includes integrity broadcasts, differential corrections, and additional ranging signals for the purpose of providing the accuracy, integrity, availability, and continuity required to support all phases of flight.

Acronyms and Abbreviations

AC: advisory circular
ACN: aircraft classification number
ADF: automatic direction finder
ADG: airplane design group
ADS-B: automatic dependent surveillance - broadcast
AFSS: automated flight service station
AGL: above ground level
AGIS: Airports Geographic Information System
AIP: Airport Improvement Program
AIR-21: Wendell H. Ford Aviation Investment and Reform Act for the 21st Century
ALS: approach lighting system
ALSF-1: standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT I configuration)
ALSF-2: standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT II configuration)
APV: instrument approach procedure with vertical guidance
ARC: airport reference code
ARFF: aircraft rescue and firefighting
ARP: airport reference point
ARTCC: air route traffic control center
ASDA: accelerate-stop distance available
ASR: airport surveillance radar
ASOS: automated surface observation station
ATCT: airport traffic control tower
ATIS: automated terminal information service
AVGAS: aviation gasoline - typically 100 low lead (100LL)
AWOS: automated weather observation station
BRL: building restriction line
CFR: Code of Federal Regulations
CIP: capital improvement program
DME: distance measuring equipment
DNL: day-night noise level
DWL: runway weight bearing capacity for aircraft with dual-wheel type landing gear
DTWL: runway weight bearing capacity of aircraft with dual-tandem type landing gear
FAA: Federal Aviation Administration
FAR: Federal Aviation Regulation
FBO: fixed base operator
FY: fiscal year
GPS: global positioning system
GS: glide slope
HIRL: high intensity runway edge lighting
IFR: instrument flight rules (FAR Part 91)

ILS: instrument landing system
IM: inner marker
LAAS: local area augmentation system
LAHSO: land and hold short operations
LDA: localizer type directional aid
LDA: landing distance available
LIRL: low intensity runway edge lighting
LMM: compass locator at middle marker
LOC: ILS localizer
LOM: compass locator at ILS outer marker
LPV: localizer performance with vertical guidance
MALS: medium intensity approach lighting system
MALSR: medium intensity approach lighting system with runway alignment indicator lights
MIRL: medium intensity runway edge lighting
MITL: medium intensity taxiway edge lighting
MLS: microwave landing system
MM: middle marker
MOA: military operations area
MSL: mean sea level
NAVAID: navigational aid
NDB: nondirectional radio beacon
NextGen: next generation air transportation system
NM: nautical mile (6,076 .1 feet)
NPES: National Pollutant Discharge Elimination System
NPIAS: National Plan of Integrated Airport Systems
NPRM: notice of proposed rulemaking
ODALS: omnidirectional approach lighting system
OFA: object free area
OFZ: obstacle free zone
OM: outer marker
PAC: planning advisory committee
PAPI: precision approach path indicator
PCN: pavement classification number
PFC: porous friction course
PFC: passenger facility charge
PCL: pilot-controlled lighting
PIW: public information workshop
PLASI: pulsating visual approach slope indicator
POFA: precision object free area
PVASI: pulsating/steady visual approach slope indicator
PVC: Poor visibility and ceiling.
RCO: remote communications outlet
REIL: runway end identifier lighting
RNAV: area navigation

RNP: required navigation performance
RPZ: runway protection zone
RSA: runway safety area
RTR: remote transmitter/receiver
RVR: runway visibility range
RVZ: runway visibility zone
SALS: short approach lighting system
SASO: specialized aviation service operator
SASP: state aviation system plan
SEL: sound exposure level
SID: standard instrument departure
SM: statute mile (5,280 feet)
SRE: snow removal equipment
SSALF: simplified short approach lighting system with sequenced flashers
SSALR: simplified short approach lighting system with runway alignment indicator lights
STAR: standard terminal arrival route
SWL: runway weight bearing capacity for aircraft with single-wheel type landing gear
STWL: runway weight bearing capacity for aircraft with single-wheel tandem type landing gear
TACAN: tactical air navigational aid
TDZ: touchdown zone
TDZE: touchdown zone elevation
TAF: Federal Aviation Administration (FAA) Terminal Area Forecast
TODA: takeoff distance available
TORA: takeoff runway available
TRACON: terminal radar approach control
VASI: visual approach slope indicator
VFR: visual flight rules (FAR Part 91)
VHF: very high frequency
VOR: very high frequency omni-directional range
VORTAC: VOR and TACAN collocated
WAAS: wide area augmentation system