

Appendix A



GLOSSARY OF TERMS

Air Carriers: The commercial system of air transportation, consisting of the certificated air carriers, air taxis (including commuters), supplemental air carriers, commercial operators of large aircraft, and air travel clubs.

Aircraft Operation: The airborne movement of aircraft in controlled or noncontrolled airport terminal areas and about a given en route fix or at other points where counts can be made. There are two types of operations - local and itinerant. An operation is counted for each landing and each departure, such that a touch-and-go flight is counted as two operations. (FAA Stats)

Airport: An area of land or water that is used or intended to be used for the landing and taking off of aircraft, and includes its buildings and facilities, if any. (FAR 1)

Airport Elevation: The highest point of an airport's usable runways, measured in feet above mean sea level. (AIM)

Airport Layout Plan (ALP): A scale drawing of existing and proposed airport facilities, their location on an airport, and the pertinent clearance and dimensional information required to demonstrate conformance with applicable standards.

Airport Master Plan (AMP): A long-range plan for development of an airport, including descriptions of the data and analyses on which the plan is based.

Airport Reference Code (ARC): A coding system used to relate airport design criteria to the operational and physical characteristics of the airplanes intended to operate at an airport. (Airport Design AQ)

Airport Reference Point (ARP): The latitude and longitude of the approximate center of the airport.

Airport Use Agreement: Legal contract for the air carriers' use of the airport and leases for use of terminal facilities.

Air Taxi/Air Charter Operation: Includes operations which are not major air carrier operations, but which are performed in revenue service, on aircraft with fewer than 60 seats. This includes carriage of passengers in unscheduled, on-demand operations; and cargo operations. Also includes operations of some corporate aircraft carrying passengers in unscheduled, on-demand operations.

Ambient Noise Level: The level of noise that is all-encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the receiver.

Approach Protection Easement: A form of easement which both conveys all of the rights of an aviation easement and sets specified limitations on the type of land uses allowed to be developed on the property.

Approach Speed: The recommended speed contained in aircraft manuals used by pilots when making an approach to landing. This speed will vary for different segments of an approach as well as for aircraft weight and configuration. (AIM)

Apron: A defined area on an airport or heliport intended to accommodate aircraft for purposes of loading or unloading passengers or cargo, refueling, parking, or maintenance. With regard to seaplanes, a ramp is used for access to the apron from the water.

Area Navigation: A method of navigation that permits aircraft operations on any desired course within the coverage of station-referenced navigation signals or within the limits of self-contained system capability.

Avigation Easement: A type of easement which typically conveys the following rights:

- A right-of-way for free and unobstructed passage of aircraft through the airspace over the property at any altitude above a surface specified in the easement (usually set in accordance with FAR Part 77 criteria).
- A right to subject the property to noise, vibrations, fumes, dust, and fuel particle emissions associated with normal airport activity.
- A right to prohibit the erection or growth of any structure, tree, or other object that would enter the acquired airspace.
- A right-of-entry onto the property, with proper advance notice, for the purpose of removing, marking, or lighting any structure or other object that enters the acquired airspace.
- A right to prohibit electrical interference, glare, misleading lights, visual impairments, and other hazards to aircraft flight from being created on the property.

Based Aircraft: Aircraft stationed at an airport on a long-term basis.

Blast Fence: A barrier used to divert or dissipate jet blast or propeller wash.

Building Restriction Line: A line which identifies suitable building area locations on airports.

Ceiling: Height above the earth's surface to the lowest layer of clouds or obscuring phenomena. (AIM)

Charter Operations: Defined by the FAA as being a type of Air Taxi operation typically above 60 seats non-scheduled to include vacation tour groups and non-scheduled air freight operations.

Circling Approach/Circle to land Maneuver: A maneuver initiated by the pilot to align the aircraft with a runway for landing when a straight-in landing from an instrument approach is not possible or not desirable. (AIM)

Clearway: A defined rectangular area beyond the end of a runway cleared or suitable for use in lieu of runway to satisfy takeoff distance requirements. Also known as a Runway Protection Zone (RPZ).

Combining District: A zoning district which establishes development standards in areas of special concern over and above the standards applicable to basic underlying zoning districts.

Commercial Activities: Airport-related activities which may offer a facility, service or commodity for sale, hire or profit. Examples of commodities for sale are: food, lodging, entertainment, real estate, petroleum products, parts and equipment. Examples of services are: flight training, charter flights, maintenance, aircraft storage and tie-down. (CAC)

Commercial Operator: A person who, for compensation or hire, engages in the carriage by aircraft in air commerce of persons or property, other than as an air carrier. (FAR 1)

Commuter Airlines: A category of airline classified according to the type of aircraft used (maximum of 60 seats) and their operating frequency (at least five scheduled round trip flights per week between two or more points).

Compatibility Plan: As used herein, a plan, usually adopted by an Airport Land Use Commission, which sets forth policies for promoting compatibility between airports and the land uses which surround them. Often referred to as a Comprehensive Land Use Plan (CLUP).

Concession Agreement: An agreement between the airport and a concession regarding the conduct of business on airport property.

Control Zone: Controlled airspace surrounding one or more airports, normally a circular area having a radius of five statute miles plus extensions to include instrument arrival and departure paths. Most control zones surround airports with air traffic control towers and are in effect only for the hours when the tower is operational.

Controlled Airspace: Any of several types of airspace within which some or all aircraft may be subject to air traffic control. (FAR 1)

Day-Night Average Sound Level (DNL): The noise metric adopted by the U.S. Environmental Protection Agency for measurement of environmental noise. It represents the average daytime noise level during a 24-hour day, measured in decibels and adjusted to account for the lower tolerance of people to noise during nighttime periods. The mathematical symbol is Ldn.

Debt Service Coverage: The requirement that the airport's revenue, net of operating and maintenance expenses be equal to a specified percentage in excess of the annual debt service (principal and interest payments) for revenue bond issues.

Decibel (dB): A unit measuring the magnitude of a sound, equal to the logarithm of the ratio of the intensity of the sound to the intensity of an arbitrarily chosen standard sound, specifically a sound just barely audible to an unimpaired human ear. For environmental noise from aircraft and other transportation sources, an A-weighted sound level (sometimes abbreviated dBA) is normally used. The A-weighting scale adjusts the values of different sound frequencies to approximate the auditory sensitivity of the human ear.

Decision Height: With respect to the operation of aircraft, the height at which a decision must be made, during an ILS or PAR instrument approach, to either continue the approach or to execute a missed approach.

Declared Distances: The distances the airport owner declares available for the airplane's takeoff run, takeoff distance, accelerate-stop distance, and landing distance requirements. The distances are:

- *Accelerate-stop distance available (ASDA):* The runway plus stopway (SWY) length declared available and suitable for the acceleration and deceleration of an airplane aborting a takeoff; and
- *Landing distance available (LDA):* The runway length declared available and suitable for a landing airplane.

Deed Notice: A formal statement added to the legal description of a deed to a property and on any subdivision map. As used in airport land use planning, a deed notice would state that the property is subject to aircraft overflights. Deed notices are used as a form of buyer notification to ensure that those who are particularly sensitive to aircraft overflights can avoid moving to the affected areas.

Density of Use: As used in airport land use planning, the term refers to the number of dwelling units per gross acre for residential land uses or the number of people per acre with regard to other land uses.

Designated Body: A local government entity, such as a regional planning agency or a county planning commission, chosen by the county board of supervisors and the selection committee of city mayors to act in the capacity of an airport land use commission.

Displaced Threshold: A landing threshold that is located at a point on the runway other than the designated beginning of the runway (see Threshold). (AIM)

Experimental Aircraft Association: A not-for-profit organization operated exclusively for educational, recreational, and charitable purposes drawing upon the surrounding community for its membership and activities which include youth programs and public services.

Easement: A less-than-fee-title transfer of real property rights from the property owner to the holder of the easement.

Equivalent Sound Level (Leq): The level of constant sound which, in the given situation and time period, has the same average sound energy as does a time-varying sound.

FAR Part 77: The part of the Federal Aviation Regulations which deals with objects affecting navigable airspace.

FAR Part 77 Surfaces: Imaginary airspace surfaces established with relation to each runway of an airport. There are five types of surfaces: (1) primary; (2) approach; (3) transitional; (4) horizontal; and (5) conical.

FAR Part 91-General Operating & Flight Rules: This Federal Aviation Regulation (FAR) prescribes rules governing the operation of aircraft with the US.

FAR Part 139-Certification & Operations: Land airports serving certain air carriers. The regulation governs the certification and operation of land airports which serve any scheduled or unscheduled passenger operation of an air carrier that conducted with an aircraft having and seating a capacity of more than 30 passengers.

FAR Part 150: The Aviation Safety and Noise Abatement Act of 1979 require the FAA to establish regulations that set forth national standards for identifying airport noise and land-use incompatibilities and to develop programs to eliminate them.

Federal Aviation Administration (FAA): The U.S. government agency which is responsible for ensuring the safe and efficient use of the nation's airports and airspace.

Federal Aviation Regulations (FAR): Regulations formally issued by the FAA to regulate air commerce.

Final Approach (IFR): The flight path of an aircraft which is inbound to an airport on a final instrument approach course, beginning at the final approach fix or point and extending to the airport or the point where a circle-to-land maneuver or a missed approach is executed.

Findings: Legally relevant conclusions which expose a government agency's mode of analysis of facts, regulations, and policies, and which bridge the analytical gap between raw data and ultimate decision.

Fixed Base Operator (FBO): A business which operates at an airport and provides aircraft services to the general public, including but not limited to sale of fuel and oil; aircraft sales, rental, maintenance, and repair; parking and tie-down or storage of aircraft; flight training; air taxi/charter operations; and specialty services, such as instrument and avionics maintenance, painting, overhaul, aerial application, aerial photography, aerial hoists, or pipeline patrol.

Fractional Aircraft Ownership:

An aircraft ownership system that is based on a user paying an annual fee to an aircraft leasing company for access to a varied selection of corporate aircraft types. Aircraft operating fees are also paid for the specific type of aircraft and the number of hours flown.

Frangible NAVAID: A navigational aid (NAVAID) which 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. The term NAVAID includes electrical and visual air navigational aids, lights, signs, and associated supporting equipment.

Fuel Flowage Fees: Fees levied by the airport operator per gallon of aviation gasoline and jet fuel sold at the airport.

GPS: A space-based radio positioning, navigation and time-transfer system. The system provides highly accurate position and velocity information, and precise time, on a continuous global basis, to an unlimited number of properly equipped users. The system is unaffected by weather, and provides a worldwide common grid reference system.

General Aviation: That portion of civil aviation which encompasses all facets of aviation except air carriers. (FAA Stats)

General Obligation Bonds: Bonds that are issued by states, municipalities, and other general-purpose governments and backed by the full faith, credit, and taxing power of the issuing government agency.

Glide Slope: An electronic signal radiated by a component of an ILS to provide vertical guidance for aircraft during approach and landing.

Global Positioning System (GPS): A satellite-based radio positioning, navigation, and time-transfer system developed and used by the U.S. Department of Defense. This technology may eventually become the principal system for air navigation throughout the world.

Helipad: A small, designated area, usually with a prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, or movement area used for takeoff, landing, or parking of helicopters. (AIM)

Heliport: A site used for the landing and taking off of helicopters which consists of a takeoff and landing area, helipad/helideck, approach-departure paths, heliport imaginary surfaces, a functioning wind cone, and sufficient lighting.

HIRL: High Intensity Runway Lights

Infill: Development which takes place on vacant property largely surrounded by existing development, especially development which is similar in character.

Instrument Approach Procedure: A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. It is prescribed and approved for a specific airport by competent authority (refer to Nonprecision Approach Procedure and Precision Approach Procedures). (AIM)

Instrument Flight Rules (IFR): Rules governing the procedures for conducting instrument flight. Generally, IFR applies when meteorological conditions with a ceiling below 1,000 feet or visibility of less than 3 miles prevail. (AIM)

Instrument Landing System (ILS): A precision instrument approach system which normally consists of the following electronic components and visual aids: (1) localizer; (2) Glide Slope; (3) Outer Marker; (4) Middle Marker; (5) Approach Lights. (AIM)

Instrument Operation: An aircraft operation in accordance with an IFR flight plan or an operation where IFR separation between aircraft is provided by a terminal control facility. (FAA ATA)

Instrument Runway: A runway equipped with electronic and visual navigation aids for which a precision or nonprecision approach procedure having straight-in landing minimums has been approved. (AIM)

Inverse Condemnation: An action brought by a property owner seeking just compensation for land taken for a public use against a government or private entity having the power of eminent domain. It is a remedy peculiar to the property owner and is exercisable by that party where it appears that the taker of the property does not intend to bring eminent domain proceedings.

Large Airplane: An airplane of more than 12,500 pounds maximum certificated takeoff weight. (Airport Design AC)

Localizer (LOC): The component of an ILS which provides course guidance to the runway. (AIM)

Limited Part 139-Operating Certificate: A certificate issued under the FAR Part 139 for the operation of an airport serving unscheduled air carrier operations.

Major Airlines: Major airlines are airlines with gross operating revenues during any calendar year of more than \$1 billion; national airlines gross between \$100 million and \$1 billion; and regional airlines gross under \$100 million.

Military Operation: An aircraft operation conducted by either a fixed-wing or rotor-wing military aircraft.

Minimum Descent Altitude (MDA): The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided. (FAR 1)

MIRL: Medium Intensity Runway Lights

Missed Approach: A maneuver conducted by a pilot when an instrument approach cannot be completed to a landing. (AIM)

National Transportation Safety Board (NTSB): The U.S. government agency responsible for investigating transportation accidents and incidents.

Navigational Aid (NAVAID): Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight. (AIM)

Noise Contours: Continuous lines of equal noise level usually drawn around a noise source, such as an airport or highway. The lines are generally drawn in 5-decibel increments so that they resemble elevation contours in topographic maps.

Noise Level Reduction: A measure used to describe the reduction in sound level from environmental noise sources occurring between the outside and the inside of a structure.

Nonconforming Use: An existing land use which does not conform to subsequently adopted or amended zoning or other land use development standards.

Nonprecision Approach Procedure: A standard instrument approach procedure in which no electronic glide slope is provided. (FAR 1)

Nonprecision Instrument Runway: A runway with an approved or planned straight-in instrument approach procedure which has no existing or planned precision instrument approach procedure. (Airport Design AC)

Obstruction: Any object of natural growth, terrain, or permanent or temporary construction or alteration, including equipment or materials used therein, the height of which exceed standards established in Subpart C of Federal Aviation Regulations Part 77, Objects Affecting Navigable Airspace.

Overflight: Any distinctly visible and audible passage of an aircraft in flight, not necessarily directly overhead.

Overflight Easement: An easement which describes the right to overfly the property above a specified surface and includes the right to subject the property to noise, vibrations, fumes and emissions. An overflight easement is used primarily as a form of buyer notification.

Overflight Zone: The area(s) where aircraft maneuver to enter or leave the traffic pattern, typically defined by the FAR Part 77 horizontal surface.

Overlay Zone: See Combining District.

Peaking Operation:

Peak hour aircraft operational projections are required to determine the peak period capacity of a runway system, as well as for determining the size of the various functional areas of a passenger terminal.

Planning Area Boundary: An area surrounding an airport designated by an ALUC for the purpose of airport land use compatibility planning conducted in accordance with provisions of the State Aeronautics Act.

Precision Approach Category I (CAT I) Runway: A runway with an instrument approach procedure which provides for approaches to a decision height (DH) of not less than 200 feet (60m) and visibility of not less than ½ mile (800m) or Runway Visual Range (RVR) 2400 (RVR 1800 with operative touchdown zone and runway centerline lights).

Precision Approach Category II (CAT II) Runway: A runway with an instrument approach procedure which provides for approaches to a minima less than CAT I to as low as a decision height (DH).

Precision Approach Category III (CAT III) Runway: A runway with an instrument approach procedure which provides for approaches to minima less than CAT II.

Precision Approach Procedure: A standard instrument approach procedure where an electronic glide slope is provided. (FAR 1)

Precision Instrument Runway: A runway with an existing or planned precision instrument approach procedure. (Airport Design AQ)

Public Airport: An airport that is open to the general public with or without a prior request to use the airport.

Referral Area: The area around an airport defined by the planning area boundary adopted by an Airport Land Use Commission within which certain land use proposals are to be referred to the commission for review.

Reliever Airport: An airport designated as having the function of relieving congestion at a commercial service airport and providing more general aviation access to the overall community.

Revenue Bonds: Bonds which are payable solely from the revenues derived from the operation of a facility which was constructed or acquired with the proceeds of the bonds.

Rotorcraft:

A heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors.

Runway Blast Pad: A surface adjacent to the ends of runways provided to reduce the erosive effect of jet blast and propeller wash.

Runway End Identifier Lights (REIL): Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.

Runway Protection Zone (RPZ): A trapezoidal shaped area off runway end to enhance the protection of people and property on the ground.

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.

Safety Zone: For the purpose of airport land use planning, an area near an airport in which land use restrictions are established to protect the safety of the public from potential aircraft accidents.

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

Single-Event Noise: As used herein, the noise from an individual aircraft operation or overflight.

Aircraft Landing Gear:

Single-Wheel: The main landing gear consists on a single wheel under each wing. Single-wheel landing gear are typically used on single-engine aircraft weighing less than 20,000 pounds.

Dual-Wheel: The main landing gear consists of two wheels under each wing. Dual-wheel landing gear are typically used on multi-engine aircraft weighing between 20,000 pounds up to 200,000 pounds.

Dual-Tandem: The main landing gear consists of four wheels under each wing. Dual-Tandem landing gear are typically used on multi-engine aircraft weighing over 200,000 pounds.

Small Airplane: An airplane of 12,500 pounds or less maximum certificated takeoff weight. (Airport Design AC)

Sound Exposure Level (SEL): A time-integrated metric (i.e., continuously summed over a time period) which quantifies the total energy in the A-weighted sound level measured during a transient noise event. The time period for this measurement is generally taken to be that between the moments when the A-weighted sound level is 10 dB below the maximum.

Straight-In Instrument Approach: An instrument approach wherein a final approach is begun without first having executed a procedure turn; it is not necessarily completed with a straight-in landing or made to straight-in landing weather minimums. (AIM)

TAF- Terminal Area Forecast: An annual FAA forecast of aviation activity throughout the US used in the FAA's planning and decision making. The TAF is a subset of approximately 900 airports in the National Plan of Integrated Airport Systems (NPIAS) database that contains over 4000 airports.

Taking: Government appropriation of private land for which compensation must be paid, as required by the First Amendment of the U.S. Constitution. It is not essential that there be physical seizure or appropriation for a taking to occur, only that the government action directly interferes with or substantially disturbs the owner's right to use and enjoyment of the property.

Taxilane (TL): The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.

Taxiway (TW): A defined path established for the taxiing of aircraft from one part of an airport to another.

Taxiway Safety Area (TSA): A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

Terminal Instrument Procedures (TERPS): Procedures for instrument approach and departure of aircraft to and from civil and military airports. There are four types of terminal instrument procedures: precision approach, nonprecision approach, circling, and departure.

Threshold (TH): The beginning of that portion of the runway usable for landing. In some instances the landing threshold may be displaced. (see Displaced Threshold) (AIM)

Threshold Lights: Fixed green lights arranged symmetrically left and right of the runway centerline, identifying the runway end.

Touch-and-Go: An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. (AIM)

Traffic Pattern: The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from an airport. The components of a typical traffic pattern are upwind leg, crosswind leg, downwind leg, base leg, and final approach. (AIM)

Utility Runway: A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight or less.

Vertical Flight: Aircraft flight operations by vertical lift aircraft. Typically, vertical lift aircraft include helicopters, tilt rotors, ducted-fan vehicles, and directed-thrust type propulsion systems.

Visual Approach: An approach where the pilot must use visual reference to the runway for landing under VFR conditions.

Visual Flight Rules (VFR): Rules that govern the procedures for conducting flight under visual conditions. VFR applies when meteorological conditions are equal to or greater than the specified minimum, generally, a 1,000-foot ceiling and 3-mile visibility.

Visual Runway: A runway intended solely for the operation of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on a FAA-approved airport layout plan or by any planning document submitted to the FAA by competent authority.

Zoning: A police power measure, enacted primarily by units of local government, in which the community is divided into districts or zones within which permitted and special uses are established, as are regulations governing lot size, building bulk, placement, and other development standards. Requirements vary from district to district,

but they must be uniform within districts. A zoning ordinance consists of two parts: the text and a map.

Glossary Sources

FAR 1: Federal Aviation Regulations Part 1, Definitions and Abbreviations

AIM: Airmen's Information Manual (1993)

Airport Design AC: Federal Aviation Administration, Airport Design Advisory Circular 150/5300-13 (1993)

FAA ATA: Federal Aviation Administration, Air Traffic Activity

FAA Stats: Federal Aviation Administration, Statistical Handbook of Aviation

NTSB: National Transportation and Safety Board