



## Appendix A

### AVIATION GLOSSARY OF TERMS

**ABOVE GROUND LEVEL (AGL).** An altitude that is measured with respect to the underlying ground.

**ACCELERATED-STOP DISTANCE AVAILABLE (ASDA).** See *Declared Distances*.

**ACI-NA.** Airports Council International – North America.

**ADMINISTRATOR.** Federal Aviation Administrator or any person to whom he has delegated his authority in the matter concerned.

**ADVISORY CIRCULAR (AC).** External communications or publications issued by the FAA to provide non-regulatory guidelines for the recommendations relative to a policy, and guidance and information relative to a specific aviation subject matter. An example of this is AC 150/1300-13A, *Airport Design*, which is frequently referenced throughout a typical master plan.

**AIR CARRIER.** A person or company who undertakes directly by lease, or other arrangement, to engage in air transportation.

**AIR ROUTE TRAFFIC CONTROL CENTERS (ARTCC).** A facility responsible for enroute control of aircraft operating under IFR in a particular volume of airspace (within its area of jurisdiction) at high altitudes between airport approaches and departures. Approximately 26 such centers cover the United States.

**AIR TAXI.** An aircraft operating under an air taxi operating certificate for the purpose of carrying passengers, mail, cargo for revenue in accordance with FAR 121 or FAR Part 135.

**AIR TRAFFIC.** Any aircraft operating in the air or on an airport surface, exclusive of loading ramps and parking areas.

**AIR TRAFFIC CONTROL (ATC).** A service provided by ground-based controllers who direct aircraft on the ground and in the air. The primary purpose of ATC systems is to separate aircraft to prevent collisions, to organize and expedite the flow of traffic, and to provide information and other support for pilots when able.

**AIR TRAFFIC CONTROL TOWER (ATCT).** A facility in the terminal air traffic control system located at an airport which consists of a tower cab structure and an associated instrument flight rules rooms, if radar equipped, that uses ground-to-air and air-to-ground communications and radar, visual, signaling, and other devices to provide for the safe and expeditious movement of terminal area air traffic in the airspace and airports within its jurisdiction.

**AIR TRAFFIC CONTROL (ATC) SERVICE.** A service provided for the purpose of promoting the safe, orderly, and expeditious flow of air traffic, including airport, approach, and enroute air traffic control services. ATC is provided by the Federal Aviation Administration, a branch of the federal government under the Department of Transportation or, at Airport Traffic Control Tower (ATCT), through an independent service provider contracted with the Federal Aviation Administration.

**AIRCRAFT.** A device that is used or intended to be used for flight in the air.

- **Airplane.** An engine-driven fixed-wing aircraft heavier than air that is supported in flight by the dynamic reaction of the air against its wings.

- **Large Airplane.** An airplane of more than 12,500 pounds maximum certified takeoff weight.
- **Small Airplane.** An airplane of 12,500 pounds or less maximum certified takeoff weight.
- **Balloon.** A lighter-than-air aircraft that is not engine-driven, and that sustains flight through the use of either gas buoyancy or an airborne heater.
- **Glider.** A heavier-than-air aircraft that is supported in flight by the dynamic reaction of the air against its lifting surfaces and whose free flight does not depend principally on an engine.
- **Heavy Aircraft.** Aircraft capable of takeoff weight of more than 255,000 pounds whether or not they are operating at this weight during a particular phase of flight.
- **Helicopter.** A rotorcraft that, for horizontal motion, depends principally on its engine-driven rotors.
- **Large Aircraft.** Aircraft of more than 41,000 pounds maximum certified takeoff weight, up to 255,000 pounds
- **Regional Jet (RJ).** There is no regulatory definition for an RJ; however, for FAA use, an RJ is a commercial jet airplane that carries fewer than 100 passengers.
- **Rocket.** An aircraft propelled by ejected expanding gases generate in engine from self-contained propellants and not dependent on the intake of outside substances.
- **Rotorcraft.** A heavier-than-air aircraft that depends principally for its support in flight on the lift generated by one or more rotors.
- **Small Aircraft.** Aircraft of 41,000 pounds or less maximum certified takeoff weight.

**AIRCRAFT APPROACH CATEGORY (AAC).** A grouping of aircraft based on approach speed, defined as 1.3 times the aircraft stall speed at maximum certificated takeoff weight. The 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 166 knots or more.

**AIRCRAFT DEICING PAD.** See *Deicing Pad*.

**AIRCRAFT ENGINE.** The component of the propulsion system for an aircraft that generates mechanical power. They are almost always either lightweight piston engines or gas turbines, although electric engines are currently in development.

- **Piston Engine.** A heat engine that uses one or more reciprocating pistons to convert pressure generated from aviation gasoline into a rotating motion.
- **Turbine Engine.** A mechanical device or engine that spins in reaction to fluid flow through or over it. This device is used in turbofan, turbojet, and turboprop-powered aircraft and utilizes jet fuel.
  - **Turbofan.** A turbojet engine whose thrust has been increased by the addition of a low-pressure compressor fan.
  - **Turbojet.** An engine that derives power from a fanned wheel spinning in reaction to burning gases escaping from a combustion chamber. The turbine in turn drives a compressor and other accessories.
  - **Turboprop.** A turbine engine in which the rotating turbine turns a propeller.

**AIRCRAFT OPERATION.** See *Operation*.



**AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF).** A special category of fire fighting that involves the response, hazard mitigation, evacuation and possible rescue of passengers and crew of an aircraft involved in (typically) an airport ground emergency.

**AIRPLANE.** See *Aircraft*.

**AIRPLANE DESIGN GROUP (ADG).** A numerical classification aircraft based on wingspan or tail height. Where an airplane is in two categories, the most demanding category should be used. The groups are as follows:

- **Group I:** Up to but not including 49 feet wingspan or tail height up to but not including 20 feet. (e.g. Cessna 172)
- **Group II:** 49 feet up to but not including 79 feet wingspan or tail height from 20 up to not including 30 feet. (e.g. Cessna Citation Business jet).
- **Group III:** 79 feet up to but not including 118 feet wingspan or tail height from 30 up to but not including 45 feet. (e.g. Boeing 737)
- **Group IV:** 118 feet up to but not including 171 feet wingspan or tail height from 60 up to but not including 66 feet. (e.g. Boeing 767)
- **Group V:** 171 feet up to but not including 214 feet wingspan or tail height from 60 up to but not including 66 feet. (e.g. Boeing 747)
- **Group VI:** 214 feet up to but not including 262 feet wingspan or tail height from 66 up to but not including 80 feet. (e.g. Airbus A380)

**AIRPORT.** An area of land or water that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any. Different types of airports include the following:

- **Cargo Service Airport.** An airport served by aircraft providing air transportation of property only, including mail, with an annual aggregate landed weight of at least 100 million pounds.
- **Certificated Airport.** An airport that has been issued an Airport Operating Certificate (AOC) by the FAA under the authority of FAR Part 139, Certification and Operation.
- **Commercial Service Airport.** A public airport providing scheduled passenger service that enplanes at least 2,500 annual passengers.
- **General Aviation Airport.** An airport that provides air service to only general aviation.
- **Hub Airport.** An airport that an airline uses as a transfer point to get passengers to their intended destination. It is part of a hub and spoke model, where travelers moving between airports not served by direct flights change planes enroute to their destinations.
  - **Large Hub Airport.** An airport that handles over 1% of the country's annual enplanements.
  - **Medium Hub Airport.** An airport that handles 0.25% ≥ 1% of the country's annual enplanements.
  - **Small Hub Airport.** An airport that handles 0.05% ≥ 0.25% of the country's annual enplanements.
  - **Non-Hub Airport.** An airport that handles over 10,000 enplanements, but less than 0.05% of the country's annual enplanements.
- **International Airport.** Relating to international flight, it means:
  - An airport of entry which has been designated by the Secretary of Treasury or Commissioner of Customs as an international airport for customs service.
  - A landing rights airport at which specific permission to land must be obtained from customs authorities in advance of contemplated use.
  - Airports designated under the Convention on ICAO as an airport for use by international commercial air transport and/or international general aviation.
- **Primary Airport.** A commercial service airport that enplanes at least 10,000 annual passengers.

- **Reliever Airport.** General aviation airports in a major metropolitan area that provides pilots with attractive alternatives to using congested hub airports.
- **Uncontrolled Airport.** An airport without an air traffic control tower at which the control of VFR traffic is not exercised. Pilots “see and avoid” other traffic without the aid of air traffic control.

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

**AIRPORT CAPITAL IMPROVEMENT PLAN (CIP).** The planning program used by the FAA to identify, prioritize, and distribute funds for airport development and the needs of National Airspace System (NAS) to meet specified national goals and objectives.

**AIRPORT CERTIFICATION MANUAL (ACM).** An approved ACM is an extension of the Part 139 regulation and its contents are legally enforceable under Federal law. An ACM should describe how a certificate holder complies with Part 139 requirements in a manner acceptable to the Administrator.

**AIRPORT DIAGRAM.** A diagram of an airport that is specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations.

**AIRPORT ELEVATION.** The highest point of an airport’s usable runway(s) expressed in feet above mean sea level (MSL).

**AIRPORT EMERGENCY PLAN (AEP).** A coordinated plan to provide emergency related actions to ensure for the safety of and emergency services for the airport and community.

**AIRPORT FACILITY DIRECTORY (AFD).** Now known as a Chart Supplement, a publication with information on all airports, seaplane bases, and heliports open to the public. This publication is issued in seven volumes according to geographical area, and includes communications data, navigational facilities, and certain special notices and procedures.

**AIRPORT HAZARD.** Any structure or natural object located on or in the vicinity of a public airport, or any use of land near such airport, that obstructs the airspace required for the flight of aircraft in landing or taking off at the airport or is otherwise hazardous to aircraft landing, taking of, or taxiing at the airport.

**AIRPORT IMPROVEMENT PROGRAM (AIP).** An FAA program authorized by the Airport and Airway Improvement Act of 1982 that serves as the primary source of funding airport planning and development. This funding is provided at specific levels, with the funding priority based on the airport’s Capital Improvement Program (CIP) and available funds.

**AIRPORT INFLUENCE AREA.** The area defined by overlaying the FAR Part 77 Imaginary Surfaces, Aircraft Accident Safety Zone data, and Noise Contour data over the top of an existing land use map, critical areas map or other base map.

**AIRPORT LAYOUT PLAN (ALP).** A scaled drawing (or set of drawings), in either traditional or electronic form, of current and future airport facilities that provides a graphic representation of the existing and long-term development plan for the airport and demonstrates the preservation and continuity of safety, utility, and efficiency of the airport to the satisfaction of the FAA.

**AIRPORT LIGHTING.** Various lighting aids that may be installed on an airport. Types of airport lighting include:

- **ALS.** See *Approach Light System*.
- **Boundary Lights.** Lights defining the perimeter of an airport or landing area.



- **Runway Centerline Lighting.** Flush centerline lights spaced at 50-foot intervals beginning 75 feet from the landing threshold and extending to within 75 feet of the opposite end of the runway. Only used on Category II/III ILS Runways.
- **Runway Edge Lights.** Lights used to outline the edges of the runways during periods of darkness or restricted visibility conditions. They are usually uniformly spaced at intervals of approximately 200 feet, and intensity may be controlled or preset. These light systems are classified according to the intensity they are capable of producing:
  - High Intensity Runway Lights (HIRLs).
  - Medium Intensity Runway Lights (MIRLs).
  - Low Intensity Runway Lights (LIRLs).
- **Runway End Identifier Lights (REIL).** Provides rapid and positive identification of the approach end of particular runway. The system consists of a pair of synchronized flashing lights, one on each side of the runway threshold.
- **Threshold Lights.** Fixed lights arranged symmetrically left and right of the runway centerline, identifying the runway threshold. Lights are green for arriving aircraft and red for departing aircraft.
- **Touchdown Zone Lighting.** Two rows of transverse light bars located symmetrically about the runway centerline normally at 100-foot intervals. Only used on Category II/III ILS Runways.

**AIRPORT MARKINGS.** Markings used on runway and taxiway surfaces to identify a specific runway, a runway threshold, a centerline, a hold line, etc. A runway should be marked in accordance with its present usage such as: 1) Visual, 2) Nonprecision instrument, 3) Precision Instrument.

**AIRPORT MASTER PLAN.** A comprehensive study of an airport that focuses on the short-, medium-, and long-term development plan to meet future aviation demand of the airport.

**AIRPORT OBSTRUCTION CHART (OC).** A scaled drawing depicting the FAR Part 77 imaginary airspace surfaces, a representation of objects that penetrate these surfaces, runway, taxiway, and ramp areas, navigational aids, buildings, roads, and other detail in the vicinity of the airport.

**AIRPORT OPERATIONS AREA (AOA).** An area of an airport used or intended to be used for landing, takeoff, or surface maneuvering of aircraft. An AOA includes such paved areas or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways, or apron.

**AIRPORT OPERATOR.** The operator (private or public) or sponsor of a public-use airport.

**AIRPORT REFERENCE CODE (ARC).** A coding system used to relate the airport design criteria to the operational and physical characteristics of the airplanes intended to use the airport or the critical aircraft. It is a two-character code consisting of the Aircraft Approach Category and the Airplane Design Group.

**AIRPORT REFERENCE POINT (ARP).** The latitude and longitude of the approximate center of the runway(s) at an airport.

**AIRPORT SIGNS.** Signs used to identify items and locations on the airport. Following are the most common sign types:

- **Boundary Sign.** These signs are used to identify the location of the boundary of the RSA/ROFZ or ILS critical areas for a pilot, or an existing the runway. These signs have a black inscription on a yellow background.
- **Destination Sign.** These signs indicate the general direction to a remote location. They have black inscriptions on a yellow background and ALWAYS contain an arrow.

- **Direction Sign.** These signs indicate directions of taxiways leading out of an intersection. They may also be used to indicate a taxiway exit from a runway. These signs have black inscriptions on a yellow background and ALWAYS contain arrows.
- **Information Sign.** These signs are installed on the airside of an airport and are considered to be signs other than mandatory signs. They have black inscriptions on a yellow background.
- **Location Sign.** These signs identify the taxiway or runway upon which the aircraft is located. The sign has yellow inscriptions on a black background with a yellow border and does NOT use arrows.
- **Mandatory Instruction Sign.** They denote taxiway/runway intersections, runway/runway intersections, ILS critical areas, OFZ boundaries, runway approach areas, CAT II/II operations areas, military landing zones, and no entry areas. These signs have white inscriptions with a black outline on a red background.
- **Roadway Sign.** These signs are located on the airfield and are solely intended for vehicle operators. They should conform to the categorical color codes established by the Manual on Uniform Traffic Control Devices (MUTCD).
- **Runway Distance Remaining Signs.** These signs are used to provide distance remaining information to pilots during takeoff and landing operations. These signs have a white numeral inscription on a black background.

**AIRPORT SPONSOR.** The entity that is legally responsible for the management and operation of an airport including the fulfillment of the requirements of laws and regulations related thereto.

**AIRPORT SURVEILLANCE RADAR (ASR).** A radar system used at airports to detect and display the position of aircraft in the terminal area.

**AIRSIDE.** The portion of an airport that contains the facilities necessary for the operations of aircraft.

**ANNUAL SERVICE VOLUME (ASV).** The number of annual operations that can reasonably be expected to occur at the airport based on a given level of delay.

**APPROACH END OF RUNWAY.** The approach end of runway is the near end of the runway as viewed from the cockpit of a landing airplane.

**APPROACH LIGHT SYSTEM (ALS).** An airport lighting facility aids in runway identification during the transition from instrument flight to visual flight for landing. Typical approach lighting systems used at airports include:

- **Approach Light System with Sequenced Flashing (ALSF).**
- **Lead-in-light System (LDIN).** Consists of one or more series of flashing lights installed at or near ground level that provides positive visual guidance along an approach path, either curving or straight, where special problems exist with hazardous terrain, obstructions, or noise abatement procedures.
- **Medium-Intensity Approach Light System with Runway Alignment Indicator (MALSR).** A lighting system installed on the approach end of a runway and consists of a series of lightbars, strobe lights, or a combination that extends outward from the runway end. It usually serves a runway that has an instrument approach procedure associated with it and allows the pilot to visually identify and align self with the runway environment once the pilot has arrived at a prescribed point on the approach.
- **Omnidirectional Approach Lighting System (ODALS).** Consist of seven omnidirectional flashing lights located in the approach area of a non-precision runway. Five lights are located on the runway centerline extended with the first light located 300 feet from the threshold and extending at equal intervals up to 1,500 feet from the threshold. The other two lights are located on each side of the runway, with a lateral distance of 40 feet from the runway edge, or 75v feet from the runway edge when installed on a runway equipped with VASI.



- **Runway Alignment Indicator Lights (RAILS).** Sequenced Flashing Lights which are installed only in combination with other lighting systems.

**APPROACH PROCEDURES WITH VERTICAL GUIDANCE (APV).** Instrument approach procedures conducted under IFR that provide both lateral and vertical guidance, but that do not meet all the accuracy requirements and navigation specifications to be classified as precision approach. Examples of APV approaches include Area Navigation (RNAV) (lateral approach procedures with vertical guidance (LPV) or lateral navigation (LNAV)/vertical navigation (VNAV) minimums) and localizer-type directional aid (LDA) with glideslope (GS).

**APPROACH SURFACE.** See *Imaginary Surfaces*.

**APRON.** A specific portion of the airfield used for passenger, cargo or freight loading and unloading, aircraft parking, and the refueling, maintenance and servicing of aircraft. Also referred to as ramp or tarmac.

**ARCHITECTURAL/ENGINEERING (AE).**

**ARFF BUILDING.** A facility located at an airport that provides emergency vehicles, extinguishing agents, and personnel responsible for minimizing the impacts of an aircraft accident or incident.

**ARRIVAL TIME.** The time an aircraft touches down on arrival.

**AVIATION SECURITY STAKEHOLDER PARTICIPATION ACT OF 2014 (ASSPA OF 2014).** Directs the DHS and TSA to establish in the TSA an aviation security advisory committee.

**AVIATION AND TRANSPORTATION SECURITY ACT (ATSA).** This act created the Transportation Security Administration. Prior to the passage of the ATSA, passenger screening was the responsibility of airlines.

**AUTOMATED FLIGHT SERVICE STATION (AFSS).** An automated air traffic facility that provides information and services to aircraft pilots before, during, and after flights, but it is not responsible for giving instructions or clearances or providing separation.

**AUTOMATED SURFACE OBSERVATION SYSTEM (ASOS).** Similar data reporting as an AWOS, but usually owned and maintained by the National Weather Service.

**AUTOMATED WEATHER OBSERVATION SYSTEM (AWOS).** An automated sensor suite which is voice synthesized to provide a weather report that can be transmitted via VHF radio, NDB, or VOR ensuring that pilots on approach have up-to-date airport weather for safe and efficient aviation operations. Most AWOS observe and record temperature and dew point in degrees Celsius, wind speed and direction in knots, visibility, cloud coverage and ceiling up to 12,000 feet, freezing rain, thunderstorm (lightning), and altimeter setting.

**AVGAS.** Aviation fuel (gasoline) used for aircraft with internal-combustion engines. The most common Avgas is currently 100LL (Low Lead).

**AVIATION SECURITY ADVISORY COMMITTEE (ASAC).** Initially established in 1989 and managed by the FAA, it was transferred to the TSA with the enactment of the ATSA. The ASAC provides advice to the TSA administration on aviation security matters.

**AVIGATION EASEMENT.** A contractual right or a property interest in land over which a right of unobstructed flight in the airspace can occur.

**BALLOON.** See *Aircraft*.

**BAGGAGE CLAIM.** An area where passengers obtain luggage that was previously checked at an airline ticket counter at the departing airport.

**BASED AIRCRAFT.** An aircraft permanently stationed at an airport by agreement between the airport owner (management or FBO) and the aircraft owner.

**BASE LEG.** See *Traffic Pattern*.

**BENEFIT-COST ANALYSIS (BCA).** An analysis of the cost, benefit, and the uncertainty associated with a project or action. A formal BCA is required for capacity projects of \$5 million or more AIP discretionary funds.

**BIRDS BALLS.** High-density plastic floating balls that can be used to cover ponds and prevent birds from using the sites.

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

**BOUNDARY LIGHTS.** See *Airport Lighting*.

**BOUNDARY SIGN.** See *Airport Signs*.

**BUILDING RESTRICTION LINE (BRL).** A line that identifies suitable building area locations on airports to limit building proximity to aircraft movement areas. Typically based on the FAR Part 77 Airport Imaginary Surfaces.

**CAPACITY (THROUGHPUT CAPACITY).** A measure of the maximum number of aircraft operations or their airport components which can be accommodated on the airport.

**CAPITAL IMPROVEMENT PROGRAM (CIP).** Provides a schedule of development for the proposed projects identified by an airport or through the development of an Airport Master Plan.

**CARGO SERVICE AIRPORT.** See *Airport*.

**CEILING.** The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as broken, overcast or obscured.

**CERTIFICATED AIRPORT.** See *Airport*.

**CIRCLING APPROACH.** 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 is not desirable.

**CLEARWAY (CWY).** A defined rectangular area beyond the end of the runway cleared or suitable for use in lieu of runway to satisfy take off distance requirements.

**COMMERCIAL SERVICE AIRPORT.** See *Airport*.

**COMMON TRAFFIC ADVISORY FREQUENCY (CTAF).** The VHF radio frequency used for air-to-air communication at uncontrolled airports or where no control tower is currently active. Pilots use the common frequency to coordinate their arrivals and departures safely, give position reports, and acknowledge other aircraft in the airfield traffic pattern.

**COMPASS ROSE.** A circle, graduated in degrees, printed on some charts or marked on the ground at an airport. It is used as a reference to either true or magnetic direction. When marked on the ground it is used to calibrate an aircraft's compass.

**CONICAL SURFACE.** See *Imaginary Surfaces*.





**CONSULTANT.** A firm, individual, partnership, corporation, or joint venture that performs architectural, engineering or planning service as defined in FAA AC150/5100-14D, employed to undertake work funded under an FAA airport grant assistance program.

**CONTROLLED AIRSPACE.** Airspace of defined dimensions within which air traffic control service is provided to IFR flight and to VFR flights in accordance with the airspace classification. Controlled airspace is a generic term that covers Class A, Class B, Class C, Class D, and Class E Airspace.

**CRITICAL (DESIGN) AIRCRAFT.** The most demanding aircraft with at least 500 annual operations that operates, or is expected to operate, at the airport.

**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*.

**DISADVANTAGED BUSINESS ENTERPRISE (DBE).** "Disadvantaged Business **Enterprise**" (DBE) means a business which is at least fifty-one percent (51%) owned and operated by one or more socially and economically disadvantaged individuals and whose management and daily operation is controlled by the qualifying party(ies).

**DECISION HEIGHT (DH).** The lowest height or altitude in an approach descent and the point at which a missed approach shall be initiated if the required visual reference has not been established. This term is used only in procedures where an electronic glide slope provides the reference for descent, as in ILS.

**DECLARED DISTANCES.** The distances the airport owner declares available for an aircraft's takeoff run, takeoff distance, accelerated-stop distance, and landing distance requirements.

- **Takeoff Run Available (TORA).** The runway length declared available and suitable for the ground run of an aircraft taking off.
- **Takeoff Distance Available (TODA).** The runway length equal to the TORA plus the length of any remaining runway or clearway beyond the far end of the TORA; the full length of TODA may need to be reduced because of obstacles in the departure area.
- **Accelerated Stop Distance Available (ASDA).** The runway length equal to the runway plus stopway length declared available and suitable for the acceleration and deceleration of an aircraft aborting a takeoff.
- **Landing Distance Available (LDA).** The runway length equal to the length of runway available and suitable for the landing ground run of airplanes.

**DESIGN AIRCRAFT.** An aircraft whose dimensions and/or other requirements make it the most demanding aircraft for an airport's facilities (i.e. runways and taxiways). The Design Aircraft is used as the basis for airport planning and design since it is assumed that airport facilities are designed to accommodate the Design Aircraft will also be able to accommodate less demanding aircraft as well. An aircraft can be utilized as the Design Aircraft for an airport if it will (has) conduct(ed) 500 or more annual operations (250 landings) at that airport.

**DECISION HEIGHT (DH).** This is associated with precision approaches and the aircraft is continually descending on final approach. When the aircraft reaches the DH, the pilot must make a decision to land or execute the missed approach procedure.

**DEICING.** The removal, though application of a max of heated water and propylene or ethylene glycol, of frost, ice, slush, or snow from the aircraft in order to provide clean surfaces.

**DEICING PAD.** A facility where an aircraft received deicing or anti-icing.

**DELAY.** The difference between constrained and unconstrained operating time.

**DEMAND.** The number of aircraft operations, passengers, or other factors that are required in a specific period of time.

**DEPARTMENT OF TRANSPORTATION (DOT).** The United States federal department that institutes and coordinates national transportation programs; created in 1966. The FAA is an organization within the DOT.

**DEPARTURE AIRSPACE.** See *Approach Airspace*.

**DESTINATION SIGN.** See *Airport Signs*.

**DETENTION PONDS.** Storm water management ponds that hold storm water for short periods of time, a few hours to a few days.

**DIRECTION SIGN.** See *Airport Signs*.

**DISCRETIONARY GRANT FUNDS.** Annual Federal grant funds that may be appropriate to an airport based upon 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.** See *Threshold*.

**DISTANCE MEASURING EQUIPMENT (DME).** See *Navigation Aid*.

**DEPARTMENT OF REVENUE (DOR).** The general mission of the DOR is to fairly, efficiently, and accurately administer the tax laws and other revenue for that state. Source: Pennsylvania Department of Revenue.

**DOWNWIND LEG.** See *Traffic Pattern*.

**EMERGENCY LOCATOR TRANSMITTER (ELT).** A radio transmitter attached to the aircraft structure that aids in locating downed aircraft by radiating an audio tone on 121.5 MHz or 243 MHz.

**ENPLANEMENT.** The boarding of a passenger, cargo, freight or mail on an aircraft at an airport.

**END-AROUND TAXIWAY (EAT).** Taxiways constructed to allow an aircraft to cross the extended centerline of the runway without specific clearance from ATC. EAT projects must be pre-approved by the FAA Office of Airport Safety and Standards, Airport Engineering Division.

**ENTITLEMENT GRANT FUNDS.** Annual federal funds for which all airports in the NPIAS are eligible for.

**ENVIRONMENTAL ASSESSMENT (EA).** An environmental analysis performed pursuant to the Nation Environmental Policy Act to determine whether an action would significantly affect the environment and thus require a more detailed environmental impact statement.

**ENVIRONMENTAL IMPACT STATEMENT (EIS).** A document required of federal agencies by the National Environmental Policy Act (NEPA) for major projects or legislative proposals affecting the environment. It is a tool for decision-making describing the positive. If no significant impact is found a Finding of No Significant Impact (FONSI) is issued.



**ESSENTIAL AIR SERVICE (EAS).** The EAS program was put into place after passage of the Airline Deregulation Act in 1978 to guarantee that small communities that were served by certificated air carriers before airline deregulation maintain a minimal level of scheduled air service. The United States Department of Transportation is mandated to provide eligible EAS communities with access to the National Air Transportation System. This is generally accomplished by subsidizing two round trips a day with 30- to 50-seat aircraft, or additional frequencies with aircraft with nine seats or fewer, usually to a large- or medium-hub airport.

**FAA ELIGIBILITY.** Refers to an airport sponsor's eligibility to receive funds under the AIP program which varies per the type of airport and the type of proposed project.

**FEDERAL AVIATION ADMINISTRATION (FAA).** An agency of the United States Department of Transportation with authority to regulate and oversee all aspects of civil aviation in the United States.

**FEDERAL AVIATION REGULATION (FAR).** The general and permanent rules established by the executive departments and agencies of the Federal government for aviation which are published in the Federal Register. These are the aviation subset of the U.S. Code of Federal Regulations (CFR).

**FEDERAL GRANT AGREEMENT.** A Federal agreement that represents an agreement made between the FAA (on the behalf of the United States) and an airport sponsor for the grant of Federal Funding.

**FEDERAL GRANT ASSURANCE.** A provision within a Federal grant agreement to which the recipient of Federal airport development assistance has agreed to comply in consideration of the assistance provided.

**FEDERAL SECURITY DIRECTOR (FSD).** The federal security director is responsible for security operations at United States federal airports.

**FINAL APPROACH FIX (FAF).** The fix from or over which final approach (IFR) to an airport is executed.

**FINAL APPROACH.** A flight path of a landing aircraft in the direction of landing along the extended runway centerline from the base leg to the runway. For instrument approaches, the final approach typically begins at the final approach fix (FAF).

**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.

**FIX.** A geographical position determined by visual reference to the surface by reference to one or more radio NAVAIDs, by celestial plotting, or by another navigational device.

**FIXED BASE OPERATION or FIXED BASE OPERATOR (FBO).** A business enterprise located on the airport property that provides services to pilots including aircraft rental, training, fueling, maintenance, parking, and the sale of pilot supplies.

**FLIGHT SERVICE STATION (FSS).** An air traffic facility that provides information and services to aircraft pilots before, during, and after flights, but unlike ATC, is not responsible for giving instructions, clearances, or providing separation.

**FLIGHT STANDARDS DISTRICT OFFICE (FSDO).** An FAA field office serving an assigned geographical area and staffed with Flight Standard personnel who serve the aviation industry and the general public on matters relating to the certification and operation of air carrier and general aviation aircraft. Activities include general surveillance of operation safety, certification of airmen and aircraft, accident prevention, investigation, enforcement, etc.

**FOREIGN OBJECT DEBRIS (FOD).** Any object found on an airport that does not belong in or near airplanes, and as a result can injure personnel and damage aircraft.

**FORM 7460-1, NOTICE OF PROPOSED CONSTRUCTION OR ALTERNATION.** Federal law requires filing a Notice of Proposed Construction or Alteration (Form 7460) for all structures over 200 feet AGL or lower if closer than 20,000 feet to a public use airport with a runway over 3,200 feet in length.

**FORM 7480-1, NOTICE OF LANDING AREA PROPOSAL.** Submitted to the FAA Airport Regional Division Office or ADO as formal written notification for project involving the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport.

**FUEL FLOWAGE FEE.** A tax assessed on the user, which is paid at the pump. Fuel flowage fee revenues are sent to the airport governing body, usually the board or authority and are then used for airport improvements or other expenses.

**GAP ANALYSIS.** See *Safety Management System*.

**GATE.** An aircraft parking position used by a single aircraft loading or unloading passengers, mail, or cargo, etc.

**GENERAL AVIATION (GA).** The segment of aviation that encompasses all aspects of civil aviation except certified air carriers and other commercial operators, such as airfreight carriers.

**GENERAL AVIATION AIRPORT.** See *Airport*.

**GEOGRAPHIC INFORMATION SYSTEM (GIS).** A technology that manages, analyzes, and disseminates geographic data.

**GLIDER.** See *Aircraft*.

**GLIDESLOPE.** See *Instrument Landing System*.

**GLOBAL POSITIONING SYSTEM (GPS).** A satellite based navigational system that provides signals in the cockpit of aircraft defining aircraft position in terms of latitude, longitude, and altitude.

**GPS RUNWAY.** See *Runway*.

**GRANT AGREEMENT.** See *Federal Grant Agreement*.

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

**HAZARD.** See *Safety Management System*.

**HAZARD TO AIR NAVIGATION.** An existing or proposed object that the FAA, as a result of an aeronautical study, determines will have a substantial adverse effect upon the safe and efficient use of navigable airspace by aircraft, operation of air navigation facilities, or existing or potential airport capacity.

**HAZARDOUS WILDLIFE.** Species of wildlife (birds, mammals, reptiles) including feral animals and domesticated animals not under control, that are associated with aircraft strike problems, are capable of causing structural damage to airport facilities, or act as attractants to other wildlife that pose a strike hazard.

**HEAVY AIRCRAFT.** See *Aircraft*.



**HEIGHT ABOVE AIRPORT (HAA).** Indicates the height of the MDA above the published airport elevation. This is published in conjunction with circling minimums.

**HELICOPTER.** See *Aircraft*.

**HELIPAD.** A small, designated area, usually with prepared surface, on a heliport, airport, landing/takeoff area, apron/ramp, movement area used for takeoff, landing, or parking of helicopters.

**HELIPORT.** An area of land, water, or structure used or intended to be used for the landing and takeoff of helicopters.

**HIGH INTENSITY RUNWAY LIGHTING (HIRL).** See *Airport Lighting*.

**HOLDING.** A predetermined maneuver which keeps an aircraft within a specified airspace while awaiting further clearance.

**HOLDING FIX.** A specified geographical point or NAVAID used as a reference point in establishing and maintaining the position of an aircraft while holding.

**HOLDOVER TIME.** The estimated time the application of anti-icing fluid will prevent the formation of frozen contamination on the protected surfaces of an aircraft. With a one-step deicing/anti-icing operation, the holdover begins at the start of the operations; with a two-step operation, the holdover begins at the start of the final anti-icing application.

**HOT SPOT.** A location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots and drivers is necessary.

**HORIZONTAL SURFACE.** See *Imaginary Surfaces*.

**HUMAN RESOURCES (HR).** The people who make up the workforce of an organization, business sector, or economy.

**HUB AIRPORT.** See *Airport*.

**INDEPENDENT FEE ESTIMATE (IFE).** An independent cost analysis for a project to be utilized as a negotiation tool and/or a cost validation tool by the sponsor.

**IMAGINARY SURFACES.** Are surfaces defined in 14 CFR Part 77 and are in relation to the airport and each runway. The size of these imaginary surfaces is based on the category of each runway for current and future airport operations. Any objects which penetrate these surfaces are considered an obstruction and affects navigable airspace.

- **Approach Surface.** An imaginary obstruction limiting surface defined in 14 CFR Part 77 which is longitudinally centered on an extended runway centerline and extends outward and upward from the primary surface at each end of a runway at a designated slope and distance upon the type of available or planned approach by aircraft to a runway.
- **Conical Surface.** An imaginary obstruction-limiting surface defined in 14 CFR 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.
- **Horizontal Surface.** An imaginary obstruction-limiting surface defined in 14 CFR Part 77 that is specified as a portion of a horizontal plane surrounding a runway located 150 feet above the established airport elevation. The specific horizontal dimension of this surface is a function of the types of approaches existing or planned for the runway.

- **Primary Surface.** An imaginary obstruction-limiting surface defined in 14 CFR Part 77 that is specified as a rectangular surface longitudinally centered about a runway. The specific dimensions of this surface are function of types of approaches existing or planned for the runway.
- **Transitional Surface.** An imaginary obstruction-limiting surface defined in 14 CFR Part 77 that extends outward and upward at right angles to the runway centerline and the runway centerline extended at a slope of 7 to 1 from the slides of the primary surface.

**INCURSION.** The unauthorized entry by an aircraft, vehicle, or obstacle into the defined protected area surrounding an active runway, taxiway, or apron.

**INFORMATION SIGN.** See *Airport Signs*.

**INITIAL APPROACH.** The segment of a standard instrument approach procedure between the initial approach fix and the intermediate fix, or the point where the aircraft is established on the intermediate segment of the final approach course.

**INITIAL APPROACH ALTITUDE.** The altitude prescribed for the initial approach segment of an instrument approach.

**INNER MARKER (IM).** See *Instrument Landing System*.

**INSTRUMENT APPROACH PROCEDURE (IAP).** 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.

**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 type of flight plan under which an aircraft is operating. IFR is defined as the weather condition that occurs whenever the cloud ceiling is at least 500 feet above ground level, but less than 1,000 feet and/or visibility is at least one statute mile, but less than 3 statute miles.

**INSTRUMENT LANDING SYSTEM (ILS).** A precise ground-based navigation system for aircraft that provides precision guidance to an aircraft approaching a runway. It uses a combination of radio signals and, in many cases, high-intensity lighting arrays to enable a safe landing during instrument meteorological conditions. Normally consists of the following components and visual aids:

- **Localizer.** The component of an ILS which provides horizontal guidance to the runway.
- **Glideslope.** An independent ILS subsystem that provides vertical guidance to aircraft approaching a runway. It is an antenna array that is usually located on one side of the runway touchdown zone.
- **Outer Marker (OM).** A marker beacon at or near the glideslope intercept altitude of an ILS approach and it keyed to transmit two dashes per second.
- **Middle Marker (MM).** A marker beacon that defines a point along the glideslope of an ILS normally located at or near the point of DH (CAT I). It is keyed to transmit alternate dots and dashes.
- **Inner Marker (IM).** A marker beacon used with an ILS (CAT II & CAT III) precision approach located between the middle marker and the end of the ILS runway, transmitting a radiation pattern keyed at six dots per second, and indicating that the pilot, both aurally and visually, is at the DH
- **Approach Lights.** See *Approach Lighting Systems*.

**ILS CATEGORIES.** The weather minimums associated with an ILS is defined by the following categories (note that to make landing under these conditions, aircraft must be equipped with special avionics, pilot must be qualified to land under specified conditions for that category, and aircraft must have proper ground equipment for conditions):



- **Category I: 200-foot ceiling and 2,400-foot RVR;**
- **Category II: 100-foot ceiling and 1,200-foot RVR;**
- **Category IIIA: zero-foot ceiling and 700-foot RVR;**
- **Category IIIB: zero-foot ceiling and 150-foot RVR; and**
- **Category IIIC: zero-foot ceiling and zero-foot RVR.**

**INSTRUMENT METEOROLOGICAL CONDITIONS (IMC).** Meteorological conditions expressed in terms of specific visibility and ceiling conditions that are less than the minimums specified for visual meteorological conditions. IMC are defined as period when cloud ceiling are less than 1,000 feet above ground and/or visibility less than three miles

**INSTRUMENT RUNWAY.** See *Runway*.

**INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO).** An agency of the United Nations which codifies the principles and techniques of the international air navigation and fosters the planning and development of international air transport to ensure safe and orderly growth. The ICAO Council adopts standards and recommended practices concerning air navigation, prevention of unlawful interference, and facilitation of border-crossing procedure for international civil aviation.

**IRREGULAR OPERATIONS (IROPS).** Unique events that require special attention from airport operations and airline staff that can impact all or part of an airport.

**ISLAND.** An unused paved or grassy area between taxiways, between runways, or between a taxiway and a runway. Paved islands are clearly marked as unusable, either by painting or the use of artificial turf.

**INFORMATION TECHNOLOGY (IT).** Information Technology is the application of computers to store, retrieve, transmit and manipulate data or information, often in the context of a business or other enterprise. IT is considered to be a subset of information and communications technology (ICT). Information technology is commonly used as a synonym for computers and computer networks, but it also encompasses other information distribution technologies such as television and telephones.

**ITINERANT OPERATIONS.** See *Operation*.

**JET-A.** Type of aviation fuel designed for use in aircraft powered by gas-turbine engines.

**KNOT.** A unit of speed equal to one nautical mile per hour, or 1.15 statute mile per hour.

**LAND AND HOLD SHORT OPERATIONS (LAHSO).** To increase airport capacity, efficiency, and safety, LAHSO clearances usually instruct an aircraft to land, and then hold short of an intersecting runway, taxiway, or predetermined point.

**LARGE HUB AIRPORT.** See *Airport*.

**LANDING DISTANCE AVAILABLE (LDA).** See *Declared Distances*.

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

**LARGE AIRPLANE.** See *Aircraft*.

**LEAD-IN-LIGHT SYSTEM (LDIN).** See *Approach Light System*.

**LOCALIZER.** See *Instrument Landing System*.

**LOCALIZER PERFORMANCE WITH VERTICAL GUIDANCE (LPV).** An instrument approach procedure that uses wide area augmentation system (WAAS) and very precise GPS capabilities to attain an airplane's position. Although it does provide vertical guidance and can provide minimums consistent with an ILS, an LPV is considered to be a non-precision approach.

**LOCALIZER TYPE DIRECTIONAL AID (LDA).** A facility of comparable utility and accuracy to a localizer but which is not part of a complete ILS and will not be aligned with the runway.

**LOCAL OPERATIONS.** See *Operation*.

**LOCATION SIGN.** See *Airport Signs*.

**LOW INTENSITY AIRPORT LIGHTING.** See *Airport Lighting*.

**LOCAL OPERATION.** See *Operations*.

**MAGNETIC (COMPASS) HEADING.** The heading relative to the magnetic poles of the Earth and indicated by a magnetic compass.

**MANDATORY INSTRUCTION SIGN.** See *Airport Signs*.

**MAXIMUM CERTIFIED TAKEOFF WEIGHT (MTOW).** The Maximum certificated weight for the airplane at takeoff, i.e. the airplane's weight at the start of the takeoff run.

**MEAN SEA LEVEL (MSL).** The average or mean height of the sea, with reference to a suitable reference surface.

**MEDIUM HUB AIRPORT.** See *Airport*.

**MEDIUM INTENSITY APPROACH LIGHT SYSTEM WITH RUNWAY ALIGNMENT INDICATOR (MASLR).** See *Approach Light System*.

**MEDIUM INTENSITY RUNWAY LIGHTS (MIRL).** See *Airport Lighting*.

**MIDDLE MARKER (MM).** See *Instrument Landing System*.

**MILITARY OPERATIONS.** See *Operation*.

**MINIMUM DESCENT ALTITUDE (MDA).** This is associated with non-precision approaches and is the lowest altitude an aircraft can fly until the pilot sees the airport environment. If the pilot has not found the airport environment by the Missed Approach Point (MAP) a missed approach is initiated.

**MISSED APPROACH POINT (MAP).** The point prescribed in an instrument approach at which a missed approach procedure shall be executed if visual reference of the runway environment is not in sight or the pilot decides it is unsafe to continue. The MAP is similar in principle to the Decision Height.

**MODIFICATION TO STANDARDS (MOS).** Any approved nonconformance to FAA standards, other than dimensional standards for Runway Safety Areas (RSAs), applicable to an airport design, construction, or equipment procurement project that is necessary to accommodate an unusual local condition for a specific project on a case-by-case basis while maintaining an acceptable level of safety.

**MOVEMENT AREA.** The runway, taxiways, and other area of an airport an airport/heliport which are utilized for taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports with a tower, specific approval for entry onto the movement area must be obtained from ATC.





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

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA).** Federal legislation that established environmental policy for the nation. It requires an interdisciplinary framework for federal agencies to evaluate environmental impacts and contains action-forcing procedures to ensure that federal agency decision makers take environmental factors into account.

**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 investigatory board whose mandate is to ensure safe public transportation. As part of the DOT, the NTSB investigates accidents, conducts studies, and makes recommendations to federal agencies and the transportation industry.

**NAUTICAL MILE (NM).** The unit measure of distance in both nautical and aeronautical context. A nautical mile equals 1.15 statute miles (6,080 feet). The measure of speed in regard to nautical miles is known as KNOTS (nautical miles per hour).

**NAVIGATION AID (NAVAID).** Any electronic and visual air navigation aids, lights, signs, and associated supporting equipment used or available for providing point-to-point guidance information or position data to aircraft in flight.

- **Distance Measuring Equipment (DME).** Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME NAVAID.
- **Non-Directional Beacon (NDB).** A radio beacon transmitting non-directional signals whereby an aircraft equipped with direction finding equipment can determine headings to or from the radio beacon and “home” in on a track to or from it. The signal transmitted does not include inherent directional information.
- **Precision Approach Path Indicator (PAPI).** A path indicator that uses a single row of lights arranged to provide precision descent guidance information during approach to a runway.
- **Rotating Beacon.** A visual NAVAID used to assist pilots in finding an airport, particularly those flying in IMC or VFR at night. The beacon provides information about the type of airport through the use of a particular set of color filter:
  - **Green flashed alternated with two quick white flashes:** Lighted military land airport.
  - **Alternating White and green flashes:** Lighted civilian land airport.
  - **Alternating white and yellow flashes:** lighted water airport.
  - **Alternating yellow, green, and white:** Lighted heliport.
- **Tactical Air Navigation (TACAN).** An ultra-high frequency electronic rho-theta NAVAID which provides suitably equipped aircraft a continuous indication of bearing and distance to the TACAN station.
- **Visual Approach Slope Indicator (VASI).** A system of lights arranged to provide vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beam.
- **VOR (Very High Frequency Omni-directional Radio-range).** A ground-based electronic NAVAID transmitting very high frequency navigation signals, 360-degree azimuth, oriented from magnetic north, used as a basis for navigation in NAS.
- **VORTAC (Very High Frequency Omni-Directional Radio-range/Tactical Aircraft Control).** A NAVAID providing VOR azimuth, TACAN azimuth, and TACAN DME at one site.

**NIGHT.** The time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time.

**NOISE ABATEMENT PROCEDURES.** Procedures developed by the FAA and community to reduce the level of noise generated by aircraft departing over-populated areas.

**NOISE CONTOUR.** A continuous line on a map of the airport vicinity connecting all points of the same noise level. These contours represent noise levels generated from aircraft operations, takeoff and landing of aircraft. They are generated based on methodology developed by the FAA and the data provides information that can be used to identify varying degrees of noise impacts on the surrounding area.

**NON-DIRECTIONAL BEACON (NDB).** See *Navigation Aid*.

**NON-HUB AIRPORT.** See *Airport*.

**NON-MOVEMENT AREA.** Taxilanes and apron areas not in the movement area and therefore not under the control of traffic control.

**NONPRECISION APPROACH PROCEDURE.** A standard instrument approach procedure in which no electronic glideslope is provided.

**NONPRECISION RUNWAY.** See *Runway*.

**NOTICE TO AIRMEN (NOTAM).** A notice containing information concerning the establishment, condition, or change in any component (facility, service, procedure of, or hazard in the NAS) the timely knowledge of which is essential to personnel concerned with flight operations.

**OBJECT.** Includes, but is not limited to above ground structures, NAVAIDs, people, equipment, vehicles, natural growth, terrain, and parked aircraft.

**OBJECT FREE AREA (OFA).** An area on the ground centered on a runway (ROFA), taxiway (TOFA), 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 located in the OFA for air navigation or aircraft ground maneuvering purposes.

**OBSTACLE.** An existing object at a fixed geographical location or which may be expected at a fixed location within a prescribed area with reference to which vertical clearance is or must be provided during flight operation.

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

**OBSTRUCTION.** An existing or future object that is of a greater height than any of the heights or surfaces defined in 14 CFR Part 77.23 and 77.25. (Note that obstructions to air navigation are presumed to be hazards to air navigation until an FAA study has determined otherwise.)

**OFFICE OF MANAGEMENT AND BUDGET (OMB).** The OMB may help or assist the Governor, State agencies, and their employees provide effective, efficient, and fiscally sound government to the citizens of their state. OMB support agency efforts to achieve results by helping them obtain the fiscal, capital, and personnel resources needed to provide services to their citizens. The OMB may be a cabinet-level agency within the



executive branch of state government. OMB develops, coordinates and monitors the individual budgets of state agencies and reviews all financial transactions made with public funds.

**OMNIDIRECTIONAL APPROACH LIGHTING SYSTEM (ODALS).** See *Approach Light System*.

**OPERATION.** The landing, takeoff, or touch-and-go procedure by an aircraft on a runway at an airport. Operations can be categorized into the following categories:

- **Itinerant Operations.** Operations by aircraft that leaves the local airspace.
- **Local Operations.** Aircraft operations performed by aircraft that are based at the airport and that operate in the local traffic pattern or within sight of the airport, that are 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.
- **Military Operations.** Aircraft operations performed in military aircraft. May be itinerant or local operations.
- **Transient Operations.** Operations by aircraft that are not based at a specified airport.

**OUTER MARKER (OM).** See *Instrument Landing System*.

**PARALLEL RUNWAYS.** See *Runway*.

**PARALLEL TAXIWAYS.** See *Taxiway*.

**PASSENGER FACILITY CHARGE (PFC).** The collection of PFC fees for every enplaned passenger at commercial airports controlled by public agencies to be used to fund FAA-approved projects that enhance safety, security, or Capacity; reduce noise; or increase air carrier competition.

**PEAK HOUR (PH).** An estimate of the busiest hour in a day. This is also known as the design hour.

**PERFORMANCE-BASED NAVIGATION (PBN).** It specifies that aircraft RNP and RNAV systems performance requirements be defined in terms of accuracy, integrity, availability, continuity and functionality required for the proposed operations in the context of a particular airspace, when supported by the appropriate navigation infrastructure.

- **Area Navigation (RNAV).** A method of navigation that permits aircraft operations on any desired flight path.
- **Required Navigation Performance (RNP).** A type of Performance-Based Navigation (PBN) that allows an aircraft to fly a specific path between two, 3 dimensionally defined points in space.

**PISTON ENGINE.** See *Aircraft Engine*.

**PLANNING ACTIVITY LEVEL (PAL).** Selected activity levels that may trigger the need for additional facilities or improvements.

**PRECISION APPROACH CATEGORIES I, II, III (CAT I, CAT II, CAT III).** See *Instrument Landing System*.

**PRECISION APPROACH PROCEDURE.** A standard precision approach procedure in which an electronic glideslope is provided, such as ILS or PAR.

**PRIMARY AIRPORT.** See *Airport*.

**PRIMARY SURFACE.** See *Imaginary Surfaces*.

**POOR VISIBILITY AND CEILING (PVC).** Is a condition that exists whenever the cloud ceiling is less than 500 feet, and/or the visibility is less than one statute mile.

**PRECISION APPROACH PATH INDICATOR (PAPI).** See *Navigational Aid*.

**PUBLIC USE AIRPORT.** An airport that is open to the general public with or without a prior request to use the airport.

**RADAR (RADIO DETECTION AND RANGING).** A device which, by measuring the time interval between transmission and reception of radio pulses, provides information on range, azimuth and/or elevation of objects in the path of the transmitted pulses.

**RADAR SERVICE.** A term which encompasses aircraft separation, navigation guidance, and/or flight track monitoring services based on the use of radar which can be provided by a controller to a pilot of a radar-identified aircraft.

**RADAR SURVEILLANCE.** The radar observation of a given geographic area for the purpose of performing some radar function.

**RADIAL.** A magnetic bearing extending from a VOR, a VORTAC, or a TACAN navigational facility.

**RAMP.** Synonymous with Apron. See *Apron*.

**RECORD OF DECISION (ROD).** A public document that reflects the FAA's final decision of an EIS, rationale behind that decision, and commitments to enforce and monitor mitigation.

**REGIONAL JET.** See *Aircraft*.

**REGRESSION ANALYSIS.** A statistical technique that seeks to identify and quantify the relationships between factors associated with a forecast.

**RELIEVER AIRPORT.** See *Airport*.

**RETENTION PONDS.** Storm water management ponds that hold water for several months.

**REQUEST FOR QUALIFICATIONS (RFQ).** The RFQ is a formal process of procuring a product or service. It is typically a screening step to establish a pool of firms or individuals to provide a product that is then evaluated on their qualifications.

**REQUEST FOR PROPOSALS (RFP).** The RFP is typically a second step in a procurement process following the Request for Qualification stage where there is a pre-selected short-list of firms. These short-listed firms will respond to the project requirements and allow for further evaluation by the selection committee.

**RISK ASSESSMENT.** See *Safety Management System*.

**RNAV.** See *Performance Based Navigation*

**RNP.** See *Performance Based Navigation*.

**ROADWAY SIGN.** See *Airport Signs*.

**ROCKET.** See *Aircraft*.

**ROTATING BEACON.** See *Navigation Aid*.



**ROTORCRAFT.** See *Aircraft*.

**RUNWAY (RW).** Defined as rectangular surface on an airport prepared or suitable for the landing and takeoff of airplanes. Runways can be classified as the following:

- **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.
- **GPS Runway.** A runway having a precision or nonprecision approach procedure using GPS navigational guidance with or without vertical guidance.
- **Nonprecision Instrument Runway.** A runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance for which a straight-in or side-step nonprecision approach procedure has been approved.
- **Nonprecision Runway.** A runway with only horizontal guidance available.
- **Parallel Runways.** Two or more runways at the same airport whose centerlines are parallel. In addition to runway number, parallel runways are designated as L (left) and R (right) or, if three parallel runways exist, L (left), C (center), and R (right).
- **Precision Instrument Runway.** A runway having an existing instrument approach procedure utilizing air navigation facilities with both horizontal and vertical guidance for which a precision approach procedure has been approved.
- **Utility Runway.** A runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 pounds maximum gross weight and less.
- **Visual Runway.** A runway without an existing or planned straight-in instrument approach procedure and no instrument approach procedure/equipment.

**RUNWAY ALIGNMENT INDICATOR LIGHTS (RAILS).** See *Approach Light System*.

**RUNWAY BLAST PAD.** A surface adjacent to the ends of the runways provided to reduce the erosive effect of jet blast and propeller wash.

**RUNWAY CENTERLINE LIGHTING.** See *Airport Lighting*.

**RUNWAY DESIGN CODE (RDC).** A code signifying the design standards to which a runway is to be built. It is comprised for three elements - the Aircraft Approach Category (AAC), the Airplane Design Group (ADG), and Visibility Minimums – that are combined to form the RDC of a particular runway.

**RUNWAY DISTANCE REMAINING SIGN.** See *Airport Signs*.

**RUNWAY EDGE LIGHTS.** See *Airport Lighting*.

**RUNWAY END IDENTIFIER LIGHTS (REIL).** See *Airport Lighting*.

**RUNWAY ENVIRONMENT.** The physical runway and the areas surrounding the runway out to the hold position marking.

**RUNWAY GRADIENT.** The ratio of the change in elevation divided by the length of the runway expressed as a percentage.

**RUNWAY HEADING.** The magnetic direction that corresponds with the runway centerline extended.

**RUNWAY INCURSION.** Any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and takeoff of aircraft.

**RUNWAY LIGHTS.** See *Airport Lighting*.

**RUNWAY PROTECTION ZONE (RPZ).** A trapezoidal area off the runway end intended 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.

**RUNWAY VISUAL RANGE (RVR).** The distance over which a pilot of an aircraft on the centerline of the runway can see the runway surface markings delineating the runway or identifying its centerline. RVR is normally expressed in feet.

**SAFETY ASSESSMENT.** See *Safety Management System*.

**SAFETY ASSURANCE.** See *Safety Management System*.

**SAFETY MANAGEMENT SYSTEM (SMS).** The formal top-down business-like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (including safety risk management, safety policy, safety assurance, and safety promotion).

- **Gap Analysis.** Identification of existing safety components compare to SMS program requirements. Gap analysis provides an airport operator an initial SMS development plan and Safety roadmap to compliance.
- **Hazard.** Any existing or potential condition that can lead to injury, illness, or death to people; damage to or loss of a system, equipment, or property, or damage to the environment. A hazard is a condition that is a prerequisite to an accident or incident.
- **Risk Assessment.** Assessment of the system or component to compare the achieved risk level with the tolerable risk level.
- **Safety Assessment.** A systematic, comprehensive evaluation of an implemented system.
- **Safety Assurance.** SMS process management functions that systematically provides confidence that organizational products/services meet or exceed safety requirements.
- **Safety Policy.** Defines the fundamental approach to managing safety that is to be adopted within an organization. Safety policy further defines the organization's commitment to safety and overall safety vision.
- **Safety Promotion.** A combination of safety culture, training, and data sharing activities that supports the implementation and operation of an SMS in an organization.
- **Safety Risk Control.** Anything that mitigates the safety risk of a hazard. Safety risk controls necessary to mitigate an unacceptable risk should be mandatory, measurable, and monitored for effectiveness.
- **Safety Risk Management (SRM).** A formal process within the SMS composed of describing the system, identifying the hazards, assessing the risk, analyzing the risk, and controlling the risk. The SRM process is embedded in the operation system is not a separate/distinct process.
- **Severity.** The consequence or impact of a hazard in terms of degree of loss or harm.

**SAFETY POLICY.** See *Safety Management System*.

**SAFETY PROMOTION.** See *Safety Management System*.



**SAFETY RISK.** See *Safety Management System*.

**SAFETY RISK CONTROL.** See *Safety Management System*.

**SAFETY RISK MANAGEMENT (SRM).** See *Safety Management System*.

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

**SELF-FUELING.** The fueling of an aircraft by the owner or operator of the aircraft.

**SEGMENTED CIRCLE.** A circle located on an airport where wind and runway pattern information are located. It performs two functions: it aids the pilot in locating the obscure airports, and it provides a centralized location for wind and traffic pattern indicators as may be required on a particular airport.

**SEPARATION.** The spacing of aircraft to achieve their safe and orderly movement in flight and while landing and taking off.

**SEPARATION MINIMA.** The minimum longitudinal, lateral, or vertical distances by which aircraft are spaced through the application of air traffic control procedures.

**SERVICE AREA.** The FAA organizes the airspace across the U.S. into three geographic Service Areas (Eastern, Central and Western) which are managed through one of the three Service Centers.

**SERVICE CENTER.** There is a Service Center for each of the three Service Areas and the Service Centers report to FAA Headquarters in Washington, D.C.

**SEVERITY.** See *Safety Management System*.

**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.

**SIDA.** Security Identification Display Area is a special area designated by an airport operator in the United States to comply with Federal Aviation Administration requirements directed by Federal Aviation Regulations (FAR) Part 107.205.

**SMALL AIRPLANE.** See *Aircraft*.

**SMALL HUB AIRPORT.** See *Airport*.

**SNOW REMOVAL EQUIPMENT (SRE).** Equipment, such as plow trucks and brooms, to remove snow from the paved surfaces on an airport.

**SOQ.** Statement of Qualifications is a written response to a Request for Qualification by an individual or firm identifying the prospective bidder's experience and key personnel.

**SPONSOR.** A public agency or private owner of a public-use airport that submits to the Secretary an application for financial assistance for the airport.

**STATUTE MILE.** A regular "highway" mile measuring 5,280 feet.

**STOP END OF RUNWAY.** The far runway end as viewed from the cockpit of a landing airplane.

**STOPWAY.** An area beyond the stop end of the takeoff runway which is no less wide than the runway and is centered on the extended centerline of the runway. It is able to support an airplane during an aborted takeoff without causing structural damage to the airplane and designated by airport authorities for use in decelerating the airplane during an aborted takeoff. A blast pad is not a stopway.

**SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM (SMGCS).** Systems providing routing, guidance, surveillance and control to aircraft and affected vehicles in order to maintain movement rates under all local weather condition within the Aerodrome Visibility Operational Level (AVOL) whilst maintaining the required level of safety.

**SYSTEM OF AIRPORT REPORTING (SOAR).** The FAA Office of Airport integrated database that contains airport planning, development, and financial information.

**STRAIGHT-IN APPROACH.** Entry into the traffic pattern by interception of the extended runway centerline (final approach) without executing any other portion of the traffic pattern.

**TACTICAL AIR NAVIGATION (TACAN).** See *Navigation Aid*.

**TAILWIND.** Any wind more than 90 degrees to the longitudinal axis of the runway.

**TAKEOFF DISTANCE AVAILABLE (TODA).** See *Declared Distances*.

**TAKEOFF RUN AVAILABLE (TORA).** See *Declared Distances*.

**TAXI.** The movement of an airplane under its own power on the surface of an airport.

**TAXILANE (TL).** The portion of the aircraft parking area used for access between taxiways and aircraft parking positions. A taxilane is outside the movement area and is normally not controlled by the Air Traffic Control Tower.

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

- **Parallel Taxiway.** A taxiway whose centerline is parallel to an adjacent runway.

**TAXIWAY/TAXILANE OBJECT FREE AREA (TOFA).** Clearing standards which prohibit service vehicle roads, parked aircraft, and other objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. Vehicles may operate within the OFA provided they give right of way to oncoming aircraft.

**TAXIWAY/TAXILANE 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.

**TAXIWAY DESIGN GROUP (TDG).** FAA aircraft classification system for taxiway design based on design aircraft undercarriage dimensions. These include the overall Main Gear Width (MGW) and the Cockpit to Main Gear Distance (CMG).

**TECHNICAL ADVISORY COMMITTEE (TAC).** A group of individuals that provide input on technical issues.

**TERMINAL AREA.** A general term used to describe airspace in which approach control service or airport traffic control service is provided.





**TERMINAL AREA FORECAST (TAF).** The official forecast of aviation activity, both aircraft and enplanements, at FAA facilities. This includes FAA-towered airports, federally contracted towered airports, non-federal towered airports, and many non-towered airports.

**TERMINAL INSTRUMENT PROCEDURES (TERPS).** Published flight procedure standards for conducting instrument approaches to runways under instrument meteorological conditions. Information on TERPS is contained in FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).

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

- **Displaced Threshold.** A threshold that is located at a point on the runway other than the designated beginning of the runway.

**THRESHOLD LIGHTING.** See *Airport Lighting*.

**THROUGH-THE-FENCE (TTF) OPERATIONS.** Those activities permitted by the airport sponsor through an agreement that permits access to the public landing area by independent entities or operator offering an aeronautical activity or to owners of aircraft based on land adjacent to, but not a part of, the airport property. The obligation to make an airport available for the use and benefit of the public does not impose any requirement for the airport sponsor to permit ground access by aircraft from adjacent property.

**THROUGHPUT CAPACITY.** See *Capacity*.

**TOUCH AND GO.** A training operation in which a landing approach is made, the aircraft touches-down on the runway, but does not fully reduce speed to turn off the runway. Instead, full engine power is applied while still rolling and a takeoff is made, thereby practicing both maneuvers as part of one motion. It counts as two separate aircraft operations.

**TOUCHDOWN ZONE LIGHTING.** See *Airport Lighting*.

**TRACK.** The flight path of an aircraft over the surface of the earth.

**TERMINAL RADAR APPROACH CONTROL FACILITY (TRACON).** Uses radar to “see” the airspace and typically manage the airspace for approximately a 30-mile radius around busy airports. Not all airports have TRACON’s.

**TRAFFIC PATTERN.** The traffic flow that is prescribed for aircraft landing at, taxiing on, or taking off from an airport. The following defines components of a standard traffic pattern:

- **Base Leg.** A flight path at right angles to the landing runway off its approach end. The base leg extends from the downwind leg to the intersection of the extended runway centerline.
- **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.
- **Upwind Leg.** A flight path parallel to the landing runway in the direction of the landing.

**TRANSITIONAL SURFACE.** See *Imaginary Surfaces*.

**TRANSIENT OPERATIONS.** See *Operation*.

**TRANSPORTATION SECURITY ADMINISTRATION (TSA).** An agency established in 2001 to safeguard United States transportation systems and to insure safe air travel. TSA operates under the Department of Homeland Security.

**TRUE HEADING.** A heading relative to the actual North and South Poles of the Earth, rather than the magnetic poles.

**TURBINE ENGINE.** See *Aircraft Engine*.

**TURBOFAN.** See *Aircraft Engine*.

**TURBOJET.** See *Aircraft Engine*.

**TURBOPROP.** See *Aircraft Engine*.

**UNCONTROLLED AIRPORT.** See *Airport*.

**UNCONTROLLED AIRSPACE.** Airspace where an ATC service is not deemed necessary or cannot be provided for practical reasons. Uncontrolled airspace is a generic term that covers Class F and Class G Airspace.

**UNIVERSAL INTEGRATED COMMUNICATIONS (UNICOM).** An air-ground communication facility operated by a private agency to provide advisory service at uncontrolled airport. Aircraft call the ground station to make announcements of their intentions. In some cases, the ground station is not staffed. If no one is staffing the ground station, pilots broadcast their location and intentions over the UNICOM or CTAF channel. When the ground station is closed this is done without an acknowledgement.

**UPWIND LEG.** See *Traffic Pattern*.

**UTILITY RUNWAY.** See *Runway*.

**VISIBILITY.** A measure of the horizontal opacity of the atmosphere at which prominent unlighted objects may be seen and identified by day and prominent lighted objects may be seen and identified by night; and is expressed in terms of the horizontal distance at which a person should be able to see and identify, is measured in statute miles.

**VISIBILITY MINIMUMS.** Visibility expressed in terms of Runway Visibility Range (RVR) values in feet of 1200, 1600, 2400, 4000, and 5000. The following correlates the RVR values with Instrument Flight Visibility Categories in statute miles:

- **1200:** lower than 1/4 mile
- **1600:** lower than 1/2 mile but not lower than 1/4 mile
- **2400:** lower than 3/4 mile but not lower than 1/2 mile
- **4000:** lower than 1 mile but not lower than 3/4 mile
- **5000:** not lower than 1 mile

**VISUAL APPROACH.** An approach conducted on an IFR flight plan which authorizes the pilot to proceed visually and clear of clouds to the airport. The pilot, at all times, must have either the airport or the preceding aircraft in sight. Reported weather at the airport must be ceiling at or above 1,000 feet and visibility of three miles or greater.

**VISUAL APPROACH SLOPE INDICATOR (VASI).** See *Navigational Aid*.

**VISUAL FLIGHT RULES (VFR).** Procedures for the conduct of flight in weather conditions above Visual Flight Rules (VFR) weather minimums. The term VFR is often also used to define weather conditions and type of flight plan under which an aircraft is operating. VFR is defined as the weather condition whenever the cloud ceiling is at least 1,000 feet above ground level and visibility is at least three statute miles.



**VISUAL METEOROLOGICAL CONDITIONS (VMC).** Meteorological conditions expressed in terms of specific visibility and ceiling conditions which are equal to or greater than the threshold values for IMC.

**VISUAL RUNWAY.** See *Runway*.

**VOR.** See *Navigation Aid*.

**VORTAC.** See *Navigation Aid*.

**WAKE TURBULENCE.** The air turbulence caused by a moving aircraft, originating at the tips of the wings. The turbulence is caused by vortices generated by an aircraft's wingtips as it travels through the air. This turbulence is greatest when the aircraft is taking off and landing.

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

**WILDLIFE ATTRACTANTS.** Any human-made structure, land-use practice, or human-made or natural geographic feature that can attract or sustain hazardous wildlife within the approach or departure airspace or the airport's AOA. These attractants can include architectural features, landscaping, waste disposal sites, wastewater treatment facilities, agricultural or aquaculture activities, surface mining, or wetlands.

**WILDLIFE HAZARD ASSESSMENT (WHA).** An FAA assessment to assess the potential of and mitigate the risk of wildlife strikes at an airport. It includes an analysis of the airport's wildlife strike history; the identification of the wildlife species observed and their numbers, locations, local movements, and daily and seasonal occurrences; the identification and location of features on and near the airport that attract wildlife; a description of wildlife hazards to aircraft operations; and ultimately, if required, a Wildlife Hazard Management Plan (WHMP) to identify measures to be implemented to reduce the risk of wildlife strikes.

**WIND COVERAGE.** The percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.

**WIND DIRECTION.** The opposite direction in which the windsock is pointing and is specified in terms of a magnetic heading.

**WINDSOCK (WIND CONE).** A conical textile tube designed to indicate wind direction and relative wind speed.

**WINGSPAN.** The maximum horizontal distance from one wingtip to the other wingtip, including the horizontal component of any extensions such as winglets or raked wingtips.

