

## Appendix B

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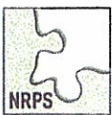
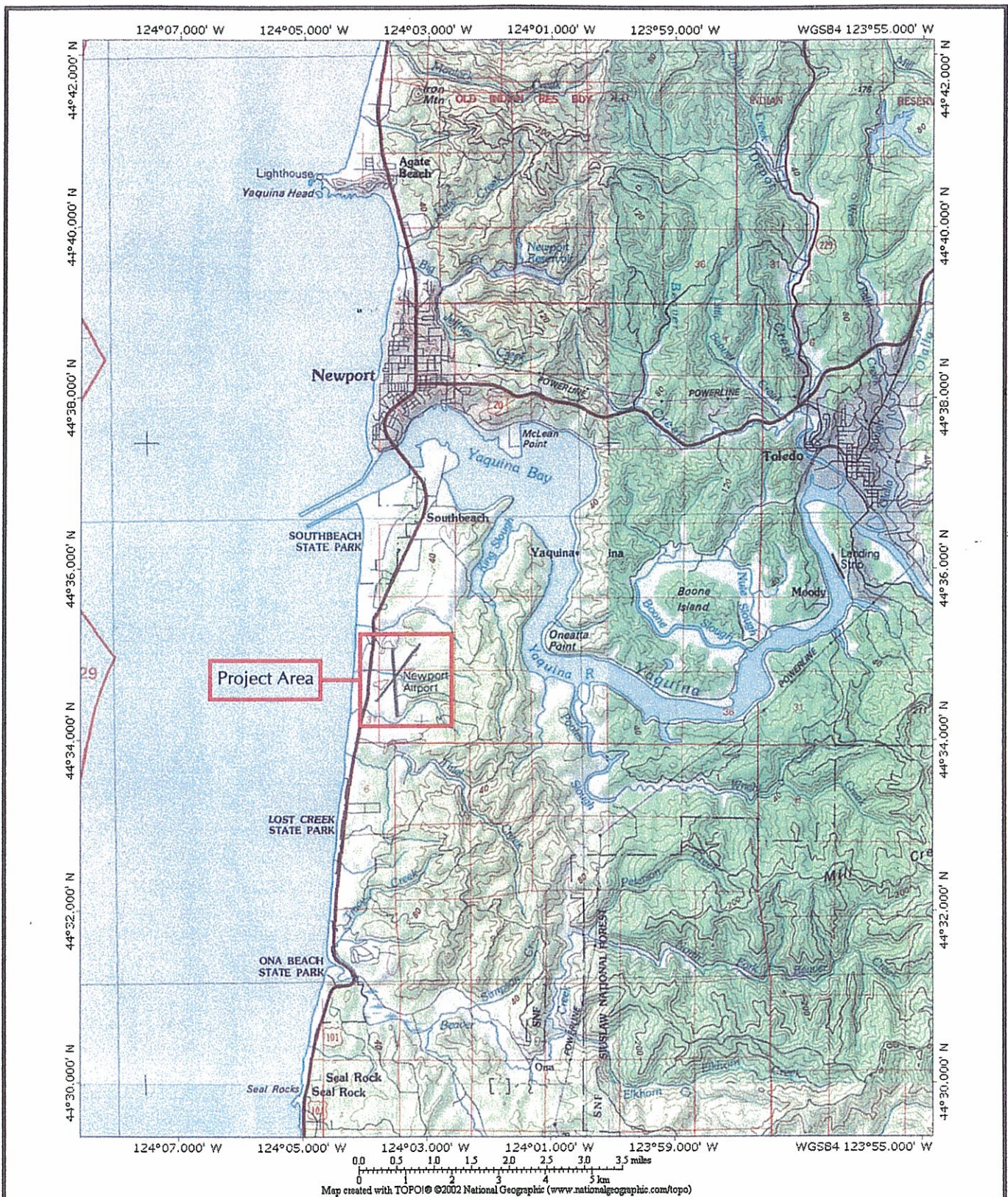
Figures

## APPENDIX B - FIGURES

Figure 1 – Project Vicinity

Figure 2 - Preferred Master Plan Concept



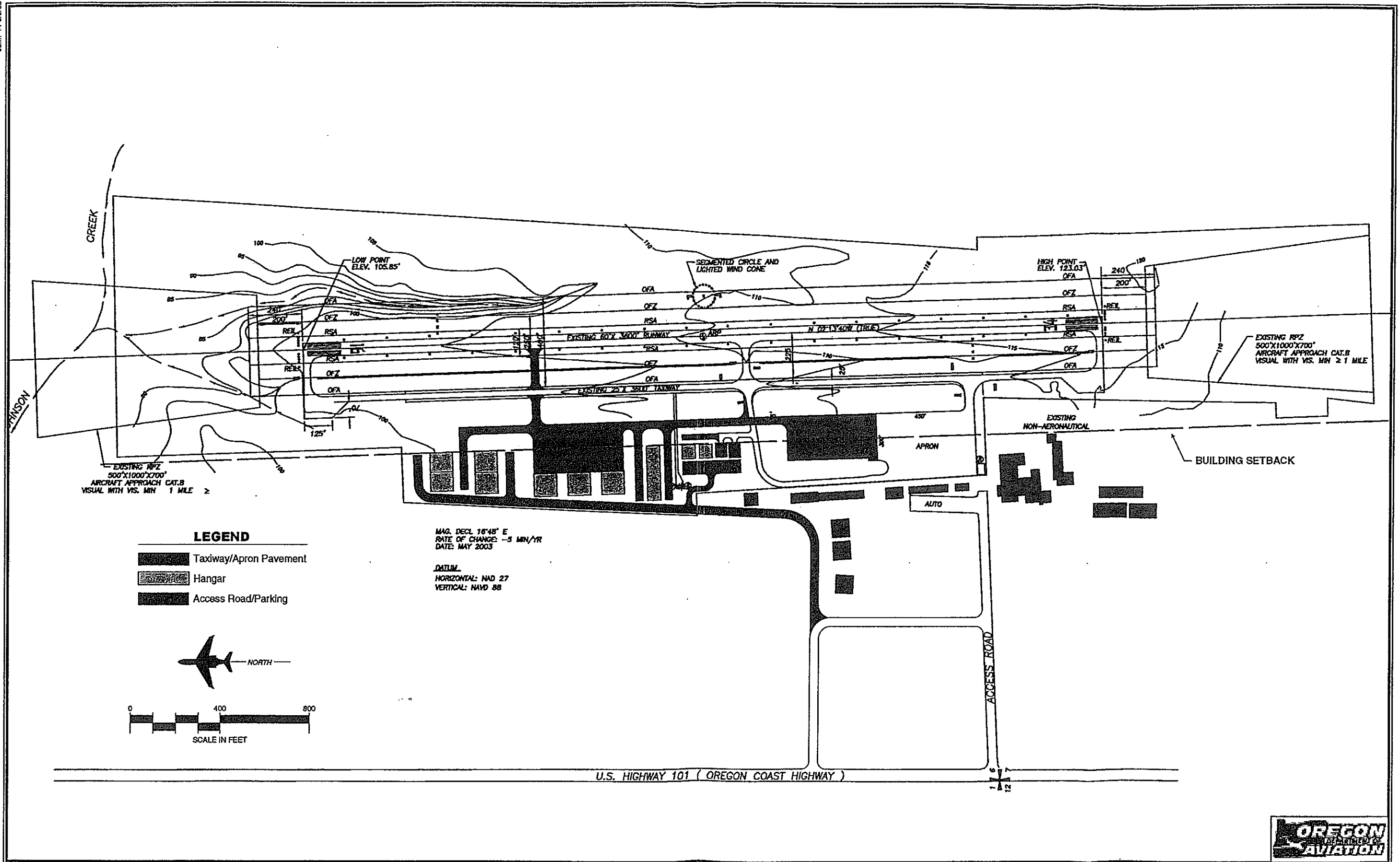


### Project Vicinity Map

Source: USGS 7.5-minute, 1:24,000-scale quadrangle (Eugene, Oregon)

**Figure 1**





*Appendix A*

Glossary of Terms

**ACCELERATE-STOP DISTANCE AVAILABLE (ASDA):** see declared distances.

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

**AIRPORT REFERENCE CODE (ARC):** a coding system used to relate airport design criteria to the operational (Aircraft Approach Category) to the physical characteristics (Airplane Design Group) of the airplanes intended to operate at the airport.

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

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

**AIRPORT LAYOUT DRAWING (ALD):** The drawing of the airport showing the layout of existing and proposed airport facilities.

**AIRCRAFT APPROACH CATEGORY:** a grouping of aircraft based on 1.3 times the stall speed in their landing configuration at their maximum certificated landing 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 greater than 166 knots.

**AIRPLANE DESIGN GROUP (ADG):** a grouping of aircraft based upon wingspan. The groups are as follows:

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

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

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

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

**ALERT AREA:** see special-use airspace.

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

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

**APPROACH MINIMUMS:** the altitude below which an aircraft may not descend while on an IFR approach unless the pilot has the runway in sight.

**AUTOMATIC DIRECTION FINDER (ADF):** an aircraft radio navigation system which senses and indicates the

direction to a non-directional radio beacon (NDB) ground transmitter.

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

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

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

**BASE LEG:** A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline. See "traffic pattern."

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

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

**BUILDING RESTRICTION LINE (BRL):** A line which identifies suitable building area locations on the airport.

**CIRCLING APPROACH:** a maneuver initiated by the pilot to align the aircraft with the runway for landing when flying



a predetermined circling instrument approach under IFR.

**CLASS A AIRSPACE:** see Controlled Airspace.

**CLASS B AIRSPACE:** see Controlled Airspace.

**CLASS C AIRSPACE:** see Controlled Airspace.

**CLASS D AIRSPACE:** see Controlled Airspace.

**CLASS E AIRSPACE:** see Controlled Airspace.

**CLASS G AIRSPACE:** see Controlled Airspace.

**CLEAR ZONE:** see Runway Protection Zone.

**CROSSWIND:** wind flow that is not parallel to the runway of the flight path of an aircraft.

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

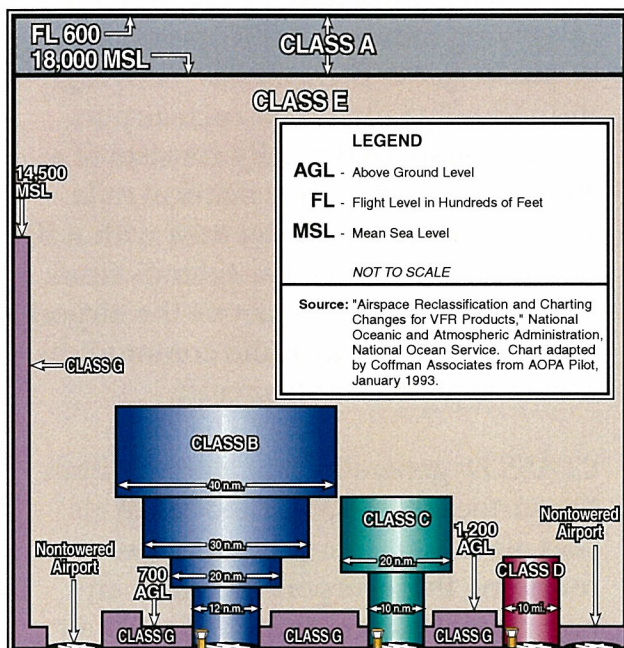
**CONTROLLED AIRSPACE:** airspace of defined dimensions within which air traffic control services are provided to instrument flight rules (IFR) and visual flight rules (VFR) flights in accordance with the airspace classification. Controlled airspace in the United States is designated as follows:

- **CLASS A:** generally, the airspace from 18,000 feet mean sea level (MSL) up to but not including flight level FL600. All persons must operate their aircraft under IFR.
- **CLASS B:** generally, the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports. The configuration of Class B airspace is unique to each airport, but typically consists of two or more layers of air space and is designed to contain all published instrument approach procedures to the airport. An air traffic control clearance is required for all aircraft to operate in the area.
- **CLASS C:** generally, the airspace from the surface to 4,000 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower and radar approach control and are served by a qualifying number of IFR operations or passenger enplanements. Although individually tailored for each airport, Class C airspace typically consists of a surface area with a five nautical mile (nm) radius and an outer area with a 10 nautical mile radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Two-way radio communication is required for all aircraft.
- **CLASS D:** generally, that airspace from the surface to 2,500 feet above the airport elevation (charted as MSL) surrounding those airport that have an operational control tower. Class D air space is individually tailored and configured to encompass published instrument approach procedures. Unless otherwise authorized, all



persons must establish two-way radio communication.

- **CLASS E:** generally, controlled airspace that is not classified as Class A, B, C, or D. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When "designated as a surface area, the airspace will be configured to contain all instrument procedures. Class E airspace encompasses all Victor Airways. Only aircraft following instrument flight rules are required to establish two-way radio communication with air traffic control.
- **CLASS G:** generally, that airspace not classified as Class A, B, C, D, or E. Class G airspace is uncontrolled for all aircraft. Class G airspace extends from the surface to the overlying Class E airspace.



**CONTROLLED FIRING AREA:** see special-use airspace.

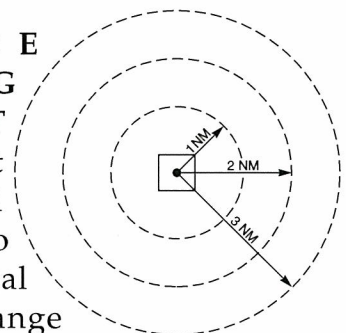
**CROSSWIND LEG:** A flight path at right angles to the landing runway off its upwind end. See "traffic pattern."

**DECLARED DISTANCES:** The distances declared available for the airplane's take-off runway, takeoff distance, accelerate-stop distance, and landing distance requirements. The distances are:

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

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

**DISTANCE MEASURING EQUIPMENT (DME):** Equipment (airborne and ground) used to measure, in nautical miles, the slant range



distance of an aircraft from the DME navigational aid.

**DNL:** The 24-hour average sound level, in A-weighted decibels, obtained after the addition of ten decibels to sound levels for the periods between 10 p.m. and 7 a.m. as averaged over a span of one year. It is the FAA standard metric for determining the cumulative exposure of individuals to noise.

**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. Also see "traffic pattern."

**EASEMENT:** The legal right of one party to use a portion of the total rights in real estate owned by another party. This may include the right of passage over, on, or below the property; certain air rights above the property, including view rights; and the rights to any specified form of development or activity, as well as any other legal rights in the property that may be specified in the easement document.

**ENPLANED PASSENGERS:** the total number of revenue passengers boarding aircraft, including originating, stop-over, and transfer passengers, in scheduled and non-scheduled services.

**FINAL APPROACH:** A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. See "traffic pattern."

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

**FRANGIBLE NAVAID:** a navigational aid 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.

**GENERAL AVIATION:** that portion of civil aviation which encompasses all facets of aviation except air carriers holding a certificate of convenience and necessity, and large aircraft commercial operators.

**GLIDESLOPE (GS):** Provides vertical guidance for aircraft during approach and landing. The glideslope consists of the following:

1. Electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS; or
2. Visual ground aids, such as VASI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

**GLOBAL POSITIONING SYSTEM:**  
See "GPS."

**GPS - GLOBAL POSITIONING SYSTEM:** A system of 24 satellites



used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude, and altitude.

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

**HIGH-SPEED EXIT TAXIWAY:** a long radius taxiway designed to expedite aircraft turning off the runway after landing (at speeds to 60 knots), thus reducing runway occupancy time.

**INSTRUMENT APPROACH:** 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):** Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

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

- |                  |                     |
|------------------|---------------------|
| 1. Localizer.    | 4. Middle Marker.   |
| 2. Glide Slope.  | 5. Approach Lights. |
| 3. Outer Marker. |                     |

**LANDING DISTANCE AVAILABLE (LDA):** see declared distances.

**LOCAL TRAFFIC:** aircraft operating in the traffic pattern or within sight of the

tower, or aircraft known to be departing or arriving from the local practice areas, or aircraft executing practice instrument approach procedures. Typically, this includes touch-and-go training operations.

**LOCALIZER:** The component of an ILS which provides course guidance to the runway.

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

**LORAN:** long range navigation, an electronic navigational aid which determines aircraft position and speed by measuring the difference in the time of reception of synchronized pulse signals from two fixed transmitters. Loran is used for enroute navigation.

**MICROWAVE LANDING SYSTEM (MLS):** an instrument approach and landing system that provides precision guidance in azimuth, elevation, and distance measurement.

**MILITARY OPERATIONS AREA (MOA):** see special-use airspace.

**MISSED APPROACH COURSE (MAC):** The flight route to be followed if, after an instrument approach, a landing is not effected, and occurring normally:

1. When the aircraft has descended to the decision height and has not established visual contact; or

2. When directed by air traffic control to pull up or to go around again.

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

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

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

**NONDIRECTIONAL BEACON (NDB):** A beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his or her bearing to and from the radio beacon and home on, or track to, the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a Compass Locator.

**NONPRECISION APPROACH PROCEDURE:** a standard instrument approach procedure in which no electronic glide slope is provided, such as VOR, TACAN, NDB, or LOC.

**OBJECT FREE AREA (OFA):** an area on the ground centered on a runway, taxiway, or taxilane centerline provided to

enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

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

**OPERATION:** a take-off or a landing.

**OUTER MARKER (OM):** an ILS navigation facility in the terminal area navigation system located four to seven miles from the runway edge on the extended centerline indicating to the pilot, that he/she is passing over the facility and can begin final approach.

**PRECISION APPROACH:** a standard instrument approach procedure which provides runway alignment and glide slope (descent) information. It is categorized as follows:

- **CATEGORY I (CAT I):** a precision approach which provides for approaches with a decision height of not less than 200 feet and visibility not less than 1/2 mile or Runway Visual Range (RVR) 2400 (RVR 1800) with operative touchdown zone and runway centerline lights.



- **CATEGORY II (CAT II):** a precision approach which provides for approaches with a decision height of not less than 100 feet and visibility not less than 1200 feet RVR.
- **CATEGORY III (CAT III):** a precision approach which provides for approaches with minima less than Category II.

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

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

**PROHIBITED AREA:** see special-use airspace.

**REMOTE COMMUNICATIONS OUTLET (RCO):** an unstaffed transmitter receiver/facility remotely controlled by air traffic personnel. RCOs serve flight service stations (FSSs). RCOs were established to provide ground-to-ground communications between air

traffic control specialists and pilots at satellite airports for delivering enroute clearances, issuing departure authorizations, and acknowledging instrument flight rules cancellations or departure/landing times.

**REMOTE TRANSMITTER/RECEIVER (RTR):** see remote communications outlet. RTRs serve ARTCCs.

**RELIEVER AIRPORT:** an airport to serve general aviation aircraft which might otherwise use a congested air-carrier served airport.

**RESTRICTED AREA:** see special-use airspace.

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

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

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

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

**RUNWAY SAFETY AREA (RSA):** a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

**RUNWAY VISUAL RANGE (RVR):** an instrumentally derived value, in feet, representing the horizontal distance a pilot can see down the runway from the runway end.

**RUNWAY VISIBILITY ZONE (RVZ):** an area on the airport to be kept clear of permanent objects so that there is an unobstructed line-of-sight from any point five feet above the runway centerline to

any point five feet above an intersecting runway centerline.

**SEGMENTED CIRCLE:** a system of visual indicators designed to provide traffic pattern information at airports without operating control towers.

**SHOULDER:** an area adjacent to the edge of paved runways, taxiways or aprons providing a transition between the pavement and the adjacent surface; support for aircraft running off the pavement; enhanced drainage; and blast protection. The shoulder does not necessarily need to be paved.

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

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

- **ALERT AREA:** airspace which may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.
- **CONTROLLED FIRING AREA:** airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons or property on the ground.

- **MILITARY OPERATIONS AREA (MOA):** designated airspace with defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from instrument flight rule (IFR) traffic and to identify for visual flight rule (VFR) traffic where these activities are conducted.
- **PROHIBITED AREA:** designated airspace within which the flight of aircraft is prohibited.
- **RESTRICTED AREA:** airspace designated under Federal Aviation Regulation (FAR) 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use. When not in use by the using agency, IFR/VFR operations can be authorized by the controlling air traffic control facility.
- **WARNING AREA:** airspace which may contain hazards to nonparticipating aircraft.

**STANDARD INSTRUMENT DEPARTURE (SID):** a preplanned coded air traffic control IFR departure routing, preprinted for pilot use in graphic and textual form only.

**STANDARD TERMINAL ARRIVAL (STAR):** a preplanned coded air traffic control IFR arrival routing, preprinted for pilot use in graphic and textual or textual form only.

**STOP-AND-GO:** a procedure wherein an aircraft will land, make a complete stop on the runway, and then commence a takeoff from that point. A stop-and-go is recorded as two operations: one

operation for the landing and one operation for the takeoff.

**STRAIGHT-IN LANDING/APPROACH:** a landing made on a runway aligned within 30 degrees of the final approach course following completion of an instrument approach.

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

**TAKEOFF RUNWAY AVAILABLE (TORA):** see declared distances.

**TAKEOFF DISTANCE AVAILABLE (TODA):** see declared distances.

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

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

**TAXIWAY SAFETY AREA (TSA):** a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

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

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

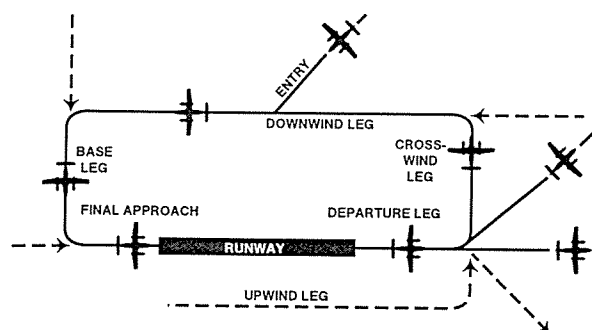
**TOUCH-AND-GO:** an operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. A touch-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

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

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

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

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

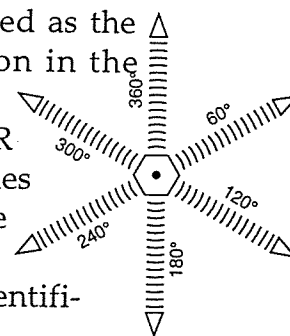


**UNICOM:** A nongovernment communication facility which may provide airport information at certain airports. Locations and frequencies of UNICOM's are shown on aeronautical charts and publications.

**UPWIND LEG:** A flight path parallel to the landing runway in the direction of landing. See "traffic pattern."

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

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



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

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

**VISUAL APPROACH:** An approach wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of an air traffic control facility and having an air traffic control authorization, may proceed to the airport of destination in VFR conditions.



**VISUAL APPROACH SLOPE INDICATOR (VASI):** An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high intensity red and white focused light beams which indicate to the pilot that he is on path if he sees red/white, above path if white/white, and below path if red/red. Some airports serving large aircraft have three-bar VASI's which provide two visual guide paths to the same runway.

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

**VOR:** See "Very High Frequency Omnidirectional Range Station."

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

**WARNING AREA:** see special-use airspace.

# ABBREVIATIONS

<b>AC:</b>	advisory circular	<b>ARFF:</b>	aircraft rescue and firefighting
<b>ADF:</b>	automatic direction finder	<b>ARP:</b>	airport reference point
<b>ADG:</b>	airplane design group	<b>ARTCC:</b>	air route traffic control center
<b>AFSS:</b>	automated flight service station	<b>ASDA:</b>	accelerate-stop distance available
<b>AGL:</b>	above ground level	<b>ASR:</b>	airport surveillance radar
<b>AIA:</b>	annual instrument approach	<b>ASOS:</b>	automated surface observation station
<b>AIP:</b>	Airport Improvement Program	<b>ATCT:</b>	airport traffic control tower
<b>AIR-21:</b>	Wendell H. Ford Aviation Investment and Reform Act for the 21st Century	<b>ATIS:</b>	automated terminal information service
<b>ALS:</b>	approach lighting system	<b>AVGAS:</b>	aviation gasoline - typically 100 low lead (100LL)
<b>ALSF-1:</b>	standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT I configuration)	<b>AWOS:</b>	automated weather observation station
<b>ALSF-2:</b>	standard 2,400-foot high intensity approach lighting system with sequenced flashers (CAT II configuration)	<b>BRL:</b>	building restriction line
<b>APV:</b>	instrument approach procedure with vertical guidance	<b>CFR:</b>	Code of Federal Regulations
<b>ARC:</b>	airport reference code	<b>CIP:</b>	capital improvement program
		<b>DME:</b>	distance measuring equipment
		<b>DNL:</b>	day-night noise level

**DWL:** runway weight bearing capacity for aircraft with dual-wheel type landing gear

**DTWL:** runway weight bearing capacity for aircraft with dual-tandem type landing gear

**FAA:** Federal Aviation Administration

**FAR:** Federal Aviation Regulation

**FBO:** fixed base operator

**FY:** fiscal year

**GPS:** global positioning system

**GS:** glide slope

**HIRL:** high intensity runway edge lighting

**IFR:** instrument flight rules (FAR Part 91)

**ILS:** instrument landing system

**IM:** inner marker

**LDA:** localizer type directional aid

**LDA:** landing distance available

**LIRL:** low intensity runway edge lighting

**LMM:** compass locator at middle marker

**LOC:** ILS localizer

**LOM:** compass locator at ILS outer marker

**LORAN:** long range navigation

**MALS:** medium intensity approach lighting system

**MALSR:** medium intensity approach lighting system with runway alignment indicator lights

**MIRL:** medium intensity runway edge lighting

**MITL:** medium intensity taxiway edge lighting

**MLS:** microwave landing system

**MM:** middle marker

**MOA:** military operations area

**MSL:** mean sea level

**NAVAID:** navigational aid

**NDB:** nondirectional radio beacon

**NM:** nautical mile (6,076 .1 feet)

**NPIAS:** National Plan of Integrated Airport Systems

**NPRM:** notice of proposed rule-making

**ODALS:** omnidirectional approach lighting system

**OFA:** object free area

**OFZ:** obstacle free zone

**OM:** outer marker

**PAC:** planning advisory committee

**PAPI:** precision approach path indicator

**PFC:** porous friction course

**PFC:** passenger facility charge

**PCL:** pilot-controlled lighting

**PIW:** public information workshop

**PLASI:** pulsating visual approach slope indicator

**POFA:** precision object free area

**PVASI:** pulsating/steady visual approach slope indicator

**RCO:** remote communications outlet

**REIL:** runway end identifier lighting

**RNAV:** area navigation

**RPZ:** runway protection zone

**RTR:** remote transmitter/receiver

**RVR:** runway visibility range

**RVZ:** runway visibility zone

**SALS:** short approach lighting system

**SASP:** state aviation system plan

**SEL:** sound exposure level

**SID:** standard instrument departure

**SM:** statute mile (5,280 feet)

**SRE:** snow removal equipment

**SSALF:** simplified short approach lighting system with sequenced flashers

**SSALR:** simplified short approach lighting system with runway alignment indicator lights

**STAR:** standard terminal arrival route

**SWL:** runway weight bearing capacity for aircraft with single-wheel type landing gear

**STWL:** runway weight bearing capacity for aircraft with single-wheel tandem type landing gear

**TACAN:** tactical air navigational aid

**TDZ:** touchdown zone



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<b>TDZE:</b>	touchdown zone elevation
<b>TAF:</b>	Federal Aviation Administration (FAA) Terminal Area Forecast
<b>TODA:</b>	takeoff distance available
<b>TORA:</b>	takeoff runway available
<b>TRACON:</b>	terminal radar approach control
<b>VASI:</b>	visual approach slope indicator
<b>VFR:</b>	visual flight rules (FAR Part 91)
<b>VHF:</b>	very high frequency
<b>VOR:</b>	very high frequency omnidirectional range
<b>VORTAC:</b>	VOR and TACAN collocated