

Appendix A

Acronyms and Definitions

Acronyms

AC	Advisory Circular
ADG	Airplane Design Group
ADO	Airport District Office
AGL	Above Ground Level
AIM	Aeronautical Information Manual
AIP	Airport Improvement Program
ALP	Airport Layout Plan
ANM	Northwest Mountain Region
ARC	Airport Reference Code
ARFF	Airport Rescue and Fire Fighting
ARP	Airport Reference Point
ARTCC	Air Route Traffic Control Center
ASDA	Accelerate-Stop Distance Available
ASV	Annual Service Volume
ATC	Air Traffic Control
ATCT	Air Traffic Control Tower
AVGAS	Aviation Gasoline
AWOS	Automated Weather Observing System
CFR	Code of Federal Regulations
CIP	Capital Investment Plan
CWY	Clearway
dB	Decibel
dBA	A-weighted Decibels
DH	Decision Height
DME	Distance Measuring Equipment
DOT	Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FBO	Fixed Based Operator
GA	General Aviation
GPS	Global Positioning System

IFR	Instrument Flight Rules
INM	Integrated Noise Model
LDA	Landing Distance Available
LIRL	Low Intensity Runway Lights
MIRL	Medium Intensity Runway Lights
MSL	Mean Sea Level
NAVAIDS	Navigational Aids
NDB	Non-Directional Beacon
NEPA	National Environmental Policy Act
OFA	Object Free Area
OFZ	Obstacle Free Zone
PAPI.....	Precision Approach Path Indicator
RPZ	Runway Protection Zone
RSA	Runway Safety Area
RW	Runway
SEPA	State Environmental Protection Act
SWY	Stopway
TH	Threshold
TL	Taxilane
TODA	Take-Off Distance Available
TORA	Take-Off Run Available
TSA	Taxiway Safety Area
TW	Taxiway
VASI	Visual Approach Slope Indicator
VFR	Visual Flight Rules
WSCASP	Washington State Continuous Airport System Plan
WSDOT	Washington State Department of Transportation

Definitions

- Aeronautical Activity Any activity commonly performed at airports involving, required for, or permitting the operation of aircraft, or required for or contributing to the safety of aircraft operations. Aeronautical activities include, but are not limited to: pilot training, aircraft rental, air taxi, charter operations, sightseeing, air carrier operations, aircraft repair and maintenance, sale of aircraft parts, sale of aviation fuels and petroleum products, air cargo, aerial crop applications, aerial photography, aerial surveying, aerial advertising, aircraft sales, aircraft storage, ultralight operations, skydiving, and power assisted hang gliding or parasailing.
- Aeronautical Service Any service involving, required for or permitting the operation of aircraft or required for or contributing to the safety of aircraft operations. These services are commonly conducted on the airport by persons or businesses who lease facilities or have permission from the airport operator to provide such services.
- 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. Air taxi operators generally operate small aircraft “for hire” for specific trips.
- Aircraft Approach Category A grouping of aircraft based on a speed of 1.3 times the stall speed in the landing configuration at maximum gross landing weight. The aircraft approach categories are:
- 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 that 166 knots; and
 - Category E - Speed 166 knots or more.
- Aircraft Mix The classification of aircraft into groups which are similar in size, noise, and operational characteristics. (Also see Fleet Mix.)

Aircraft Operations The airborne movement of aircraft. There are two types of operations: local and itinerant, defined as follows:

1. Local Operations are performed by aircraft which:
 - a... operate in the local traffic pattern or within sight of the airport;
 - b. . are known to be departing for or arriving from a local practice area.
2. Itinerant operations are all others.

Airfield A defined area on land or water including any buildings, installations, and equipment intended to be used either wholly or in part for the arrival, departure, or movement of aircraft.

Airplane Design Group A grouping of airplanes based on wingspan. The groups are as follows:

- Group I: Up to but not including 49 feet (15 m).
- Group II: 49 feet (15 m) up to but not including 79 feet (24 m).
- Group III: 79 feet (24 m) up to but not including 118 feet (36 m).
- Group IV: 118 feet (36 m) up to but not including 171 feet (52 m).
- Group V: 171 feet (52 m) up to but not including 214 feet (65 m).
- Group VI: 214 feet (65 m) up to but not including 262 feet (80 m).

Airport All of the property, buildings, facilities and improvements within the property boundaries of the airport as it now exists or will exist in the future. This area is defined on the Airport Layout Plan or Exhibit A.

Airport Elevation The highest point on an airport’s usable runway expressed in feet above mean sea level (MSL).

Airport Layout Plan (ALP) The plan of an airport showing the layout of existing and proposed airport facilities.

Airport Owner	The City of Auburn and/or its designee who is charged with the operation and administration of the airport.
Airport Reference Point (ARP) ...	The latitude and longitude of the approximate center of the airport.
Airside	The runways, taxiways, aprons, ramps, buildings and facilities located inside the security fencing.
Airspace	The area above the ground in which aircraft travel. It is divided into corridors, routes, and restricted zones for the control and safety of aircraft.
Ambient Noise Level	Background noise level, exclusive of the contribution made by aircraft.
Annual Service Volume	A reasonable estimate of an airport's annual capacity. It accounts for differences in runway use, aircraft mix, weather conditions, etc., that would be encountered over a year's time.
Approach End of Runway	The near end of the runway as viewed from the cockpit of a landing aircraft.
Approach Surface	An imaginary surface longitudinally centered on the extended runway centerline and extending outward and upward from each end of the primary surface. An approach surface is applied to each end of the runway based upon the planned approach. The inner edge of the approach surface is the same width as the primary surface and expands uniformly, depending upon the planned approach.
Approved Instrument Approach .	Instrument approach meeting the design requirement, equipment specifications, and accuracies, as determined by periodic FAA flight checks, and which are approved for general use and publication by the FAA.
Apron	A defined area where aircraft are maneuvered and parked, and where activities associated with the handling of flights can be carried out.

Automated Weather Observing System (AWOS)	An automatic recording instrument for measuring cloud height, visibility, wind speed and direction, temperature, and dew point.
Aviation Gasoline (AVGAS)	Fuel used in reciprocating (piston) aircraft engines. Avgas is manufactured in the following grades: 80/87; 100LL; 100/130; and 115/145.
Avigation Easement	A form of limited property right purchase that establishes legal land-use control prohibiting incompatible development of areas required for airports or aviation-related purposes.
Based Aircraft	Aircraft stationed at an airport on an annual basis.
Circling Approach	An instrument approach procedure in which an aircraft executes the published instrument approach to one runway, then maneuvers visually to land on a different runway. Circling approaches are also used at airports that have published instrument approaches with a final approach course that is not aligned within 30 degrees of any runway.
Clear Zone	See Runway Protection Zone.
Clearway	A clearway is an area available for the continuation of the take-off operation which is above as clearly defined area connected to and extending beyond the end of the runway. The area over which the clearway lies need not be suitable for stopping aircraft in the event of an aborted take-off. Clearways are applicable only in the take-off operations of turbine-engined aircraft.
Commercial Service or Activity ..	Any commerce, trade or business involved in the exchange of goods, property or services of any kind.
Conical Surface	A surface extending outward and upward from the horizontal surface at a slope of 20:1 for a horizontal distance of 4,000 feet.
Controlled Airspace	Airspace designated as continental control area, control area, control zone, or transition area within which some or all aircraft may be subject to air traffic control.

Critical Aircraft	The aircraft which controls one or more design items based on wingspan, approach speed and/or maximum certificated take-off weight. The same aircraft may not be critical to all design items.
Cross wind	When used concerning wind conditions, the word means a wind not parallel to the runway or the path of an aircraft.
dBA	Decibels measured on the A-weighted scale to factor out anomalies.
Decibel (dB)	The standard unit of noise measurement relating to a logarithm scale in which 10 units represents a doubling of acoustic energy.
Displaced Threshold	Actual touchdown point on specific runway designated due to obstructions which make it impossible to use the actual physical runway end.
Effective Runway Gradient	The maximum difference between runway centerline elevations divided by the runway length, expressed as a percentage.
Environmental Assessment (EA)	A report prepared under the National Environmental Policy Act (NEPA) analyzing the potential environmental impacts of a federally funded project.
Environmental Impact Statement (EIS)	A report prepared under NEPA fully analyzing the potential significant environmental impacts of a federally-funded project.
FAR Part 77	Federal Aviation Regulations which establish standards for determining obstructions in navigable airspace.
Federal Aviation Administration (FAA)	A branch of the US Department of Transportation responsible for the regulation of all civil aviation activities.
Final Approach	The flight path of an aircraft which is inbound to the airport on an approved final instrument approach course, beginning at the point of interception of that course and extending to the airport or the point where circling for landing or missed approach is executed.

Fixed Base Operation (FBO)	An individual or business property licensed and authorized by written agreement with the airport owner to provide specified aeronautical services at the airport, and who rents or leases facilities on the airport to conduct these services. These operators commonly occupy an office, hangar or shop on the airport, and are required to comply with the written agreements and referenced rules and regulations.
Fixed Wing	For the purposes of this report, any aircraft not considered rotorcraft.
Flying Club	A non-commercial organization established to promote flying. Activities include, but are not limited to, development of aeronautical skills such as pilotage, navigation, airmanship, and the awareness and appreciation of aviation requirements and techniques.
Fuel	Aviation gasoline, jet fuel, automotive fuel or diesel.
Full Service FBO	A fixed base operator who provides a full range of services. This range of services generally includes aircraft rental, flight instruction, aircraft maintenance and repair, and pilot supplies.
General Aviation	All civil aviation operations other than scheduled air services and non-scheduled air transport operations for remuneration or hire.
Global Positioning System (GPS)	A system of US satellites orbiting the earth which is used to instantly and accurately determine the navigational position of users on or above the earth's surface.
Hazard to Air Navigation	An object which, as a result of an aeronautical study, the FAA determines will have a substantial adverse effect upon the safe and efficient use of a navigable airspace by aircraft, operation of air navigation facilities, or existing or potential airport capacity.
Horizontal Surface	An elliptical surface at an elevation 150 feet above the established airport elevation created by swinging 5,000-foot radius arcs from the center of each end of the primary surface. Tangent lines then connect these arcs.

- Independent Flight Instructor A single individual, working alone and without employees, partners, or facilities on the airport who provides professional, licensed/certified flight instruction.
- Independent Mechanic A single individual, working alone and without employees, partners, or facilities on the airport who provides professional, certificated repair and/or maintenance services for aircraft or aeronautical components.
- Instrument Flight Rules (IFR) Instrument Flight Rules governing the procedures for conducting instrument flight. Pilots are required to follow these rules when operating in controlled airspace with visibility of less than three miles and/or ceiling lower than 1,000 feet.
- Itinerant Operation All aircraft operations at an airport other than local.
- Landside All buildings and surfaces on the airport used by pedestrian or surface vehicular traffic located outside the airport security fence. The entire Auburn airport is fenced, so this designation is not applicable here.
- Large Airplane An airplane of more than 12,500 pounds (5,700 kg) maximum certificated takeoff weight.
- Limited Service FBO A fixed base operator whose services are confined to less than full service. Examples of Limited Service include FBOs who provide specialty services such as aircraft sales, painting or upholstery, avionics repair, or other specialty services, or who provide only aviation fuel, or only aircraft maintenance and repair, or only aircraft rental and charter.
- Local Operation Aircraft operation in the traffic pattern or within sight of the tower, or aircraft known to be departing or arriving from flight in local practice areas, or aircraft executing practice instrument approaches at the airport.
- Minimum Standards Standards established by the airport owner as the minimum requirements to be met as a condition for the right to provide commercial services on the airport.

- Navigational Aid (NAVAID) Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.
- Non-Aeronautical Service Any service conducted on the airport that provides products or services that are not associated with aviation. These services are provided by persons or businesses who lease facilities or have permission from the airport operator to provide such services on the airport.
- Non-Directional Beacon (NDB) .. Non-Directional Beacon which transmits a signal on which a pilot may “home” using equipment installed in the aircraft.
- 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, 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 OFZ is the airspace below 150 feet (45 m) 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. The OFZ is subdivided as follows:
- Runway OFZ - The airspace above a surface centered on the runway centerline.
 - Inner-approach OFZ - The airspace above a surface centered on the extended runway centerline. It applies to runways with an approach lighting system.
 - Inner-transitional OPZ - The airspace above the surfaces located on the outer edges of the runway OFZ and the inner-approach OFZ. It applies to runways with approach visibility minimums lower than $\frac{3}{4}$ -statute mile (1,200 m).

Obstruction to Air Navigation	An object of greater height than any of the heights or surfaces presented in Subpart C of the Code of Federal Regulation (14 CFR), Part 77. (Obstructions to air navigation are presumed to be hazards to air navigation until an FAA study has determined otherwise).
Precision Approach Path Indicator (PAPI)	A lighting system located along side of a runway which provides the pilot with position information related to the desired glide path to the runway. PAPIs contain red and white light units which are configured in a single row.
Primary Surface	A rectangular surface with a width of 250 feet (centered on the runway centerline) and a length that extends 200 feet beyond each end of the runway. The elevation of the primary surface corresponds to the elevation of the nearest point of the runway centerline.
Rotorcraft (Helicopter)	A heavier-than-air aircraft supported in flight by the reactions of the air on one or more power-driven rotors on substantially vertical axis.
Runway (RW)	A defined rectangular surface on an airport prepared or suitable for the landing or takeoff of airplanes.
Runway Blast Pad	A surface adjacent to the ends of runways provided to reduce the erosive effect of jet blast and propeller wash.
Runway Protection Zone (RPZ) ..	An area off the runway end to enhance the protection of people and property on the ground.
Runway Safety Area (RSA)	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.
Segmented Circle	A system of visual indicators designed to provide traffic pattern information at airports without operating control towers.
Self-Fueling Operator	A person who dispenses aviation fuel to aircraft owned by that person, or leased from others and operated by that person.

Shoulder	An area adjacent to the edge of paved runways, taxiways, or aprons providing a transition between the pavement and the adjacent surface; support of aircraft running off the pavement; enhanced drainage; and blast protection.
Small Airplane	An airplane of 12,500 pounds (5,700 kg) or less maximum certificated takeoff weight.
Stopway (SWY)	A defined rectangular surface beyond the end of a runway prepared or suitable for use in lieu of runway to support an airplane, without causing structural damage to the airplane, during an aborted takeoff.
Taxilane (TL)	The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.
Taxiway (TW)	A defined path established for the taxiing of aircraft from one part of an airport to another.
Taxiway Safety Area (TSA)	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.
Threshold (TH)	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
Touch and Go Operation	Practice flight performed by a landing touch down and continuous take-off without stopping or exiting the runway.
Transitional Surface	A sloping 7:1 surface that extends outward and upward at right angles to the runway centerline from the sides of the primary surface and the approach surfaces.
Ultralight	An aeronautical vehicle operated for sport or recreational purposes which does not require FAA registration, an airworthiness certificate, nor pilot certification. They are primarily single occupant vehicles, although some two-place vehicles are authorized for training purposes.
Utility Runway	A runway that is constructed for, and intended to be used by, aircraft of 12,500 pounds maximum gross weight and less.

Visual Approach Slope Indicator (VASI)	A lighting system located along side of a runway which provides the pilot with position information related to the desired glide path to the runway. VASIs are configured in bars (versus a single row like PAPIs)
Visual Flight Rules (VFR)	Visual Flight Rules by which aircraft are operated by visual reference to the ground. Weather conditions for flying under these rules must include a ceiling greater than 1,000 feet, three miles visibility, and standard cloud clearance.
Visual Runway	A runway without an existing or planned straight-in instrument approach procedure.
Wind Coverage	Wind coverage is the percent of time for which aeronautical operations are considered safe due to acceptable crosswind components.
Wind Rose	A scaled graphical presentation of wind information.

Appendix B

Zoning Ordinances

Lincoln County Zoning Ordinances

Public Facilities District

17.02.120 Public facilities district purpose.

The purpose of this section is to provide and protect land for the use of the public, including functions that can only be pursued in an area designated for this purpose. All proposals shall require site plan and SEPA review.

17.02.130 Permitted uses.

It is not feasible to itemize all potential public uses that may be applied for therefore, the following use classifications are provided to define those general uses that are to be considered.

- A. Uses commonly know as public uses such as public schools, public parks, public libraries and museums, fire stations, hospitals, and other public facilities and buildings.
- B. Uses common to activities of public non-profit organizations such as meeting halls and churches.
- C. Public utility facilities (except for offices) such as telephone exchanges, gas and water regulation stations, transmission lines and towers, electrical substations, water reservoirs and pumping stations, and water and sewage treatment plants.

Note: The planning director shall review applications to determine whether or not the use applied for meets the public criteria and if upon review of an application for a public use the director is uncertain whether or not the use meets the criteria for public use outlined above a determination on use classification shall be requested from the board of adjustment.

17.02.140 Accessory uses.

Accessory uses and buildings customarily incidental to any of the principal permitted uses when located on the same property.

17.02.150 Dimensional requirements.

- A. Minimum lot size: twenty-thousand (20,000') square feet.
- B. Minimum lot width: one-hundred (100') feet.

17.02.160 Setback requirements.

- A. Front - thirty-five (35') feet measured from the state or county right-of-way.
- B. Side and rear - twenty (20') feet from edge of lot.
- C. Flanking Street - thirty-five (35') feet from edge of lot.
- D. Ingress/egress - ten (10') feet from side property line.
- E. Retaining structures adjacent to a county right-of-way will be reviewed on a case-by-case basis by the county engineer prior to installation.

Agricultural District

17.02.020 Agricultural district purpose.

The agricultural district provides minimum standards for areas of general agricultural land use, including requirements for residential dwellings. (See definitions). Agricultural will be the primary use in the district and all other uses will be placed so as to minimize their impact on the surrounding agricultural use.

17.02.030 Permitted uses.

- A. Agricultural, including but not limited to cropping, grazing of livestock, farm oriented feedlots, dairying horticulture and floriculture and all practices common or incidental to agriculture, which will not create a public nuisance to incorporated and unincorporated areas.
- B. Accessory buildings, including barns, storage buildings for crops and feed and equipment sheds or other structures accessory to any permitted uses.
- C. One and two family residential dwellings. Also, three family or more residential dwellings, which are located within one mile of any incorporated or unincorporated communities. RV's are not considered full time residential dwellings. (See definitions).
- D. Temporary stands for the sale of agricultural non-livestock products produced on premises.
- E. Home occupations employing not more than one individual who is not a resident of the premises and utilizing only those accessory buildings and structures permitted under this title.
- F. Existing cemeteries.

17.02.040 Residential requirements.

- A. The area of the lot shall be no less than the minimum area required by the Lincoln County environmental health department to safely accommodate approved water supply and on-site sewage disposal systems.
- B. Short plats and/or regular subdivisions are not permitted unless the proposal is located on non-tilled land or adjacent to existing unincorporated or incorporated communities.
- C. All permitted uses will be placed so as to not interfere with accepted farming practices including, but not limited to, machinery movement, right-of-way and access.

17.02.050 Setback requirements.

The minimum set back for all structures shall be ten (10') feet on all sides. The Lincoln County engineer prior to installation will review retaining structures adjacent to a county right-of-way on a case-by-case basis. A minimum setback of thirty (30') feet shall be required along the right-of-way of any state or county roadway, except when the county road is in a legal subdivision and then the setback shall be ten (10') feet. A ten (10') foot setback from property lines shall also apply to ingress/egress driveways, except where otherwise approved by the county engineer and/or planning director.

17.02.060 Conditional uses.

- A. Multiple-family dwellings further than one mile from unincorporated and incorporated communities.
- B. Housing for migrant and construction workers.
- C. Solid waste sites or transfer stations.
- D. Manufactured home and recreational vehicle parks.
- E. Manufactured home and recreational vehicle subdivisions approved pursuant to Title 16 of the Lincoln County code.
- F. Transmission lines equal to or greater than 230 kV.
- G. Gun clubs, rifle ranges.
- H. Rock quarrying crushing and/or asphalt paving plants.
- I. Private and public recreational facilities.
- J. Utility substations.
- K. Animal Clinics, hospitals, kennels, cemeteries, training schools (this pertains to animals only).
- L. Cemeteries.
- M. Commercial livestock feed yards and sales yards.
- N. Granges, community and fraternal halls, churches, libraries, schools, fire stations, museums and hospitals.
- O. Communication tower(s).
- P. Wind-powered generation and/or assessment tower(s).
- Q. Manufacture, storage and sale of agricultural fertilizer, pesticides, herbicides and soil sterilants.
- R. Commercial pipelines.
- S. Waste treatment and storage facilities.
- T. Other uses that could be determined to be relatively low impact in nature and largely devoid of nuisance factors, hazards or placing exceptional demands upon public facilities or services. These proposals will be reviewed on a case-by-case basis.

Appendix C

**FAA Airport Design
Computer Program
Printouts**

EXISTING.TXT
AIRPORT DESIGN AIRPLANE AND AIRPORT DATA

Aircraft Approach Category B
 Airplane Design Group I (Small Airplanes Exclusively)
 Airplane wingspan 44.10 feet
 Primary runway end approach visibility minimums are visual exclusively
 Other runway end approach visibility minimums are visual exclusively
 Airplane undercarriage width (1.15 x main gear track) . . . 11.50 feet

RUNWAY AND TAXIWAY WIDTH AND CLEARANCE STANDARD DIMENSIONS

Airplane Group/ARC

Runway centerline to parallel runway centerline simultaneous operations
 when wake turbulence is not treated as a factor:

VFR operations with no intervening taxiway 700 feet
 VFR operations with one intervening taxiway 700 feet
 VFR operations with two intervening taxiways 700 feet
 IFR approach and departure with approach to near threshold 2500 feet less
 100 ft for each 500 ft of threshold stagger to a minimum of 1000 feet.

Runway centerline to parallel runway centerline simultaneous operations
 when wake turbulence is treated as a factor:

VFR operations 2500 feet
 IFR departures 2500 feet
 IFR approach and departure with approach to near threshold . . . 2500 feet
 IFR approach and departure with approach to far threshold 2500 feet plus
 100 feet for each 500 feet of threshold stagger.
 IFR approaches 3400 feet

Runway centerline to parallel taxiway/taxilane centerline . 147.1 150 feet
 Runway centerline to edge of aircraft parking 125.0 125 feet
 Runway width 60 feet
 Runway shoulder width 10 feet
 Runway blast pad width 80 feet
 Runway blast pad length 60 feet
 Runway safety area width 120 feet
 Runway safety area length beyond each runway end
 or stopway end, whichever is greater 240 feet
 Runway object free area width 250 feet
 Runway object free area length beyond each runway end
 or stopway end, whichever is greater 240 feet
 Clearway width 500 feet
 Stopway width 60 feet

Obstacle free zone (OFZ):

Runway OFZ width 250 feet
 Runway OFZ length beyond each runway end 200 feet
 Inner-approach OFZ width 250 feet
 Inner-approach OFZ length beyond approach light system 200 feet
 Inner-approach OFZ slope from 200 feet beyond threshold . . . 50:1
 Inner-transitional OFZ slope 0:1

Runway protection zone at the primary runway end:

width 200 feet from runway end 250 feet
 width 1200 feet from runway end 450 feet
 Length 1000 feet

Runway protection zone at other runway end:

EXISTING.TXT

width 200 feet from runway end	250 feet
width 1200 feet from runway end	450 feet
Length	1000 feet

Departure runway protection zone:

width 200 feet from the far end of TORA	250 feet
width 1200 feet from the far end of TORA	450 feet
Length	1000 feet

Threshold surface at primary runway end:

Distance out from threshold to start of surface	0 feet
width of surface at start of trapezoidal section	250 feet
width of surface at end of trapezoidal section	700 feet
Length of trapezoidal section	2250 feet
Length of rectangular section	2750 feet
Slope of surface	20:1

Threshold surface at other runway end:

Distance out from threshold to start of surface	0 feet
width of surface at start of trapezoidal section	250 feet
width of surface at end of trapezoidal section	700 feet
Length of trapezoidal section	2250 feet
Length of rectangular section	2750 feet
Slope of surface	20:1

Taxiway centerline to parallel taxiway/taxilane centerline	62.9	69 feet
Taxiway centerline to fixed or movable object	40.8	44.5 feet
Taxilane centerline to parallel taxilane centerline	58.5	64 feet
Taxilane centerline to fixed or movable object	36.5	39.5 feet
Taxiway width	21.5	25 feet
Taxiway shoulder width		10 feet
Taxiway safety area width	44.1	49 feet
Taxiway object free area width	81.7	89 feet
Taxilane object free area width	72.9	79 feet
Taxiway edge safety margin		5 feet
Taxiway wingtip clearance	18.8	20 feet
Taxilane wingtip clearance	14.4	15 feet

REFERENCE: AC 150/5300-13, Airport Design, including Changes 1 through 4.

RUNWAY.TXT
AIRPORT AND RUNWAY DATA

Airport elevation	1737 feet
Mean daily maximum temperature of the hottest month	88.00 F.
Maximum difference in runway centerline elevation	14 feet
Length of haul for airplanes of more than 60,000 pounds	500 miles
Wet and slippery runways	

RUNWAY LENGTHS RECOMMENDED FOR AIRPORT DESIGN

Small airplanes with approach speeds of less than 30 knots . . .	350 feet
Small airplanes with approach speeds of less than 50 knots . . .	940 feet
Small airplanes with less than 10 passenger seats	
75 percent of these small airplanes	3070 feet
95 percent of these small airplanes	3670 feet
100 percent of these small airplanes	4300 feet
Small airplanes with 10 or more passenger seats	4570 feet
Large airplanes of 60,000 pounds or less	
75 percent of these large airplanes at 60 percent useful load	5500 feet
75 percent of these large airplanes at 90 percent useful load	7000 feet
100 percent of these large airplanes at 60 percent useful load	6030 feet
100 percent of these large airplanes at 90 percent useful load	8910 feet
Airplanes of more than 60,000 pounds	Approximately 5620 feet

REFERENCE: Chapter 2 of AC 150/5325-4A, Runway Length Requirements for Airport Design, no Changes included.

Appendix D

**Instrument Designation
Report**

INSTRUMENT RUNWAY DESIGNATION REPORT

Odessa Airport Odessa, Washington May, 2006

INTRODUCTION

Odessa Municipal Airport is a general aviation airport located in Odessa, Washington. The Airport currently has one runway: Runway 2-20, which is 3,125 feet long and 60 feet wide. A vicinity map is shown in **Figure 1**, below.

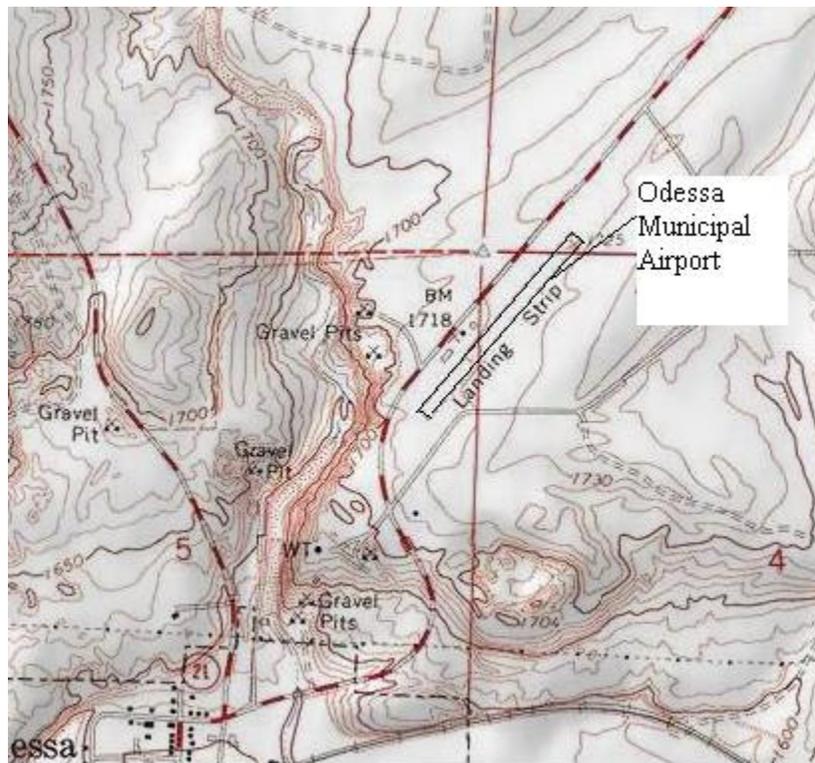


Figure 1: Airport Vicinity Map

The purpose of this report is to evaluate the eligibility of Odessa Municipal Airport to receive a Global Positioning System (GPS) approach procedure, and provide the information required for approval. The FAA Flight Procedures Office (FPO) has performed a feasibility test of both runway ends to determine if a straight-in, non precision approach with visibility minimums greater than or equal to one mile, would be possible at the Airport. The FPO concluded that this type of approach and visibility minimum would be feasible on both runway ends.

Based on the fact that a straight-in, non precision approach requires a 500' primary surface width, the Airport has decided that it does not want to pursue a straight-in approach as the increased primary surface width would have an adverse impact on the buildings and facilities around the runway. In order to preserve a 250' primary surface width, the Airport is requesting a circling GPS approach to both runway ends with visibility minimums greater than or equal to one mile.

ELIGIBILITY

The general requirements for establishing eligibility for a GPS Approach Procedure are as follows:

- The airport must be open for public use.
- The sponsor must show a reasonable need for the instrument approach. A reasonable need can be established by showing that the airport is used by a certified air carrier, air taxi, or commercial operator. If the airport is not served by these groups, the sponsor should solicit letters from at least two aircraft operators whose aviation activities relate to the commerce of the community.
- The establishment of controlled airspace from 700 feet above ground level (AGL) for approximately 5 miles around the airport; and, acknowledging that the political subdivision is aware and concurs that if the Federal Aviation Administration (FAA) provides a GPS Approach Procedure for the airport, controlled airspace of approximately five nautical miles, 700 feet above the ground, will be established around the airport.

Odessa Municipal Airport is open for public use. The Airport is not currently served by an air carrier, air taxi, or commercial operator; however Smith Air, a large agricultural operation, is based at the Airport. Advances in technology have made implementing an approach procedure much more of a reality at smaller airports. According to the Washington State System Plan all public-use airports in the state of Washington were expected to have GPS approaches by 2005. Due to the tragedy of September 11, 2001, this goal was not met; however, the forecast chapter of the attached ALP Narrative Report anticipates that a GPS approach procedure will be in place at the Airport by 2010.

AIRPORT INFORMATION

This report is being submitted along with the current version of the Odessa Municipal Airport Layout Plan (ALP) and narrative report. Additional airport information pertinent to the application of a GPS approach system is included below.

Airport Landing Surface: The airport landing surface consists of asphalt pavement. The existing pavement section has been designed to accommodate 5,000 pound single wheel gear (SWG) aircraft, Airport Reference Code (ARC) B-I (small). As part of the Capital Improvements, a pavement overlay project will be completed to bring the pavement strength rating to 12,500 pounds.

Runway Gradient: Runway 2-20 has an approximate gradient of 0.448%

Runway Safety Areas (RSA): The RSA is currently non-standard. Its width is 66' wide and its length beyond the runway ends varies from 0-40'. As part of the proposed runway project, the RSA will be brought to standard. Road/fence relocation and fill will be needed to achieve standard.

Runway Lighting: Runway 2-20 is currently lighted with a Medium Intensity Runway Lighting (MIRL) system. This system is/will be adequate.

Runway Markings: The existing runway markings consist of visual (basic) markings. These markings are appropriate for a circling GPS approach, which is expected at Odessa Municipal Airport.

Hold Markings: There are no existing hold markings on the airfield pavements. The CIP includes hold markings the installation of hold signs.

Signage: The Airport does not have any existing signage. The installation of hold signs are proposed in the CIP.

Weather Information: An AWOS is proposed to be installed during the first phase of the Airport's Capital Improvement Projects.

Wind Coverage: Runway 2-20 provides 95% wind coverage.

Communications: Phone service is available at the Airport, but there is currently not a public phone available.

Obstacle Free Zone (OFZ): The existing OFZ meets standards with the exception of the length available beyond the Runway 20 end. This area is non-standard due to the gravel road running through it. The road will be relocated and the runway will be extended.

Obstructions: There are existing and proposed obstructions to the Part 77 and threshold siting surfaces. These obstructions have been identified and their dispositions recommended; see attached Airport Layout Plan drawing set.

Noise Analysis: A formal noise analysis has not been conducted; however, the approaches to both Runways 2 and 20 could be restricted to the north and west sides of the airport to avoid direct over flight of the town.

Appendix E

**FAA NW Mountain Region
ALP Checklist**

AIRPORT LAYOUT PLAN CHECKLIST
Airports Division, Northwest Mountain Region
Federal Aviation Administration
April 1997

This checklist is recommended for use by consultants, airport sponsors, and FAA Airports District Office (ADO) personnel to help insure that all pertinent information is reflected on the airport layout plan (ALP) set of drawings. This checklist can be used for the small airports as well as for the larger, more complex ones and therefore every drawing or item in the checklist may not apply in all airport situations. However, certain drawings in the checklist are normally required in every case. These include (1) the airport layout plan drawing, (2) the airport airspace drawing, and (3) the inner portion of the approach surface drawing. The need for the other drawings should be decided on a case-by-case basis. This decision as well as the determination as to which of the individual checklist items for each drawing apply to a given airport situation should be made at the time the workscope is prepared for the development of the new or updated ALP. This involves the ADO working closely with the airport sponsor and their consultant to evaluate and reach agreement on the use of the checklist in the ALP project. The individual checklist items as well as the case-by-case drawings that apply to a given airport situation depend on the nature and complexity of the facility and the evaluation during the ALP workscope determination process. If during or after this process, the airport sponsor or their consultant disagrees with the ADO regarding the applicability of any element of the checklist to a given ALP project, they should provide the rationale for any such disagreement to the ADO. The ADO shall determine whether or not the rationale is acceptable and make the appropriate determination. In summary, this checklist can be used as part of the ALP workscope process, during the preparation of the ALP, and in the draft and final ALP reviews.

AIRPORT: Odessa Municipal **LOCATION:** Odessa, Washington

SPONSOR/CONSULTANT: WSDOT Aviation Division/W&H Pacific, Inc

DATE: July, 2006

FAA PROJECT MGR: Mary Vargas **DATE:** _____

THIS CHECKLIST WAS COMPLETED FOR (check one):

- ALP Workscope Purposes.
- ALP Preparation Purposes.
- ALP Review Purposes.

Note: Page 16 of this checklist provides specific instructions on its use in terms of checking **YES** or **NO**, with or without **REMARKS**, for each of these purposes.

<u>I. The ALP Set of Drawings.</u>	YES	NO	REMARKS
1. Normally Required Drawings.			
a. Airport Layout Plan Drawing.	(x)	()	_____
b. Airport Airspace Drawing.	(x)	()	_____
c. Inner Portion of the Approach Surface Drawing.	(x)	()	<u>Plan & Profile Sheet</u>
2. Case-by-Case Drawings.			
a. Terminal Area Drawing.			Terminal Area Buildings shown on ALP sheet
b. Land Use Drawing.	(x)	()	_____
c. Airport Property Map Drawing, Exhibit "A".	()	(x)	<u>Not included in scope</u>

Note: Normally, the airport layout plan drawing and the airport airspace drawing should be presented on separate sheets. The Exhibit "A", if done as part of a new or updated ALP set of drawings, should also be depicted on a separate sheet (or sheets for large airports). The other drawings do not necessarily need to be on separate sheets, depending on scale and size of the drawings.

<u>II. The Airport Layout Plan Drawing.</u>	YES	NO	REMARKS
1. Features:			
a. Layout of existing & planned facilities & features.	(x)	()	_____
b. Wind rose & coverage analysis.			
c. Basic airport & runway data tables.	(x)	()	<u>Shown on Cover Sheet. Data used is from Spokane, WA</u>
d. Legend & building tables.	(x)	()	_____
e. Title & revision blocks.	(x)	()	_____
f. Sponsor approval block.	(x)	()	_____
g. List of approved modifications to FAA airport design standards (with dates), including proposed & planned modification to standards expected to be approved as part of the ALP review & approval process.	()	(x)	<u>No mods to standards</u>
h. List of non-standard conditions & proposed disposition on them.	(x)	()	_____

	YES	NO	REMARKS
2. Preparation guidelines:			
a. Sheet size, recommend 22" x 34".	(x)	()	_____
b. Scale, recommend between 1"=200' & 1"=600':			
(1) Show graphic scale.	(x)	()	_____
(2) Metric conversion table, (optional per Appendix 6, AC 150/5300-13, Airport Design).	()	(x)	Not applicable. _____
c. North arrow.			
(1) True.	(x)	()	_____
(2) Magnetic & year of mag. declin.	(x)	()	_____
(3) North to top or left of drawing.	()	(x)	_____
d. Wind rose. Explain below in Remarks for Data source if wind data not available for ALP wind rose.			
(1) Data source (weather station) & time period covered.	(x)	()	_____
(2) Individual & combined coverage, see paragraph 203b of AC 150/5300-13, Airport Design, for info on wind conditions.			
(a). Rwy's with 10.5 knots crosswind.	(x)	()	_____
(b). Rwy's with 13 knots crosswind.	(x)	()	_____
(c). Rwy's with 16 knots crosswind.	(x)	()	_____
(d). Rwy's with 20 knots crosswind.	(x)	()	_____
(e). IFR windrose.	(x)	()	_____
e. Airport reference point (ARP).			
(1). Existing (nearest sec/NAD 83).	(x)	()	_____
(2). Ultimate (nearest sec/NAD 83).	(x)	()	_____
f. Topo info. Ground contours at intervals of 2' to 10', lightly drawn. Show any principle drainage features.	(x)	()	_____

	YES	NO	REMARKS
g. Elevations.			
(1). Runways. Indicate at existing & ultimate ends, displaced thresholds, touchdown zones, rwy intersections, high & low points to nearest 1/10".	(x)	()	_____
(2). Structures on airport. If terminal area plan drawing is not to be included, show top elevations by using building table & numbering system.	(x)	()	<u>Estimated values</u>
h. Building restriction line (BRL) & runway visibility zone.	(x)	()	_____
i. Runway details (existing/planned):			
(1). Dimensions (width & length).	(x)	()	_____
(2). Orientation:			
(a). True bearing to nearest 0.01 degree.	(x)	()	_____
(b). Show rwy end numbers.	(x)	()	_____
(3). Lighting (threshold lights).	(x)	()	_____
(4). Marking.	(x)	()	_____
(5). Show stage lengths if new rwy or rwy extension will be developed in stages.	()	(x)	<u>Not applicable</u>
(6). Indicate surveyed existing end coordinates (to nearest 0.01 second, NAD 83) & elevations (to nearest 1/10").	(x)	()	_____
(7). Monuments (show location of all survey monuments & reference markers. Include note on how monuments are protected).	()	(x)	<u>Not available</u>
(8). Declared distances for each runway direction. Identify any clearway/stopway portions in the declared distances & any rwy portions not included in the declared distances. Depict appropriate details in separate drawing, if needed.	()	(x)	<u>Not applicable</u>
(9). Any displaced thresholds.	()	(x)	_____

	YES	NO	REMARKS
(10). Any relocated thresholds.	()	(x)	Not applicable
(11). Any clearways.	()	(x)	
(12). Any stopways.	()	(x)	
(13). Separation dimensions from BRL and any parallel rwys.	(x)	()	
j. Object free areas (OFAs).	(x)	()	
k. Runway safety areas (RSAs).	(x)	()	
l. Obstacle free zones (OFZs).	(x)	()	
m. Threshold siting surface may be depicted with dimensions to facilitate identifying object penetrations. Print "No threshold siting surface object penetrations" when no object penetrates the threshold siting surface. Otherwise, identify the object, show the amount of object penetrations, & indicate in a note how they will be eliminated.	(x)	()	Threshold siting surface shown on plan and profile sheet. Note included on ALP sheet
n. Runway protection zone (RPZ) details per paragraph 212, Table 2-4, & Figure 2-3 of AC 150/5300-13, Airport Design.			
(1). Depict size with dimensions.	(x)	()	
(2). Airport interest in RPZ (fee, easement, or non-airport). Indicate by note with arrow to each RPZ or with appropriate legend symbol.	(x)	()	
(3). For each RPZ, indicate in a note the approach visibility minimums & aircraft served (i.e., small aircraft, aircraft approach Cat A & B, aircraft approach Cat C & D, or all aircraft).	(x)	()	
(4). Land uses in RPZ. Show any residences & places of public assembly & indicate by note how they will be removed. Depict any roads, railroads, or waterways.	(x)	()	
o. Holding position signs & markings. Show distance from rwy centerline.	(x)	()	
p. Taxiway details (existing/planned).			
(1). Dimensions (width & length).	(x)	()	

	YES	NO	REMARKS
(2). Separation dimensions parallel runways and taxiways	(x)	()	_____
(3). Clearance dimensions to objects, including aircraft parking areas.	(x)	()	_____
q. Apron details (existing/planned).			
(1). Dimensions (width & length).	(x)	()	_____
(2). Aircraft parking arrangement.	(x)	()	_____
(3). Any taxilanes.	(x)	()	_____
r. Nav aids & landing light systems (existing/planned).			
(1). Location & type.	(x)	()	_____
(2). Critical areas outlined with dimensions.	(x)	(x)	_____
s. Terminal area (existing/planned).			
(1). Show & identify all main structures. Also show & identify by using building table & numbering system if no terminal area plan drawing.	(x)	()	_____
(2). Hangar areas & related taxiways.	(x)	()	_____
(3). Auto parking & entrance roads.	(x)	()	_____
t. Wind cone/tee & segmented circle.	(x)	()	_____
u. Any weather equipment (e.g., ASOS including related critical areas).	(x)	()	_____
v. Airport service roads.	()	(x)	_____
w. Airport fencing.	(x)	()	_____
x. Airport property lines & easements (existing/planned).	(x)	()	_____
y. Airport data table (existing/ultimate).			
(1). Airport elevation (nearest 1/10').	(x)	()	_____
(2). Airport reference point, latitude & longitude, nearest sec/NAD 83.	(x)	()	_____
(3). Mean daily max temperature.	(x)	()	_____
(4). Combined wind coverage, VFR/IFR (%).	(x)	()	Data shown on Cover Sheet
(5). Airport magnetic variation & date.	(x)	()	_____

	YES	NO	REMARKS
(6). Airport reference code (ARC) for most demanding aircraft accommodated at the airport.	(x)	()	_____
(7). NPIAS service level (GA, RL, CS, or PCS).	(x)	()	_____
(8). Taxiway lighting.	(x)	()	_____
(9). Taxiway marking.	(x)	()	_____
(10). Airport & terminal nav aids.	(x)	()	_____
(11). Others (indicate in Remarks).	()	(x)	_____
z. Runway data table for each runway end (existing/ultimate).			
(1). Approach visibility minimums. (Include designated or planned. Indicate V, 1 mile, 3/4 mile, 1/2 mile, CAT II, or CAT III).	(x)	()	_____
(2). FAR Part 77 approach slope.	(x)	()	_____
(3). Dimensions (width & length).	(x)	()	_____
(4). Pavement type.	(x)	()	_____
(5). Pavement design strength.	(x)	()	_____
(6). Lighting.	(x)	()	_____
(7). Marking.	(x)	()	_____
(8). Percent gradient.	(x)	()	_____
(9). Max grade within rwy length.	()	(x)	Not in scope
(10). Line of sight requirements.	(x)	()	_____
(11). Percent wind coverage.	(x)	()	Shown on Cover Sheet
(12). Visual approach aids (e.g., VASI, REIL, etc.).	(x)	()	_____
(13). Instrument approach aids (e.g., ILS, localizer, etc.).	()	(x)	Not Applicable
(14). Airport reference code (ARC) for the runway.	(x)	()	_____
(15). Identify the critical aircraft. If more than one critical aircraft involved, then identify further as follows:	(x)	()	_____
(a). Critical aircraft by wingspan.	(x)	()	Only one critical a/c

III. Airport Airspace Drawing.

	YES	NO	REMARKS
1. Includes:			
a. Plan view of FAR Part 77 Subpart C surfaces based on <u>ultimate</u> runway lengths.	(x)	()	_____
b. Profile views of FAR Part 77 Subpart C approaches (existing/ultimate).	()	(x)	Shown on plan/profile sheet (sheet 4) _____
c. Obstruction data tables, as appropriate.	(x)	()	_____
2. Preparation guidelines:			
a. Sheet size, recommend same as ALP drawing.	(x)	()	_____
b. Scale, recommend 1"=2000' for plan view. 1"=1000' (horizontal) & 1"=100' (vertical) for approach profiles.	(x)	()	Plan view scale is 1"=1000' _____
c. Title & revision blocks (same format as ALP drawing).	(x)	()	_____
d. Plan view details.			
(1). Use current USGS 7 1/2 minute Quad for base map when available (highlight lat. & long. grid tick marks on map for plotting purposes). Show area under all applicable FAR Part 77 airport imaginary surfaces.	(x)	()	_____
(2). Show rwy end numbers.	(x)	()	_____
(3). 50' elevation contours on all sloping imaginary surfaces.	(x)	()	_____
(4). When horizontal &/or conical surfaces overlap the approach surface, show the most demanding one with solid lines, the others with dashed lines.	(x)	()	_____

	YES	NO	REMARKS
(5). Show objects by number & give top elevations of any of them that are obstructions. Add note referring to inner portion of the approach surface drawing for details on any close-in approach obstructions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Top elevations are shown in data table</u>
(6). For precision instrument approaches, show entire 50,000' approach surface (may show outer portions on separate sheet).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>No PIR</u>
(7). Include a note on any height or slope protected by local zoning ordinance.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>Zoning does not include any height restrictions; a note has been added to state this</u>
(8). Identify land uses in the FAR Part 77 area, especially those incompatible with normal airport operations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>See land use plan</u>
(9). RPZ based on ultimate runway lengths.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>_____</u>
(10). Airport property lines & easements (existing/ultimate).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<u>See land use plan</u>
e. Approach profile details.			
(1). Depict ground profile representing the <u>composite</u> profile based on highest terrain across width & along length of the approach surface.	<input type="checkbox"/>	<input type="checkbox"/>	<u>All approach profile details are shown on the approach plan and profile sheet. Refer to section IV.</u>
(2). Show all obstructions by number plus any other significant objects within the approach surfaces with their top elevations.	<input type="checkbox"/>	<input type="checkbox"/>	<u>See note in e. (1)</u>
(3). Show existing & ultimate rwy ends & FAR Part 77 approach surfaces.	<input type="checkbox"/>	<input type="checkbox"/>	<u>See note in e. (1)</u>
(4). Depict threshold siting surface slope for threshold siting requirements per Appendix 2 of AC 150/5300-13, Airport Design, if applicable.	<input type="checkbox"/>	<input type="checkbox"/>	<u>See note in e. (1)</u>

	YES	NO	REMARKS
f. Show profile of entire runway if space available on sheet. As minimum, show end elevations & high/low points (to nearest 1/10').	()	()	See note in e. (1) _____
g. Obstruction data tables details.			
(1). List all obstructions shown in the plan & profile views.	(x)	()	_____
(2). Identify obstructions by numbers used in plan & profile views & provide description, amount of FAR Part 77 Subpart C surface penetrations (indicate which surface involved, such as horizontal, conical, primary, etc.), & proposed disposition of the obstruction, including no action.	(x)	()	_____
(3). If there are any close-in obstructions in the approach areas, include a note referring to the obstruction tables on the inner portion of the approach surface drawing.	(x)	()	_____

IV. Inner Portion of the Approach Surface Drawing.

	YES	NO	REMARKS
1. Includes:			
a. Large scale plan view of the existing & ultimate inner portion of the approach area for each runway end. Usually limited to the area out to where the approach surface reaches 100' height above the rwy end.	(x)	()	_____
b. Profile view of the existing & ultimate inner portion of the approach area for each runway end.	(x)	()	_____
c. Obstruction tables for the existing & ultimate inner portion of the approach area for each runway end.	(x)	()	_____

	YES	NO	REMARKS
2. Preparation Guidelines:			
a. Sheet size, recommend same as ALP drawing.	(x)	()	_____
b. Scale, recommend horizontal 1"=200' & vertical 1"=20'.	(x)	()	_____
c. Title & revision blocks (same format as ALP drawing).	(x)	()	_____
d. Plan view details.			
(1). Aerial photos for base maps when available.	(x)	()	_____
(2). Show obstructions. Also, use numbering system & describe in table.	(x)	()	_____
(3). Depict airport property lines in area.	(x)	()	_____
(4). Show elevations & clearances for any roads, railroads, & waterways at the approach surface edges & extended rwy centerline. Number these points & key them to profile view & obstruction table, as appropriate.	(x)	()	_____
(5). Depict ends of runways, stopways, clearways, safety areas, & object free areas (existing/ultimate).	(x)	()	_____
(6). Show ground contours drawn lightly.	(x)	()	_____
(7). Show existing/ultimate approach & any departure RPZs.	(x)	()	Departure RPZs not applicable -- no declared distances
(8). Indicate existing/ultimate FAR Part 77 approach slopes.	(x)	()	_____
e. Profile view details.			
(1). Depict the ground profile representing the <u>composite</u> profile based on the highest terrain across the width & along the length of the inner portion of the approach surface. Also, show significant features regardless of whether they are obstructions (e.g., fences, stream beds, etc.).	(x)	()	_____

	YES	NO	REMARKS
(2). Identify obstructions with numbers used on plan view & keyed to obstruction table.	(x)	()	_____
(3). Depict cross-section of any roads, railroads, & waterways where they intersect outer edges of approach surface.	(x)	()	_____
(4). Show existing & ultimate FAR Part 77 approach slope.	(x)	()	_____
(5). Depict threshold siting surface slope for threshold siting requirements per Appendix 2 of AC 150/5300-13, Airport Design, if applicable.	(x)	()	_____
f. Obstruction table details			
(1). Separate table for each existing & ultimate approach surface. Specify type & slope of FAR Part 77 approach surface.	(x)	()	_____
(2). Identify obstructions by numbers used in plan & profile views & provide description, amount of approach surface penetration, & proposed disposition of the obstructions, including no action.	(x)	()	_____

VI. Land Use Drawing.

	YES	NO	REMARKS
1. Drawing depicts existing & recommended land uses within and outside the existing & ultimate airport property. Off airport land uses should be shown to at least the outer boundary of the 65 DNL area. Land uses should be depicted by general use categories (e.g., agricultural, recreational, industrial, commercial, etc.).	(x)	()	Noise contours not included in scope of work _____
2. Provides plan for leasing revenue producing areas on the airport, for guidance on compatible land uses in close proximity to runways, for line of sight between rwy ends & within rwy visibility zones, & for guidance to local authorities for establishing appropriate zoning in the airport environs.	(x)	()	_____

	YES	NO	REMARKS
3. Preparation guidelines:			
a. Sheet size, recommend same as ALP drawing.	(x)	()	_____
b. Scale, recommend same as ALP drawing.	(x)	()	_____
c. Title and revision blocks (same format as ALP drawing).	(x)	()	_____
d. Base map. Aerial photo when available.	(x)	()	_____
e. Legend. Use standard drafting symbols to show existing & recommended land uses by general category. Use notes to identify the existing and recommended land uses.	(x)	()	_____
f. Public facilities & other uses in the airport environs.			
(1). Indicate all major existing & recommended land uses.	(x)	()	_____
(2). Depict the location of all public facilities (e.g., schools, hospitals, parks, etc.).	(x)	()	_____
(3). Show governmental jurisdictional boundaries.	()	(x)	Jurisdictional boundaries are not within view on this aerial photo.
(4). Indicate established flight tracks.	()	(x)	Not part of scope
(5). Show current noise contours, if available (give date of data used for the contours).	()	(x)	Not part of scope
g. Airport drawing details.			
(1). Normally limited to the primary existing and future airport features (rwys, txys, aprons, RPZs, terminal bldgs, & nav aids).	(x)	()	_____
(2). Show enough details to determine aeronautical areas versus non-aeronautical areas & to determine limit lines for areas to be kept in grass or limited to low growing crops.	(x)	()	_____
h. Show in the drawing and/or describe in airport drawing details.			

	YES	NO	REMARKS
<p>2. Definition: The Exhibit "A" is a document unique to the AIP. It should not be confused with a Property Plan or Plot Plan. As a minimum, the Exhibit "A" must show the current airport boundary compiled from deed research, available mapping/surveys, & field verification, as required. Physical survey of boundaries is generally not required. In those instances where field survey may be considered necessary, the property line & runways should be tied to the State grid system. Requests for participation in field surveys will be considered on a case by case basis. Standards for precision & accuracy would be part of this review. All of above has been considered.</p>	()	()	_____
<p>3. General preparation guidelines:</p> <p style="margin-left: 20px;">a. Recommend sheet size same as ALP drawing. This drawing must be on a separate sheet.</p> <p style="margin-left: 20px;">b. Title & revision blocks (same format as ALP drawing). Clearly label as <u>Exhibit "A"</u> Airport Property Map.</p> <p style="margin-left: 20px;">c. Legend. Use standard drafting symbols.</p>	()	()	_____
<p style="margin-left: 20px;">b. Title & revision blocks (same format as ALP drawing). Clearly label as <u>Exhibit "A"</u> Airport Property Map.</p>	()	()	_____
<p style="margin-left: 20px;">c. Legend. Use standard drafting symbols.</p>	()	()	_____
<p>4. Specific Exhibit "A" required items:</p> <p style="margin-left: 20px;">a. A clear identification of the outside airport property boundary.</p> <p style="margin-left: 20px;">b. Each parcel making up the entire airport must be shown & numbered. In addition, parcels which were once airport property must also be shown. Leased areas should not be shown.</p> <p style="margin-left: 20px;">c. Both fee & easement interests must be shown & separately designated.</p> <p style="margin-left: 20px;">d. Delineate runways, taxiways, RPZs, RSAs, OFAs, aprons, BRLs, terminal buildings, & nav aids (existing/planned).</p>	()	()	_____
<p style="margin-left: 20px;">b. Each parcel making up the entire airport must be shown & numbered. In addition, parcels which were once airport property must also be shown. Leased areas should not be shown.</p>	()	()	_____
<p style="margin-left: 20px;">c. Both fee & easement interests must be shown & separately designated.</p>	()	()	_____
<p style="margin-left: 20px;">d. Delineate runways, taxiways, RPZs, RSAs, OFAs, aprons, BRLs, terminal buildings, & nav aids (existing/planned).</p>	()	()	_____

	YES	NO	REMARKS
e. Magnetic & true north arrows.	()	()	_____
f. Each line type which identifies airport boundary, parcel boundary, RPZs, BRLs, easements, etc. must be clearly shown in the legend.	()	()	_____
g. The plan view with related data table and/or notes must show an inventory of all parcels by number, including the grantor, grantee, type of interest, acreage, book & page, & date of recording. They must also show FAA project number if acquired under a grant; PFC application number if acquired with Passenger Facility Charges; Surplus Property Transfer or AP-4 Agreement if applicable; type of easement (clearing, aviation, utility, right of way, etc.); and if released, date of FAA approval.	()	()	_____
h. The purpose of acquisition if acquired under a Federal grant (approach protection, aeronautical, noise compatibility, current or future development) based on the grant description must be indicated plus any special conditions.	()	()	_____
i. If the Exhibit "A" is being prepared for submittal as part of a land acquisition project, the parcels being acquired must also be shown.	()	()	_____
j. The Exhibit "A" must be drawn to scale, all information must be on one sheet if possible, & should be no larger than the ALP drawing sheet size & be legible. There should be an index sheet if the Exhibit "A" involves several sheets for the larger airports.	()	()	_____
k. The Exhibit "A" must be dated & amended whenever there is a change to any airport property.	()	()	_____

	YES	NO	REMARKS
i. There should be sufficient descriptive data (i.e., section, township & range, lot & block, metes & bounds) to enable accurate location of current & future parcels on the drawing.	()	()	_____
m. Points of reference for tracing parcels from a deed description by scaling should be shown. As new parcels are acquired, the Exhibit "A" should add their associated bearings & lengths to enable quick confirmation of the parcel's location.	()	()	_____
n. Perimeter fencing, only if it does not obscure airport boundary lines.	()	()	_____

References:

The ALP checklist above is based primarily on Appendix 7 of AC 150/5300-13, Airport Design, including changes 1 through 5. Change 5 is dated 2/14/97. Appendix 7 covers ALP components and preparation. The Airport Property Map (Exhibit "A") component of the ALP checklist is based primarily on AC 150/5100-17, Land Acquisition And Relocation Assistance For Airport Improvement Program Assisted Projects, dated 3/29/96.

Appendix F

FAA Forecast Worksheets

Template for Summarizing and Documenting Airport Planning Forecasts

Odessa Municipal Airport

AIRPORT NAME: Odessa Municipal Airport

A. Forecast Levels and Growth Rates
Specify base year: 2004

	Average Annual Compound Growth Rates				
	<u>Base Yr. Level</u> <u>(2004)</u>	<u>Base Yr. + 1Yr.</u> <u>(2005)</u>	<u>Base Yr. + 5Yrs.</u> <u>(2009)</u>	<u>Base Yr. + 10Yrs.</u> <u>(2014)</u>	<u>Base Yr. + 15Yrs.</u> <u>(2019)</u>
Passenger Enplanements					
Air Carrier	0	0	0	0	0
Commuter	0	0	0	0	0
TOTAL	0	0	0	0	0

	Average Annual Compound Growth Rates				
	<u>Base Yr. to +1</u>	<u>Base Yr. to +5</u>	<u>Base Yr. to +10</u>	<u>Base Yr. to +15</u>	
Air Carrier	NA	NA	NA	NA	
Commuter	NA	NA	NA	NA	
TOTAL	NA	NA	NA	NA	

	Average Annual Compound Growth Rates				
	<u>Base Yr. to +1</u>	<u>Base Yr. to +5</u>	<u>Base Yr. to +10</u>	<u>Base Yr. to +15</u>	
Operations					
<u>Itinerant</u>					
Air carrier	0	0	0	0	
Commuter/air taxi	0	0	0	0	
Total Commercial Operations	0	0	0	0	
General aviation	2,700	2,708	2,722	2,913	
Military	0	0	0	0	
<u>Local</u>					
General aviation	5,500	5,517	5,525	5,915	
Military	0	0	0	0	
TOTAL OPERATIONS	8,200	8,225	8,247	8,828	

	Average Annual Compound Growth Rates				
	<u>Base Yr. to +1</u>	<u>Base Yr. to +5</u>	<u>Base Yr. to +10</u>	<u>Base Yr. to +15</u>	
Instrument Operations	0.3%	0.1%	0.7%	0.6%	
Peak Hour Operations	NA	NA	NA	NA	
Cargo/mail (enplaned+deplaned tons)	0.3%	0.1%	0.7%	0.6%	

	Average Annual Compound Growth Rates				
	<u>Base Yr. to +1</u>	<u>Base Yr. to +5</u>	<u>Base Yr. to +10</u>	<u>Base Yr. to +15</u>	
Based Aircraft					
Single Engine (Nonjet)	12	12	12	13	
Multi Engine (Nonjet)	0	0	0	0	
Jet Engine	0	0	0	0	
Helicopter	0	0	0	0	
Other	0	0	0	0	
TOTAL	12	12	12	13	

	Average Annual Compound Growth Rates				
	<u>Base Yr. to +1</u>	<u>Base Yr. to +5</u>	<u>Base Yr. to +10</u>	<u>Base Yr. to +15</u>	
0.0%	0.0%	0.8%	0.5%		
0.0%	0.0%	0.0%	0.0%		
NA	NA	NA	NA		
0.0%	0.0%	0.0%	0.0%		
0.0%	0.0%	0.0%	0.0%		
0.0%	0.0%	0.8%	0.5%		

	Average Annual Compound Growth Rates				
	<u>Base Yr. to +1</u>	<u>Base Yr. to +5</u>	<u>Base Yr. to +10</u>	<u>Base Yr. to +15</u>	
Average aircraft size (seats)	NA	NA	NA	NA	
Air carrier	NA	NA	NA	NA	
Commuter	NA	NA	NA	NA	
Average enplaning load factor	NA	NA	NA	NA	
Air carrier	NA	NA	NA	NA	
Commuter	NA	NA	NA	NA	
GA operations per based aircraft	683	685	687	692	

NOTE: Right hand side of worksheet has embedded formulas for average annual compound growth rate calculations.

B. Operational Factors

Note: Show base plus one year if forecast was done.
If planning effort did not include all forecast years shown interpolate years as needed, using average annual compound growth rates.

Template for Comparing Airport Planning and TAF Forecasts

Odessa Municipal Airport

AIRPORT NAME: Odessa Municipal Airport

		Airport	TAF	AF/TAF (% Difference)
	<u>Year</u>	<u>Forecast</u>	<u>TAF</u>	<u>(% Difference)</u>
Passenger Enplanements				
Base yr.	2004	N/A	N/A	N/A
Base yr. + 5yrs.	2009	N/A	N/A	N/A
Base yr. + 10yrs.	2014	N/A	N/A	N/A
Base yr. + 15yrs.	2019	N/A	N/A	N/A
Commercial Operations				
Base yr.	2004	N/A	N/A	N/A
Base yr. + 5yrs.	2009	N/A	N/A	N/A
Base yr. + 10yrs.	2014	N/A	N/A	N/A
Base yr. + 15yrs.	2019	N/A	N/A	N/A
Total Operations				
Base yr.	2004	8,200	8,200	0.0%
Base yr. + 5yrs.	2009	8,247	8,200	0.6%
Base yr. + 10yrs.	2014	8,828	8,200	7.7%
Base yr. + 15yrs.	2019	9,000	8,200	9.8%

NOTES: TAF data is on a U.S. Government fiscal year basis (October through September).
AF/TAF (% Difference) column has embedded formulas.