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Appendix A

OAR 660-013

Airport Planning

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**The Oregon Administrative Rules contain OARs filed
through August 15, 2002**

LAND CONSERVATION AND DEVELOPMENT DEPARTMENT

DIVISION 13

AIRPORT PLANNING

660-013-0010

Purpose and Policy

- (1) This division implements ORS 836.600 through 836.630 and Statewide Planning Goal 12 (Transportation). The policy of the State of Oregon is to encourage and support the continued operation and vitality of Oregon's airports. These rules are intended to promote a convenient and economic system of airports in the state and for land use planning to reduce risks to aircraft operations and nearby land uses.
- (2) Ensuring the vitality and continued operation of Oregon's system of airports is linked to the vitality of the local economy where the airports are located. This division recognizes the interdependence between transportation systems and the communities on which they depend.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.635 & 1997 OL, Ch. 859

Hist.: LCDDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0020

Definitions

For purposes of this division, the definitions in ORS Chapter 197 apply unless the context requires otherwise. In addition, the following definitions apply:

- (1) "Airport" means the strip of land used for taking off and landing aircraft, together with all adjacent land used in connection with the aircraft landing or taking off from the strip of land, including but not limited to land used for existing airport uses.
- (2) "Aircraft" means helicopters and airplanes, but not hot air balloons or ultralights.
- (3) "Airport Uses" means those uses described in OAR 660-013-0100.
- (4) "Non Towered Airport" means an airport without an existing or approved control tower on June 5, 1995.
- (5) "Public Assembly Uses" means a structure or outdoor facility where concentrations of people gather for purposes such as deliberation, education, worship, shopping, business, entertainment, amusement, sporting events, or similar activities, excluding air shows. Public Assembly Uses does not include places where people congregate for short periods of time such as parking lots and bus stops or uses approved by the FAA in an adopted airport master plan.

- (6) "Sponsor" means the owner, manager, other person, or entity designated to represent the interests of an airport.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.635 & 1997 OL, Ch. 859

Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0030

Preparation and Coordination of Aviation Plans

- (1) The Oregon Department of Transportation (ODOT) shall prepare and adopt a state Aviation System Plan (state ASP) as part of the State Transportation System Plan in accordance with ORS 184.618 and the State Agency Coordination Program approved under ORS 197.180. ODOT shall coordinate the preparation, adoption, and amendment of land use planning elements of the state ASP with local governments and airport sponsors. The purpose of the state ASP is to provide state policy guidance and a framework for planning and operation of a convenient and economic system of airports, and for land use planning to reduce risks to aircraft operations and nearby land uses. The state ASP shall encourage and support the continued operation and vitality of Oregon's airports.
- (2) A city or county with planning authority for one or more airports, or areas within safety zones or compatibility zones described in this division, shall adopt comprehensive plan and land use regulations for airports consistent with the requirements of this division and ORS 836.600 through 836.630. Local comprehensive plan and land use regulation requirements shall be coordinated with acknowledged transportation system plans for the city, county, and Metropolitan Planning Organization (MPO) required by OAR 660, Division 12. Local comprehensive plan and land use regulation requirements shall be consistent with adopted elements of the state ASP and shall be coordinated with affected state and federal agencies, local governments, airport sponsors, and special districts. If a state ASP has not yet been adopted, the city or county shall coordinate the preparation of the local comprehensive plan and land use regulation requirements with ODOT. Local comprehensive plan and land use regulation requirements shall encourage and support the continued operation and vitality of airports consistent with the requirements of ORS 836.600 through 836.630.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0040

Aviation Facility Planning Requirements

A local government shall adopt comprehensive plan and land use regulation requirements for each state or local aviation facility subject to the requirements of ORS 836.610(1). Planning requirements for airports identified in ORS 836.610(1) shall include:

- (1) A map, adopted by the local government, showing the location of the airport boundary. The airport boundary shall include the following areas, but does not necessarily include all land within the airport ownership:

- (a) Existing and planned runways, taxiways, aircraft storage (excluding aircraft storage accessory to residential airpark type development), maintenance, sales, and repair facilities;
 - (b) Areas needed for existing and planned airport operations; and
 - (c) Areas at non-towered airports needed for existing and planned airport uses that:
 - (A) Require a location on or adjacent to the airport property;
 - (B) Are compatible with existing and planned land uses surrounding the airport; and
 - (C) Are otherwise consistent with provisions of the acknowledged comprehensive plan, land use regulations, and any applicable statewide planning goals.
 - (d) "Compatible," as used in this rule, is not intended as an absolute term meaning no interference or adverse impacts of any type with surrounding land uses.
- (2) A map or description of the location of existing and planned runways, taxiways, aprons, tiedown areas, and navigational aids;
 - (3) A map or description of the general location of existing and planned buildings and facilities;
 - (4) A projection of aeronautical facility and service needs;
 - (5) Provisions for airport uses not currently located at the airport or expansion of existing airport uses:
 - (a) Based on the projected needs for such uses over the planning period;
 - (b) Based on economic and use forecasts supported by market data;
 - (c) When such uses can be supported by adequate types and levels of public facilities and services and transportation facilities or systems authorized by applicable statewide planning goals;
 - (d) When such uses can be sited in a manner that does not create a hazard for aircraft operations; and
 - (e) When the uses can be sited in a manner that is:
 - (A) Compatible with existing and planned land uses surrounding the airport; and
 - (B) Consistent with applicable provisions of the acknowledged comprehensive plan, land use regulations, and any applicable statewide planning goals.
 - (6) When compatibility issues arise, the decision maker shall take reasonable steps to eliminate or minimize the incompatibility through location, design, or conditions. A decision on compatibility pursuant to this rule shall further the policy in ORS 836.600.

- (7) A description of the types and levels of public facilities and services necessary to support development located at or planned for the airport including transportation facilities and services. Provision of public facilities and services and transportation facilities or systems shall be consistent with applicable state and local planning requirements.
- (8) Maps delineating the location of safety zones, compatibility zones, and existing noise impact boundaries that are identified pursuant to OAR 340, Division 35.
- (9) Local government shall request the airport sponsor to provide the economic and use forecast information required by this rule. The economic and use forecast information submitted by the sponsor shall be subject to local government review, modification and approval as part of the planning process outlined in this rule. Where the sponsor declines to provide such information, the local government may limit the airport boundary to areas currently devoted to airport uses described in OAR 660-013-0100.

Stat. Auth.: ORS 183 & 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0050

Implementation of Local Airport Planning

A local government with planning responsibility for one or more airports or areas within safety zones or compatibility zones described in this division or subject to requirements identified in ORS 836.608 shall adopt land use regulations to carry out the requirements of this division, or applicable requirements of ORS 836.608, consistent with the applicable elements of the adopted state ASP and applicable statewide planning requirements.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0070

Local Government Safety Zones for Imaginary Surfaces

- (1) A local government shall adopt an Airport Safety Overlay Zone to promote aviation safety by prohibiting structures, trees, and other objects of natural growth from penetrating airport imaginary surfaces.
 - (a) The overlay zone for public use airports shall be based on **Exhibit 1** (See page A-13) incorporated herein by reference.
 - (b) The overlay zone for airports described in ORS 836.608(2) shall be based on **Exhibit 2** (See page A-17) incorporated herein by reference.
 - (c) The overlay zone for heliports shall be based on **Exhibit 3** (See page A-19) incorporated herein by reference.
- (2) For areas in the safety overlay zone, but outside the approach and transition surface, where the terrain is at higher elevations than the airport runway surface such that existing structures and planned development

exceed the height requirements of this rule, a local government may authorize structures up to 35 feet in height. A local government may adopt other height exceptions or approve a height variance when supported by the airport sponsor, ODOT Aeronautics Division, and the FAA.

Stat. Auth.: ORS 183

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0080

Local Government Land Use Compatibility Requirements For Public Use Airports

- (1) A local government shall adopt airport compatibility requirements for each public use airport identified in ORS 836.610(1). The requirements shall:
 - (a) Prohibit new residential development and public assembly uses within the Runway Protection Zone (RPZ) identified in **Exhibit 4** (See page A-21);
 - (b) Limit the establishment of uses identified in Exhibit 5 within a noise impact boundary that has been identified pursuant to OAR 340, Division 35 consistent with the levels identified in **Exhibit 5** (See page A-23);
 - (c) Prohibit the siting of new industrial uses and the expansion of existing industrial uses where either, as a part of regular operations, would cause emissions of smoke, dust, or steam that would obscure visibility within airport approach corridors;
 - (d) Limit outdoor lighting for new industrial, commercial, or recreational uses or the expansion of such uses to prevent light from projecting directly onto an existing runway or taxiway or into existing airport approach corridors except where necessary for safe and convenient air travel;
 - (e) Coordinate the review of all radio, radiotelephone, and television transmission facilities and electrical transmission lines with ODOT Aeronautics Division;
 - (f) Regulate water impoundments consistent with the requirements of ORS 836.623(2) through (6); and
 - (g) Prohibit the establishment of new landfills near airports, consistent with Department of Environmental Quality (DEQ) rules.
- (2) A local government may adopt more stringent regulations than the minimum requirements in section (1)(a) through (e) and (g) based on the requirements of ORS 836.623(1)

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0100**Airport Uses at Non-Towered Airports**

Local government shall adopt land use regulations for areas within the airport boundary of non-towered airports identified in ORS 836.610(1) that authorize the following uses and activities:

- (1) Customary and usual aviation-related activities including but not limited to takeoffs, landings, aircraft hangars, tiedowns, construction and maintenance of airport facilities, fixed-base operator facilities, a residence for an airport caretaker or security officer, and other activities incidental to the normal operation of an airport. Residential, commercial, industrial, manufacturing, and other uses, except as provided in this rule, are not customary and usual aviation-related activities and may only be authorized pursuant to OAR 660-013-0110.
- (2) Emergency Medical Flight Services, including activities, aircraft, accessory structures, and other facilities necessary to support emergency transportation for medical purposes. "Emergency Medical Flight Services" does not include hospitals, medical offices, medical labs, medical equipment sales, and similar uses.
- (3) Law Enforcement and Firefighting Activities, including aircraft and ground based activities, facilities and accessory structures necessary to support federal, state or local law enforcement and land management agencies engaged in law enforcement or firefighting activities. These activities include transport of personnel, aerial observation, and transport of equipment, water, fire retardant and supplies.
- (4) Flight Instruction, including activities, facilities, and accessory structures located at airport sites that provide education and training directly related to aeronautical activities. "Flight Instruction" does not include schools for flight attendants, ticket agents, or similar personnel.
- (5) Aircraft Service, Maintenance and Training, including activities, facilities, and accessory structures provided to teach aircraft service and maintenance skills, maintain, service and repair aircraft and aircraft components, but not including activities, structures, and facilities for the manufacturing of aircraft for sale to the public or the manufacturing of aircraft related products for sale to the public. "Aircraft Service, Maintenance and Training" includes the construction of aircraft and aircraft components for personal use. The assembly of aircraft and aircraft components is allowed as part of servicing, maintaining, or repairing aircraft and aircraft components.
- (6) Aircraft Rental, including activities, facilities, and accessory structures that support the provision of aircraft for rent or lease to the public.
- (7) Aircraft Sales and the sale of aeronautic equipment and supplies, including activities, facilities, and accessory structures for the storage, display, demonstration and sale of aircraft and aeronautic equipment and supplies to the public.
- (8) Aeronautic Recreational and Sporting Activities, including activities, facilities and accessory structures at airports that support recreational use of aircraft and sporting activities that require the use of aircraft or other devices used and intended for use in flight. Aeronautic Recreation and

Sporting Activities on airport property shall be subject to approval of the airport sponsor. Aeronautic recreation and sporting activities include but are not limited to: fly-ins; glider flights; hot air ballooning; ultralight aircraft flights; displays of aircraft; aeronautic flight skills contests; gyrocopter flights; flights carrying parachutists; and parachute drops onto an airport. As used in this rule, parachuting and parachute drops includes all forms of skydiving. Parachuting businesses may be allowed only where they have secured approval to use a drop zone that is at least 10 contiguous acres. A local government may establish a larger size for the required drop zone where evidence of missed landings and dropped equipment supports the need for the larger area. The configuration of 10 acre minimum drop zone shall roughly approximate a square or circle and may contain structures, trees, or other obstacles if the remainder of the drop zone provides adequate areas for parachutists to safely land.

- (9) Crop Dusting Activities, including activities, facilities and structures accessory to crop dusting operations. These include, but are not limited to: aerial application of chemicals, seed, fertilizer, pesticide, defoliant and other activities and chemicals used in a commercial agricultural, forestry or rangeland management setting.
- (10) Agricultural and Forestry Activities, including activities, facilities and accessory structures that qualify as a "farm use" as defined in ORS 215.203 or "farming practice" as defined in ORS 30.930.
- (11) Air passenger and air freight services and facilities at public use airports at levels consistent with the classification and needs identified in the state ASP.

Stat. Auth.: ORS 183 & ORS 197
 Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859
 Hist.: LCDC 6 -1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0110

Other Uses Within the Airport Boundary

Notwithstanding the provisions of OAR 660-013-0100, a local government may authorize commercial, industrial, manufacturing and other uses in addition to those listed in OAR 660-013-0100 within the airport boundary where such uses are consistent with applicable provisions of the acknowledged comprehensive plan, statewide planning goals and LCDC administrative rules and where the uses do not create a safety hazard or otherwise limit approved airport uses.

Stat. Auth.: ORS 183 & ORS 197
 Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859
 Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0140

Safe Harbors

A "safe harbor" is a course of action that satisfies certain requirements of this division. Local governments may follow safe harbor requirements rather than addressing certain requirements in these rules. The following are considered to be "safe harbors":

- (1) Portions of existing acknowledged comprehensive plans, land use regulations, Airport Master Plans and Airport Layout Plans adopted or otherwise approved by the local government as mandatory standards or requirements shall be considered adequate to meet requirements of these rules for the subject areas of rule requirements addressed by such plans and elements, unless such provisions are contrary to provisions of ORS 836.600 through 836.630. To the extent these documents do not contain specific provisions related to requirements of this division, the documents can not be considered as a safe harbor. The adequacy of existing provisions shall be evaluated based on the specificity of the documents and relationship to requirements of these rules;
- (2) This division does not require elimination of existing or allowed airport related uses authorized by an acknowledged comprehensive plan and land use regulations; and
- (3) Notwithstanding the safe harbor provisions of this rule, land use regulations applicable to non-towered airports shall authorize airport uses required by this division.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0155

Planning Requirements for Small Airports

- (1) Airports described in ORS 836.608(2) shall be subject to the planning and zoning requirements described in ORS 836.608(2) through (6) and (8).
- (2) The provisions of OAR 660-013-0100 shall be used in conjunction with ORS 836.608 to determine appropriate types of uses authorized within airport boundaries for airports described in 836.608(2).
- (3) The provisions of OAR 660-013-0070(1)(b) shall be used to protect approach corridors at airports described in ORS 836.608(2).
- (4) Airport boundaries for airports described in ORS 836.608(2) shall be adopted by local government pursuant to the requirements in ORS 836.608(2).

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDD 3-1999, f. & cert. ef. 2-12-99

660-013-0160

Applicability

This division applies as follows:

- (1) Local government plans and land use regulations shall be updated to conform to this division at periodic review, except for provisions of Chapter 859, OR Laws 1997 that became effective on passage. Prior to the adoption of the list of airports required by ORS 836.610(3), a local government shall be required to include a periodic review work task to comply with this division. However, the periodic review work task shall not

begin prior to the Department of Transportation's adoption of the list of airports required by ORS 836.610(3). For airports affecting more than one local government, applicable requirements of this division shall be included in a coordinated work program developed for all affected local governments concurrent with the timing of periodic review for the jurisdiction with the most land area devoted to airport uses.

- (2) Amendments to plan and land use regulations may be accomplished through plan amendment requirements of ORS 197.610 to 197.625 in advance of periodic review where such amendments include coordination with and adoption by all local governments with responsibility for areas of the airport subject to the requirements of this division.
- (3) Compliance with the requirements of this division shall be deemed to satisfy the requirements of Statewide Planning Goal 12 (Transportation) and OAR 660, Division 12 related Airport Planning.
- (4) Uses authorized by this division shall comply with all applicable requirements of other laws.
- (5) Notwithstanding the provisions of OAR 660-013-0140 amendments to acknowledged comprehensive plans and land use regulations, including map amendments and zone changes, require full compliance with the provisions of this division, except where the requirements of the new regulation or designation are the same as the requirements they replace.

Stat. Auth.: ORS 183 & ORS 197

Stats. Implemented: ORS 836.600 - ORS 836.630 & 1997 OL, Ch. 859

Hist.: LCDC 6-1996, f. & cert. ef. 12-23-96; LCDD 3-1999, f. & cert. ef. 2-12-99

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Appendix A
OAR 660 Division 13
EXHIBITS

These attachments, as they apply to public use airports, are intended to reflect Federal Aviation (FAA) Regulations (FARS) and Design Standards, as amended. These attachments, as they apply to privately owned, private use airports, reflect State Standards.

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Exhibit #1 – Public Use Airport Overlay Zone

1. Airport Approach Zone means the land that underlies the approach surface, excluding the Runway Protection Zone.
2. Airport Imaginary Surfaces mean surfaces established with relation to the airport and to each runway based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of the runway shall be determined by the most precise approach existing or planned for that runway end.
3. Approach Surface means a 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 type of approach available or planned for that runway end.
 - a) The inner edge of the approach surface is the same width as the primary surface and it expands uniformly to a width of:
 - A) 1,250 feet for that end of a utility runway with only visual approaches.
 - B) 1,500 feet for that end of a runway other than a utility runway with only visual approaches.
 - C) 2,000 feet for that end of a utility runway with a non-precision instrument approach.
 - D) 3,500 feet for that end of a non-precision instrument runway other than utility, having visibility minimums greater than three-fourths statute mile.
 - E) 4,000 feet for that end of a non-precision instrument runway, other than utility, having a non-precision instrument approach with visibility minimums as low as three-fourths statute mile.
 - F) 16,000 feet for precision instrument runways.
 - b) The approach surface extends for a horizontal distance of:
 - A) 5,000 feet at a slope of 20 to 1 for all utility and visual runways.
 - B) 10,000 feet at a slope of 34 to 1 for all non-precision instrument runways other than utility.
 - C) 10,000 feet at a slope of 50 to 1 with an additional 40,000 feet at a slope of 40 to 1 for all precision instrument runways.
 - c) The outer width of an approach surface to an end of a runway will be that width prescribed in this subsection for the most precise approach existing or planned for that runway end.

4. Conical Surface means a surface extending outward and upward from the periphery of the horizontal surface at a slope of 20 to 1 for a horizontal distance of 4,000 feet.

5. Horizontal Surface means a horizontal plane 150 feet above the established airport elevation, the perimeter of which is constructed by swinging arcs of specified radii from the center of each end of the primary surface of each runway of each airport and connecting the adjacent arcs by lines tangent to those arcs. The radius of each arc is:
 - a) 5,000 feet for all runways designated as utility or visual.
 - b) 10,000 feet for all other runways.
 - c) The radius of the arc specified for each end of a runway will have the same arithmetical value. That value will be highest determined for either end of the runway. When a 5,000 foot arc is encompassed by tangents connecting two adjacent 10,000 foot arcs, the 5,000 foot arc shall be disregarded on the construction of the perimeter of the horizontal surface.

6. Primary Surface means a surface longitudinally centered on a runway. When the runway has a specially prepared hard surface, the primary surface extends 200 feet beyond the end of that runway, but when the runway has no specially prepared hard surface, or planned hard surface, the primary surface ends at the end of that runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface of a runway will be that width prescribed in this section for the most precise approach existing or planned for either end of the runway. The width of the primary surface is:
 - a) 250 feet for utility runways having only visual approaches.
 - b) 500 feet for utility runways having non-precision approaches
 - A) For other than utility runways the width is:
 - i) 500 feet for visual runways having only visual approaches,
 - ii) 500 feet for non-precision instrument runways having visibility minimums greater than three-fourths statute mile, and
 - iii) 1,000 feet for non-precision instrument runway having a non-precision instrument approach with visibility minimum as low as three-fourths of a statute mile, and for precision instrument runways.

7. Transitional Surface means those surfaces which extend upward and outward at 90 degree angles to the runway centerline and the runway centerline extended at a slope of seven (7) feet horizontally for each foot vertically from the sides of the primary and approach surfaces to the point of intersection with the horizontal and conical surfaces. Transitional surfaces for those portions of the precision approach surfaces, which project through

and beyond the limits of the conical surface, extend a distance of 5,000 feet measured horizontally from the edge of the approach surface and at a 90 degree angle to the extended runway centerline.

8. Non-Precision instrument runway means a runway having an existing instrument approach procedure utilizing air navigation facilities with only horizontal guidance, or area type navigation equipment, for which a straight-in non-precision instrument approach procedure has been approved, or planned, and for which no precision approach facilities are planned, or indicated on an FAA planning document.
9. Precision instrument runway means a runway having an existing instrument approach procedure utilizing an instrument approach procedure utilizing an Instrument Landing System (ILS), or a Precision Approach Radar (PAR). It also means a runway for which a precision approach system is planned and is so indicated by an FAA approved airport layout plan or any other FAA planning document.
10. Runway Protection Zone (RPZ) means an area off the runway end to enhance the protection of people and property on the ground. The dimensions of the RPZ for Public-use airports shall be as depicted in attachment #4 of these rules.
11. Utility runway means a runway that is constructed for and intended to be used by propeller driven aircraft of 12,500 maximum gross weight and less.
12. Visual runway means a runway intended solely for the operations of aircraft using visual approach procedures, with no straight-in instrument approach procedure and no instrument designation indicated on an FAA approved airport layout plan, or by any planning document submitted to the FAA by competent authority.

Exhibit #2 – Private Use Airport Overlay Zone

1. Airport Imaginary Surfaces mean surfaces established with relation to the airport and to each runway based on the category of each runway according to the type of approach available or planned for that runway. The slope and dimensions of the approach surface applied to each end of the runway shall be determined by the most precise approach existing or planned for that runway end.
2. Approach Surface means a 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 each runway. The inner edge of the approach surface is the same width as the primary surface and expands uniformly to a width of 450 feet for that end of a private use airport with only visual approaches. The approach surface extends for a horizontal distance of 2,500 feet at a slope of twenty to one.
3. Primary Surface means a surface longitudinally centered on a runway. The primary surface ends at each end of the runway. The elevation of any point on the primary surface is the same as the elevation of the nearest point on the runway centerline. The width of the primary surface is 200 feet for the Private Use airport runways.



DIM	ITEM	DIMENSIONAL STANDARDS IN FEET
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	200
B	APPROACH SURFACE WIDTH AT THE END	450
C	APPROACH SURFACE LENGTH	2500
D	APPROACH SLOPE	20:1

Exhibit #3 – Heliport Overlay Zone

1. Heliport means an area of land, water, or structure designated for the landing or take-off of helicopters or other rotorcraft.
2. Heliport Imaginary Surfaces means airport imaginary surfaces as they apply to heliports.
3. Heliport Approach Surface means the approach surface beginning at each end of the heliport primary surface and has the same width as the primary surface. The surface extends outward and upward for a horizontal distance of 4,000 feet where its width is 500 feet. The slope of the approach surface is 8 to 1 for civil heliports and 10 to 1 for military heliports.
4. Heliport Instrument Procedure Surfaces means the criteria for heliports set forth in the United States Standard for Terminal Instrument Procedures.
5. Heliport Primary Surface means the area of the primary surface that coincides in size and shape with the designated take-off and land area of a heliport. This surface is a horizontal plane at the established heliport elevation.
6. Heliport Transitional Surfaces means surfaces extending outward and upward from the lateral boundaries of the heliport primary surface and from the approach surfaces at a slope of 2 to 1 for a distance of 250 feet measured horizontally from the centerline of the primary and approach surfaces.

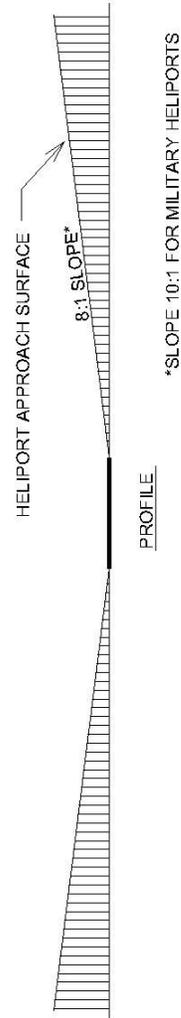
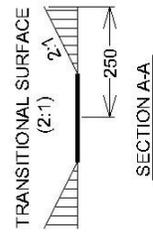
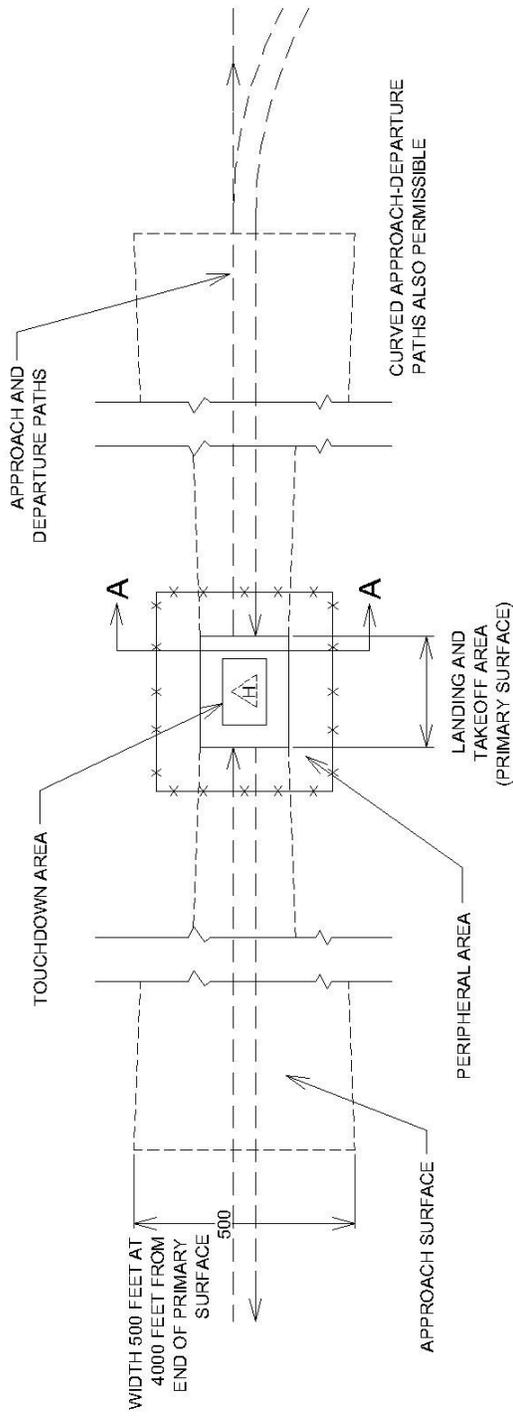
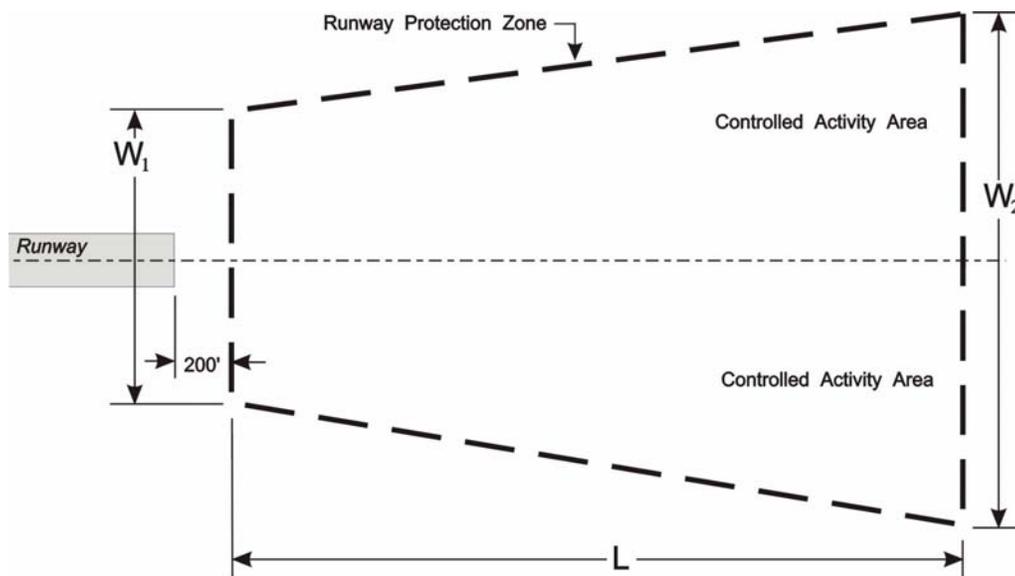


Exhibit #4 – Runway Protection Zone

Runway Protection Zone (RPZ) means an area off the runway end to enhance the protection of people and property on the ground. The Runway Protection Zone is trapezoidal in shape and centered about the extended runway centerline. The RPZ dimension for a particular runway end is a function of the type of aircraft and the approach visibility minimum associated for that runway end.

- a) The RPZ extends from each end of the primary surface, as defined in Attachment 1, Section 10, for a horizontal distance of:
 - A) 1,000 feet for all utility and visual runways.
 - B) 1,700 feet for all non-precision instrument runways other than utility.
 - C) 2,500 feet for all precision instrument runways.

Exhibit #4 - Runway Protection Zone and Dimension Requirements



Runway Protection Zone Dimension Requirements

Approach Visibility Minimums ¹	Facilities Expected to Serve	Dimensions			
		Length (L)	Inner Width (W ₁)	Outer Width (W ₂)	RPZ (acres)
Visual and Not lower than 1 Mile	Small Aircraft Exclusively	1,000	250	450	8.035
	Aircraft Approach Categories A & B	1,000	500	700	13.770
	Aircraft Approach Categories C & D	1,700	500	1,010	29.465
Not lower than ¼ Mile	All Aircraft	1,700	1,000	1,510	48.978
Lower than ¼ Mile	All Aircraft	2,500	1,000	1,750	78.914

All dimensions in feet unless otherwise noted.

Source: FAA Advisory Circular 150/5300-13, Airport Design

Note:

¹The RPZ dimensional standards are for the runway end with the specified approach visibility minimums. The departure RPZ dimensional standards are equal to or less than the approach RPZ dimensional standards. When a RPZ begins other than 200 feet beyond the runway end, separate approach and departure RPZs should be provided. Refer to appendix 14 of FAA Advisory Circular 150/5300-13, *Airport Design*, for approach and departure RPZs.

Exhibit #5 – Noise Compatibility						
<p>Legend: Y (Yes) - Land use and related structures compatible without restrictions N (No) - Land use and related structures are not compatible and should be prohibited NLR - Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure DNL - Average Day-Night Sound Level 25, 30, 35 - Land use and related structures generally compatible; measures to achieve NLR of 25, 30, 35 dB must be incorporated into design and construction of structure.</p>						
Land Use	Below 65	65-70	70-75	75-80	85-85	Over 85
Residential						
Residential, other than mobile homes and transient lodging	Y	N ⁽¹⁾	N ⁽¹⁾	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N ⁽¹⁾	N ⁽¹⁾	N ⁽¹⁾	N	N
Public						
Schools	Y	N ⁽¹⁾	N ⁽¹⁾	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Government services	Y	Y	25	30	N	N
Transportation	Y	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	Y ⁽⁴⁾
Parking	Y	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	N
Commercial						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail - building materials, hardware and farm equipment	Y	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	N
Retail trade - general	Y	Y	25	30	N	N
Utilities	Y	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	N
Communication	Y	Y	25	30	N	N

Exhibit #5 – Noise Compatibility (Continued)						
Land Use	Below 65	65-70	70-75	75-80	80-85	Over 85
Manufacturing & Production						
Manufacturing - general	Y	Y	Y ⁽²⁾	Y ⁽³⁾	Y ⁽⁴⁾	N
Photographic and optical	Y	Y	25	30	N	N
Agricultural (except livestock) and forestry	Y	Y ⁽⁶⁾	Y ⁽⁷⁾	Y ⁽⁸⁾	Y ⁽⁸⁾	Y ⁽⁸⁾
Livestock farming and breeding	Y	Y ⁽⁶⁾	Y ⁽⁷⁾	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
Recreational						
Outdoor sports arenas and spectator sports	Y	Y ⁽⁵⁾	Y ⁽⁵⁾	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusement parks, resorts and camps	Y	Y	Y	N	N	N
Riding stables and water recreation	Y	Y	25	30	N	N

Source: FAR Part 150, Appendix A, Table 1

Notes:

1. When the community determines that residential or school uses must be allowed, measures to achieve an outdoor to indoor NLR of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be expected to provide a NLR of 20 dB, thus, the reduction requirements are often stated as 5,10 or 15 dB over standard construction and normally assume mechanical ventilation and closed windows year round. The use of NLR criteria will not, however, eliminate outdoor noise problems.
2. Measures to achieve NLR of 25 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
3. Measures to achieve NLR of 30 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
4. Measures to achieve NLR of 35 dB must be incorporated into the design and construction of portions of these buildings where the public is received, office areas, noise-sensitive areas, or where the normal noise level is low.
5. Land use is compatible provided special sound reinforcement systems are installed.
6. Residential buildings require an NLR of 25 dB.
7. Residential buildings require an NLR of 30 dB.
8. Residential buildings not permitted.