Chapter 6 – Environmental Review

Chapter 6 – Environmental Review

Introduction

The purpose of this environmental review is to identify physical or environmental conditions of record, which may affect the recommended improvements at Ken Jernstedt Airfield.

The scope of work for this element is limited to compiling, reviewing, and briefly summarizing information of record from applicable local, federal, and state sources for the airport site and its environs. The environmental review technical memorandum is included in **Appendix A** and a brief overview is provided below.

Local Site Conditions

Ken Jernstedt Airfield is located in an area with predominantly agricultural usage. An environmental review of existing airport site conditions and items of interest was conducted as part of the master plan and included land use, water resources (wetlands, stormwater), species of concern, federal lands, and essential fish habitat.

The environmental review identified that there are no known sensitive, threatened, or endangered plants and animals, or critical habitats on airport property. A wetland inventory was included in the review.

Wetlands are under the jurisdiction of both the Oregon Department of State Lands (DSL) and the US Army Corps of Engineers (Corps). This review identified Cedar Creek, approximately 0.83 acres in size and Alder Creek (a tributary to Cedar Creek), approximately 0.14 acres in size within the airport boundary. These two creeks drain into Hood River, approximately 1.9 miles northeast of the airport. There are no documented species included in the Endangered Species Act (ESA) within Cedar Creek or Alder Creek; however, there are ESA species in Hood River. The review identified six ESA species that are present in the vicinity of the airport including four fish species found in Hood River, one bird, and one mammal. The six ESA species include:

- Chinook Salmon
- Coho Salmon
- Steelhead
- Bull Trout
- Northern Spotted Owl
- Fisher

It is noted that future FAA-funded improvement projects are subject to environmental review under the requirements established in the National Environmental Policy Act (NEPA). Projects that involve potentially substantial environmental impacts may require an FAA-funded Environmental Assessment (EA) or Environmental Impact Statement (EIS), depending on the nature of the impact.

Chapter 7 – Financial and Development Plan

Chapter 7 – Financial and Development Program

Introduction

The purpose of this chapter is to present the projects identified in the Airport Capital Improvement Program (ACIP) that have been developed and assembled based on the analyses conducted in the Facility Requirements and Development Alternatives evaluations (Chapters Four and Five). The ACIP projects are summarized in **Table 7-1** later in the chapter. The ACIP is organized into short, intermediate, and long-term planning periods that reflect both project prioritization and financial capabilities. Several factors were considered in determining project prioritization, including safety, forecast demand, the need to maintain/replace existing airfield facilities, and financial capabilities of both the Port and FAA to support the development program based on existing funding mechanisms.

The Master Plan preferred alternative includes both airside elements and landside elements. Minor pavement maintenance items such as vegetation removal and crack filling are not included in the ACIP, but will need to be undertaken by the Port on an annual or semi-annual basis.

A brief environmental review was prepared and is presented in Chapter Six and **Appendix A**. The review provides an overview of areas of potential concern associated with proposed development. In addition, all federally funded projects will require some level of project-specific environmental study, as determined by FAA.

The ACIP lists all major projects included in the twenty-year planning period addressed in the Airport Master Plan. Individual projects for the first five years of the planning period are listed in order of priority by year. Projects for the intermediate and long-term phases of the planning period (years 6-20) are listed in

order of priority but have not been assigned a year. Each project's eligibility for FAA funding is noted, based on current federal legislation and funding formulas. Specific project details are depicted on the updated Airport Layout Plan and Terminal Area Plan drawings contained in Chapter 8.

A primary source of potential funding identified in this plan is the FAA's Airport Improvement Program (AIP). As proposed, approximately 90 percent of the airport's twenty-year ACIP will be eligible for federal funding. Funds from this program are derived from the Aviation Trust Fund, which is the depository for all federal aviation taxes collected on such items as airline tickets, aviation fuel, lubricants, tires, aircraft registrations, and other aviation related fees. These funds are distributed by FAA under appropriations set by Congress for all airports in the United States included in the federal airport system (National Plan of Integrated Airport Systems – NPIAS).

However, as noted in **Table 7-1**, the projected twenty-year total for FAA eligible projects in the ACIP significantly exceeds current FAA funding levels through the non-primary entitlement program, which is $150,000 annually. While other types of FAA funding may be available for some projects, it is reasonable to assume that despite establishing eligibility for FAA funding, not all eligible projects are likely to be funded. The Port must maximize the use of available FAA and other outside sources of funding as it manages its ACIP. In some cases, the limited availability of outside funds may require deferring some projects, or increasing funding with additional local, state, or private funding.

Airport Development Schedule and Cost Estimates

Cost estimates for each individual project were developed in 2015 dollars based on typical construction costs associated with the specific type of project. The project costs listed in the ACIP represent order-of-magnitude estimates that approximate design, engineering, environmental, other related costs, and contingencies. The estimates are intended only for preliminary planning and programming purposes. Specific project analysis and detailed engineering design will be required prior to project implementation to provide more refined and detailed estimates of the development costs.

These cost estimates can continue to assist management through adjustments to the 2015-based amounts to account for subsequent inflation as the plan is carried out in future years. This can be accomplished by converting the appropriate change in the United States Consumer Price Index (USCPI) to a multiplier using the following formula:

$$\frac{X}{I} = Y$$

Where:
X = USCPI in any given future year

Y = Change Ratio
I = Current Index (USCPI)[1]

USCPI-U
244.955 **(1982-1984 = 100)** **June 2017**

Multiplying the change ratio (Y) times any 2015-based cost estimate presented in this study will yield the adjusted dollar amounts appropriate in any future year evaluation. Several different CPI-based indices are available for use and any applicable index may be substituted by the Port in its financial management program.

The following sections outline the recommended development program and funding assumptions. The scheduling has been prepared according to the facility requirements determined through the master plan evaluation. The projected staging of development projects is based on anticipated needs and investment priorities. Actual activity levels may vary from projected levels; therefore, the staging of development in this section should be viewed as a general guide. When activity does vary from projected levels, implementation of development projects should occur when demand warrants, rather than according to the estimated staging presented in this chapter. In addition to major projects, the airport will continue to require regular facility maintenance such as pavement maintenance, vegetation control, sweeping, lighting repair, and fuel system maintenance.

The first phase of the Capital Improvement Program includes the highest priority projects recommended during the first five years of the planning period. Intermediate and long-term projects are anticipated to occur in the 6- to 20-year period, although changes in demand or other conditions could accelerate or slow demand for some improvements. **Table 7-1** provides a complete list of the projects included in the 20-year CIP. The following summary describes the key projects.

SHORT-TERM PROJECTS

The short-term program contains work items of the highest priority. Priority items include safety related improvements. These items will need to be incorporated into the State Capital Improvement Program (SCIP) managed by the FAA Seattle Airport District Office and the Oregon Department of Aviation (ODA). To assist with this process, the short-term projects are scheduled in specific calendar years for the first five years of the planning period (2015-2019).

[1] U.S. Consumer Price Index for All Urban Consumers (USCPI-U)

It is noted that several high priority short term projects identified early in the master planning process have been initiated, with some completed during the final master plan review. These projects are listed as a common group at the beginning of the short term program and included design & construction of airfield improvements needed to meet Airplane Design Group (ADG) II standards on the south side of Runway 7/25.

The initial evaluation (environmental) for the north apron redevelopment project is also included in the short-term development program, to support design and construction early in the intermediate program.

Completed Projects (Years 2015-2017):

- Relocation/reconstruction of the south parallel taxiway (Taxiway B);
- South Apron Rehabilitation;
- Relocation of the aviation fuel storage tank and dispensing facilities; and
- Reconstruction/reconfiguration of the south apron and associated taxilanes to support hangar development.

Short-Term Projects:

- North Apron (Design & Construction)
    - Apron expansion to the north adjacent to future FBO building and hangar facilities;
    - Apron overlay (existing pavement) and reconfiguration of taxilanes and tiedowns;
- Pavement Management Plan (PMP);
- Property Acquisition (South Residences).
    - Acquire parcels or portions of the parcels within the object free area (OFA) of the runway. The estimated cost of acquiring these parcels is based on Hood River's estimated property values with a 30 percent contingency for legal fees and appraisals. For CIP purposes, the estimated cost assumes acquiring full parcels and improvements, although individual parcel requirements will vary. Assumed property values and external costs (legal, environmental) are subject to change and will require property appraisals and additional legal evaluations to verify. The ability to execute this project depends heavily on the ability of FAA to provide required funding. In the event that FAA funding is unavailable in the time frame assumed in the CIP, property related project cost increases are likely to exceed the CIP-derived formula noted earlier.

INTERMEDIATE & LONG-TERM PROJECTS

Several intermediate or long-term projects are considered to be current needs. However, based on the limited funding resources available, it was necessary to shift some projects to subsequent planning periods. Individual projects may be completed sooner in the event additional funding can be obtained.

Intermediate-Term Projects (2023-2027)

- North Apron Area Property Trade;
- South T-Hangar Taxilane (w/connectors to south parallel taxiway) – Overlay;
- Northwest T-hangar Taxilane Construction and Apron Overlay;
- Agricultural Apron – Overlay;
- Stopway Slurry Seal & Repaint Markings;
- Southwest Hangar Apron Development;
- Runway 7- Replace Threshold Lights (modified or flush mounted fixtures compatible with stopway); and
- Replace Taxiway A & Taxiway B Retro-reflective Markers.

Long-Term Projects (2028 and beyond)

- Runway 7/25 Medium Intensity Runway Lights (MIRL) replacement;
- North & South Parallel Taxiway and Runway Exits – Slurry Seal and Repaint Markings;
- Northwest Hangar Taxilane Extension;
- Medium Intensity Taxiway Lights - Taxiway A, B, & Connectors;
- Replace Runway End Identifier Lights (REIL) Runway 7 & 25;
- Replace Beacon;
- Install Perimeter Fencing and Gates (along Airport Road, Tucker Road, and North Apron);
- Northeast Landside Area Development;
- Southeast Landside Development;
- Replace Segmented Circle and Wind Cone;
- Runway 7/25 & Stopway - Slurry Seal and Repaint Markings;
- North & South Parallel Taxiway and Runway Exits – Slurry Seal and Repaint Markings; and
- Master Plan Update and Airports GIS (AGIS) Survey (note: the AGIS may be required by FAA earlier in the planning period).

Ken Jernstedt Airfield-Hood River Airport Master Plan

20-YEAR CAPITAL IMPROVEMENT PROGRAM 2015-2034

Current NPE $ Accumulation: $48,952 (FY 2017)

Prepared by Century West Engineering

Short Term	Project	ID	Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	Total Cost	FAA GA Entitlement	Other FAA **	Local Costs		
Completed Projects (Years 2015-2017)													
2015	No Projects - Carryover		-										
2016	South Taxiway Extension and Apron Rehabilitation: Design		Engineering										
2017	South Taxiway Extension and Apron Rehabilitation: Construction		Pavement Rehabilitation										
2018	North Apron: Construction (New Pavement - Expansion)***		Pavement Construction	LS	1	-	$2,000,000	$2,000,000	$0	$0	$2,000,000		
												NPE Accumulation	*$48,952*
												FY 2017 NPE	*$150,000*
						Subtotal	$2,000,000	$2,000,000	$0	$0	$2,000,000	*Total Available (NPE)*	*$198,952*
2019	North Apron: Environmental (Reimbursement)		Engineering	LS	1	-	$250,000	$250,000	$225,000	$0	#VALUE!		
	North Apron: Design		Engineering	LS	1	-	$82,500	$82,500	$74,250	$0	$8,250	*NPE Accumulation*	*$198,952*
												FY 2018 NPE	*$150,000*
						Subtotal	$332,500	$332,500	$299,250	$0	#VALUE!	*Total Available (NPE)*	*$49,702*
2020	North Apron: Construction (Overlay Existing Apron)		Pavement Rehabilitation	LS	1	-	$1,958,000	$1,958,000	$201,952	$1,560,248	$195,800		
												NPE Accumulation	*$49,702*
												FY 2019 NPE	*$150,000*
						Subtotal	$1,958,000	$1,958,000	$201,952	$1,560,248	$195,800	*Total Available (NPE)*	*-$2,250*
2021	PMP		Pavement Maintenance	LS	1	-	$22,000	$22,000	$19,800	$0	$2,200		
												NPE Accumulation	*($2,250)*
							$0	$0	$0		$0	*FY 2020 NPE*	*$150,000*
						Subtotal	$22,000	$22,000	$19,800	$0	$2,200	*Total Available (NPE)*	*$127,950*
2022	Property Acquisiton - OFA Control (South Residences)****		Property Acquisition	Parcel	9	$1,000,000	$9,000,000	$9,000,000	$280,200	$7,819,800	$900,000		
												NPE Accumulation	*$127,950*
												FY 2021 NPE	*$150,000*
						Subtotal	$9,000,000	$9,000,000	$280,200	$7,819,800	$900,000	*Total Available (NPE)*	*-$2,250*
						5-YR Total	**$13,312,500**	**$13,312,500**	**$801,202**	**$9,380,048**	**#VALUE!**		

**** Current Year Project Grant***

***** Other FAA Funding Total listed for reference only based on general project eligibility; FAA funding levels are expected to be below projected needs.***

****** State Funding (Connect Oregon Grant)***

******* Property acquisition includes 30% contingency for legal fees, appraisals, and environmental.***

Ken Jernstedt Airfield-Hood River Airport Master Plan
20-YEAR CAPITAL IMPROVEMENT PROGRAM 2015-2034

Current NPE $ Accumulation: $48,952 (FY 2017)

Prepared by Century West Engineering

Intermediate Term	Project		Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	Total Cost	FAA GA Entitlement	FAA Eligible **	Local Costs
2023-2027	North Apron Area Property Trade		Land Acquisition	LS	1	$0	$0	$0	$0	$0	$0
	South T-Hangar Taxilane (w/connectors to south parallel taxiway) - Overlay		Pavement Rehabilitation	LS	1	$400,000	$400,000	$400,000	$0	$360,000	$40,000
	Northwest T-Hangar Taxilanes and Apron - Rehabilitation (Existing Apron)		Pavement Construction	LS	1	$1,500,000	$1,500,000	$1,500,000	$0	$1,350,000	$150,000
	AG Apron - Overlay		Pavement Construction	LS	1	$200,000	$175,000	$175,000	$0	$157,500	$17,500
	Stopway Slurry Seal & Marking		Pavement Rehabilitation	LS	1	$150,000	$150,000	$150,000	$0	$135,000	$15,000
	Southwest Hangar Apron Development		Other	LS	1	$300,000	$300,000	$300,000	$0	$270,000	$30,000
	Runway 7 - Replace Threshold Lights		Lighting	LS	1	$35,000	$35,000	$35,000	$0	$31,500	$3,500
	Replace Taxiway A & Taxiway B Retro-reflective Markers		Other	LS	1	$50,000	$50,000	$50,000	$0	$45,000	$5,000
	FAA Non Primary Entitlments (5 years - project allocations TBD)								*$750,000*	*-$750,000*	
						5-YR Total	**$2,610,000**	**$2,610,000**	**$750,000**	**$1,599,000**	**$261,000**

** Other FAA Funding Total listed for reference only based on general project eligibility; FAA funding levels are expected to be below projected needs.

5 year NPE $ = $750,000

Long Term	Project		Project Category	Unit	Quantity	Unit Cost	Subtotal Cost	Total Cost	FAA GA Entitlement	FAA Eligible **	Local Costs
2028-2034	Runway 7/25 Medium Intensity Runway Lights (MIRL) Replacement		Lighting	LS	1	$375,000	$375,000	$375,000	$0	$337,500	$37,500
	North & South Parallel Taxiway and Runway Exits-Slurry Seal		Pavement Rehabilitation	LS	1	$350,000	$350,000	$350,000	$0	$315,000	$35,000
	Northwest Hangar Taxilane Extension		Pavement Construction	LS	1	$600,000	$600,000	$600,000	$0	$540,000	$60,000
	Runway 25 - Replace Threshold Lights		Lights	LS	1	$35,000	$35,000	$35,000	$0	$31,500	$3,500
	Medium Intensity Taxiway Lights - Taxiway A, B, & Connectors		Lighting	LS	1	$550,000	$550,000	$550,000	$0	$495,000	$55,000
	Runway End Identifer Lights (REIL) Runway 7 & 25		Lighting	LS	1	$185,000	$185,000	$185,000	$0	$166,500	$18,500
	Beacon Replacement		Lighting	LS	1	$115,000	$125,000	$125,000	$0	$112,500	$12,500
	Perimeter Fencing & Gates		Fencing	LS	1	$450,000	$450,000	$450,000	$0	$405,000	$45,000
	Northeast Landside Area		Pavement Construction	LS	1	$1,900,000	$1,900,000	$1,900,000	$0	$1,710,000	$190,000
	Southeast Landside Area		Pavement Construction	LS	1	$2,300,000	$2,300,000	$2,300,000	$0	$2,070,000	$230,000
	North & South Apron Seal Coat		Pavement Rehabilitation	LS	1	$450,000	$450,000	$450,000	$0	$405,000	$45,000
	Segmented Circle/Wind Cone Replacement		Other	LS	1	$125,000	$125,000	$125,000	$0	$112,500	$12,500
	Runway 7/25 & Stopway - Slurry Seal/Repaint NPI Markings		Pavement Rehabilitation	LS	1	$400,000	$400,000	$400,000	$0	$360,000	$40,000
	North & South Parallel Taxiway and Runway Exits-Slurry Seal		Pavement Rehabilitation	LS	1	$350,000	$350,000	$350,000	$0	$315,000	$35,000
	Master Plan Update & AGIS		Other	LS	1	$500,000	$500,000	$500,000	$0	$450,000	$50,000
	FAA Non Primary Entitlments (10 years - project allocations TBD)								*$1,500,000*	*-$1,500,000*	
						Total	**$8,695,000**	**$8,695,000**	**$1,500,000**	**$6,325,500**	**$869,500**
						20-YR Total	$24,617,500	$24,617,500	$3,051,202	$17,304,548	#VALUE!

***** Other FAA Funding Total listed for reference only based on general project eligibility; FAA funding levels are expected to be below projected needs.***

****** Property Acquisiton dependent on willing seller.***

Unit: LS=Lump Sum, LF=Linear Foot, SY=Square Yard, EA=Each

10 year NPE $ = $1,500,000

Capital Funding Sources & Programs

FEDERAL GRANTS

Federal funding is provided through the Federal Airport Improvement Program. The Airport Improvement Program is the latest evolution of a funding program originally authorized by Congress in 1946 as the Federal Aid to Airports Program (FAAP). The AIP program provides grant funding for airports listed in the NPIAS. Under current legislation, eligible general aviation airports can receive up to $150,000 per year in "non-primary entitlement" grants. If a project is projected to cost in excess of $150,000, the participating airport can roll over yearly funding allocations thereby accumulating funds for up to four years (equaling $600,000 at current non-primary entitlement levels), at which time the accumulated funds can be used for larger projects. Any unused funds remaining beyond the maximum allowable roll over period revert to FAA for use at other airports. These annual entitlement funds may only be used for eligible capital improvement projects and may not support airport operation and maintenance costs. Current FAA funding levels equal 90 percent of eligible costs with a 10 percent local match.

FAA funding is limited to projects that have a clearly defined need and are identified through preparation of an FAA approved Airport Layout Plan (ALP). Periodic updates of the ALP are required when new or unanticipated project needs or opportunities exist that require use of FAA funds and to reflect the status of completed projects. The FAA will not generally participate in vehicle parking, utilities, building renovations, or projects associated with non-aviation development.

Projects such as hangar construction or fuel systems are eligible for funding, although the FAA indicates this category of project would be considered a much lower priority than other airfield needs.

The FAA also provides discretionary grants to airports. The dollar amount of individual grants varies and can be significantly larger than the non-primary entitlements. Discretionary grants are awarded at the FAA's sole discretion. Discretionary funds are distributed after all entitlement funds have been allocated. For larger projects requiring substantially larger amounts of funding, non-primary entitlement, state apportionment, and discretionary grants are often combined. Other types of FAA funding include facilities & equipment (F&E) projects and Congressionally-appropriated dollars for specific projects.

STATE OF OREGON

No specific level of Oregon Department of Aviation (ODA) funding has been assumed in the CIP presented in **Table 7-1**. It is recommended that the Port maximize use of any ODA or other State of Oregon funds available in the planning period.

Pavement Maintenance Program

The Pavement Management Program (PMP) programs airfield pavement maintenance funds on established multi-year cycles. This program is intended to preserve and maintain existing airfield pavements in order to maximize their useful lives and the economic value of the pavement. As noted earlier, several short-term pavement maintenance projects are identified for Ken Jernstedt Airfield in the most recent PMP. The program funds pavement maintenance and associated improvements (crack filling, repair, sealcoats, etc.), including some items that have not traditionally been eligible for FAA funding.

Funding for the PMP is generated through collection of aviation fuel taxes. ODA manages the PMP through an annual consultant services contract and work is programmed on a three-year regional rotation. The program includes a regular schedule of inspections and subsequent field work. Benefits from the PMP include:

- Economy of scale in bidding contracts;
- Federal/State/Local partnerships that maximize airport improvement funds; and
- PMP is not a grant program and local match is on a sliding scale (50% - 5% required).

The PMP includes the following features:

- Review prior year's Pavement Condition Index (PCI) reports;
- Only consider PCIs below 70;
- Apply budget;
- Limit work to patching, crack sealing, fog sealing, slurry sealing;
- Add allowance for markings; and
- Program to include approximately 20 airports per year, depending on funding levels.

Financial Aid to Municipalities (FAM) Grants

ODA's Financial Aid to Municipalities (FAM) grant program has been suspended in recent years due to a lack of funding. Efforts to resume and expand the program are currently being considered by the Oregon legislature. FAM grants up to $25,000 were previously available to Oregon airports for eligible airport related projects.

Connect Oregon Grants

The Oregon Legislature authorized funding for air, marine, rail, and transit infrastructure, known as ConnectOregon in 2005. This program is intended to improve commerce, reduce delay, and enhance safety for the state's multi-modal transportation system.

Lottery-based bonds, sold by the Oregon Department of Administrative Services are used to fund the program. The funds are deposited into Oregon's Multimodal Transportation Fund and administered by the Oregon Department of Transportation Local Government Section. ConnectOregon funds cannot be used for projects eligible for Oregon's Highway Fund, thereby providing less competition for aviation projects seeking ConnectOregon funding.

In 2014, after the fifth installment of funding, the Legislature had provided $382 million to the program. Connect Oregon grants fund up to 80-percent of project costs with a 20-percent sponsor match and loans up to 100-percent of project costs.

As noted previously, the Port has applied for a 2016 Connect Oregon grant that would provide funding for a number of projects currently listed within the intermediate-term planning period. Those projects would shift to the short-term planning period if the grant is approved.

House Bill 2075

House Bill 2075 increased the tax on aircraft fuels, providing new revenues for the State Aviation Account. The new tax on jet fuel (Jet-A) is one cent per gallon and aviation gasoline (AVGAS) is nine cents per gallon. These revenues will be distributed to fund a variety of aviation needs including:

- Assisting airports in providing local match for FAA AIP grants;
- Creation of grants to fund emergency preparedness and infrastructure projects;
- Creation of grants to fund services critical to aviation, aviation related business development, and airport development;
- Assisting in commercial air service to rural Oregon; and
- Improvements to state-owned airports.

State Capital Improvement Program (SCIP)

The FAA's Seattle Airport District Office (ADO) is working with state aviation agencies in Oregon and Washington to develop a coordinated "State" Capital Improvement Program, known as the SCIP. The SCIP is intended to become the primary tool used by FAA, state aviation agencies, and local airport sponsors to prioritize funding. The program has reached full implementation with current and near-term future funding decisions prioritized through evaluation formulas. Airport sponsors are asked to provide annual updates to the short-term project lists annually in order to maintain a current system of defined project needs. The short-term priorities identified in the master plan CIP will be imported into the SCIP and will be subject to additional prioritization for funding in competitive statewide evaluations.

LOCAL FUNDING

As currently defined, the locally funded (Port/tenant) portion of the CIP for the twenty-year planning period is estimated to be approximately $2.26 million. Hangar and FBO building construction costs and building maintenance have not been included in the CIP, since no FAA funding is assumed.

A portion of local matching funds are generated through airport revenues, including fuel sales, land leases, and hangar rentals.

Airport sponsors occasionally fund infrastructure and revenue-generating development, including hangars and buildings, either through an inter fund loan or the issuance of long-term debt (revenue or general obligation bonds).

Chapter 8 – Airport Layout Plan

Chapter 8 – Airport Layout Drawings

Introduction

The options that were considered for the long-term development of Ken Jernstedt Airfield resulted in the selection of a preferred alternative. The preferred alternative has been incorporated into the airport layout plan drawings, which are depicted in this chapter. The set of airport plans, which is referred to in aggregate as the "Airport Layout Plan" (ALP) has been prepared in accordance with Federal Aviation Administration (FAA) guidelines. The drawings illustrate existing conditions, recommended changes in airfield facilities, property ownership, land use, and obstruction removal. The ALP set is presented at the end of this chapter:

- Sheet 1 – Cover Sheet
- Sheet 2 – Airport Data Sheet
- Sheet 3 – Airport Layout Plan
- Sheet 4 – On-Airport Individual Area Plans
- Sheet 5 – Airport Airspace Plan (FAR Part 77)
- Sheet 6 – Runway Inner Approach Surface / RPZ
- Sheet 7 – Runway 7 Approach Plan and Profile
- Sheet 8 – Runway 25 Approach Plan and Profile
- Sheet 9 – On-Airport Land Use Plan
- Sheet 10 – Off-Airport Land Use Plan
- Sheet 11 – Exhibit "A" Airport Property Plan

The airport layout plan drawings provide detailed information for existing and future facilities. The future improvements depicted in the drawing set are consistent with the airport master plan's updated twenty-year capital improvement program contained in Chapter Seven. The draft ALP drawing set was submitted along with the draft final airport master plan report to FAA for review and approval. The drawings were reviewed by the FAA Seattle Airports District Office (ADO) with additional review coordinated with other FAA offices (Flight Procedures, Flight Standards, etc.). Once approved, the final ALP drawing set were signed by the Port of Hood River and the FAA Seattle ADO. As individual projects are completed, minor "as-built" updates to the ALP drawing may be completed (with FAA coordination) without updating the airport master plan.

The airport layout plan drawings are prepared using AutoCAD® computer-aided drafting software, which allows for easier updating and revision. The drawing files may also be imported into local geographic information systems (GIS) to support land use planning, airport overlay zone mapping, etc.

A brief summary of the individual drawings is provided below:

AIRPORT DATA SHEET DRAWING

The Airport Data Sheet drawing contains detailed runway and taxiway dimensions, FAA dimensional standards, wind roses, and other data that is reflected on the sheets in the drawing set.

AIRPORT LAYOUT PLAN DRAWING

The Airport Layout Plan (ALP) drawing graphically depicts existing and future airfield facilities. The current length of Runway 7/25 (3,040 feet) is maintained, although the existing paved 580-foot overrun located beyond the west end of the runway is recommended to be designated as a "stopway."

The designation of the existing pavement as a stopway does not increase the published runway length. However, the overall dimension (runway + stopway) would be listed in a declared distance table as "Accelerate-Stop Distance Available (ASDA)" for Runway 25, in the published FAA Airport/Facility Directory (A/FD). By FAA definition, a stopway "*must be a wide as the runway and able to support an aircraft during an aborted takeoff without causing structural damage to the aircraft.*"[1] When the stopway is properly marked, lighted and maintained, and the declared distances are published, the Runway 25 ASDA will increase to 3,620 feet.

Upgraded runway lighting is planned, including the installation of visual guidance indicators (VGI) and runway end identifier lights (REIL) at both runway ends, and replacement of the medium intensity runway lighting (MIRL) system at the end of its useful life near the end of the current twenty-year planning period.

[1] FAA Advisory Circular 150/5300-13A, Paragraph 312

The western section of the south parallel taxiway (Taxiway B) will be shifted approximately 90 feet south to meet the 240-foot Airplane Design Group II (ADG II) dimensional standard for runway and parallel taxiway centerline to centerline separation. The taxiway relocation will require reconfiguration of the south apron (taxilanes and tiedowns) and relocation of the existing fuel storage tanks to accommodate required clearances.

The north and south apron areas will be reconfigured to meet FAA design standards and to accommodate targeted redevelopment and infill development of hangars. New aircraft hangar areas are planned near the northwest and northeast corners of the airport, with additional development identified abutting the south side of the terminal area (currently off airport property). As part of the planned north apron development, a land trade is planned with WAAAM to accommodate more efficient development of hangars, FBO building, access road and vehicle parking. Jeanette Road will provide access to new hangars located near the east end of the north apron.

Future facilities are color-coded (red) to distinguish them from existing facilities. Future facilities are represented in the airport master plan's twenty-year capital improvement program (CIP) as individual projects or project groupings.

ON-AIRPORT INDIVIDUAL AREA PLANS DRAWING

The On-Airport Individual Area Plans drawing for the landside areas located on both the north and south sides of Runway 7/25 provide additional detail for existing and new facilities. Recommended improvements include reconfigured/expanded aircraft parking on both the north and south aprons; future hangar development on both the north and south sides of the runway; temporary and ultimate aircraft fuel area; access roads and vehicle parking; and land acquisition for future hangar development.

FAR PART 77 AIRSPACE DRAWING

The FAR Part 77 Airspace drawing depicts the protected airspace defined for Runway 7/25 under Federal Aviation Regulation (FAR) Part 77, *Objects Affecting Navigable Airspace*. The airspace plan drawing depicts plan views of the five "imaginary surfaces" defined in FAR Part 77.25 including the primary, transitional, approach, horizontal, and conical surfaces based on the "ultimate" runway configuration. Profile views of the full runway approach surfaces are also provided; additional plan and profile detail for the approach surfaces is provided on additional drawings in the ALP set. A detailed description of FAR Part 77 airspace surfaces is provided in Chapter Four (Airport Facility Requirements).

Part 77 surfaces should be free of built or terrain obstructions to the greatest extent possible. Objects that penetrate FAR Part 77 surfaces may require action to mark or remove depending on their severity, location, and the feasibility of the action. The drawing includes a table of obstructions with recommended dispositions.

The physical characteristics of the FAR Part 77 surfaces are defined the size of aircraft using the runway and the runway approach capabilities. As noted earlier, no increase in runway length is recommended for the current planning period. The addition of a designated stopway does not affect FAR Part 77 airspace surfaces.

- **Runway 7/25 Approach Surface:** Extend 5,000 feet from both ends of the runway primary surface (see below). The approach surfaces for Runway 7 and 25 have a slope of 20:1, which represents the horizontal distance required for each increment of vertical rise. The approach surfaces are consistent with visual approach capabilities.

- **Primary Surface:** Based on the visual approach standards for "larger-than-utility" runways, the primary surface is 250 feet wide and extends 200 feet beyond each end of the runway. The primary surface is a flat plane of airspace centered on the runway with the same elevation as the nearest point on the runway centerline. For Runway 7/25, the primary surface is 3,440 feet long, 250 feet wide, and is consistent with applicable FAR Part 77 criterion.

- **Runway Transitional Surface:** The runway transitional surfaces extend outward and upward from the outer edges of the primary surface. The transitional surfaces have a slope of 7:1 and extend to an elevation 150 feet above airfield elevation, where they connect to the runway horizontal surface. The 7:1 transitional surface slopes for Runway 7/25 begin 125 feet from runway centerline.

- **Horizontal Surface:** The horizontal surface for Runway 7/25 is drawn from 5,000-foot radii that extend from both ends of the primary surface to form an oval. The horizontal surface is a flat plane of airspace with an elevation 150 feet above airport elevation. For Runway 7/25, the radius of the horizontal surface coincides with the length of the runway approach surfaces.

- **Conical Surface:** The conical surface extends from the outer edge of the horizontal surface at a slope of 20:1 for 4,000 feet. The top elevation of the conical surface is 350 feet above published airport elevation.

RUNWAY INNER APPROACH SURFACE / RPZ DRAWING

The Inner Approach Surface and Runway Protection Zone (RPZ) drawing depict detailed plan views of these areas and profile views of the approach surface and threshold siting surface (when used) for each runway end. The drawing depicts obstructions, using a common numbering system from the FAR Part 77 Airspace Plan drawing.

RUNWAY APPROACH SURFACE PLAN AND PROFILE DRAWINGS

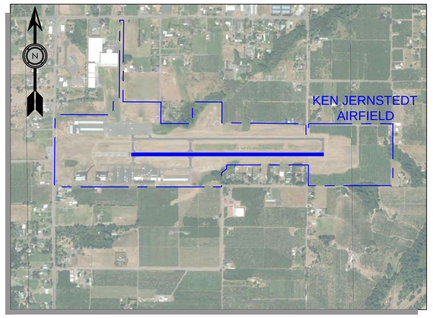
The Approach Surface drawings depict plan and profile views of the runway approach surfaces depicted in the FAR Part 77 airspace plan. The drawings provide additional detail in identify obstructions, terrain and other physical features within the approach surfaces. The drawings depict obstructions, using a common numbering system from the FAR Part 77 Airspace Plan drawing.

AIRPORT LAND USE PLANS

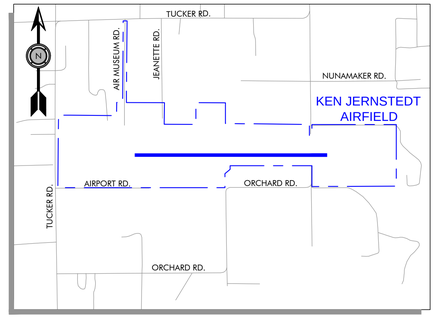
The Airport Land Use Plan drawings depict existing comprehensive plan and zoning designations for the airport and surrounding areas, and notes existing airport overlay zoning. Ken Jernstedt Airport is located outside the Hood River city limits and urban growth boundary (UGB) in Hood River County.

EXHIBIT "A" – AIRPORT PROPERTY PLAN

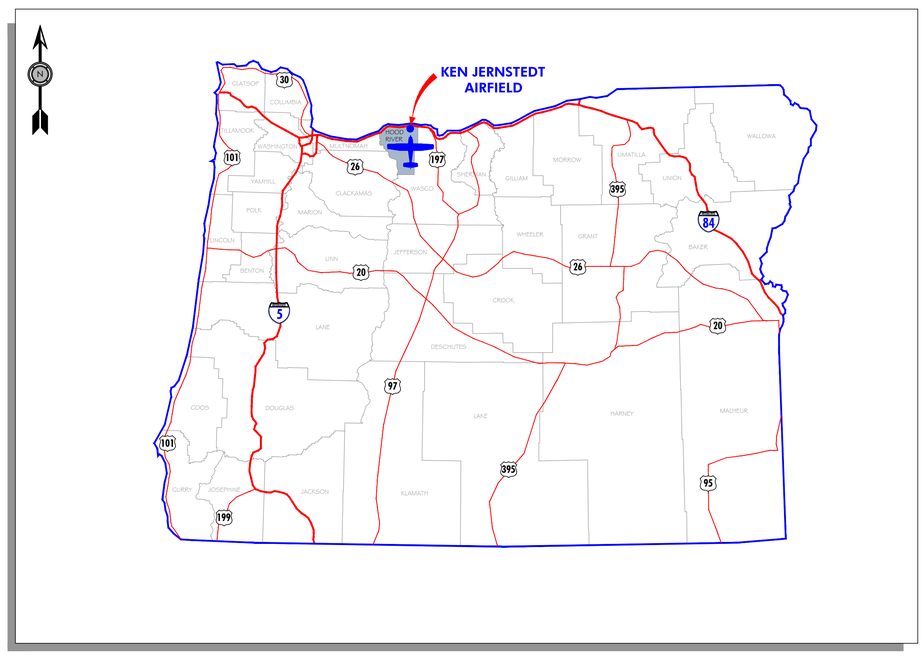
The Exhibit "A" - Airport Property Plan drawing provides depicts all property owned by the Port of Hood River associated with Ken Jernstedt Airfield. The drawing notes the form of ownership or control (fee simple, avigation easement, etc.) and the date of acquisition per FAA guidelines. The drawing also depicts access easement ("through-the-fence") locations and land areas planned for acquisition and trade, consistent with the ALP drawing.



AERIAL PHOTO



VICINITY MAP



LOCATION MAP

KEN JERNSTEDT AIRFIELD
AIRPORT MASTER PLAN

HOOD RIVER, OREGON
CWEC PROJECT NO. 1239900901
AIP NO. 3-41-0001-012-01
MARCH 2018

SHEET INDEX

NO.	DATE	BY	APPR	REVISIONS

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DATE: MARCH 2018		PROJECT NO: 12399009.01	

KEN JERNSTEDT AIRFIELD

COVER SHEET

FIGURE NO. -

SHEET NO. 1 OF 11

AIRPORT DATA TABLE

DESCRIPTION		EXISTING	FUTURE
AIRPORT ELEVATION (MSL)		631.14'	SAME
AIRPORT ACREAGE		125	128.6
ARP COORDINATES	LAT. LONG.	N 45° 40' 22.581" W 121° 32' 01.885"	SAME
MAGNETIC DECLINATION		15°22'E (2/2016) ANNUAL RATE OF CHANGE 0°8"W	SAME
MEAN MAX. DAILY TEMPERATURE		81° F	SAME
FAA IDENTIFIER		4S2	SAME
DATUM		NAD 83/NGVD 88	SAME

RUNWAY DATA TABLE

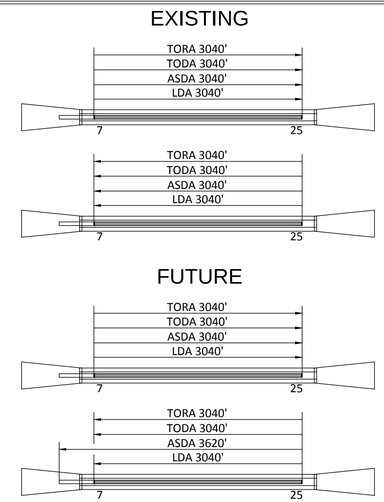
	EXISTING CONDITIONS RUNWAY 7 - 25	FUTURE CONDITIONS RUNWAY 7 - 25
RUNWAY LENGTH AND WIDTH	3040' X 75'	SAME
RUNWAY LIGHTING	MIRL	SAME
RUNWAY PAVEMENT STRENGTH (IN 1000 LBS)	23,000 SW	SAME
RUNWAY PAVEMENT TYPE	ASPHALT	SAME
RUNWAY PERCENT WIND COVERAGE (13 KNOTS)	99.98%	SAME
RUNWAY PERCENT GRADIENT / MAXIMUM GRADE	1.116%	SAME
AIRPORT REFERENCE CODE (ARC)	A-II (SMALL)	B-II (SMALL)
RUNWAY DESIGN CODE (RDC)	A / B-II VIS	A / B-II VIS
FAR PART 77 DESIGNATION	VISUAL	SAME
NPIAS ROLE / SERVICE LEVEL	GENERAL AVIATION	SAME
TERMINAL NAVAIDS	BEACON	SAME
TAXIWAY LIGHTING	REFLECTORS	MITL
TAXIWAY MARKING	VISUAL	SAME
OFZ PENETRATION	YES (SEE NOTE 2)	YES (SEE NOTE 2)

RUNWAY DATA TABLE

	EXISTING CONDITIONS	EXISTING STANDARD	FUTURE CONDITIONS	FUTURE STANDARD
RUNWAY SAFETY AREA LENGTH AND WIDTH LENGTH BEYOND RUNWAY END	3640' X 150' 300'	3640' X 150' 300'	3640' X 150' 300'	3640' X 150' 300'
OBJECT FREE AREA LENGTH AND WIDTH LENGTH BEYOND RUNWAY END	3640' X 500' 300'	3640' X 500' 300'	3640' X 500' 300'	3640' X 500' 300'
OBSTACLE FREE ZONE LENGTH AND WIDTH LENGTH BEYOND RUNWAY END	3440' X 400' 200'	3440' X 400' 200'	3440' X 400' 200'	3440' X 400' 200'

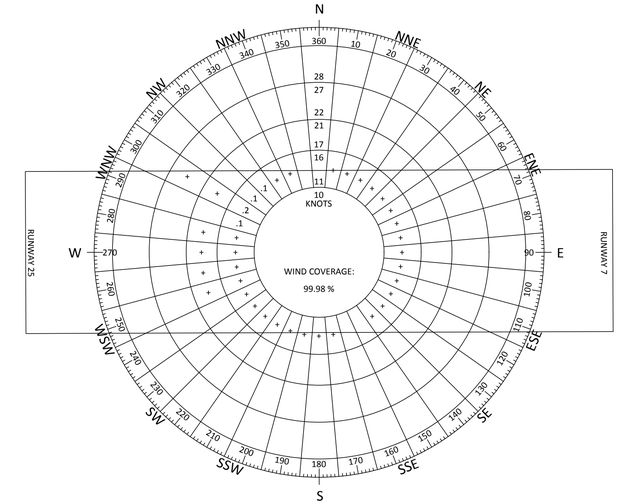
		EXISTING CONDITIONS		FUTURE CONDITIONS	
RUNWAY END		7	25	7	25
RUNWAY APPROACH CATEGORY		VISUAL	VISUAL	VISUAL	VISUAL
RUNWAY APPROACH SLOPE	PART 77 REQUIRED	20:1	20:1	20:1	20:1
	ACTUAL	20:1	20:1	20:1	20:1
APPROACH VISIBILITY MINIMUMS		≧ 1 MILE	≧ 1 MILE	≧ 1 MILE	≧ 1 MILE
RUNWAY MARKINGS		BASIC	BASIC	BASIC	BASIC
RUNWAY END COORDINATES	LAT. LONG.	N 45° 40' 21.9" W 121° 32' 23.3"	N 45° 40' 22.0" W 121° 31' 40.5"	N 45° 40' 21.9" W 121° 32' 23.3"	N 45° 40' 22.0" W 121° 31' 40.5"
INSTRUMENTATION AND APPROACH AIDS		NONE	NONE	SAME	SAME
VISUAL APPROACH AIDS		REIL	REIL	PAPI; REIL	PAPI; REIL
CRITICAL AIRCRAFT (ARC)		CESSNA CARAVAN C208 (A-II) / SCHLEICHER ASW 20 CL (A-II)		CESSNA CARAVAN C208 (A-II) / BEECHCRAFT KING AIR 250 (B-II)	
WINGSPAN		<79 FEET		SAME	
WEIGHT		≤12,500 LBS		SAME	
APPROACH SPEED		<91 KNOTS		<121 KNOTS	
LENGTH OF HAUL		<500 NAUTICAL MILES		SAME	

RUNWAY 7-25 DECLARED DISTANCES



NOTES:

1. 580' PAVED OVERRUN AT WEST END OF RUNWAY TO BE CONVERTED TO STOPWAY. DECLARED DISTANCES TO BE PUBLISHED IN FAA AIRPORT / FACILITY DIRECTORY. FUTURE ACCELERATE-STOP DISTANCE (ASDA) FOR RUNWAY 25 IS 3,620 FEET, ALL OTHER RUNWAY DECLARED DISTANCES ARE 3,040 FEET.
2. GLIDER PARKING ON SOUTH SIDE OF RUNWAY TO BE RELOCATED OUTSIDE OFA; OFF-AIRPORT RESIDENTIAL STRUCTURES (GARAGES, STORAGE BUILDINGS, ETC.) TO BE RELOCATED OUTSIDE OFA WHERE FEASIBLE.



ALL WEATHER WIND ROSE

SOURCE : 4S2 AUTOMATED WEATHER OBSERVING SYSTEM (AWOS)
JANUARY 2006 - JULY 2014
OBSERVATIONS 178,219

CROSSWIND	RUNWAY 7/25
13 KNOTS	99.98%

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DM	JLS	WMR	AS SHOWN
DATE: MARCH 2018		PROJECT NO: 12399009.01	

KEN JERNSTEDT AIRFIELD

AIRPORT DATA SHEET

FIGURE NO.
-

BUILDING / FACILITY KEY

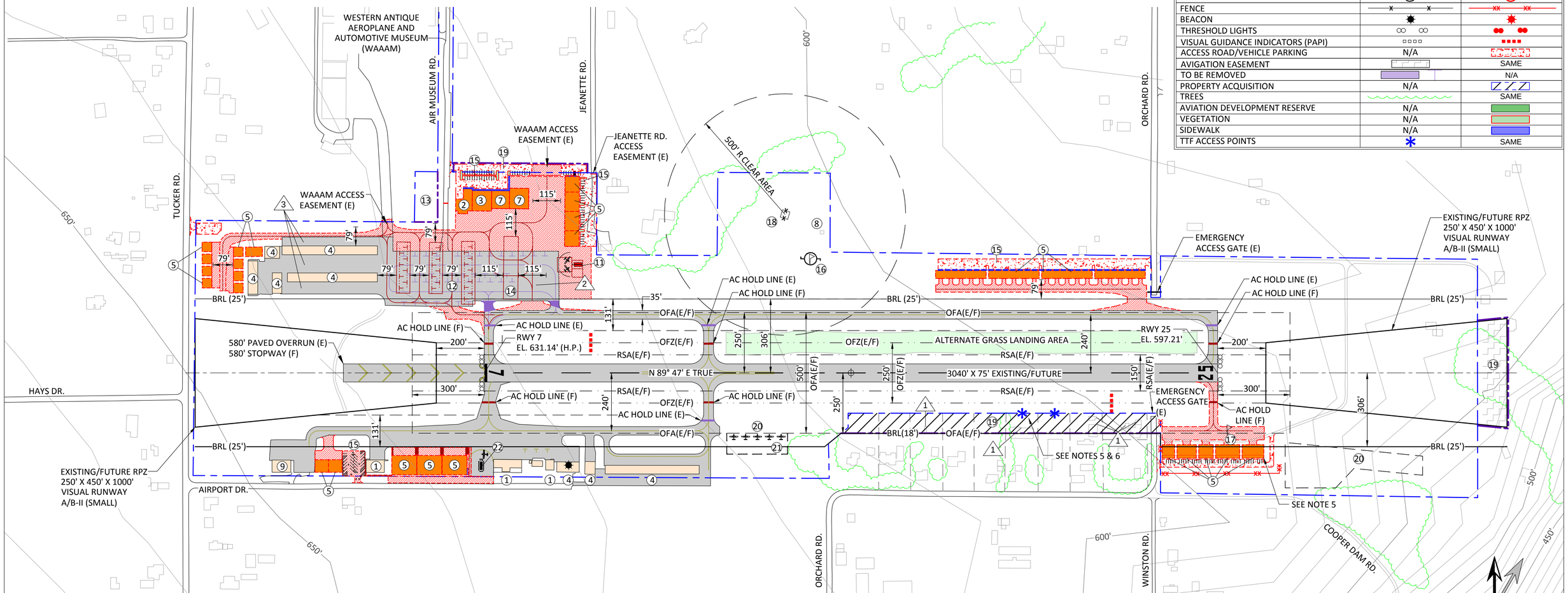
	DESCRIPTION		DESCRIPTION
1	FBO / MAINTENANCE HANGAR (E)	12	TIEDOWN APRON
2	FBO BUILDING (F)	13	WAAAM OVERFLOW AIRCRAFT PARKING (F)
3	MAINTENANCE HANGAR (F)	14	TRANSIENT HELICOPTER PARKING
4	HANGARS (E)	15	AUTO PARKING (F)
5	BOX HANGARS (F)	16	WIND TEE (E)
6	MULTI-UNIT HANGARS (F)	17	SUPPLEMENTAL WIND TEE (E)
7	COMMERCIAL HANGAR (F)	18	AWOS (E)
8	REGULATOR BUILDING	19	PROPERTY TO BE ACQUIRED
9	AGRICULTURAL OPS AREAS	20	GLIDER STORAGE / PARKING AREA (E/F)
10	FUEL LOCATION (E)	21	OVERFLOW PARKING AREA (F)
11	FUEL LOCATION (F)	22	TEMPORARY FUEL LOCATION

NON STANDARD CONDITIONS

NO.	ITEM	DESCRIPTION	DISPOSITION
1	ROFA	SOUTHEAST SIDE RESIDENCES	FUTURE PROPERTY ACQUISITION
2	TAXILANE OFA APRON	TAXILANE CLEARANCES TO PARKED AIRCRAFT (ADG I & ADG II)	RECONFIGURE APRON
3	TAXILANE OFA (HANGARS)	LESS THAN STD. ADG I CLEARANCES	MODIFY WHERE FEASIBLE

LEGEND

	EXISTING	FUTURE
BUILDINGS		
AIRFIELD PAVEMENT		
BUILDING RESTRICTION LINE (BRL)	BRL (E)	BRL (F)
AIRPORT PROPERTY LINE		
RUNWAY SAFETY AREA (RSA)		
OBJECT FREE AREA (OFA)		
OBSTACLE FREE ZONE (OFZ)		
TAXIWAY OBJECT FREE AREA (TOFA)		
RUNWAY PROTECTION ZONE (RPZ)		
GROUND CONTOURS	10'	SAME
AIRPORT REFERENCE POINT (ARP)		SAME
RUNWAY END IDENTIFIER LIGHTS (REIL)		
WIND INDICATOR		
SEGMENTED CIRCLE WIND INDICATOR		
FENCE		
BEACON		
THRESHOLD LIGHTS		
VISUAL GUIDANCE INDICATORS (PAPI)		
ACCESS ROAD/VEHICLE PARKING	N/A	
AVIGATION EASEMENT		SAME
TO BE REMOVED		N/A
PROPERTY ACQUISITION	N/A	
TREES		SAME
AVIATION DEVELOPMENT RESERVE	N/A	
VEGETATION	N/A	
SIDEWALK	N/A	
TTF ACCESS POINTS		SAME



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NOTES:

1. STOPWAY (F) AT WEST END OF RUNWAY WILL INCREASE FUTURE ACCELERATE - STOP DISTANCE AVAILABLE (ASDA) FOR RUNWAY 25 TO 3,620 FEET.
2. HIGH POINT (SURVEYED) ON RUNWAY IS 631.14' MSL. PUBLISHED AIRPORT ELEVATION (FAA A/FD) TO BE UPDATED FOR CONSISTENCY.
3. AIRPORT IS NOT SUBJECT TO 100-YEAR FLOODING.
4. FUTURE STOPWAY AT RUNWAY 7 END REQUIRES DECLARED DISTANCES AND STOPWAY DESIGNATION PUBLISHED IN FAA CHART SUPPLEMENT.
5. AIRPORT USES DEPICTED ON PARCELS ZONED EFU OR RR ARE SUBJECT TO FUTURE COMPREHENSIVE PLAN MAP AMENDMENT AND REZONE APPLICATION(S) AND DETERMINATION(S) BY HOOD RIVER COUNTY.
6. PROPERTY TO BE ACQUIRED TO ALLOW AIRPORT CONTROL OF RUNWAY OBJECT FREE AREA. CONFIGURATION OF PROPERTY TO BE ACQUIRED AND ACCOMMODATION OF EXISTING THROUGH THE FENCE AGREEMENTS WILL BE COORDINATED WITH THE PROPERTY OWNER.

MAGNETIC DEC. 15° 22' EAST (2016 VALUE)

0' 200' 400'

Scale: 1"=200'

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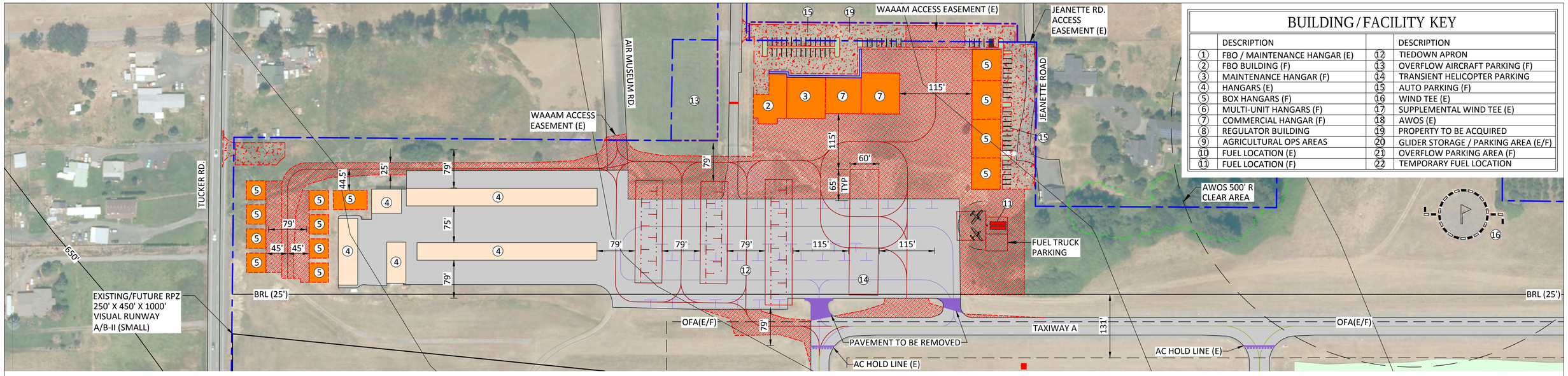
KEN JERNSTEDT AIRFIELD

AIRPORT LAYOUT PLAN

FIGURE NO. -

SHEET NO. 3 OF 11



BUILDING / FACILITY KEY

	DESCRIPTION		DESCRIPTION
1	FBO / MAINTENANCE HANGAR (E)	12	TIEDOWN APRON
2	FBO BUILDING (F)	13	OVERFLOW AIRCRAFT PARKING (F)
3	MAINTENANCE HANGAR (F)	14	TRANSIENT HELICOPTER PARKING
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8	REGULATOR BUILDING	19	PROPERTY TO BE ACQUIRED
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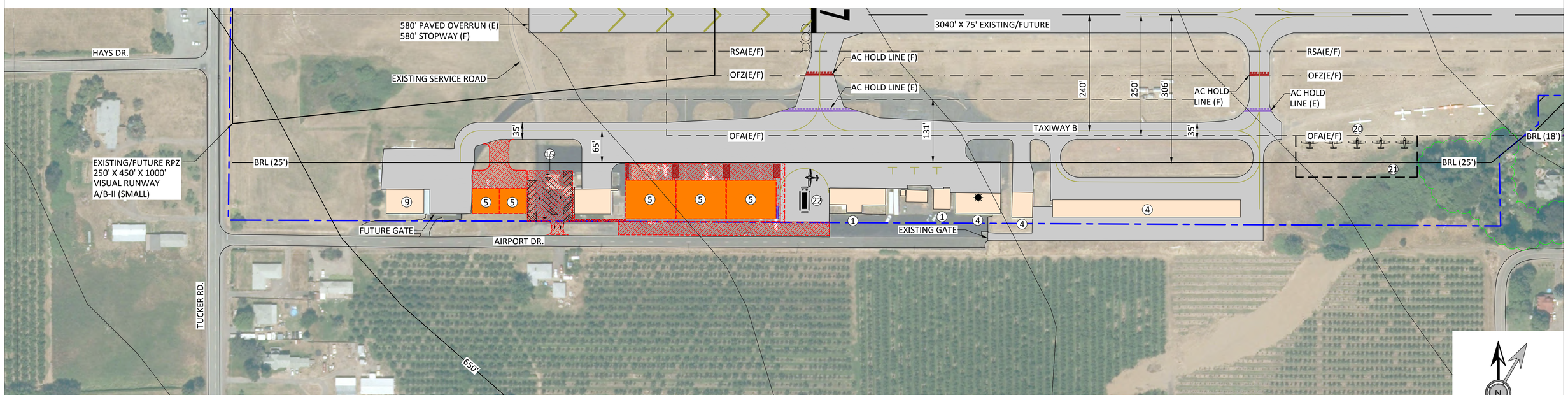
11	FUEL LOCATION (F)	22	TEMPORARY FUEL LOCATION

NORTH APRON



SOUTH APRON

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NOTES:

1. SEE AIRPORT LAYOUT PLAN (SHEET 3) FOR FULL LEGEND.
2. APL FOR SOUTH APRON IS DEFINED BY TAXIWAY OFA.
3. ALTERNATIVE FUELING LOCATION DEPICTED FOR NORTH APRON WOULD ELIMINATE CO-LOCATED HANGAR SITES.

N
MAG
TRUE
MAGNETIC DEC. 15° 22' EAST (2016 VALUE)

0' 100' 200'
Scale: 1"=100'

NO.	DATE	BY	APPR	REVISIONS

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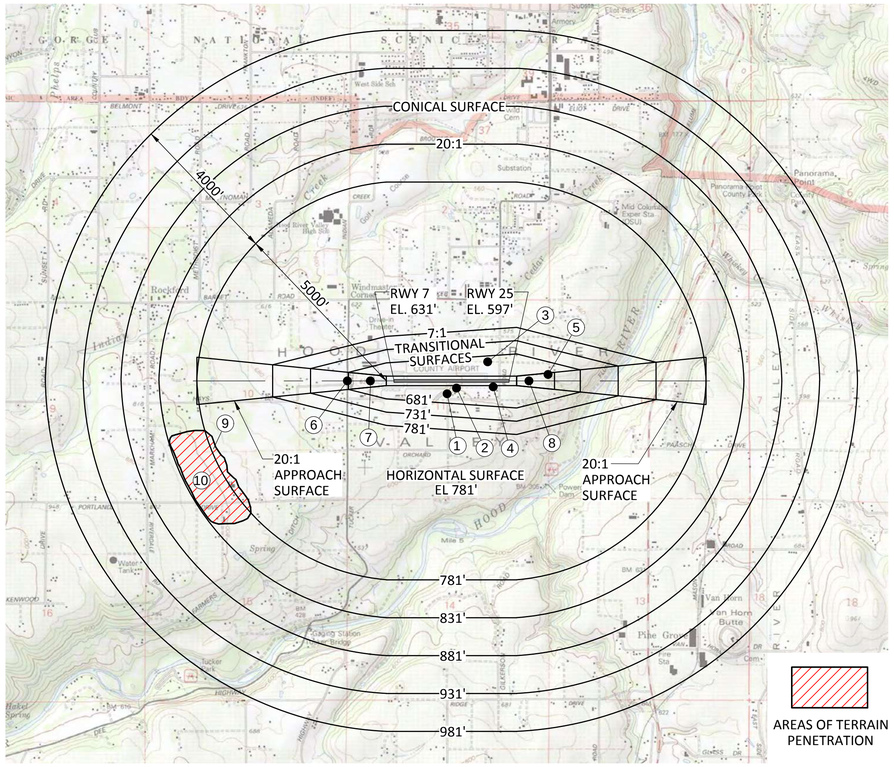
KEN JERNSTEDT AIRFIELD

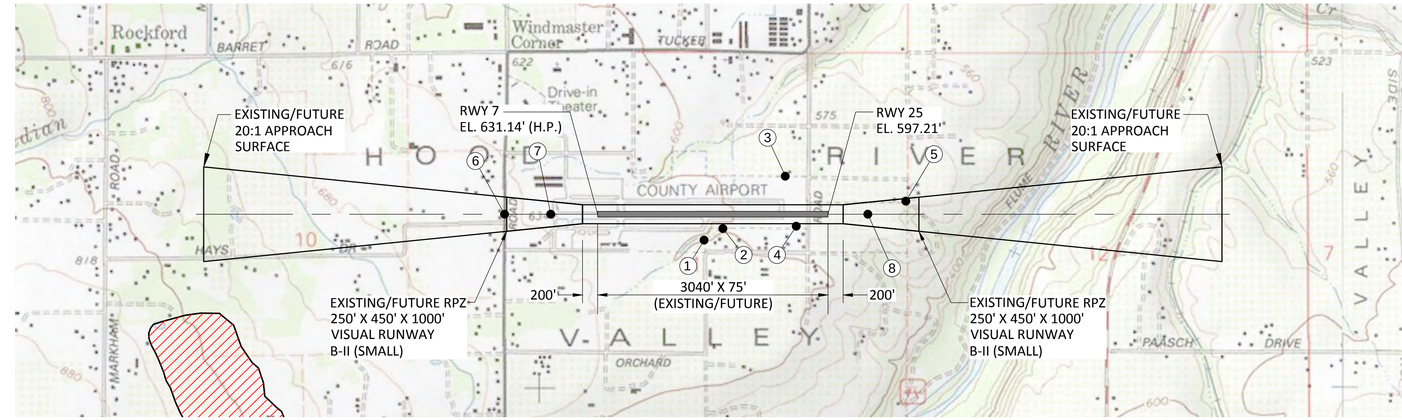
ON - AIRPORT INDIVIDUAL AREA PLANS

FIGURE NO.
-

SHEET NO.
4 OF 11



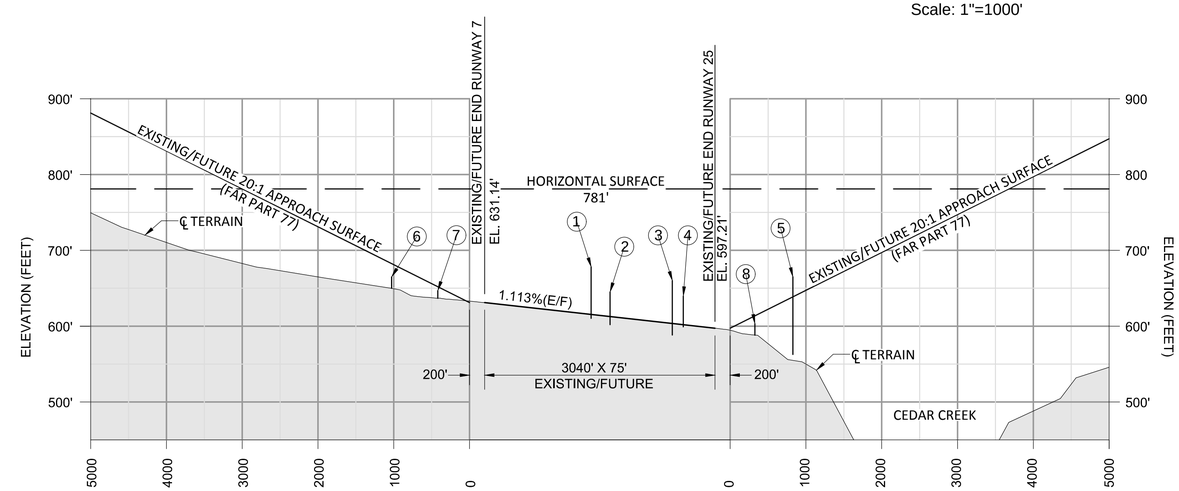
FAR PART 77 PLAN VIEW



RUNWAY 7-25 PLAN VIEW

0' 1000' 2000'

Scale: 1"=1000'



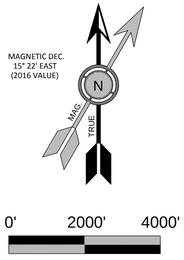
RUNWAY 7-25 PROFILE VIEW

0' 100' 200'

SCALE OF FEET
VERTICAL SCALE 1"=100'

0' 1000' 2000'

SCALE OF FEET
HORIZONTAL SCALE 1"=1000'



0' 2000' 4000'

Scale: 1"=2000'

RUNWAY 7/25

FAR PART 77 DIMENSIONAL STANDARDS

RUNWAY ULTIMATE LENGTH = 3040'
RUNWAY TYPE = UTILITY - VISUAL
PRIMARY SURFACE WIDTH = 250'
APPROACH SURFACE INNER WIDTH = 250'
APPROACH SURFACE OUTER WIDTH = 1,250'
APPROACH SURFACE LENGTH = 5,000'
RADIUS OF HORIZONTAL SURFACE = 5,000'
APPROACH SLOPE = 20:1

OBSTRUCTION CHART

NO.	ITEM	PART 77 SURFACE	MSL ELEV (EST.)	DISTANCE FROM RWY CL	DISTANCE FROM RWY END	AMOUNT OF PENETRATION (ESTIMATED)	AIRPORT PROPERTY	DISPOSITION
1	TREES	TRANSITIONAL	678'	342'	-1405'	-	YES	TOP OR REMOVE
2	TREE	TRANSITIONAL	645'	191'	-1386'	-	NO	TOP OR REMOVE
3	TREE	TRANSITIONAL	660'	501'	-563'	-	NO	TOP OR REMOVE
4	TREES	TRANSITIONAL	639.6'	159'	-418'	-	YES	TOP OR REMOVE
5	TREE W/ ANTENNA	O.C.S., PT77, RPZ	665'	171'	1028'	26'	YES	RELOCATE
6	TUCKER ROAD	APPROACH (RWY 7)	664.8'	0'	1228'	0'	NO	FOR REFERENCE ONLY
7	DIRT ROAD	APPROACH (RWY 7)	646.8'	0'	619'	0'	YES	RELOCATE
8	ORCHARD ROAD	APPROACH (RWY 25)	603'	0'	527'	0'	YES	FOR REFERENCE ONLY
9	TERRAIN	HORRIZONTAL	785'	3487' - 1309'	3773' - 4991'	4'	NO	FOR REFERENCE ONLY
10	TERRAIN	CONICAL	835'	1306' - 3776'	3773' - 5924'	4'	NO	FOR REFERENCE ONLY

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APPROVAL DATE: _____

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BEND OFFICE
1020 SW EMKAY DRIVE., #100
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541.382.2423 FAX

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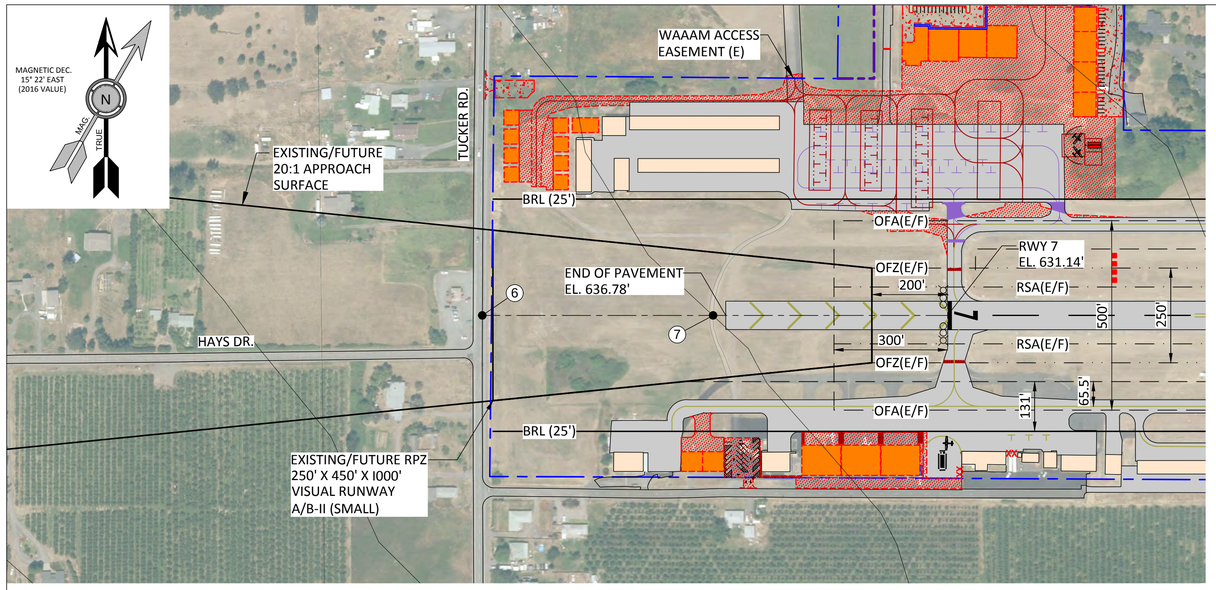
DATE: MARCH 2018		PROJECT NO: 12399009.01	

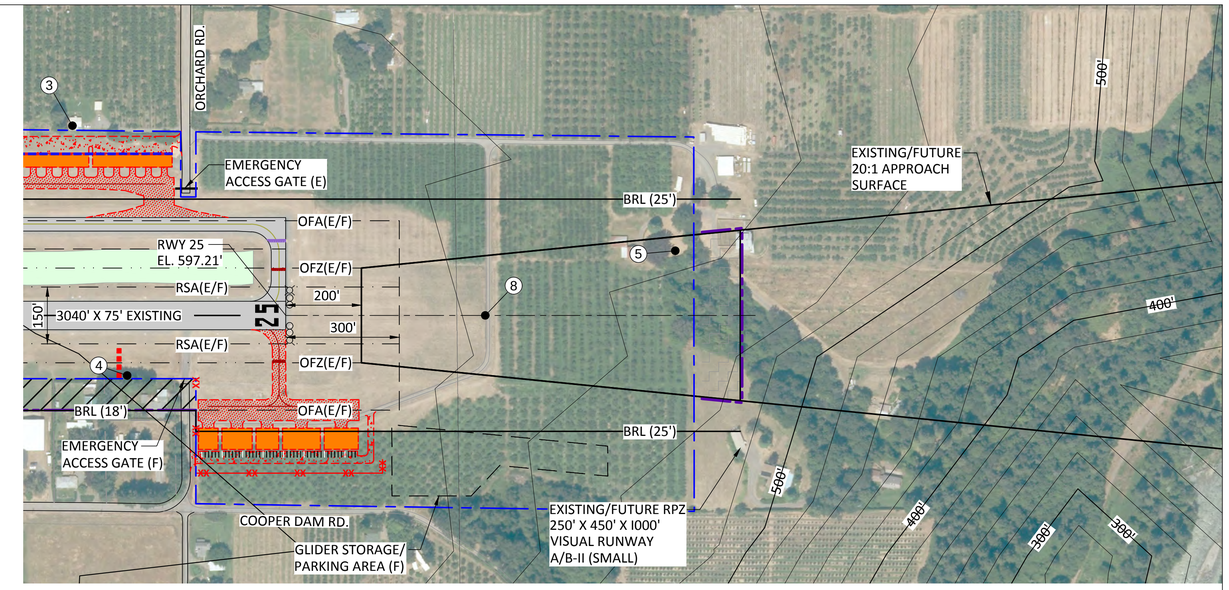
KEN JERNSTEDT AIRFIELD

AIRPORT AIRSPACE PLAN (FAR PART 77)

FIGURE NO.
-

SHEET NO.
5 OF 11

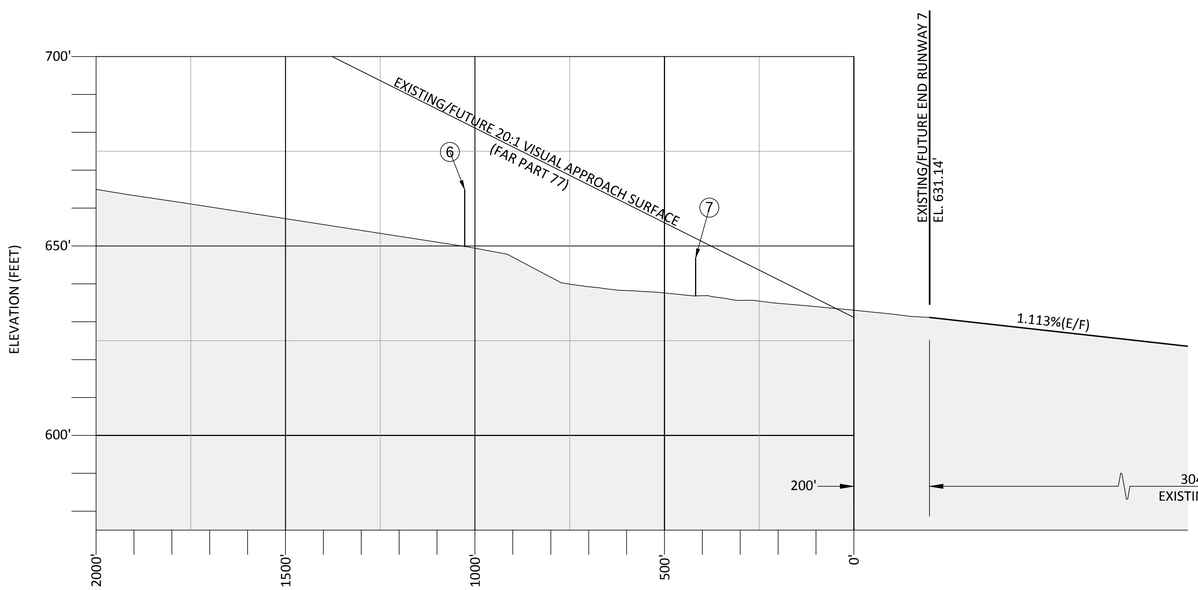


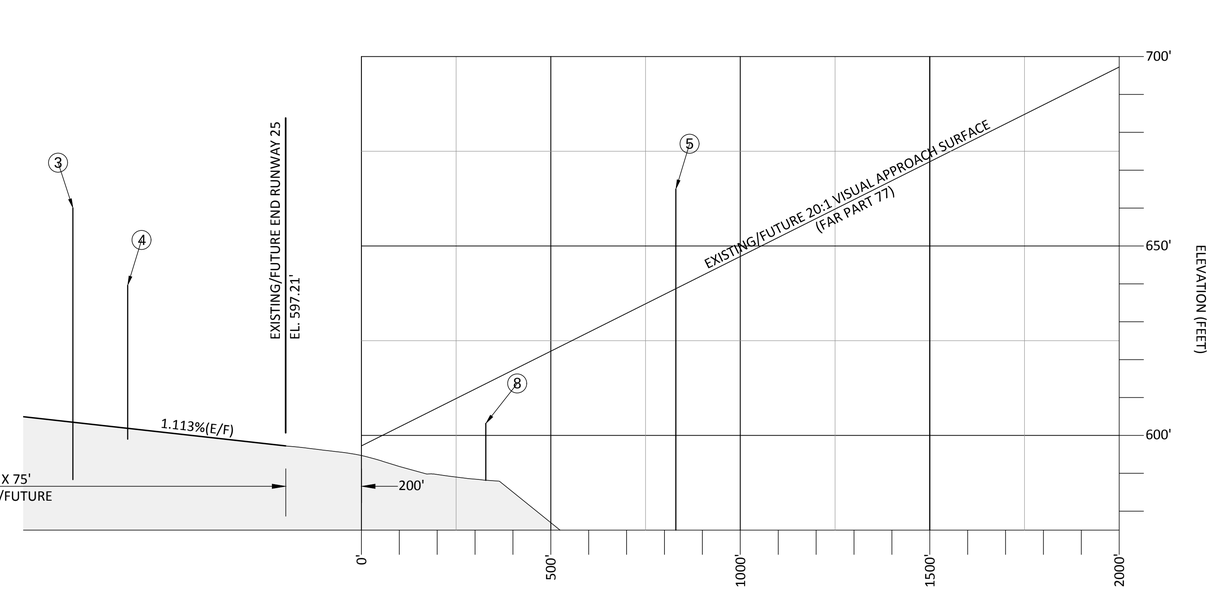


RUNWAY 7-25 PLAN VIEW

0' 200' 400'

Scale: 1"=200'





0' 20' 40'

Vertical Scale: 1"=20'

RUNWAY 7-25 PROFILE VIEW

0' 200' 400'

Horizontal Scale: 1"=200'

NOTE:
1. SEE AIRPORT LAYOUT PLAN (SHEET 3) FOR FULL LEGEND.

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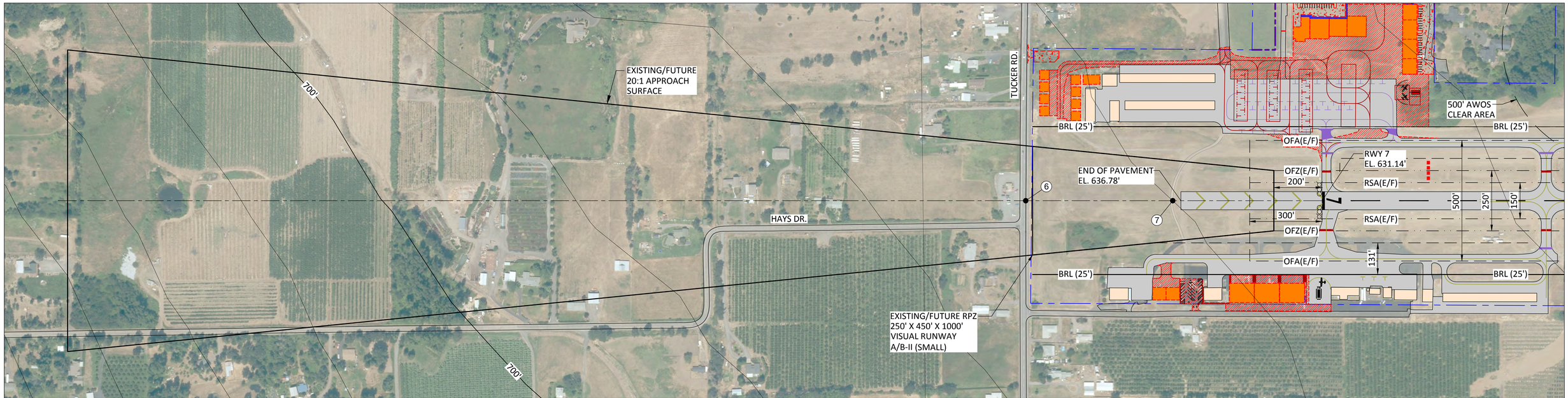
KEN JERNSTEDT AIRFIELD

RUNWAY INNER APPROACH SURFACE / RPZ

FIGURE NO.
-

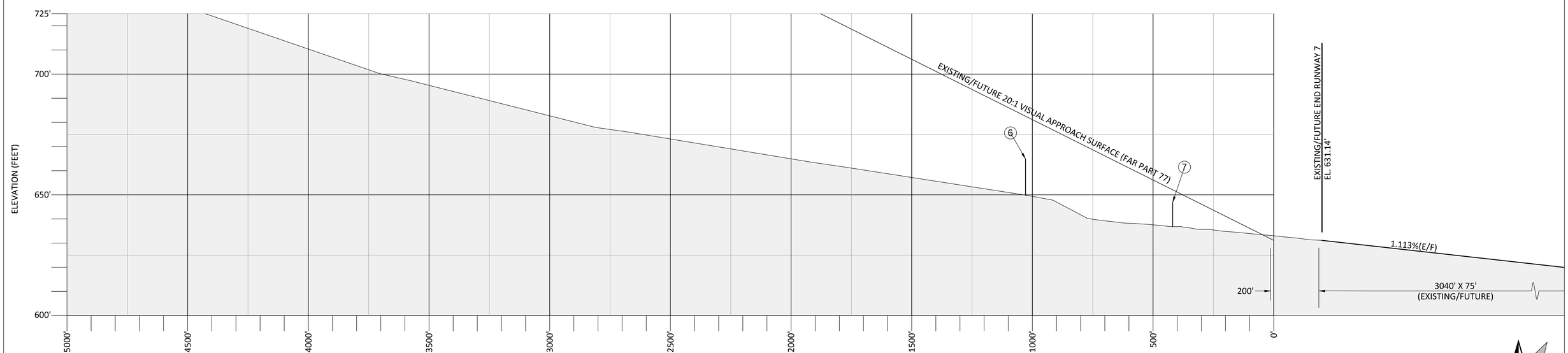
SHEET NO.
6 OF 11



RUNWAY 7 PLAN VIEW

0' 200' 400'

Scale: 1"=200'



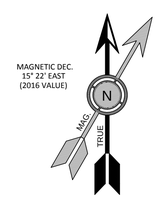
RUNWAY 7 PROFILE VIEW

0' 20' 40'

Vertical Scale: 1"=20'

0' 200' 400'

Horizontal Scale: 1"=200'



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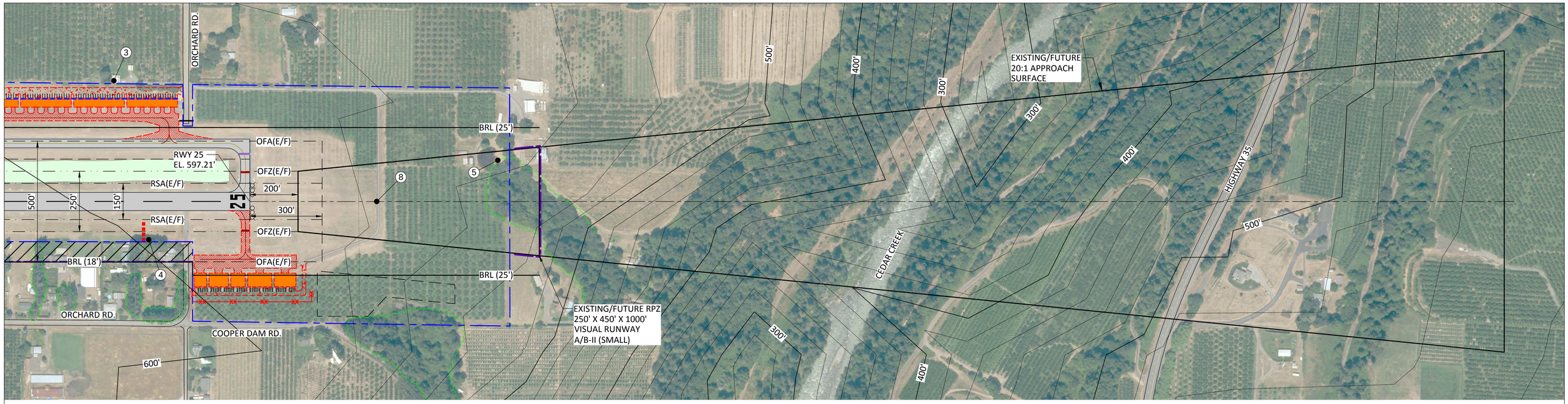
KEN JERNSTEDT AIRFIELD

RUNWAY 7 APPROACH PLAN AND PROFILE

FIGURE NO.
-

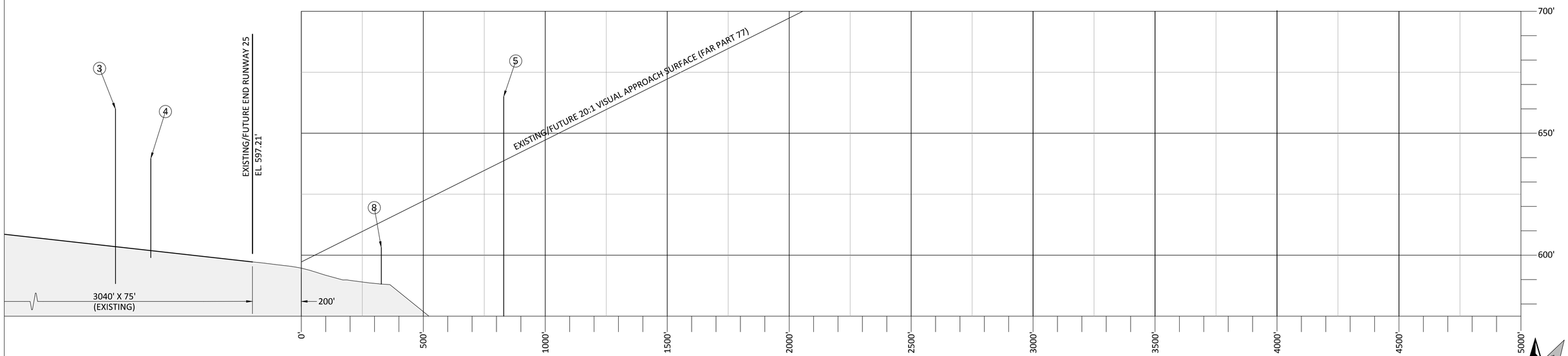
SHEET NO.
7 OF 11



RUNWAY 25 PLAN VIEW

0' 200' 400'

Scale: 1"=200'



RUNWAY 25 PROFILE VIEW

0' 20' 40'

Vertical Scale: 1"=20'

0' 200' 400'

Horizontal Scale: 1"=200'

MAGNETIC DEC.
15° 22' EAST
(2016 VALUE)

N
MAG
TRUE

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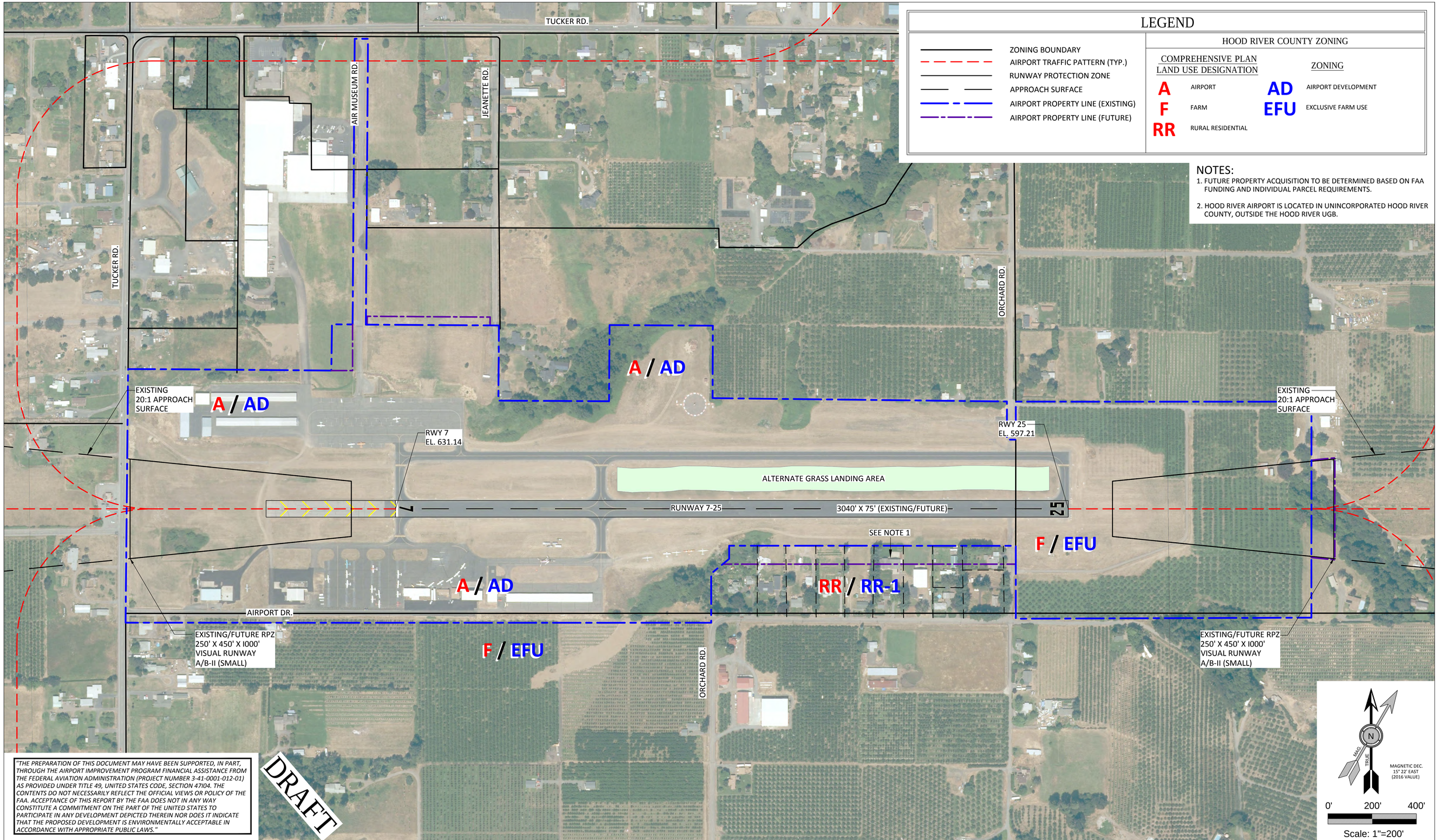
KEN JERNSTEDT AIRFIELD

RUNWAY 25 APPROACH PLAN AND PROFILE

FIGURE NO.
-

SHEET NO.
8 OF 11



LEGEND

- ZONING BOUNDARY
- AIRPORT TRAFFIC PATTERN (TYP.)
- RUNWAY PROTECTION ZONE
- APPROACH SURFACE
- AIRPORT PROPERTY LINE (EXISTING)
- AIRPORT PROPERTY LINE (FUTURE)

HOOD RIVER COUNTY ZONING

COMPREHENSIVE PLAN LAND USE DESIGNATION		ZONING	
A	AIRPORT	AD	AIRPORT DEVELOPMENT
F	FARM	EFU	EXCLUSIVE FARM USE
RR	RURAL RESIDENTIAL		

NOTES:

1. FUTURE PROPERTY ACQUISITION TO BE DETERMINED BASED ON FAA FUNDING AND INDIVIDUAL PARCEL REQUIREMENTS.
2. HOOD RIVER AIRPORT IS LOCATED IN UNINCORPORATED HOOD RIVER COUNTY, OUTSIDE THE HOOD RIVER UGB.

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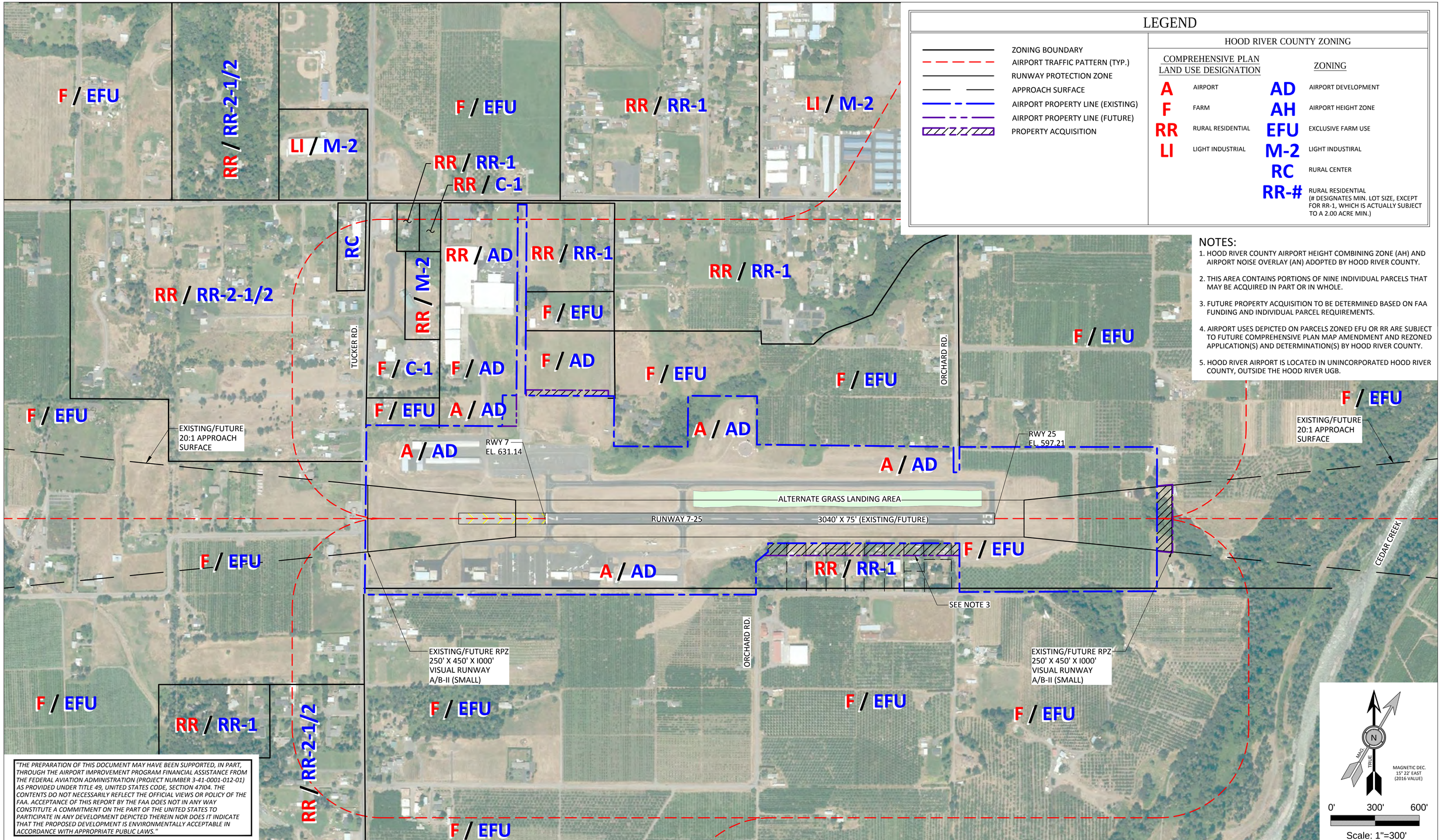
KEN JERNSTEDT AIRFIELD

ON - AIRPORT LAND USE PLAN

FIGURE NO.
-

SHEET NO.
9 OF 11



LEGEND

- ZONING BOUNDARY
- AIRPORT TRAFFIC PATTERN (TYP.)
- RUNWAY PROTECTION ZONE
- APPROACH SURFACE
- AIRPORT PROPERTY LINE (EXISTING)
- AIRPORT PROPERTY LINE (FUTURE)
- PROPERTY ACQUISITION

HOOD RIVER COUNTY ZONING

COMPREHENSIVE PLAN LAND USE DESIGNATION		ZONING	
A	AIRPORT	AD	AIRPORT DEVELOPMENT
F	FARM	AH	AIRPORT HEIGHT ZONE
RR	RURAL RESIDENTIAL	EFU	EXCLUSIVE FARM USE
LI	LIGHT INDUSTRIAL	M-2	LIGHT INDUSTIRAL
		RC	RURAL CENTER
		RR-#	RURAL RESIDENTIAL (# DESIGNATES MIN. LOT SIZE, EXCEPT FOR RR-1, WHICH IS ACTUALLY SUBJECT TO A 2.00 ACRE MIN.)

NOTES:

1. HOOD RIVER COUNTY AIRPORT HEIGHT COMBINING ZONE (AH) AND AIRPORT NOISE OVERLAY (AN) ADOPTED BY HOOD RIVER COUNTY.
2. THIS AREA CONTAINS PORTIONS OF NINE INDIVIDUAL PARCELS THAT MAY BE ACQUIRED IN PART OR IN WHOLE.
3. FUTURE PROPERTY ACQUISITION TO BE DETERMINED BASED ON FAA FUNDING AND INDIVIDUAL PARCEL REQUIREMENTS.
4. AIRPORT USES DEPICTED ON PARCELS ZONED EFU OR RR ARE SUBJECT TO FUTURE COMPREHENSIVE PLAN MAP AMENDMENT AND REZONED APPLICATION(S) AND DETERMINATION(S) BY HOOD RIVER COUNTY.
5. HOOD RIVER AIRPORT IS LOCATED IN UNINCORPORATED HOOD RIVER COUNTY, OUTSIDE THE HOOD RIVER UGB.

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DM	JLS	WMR	AS SHOWN
DATE: MARCH 2018		PROJECT NO: 12399009.01	

KEN JERNSTEDT AIRFIELD

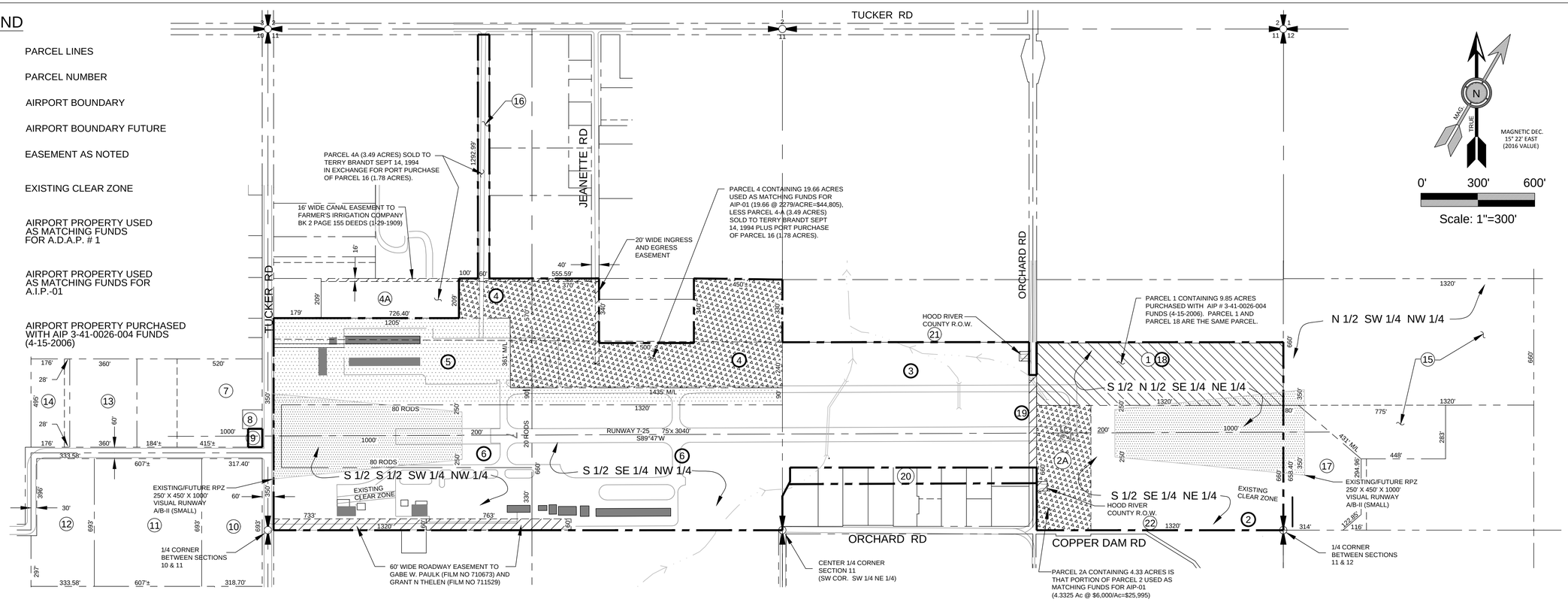
OFF - AIRPORT LAND USE PLAN

FIGURE NO. -

SHEET NO. 10 OF 11

LEGEND

- PARCEL LINES
- (1) PARCEL NUMBER
- AIRPORT BOUNDARY
- AIRPORT BOUNDARY FUTURE
- EASEMENT AS NOTED
- EXISTING CLEAR ZONE
- AIRPORT PROPERTY USED AS MATCHING FUNDS FOR A.D.A.P. # 1
- AIRPORT PROPERTY USED AS MATCHING FUNDS FOR A.I.P.-01
- AIRPORT PROPERTY PURCHASED WITH AIP 3-41-0026-004 FUNDS (4-15-2006)



LAND PARCEL-ACQUIRED FROM		ACRES	RECORDING INFO. DATE	RECORDING INFO. FILM REC. NO.	INTEREST	FEDERAL AGREEMENT	NOTES
(1)	HOOD RIVER COUNTY	9.85±	7-29-76	761560	AVIGATION EASEMENT		SAME PARCEL AS PARCEL 18
(2)	GLENN W. & V. PAULINE MARSH (PARCEL 2 & 2A)	**19.70Ñ**	2-7-78	780240	FEE	AIP-01 (4.33 AC)	
	(CORRECTION DEED) (PARCEL 2 & 2A)	------	2-23-78	780375	------		
	PARCEL 2A	4.3325±	PART OF PARCEL 2	PART OF PARCEL 2	PART OF PARCEL 2	PART OF PARCEL 2	PORTION OF PARCEL 2 USED AS MATCHING FUNDS FOR AIP-01
(3)	HOOD RIVER COUNTY	**20.10Ñ**	7-13-76	761445	FEE		
	(CORRECTION DEED)	------	1-30-79	790198	------		
(4)	EUGENE E. & TALIHAE WRIGHT (PARCEL 4)	**19.66Ñ**	6-3-86	860957	FEE	AIP-01 (19.66 AC)	
	PORT OF HOOD RIVER (PARCEL 4A)	3.49±	9-14-94	950265	FEE		PARCEL 4A SOLD TO TERRY BRANDT
(5)	EUGENE E. & TALIHAE WRIGHT	**15.12Ñ**	5-2-79	790949	FEE	ADAP # 1 (15.12 AC)	
(6)	HOOD RIVER COUNTY	**39.54Ñ**	7-13-76	761445	FEE		
(7)	HOOD RIVER COUNTY	2.61±	7-29-76	761560	AVIGATION EASEMENT		
(8)	HOOD RIVER COUNTY	0.31±	7-29-76	761560	AVIGATION EASEMENT		
(9)	PATSY M. ROTH FORMERLY	0.23±	7-22-77	771700	AVIGATION EASEMENT		PARCEL PURCHASED 1-03-00
	KNOWN AS PATSY M. GRUNKE	0.23±	1-03-00	20000021	FEE		
(10)	ROBERT E. & MATTIE M. SHERRILL	4.84±	8-8-77	771829	AVIGATION EASEMENT		
(11)	ROBERT E. & MATTIE M. SHERRILL	9.67±	8-8-77	771829	AVIGATION EASEMENT		
(12)	ROBERT E. & MATTIE M. SHERRILL	4.81±	8-8-77	771829	AVIGATION EASEMENT		
(13)	HOOD RIVER COUNTY	3.85±	7-29-76	761560	AVIGATION EASEMENT		
(14)	MERIDENE TAYLOR	2.81±	7-20-77	771678	AVIGATION EASEMENT		
(15)	GEORGE & HISAKO TAMURA	24.2±	-------	-------	-------		
(16)	FORREST E. & NAOMI M. ORCUTT	**1.78Ñ**	9-14-94	950266	FEE		
(17)	TED & SHIRLY EKKER	5.0±	-------	-------	-------		
(18)	TERRY BRANDT	**9.85±**	4-15-06	20051903	FEE	PURCHASED UNDER AIP-004 (9.85 AC)	SAME PARCEL AS PARCEL 1
(19)	HOOD RIVER COUNTY	**.66±**	10-8-12	2012043	FEE	AIP-006 (0.66 AC)	ORCHARD RD. VACATION
(20)	MULTIPLE OWNERS (9 PARCELS)	TBD	-	-	FEE	TBD	RUNWAY OFA

PROPERTY DISPOSAL		ACRES	RECORDING INFO. DATE	RECORDING INFO. FILM REC. NO.	INTEREST	FEDERAL AGREEMENT	NOTES
(21)	R.O.W. DEDICATION FOR HOOD RIVER CO.	.065±	10-8-12	21203236	ROAD EASEMENT	(.065 AC)	R.O.W. DEDICATED TO HOOD RIVER CO.
(22)	R.O.W. DEDICATION FOR HOOD RIVER CO.	.065±	10-8-12	21203236	ROAD EASEMENT	(.065 AC)	R.O.W. DEDICATED TO HOOD RIVER CO.

NOTES:

1. THE SECTIONAL INFORMATION ON THIS DRAWING IS A COMPILATION OF VARIOUS SOURCES AND DOES NOT CONSTITUTE A RECORD OF SURVEY.
2. A CERTIFIED LAND SURVEY OF AIRPORT PROPERTY BOUNDARY IS RECOMMENDED TO VERIFY TOTAL AIRPORT ACREAGE.

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KEN JERNSTEDT AIRFIELD

EXHIBIT "A" AIRPORT PROPERTY PLAN

FIGURE NO. -

SHEET NO. 11 OF 11

Chapter 9 – Airport Land Use Compatability

Chapter 9 – Airport Land Use Compatibility

This chapter was prepared jointly by Century West Engineering and BergerABAM, a member of the Century West airport master planning team.

Introduction

The following chapter summarizes land use regulations affecting airport development in Hood River County (County). Land uses, compatibilities, and jurisdictional responsibilities applicable to the Ken Jernstedt Airfield (airport) are discussed below using federal, state, and local regulations. The analysis of nearby land uses is intended to identify potential opportunities and restrictions to airport expansion onto surrounding lands.

The airport is considered a public use airport and is operated by the Port of Hood River (Port). The airport is located approximately one mile south of the City of Hood River urban growth boundary (UGB) in Hood River County, Oregon. Ken Jernstedt Airfield has a **"Category IV - Community General Aviation"** airport designation in the current Oregon Aviation Plan.[1] The defined function of Category IV airports is to accommodate general aviation users and local business activities. This typically includes a variety of piston- and turbine-engine fixed wing aircraft and helicopters.

[1] Oregon Aviation Plan (Oregon Department of Aviation, 2007)

Government Roles in Airports

FEDERAL

The Code of Federal Regulations (CFR) permits the FAA to influence land-use decisions within airport boundaries by approving airport layout plans, and by providing grants to help fund local airport improvements consistent with FAA guidelines. These grants can be used to maintain unobstructed airspace and support aeronautical function. In order to meet FAA guidelines and prevent the obstruction of local airspace, local authorities also adopt regulations limiting the height and the proximity of structures on adjacent lands.

Land use decisions at local airports are administered by local decision-making procedures and determinations are provided by local jurisdictions. Although the FAA does not influence local decisions directly, the agency plays a technical advisory role for local authorities.

Under CFR 14, Part 77, the FAA is permitted to review proposals affecting land uses in close proximity to airports under the Form 7460-1 Notice of Construction or alteration process. This process allows the FAA to address airspace compatibility based on proposed obstructions and/or penetrations of protected airspace by nearby land uses. During this process, the FAA reviews Federal Aviation Regulations (FAR) Part 77, which deals with the safe, efficient use, and preservation of the navigable airspace, terminal instrument procedure surfaces, visual runway traffic patterns, and visual navigation aids, such as lighting systems (e.g. VASI, PAPI, etc.). Developers proposing structures in violation of these air surfaces are issued a Determination of Presumed Hazard to Air Navigation for the consideration of local authorities. If a structure is determined not to violate this airspace, a determination of no objection is issued. The determinations issued by the FAA through the 7460-1 process are not relevant to the compatibility of nearby land uses, but are instead based on the proposed action's penetration of airspace above designated elevations.

The codified regulations of local jurisdictions should include the following language to recognize the FAA's role in local land use policy: "nothing in this chapter shall diminish the responsibility of project proponents to submit a Notice of Construction or Alteration to the Federal Aviation Administration if required in accordance with FAR Part 77, Objects Affecting Navigable Airspace."

Land use guidance for airport-related noise regulations is provided by FAR Part 150. This federal regulation was developed to support the Airport Noise and Capacity Act of 1990 and defines noise policy by setting operating curfews and aircraft restrictions with the intent of standardizing noise controls.

OREGON STATE

The Oregon Department of Land Conservation and Development (DLCD) administers statewide aviation regulations under Chapter 660 Division 13 of the Oregon Administrative Rules (OARs). The DLCD encourages and supports the continued operation and vitality of Oregon airports. The agency seeks to improve the local economy by ensuring the continued operation of airports according to OAR 660-013-0010(1) and OAR 660-013-0010(2). Under statewide administrative rules, local jurisdictions are required to adopt airport compatibility requirements for public use airports (OAR 660-013-0080).

OARs implement Chapter 836 of the Oregon Revised Statutes (ORS) – Airports and Landing Fields – in support of regulating statewide aviation activities. Statewide airport expansion and land use activities are regulated under ORS 836.600 to 836.630 – Local Government Airport Regulations. Oregon statutes are intended to encourage and support the continued operation of local airports because they are considered a matter of statewide concern.

ORS 836.608 - Airport operation as a matter of state concern; local planning documents to recognize airport location; limitations on use; expansion of facility

Local governments are required to recognize airports and their locations in planning documents that establish airport land use regulations on land within designated airport jurisdictions and limit land uses on airport property.

ORS 836.610 - Local government land use plans and regulations to accommodate airport zones and uses

According to this statewide statute, local governments are required to amend land use regulations and comprehensive plans consistent with airport regulations set by the DLCD (ORS 836.16 to 836.619).

ORS 836.616 - Rules for airport uses and activities

This code section sets further guidelines for land uses within the boundaries of state-designated airports.

ORS 836.623 - Local compatibility and safety requirements more stringent than state requirements; criteria; water impoundments; report to federal agency; application to certain activities

This code section permits local governments to develop regulations more stringent than required by the DLCD, with the exception of water impoundments.

LOCAL

Hood River County is responsible for administering land use decisions on the airport and within the airport's immediate vicinity. In order to govern airport land uses, the County has integrated the airport master plan within the Hood River County Comprehensive Plan (the comprehensive plan) and zoning ordinances.

COMPREHENSIVE PLAN

The current Hood River County Comprehensive Plan was adopted on February 21, 1984 to influence and direct land use and development activities within the county, and to ensure compliance with statewide planning goals established by the Land Conservation and Development Commission (LCDC). The comprehensive plan establishes land use designations and is composed of background reports that contain inventories, detailed information, and analyses to ensure compliance with each statewide planning goal. Background reports that protect and guide the development of lands both on and in the vicinity of the airport include Goal 2 (Plan Designations and Acreages) and Goal 12 (Transportation).

Goal 2 - Land Use Planning

The Goal 2 Background Report defines each land use designation established in the comprehensive plan. The "**Airport**" designation, included in Section H, is intended to recognize and maintain the existing airport, its related uses, and allow for future expansion. Lands designated Airport are areas to be built upon or committed to airports and related uses, including areas for expansion or infill, and adjacent areas where surrounding resource lands lack higher density development. The Airport designation is implemented with the Airport Development Zone (AD) and the Airport Height Zone (AH). Parcels or lots designed for airport use have no minimum size, but County development provisions for the AD zone must be met. Land use designations in the vicinity of the airport include "Farm," "Rural Residential," and "Light Industrial."

A detail map (Enlargement C - Hood River UGA) from the 1984 Comprehensive Plan depicts the outer edge of the AH zone extending over the City of Hood River's southern city limits and a large area within the UGB. The remaining portion of the AH zone extends over unincorporated Hood River County. It is noted that the AH zone depicted on the 1984 map was amended in 2009 (Ordinance #295) as part of the update of the airport layout plan that downsized the airspace defined for Ken Jernstedt Airfield to reflect existing/future visual approach capabilities. The amended AH zone has a smaller footprint and extends northward beyond Fairview Drive and Pacific Avenue, approximately 1.7 miles north of the airport, partially within the Hood River city limits and UGB.

Goal 12 - Transportation

Section K of the Goal 12 Background Report was amended to include the airport, airport-related zoning districts, and the airport master plan. The airport serves the forest and fruit industries, two significant drivers of the local economy. Section B of the Goal 12 Background Report states the transportation system should be well balanced and include air transportation.

ZONING ORDINANCE

Hood River County Codes (HRCCs) implement the comprehensive plan by designating local zoning districts. Zones that pertain to airport-related land uses comply with OARs and federal aviation regulations as required by law. The airport and its immediate vicinity are subject to the airport development (AD) zone (HRCC Article 33), airport height combining (AH) zone (HRCC Article 34), and two overlay zones – the airport noise (AN) overlay zone (HRCC Article 37) and the local health hazard (HH) overlay zone (HRCC Article 47). Local zoning districts and overlays are shown on Attachment A. Please note that Attachments A and B are out of date. These attachments do not reflect the current runway location after its eastward shift in 2009. Attachments A and B are included in **Appendix B**.

HRCC Article 33 – Airport development zone (AD)

The purpose of this zone is to protect airport facilities from incompatible land uses. This code section outlines permitted and conditionally permitted uses, limitations of uses, and dimensional standards in the AD zone.

HRCC Article 34 – Airport height combining zone (AH)

The AH zone is intended to protect public safety and welfare and property close to the Ken Jernstedt Airfield and Cascade Locks State Airport by restricting the heights of surrounding land uses. This zone regulates various types of air space obstruction and other hazards which may interfere with safe takeoffs and landings.

HRCC Article 37 – Airport noise overlay zone (AN)

The AN overlay zone regulates construction standards close to the airport. These rules apply in areas of 65 or greater Noise Decibel Levels (NDL) and regulate noise level reduction standards required by the Oregon Airport Planning Rule (OAR-660-013-0080[1][b]).

HRCC Article 47 – Health hazard overlay zone (HH)

Although the airport is located within the HH overlay zone, this overlay is not specific to airport development. The HH overlay is incorporated in areas declared to be public health hazards as a result of inadequate sewage disposal. The purpose of the overlay is to design and construct sanitary sewer systems to the minimum size necessary to serve the health hazard area.

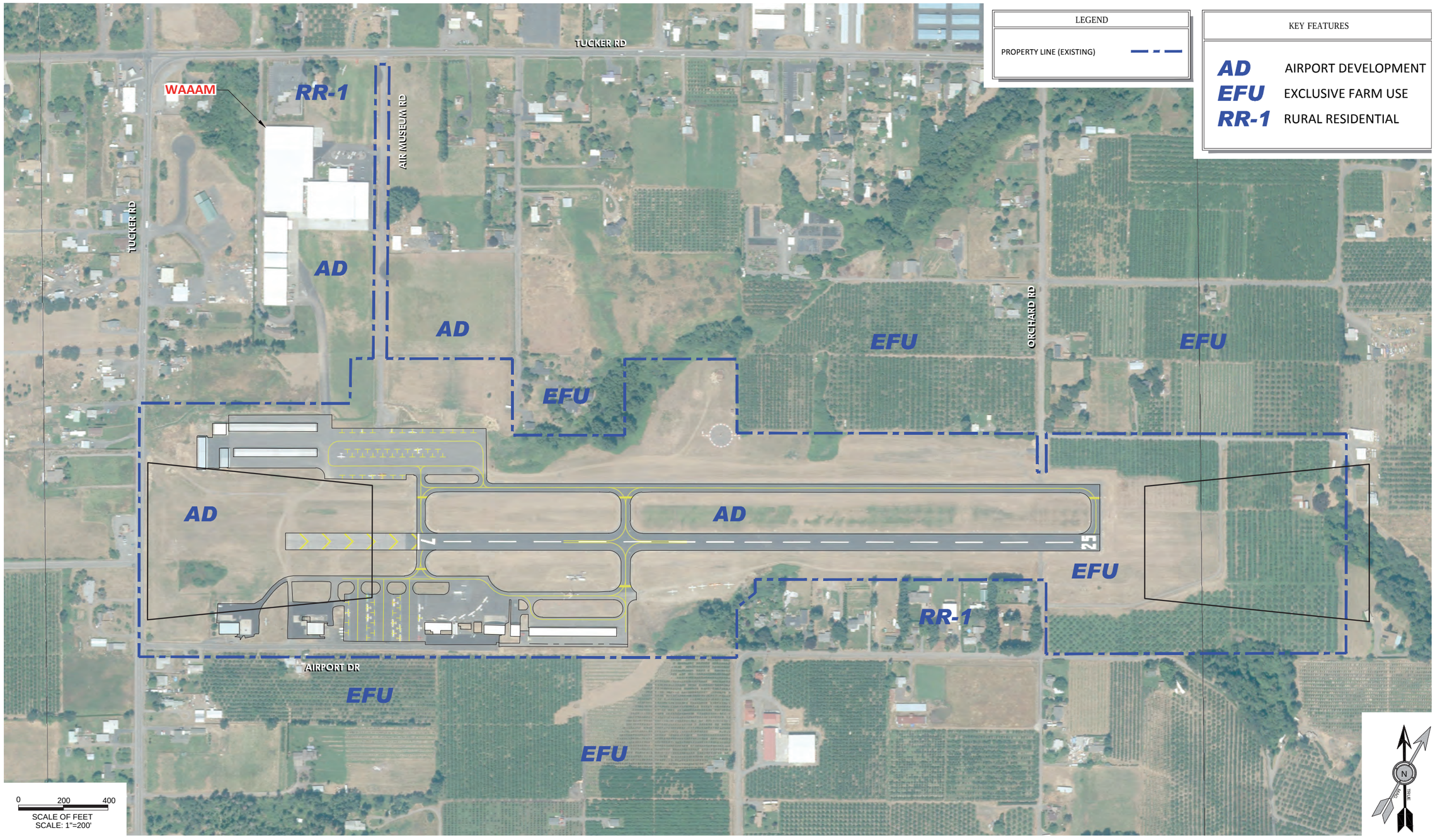
AIRPORT AND SURROUNDING ZONING

The airport is zoned AD with adjacent lands consisting primarily of exclusive farm use (EFU). Land uses in these areas include agriculture (primarily orchards) and agriculture-related structures. Other uses in the vicinity of the airport include residential dwellings. Area businesses include airport-related and non-

airport related commercial uses served by Airport Road and Highway 281. Additionally, the area includes public uses such as the Western Antique Aeroplane and Automobile Museum (WAAAM). Uses west of Highway 281 include an auto service station and the Twin Peaks Restaurant.

The AD zone is focused primarily on airport development and is located adjacent to four County zoning districts. They include the EFU, commercial (C-1), rural residential (RR), and light industrial (M-2) zones. Because these areas border the airport, they may be of interest for airport expansion. Of these adjacent designations, the M-2 zone does not permit airport development. Attachment A shows the current County zoning and overlays in the airport's vicinity.

Figure 9-1 depicts current land use and zoning for the airport vicinity.



KEN JERNSTEDT AIRFIELD- HOOD RIVER | AIRPORT MASTER PLAN

ZONING MAP | **FIG. 9-1**

CENTURY WEST ENGINEERING

AIRPORT DEVELOPMENT (AD)

The airport is located on approximately 95 acres of land zoned AD and EFU (see following section regarding EFU-zoned area of airport). The purpose of this zone is to protect airport facilities from incompatible uses, provide land for future airport expansion, and preserve adjacent lands for future air-related commercial and light industrial uses. Therefore, expansion onto lands zoned AD can accommodate airport growth. Uses allowed outright within this zone include those specific to functioning airports, and the County has allocated portions of the airport's vicinity for airport development. The AD zone permits uses also allowed in the M-2 and industrial (M-1) zones with an approved County conditional use permit. These uses include manufacturing, repairing, compounding, processing, packing or storage, and wholesale distributing facilities. Airport expansion into M-2 is not currently allowed. Any plans to expand into the M-2 zone may require rezoning to AD, or an M-2 zone text amendment to allow airport uses.

COUNTY ZONING AMENDMENT - 2009

The County approved a zoning revision in May 2009 that conditionally permits public airports to expand onto lands zoned EFU (comprehensive plan amendment 08-0116). The Port requested this amendment to Article 7 of the HRCC to permit a 550-foot eastward runway shift recommended in the 2009 Ken Jernstedt Airfield Master Plan. In order to accommodate the runway shift, the Port acquired parcels 1000 and 1100 located east of the existing runway. A conditional use under HRCC 7.40(Y) is recommended for any future airport expansions onto EFU lands.

Exclusive Farm Use (EFU)

Zoning in the vicinity of the airport consists primarily of EFU. EFU-designated parcels east of Highway 281 and within a quarter mile of the airport total approximately 288 acres. Local land use regulations (HRCC 7.40[Y]) conditionally permit the expansion of airports. A rezone can also be requested; however, a Goal 3 (Agricultural Lands) exception and public hearings will be required. Oregon Statewide Planning Goal 3 protects EFU lands from non-farm uses to prevent the loss of land for agriculture, an industry vital to Oregon's economy. Therefore, rezoning EFU lands with high value crops (orchards) is difficult to justify, and is not recommended.

Commercial (C-1)

Airports and airport-related development are not typically located within the commercial zone (C-1). In fact, airport development is considered a conditionally permitted use on these lands (HRCCs 21.10[A], 12.20[A], and 10.20[A]). Parcels zoned for C-1 activities are located north of the airport between Highway 281 and WAAAM. These parcels total approximately 14 acres and generally contain retail and professional service establishments unrelated to functioning airports. The businesses close to the airport include the All Animal Hospital and Fastenal.

Rural Residential (RR)

The RR zone is designated for residential development outside the City of Hood River urban growth boundary. Parcels zoned RR are intended to maintain a semi-rural atmosphere for the development of residential lands. Consistent with these intentions, priority is given to residential uses first, with agricultural as an accessory use.

Airports are permitted conditionally within the RR zone per HRCC 15.40(F). Residential development and airports are not usually considered compatible land uses. Airports and their vicinities contain elevated noise levels resulting from inbound and outbound air traffic. High levels of noise are typically not considered suitable environments for residential development, however some neighbors are airport users and enthusiasts that elect to reside proximate to the airport. Therefore, the Port should consider residential impacts and compatibility if it elects to consider airport expansion onto adjacent residential lands. Lands zoned RR total approximately 50 acres north of the airport (south of Highway 281) and 9 acres south of the runway.

Light Industrial (M-2)

The M-2 zone does not permit airport expansion. The M-2 zone is intended to provide lands for manufacturing or other industries which, because of their characteristics, can be permitted in relatively close proximity to residential, commercial, and farm zones. Generally, uses permitted within this zone consist of manufacturing, assembly, warehousing, and related businesses. Although light industrial uses are permitted conditionally on lands zoned AD, airports are neither permitted nor permitted conditionally within this zone. If the Port chooses to pursue airport expansion onto M-2 lands, an amendment to the zoning ordinance to include airport development as a permitted or conditional use is required. Alternatively, the Port could request a zone change to AD, airport development. Parcels zoned M-2 are located north of the airport but south of Highway 281 and total approximately 7 acres.

OVERLAY DISTRICTS

Airport Height Combining Overlay (HRCC Article 34)

The AH overlay is a 3-D overlay of imaginary height restrictive surfaces. These surfaces are located adjacent to the airport and extend approximately 2 miles north, south, east, and west of the airport. The height limitations of the overlay, described in HRCC Article 34, are intended to prevent objects from entering the traveled way of incoming and exiting aircraft. These code provisions apply to all land located within the AH overlay (see Attachment A). A detailed discussion of each air-related surface follows below.

Primary Surface

The primary surface is centered longitudinally on the runway. It extends 200 feet beyond each end of the runway and extends125 feet from runway centerline on each side.

Approach Surface

The approach surface slopes 20 feet outward for each foot upward (20:1). It begins at the same elevation of as the end of the primary surface. The approach surface extends horizontally 5,000 feet from the end of the runway primary surface.

Transitional Surface

The slopes of the transitional surface extend 7 feet outward for each foot upward (7:1). The slope begins at the same elevation as the primary surface and the approach surface, and extends to a height of 150 feet above the airport.

Horizontal Surface

The horizontal surface extends 5,000 feet from the center of each runway end. It begins where the transitional surface reaches a vertical height of 150 feet.

Conical Surface

The conical surface slopes 20 feet outward for each foot upward (20:1). It extends 4,000 feet from the beginning of the periphery of the horizontal surface. Its elevation increases from 150 feet to 350 feet above the airport's elevation.

Runway Protection Zone

The runway protection zone (RPZ) extends 1,000 feet from the ends of the runway (beginning 200 feet beyond the runway threshold) and is the trapezoidal shape centered on the extended runway centerline. The inner width of the RPZ is the same as the width of the primary surface. The outer width of the RPZ is a function of the type of aircraft and specified approach visibility associated with the runway end.

Airport Noise Overlay (HRCC Article 37)

The airport noise overlay (AN) circles the outside of the airport approximately 250 feet from the edge of the runway. Uses permitted in the underlying base zone are permitted in the AN overlay with the exception of new schools, music venues, amphitheaters, and zoos. If new structures are proposed in this overlay, additional construction standards to mitigate noise are required. These standards vary depending

on the proposed use or redevelopment. The permissible NDLs in the AN overlay range from 65 to 75. Please see Attachment B for further details on noise overlay zone locations and standards.

Health Hazard Overlay (HRCC Article 47)

The airport and adjacent lands are located within a health hazard overlay (HH) zone. The HH overlay is located approximately three-quarters of a mile northwest, northeast, and southwest of the airport. As stated in HRCC 47.10, "the purpose of the [HH zone] is to ensure that sewer systems installed in areas declared as public health hazards, as a result of a sewage problem, are designed and constructed to the minimum size necessary to serve the health hazard area and are restricted to those uses specifically allowed under the current Oregon Administrative Rules regarding Goal 11." HH zones are a basis for extending sanitary sewer service outside the City of Hood River urban growth boundary. Although this overlay will not directly impact airport expansion, it does provide precedent for extra-territorial utility expansion in the airport vicinity. Short of a health hazard caused by failing septic systems, it is unclear if utility extensions can be provided to serve airport growth on County lands.

ZONE CHANGE

The Port may request a County zone or text change amendment to potentially permit airport expansion on all lands not zoned AD. However, a request to rezone EFU land is not recommended given that an exception to Statewide Planning Goal 3 (Agricultural Lands) would be difficult to justify.

A Goal exception requires notice to DLCD, public hearings, and approval from the Hood River County Planning Commission and the Board of County Commissioners. The Port would need to demonstrate that the land subject to the Goal exception is either (1) physically developed to the extent that it is no longer available for uses allowed by the Goal or (2) is irrevocably committed to uses not allowed by the applicable Goal because existing adjacent uses and other relevant factors make uses allowed by the applicable Goal impracticable. Lands zoned EFU and located adjacent to the airport would not easily meet this criteria. They are considered high value farm land (orchards). Therefore, a zone change from EFU to AD airport development is not recommended at this time.

Summary and Recommendations

Hood River County's comprehensive plan and zoning provisions were developed proactively to support the airport. Many of the zoning designations in the vicinity of the airport permit airport-related development outright, or allow it through the conditional use process. The exception to this standard is the M-2 zone, which does not permit or conditionally permit airport development.

The following strategies may be considered to support airport-related expansion:

- Request a conditional use permit consistent with HRCC 7.40(Y) for any airport uses proposed on EFU lands;
- A rezone of EFU lands to AD, airport development is not recommended. A rezone of these lands will require a Statewide Goal 3 (Agricultural Lands) exception;
- If appropriate, the Port may consider rezoning a portion of adjacent rural residential parcels to airport development if airport expansion onto residential lands is deemed necessary by the Port;
- If airport uses are proposed on M-2 lands, a rezone to AD, airport development, or a text amendment change to allow airport uses in the M-2 zone would be required;
- Review comprehensive plan land use goals and policies periodically for their compliance with Oregon land use regulations and consistency with the current airport master plan and airport layout plan; and
- Update the Hood River County planning maps and GIS webmaps with current FAA approved airport layout plan drawing set.

Chapter 10 – FAA Compliance Review and Solid Waste Recycling Plan

Chapter 10 – FAA Compliance Review and Solid Waste Recycling Plan

Introduction

This chapter discusses the elements associated with the operation and management of Ken Jernstedt Airfield, as a federally obligated airport. The Federal Aviation Administration (FAA) encourages airport sponsors to establish and implement programs that promote sound operating practices and ongoing compliance with regulatory requirements. The FAA currently recommends that compliance be addressed during the airport planning process through the review of airport plans and documents including: an approved Airport Layout Plan, Exhibit" A" Property Map, airport ordinance, zoning ordinances, rules and regulations, minimum standards, airport budgets, leases, easements, permits, and other documents.

Airport compliance review is ultimately the responsibility of the FAA and the findings in the Master Plan represent a snapshot of the specific point in time when the Master Plan was prepared. The review presented in this document is not all encompassing, and does not serve as a substitute for FAA's ultimate oversight role.

Port of Hood River Compliance

The Port of Hood River maintains a high degree of control over the operation of Ken Jernstedt Airfield. The port meets all applicable financial reporting and record keeping requirements. They employ a variety of "best practices" including: periodic review of market rates and fees, land appraisals, formal

procurement and contracting practices, coordination with adjacent land owners (navigation easements), local government (land use planning, zoning), state government (airport overlay zoning, environmental agencies, etc.), and tribal government.

FAA Compliance Overview

A management program based on the FAA's "Planning for Compliance" guidance and the adoption of additional airport management "Best Practices" is recommended to address FAA compliance requirements and avoid noncompliance, which could have significant consequences.

Airport management "Best Practices" are developed to provide timely information and guidance related to good management practices and safe airport operations for airport managers and sponsors. The practices outlined herein are designed for use by the Port of Hood River for evaluating and improving their current and future operation and management program.

Airport sponsors must comply with various federal obligations through agreements and/or property conveyances, outlined in **FAA Order 5190.6B**, Airport Compliance Manual. The contractual federal obligations a sponsor accepts when receiving federal grant funds or transfer of federal property can be found in a variety of documents including:

- Grant agreements issued under the Federal Airport Act of 1946, the Airport and Airway Development Act of 1970, and Airport lmprovement Act of 1982. Included in these agreements are the requirement for airport sponsors to comply with:
    - Grant Assurances;
    - Advisory Circulars;
    - Application commitments;
    - FAR procedures and submittals; and
    - Special conditions.
- Surplus airport property instruments of transfer;
- Deeds of conveyance;
- Commitments in environmental documents prepared in accordance with FAA requirements; and
- Separate written requirements between a sponsor and the FAA.

Land use compliance and compatible land use planning is often a significant compliance issue for airports. Compliance and suggested best practices are discussed under the following subheadings in this chapter:

- Airport Compliance with Federal and State Grant Assurances;
- Environmental Compliance;
- Airport User Compliance; and
- Other Airport Operational Policies and Procedures.

Airport Compliance with Grant Assurances

As a recipient of both federal and state airport improvement grant funds, the Port of Hood River is contractually bound to various sponsor obligations referred to as "Grant Assurances", developed by the FAA and the Oregon Department of Aviation. These obligations, presented in detail in federal and state grants and state statute and administrative codes, document the commitments made by the airport sponsor to fulfill the intent of the grantor (FAA and State of Oregon) required when accepting federal and/or state funding for airport improvements. Failure to comply with the grant assurances may result in a finding of noncompliance and/or forfeiture of future funding. Grant assurances and their associated requirements are intended to protect the significant investment made by the FAA, State, and Port to preserve and maintain the nation's airports as a valuable national transportation asset, as mandated by Congress.

FAA GRANT ASSURANCES

The FAA's Airport Compliance Program defines the interpretation, administration, and oversight of federal sponsor obligations contained in grant assurances. The Airport Compliance Manual defines policies and procedures for the Airport Compliance Program. Although it is not regulatory or controlling with regard to airport sponsor conduct, it establishes the policies and procedures for FAA personnel to follow in carrying out the FAA's responsibilities for ensuring compliance by the sponsor.

The Airport Compliance Manual states the FAA Airport Compliance Program is: "…designed to monitor and enforce obligations agreed to by airport sponsors in exchange for valuable benefits and rights granted by the United States in return for substantial direct grants of funds and for conveyances of federal property for airport purposes. The Airport Compliance Program is designed to protect the public interest in civil aviation. Grants and property conveyances are made in exchange for binding commitments (federal obligations) designed to ensure that the public interest in civil aviation will be served. The FAA bears the important responsibility of seeing that these commitments are met. This order addresses the types of commitments, how they apply to airports, and what FAA personnel are required to do to enforce them."

To better understand the intent of the FAA Compliance Program, it is important to understand the FAA's goals for a national airport system. The national airport system is currently known as the National Plan of Integrated Airport Systems (NPIAS), which has historic origins dating back to the 1946 Federal Airports Act. The airport system has evolved through several legislative updates in concert with changes in the organization and scope of the FAA. The NPIAS was adopted as part of the Airport and Airway Development Act of 1982, replacing the National Airport System Plan (NASP), created by earlier legislation. There are approximately 2,500 general aviation airports and 800 commercial service airports in the NPIAS.

According to the FAA, cooperation between the FAA, state, and local agencies should result in an airport system with the following attributes:

- Airports should be safe and efficient, located at optimum sites, and be developed and maintained to appropriate standards;
- Airports should be operated efficiently both for aeronautical users and the government, relying primarily on user fees and placing minimal burden on the general revenues of the local, state, and federal governments;
- Airports should be flexible and expandable, able to meet increased demand and accommodate new aircraft types;
- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long term;
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and the requirements of residents in neighboring areas;
- Airports should be developed in convert with improvements to the air traffic control system;
- The airport system should support national objectives for defense, emergency readiness, and postal delivery;
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20 miles of travel to the nearest NPIAS airport; and
- The airport system should help air transportation contribute to a productive national economy and international competitiveness.

FAA Airport Improvement Program (AIP) grant assurances are summarized and categorized in **Table 10-1**. While sponsors should understand and comply with all grant assurances, there are several assurances that are common and recurring issues for airport sponsors throughout the country. These are summarized in more detail below. A complete description of current AIP grant assurances is provided in **Appendix C**. It is important to note that the assurances (and corresponding numbers) are applied to non-airport sponsors undertaking noise compatibility program projects and planning agency sponsors. These can also be found in the AIP under grant assurances.

TABLE 10-1: SUMMARY OF FAA AIP GRANT ASSURANCES (AIRPORT SPONSOR ASSURANCES 3/2014)

GRANT ASSURANCE NO.	GENERAL AIRPORT	PROJECT PLANNING / DESIGN & CONTRACTING	AIRPORT OPERATIONS AND LAND USE	DAY TO DAY AIRPORT MANAGEMENT	PROJECT CONSTRUCTION	LEASES & FINANCIAL	OTHER
1. General Federal Requirements	■						
2. Responsibility and Authority of the Sponsor		■					
3. Sponsor Fund Availability		■					
4. Good Title	■						
5. Preserving Rights and Powers	■						
6. Consistency with Local Plans		■					
7. Consideration of Local Interest		■					
8. Consultation with Users		■					
9. Public Hearings		■					
10. Metropolitan Planning Organization		■					
11. Pavement Preventative Maintenance			■				
12. Terminal Development Prerequisites							■
13. Accounting System, Audit, and Record Keeping Requirements		■					
14. Minimum Wage Rates		■					
15. Veteran's Preference		■					
16. Conformity to Plans and Specifications		■					
17. Construction Inspection and Approval					■		
18. Planning Projects		■					
19. Operations and Maintenance			■				
20. Hazard Removal and Mitigation			■				
21. Compatible Land Use			■				

GRANT ASSURANCE NO.	GENERAL AIRPORT	PROJECT PLANNING / DESIGN & CONTRACTING	AIRPORT OPERATIONS AND LAND USE	DAY TO DAY AIRPORT MANAGEMENT	PROJECT CONSTRUCTION	LEASES & FINANCIAL	OTHER
22. Economic Nondiscrimination				■			
23. Exclusive Rights				■			
24. Fee and Rental Structure						■	
25. Airport Revenues						■	
26. Reports and Inspections				■			
27. Use by Government Aircraft							■
28. Land for Federal Facilities							■
29. Airport Layout Plans	■						
30. Civil Rights		■					
31. Disposal of Land	■						
32. Engineering and Design Services		■			■		
33. Foreign Market Restrictions		■					
34. Policies, Standards and Specifications		■					
35. Relocation and Real Property Acquisition		■					
36. Access by Intercity Bus							■
37. Disadvantaged Business Enterprises		■			■		
38. Hangar Construction				■			
39. Competitive Access							■

As the airport sponsor, the Port of Hood River is responsible for the direct control and operation of Ken Jernstedt Airfield. Familiarity with, proper monitoring and implementation of sponsor obligations and FAA grant assurances, is key to maintaining compliance. The Airport Compliance Manual and ongoing communication with the FAA Northwest Mountain Region Compliance Office are both excellent resources for the airport sponsor when addressing policy and compliance.

DURATION

The terms, conditions, and assurance of a grant agreement with the FAA remain in effect for the useful life of a development project, which is typically 20 years from the receipt of the last grant. However, terms, conditions, and assurances associated with land purchased with federal funds do not expire.

The airport sponsor should have a clear understanding of and comply with all assurances. The following sections describe the selected assurances in more detail.

Project Planning, Design and Contracting

Sponsor Fund Availability (Assurance #3)

Once a grant is given to an airport sponsor, the receiving sponsor commits to providing the funding to cover their portion of the total project cost. Currently this amount is ten percent of the total eligible project cost, although it may be higher depending on the particular project components or makeup. Once the project has been completed, the receiving airport also commits to having adequate funds to maintain and operate the airport in the appropriate manner to protect the investment in accordance with the terms of the assurances attached to and made a part of the grant agreement.

Consistency with Local Plans (Assurance #6)

All projects must be consistent with city and county comprehensive plans, transportation plans, zoning ordinances, development codes, and hazard mitigation plans. The airport sponsor and planners should familiarize themselves with local planning documents before a project is considered to ensure that all projects follow local plans and ordinances.

In addition to understanding local plans, airport sponsors should be proactive in order to prevent noncompliance with this assurance. The airport sponsor should assist in the development of local plans that incorporate the airport and consider its unique aviation related needs. Sponsor efforts should include the development of goals, policies, and implementation strategies to protect the airport as part of local plans and ordinances.

Accounting System Audit and Record Keeping (Assurance #13)

All project accounts and records must be made available at any time. Records should include documentation of cost, how monies were actually spent, funds paid by other sources, and any other financial records associated with the project at hand. Any books, records, documents, or papers that pertain to the project should be available at all times for an audit or examination.

General Airport Assurances

Good title (Assurance #4)

The airport owner must have a Good Title to affected property when considering projects associated with land, building, or equipment. Good Title means the sponsor can show complete ownership of the property without any legal questions, or show it will soon be acquired.

Preserving Rights and Powers (Assurance #5)

No actions are allowed, which might take away any rights or powers from the sponsor, which are necessary for the sponsor to perform or fulfill any condition set forth by the assurance included as part of the grant agreement. If there is an action taken or activity permitted that might hinder any of those rights or powers it should be discontinued. An example of an action that can adversely affect the rights and powers, of the airport is a Through-the-Fence (TTF) activity. TTF activities allow access to airport facilities from off-airport users. In many instances, the airport sponsor cannot control the activities of those operating off the airport resulting in less sponsor control. This loss of control can potentially have an adverse impact on airport users. For example, TTF operators may not pay the same rates and charges as on-airport users, resulting in an unfair competitive advantage for business and users located off-airport.

Airport Layout Plan (ALP) (Assurance #29)

The airport should at all times keep an up-to-date ALP, which should include current and future boundaries, facilities/structures, locations of non-aviation areas, and existing improvements. No changes should be made at the airport to hinder the safety of operations; also no changes should be made to the airport that is not in conformity with the ALP. Any changes of this nature could adversely affect the safety, utility, or efficiency of the airport. lf any changes are made to the airport without authorization the alteration must be changed back to the original condition or the airport will have to bear all cost associated with moving or changing the alteration to an acceptable design or location. Additionally, no federal participation will occur for improvement projects not shown on an approved ALP.

Disposal of Land (Assurance #31)

Land purchased with the financial participation of an FAA Grant cannot be sold or disposed of by the airport sponsor at their sole discretion. Disposal of such lands are subject to FAA approval and a definitive process established by the FAA. If airport land is no longer considered necessary for airport purposes, and the sale is authorized by the FAA, the land must be sold at fair market value. Proceeds from the sale of the land must either be repaid to the FAA, or reinvested in another eligible airport improvement, or noise compatibility project. Land disposal requirements typically arise when a community is building a new airport and the land on which the airport was located is sold with the proceeds used to offset costs of the new airport. In general, land purchased with FAA funds is rarely sold by a sponsor.

Airport Operations and Land Use

Pavement Preventative Maintenance (Assurance #11)

Since January 1995, the FAA has mandated that it will only give a grant for airport pavement replacement or reconstruction projects if an effective airport pavement maintenance-management program is in place. The program should identify the maintenance of all pavements funded with federal financial assistance. The report provides a pavement condition index (PCl) rating (0 to 100) for various sections of aprons, runways, and taxiways; including, a score for overall airport pavements.

Operations and Maintenance (Assurance #19)

All federally funded airport facilities must operate at all times in a safe and serviceable manner. The airport sponsor should not allow for any activities that inhibit or prevent this. The airport sponsor must always promptly mark and light any hazards on the airport, and promptly issue Notices to Airmen (NOTAMs) to advise of any conditions that could affect safe aeronautical use. Exceptions to this assurance include when temporary weather conditions make it unreasonable to maintain the airport. Further, this assurance does not require the airport sponsor to repair conditions that have happened because of a situation beyond the control of the sponsor.

Compatible Land Use (Assurance #21)

Land uses around an airport should be planned and implemented in a manner that ensures surrounding development and activities are compatible with the airport. To ensure compatibility, the sponsor is expected to take appropriate action, to the extent reasonable, including the adoption of zoning laws to guide land use in the vicinity of airports under their jurisdiction. Incompatible land uses around airports represents one of the greatest threats to the future viability of airports.

Day to Day Airport Management

Economic Non-Discrimination (Assurance #22)

Any reasonable aeronautical activity offering service to the public should be permitted to operate at the airport as long as the activity complies with airport established standards for that activity. Any contractor agreement made with the airport will have provisions making certain the person, firm, or corporation will not be discriminatory when it comes to services rendered including rates or prices charged to customers. Provisions include:

- All FBOs on the airport should be subject to the same rate fees, rentals, and other charges;
- All persons, firms, or corporations operating aircraft can work on their own aircraft with their own employees;

- If the airport sponsor at any time exercises the rights and privileges of this assurance they will be under all of the same conditions as any other airport user would be; and
- The sponsor can establish fair conditions that need to be met by all airport users to make the airport safer and more efficient.

The sponsor can prohibit any type, kind, or class of aeronautical activity if it is for the safety of the airport. An example of an activity that may be considered for prohibition is sky diving. It is important to point out that the FAA will review such prohibitions and will make the final determination as to whether or not a particular activity type is deemed unsafe at the airport based on current operational dynamics.

Exclusive Rights (Assurance #23)

Exclusive rights at an airport are often a complicated subject usually specific to individual airport situations. The assurance states the sponsor "will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public..." However, there are exceptions to this rule. If the airport sponsor can prove that permitting a similar business would be unreasonably costly, impractical, or result in a safety concern, the sponsor may consider granting an exclusive right. To deny a business opportunity because of safety, the sponsor must demonstrate how that particular business will compromise safety at the airport. Exclusive rights are very often found in airport relationships with fixed base operators (FBO). However, exclusive rights can also be established with any other business at the airport, which could assist in the operation of an aircraft at the airport. If an unapproved exclusive rights agreement exists, it must be dissolved before a future federal grant can be awarded to the airport.

If a sponsor is contemplating denial of a business use at the airport, it is strongly encouraged that they contact their FAA Airport Districts Office (ADO) in order to ensure they have all necessary information and that denial of access is not going to be seen as unjust discrimination. For more in depth information on exclusive rights reference Advisory Circular 150/5190-6, "Exclusive Rights at Federally Obligated Airports."

<u>Leases and Finances</u>

Fee and Rental Structure (Assurance #24)

Simply put, the fee and rental structure at the airport must be implemented with the goal of generating enough revenue from airport related fees and rents to become self-sufficient in funding day to day operational needs. The airport sponsor should routinely monitor its fee and rental structure to ensure reasonable fees are being charged to meet this goal. Common fees charged by airports include fuel flowage, tie-down, landing fees, and hangar rent.

Airport Revenue (Assurance #25)

All airport revenue and local taxes on aviation fuel should be used toward the operating costs of the airport, the local airport system, or other local facilities that are owned by the same owner of the airport, which will directly affect air transportation passengers, property, or for noise mitigation on or off airport property. In other words, revenue generated by airport activities must be used to support the continued operation and maintenance of the airport. Use of airport revenue to support or subsidize non-aviation activities or functions of the sponsor is not allowed and is considered revenue diversion. Revenue diversion is a significant compliance issue subject to cause scrutiny by the FAA.

Other FAA Compliance Requirements

THROUGH-THE-FENCE AGREEMENTS (TTF)

According to **Advisory Circular 150/6190-7**, Minimum Standards for Commercial Aeronautical Activities, the FAA defines through-the-fence as "those activities permitted by an airport sponsor through an agreement that permits access to the public landing area by independent entities or operations offering an aeronautical activity or to owners of aircraft based on land adjacent to, but not part of, the airport property. The obligation to make an airport available for the use and benefit of the public does not impose any requirement for the airport sponsor to permit ground access by aircraft from adjacent property." The FAA discourages through-the-fence access since it can create a problem for the airport sponsor to control aviation activities on and around the airport, and create economic discrimination.

There are nine residential properties located on the southeast corner of the airport and one parcel located on the north side of the airport, immediately adjacent to the airfield. Of these ten parcels, two have active RTTF agreements with the Port of Hood River. The two parcels with the RTTF agreements include small conventional aircraft storage hangars. Aircraft owners on these lots have direct access to the runway through a grass field. The RTTF agreements currently in place with the Port of Hood River allow access from these lots to the airfield in accordance with FAA TTF guidelines. **Figure 10-1** (South Residential Through-the-Fence Parcels) depicts the location of the existing south residential lots and active hangars.

Five large conventional hangars are located adjacent to the northwest corner of the airport and have direct access to the north tiedown apron via a paved access taxiway. These hangars are part of the Western Antique Aeroplane & Automobile Museum and are for aircraft and automobile storage and display. The Port of Hood River does not presently have a through-the-fence agreement in place with WAAAM. It is recommended that the Port work with the FAA and WAAAM to establish an acceptable through-the-fence agreement. One residential lot located near the east end of the north apron has an easement providing access to the airfield. The easement is currently not in use and no through-the-fence agreement is in place. A copy of the Port's standard through-the-fence agreement is included in **Appendix D**.

Federal Requirements and Policies

"On March 14, 2011, FAA amended Grant Assurance 5, Preserving Rights and Powers, to prohibit new residential through-the-fence access arrangements and published an interim policy to address existing residential through-the-fence access."

On February 14, 2012, the FAA Modernization and Reform Act was signed into law (P.L. 112-95). "Section 136 of this law permits general aviation airport sponsors, as defined in the statute, to enter into residential through-the-fence agreements with property owners or associations representing property owners. This must be a written agreement that requires the property owner to: [1]

- Pay access charges that the sponsor determines to be comparable to those fees charged to tenants and operators on-airport making similar use of the airport;
- Bear the cost of building and maintaining the infrastructure the airport sponsor determines is necessary to provide access to the airfield from property located adjacent to or near the airport;
- Maintain the property for residential, noncommercial use for the duration of the agreement;
- Prohibit access to the airport from other properties through the property of the property owner; and
- Prohibit any aircraft refueling from occurring on the property.

Existing Mixed-Use Properties: "The FAA is aware of some existing residential through-the-fence agreements that permit the co-location of homes and aeronautical businesses (mixed-use properties). In these cases, FAA will require airport sponsors to execute two separate agreements with the homeowner. One agreement must address the duration, rights, and limitations of the homeowner's residential through-the-fence access, and the second agreement must be consistent with FAA's current policies on commercial through-the-fence activities and ensure the off-airport business does not result in unjust economic discrimination for on-airport aeronautical service providers."

Authorized Access: Section 136 states "residential property owners must prohibit access to the airport from other properties through the property of the property owner. The FAA interprets this as a prohibition on unauthorized access to the airport; this condition does not necessarily prescribe a scenario in which all residential through-the-fence users must have their own dedicated access point to enter the airport. Compliance with this condition will require that access agreements stipulate that residential through-the-fence access agreement holders are prohibited from permitting unauthorized users (any individual not a party to an access agreement with the airport sponsor) to pass through or 'piggy back' on

[1] FAA Compliance Guidance Letter 2013-01-FAA Review of Existing and Proposed Residential Through-the-Fence Access Agreements (July 16, 2013)

their access in order to enter the airport. The FAA expects airport sponsors to establish their own policies, restrictions, and/or requirements to be imposed on fly-in guests who taxi from the airport to visit off-airport residents."

Potential residential Through-the-Fence impacts include violations to: [2]

- Grant Assurance 5, Rights and Powers by making it difficult for an airport sponsor to control airport access and use its property;
- Grant Assurance 19, Operations and Maintenance by limiting a sponsor's ability to ensure safe airport operations;
- Grant Assurance 21, Compatible Land Use by weakening a sponsor's ability to address incompatible land uses;
- Grant Assurance 22, Economic Nondiscrimination by creating unjustly discriminatory conditions for tenants on the airport;
- Grant Assurance 23, Exclusive Rights by granting an exclusive right; and
- Grant Assurance 24, Fee and Rental Structure by affecting a sponsor's ability to be self-sustaining.

The FAA may consider the following for issues of noncompliance:

- Decline to invest discretionary AIP funds at the airport;
- Place the airport into pending non-compliance status;
- Issue a formal finding of non-compliance, preventing the airport sponsor from receiving entitlement or discretionary AIP funds; and
- Remove the airport from the NPIAS System.

Conclusion

The airport sponsor is obligated to report to the FAA Airports Division any existing arrangements that grant access to the airport from off-airport areas, including a description of the circumstances. It is then up to the Regional Airports Division to determine if the agreement is accepted or in violation of federal regulations.

[2] FAA Compliance Updates by Steve Engebrecht (September 23, 2014) (http://www.faa.gov/airports/airport_compliance/residential_through_the_fence/)

14
OWNER
PASQUALE & JACQUIE L
BARONE
1.23 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-2100

12
OWNER
AMIT & GAIL
DAGAN
0.89 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-2001

11
OWNER
DEBRA K
KING
0.93 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-2000

13
OWNER
SHANE & SANDRA
OSTLER
0.93 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-2002

10
OWNER
TIMOTHY J U-2 ET AL
O'DONNELL
0.97 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-1900

9 *
OWNER
WILLIAM E & REBECCA J ET
VEATCH
0.92 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-1800
RTTF

8 *
OWNER
JEREMY J & KARA CHRISTINE
YOUNG
0.94 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-1600
RTTF

7
OWNER
LYLE L & MARES
THORNTON
0.50 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-1400

6
OWNER
NANCY E & PEPITONE
HUBERT
0.45 ACRES
COUNTY ZONE : RR-1
PARCEL : 02N10E11A-1300

* EXISTING THROUGH THE FENCE USE AGREEMENT IN PLACE

KEN JERNSTEDT AIRFIELD- HOOD RIVER | AIRPORT MASTER PLAN

SOUTH RESIDENTIAL PARCELS
THROUGH-THE-FENCE EVALUATION | **FIG. 10-1**

CENTURY WEST ENGINEERING

OTHER FEDERAL CONTRACTING AND PROCUREMENT DOCUMENTS

When an airport sponsor accepts an FAA AIP grant, they agree to adhere to all applicable federal contracting and procurement requirements. Adherence to advisory circulars is required for use in AIP funded projects. Included in each grant request is a federal funding checklist that identifies the requirements an airport should consider before accepting the grant. The following items are noted in the checklist:

- ALPs should be up to date;
- Exhibit A Property Map may need to be updated if acquiring additional property;
- Land Inventory may need to be updated if land has been recently acquired with federal assistance;
- Airports must hold good title to the airport landing area;
- Appropriate signage and markings must be in place;
- Runway Protection Zones and approach surface deficiencies must be identified and steps to address deficiencies must be noted;
- Runway Safety Areas must meet FAA standards if planning a runway project;
- Disadvantaged Business Enterprise program goals must be met on projects of more than $250,000;
- Procedures should be in place to handle bid protests;
- Open AIP grant projects need to be identified;
- Project closeout forms must be submitted within 90 days of work completion;
- A "Certification of Economic Justification" must be included for routine pavement maintenance projects;
- A "Revenue Generating Facility Eligibility Evaluation" must be completed for hangar construction or fueling facilities;
- A "Reimbursable Agreement" and "Non-Fed Coordination" must be completed for navigational aid projects; and
- A "Relocation Plan" must be completed if a project requires residences or businesses to be relocated.

SPECIAL CONDITIONS

In addition to the standard grant assurances discussed above, the state or the FAA may require "Special Conditions" to individual grants, which supplement or expand the standard grant assurances. Special Conditions are unique to an individual airport and can be project or administrative in nature. Airport sponsors need to be aware of such conditions that may be applied to their airport.

MULTI-JURISDICTIONAL CHALLENGES

In some instances, airports are jointly owned and operated by more than one airport sponsor. In other instances, airports may be located within multiple jurisdictions. While the official airport sponsor is ultimately responsible for adherence with grant assurances, the actions, or inactions of surrounding jurisdictions may impact the airport sponsor's ability in meeting its obligations. This is particularly true with land use compatibility issues around airports. As a result, it is important in either circumstance that all jurisdictions affected by the airport understand the operational needs and complexities of having an airport within its jurisdiction. Mutual agreements addressing airport operational or land use protection needs, or other cooperative measures are recommended by all jurisdictions to both protect the functionality of the airport and the safety and well-being of airport users and neighbors.

Solid Waste Recycling Plan

Introduction

This section of the chapter discusses solid waste generation at the Airport and what recycling options are used and available. The layout of this section is outlined below:

- Waste Audit;
- Recycling Feasibility;
- Plan to Minimize Solid Waste Generation;
- Operational and Maintenance Requirements;
- Waste Management Contracts;
- Potential for Cost Savings or Revenue Generation; and
- Future Development and Recommendations.

Waste Audit

Minimal waste is generated on site due to the size of the Hood River Airport. Sources of waste on site include private conventional hangars and T-hangars, the commercial hangars, the Classic Wings Aero Services FBO and, while not currently available, agricultural spraying operations.

Hood River Garbage and Recycling currently provides trash and recycling hauling service for the Airport FBO. All other Airport tenants are responsible for their own solid waste disposal and recycling.

WASTE DISPOSAL

As noted above, the Port of Hood River contracts with Hood River Garbage and Recycling solely for disposal of solid waste and recycling generated by the FBO. This contract provides for commingled recycling including aluminum, tin cans, plastic containers, paper, glass, and cardboard. Trash is picked up every Wednesday in a 1 1/2-yard container and hauled to The Dalles landfill. Commingled recycling is provided as is glass recycling. Two 14-gallon recycling bins are provided and recycling materials are picked up every other Wednesday. These waste materials are hauled to The Dalles landfill located about 34 miles west of the airport. The remaining tenants are responsible for taking care of their own waste disposal and recycling. No State or Federal requirements apply to the waste generated.

The Port has also developed a "Facility Management Plan for the Agricultural Spraying Operations at the Ken Jernstedt Airfield," identifying the specific procedures for handling solid waste generated by those operations. At this time, however, there is no agricultural spraying operation located on the field.

The Port requires that the following best management plan guidelines be implemented for handling of pesticides by the agricultural spraying operator (excerpted from the Facility Management Plan dated May 16, 2011):

- All pesticides and pesticide spray solutions must be stored under dry conditions;
- Containers must be identified with proper EPA container labeling and manufacturers' use instructions;
- Products must be stored in their original containers unless they are a mixed spray solution (which must be appropriately labeled);
- The storage location must be a locked building with an impervious floor;
- No storage of pesticide products is allowed outside of the hangar under any circumstances;
- An inventory of pesticides is required to be posted in the building along with each product's *material safety data sheet* and updated as the inventory changes through product use or product addition;

- Spill kits must be present, readily accessible, and clearly marked;
- The spray applicator/lessee shall provide the fire department with a list of the types of pesticides and quantities located at the lease site annually. If significant changes in the quantity or types of pesticides occur, the spray applicator/lessee immediately shall provide the fire department with an updated inventory list;
- Incompatible chemicals will not be stored together;
- An Emergency Response Plan is required; and
- No storage of spray product outside of the hangar is allowed except for brief periods when mixing, loading, and rinsing operations are underway as part of an active, daily spraying operation.

Mixing of Spray Solutions:

- Pesticide labels shall be reviewed prior to opening containers to assure that the spray applicator/lessee is familiar with the current directions for the product's use and handling;
- Mixing shall be conducted on an impervious surface that facilitates rapid spill cleanup and prevents any migration to the environment. The mixing process is required to be done only under the awning so that any pesticide residue is not mobilized by later precipitation;
- No storage of spray product outside of the hangar is allowed except for during the day when mixing, loading, and rinsing operations are underway as part of an active, daily spraying operation (that is, when the facility is attended);
- Pesticide containers are required to be, at a minimum, triple rinsed and the rinsate added to the spray solution. Container disposal is discussed in the section titled Waste Disposal, below; and
- Only enough spray solution shall be mixed to accommodate a single day's flight operation.

Loading of Spray Solutions:

- Loading from the mixing tote to the aircraft's spray tanks must be done on an impervious surface. The existing roll-over flexible containment pad must be placed over the impervious surface and beneath the aircraft's tanks and spray booms to catch any leaks or drips;
- Absorbent pads (or drip buckets) are required to be placed under any hose connections found between the tank, the pump, and the aircraft; and
- Leaks and spills encountered during this loading operation must be cleaned up immediately.

Equipment Cleanup:

- Upon parking the aircraft after the rinse flight, any dripping solution from the spray booms (or other drips) must be captured in drip pans and not allowed to contaminate the ramp or parking area.

Pesticide Waste Disposal:

Any wastes generated during cleanup that are contaminated with a pesticide and that cannot be properly used for the intended purpose of that pesticide (e.g., spraying onto the appropriate crop) must be properly disposed according to applicable regulations.

Spills and Cleanup:

Any spills (including hose leaks or other drips) that occur during the facility's operation (e.g., storage, mixing, and loading procedures) must be immediately cleaned up to prevent pesticides from entering the nearby soil, surface water, and groundwater. The spray applicator/lessee must have an Emergency Response Plan (ERP) prepared; the ERP shall be readily accessible at all times; and the spray applicator/lessee must train staff on the ERP's implementation. Methods of stopping the spill and containing the liquid (such as constructing temporary soil berms) shall be identified in the ERP.

Waste Disposal:

Should a spill occur, any pesticide wastes created by the cleanup must be placed in an appropriate container and labeled "pesticide wastes" and marked with the date the waste was generated. The name of the pesticide shall be included on the label. This also is necessary for any other pesticide-contaminated materials that are designated as wastes.

Empty pesticide containers must be at least triple rinsed before they can be designated as nonhazardous and disposed of in a landfill or recycled. Paper bags need to be cut open and completely emptied before being landfilled. Burning paper bags is NOT an option! Plastic containers, after being punched with holes to prevent reuse, shall be either landfilled or recycled. Metal containers must be punctured (small containers) or the top and bottoms removed from larger containers before being crushed and recycled (or landfilled). Glass containers, after rinsing, shall be either recycled or landfilled. Some containers can be returned to the manufacturer for reuse. The manufacturer should be contacted prior to compromising the container.

MAINTENANCE WASTE

Another source of waste is generated by maintenance activities (yard debris). The infield lawn is not watered however the turf runway is irrigated. Turf areas of the airfield are mowed by Port staff once or twice per month. All lawn clippings are left in place.

WAAAM conducts a number of events throughout the year, including an annual fly-in that is held the weekend after Labor Day, each September. However, these WAAAM events are held off-airport resulting in no unique, short-term spikes in waste generated on the Airport.

CONSTRUCTION WASTE

Any waste and debris during construction would have to be removed at the Contractor's expense.

Recycling Feasibility

Currently, recycling services available to tenants at the Airport are: aluminum, tin cans, plastic containers, paper, glass, and cardboard. The Dalles landfill can accept solid waste items beyond those accepted at the Airport, and the Hood River County website provides a list of local contacts for other recyclable items.

CURRENT PRACTICES

According to OAR 340-090-0040, cities with a population greater than 4,000 residents must establish some sort of recycling option. The U.S. Census Bureau estimated the population of the City of Hood River to be 7,379 persons in 2013. With a population exceeding the 4,000-person threshold, the City is required to provide weekly receptacles, collection service, or an education and promotion program to its residents. However, the Hood River Airport is located in Hood River County and is owned by the Port of Hood River.

The Port has contracted with Hood River Garbage and Recycling to accommodate solid waste generated by FBO operations and to handle their recyclables. Individual airport hangar tenants are responsible for contracting for solid waste disposal and recycling of materials generated in each hangar. Hood River Garbage and Recycling provides services for commingled recycling. Disposal of any non-standard recyclables will also be the tenant's responsibility and can be delivered to The Dalles landfill.

Plan to Minimize Solid Waste Generation

Oregon's 1991 Recycling Act set a goal for each county to recycle a certain percentage of their total waste generated. This Act required each county to recycle specific percentages of their total waste generated by 1995. Revised statewide and individual county material recovery goals were established in 2001, under HB 3744. The revised goal for Hood River County's recovery rate was set at 25% for 2005 and 2009.

The statutes also established programs whereby the County can implement efforts to reduce solid waste generation and earn "credits" toward recovery rates mandated by the state of Oregon. In 1997, House Bill 3456 created three programs that a wasteshed—in this case, Hood River County—can choose to implement:

- Waste Prevention Program;
- Reuse Program; and
- Residential Composting Program.

For each program, a two percent "credit" can be obtained by creating an education or promotional campaign and adhering to at least two components listed by the Oregon Department of Environmental Quality (ODEQ). Up to six percent can be deducted from the County's material recovery and waste generation rate if the County decides to participate in all three programs (ODEQ no date). Hood River

County was one of eighteen counties within the state of Oregon to receive recovery credits allowable as of 2013. Hood River County is required to maintain a 25 percent recovery rate (2009) and currently (2013) maintains a recovery rate of 39.4%, including the six percent credit. Hood River County does not currently have a policy to eliminate wasteful practices or require departments to buy reusable, recyclable, or repairable products and supplies.

METHODS TO REDUCE SOLID WASTE

Because little waste is produced at the Airport, there are limited opportunities to reduce solid waste generation. However, the Airport should still have a goal to reduce the amount of solid waste generated. Even though the Airport is not responsible for waste generated by hangar tenants, informational brochures on recycling opportunities developed by the County could be distributed to all of the hangar tenants to encourage them to recycle their waste.

PHYSICAL CONSTRAINTS

While Hood River County has a mainly rural population, there are no significant constraints as Hood River Garbage and Recycling is a solid waste transfer station and recyclable materials receiving center.

Operational and Maintenance Requirements

Operational and maintenance requirements at the Airport are minimal. The Port of Hood River is responsible for the costs associated with mowing the turf areas of the airfield. The turf runway is irrigated and turf areas are mowed between once or twice per month with the grass clippings left in place. (Approximately 25% of the lawn's total fertilizer needs are provided by the grass clippings, creating a healthy turf environment - Starbuck 1999).

Waste Management Contracts

Leases provided by the Port were reviewed for information regarding waste and recycling. The hangar leases do not provide specific guidelines with regard to solid waste disposal and recycling. Communications with Port staff (e-mail from Anne Medenbach, July 29, 2015) indicated that tenants are responsible for their own hangar waste and no mention of the opportunity for recycling is included in these leases. No hauling or landfill contracts were available.

To promote recycling opportunities, language could be added to the hangar leases encouraging tenants to use the services of Hood River Garbage and Recycling approximately 2 – 1/2 miles from the Airport and to be conscientious of any waste generated in their hangars.

Potential for Cost Savings or Revenue Generation

The potential for cost savings to the Port is limited since individual tenants are responsible for costs associated with solid waste disposal and recycling.

Revenue generation is also limited due to the small amount of waste generated. Any potential for additional revenue would accrue to the individual tenants since they contract with the waste disposal and recycling provider.

Future Development and Recommendations

FUTURE DEVELOPMENT

Future development projects at the Airport include FBO/Terminal construction, tenant improvements, landside and airside facility development, and rehabilitation projects. The demolition and waste associated with each of these projects would be the responsibility of the Contractor performing the work. It is assumed that the demolition waste would be taken to the County Landfill.

A periodic review of the Airport's solid waste plan needs to be implemented to allow for future development.

RECOMMENDATIONS

Immediate

An immediate recommendation would be to continue with the existing practice of leaving lawn clippings in place, which saves money on disposal fees at the transfer station while preserving the aesthetics of the infield area.

Short-Term

A short-term recommendation would be to add a statement into hangar leases advising tenants of the recycling options available through Hood River Garbage and Recycling and to encourage tenants to recycle and minimize waste. Additionally, informational brochures on recycling opportunities developed by the Tri-County Waste and Recycling Program could be distributed to all of the hangar tenants to encourage them to recycle their waste. Copies of brochures are attached in **Appendix E**.

Ongoing

An ongoing recommendation would be to reevaluate the Airport's solid waste plan, especially after any development has occurred. An increase in hangars may increase the amount of waste generated and glass recycling—among other items—may become warranted.

Modifications to Specifications

Language in construction contract documents could be added that encourages the Contractor to recycle waste at Hood River Garbage and Recycling and to minimize waste caused by construction activities as much as practical.

References

Tri- County. No date. "Solid Waste" Website: http://www.tricountyrecycle.com/

County of Hood River Solid Waste Ordinance (Solid Waste Ordinance). *Ord 115, 1981*; *2001*

Hood River County Health and Safety, Section 8.08.120 Disposal of Refuse and Solid Waste, Website:http://www.co.hood-river.or.us/vertical/sites/%7B4BB5BFDA-3709-449E-9B16-B62A0A0DD6E4%7D/uploads/Nuisances_Code_Chapter_8.08_-_Health_and_Safety_Code.pdf

Oregon Department of Environmental Quality (ODEQ). No date. "Waste Prevention and Reduction." Website: http://www.deq.state.or.us/lq/sw/twopercent/index.htm

Medenbach, Anne. Development & Property Manager, Port of Hood River. E-mail. July 29, 2015

Starbuck, Christopher J. Department of Horticulture. University of Missouri-Columbia. 1999. "Grass Clippings, Compost and Mulch: Questions and Answers." Website.

http://extension.missouri.edu/explorepdf/agguides/hort/g06958.pdf

http://www.co.hood-river.or.us/vertical/sites/%7B4BB5BFDA-3709-449E-9B16B62A0A0DD6E4%7D/uploads/2011_Opp._to_Recycle_Report.PDF

Port of Hood River – Waste and Recycling

http://www.tricountyrecycle.com/managing-my-materials/recycle/recycling-home/recycle-home-hood-river

http://www.wasteconnections.com/

http://ci.hood-river.or.us/pageview.aspx?id=39061

Household Hazardous Waste Management Plan

http://www.tricountyrecycle.com/about-us

Population

http://quickfacts.census.gov/qfd/states/41/4134900.html

Waste Reduction and Reuse

http://www.tricountyrecycle.com/managing-my-materials/reuse

Appendix A

BergerABAM

210 East 13th Street, Suite 300, Vancouver, Washington 98660-3231
360/823-6100 • 360/823-6101 Fax • www.abam.com

Memorandum

Date: 11 March 2015

Subject: Ken Jernstedt Airfield – Draft Master Plan Environmental Conditions Inventory

From: Scott Bucklin and Dustin Day, BergerABAM

To: Matt Rogers, Century West Engineering

Route to: Scott Keillor, BergerABAM
David Miller, Century West Engineering

Ken Jernstedt Airfield (airport) is located at Airport Drive, east of Tucker Road (OR 281), south of the City of Hood River, Oregon. The airport is located outside city limits in Hood River County (County) in portions of sections 11A and 11B, Township 2 North, Range 10 East, Willamette Meridian. The airport and associated property include tax lots 1000, 1100, 2200, 2501, 2503, 2501, and 2600.

BergerABAM reviewed existing studies and secondary source data to assess the environmental factors related to airport development. This technical memorandum summarizes the findings of our review. A summary of the findings follows and the attached figure shows the locations of the airport and significant features of the surrounding landscape.

1.0 THREATENED AND ENDANGERED SPECIES

The sources consulted for this review included species lists obtained from the websites of the U.S. Fish and Wildlife Service (USFWS) (http://ecos.fws.gov/ipac/) and National Oceanic and Atmospheric Administration (NOAA) Fisheries (http://www.westcoast.fisheries.noaa.gov/maps_data/species_population_boundaries.html) on 16 January 2015. In addition, BergerABAM reviewed an Endangered Species Act (ESA) finding of no effect, dated 23 March 2010, from Pacific Habitat Services, Inc. (PHS) for the 2010 taxi runway relocation and runway extension project.

Species listed under the ESA that are addressed in this memorandum are shown in the table below. According to the data obtained from USFWS and NOAA Fisheries, there are no known listed species occurrences and no designated critical habitat for any species on airport property.

Hood River County online GIS maps identify Cedar Creek and Alder Creek (a tributary to Cedar Creek) within the airport boundary. According to the fish distribution data on the Oregon Explorer website (http://oregonexplorer.info/), Cedar Creek and Alder Creek are not accessible to fish because there is a fish barrier near the confluence of Cedar Creek with the Hood River. Therefore, it is assumed that ESA-listed species would not be present within the streams at the airport. However, if a stormwater pollution control plan (SWPCP) is generated to reflect future development, a biological assessment may need to be completed to determine downstream water quality and the potential effects to ESA-listed salmonids and bull trout found in Hood River.

ESA-Listed Species Potentially Occurring in Project Vicinity

Species Name			ESA Listing Status	Critical Habitat
Common Name	**Scientific Name**	**ESU or DPS***		
Chinook Salmon	*(Oncorhynchus tshawytscha)*	Lower Columbia River ESU	Threatened	Designated
Coho Salmon	*(Oncorhynchus kisutch)*	Lower Columbia River ESU	Threatened	Proposed
Steelhead	*(Oncorhynchus mykiss)*	Lower Columbia River DPS	Threatened	Designated
Bull Trout	*(Salvelinus confluentus)*	Columbia River DPS	Threatened	Designated
Northern Spotted Owl	*(Strix occidentalis caurina)*	N/A	Threatened	Designated
Fisher	*(Martes pennant)*	West Coast DPS	Proposed	None

*ESU=Evolutionarily Significant Unit; DPS=Distinct Population Segment

1.1 Fish

Lower Columbia River Chinook salmon, coho salmon, and steelhead inhabit the main stem of Hood River. Cedar Creek is not mapped as a fish-bearing stream, and the airport is approximately 1.9 miles from Hood River. As mentioned above, potential drainage from any future airport development that is directed to Cedar Creek or Alder Creek may require the preparation of a SWPCP and, as a result, a biological assessment may need be completed to determine the impacts of downstream water quality to Chinook salmon, coho salmon, and steelhead.

Bull trout inhabit cold water in relatively pristine stream and lake habitats. They are known to occur within the main stem of Hood River. Cedar Creek does not provide suitable habitat for bull trout because it has been highly altered. Potential drainage from any future airport development that is directed to Cedar Creek or Alder Creek may require the preparation of a SWPCP and, as a result, a biological assessment may need be completed to determine the impacts of downstream water quality to bull trout.

1.1.1 Essential Fish Habitat

Public Law 104-297, the Sustainable Fisheries Act of 1996, amended the Magnuson-Stevens Fishery Conservation and Management Act to establish new requirements for descriptions of essential fish habitat (EFH) in federal fishery management plans and to

require federal agencies to consult with the National Marine Fisheries Service (NMFS) on activities that may adversely affect EFH.

The Magnuson-Stevens Act requires all fishery management councils to amend their fishery management plans to describe and identify EFH for each managed fishery. In 2000, the Pacific Fishery Management Council issued Amendment 14 to its 1999 salmon fishery management plan for Pacific Coast salmon. This amendment covers EFH for the Pacific salmon (Chinook salmon, coho salmon, and pink salmon) under NMFS jurisdiction that potentially could be affected by the proposed action.

EFH for Pacific salmon in freshwater includes all streams, lakes, ponds, wetlands, and other currently viable bodies of freshwater and the substrates within those waterbodies accessible to Pacific salmon. Therefore, there is no EFH within the airport property because Pacific salmon are not able to access Cedar Creek or its tributary.

1.2 Birds

Northern spotted owls are known to occur in the Eastern Cascade bioregion, but require old growth forests for nesting, roosting, foraging, and dispersal. The airport and surrounding areas do not contain suitable habitat for northern spotted owls. The airport is outside of the known geographic distribution range for the northern spotted owl. The project will have no effect on the northern spotted owl.

1.3 Mammals

Fishers inhabit forested areas and avoid non-forested habitat such as open forest, grassland, and wetland habitats. The airport is composed of open grassland and wetland habitats and does not provide suitable habitat for fisher. The project will have no effect on fisher.

2.0 LAND USE AND ZONING

2.1 Airport Development and Overlay Zones

The airport is zoned airport development (AD) by the County with an airport zoning overlay (height combining zone). Uses allowed outright within the AD zone include those specific to functioning airports and, therefore, airport expansion or airport-related activities are permitted on parcels located within this zone. The height combining zone is discussed below in further detail.

2.1.1 Overlay Zone (Height Combining Zone – HRCC 34.30)

The Federal Aviation Administration requires local governments to uphold specific height restrictions in close proximity to airports. These height restrictive zones include the Runway Safety Area (RSA), Runway Object Free Area (OFA), Obstacle Free Zone (OFZ), Building Restriction Line (BRL), Runway Protection Zones (RPZ), and the Aircraft

Parking Line (APL). The aforementioned zones surround the Airport in all directions spanning 1.5-miles to the south and 1.5-miles north, 2-miles to the east and 2-miles to the west. The County recognizes these zones through an adopted zoning code outlined in HRCC 34.30.

2.2 Surrounding Zoning Designations

County zoning designations to the north, south, and east of the airport consist primarily of exclusive farm use (EFU) and rural residential 1-acre (RR-1). Zones to the west and northwest of the airport consist of commercial (C-1), EFU, light industrial/manufacturing (M-2), rural residential 2.5-acre (RR-2.5), and RR-1 to the west.

In Hood River County, RR is defined by its minimum parcel size. RR-1 and RR-2.5 consist of residential parcels with a minimum size of 1 acre or 2.5 acres, respectively. Uses on RR- and EFU-zoned land in the airport's vicinity consist of Twin Peaks Restaurant, agriculture, orchards, and structures related to agricultural use. Additional uses in the airport's vicinity include the public rights-of-way of Airport Road and OR 281, a state highway.

2.3 Incompatible Land Uses

2.3.1 Exclusive Farm Use Zone (HRCC Article 7)

Airport-related activities are not permitted within the EFU zone. Permitted uses typically consist of farm-related activities, structures, enhancements of the natural environment, and churches.

In order to expand airport-related activities into the EFU zone, an exception to statewide Goal 3 (Agriculture) would be required per HRCC 7.40(T) and subsequent Oregon Administrative Rules 660.033.0120, 660.033.130(13), and 660.012.0065.3(n). Exceptions to Goal 3 are uncommon and not easily obtained. Given the proximity of EFU lands to the airport, their acquisition may be necessary and useful for airport overlay zone purposes, rather than for agriculture conversion. Purchasing agricultural property in the runway protection zone, or in other airport-related overlay zones, will allow leasing opportunities.

2.3.2 Manufacturing Zone (HRCC Article 32)

Parcels zoned M-2 are located adjacent to the Western Antique Aeroplane & Automobile Museum (WAAAM). Generally, uses permitted within this zone consist of manufacturing businesses and those related to manufacturing.

Because of the M-2 zone's nature as a manufacturing-oriented area, airports are either not permitted in this zone or permitted conditionally; therefore, this zone is considered an incompatible land use for airport expansion.

2.4 Parks and Recreation

Parks and recreation uses within the vicinity of the airport are limited to local bicycling along OR 281 and county streets and visitation to WAAAM. The museum, which is located within the AD zone approximately 1,000 feet north of the runway, is open to the public and contains one of the country's largest collections of antique airplanes and antique automobiles that are still flying or driving.

The museum's collection includes a 1917 Curtiss JN-4D Jenny featuring an OX-5 90 HP engine as well as numerous makes and models of early automobiles and motorcycles. While not a traditional park and recreational facility, WAAAM draws significant crowds for major events, including its annual September fly-in. No other parks and recreation locations exist within the airport's vicinity.

3.0 AIR AND WATER QUALITY

3.1 Air Quality

The airport is near the Columbia River and the Columbia Gorge, which routinely experience high winds. These high winds, coupled with the fact that the area has little to no manufacturing or industrial uses, result in very little air pollution within the region. Additionally, the airport is not located in a nonattainment area. According to the Environmental Protection Agency (EPA), the air quality index in Hood River is 97 on a scale to 100 (higher is better). This is based on ozone alert days and number of pollutants in the air, as reported by the EPA.

3.2 Water Quality

The airport lies in the north central part of the state. The Oregon Department of Environmental Quality (DEQ) and the Oregon Water Resources Department (WRD) have designated the Hood River area as a management area; thus, groundwater use has been restricted due to overdraft issues. In addition, DEQ and WRD have both designated the Hood River aquifer as "sensitive." Groundwater contamination in this region is caused by both non-point and point source contaminations. Non-point sources, such as agriculture and leaching from densely located septic systems, are primarily responsible for elevated levels of nitrogen near the airport and the City of Hood River.

Cedar Creek and Alder Creek, mentioned above, are two surface water bodies found in the vicinity of the airport. They drain to the Hood River, approximately 1.9 miles to the northeast. Furthermore, DEQ lists the Hood River as a 303d-listed water, meaning the river exceeds water quality thresholds for certain parameters.

4.0 WASTEWATER AND SOLID WASTE TREATMENT

As part of the Windmaster Area Sanitary Sewer collection system project, a past project involving the regional sewer district and BergerABAM, a sanitary connection was

installed in Airport Drive. Having the capacity to discharge sewage to a sewer collection and treatment system will alleviate the need for on-site septic systems. Other wastewater and/or solid waste generated at the airport must comply with DEQ requirements.

5.0 DRAINAGE PATTERNS (STORMWATER)

As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Stormwater discharges at airports are regulated under a NPDES 1200-Z permit from the DEQ. Future development that meets size threshold requirements may require the airport to prepare a SWPCP to identify new development stormwater generating impervious surfaces and to ensure consistency with NPDES requirements.

6.0 WETLANDS AND WATERS OF THE STATE/U.S.

USFWS's National Wetland Inventory (NWI) database was accessed on 16 January 2015 to determine the extent of known wetlands within the airport. No wetlands were identified within the airport by the NWI mapping database. In addition, the Hood River County Soil Survey was reviewed to determine if any hydric soils are mapped within the airport properties. According to the Hydric Soils of the United States (USDA – NRCS 1991), no hydric soils occur within the airport properties. However, a wetland delineation conducted by PHS in March 2010 on portions of tax lots 1000, 1100, 2200, 2501, 2503, and 2600 identified two wetland areas north of the parallel taxiway (see attached figure). According to the PHS delineation report:

- Wetland A is approximately 0.83 acre in size and includes Cedar Creek, a tributary to Hood River. The wetland and creek extend off site to the north and east.
- Wetland B is approximately 0.14 acre in size and appears to be a remnant tributary (Alder Creek) to Cedar Creek. This wetland is also located north of the parallel taxi runway and extends off-site to the north.

In addition to the wetland identified by PHS, two other potential wetland areas were identified through aerial photograph interpretation. When compared to the surrounding mowed lawn area, these two wetland areas have been left in a more natural condition and their vegetation was greener than the surrounding landscape; during the dry summer months, this typically indicates a water source. Additionally, Street View images available from Google Maps indicate the presence of cattails and shrubby vegetation, also indicative of wetland conditions. The two potential wetland areas are shown in the attached figure. The photo interpretation does not constitute a wetland delineation and a formal wetland delineation will be needed if development is planned for these areas.

As mentioned above, Cedar Creek and Alder Creek are mapped within the boundaries of the airport and are classified as waters of the state and United States. Cedar Creek is mapped in the northwest portion of the airport. As the attached figure shows, Alder Creek originates in an orchard south of the airport and flows north into it, and has been piped under the runway and the parallel taxi runway.

Wetlands and water bodies are under the jurisdiction of the Department of State Lands and the U.S. Army Corps of Engineers. The potential wetland areas appear to be connected to Cedar Creek and would be regulated as jurisdictional waters.

Attachment: Figure

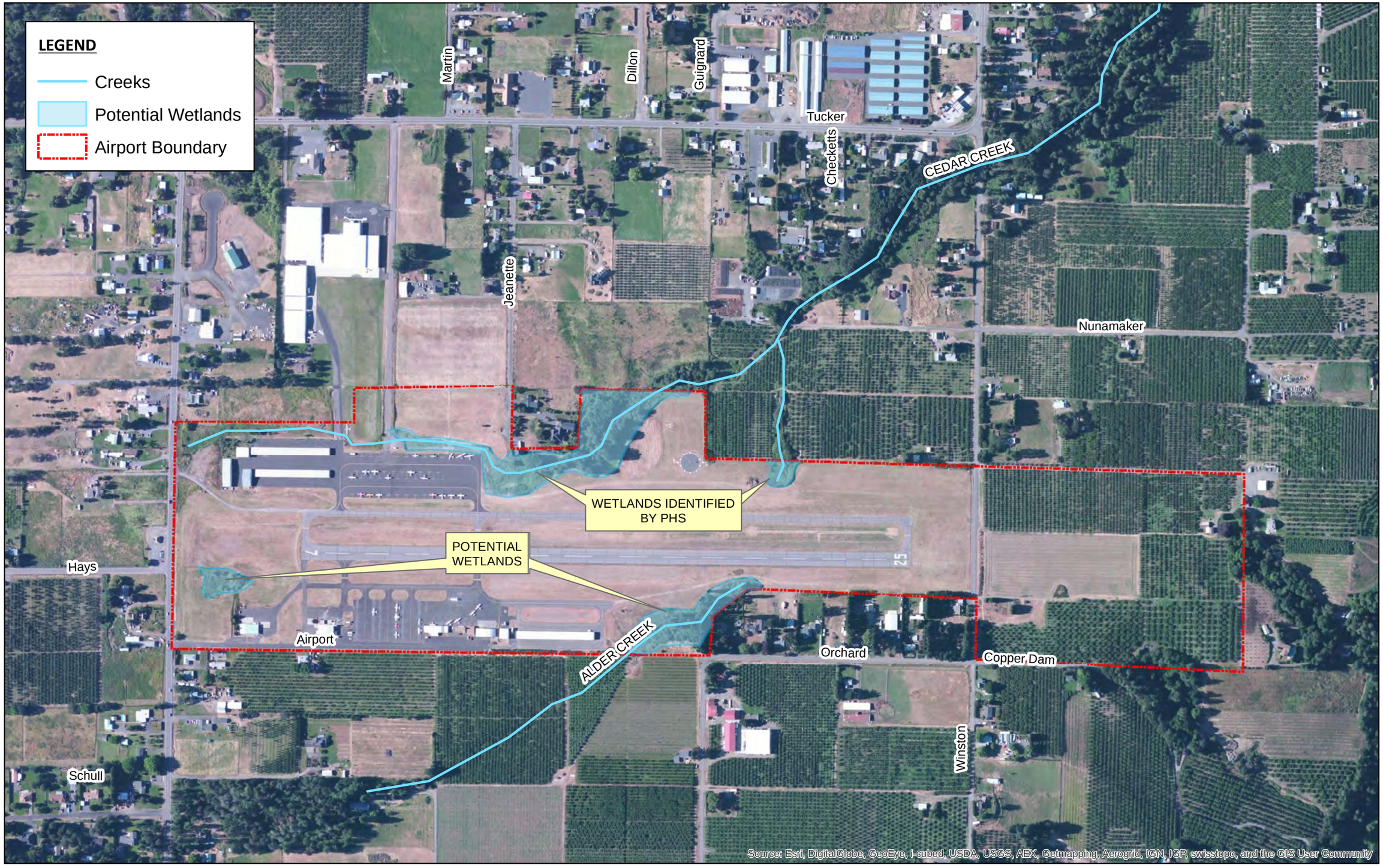


FIGURE 1 - DRAFT STREAM AND WETLANDS MAP

DRAFT- BASE MAP IS PRE-RUNWAY SHIFT

0 225 450 900 1,350 1,800 Miles

BergerABAM

Appendix B

ARTICLE 33 – AIRPORT DEVELOPMENT ZONE (AD)

(Amended by Ordinance #295 – Effective June 26, 2009)

Section 33.10 - Purpose and Intent

The purpose of this zone is to protect airport facilities from incompatible uses; to provide for future airport expansion; and to preserve lands adjacent to airports for future commercial and light industrial uses which will be directly dependent on air transportation.

Section 33.15 - Uses Permitted

The following uses are permitted subject to issuance of a land use permit:

A. Accepted Farming Practices; including crop dusting and associated activities, such as chemical storage.

B. 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 ordinance, are not customary and usual aviation-related activities and may only be authorized pursuant to Section 33.20.

C. Air cargo terminals.

D. Aircraft and aviation recreational vehicle sales, repair, service, rental, storage and flight schools relating to aircraft and aviation recreational vehicle operations; and construction and maintenance of airport facilities on the airport property essential for the operation of airports, such as fuel storage, hanger use, fixed-base operator offices, etc.

E. Public and semi-public buildings, structures and uses essential to the welfare of an area, such as fire stations, pump stations, and water storage.

F. Taxi and bus terminals.

G. Snack-shop for airport clientele with a total floor area of no larger than 1,000 square feet.

H. Other uses where the ongoing operations and the use must be directly dependent upon and directly associated with the Airport.

I. Emergency medical flight services; law enforcement and firefighting activities.

J. Air passenger and air freight terminals and services at levels consistent with the classifications and needs identified in the State Aviation System Plan.

K. Aviation recreation and sporting activities, as defined in Section 34.15.

L. Antique Aircraft and Automobile Museum and related uses such as food service and gift shop specifically intended to accommodate museum visitors.

33.20 - Uses Subject to a Conditional Use Permit

The following conditional uses will be permitted by the Planning Director, providing they meet all the criteria outlined in Section 33.25 and meet the requirements of Article 60:

A. Light industrial, as permitted in the M-2 zone.

B. Truck terminals.

Section 33.25 - Conditional Use Criteria

The Planning Director may grant a Conditional Use Permit for uses described in Section 33.20 if each of the below criteria is met, as determined by the Planning Director. The ongoing operations or the use must be directly dependent upon and directly associated with the airport. The use shall not create a safety hazard or otherwise conflict with any present or planned airport uses.

Section 33.30 - Limitations of Use

In an AD zone, the following conditions shall apply.

A. Liquid and Solid Wastes:

   Storage of animal, vegetable, or other wastes which attract insects, rodents, or birds or otherwise create a health hazard shall be prohibited.

B. Discharge Standards:

   There shall be no emission of smoke, fly ash, dust, vapor, gases, or other forms of air pollution that may cause nuisance or injury to human, plant or animal life, or to property, or that may conflict with any present or planned operations of the airport.

C. Lighting:

   1. Sign lighting and exterior lighting shall not project directly into an adjoining residential zone.

   2. Unless necessary for safe and convenient air travel, sign lighting and exterior lighting shall not project directly into the runway, taxiway, or approach zone.

D. Landscaping:

   1. Site plan submitted with an application for a land use permit must include a landscaping plan, which shows the location and type of plant materials.

   2. New uses, which abut a residential zone, shall provide and maintain a dense evergreen landscape buffer, sight obscuring fence, or landscaped berm which attains a (mature) height of at least six (6) feet. Should evergreen landscaping be used to meet this standard, only varieties with a mature height limit less than the elevation of the imaginary airspace shall be used.

3. All unused property shall be maintained in native or existing vegetative ground cover or planted grass, shrub and barkdust, or other suitable ground cover in an uncluttered manner.

4. Responsibility for establishment and maintenance of landscaping rests with the property owner.

E. Parking:

1. Site plan(s) submitted with application for a land use permit must include a parking plan which shows the location and number of parking spaces, circulation patterns, and ingress and egress provisions.

2. All industrial uses within an Airport Development zone shall provide at least two parking spaces for every three employees on the major shift during normal season.

3. All Commercial Uses shall follow the Zoning Ordinance for the required number of parking spaces.

4. All parking lots shall have an all weather surface.

5. Adequate provisions for safe and convenient circulation, ingress, and egress shall be provided.

F. Glare and Electro-magnetic Interference:

1. Building materials shall not produce glare which may conflict with any present or planned operations of the airport.

2. No use may produce electro-magnetic interference, which may conflict, with any present or planned operation of the airport.

Section 33.35 - Dimensional Standards

A. Minimum street frontage of lots: Fifty- (50) feet.

B. Vision clearance setback from all street intersections: Thirty-five (35) feet.

C. No building shall be constructed closer to a residential or farm zone than the height of the building.

D. All new buildings must be set back at least 30’ from Cedar Creek.

E. Maximum height:
   i. For a building or structure not equipped with a sprinkler system: Two (2) stories or 30 feet, whichever is less, unless otherwise restricted pursuant to the height limitations of the Airport Height Combining Zone.

ii. For a building or structure equipped with a sprinkler system approved by the County Building Official and/or Fire Marshal: Three (3) stories or 45 feet, whichever is less, unless otherwise restricted pursuant to the height limitations of the Airport Height Combining Zone.

iii. Unless otherwise exempt pursuant to Section 34.60(K), structures on the airport property necessary for the operation of the airport may be higher than the above height limitations, subject to submitting a FAA Form 7460-1 to and receiving approval from the Oregon Department of Aviation and Federal Aviation Administration.

ARTICLE 34 – AIRPORT HEIGHT COMBINING ZONE (AH)

(Amended by Ordinance #295 – Effective June 26, 2009)

Section 34.10 - Purpose and Intent

The purpose of the Airport Height Combining Zone (AH) is to protect the public's safety and welfare and to protect property adjacent to and surrounding both the Cascade Locks State Airport and the Hood River Airport) through the use of height restrictions Ken Jernstedt Airfield (formerly the and other provisions in this ordinance. The AH Zone shall regulate various types of air space obstruction and other hazards which may interfere with safe landing and taking off of aircraft including: (a) the height of structures and objects of natural growth; (b) conditions or activities which may cause electronic interference with air navigation communication systems; (c) lights which may interfere with airport lighting systems; (d) conditions or activities which produce levels of smoke, dust and glare that would interfere with safe operations; and (e) conditions or activities creating bird strike hazards. The AH Zone is an overlay zone to be used in conjunction with any base zone.

The protected airspace and Runway Protection Zone (RPZ) standards depicted in the attached exhibit entitled "Airport Zones Current and Future Conditions" (*see Appendix "C-1"*) will apply to present runway configuration until the runway shift identified in the 2009 Airport Master Plan is completed. Once the runway is shifted east, the newly located airspace and RPZ standards depicted in the exhibit as "future" will automatically apply and supersede the "current" airspace and RPZ regulations.

Section 34.15 – Definitions

A. Aircraft. Helicopters and airplanes, but not hot air balloons or ultralights.

B. Airport. The strip of land used for taking off and landing aircraft, together with all adjacent land used in connection with the aircraft landing and taking off from the strip of land, including but not limited to land used for existing airport uses.

C. Airport Imaginary Surfaces (and zones). Imaginary areas in space and on the ground that are established in relationship to the airport and its runways. The airport imaginary surfaces are defined by the Approach Surface, Transitional Surface, Horizontal Surface, Conical Surface, and Runway Protection Zone, which are described in Section 34.30 and depicted in Appendix "B-2" (Current) and B-3" (Future).

D. Airport Noise Criterion. The State criterion for airport noise is an Average Day-Night Sound Level (DNL) of 55 decibels (dBA or dB) or greater. The Airport Noise Criterion is not designed to be a standard for imposing liability or any other legal obligation except as specifically designated pursuant to OAR 340, Division 35.

E. Average Day-Night Sound Level (DNL). Average day-night sound level is the FAA standard measure for determining the cumulative exposure of individuals to noise. DNL is the equivalent of noise levels produced by an aircraft operations during a 24-hour period, with a ten-decibel penalty applied to the level measured during nighttime hours (10:00 p.m. to 7:00 a.m.).

F. Aviation Recreation and Sporting Activities. Activities, facilities, and accessory structures at airports that support recreational use of aircraft and sporting flight. Aviation recreation and sporting activities on airport property shall be subject to approval of the airport sponsor. Aviation 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/skydivers; and parachute/skydiving drops onto an airport, when a minimum 10 acre drop zone, which roughly approximates a square or circle, has been secured from the airport sponsor.

G. Aviation Recreational Vehicle: A type of vehicle, other than planes or helicopters, that are primarily used or intended to be used for recreational flight. Examples of an aviation recreational vehicle include but are not limited to gliders, hot air balloons, and ultralights.

H. FAA. Federal Aviation Administration

I. FAR. Regulation issued by the FAA.

J. FAR Part 77. Regulation, Part 77, "Objects Affecting Navigable Airspace, "establishes standards for determining obstructions to navigable airspace.

K. Height. The highest point of a structure or tree, plant or other object of natural growth, measured from mean sea level.

L. Obstruction. Any structure or tree, plant or other object of natural growth that penetrates an imaginary surface.

M. Other than Utility Runway. A runway that is constructed for and intended to be used by turbine-driven aircraft or by propeller-driven aircraft exceeding 12,500 pounds gross weight.

N. Public Assembly Facility. A permanent or temporary structure or facility, place or activity where concentration of people gather in reasonably close quarters for purposes such as deliberation, education, worship, shopping, employment, entertainment, recreation, sporting events, or similar activities. Public assembly facilities include, but are not limited to, schools, churches, conference or convention facilities, employment and shopping centers, arenas, athletic fields, stadiums, clubhouses, museums, and similar facilities and places, but do not include parks, golf courses or similar facilities unless used in a manner where

people are concentrated in reasonably close quarters. Public assembly facilities also do not include air shows, structures or uses approved by the FAA in an adopted airport master plan, or places where people congregate for short periods of time.

O. Runway. A defined area on an airport prepared for landing and takeoff of aircraft along its length.

P. Structure. Any constructed or erected object, which requires a location on the ground or is attached to something located on the ground. Structures include but are not limited to buildings, decks, fences, signs, towers, cranes, flagpoles, antennas, smokestacks, earth formations and overhead transmission lines. Structures do not include paved areas.

Q. Visual Runway. A runway intended solely for the operation of aircraft using visual approach procedures, where no straight-in instrument approach procedures or instrument designations have been approved or planned, or are indicated on an FAA-approved airport layout plan or any other FAA planning document.

Section 34.20 - Application

The provisions of this ordinance shall apply to all lands in Hood River County under the following surfaces: (a) airport approach; (b) conical; (c) horizontal; and (d) transitional which are shown in Appendix "A", Cascade Locks State Airport Plan, Cascade Locks, Oregon (4/18/83) [1]; and Appendix "B" Ken Jernstedt Airfield Airport Master Plan Sheets 1-5, 2009. (*Originals at a larger scale are available in the Hood River County Planning Department*.) Dark shaded or diagonal lines and irregular bounded areas as noted in both Appendices show topography penetrating the imaginary surfaces making it difficult to apply provisions of this ordinance.

Section 34.30 - Height Limitations

No structure or tree shall be erected, altered, allowed to grow, or be maintained in the Airport Height Combining Zone to a height in excess of height limitations established by each of the following goals which underlie each designated surface as shown in Appendices "A", "B", and "C":

A. Primary Surface: A surface longitudinally centered on a runway. The primary surface extends 200 feet beyond each end of the runway and is 250 feet wide along each side, as measured from the centerline of the runway.

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1. Applies only to lands outside the Cascade Locks Urban Growth Boundary. It is recommended (see County Policy Document and Goal 12- Transportation) that the City of Cascade Locks update their Comprehensive Plan to apply the Airport Height Combining Zone to Cascade Locks State Airport in the UGA and designate the airport in their plan.

B. Approach Surface (for Other than Utility Visual Runway): Slopes twenty (20) feet outward for each foot upward (20:1) beginning at the end of and at the same elevation as the Primary Surface and extending to a horizontal distance of 5,000 feet along the extended runway centerline.

C. Transitional Surface: Slopes seven (7) feet outward for each foot upward (7:1) beginning at the sides of and at the same elevation as the Primary Surface and the Approach Surface and extending to a height of 150 feet above the airport elevation.

D. Horizontal Surface: Established at 150 feet above the airport elevation or at a height of 301 feet above mean sea level at the Cascade Locks Airport and 780 feet at the Ken Jernstedt Airfield. (*Note: The elevation of the Ken Jernstedt Airfield is subject to change should the runway shift to the east as detailed in the 2009 Airport Master Plan*.) The Horizontal Surface extends 5,000 feet from the center of each runway end, as shown on Appendix "B-2" (current) and "B-3"(future), and begins where the Transitional Surface reaches a vertical height of 150 feet.

E. Conical Surface: Slopes twenty (20) feet outward for each foot upward (20:1) for 4,000 feet beginning at the periphery of the Horizontal Surface and at 150 feet above the airport elevation and extending to a height of 350 feet above the airport elevation.

F. Runway Protection Zone: Extending 1,000 feet from the ends of existing and planned runway termini as shown on attached Appendix C, Sheets 1 though 3. The RPZ is trapezoidal in shape and centered about the extended runway centerline. The inner width of the RPZ is the same as the width of the Primary Surface. The outer width of the RPZ is a function of the type of aircraft and specified approach visibility minimum associated with the runway end.

G. The Plan Diagram in the Appendices shall be utilized to assist in determining any air space obstructions.

Section 34.40 - Permitted Uses

Any permitted use in the base zone subject to compliance with the provisions of the AH Zone, including provisions in Section 34.60 below.

Section 34.50 - Uses Subject to a Conditional Use Permit

Conditional uses listed in the base zone shall be subject to compliance with provisions of the AH Zone, including provisions in Section 34.60 below.

Section 34.60 - Other Conditions to Use and Occupancy:

Uses permitted in the base zone will also be governed by the following restrictions:

A. No building, pipe, chimney, tower, steeple, stand, platform, pole, wire or structure or erection or object of natural growth, or obstruction of any kind of nature whatsoever, shall be built, placed, hung, or permitted to grow or allowed to be built, placed or hung which shall at any point project into the zones as delineated in Appendices "A", "B" and "C" to this ordinance.

B. No residential development or uses that promote public gathering are permitted in the Runway Protection Zone, as detailed in Appendix C (Sheets 1 through 3). Any residential development or uses that promote public gathering that lawfully existed as of the adoption date of this amendment (*June 26, 2009*) shall be treated as nonconforming uses, subject to the provisions of Article 65 (Nonconforming Uses).

C. No searchlight, beacon light, or other glaring light shall be used, maintained, or operated within one-half mile of said airports, so that the same shall reflect, glare, or shine upon or in the direction of said airports.

D. No glare producing materials such as unpainted metal or reflective glass shall be used on the exterior of any structure located within or below the Airport Height Combining Zone, where glare could impede a pilot's view.

E. Any electromagnetic radiation that would interfere with normal aircraft communication is prohibited.

F. Any land use or activity that produces smoke or haze to a degree that would interfere with normal aircraft operations is prohibited.

G. Any land use or activity that produces excessive bird strike hazard in the designated zones is prohibited.

H. Where a zone is covered by more than one height limitation the more restrictive shall prevail.

I. It is the applicant's responsibility to provide elevation profiles and a site plan, both drawn to scale, including the location and height of all existing and proposed structures, measured in feet above mean sea level to demonstrate compliance with the height limitations of this Article.

J. Except as provided in Subsection K, below, for areas within the airport imaginary surfaces, but outside the Approach and Transition Surfaces, where the terrain is near or higher than the airport imaginary surface elevation such that existing structures and/or permitted development penetrate or would penetrate the airport imaginary surfaces, structures up to 35 feet in height may be authorized subject to the following standards:

Notice to the Federal Aviation Administration (FAA) is required by Part 77 of the Federal Aviation Regulations where construction and/or alteration of structures may penetrate regulated airspace described within this Section. It is the applicant's responsibility to notify the FAA and the Oregon Department of Aviation (ODA) and secure approvals via FAA Form 7460-1. Once notification has been made, the FAA or ODA will either make a "determination of no hazard" (DNH) or require mitigation through structure relocation on the subject site, aviation safety lighting or other means. The Planning Department will require a DNH or ensure mitigation is met as part of its approval process.

K. Pursuant to FAA Form 7460-1, FAA notification is not required for any of the following construction activities or alterations:

(1) Any object that would be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the structure so shielded will not adversely affect safety in air navigation.

(2) Any antenna structure of 20 feet of less in height, except one that would increase the height of another antenna structure.

(3) Any air navigation facility, airport visual approach or landing aid, aircraft arresting device, or meteorological device, of a type approved by the Administrator, or an appropriate military service, the location and height of which is fixed by its functional purpose.

(4) Any construction or alteration for which notice is required by any other FAA regulation.

(5) Any other construction activities or alterations deemed by FAA as exempt from notification.

L. Except as provided in Subsection 34.60(J), any person desiring to erect or increase the height of a structure causing it to penetrate into or penetrate further into the airport imaginary surface may apply for a variance, subject to the provisions of Article 66 (Variances) and the following:

(1) Prior to making application for a variance, the applicant shall submit a Form 7460-1 to and receive approval from the Oregon Department of Aviation and Federal Aviation Administration.

(2) An approved variance may be conditioned as to require the owner of the structure to install, operate, and maintain obstruction markers at the owner's expense.

(3) An approved variance may not allow a structure to exceed the height limitations prescribed in the base zone.

M. The following requirements and conditions shall apply to safety risks associated with potential bird strike hazards resulting from new water impoundments proposed in close proximity to an airport identified under ORS 836.610 (1):

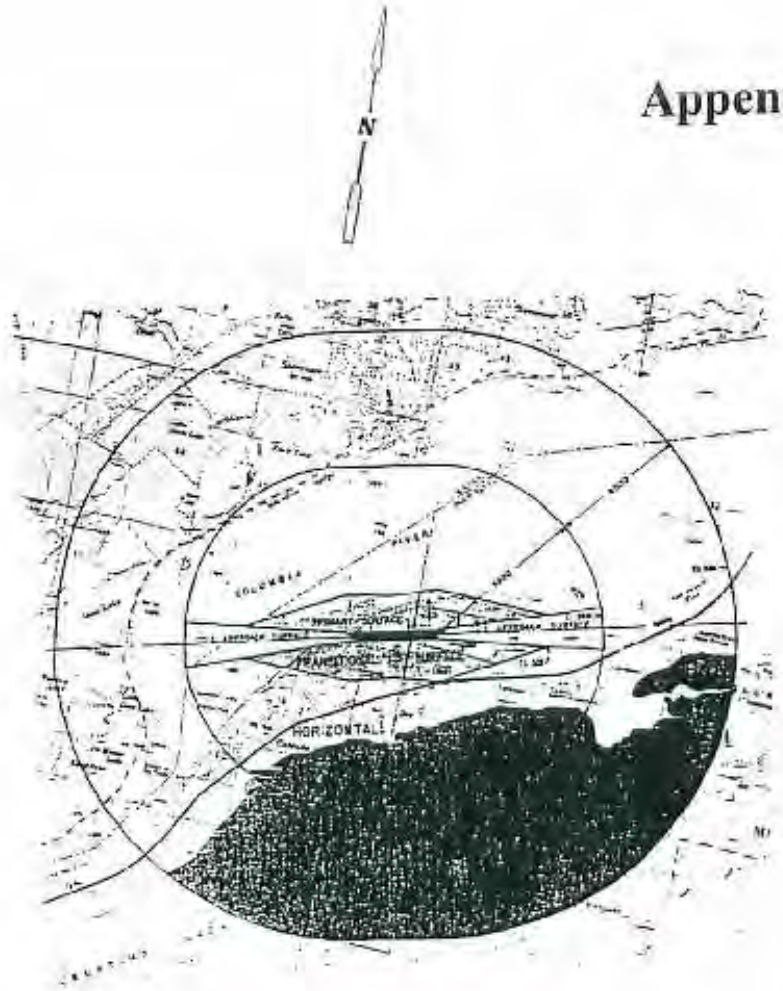
(1) No new water impoundments of one-quarter acre or larger shall be allowed:

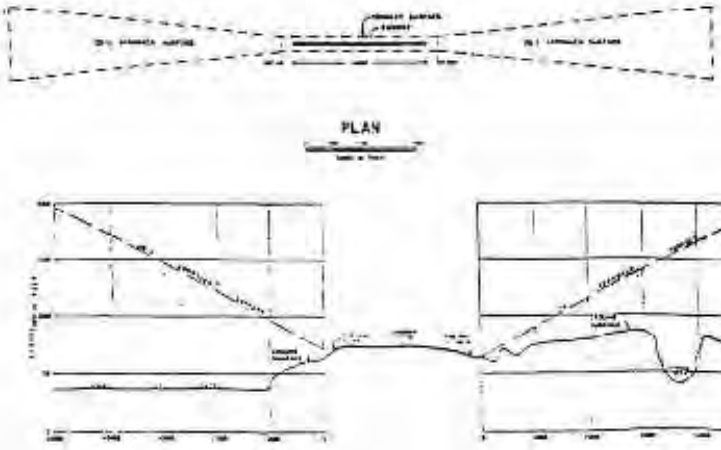
(A) Within an approach corridor and within 5,000 feet from the end of a runway; or

(B) On land owned by the airport or airport sponsor where the land is necessary for airport operations;

(2) Wetlands mitigation required for projects located within the areas identified in paragraphs (A) and (B) of this subsection shall be authorized where it is not practicable to provide off-site mitigation.

Appendix "A"

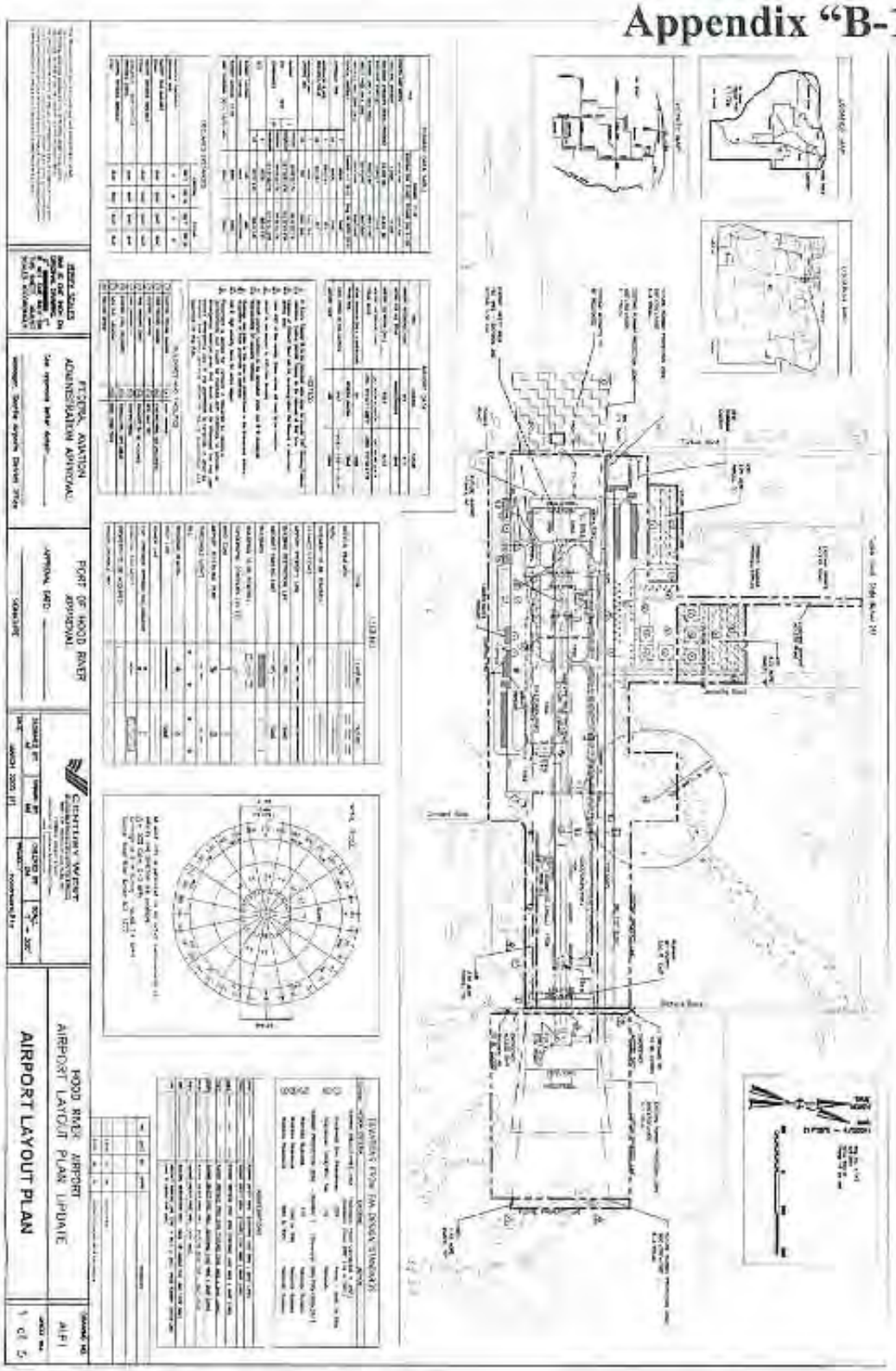




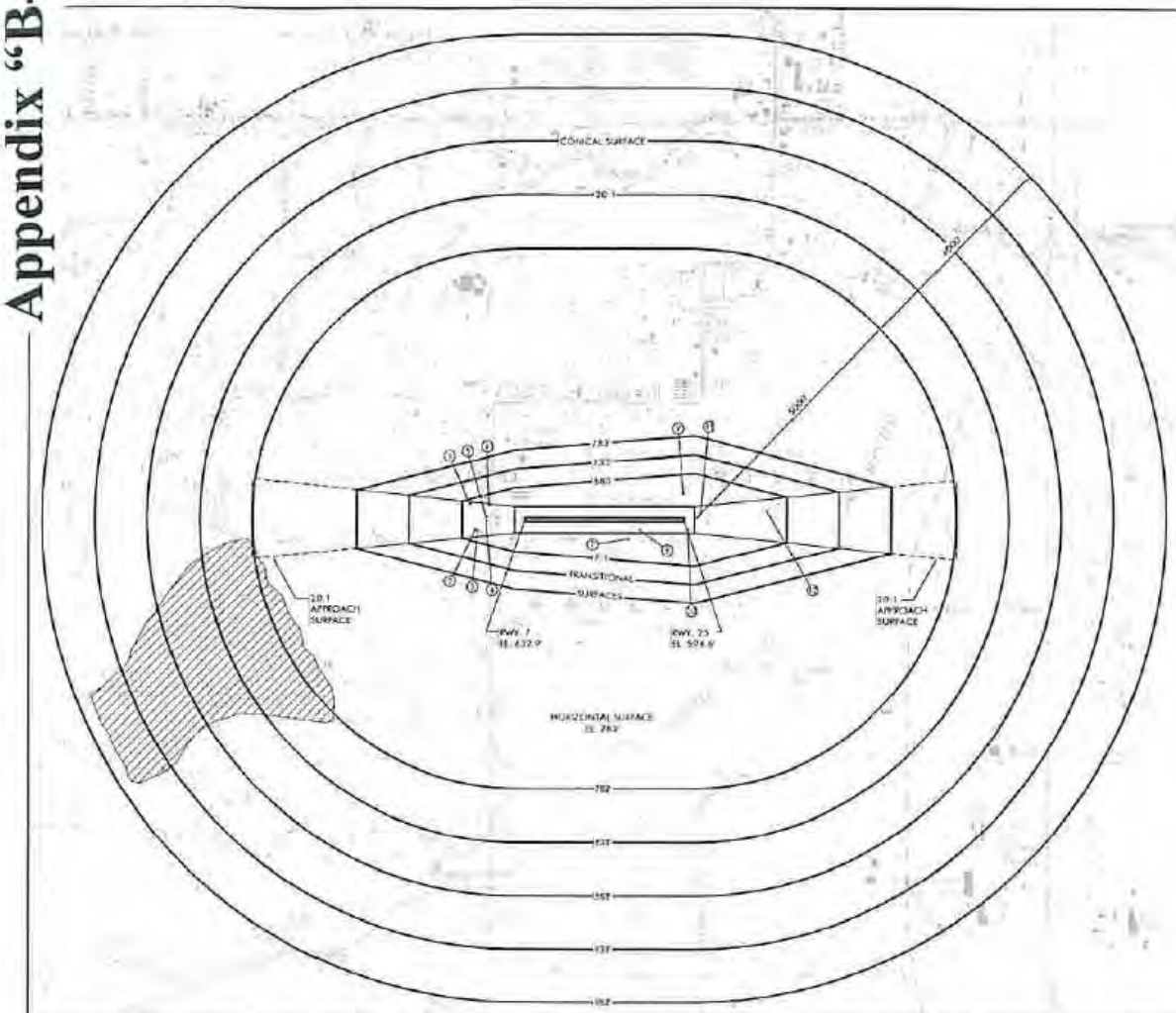
Article 34

Article 34 – Airport Height Combining (AH) Zone

Appendix "B-1"


FEDERAL AVIATION ADMINISTRATION APPROVAL
PORT OF HOOD RIVER APPROVAL
CENTURY WEST
HOOD RIVER AIRPORT
AIRPORT LAYOUT PLAN UPDATE
AIRPORT LAYOUT PLAN
AIR-1

Appendix "B-2"



RUNWAY OBSTRUCTION LEGEND

NO.	OBJECT	ELEV.	PENETRATION DES. (Sec 1)	PENETRATION PT. 77 (Sec 1)	SURFACE	ACTION
1	Tree	846'	9.95'	19'	OCS & PT77, RPZ	Reduce top
2	Tree	840'	4.75'	14.75'	OCS & PT77, RPZ	Reduce top
3	"A" Antenna on House	877'	0'	4.25'	OCS, PT77, RPZ	No Action
4	Coach Sta.	867'	0'	1.5'	N. RPZ	Reduce RPZ & Ob
5	Steady Drop w/ Electrical Conduit Pole	861'	0'	1.4'	N. RPZ	Reduce RPZ & Ob
6	Trailer No. 84 (L x 15' Parking)	841'+	0'	0'	PT77 APPROACH & RPZ	Reduce RPZ & Ob
7	Trees (100 L/L)	839'	0'	0'	PT77 TRANSITIONAL	Top or Remove
8	Tree	840'	0'	0'	PT77 TRANSITIONAL	Top or Remove
9	Tree	838'	0'	0'	PT77 TRANSITIONAL	Top or Remove
10	Trees (100 L/L)	834'+	0'	0'	PT77 TRANSITIONAL	Top or Remove
11	Orchard Bldg.	843'	0'	0'	PT77, RPZ	Remove Road
12	Tree w/ Antenna	882'	0'	0'	OCS, PT77, RPZ	Remove

OCS = Obstacle Clearance Surface - See note 1. PT 77 = FAR Part 77 Surface

NOTES:

1. FOR DESCRIPTION OF CLOSE-IN OBSTRUCTIONS AND OBSTRUCTION PLAN SEE RPZ PLANS AND PROFILES DRAWING (SHEET 4-5)
2. HEIGHT RESTRICTIONS ORDINANCE IN EFFECT - HOOD RIVER COUNTY ARTICLE 24.

LEGEND

TERRAIN PENETRATION OF IMAGINARY SURFACE

640' GROUND CONTOUR INTERVAL = 40'

Mag Dec. 17°15'
April 2004
Annual Rate Of
Change 18' per year

SCALE OF FEET
HORIZONTAL SCALE: 1" = 1000'

NO.	DATE	BY	APVD	REVISIONS
2	[illegible]	[illegible]	[illegible]	[illegible]
1	[illegible]	[illegible]	[illegible]	[illegible]

VERIFY SCALES

BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

FEDERAL AVIATION ADMINISTRATION APPROVAL

See approval letter dated: _____

_____
Manager, Seattle Airports District Office

PORT OF HOOD RIVER APPROVAL

APPROVAL DATE: _____

_____
SIGNATURE

CENTURY WEST ENGINEERING CORPORATION

DESIGNED BY: AF | DRAWN BY: MB | CHECKED BY: DM | SCALE: 1" = 1,000'

DATE: MARCH 2005 (R) | PROJECT: hoodriverALP2a

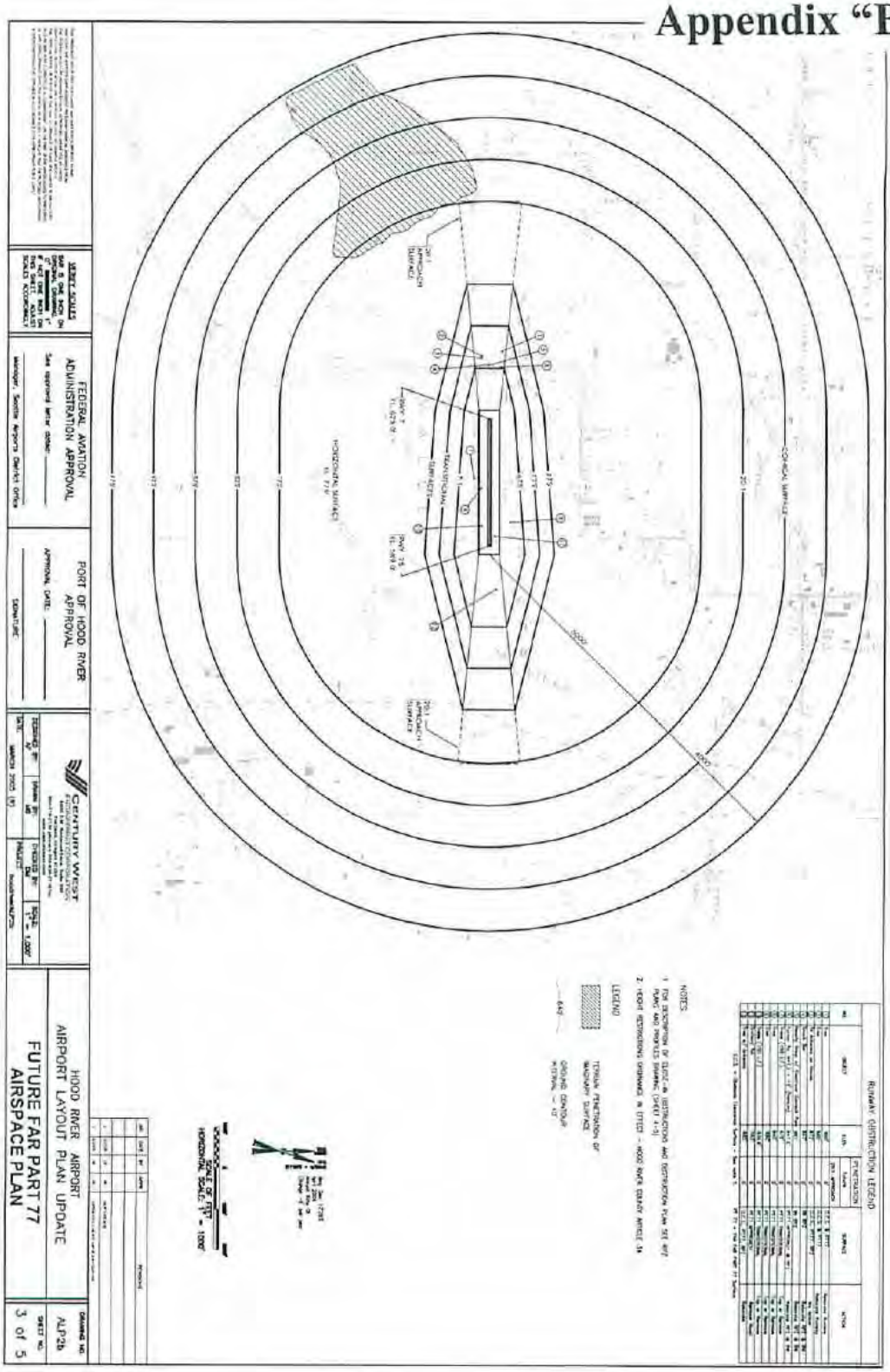
HOOD RIVER AIRPORT
AIRPORT LAYOUT PLAN UPDATE

EXISTING FAR PART 77
AIRSPACE PLAN

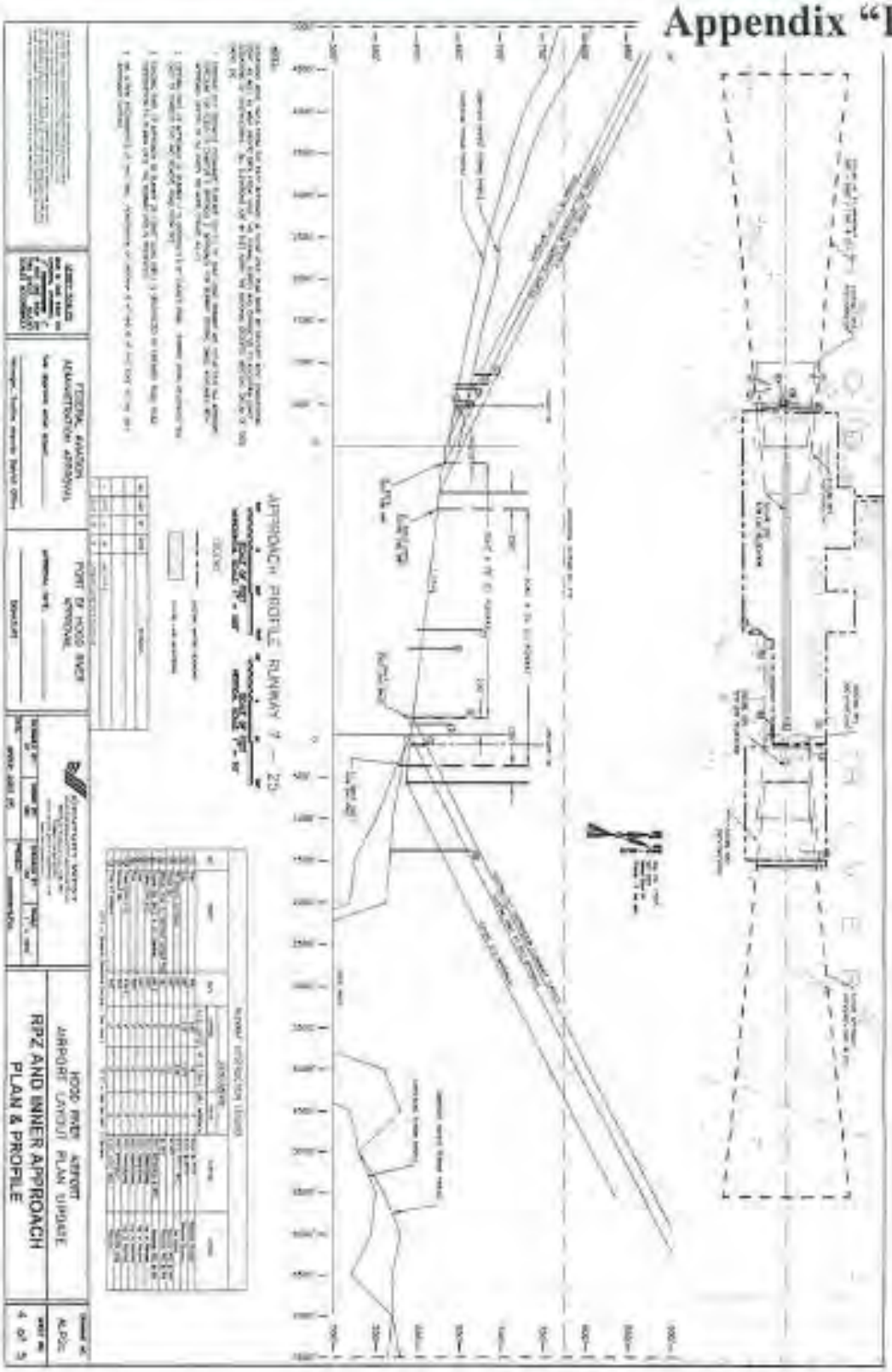
DRAWING NO. ALP2a

SHEET NO. 2 of 5

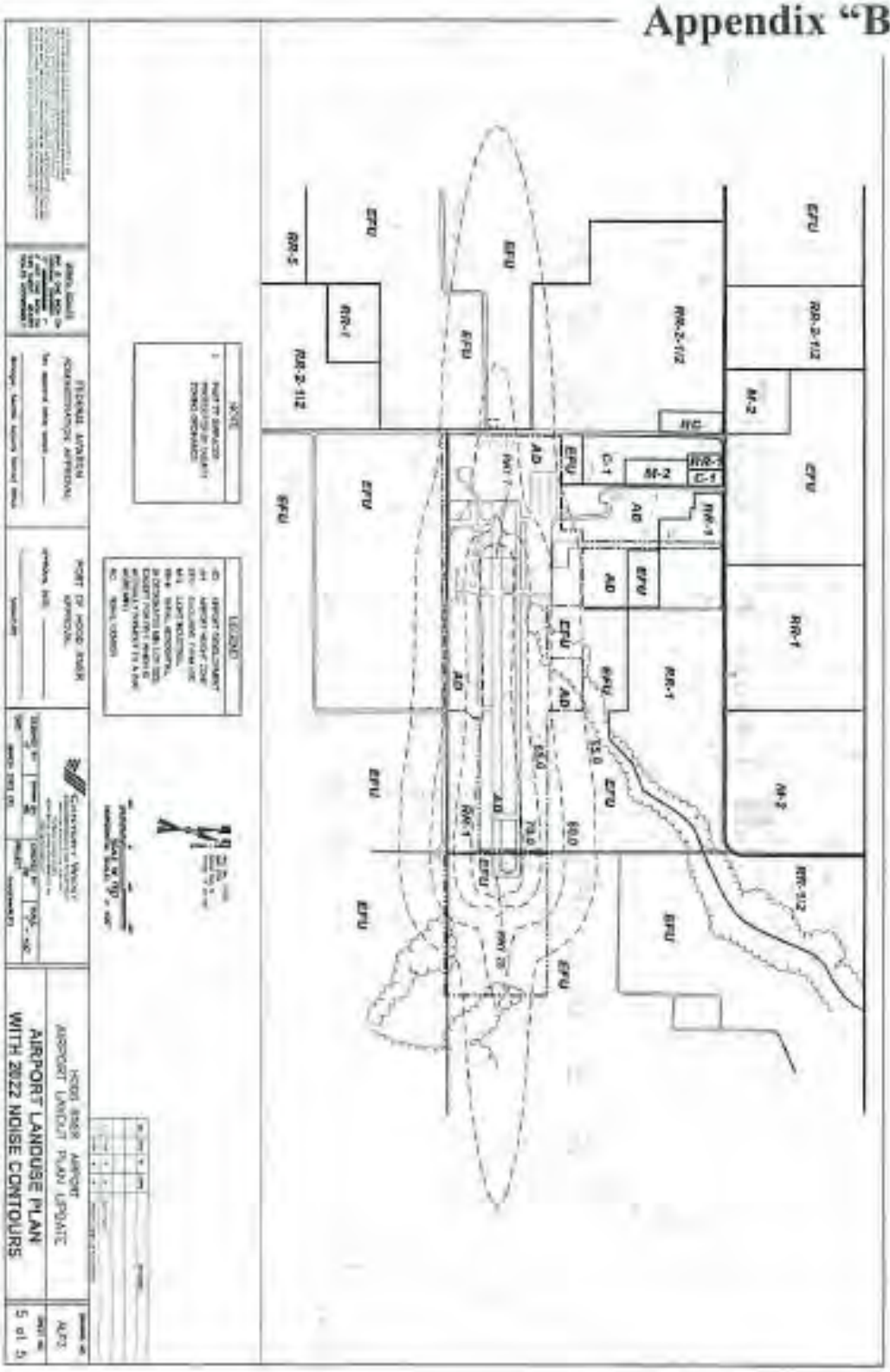
Appendix "B-3'

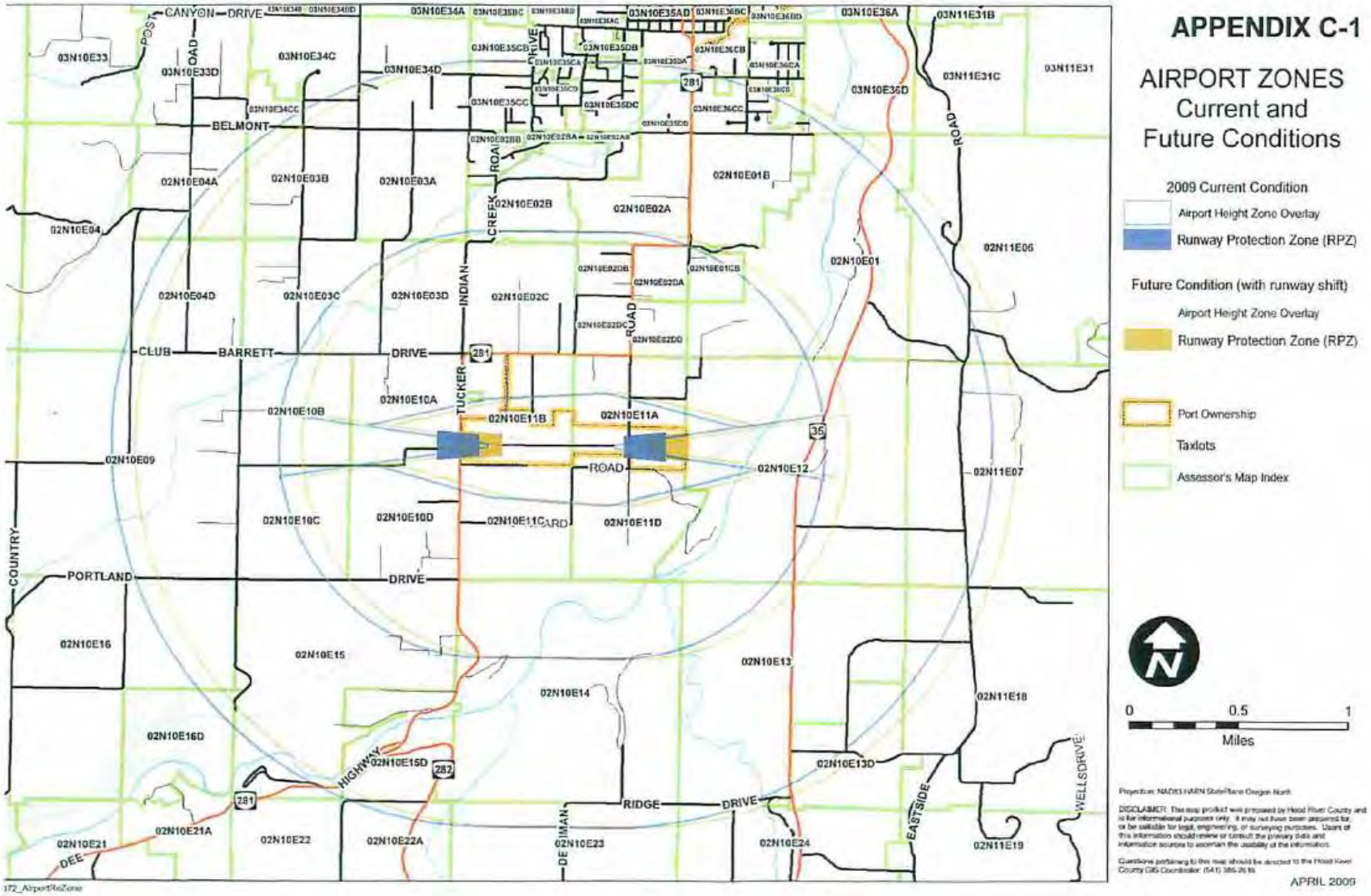

RUNWAY DISTRIBUTION LEGEND
NOTES
LEGEND
FEDERAL AVIATION ADMINISTRATION APPROVAL
PORT OF HOOD RIVER APPROVAL
CENTURY WEST
HOOD RIVER AIRPORT
AIRPORT LAYOUT PLAN UPDATE
FUTURE FAR PART 77
AIRSPACE PLAN
ALP-2b
3 of 5

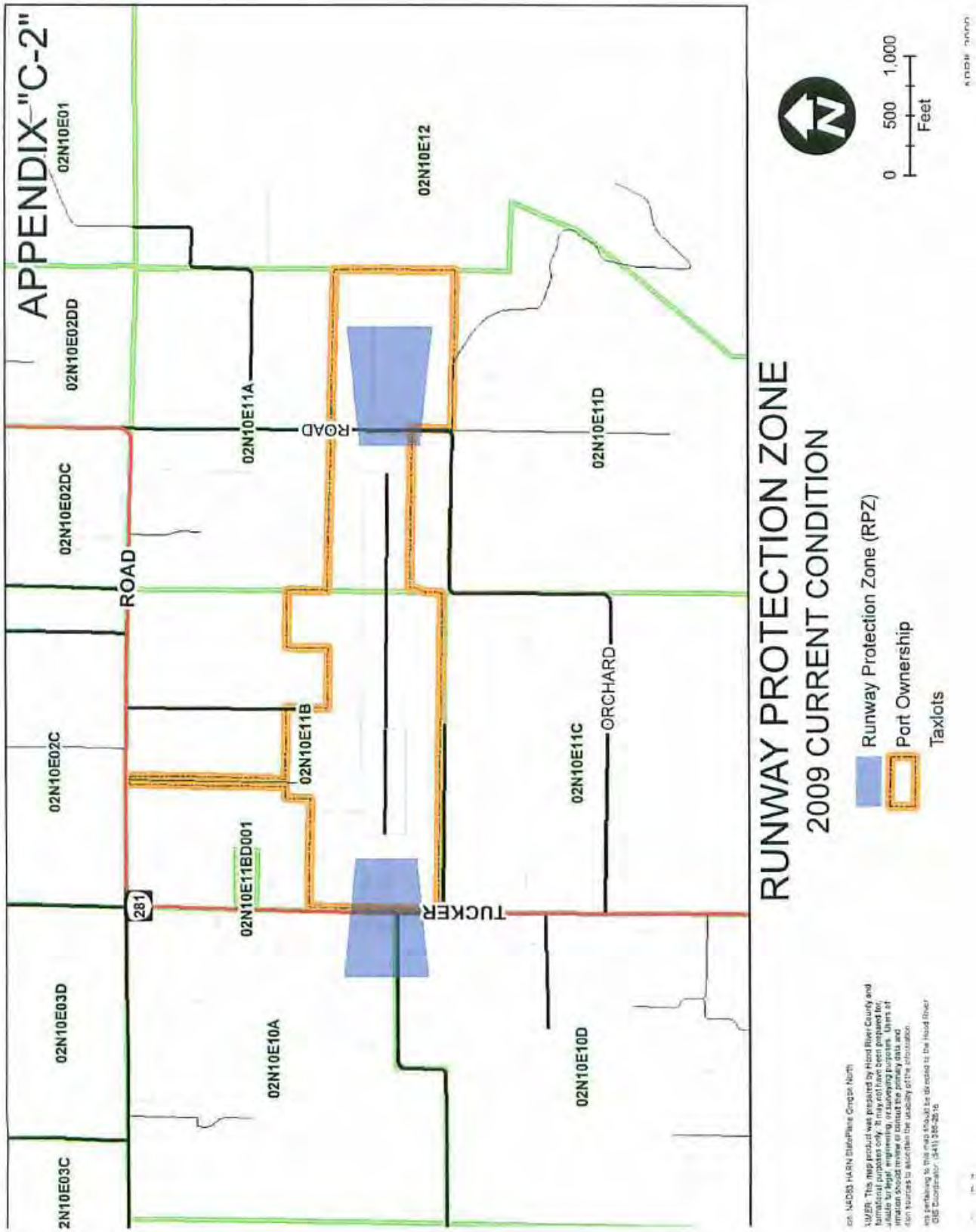
Appendix "B-4"

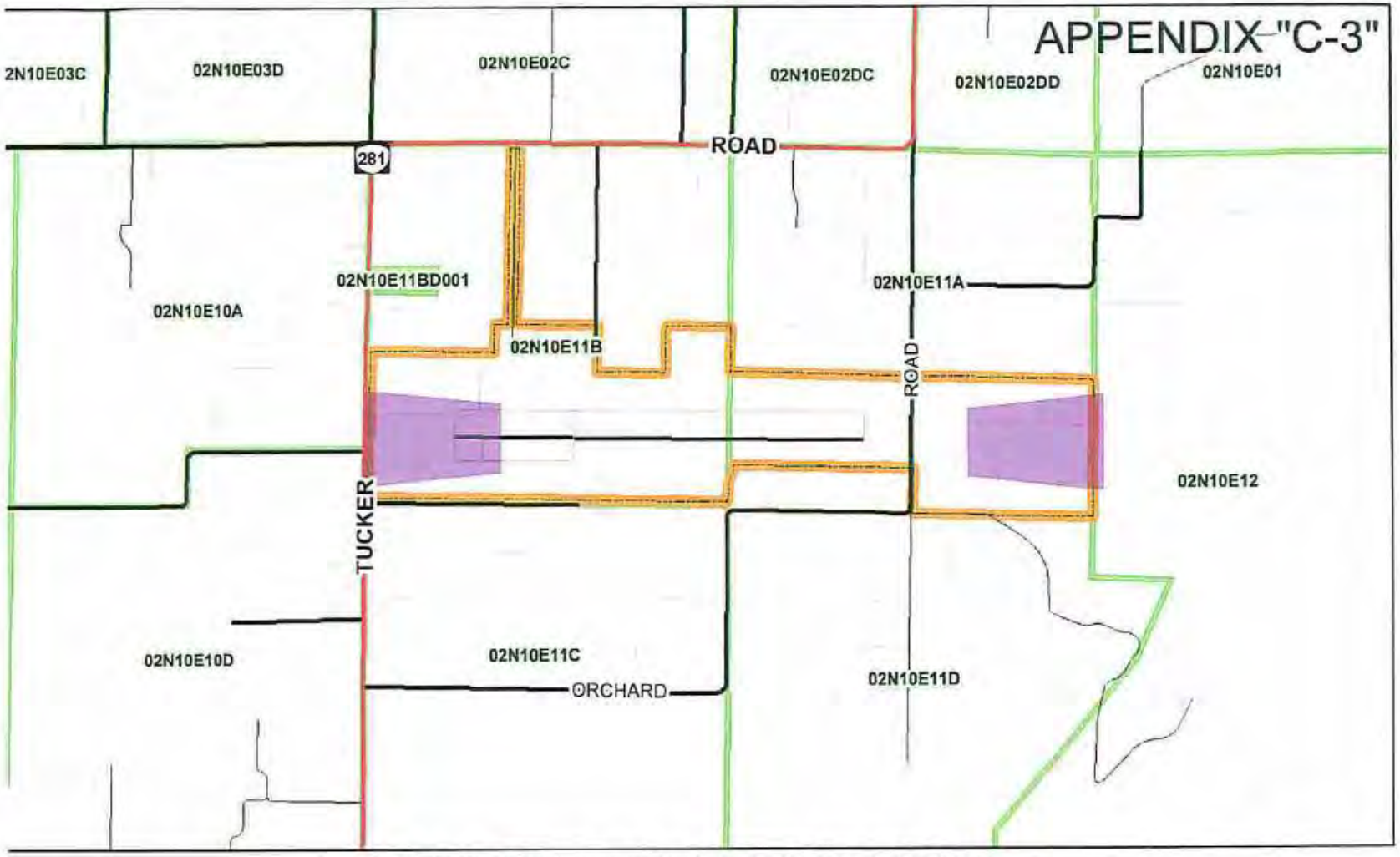

APPROACH PROFILE RUNWAY 4 – 22
RPZ AND INNER APPROACH
PLAN & PROFILE
HOOD RIVER AIRPORT
AIRPORT LAYOUT PLAN UPDATE
PORT OF HOOD RIVER
FEDERAL AVIATION ADMINISTRATION APPROVAL
4 of 5

Appendix "B-5"


EFU
RR-2-1/2
M-2
RR-1
RR-5
C-1
AD
RW 7
RW 25
RW 12
RW 30
15.0
10.0
7.5
5.0
HOOD RIVER AIRPORT
AIRPORT LAYOUT PLAN UPDATE
AIRPORT LANDUSE PLAN
WITH 2022 NOISE CONTOURS
A-2
5 of 5


APPENDIX C-1
AIRPORT ZONES
Current and
Future Conditions
2009 Current Condition
Airport Height Zone Overlay
Runway Protection Zone (RPZ)
Future Condition (with runway shift)
Airport Height Zone Overlay
Runway Protection Zone (RPZ)
Port Ownership
Taxlots
Assessor's Map Index
0
0.5
1
Miles
APRIL 2009
CANYON DRIVE
BELMONT
CLUB
BARRETT
DRIVE
PORTLAND
DRIVE
COUNTRY
POST
ROAD
INDIAN
CREEK
ROAD
TUCKER
ROAD
ROAD
CARD
HIGHWAY
DEE
DEMAN
RIDGE
DRIVE
EASTSIDE
WELLSDRIVE
ROAD
03N10E33
03N10E33D
03N10E34A
03N10E34C
03N10E34D
03N10E35AD
03N10E36A
03N11E31B
03N11E31C
03N11E31
03N10E36D
02N10E04
02N10E04A
02N10E04D
02N10E03A
02N10E03B
02N10E03C
02N10E03D
02N10E02A
02N10E02B
02N10E02C
02N10E01B
02N10E01
02N11E06
02N10E10A
02N10E10B
02N10E10C
02N10E10D
02N10E11A
02N10E11B
02N10E11C
02N10E11D
02N10E09
02N10E12
02N11E07
02N10E16
02N10E15
02N10E14
02N10E13
02N11E18
02N10E16D
02N10E15D
02N10E13D
02N10E21
02N10E21A
02N10E22
02N10E22A
02N10E23
02N10E24
02N11E19
281
282
35
172_AirportReZone


APPENDIX "C-2"
RUNWAY PROTECTION ZONE
2009 CURRENT CONDITION
Runway Protection Zone (RPZ)
Port Ownership
Taxlots
0 500 1,000
Feet
02N10E01
02N10E02DD
02N10E02DC
02N10E02C
02N10E03D
2N10E03C
02N10E11A
02N10E11B
02N10E11BD001
02N10E11C
02N10E11D
02N10E12
02N10E10A
02N10E10D
ROAD
ROAD
TUCKER
ORCHARD
281



RUNWAY PROTECTION ZONE

FUTURE CONDITION (WITH RUNWAY SHIFT)

Runway Protection Zone (RPZ)

Port Ownership

Taxlots

0 500 1,000

Feet

ion: NAD83 HARN StatePlane Oregon North

AIMER: This map product was prepared by Hood River County and formational purposes only. It may not have been prepared for, uitable for legal, engineering, or surveying purposes. Users of ormation should review or consult the primary data and ition sources to ascertain the usability of the information.

ns pertaining to this map should be directed to the Hood River GIS Coordinator: (541) 386-2616

APRIL 2009

ARTICLE 37 – AIRPORT NOISE OVERLAY ZONE (AN)

(Effective June 26, 2009 – Ordinance #295)

Section 37.10 – Purpose and Intent

The AN overlay zone is intended to be applied to lands within and adjacent to the Ken Jernstedt Airfield that are located in areas of 65 and greater Noise Decibel Levels (NDL), as depicted in Appendix "A" of this Article. The purpose of this zone is to implement OAR-660-013-0080 (1)(b) and to apply Noise Level Reduction (NLR) standards required by the Oregon Airport Planning Rule.

Section 37.20 – AN Zoning on Official Zoning Map

Lands zoned AN on the official zoning map are those lands located on and adjoining the airport and shown on the Airport Master Plan to have Airport Noise Contours at 65 dB (DNL) and greater. Existing dwellings and other uses otherwise prohibited in the AN zone are not subject to the provisions of Article 65, Non-Conforming Uses.

Section 37.30 – Uses Permitted Outright or Conditionally

The AN overlay zone will have no impact on uses allowed outright or conditionally in the underlying base zone, but may require additional construction standards as outlined in Article 37.50 below.

Section 37.40 – Prohibited Uses

The following uses are specifically prohibited within the AN zone:

1. New dwellings, except as otherwise allowed in Section 37.50(2).

2. New schools, except for flight schools located on airport property.

3. Outdoor music shells, amphitheatres.

4. Nature exhibits and zoos.

Section 37.50 – Limitations on Use

All proposed residential (habitable structures) and other allowed uses occurring within the 65 dB Airport Noise Contour must meet the following noise mitigation provisions:

1. Minimum Construction Standards: Except as provided in Subsection 5, below, noise mitigation is required for new construction located within the 65 dB contour. Typical home construction provides 20 dB indoors assuming vents and windows are closed. New residential construction and replacement dwellings require the applicant use building techniques (wall and window materials, insulating qualities, etc.) shown to enhance the indoor noise level to a range of 25 dB to 30 dB; or exceed standard construction indoor noise reduction by 5 dB to 10 dB as determined by the Building Official. This may require a qualified professional to design the structure, and may require a third party test to ensure that the structure was built to meet noise reduction standards prior to occupancy.

2. Replacement Dwellings. Where an existing dwelling is located entirely outside, partially inside and partially outside, or entirely inside the 65 dB contour, the replacement dwelling may only be allowed to expand into or further into the 65 dB if the noise level reduction standards described in Subsection 1 above are achieved and one of the following is met:

    a. No more than 25 percent of habitable floor area of the existing dwelling is allowed to penetrate into or further into the 65 dB contour; or

    b. More than 25 percent of the habitable floor area of the existing dwelling is allowed to penetrate into or further into the 65 dB contour with an approved variance (Article 66) and justification that shows special conditions or physical limitations on the site make the proposal the most feasible option.

3. Existing Dwellings. Where an existing dwelling is located entirely outside, partially inside and partially outside, or entirely inside the 65 dB contour, the existing dwelling may only be allowed to expand into or further into the 65 dB contour area if the noise level reduction standards described in Subsection 1 above are achieved and one of the following are met:

    a. No more than 25 percent of habitable floor area of the existing dwelling is allowed to penetrate into or further into the 65 dB contour; or

    b. More than 25% of the habitable floor area of the existing dwelling is allowed to penetrate into or further into the 65 dB contour with an approved variance (Article 66) and justification that shows special conditions or physical limitations on the site make the proposal the most feasible option.

4. Additions and Alterations. Where existing construction is altered or additions are proposed, all newly constructed portions of dwellings within the 65 dB contour shall meet the 25 to 30 dB standard, while all remaining unaltered portions of the dwelling are exempt.

5. Exemptions. Non-habitable structures, such as garages and outbuildings, as well as minor repairs to existing dwellings (e.g. broken windows or roof repairs) are exempt from the noise level reduction standards.

6. Non-Residential Uses. Additional uses that are consistent with the base zone may be permitted with limitations as outlined in the Noise Compatibility Table 37.1 below, which was adapted from Exhibit 5 of OAR 660-013, Airport Planning Rule.

Noise Compatibility Table 37.1		
Land Use	**Yearly Day-Night Sound Levels (DNL) in Decibels**	
Residential	65-70	70-75
Residential Dwellings	N[1]	N[1]
Mobile Homes	N	N
Transient Lodging (motels and hotels)	N[1]	N[1]
Public Use		
Schools	N[1]	N[1]
Churches, auditoriums, concert halls, hospitals, nursing homes	25	30
Government Services	Y	25
Transportation/Parking	Y	Y[2]
Commercial		
Offices-business and professional	Y	25
Wholesale/retail-materials, hardware and farm equipment	Y	Y[2]
Retail trade-general	Y	25
Utilities	Y	Y[2]
Communications	Y	25
Manufacturing		
Manufacturing-general	Y	Y[2]
Photographic and optical	Y	25
Agriculture (except livestock) and forestry	Y[4]	Y[5]
Livestock farming and breeding	Y[4]	Y[5]
Mining and fishing, resource production and extraction	Y	Y
Recreation		
Outdoor sports arenas/spectator sports	Y[3]	Y[3]
Outdoor music shells, amphitheatres	N	N
Nature exhibits and zoos	N	N
Amusement parks, resorts, camps	Y	Y
Golf courses, riding stables, water recreation	Y	25

Key:

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, 35 Land Use and related structures generally compatible; measures to achieve NLR of 25 or 30 dB must be incorporated into design and construction of structure.

Table 37.1 Notes:

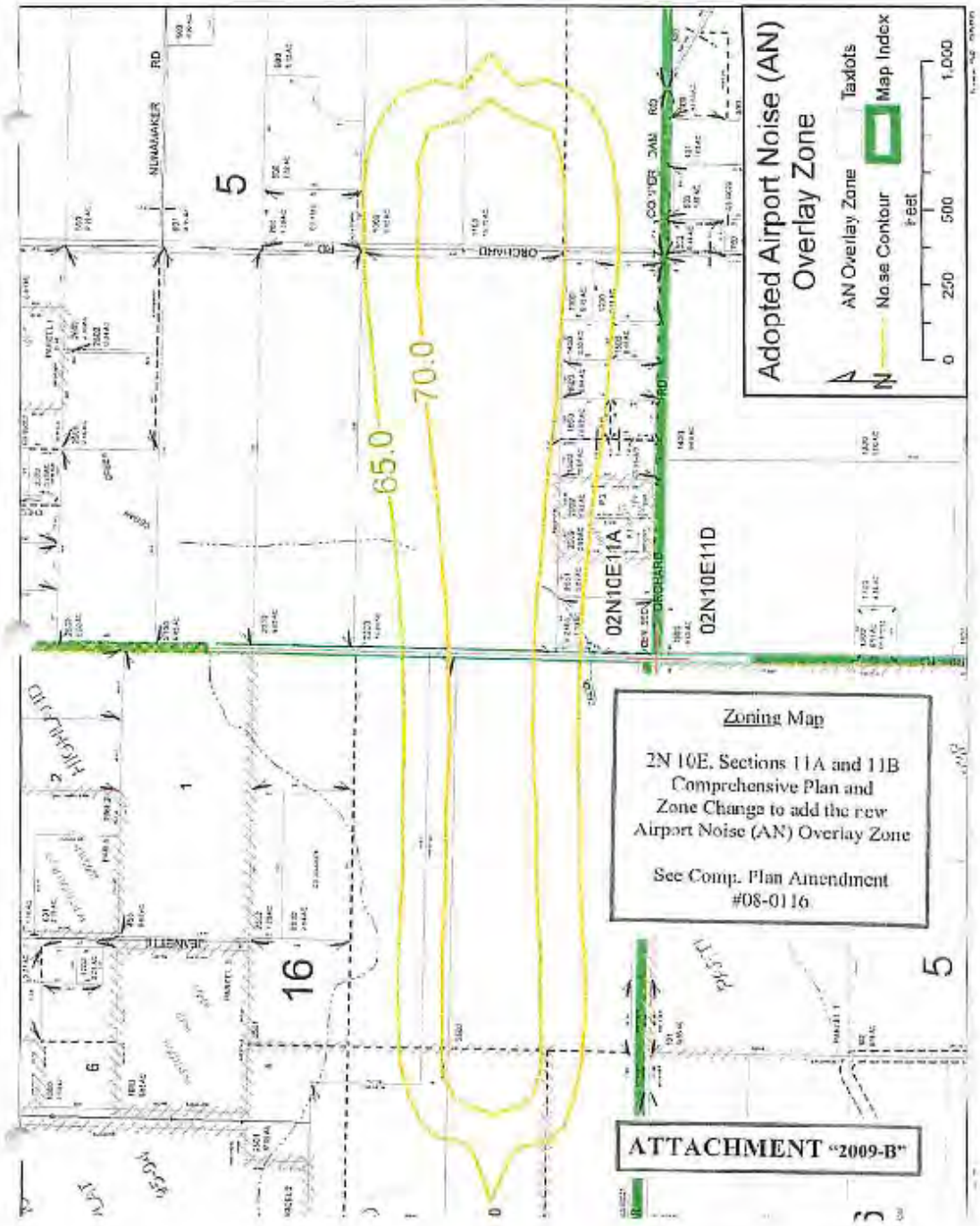
1. Where a community determined that residential or school uses must be allowed, measures to achieve an outdoor to indoor Noise Level Reduction (NLR) of at least 25 dB and 30 dB should be incorporated into building codes and be considered in individual approvals. Normal residential construction can be 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. Land use compatible provided special sound reinforcement systems are installed.

4. Residential Buildings require an NLR of 25 dB.

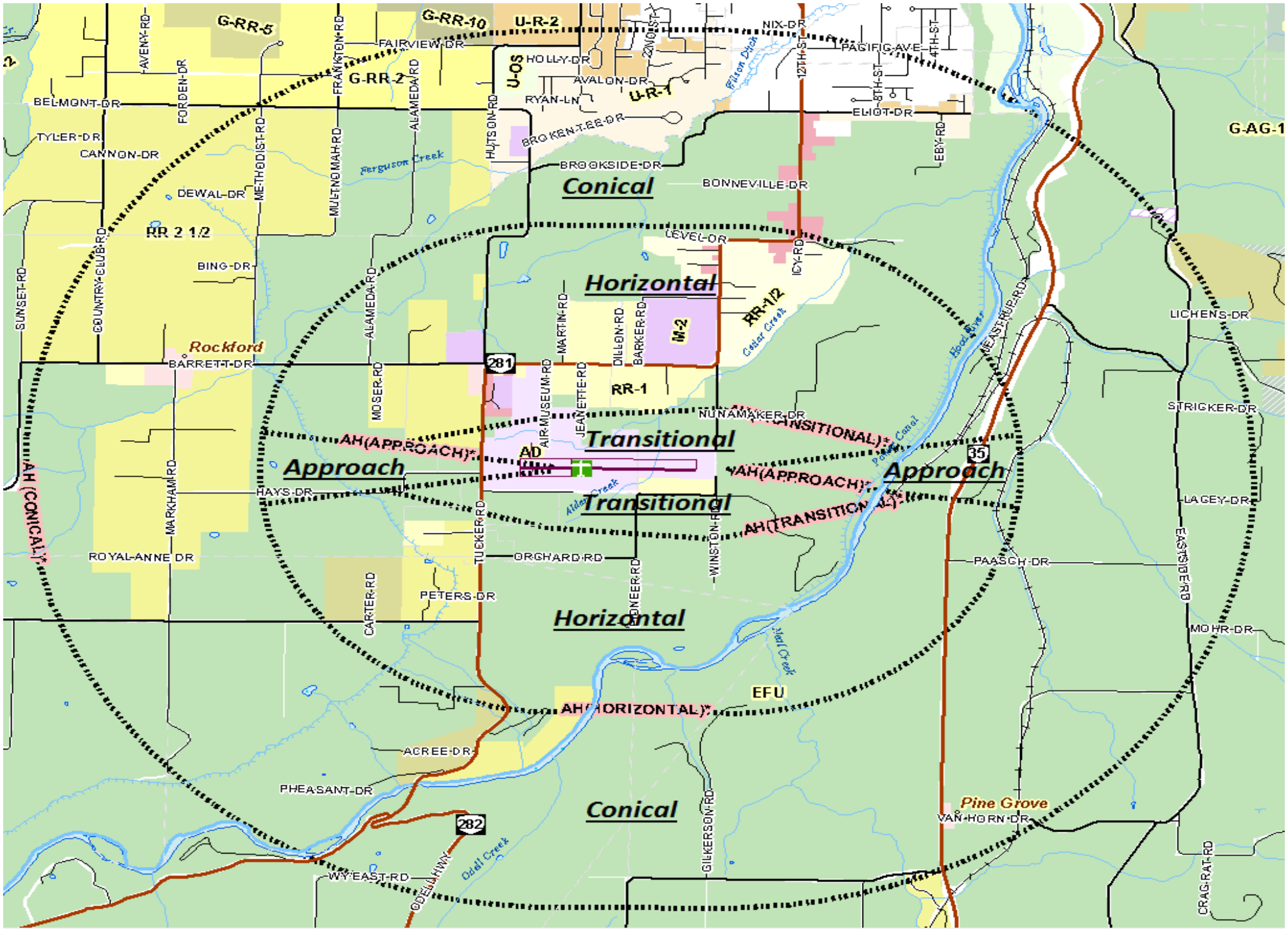
5. Residential Buildings require an NLR of 30 dB.



Attachment "A" – Article 37

Attachment A
and Attachment B

Attachment A:



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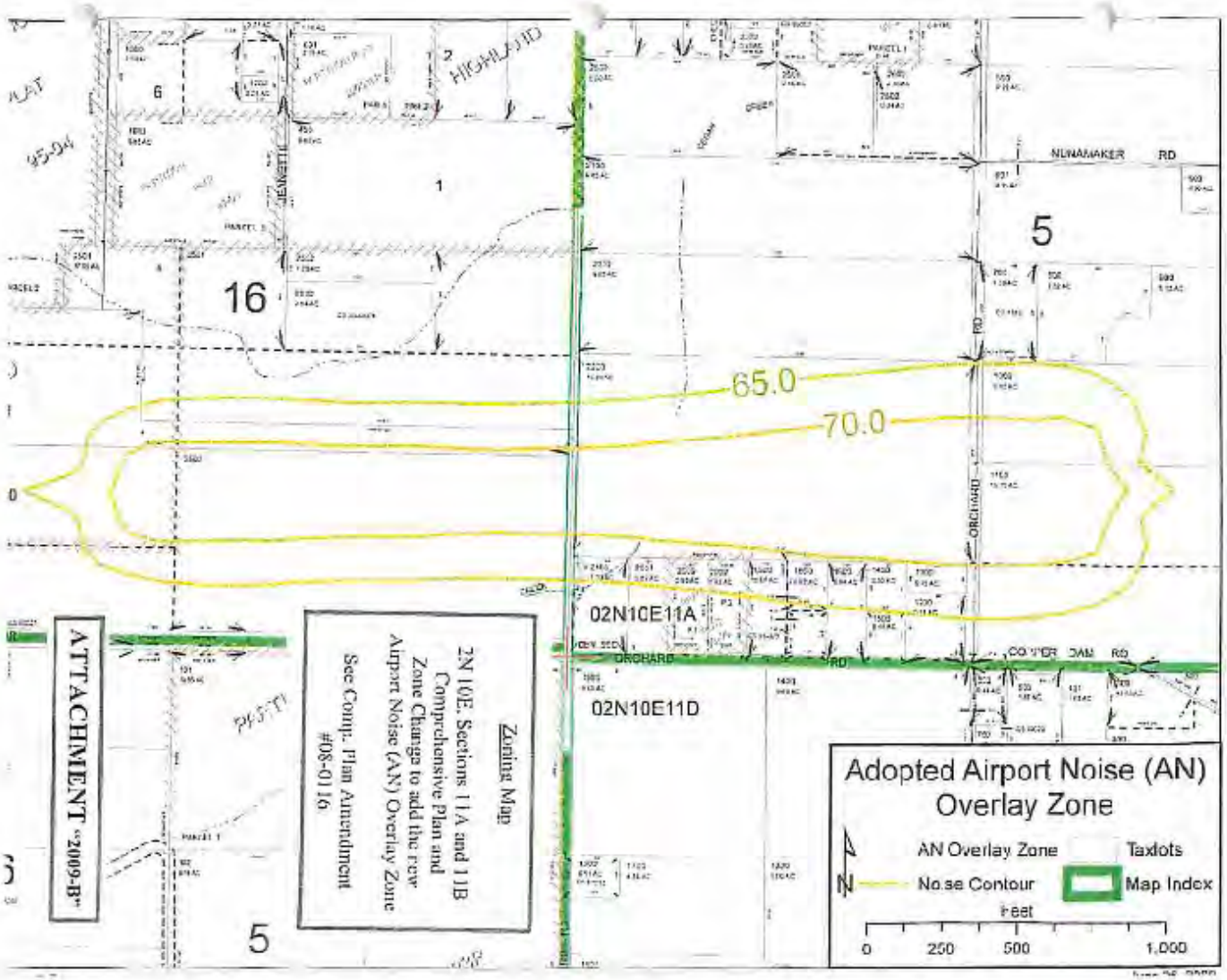


Appendix C

FAA
Airports

ASSURANCES

Airport Sponsors

A. General.

1. These assurances shall be complied with in the performance of grant agreements for airport development, airport planning, and noise compatibility program grants for airport sponsors.
2. These assurances are required to be submitted as part of the project application by sponsors requesting funds under the provisions of Title 49, U.S.C., subtitle VII, as amended. As used herein, the term "public agency sponsor" means a public agency with control of a public-use airport; the term "private sponsor" means a private owner of a public-use airport; and the term "sponsor" includes both public agency sponsors and private sponsors.
3. Upon acceptance of this grant offer by the sponsor, these assurances are incorporated in and become part of this grant agreement.

B. Duration and Applicability.

1. **Airport development or Noise Compatibility Program Projects Undertaken by a Public Agency Sponsor.**

   The terms, conditions and assurances of this grant agreement shall remain in full force and effect throughout the useful life of the facilities developed or equipment acquired for an airport development or noise compatibility program project, or throughout the useful life of the project items installed within a facility under a noise compatibility program project, but in any event not to exceed twenty (20) years from the date of acceptance of a grant offer of Federal funds for the project. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the airport is used as an airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with federal funds. Furthermore, the duration of the Civil Rights assurance shall be specified in the assurances.

2. **Airport Development or Noise Compatibility Projects Undertaken by a Private Sponsor.**

   The preceding paragraph 1 also applies to a private sponsor except that the useful life of project items installed within a facility or the useful life of the facilities developed or equipment acquired under an airport development or noise compatibility program project shall be no less than ten (10) years from the date of acceptance of Federal aid for the project.

3. **Airport Planning Undertaken by a Sponsor.**

Unless otherwise specified in this grant agreement, only Assurances 1, 2, 3, 5, 6, 13, 18, 25, 30, 32, 33, and 34 in Section C apply to planning projects. The terms, conditions, and assurances of this grant agreement shall remain in full force and effect during the life of the project; there shall be no limit on the duration of the assurances regarding Airport Revenue so long as the airport is used as an airport.

C. Sponsor Certification.

The sponsor hereby assures and certifies, with respect to this grant that:

1. **General Federal Requirements.**

It will comply with all applicable Federal laws, regulations, executive orders, policies, guidelines, and requirements as they relate to the application, acceptance and use of Federal funds for this project including but not limited to the following:

Federal Legislation

a. Title 49, U.S.C., subtitle VII, as amended.
b. Davis-Bacon Act - 40 U.S.C. 276(a), et seq.[1]
c. Federal Fair Labor Standards Act - 29 U.S.C. 201, et seq.
d. Hatch Act – 5 U.S.C. 1501, et seq.[2]
e. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Title 42 U.S.C. 4601, et seq.[1 2]
f. National Historic Preservation Act of 1966 - Section 106 - 16 U.S.C. 470(f).[1]
g. Archeological and Historic Preservation Act of 1974 - 16 U.S.C. 469 through 469c.[1]
h. Native Americans Grave Repatriation Act - 25 U.S.C. Section 3001, et seq.
i. Clean Air Act, P.L. 90-148, as amended.
j. Coastal Zone Management Act, P.L. 93-205, as amended.
k. Flood Disaster Protection Act of 1973 - Section 102(a) - 42 U.S.C. 4012a.[1]
l. Title 49, U.S.C., Section 303, (formerly known as Section 4(f))
m. Rehabilitation Act of 1973 - 29 U.S.C. 794.
n. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
o. Americans with Disabilities Act of 1990, as amended, (42 U.S.C. § 12101 et seq.), prohibits discrimination on the basis of disability).
p. Age Discrimination Act of 1975 - 42 U.S.C. 6101, et seq.
q. American Indian Religious Freedom Act, P.L. 95-341, as amended.
r. Architectural Barriers Act of 1968 -42 U.S.C. 4151, et seq.[1]
s. Power plant and Industrial Fuel Use Act of 1978 - Section 403- 2 U.S.C. 8373.[1]
t. Contract Work Hours and Safety Standards Act - 40 U.S.C. 327, et seq.[1]
u. Copeland Anti-kickback Act - 18 U.S.C. 874.1
v. National Environmental Policy Act of 1969 - 42 U.S.C. 4321, et seq.[1]
w. Wild and Scenic Rivers Act, P.L. 90-542, as amended.
x. Single Audit Act of 1984 - 31 U.S.C. 7501, et seq.[2]
y. Drug-Free Workplace Act of 1988 - 41 U.S.C. 702 through 706.

z. The Federal Funding Accountability and Transparency Act of 2006, as amended (Pub. L. 109-282, as amended by section 6202 of Pub. L. 110-252).

Executive Orders

a. Executive Order 11246 - Equal Employment Opportunity[1]
b. Executive Order 11990 - Protection of Wetlands
c. Executive Order 11998 – Flood Plain Management
d. Executive Order 12372 - Intergovernmental Review of Federal Programs
e. Executive Order 12699 - Seismic Safety of Federal and Federally Assisted New Building Construction[1]
f. Executive Order 12898 - Environmental Justice

Federal Regulations

a. 2 CFR Part 180 - OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement).
b. 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. [OMB Circular A-87 Cost Principles Applicable to Grants and Contracts with State and Local Governments, and OMB Circular A-133 - Audits of States, Local Governments, and Non-Profit Organizations].[4, 5, 6]
c. 2 CFR Part 1200 – Nonprocurement Suspension and Debarment
d. 14 CFR Part 13 - Investigative and Enforcement Procedures14 CFR Part 16 - Rules of Practice For Federally Assisted Airport Enforcement Proceedings.
e. 14 CFR Part 150 - Airport noise compatibility planning.
f. 28 CFR Part 35- Discrimination on the Basis of Disability in State and Local Government Services.
g. 28 CFR § 50.3 - U.S. Department of Justice Guidelines for Enforcement of Title VI of the Civil Rights Act of 1964.
h. 29 CFR Part 1 - Procedures for predetermination of wage rates.[1]
i. 29 CFR Part 3 - Contractors and subcontractors on public building or public work financed in whole or part by loans or grants from the United States.[1]
j. 29 CFR Part 5 - Labor standards provisions applicable to contracts covering federally financed and assisted construction (also labor standards provisions applicable to non-construction contracts subject to the Contract Work Hours and Safety Standards Act).[1]
k. 41 CFR Part 60 - Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor (Federal and federally assisted contracting requirements).[1]
l. 49 CFR Part 18 - Uniform administrative requirements for grants and cooperative agreements to state and local governments.[3]
m. 49 CFR Part 20 - New restrictions on lobbying.
n. 49 CFR Part 21 – Nondiscrimination in federally-assisted programs of the Department of Transportation - effectuation of Title VI of the Civil Rights Act of 1964.
o. 49 CFR Part 23 - Participation by Disadvantage Business Enterprise in Airport Concessions.

p. 49 CFR Part 24 – Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs.[1 2]
q. 49 CFR Part 26 – Participation by Disadvantaged Business Enterprises in Department of Transportation Programs.
r. 49 CFR Part 27 – Nondiscrimination on the Basis of Handicap in Programs and Activities Receiving or Benefiting from Federal Financial Assistance.[1]
s. 49 CFR Part 28 – Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities conducted by the Department of Transportation.
t. 49 CFR Part 30 - Denial of public works contracts to suppliers of goods and services of countries that deny procurement market access to U.S. contractors.
u. 49 CFR Part 32 – Governmentwide Requirements for Drug-Free Workplace (Financial Assistance)
v. 49 CFR Part 37 – Transportation Services for Individuals with Disabilities (ADA).
w. 49 CFR Part 41 - Seismic safety of Federal and federally assisted or regulated new building construction.

Specific Assurances

Specific assurances required to be included in grant agreements by any of the above laws, regulations or circulars are incorporated by reference in this grant agreement.

Footnotes to Assurance C.1.

[1] These laws do not apply to airport planning sponsors.

[2] These laws do not apply to private sponsors.

[3] 49 CFR Part 18 and 2 CFR Part 200 contain requirements for State and Local Governments receiving Federal assistance. Any requirement levied upon State and Local Governments by this regulation and circular shall also be applicable to private sponsors receiving Federal assistance under Title 49, United States Code.

[4] On December 26, 2013 at 78 FR 78590, the Office of Management and Budget (OMB) issued the Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in 2 CFR Part 200. 2 CFR Part 200 replaces and combines the former Uniform Administrative Requirements for Grants (OMB Circular A-102 and Circular A-110 or 2 CFR Part 215 or Circular) as well as the Cost Principles (Circulars A-21 or 2 CFR part 220; Circular A-87 or 2 CFR part 225; and A-122, 2 CFR part 230). Additionally it replaces Circular A-133 guidance on the Single Annual Audit. In accordance with 2 CFR section 200.110, the standards set forth in Part 200 which affect administration of Federal awards issued by Federal agencies become effective once implemented by Federal agencies or when any future amendment to this Part becomes final. Federal agencies, including the Department of Transportation, must implement the policies and procedures applicable to Federal awards by promulgating a regulation to be effective by December 26, 2014 unless different provisions are required by statute or approved by OMB.

[5] Cost principles established in 2 CFR part 200 subpart E must be used as guidelines for determining the eligibility of specific types of expenses.

[6] Audit requirements established in 2 CFR part 200 subpart F are the guidelines for audits.

2. **Responsibility and Authority of the Sponsor.**

   a. Public Agency Sponsor:

   It has legal authority to apply for this grant, and to finance and carry out the proposed project; that a resolution, motion or similar action has been duly adopted or passed as an official act of the applicant's governing body authorizing the filing of the application, including all understandings and assurances contained therein, and directing and authorizing the person identified as the official representative of the applicant to act in connection with the application and to provide such additional information as may be required.

   b. Private Sponsor:

   It has legal authority to apply for this grant and to finance and carry out the proposed project and comply with all terms, conditions, and assurances of this grant agreement. It shall designate an official representative and shall in writing direct and authorize that person to file this application, including all understandings and assurances contained therein; to act in connection with this application; and to provide such additional information as may be required.

3. **Sponsor Fund Availability.**

   It has sufficient funds available for that portion of the project costs which are not to be paid by the United States. It has sufficient funds available to assure operation and maintenance of items funded under this grant agreement which it will own or control.

4. **Good Title.**

   a. It, a public agency or the Federal government, holds good title, satisfactory to the Secretary, to the landing area of the airport or site thereof, or will give assurance satisfactory to the Secretary that good title will be acquired.

   b. For noise compatibility program projects to be carried out on the property of the sponsor, it holds good title satisfactory to the Secretary to that portion of the property upon which Federal funds will be expended or will give assurance to the Secretary that good title will be obtained.

5. **Preserving Rights and Powers.**

   a. It will not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions, and assurances in this grant agreement without the written approval of the Secretary, and will act promptly to acquire, extinguish or modify any outstanding rights or claims of right of others which would interfere with such performance by the sponsor. This shall be done in a manner acceptable to the Secretary.

b. It will not sell, lease, encumber, or otherwise transfer or dispose of any part of its title or other interests in the property shown on Exhibit A to this application or, for a noise compatibility program project, that portion of the property upon which Federal funds have been expended, for the duration of the terms, conditions, and assurances in this grant agreement without approval by the Secretary. If the transferee is found by the Secretary to be eligible under Title 49, United States Code, to assume the obligations of this grant agreement and to have the power, authority, and financial resources to carry out all such obligations, the sponsor shall insert in the contract or document transferring or disposing of the sponsor's interest, and make binding upon the transferee all of the terms, conditions, and assurances contained in this grant agreement.

c. For all noise compatibility program projects which are to be carried out by another unit of local government or are on property owned by a unit of local government other than the sponsor, it will enter into an agreement with that government. Except as otherwise specified by the Secretary, that agreement shall obligate that government to the same terms, conditions, and assurances that would be applicable to it if it applied directly to the FAA for a grant to undertake the noise compatibility program project. That agreement and changes thereto must be satisfactory to the Secretary. It will take steps to enforce this agreement against the local government if there is substantial non-compliance with the terms of the agreement.

d. For noise compatibility program projects to be carried out on privately owned property, it will enter into an agreement with the owner of that property which includes provisions specified by the Secretary. It will take steps to enforce this agreement against the property owner whenever there is substantial non-compliance with the terms of the agreement.

e. If the sponsor is a private sponsor, it will take steps satisfactory to the Secretary to ensure that the airport will continue to function as a public-use airport in accordance with these assurances for the duration of these assurances.

f. If an arrangement is made for management and operation of the airport by any agency or person other than the sponsor or an employee of the sponsor, the sponsor will reserve sufficient rights and authority to insure that the airport will be operated and maintained in accordance Title 49, United States Code, the regulations and the terms, conditions and assurances in this grant agreement and shall insure that such arrangement also requires compliance therewith.

g. Sponsors of commercial service airports will not permit or enter into any arrangement that results in permission for the owner or tenant of a property used as a residence, or zoned for residential use, to taxi an aircraft between that property and any location on airport. Sponsors of general aviation airports entering into any arrangement that results in permission for the owner of residential real property adjacent to or near the airport must comply with the requirements of Sec. 136 of Public Law 112-95 and the sponsor assurances.

6. **Consistency with Local Plans.**

   The project is reasonably consistent with plans (existing at the time of submission of this application) of public agencies that are authorized by the State in which the project is located to plan for the development of the area surrounding the airport.

7. **Consideration of Local Interest.**

   It has given fair consideration to the interest of communities in or near where the project may be located.

8. **Consultation with Users.**

   In making a decision to undertake any airport development project under Title 49, United States Code, it has undertaken reasonable consultations with affected parties using the airport at which project is proposed.

9. **Public Hearings.**

   In projects involving the location of an airport, an airport runway, or a major runway extension, it has afforded the opportunity for public hearings for the purpose of considering the economic, social, and environmental effects of the airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the Secretary, submit a copy of the transcript of such hearings to the Secretary. Further, for such projects, it has on its management board either voting representation from the communities where the project is located or has advised the communities that they have the right to petition the Secretary concerning a proposed project.

10. **Metropolitan Planning Organization.**

    In projects involving the location of an airport, an airport runway, or a major runway extension at a medium or large hub airport, the sponsor has made available to and has provided upon request to the metropolitan planning organization in the area in which the airport is located, if any, a copy of the proposed amendment to the airport layout plan to depict the project and a copy of any airport master plan in which the project is described or depicted.

11. **Pavement Preventive Maintenance.**

    With respect to a project approved after January 1, 1995, for the replacement or reconstruction of pavement at the airport, it assures or certifies that it has implemented an effective airport pavement maintenance-management program and it assures that it will use such program for the useful life of any pavement constructed, reconstructed or repaired with Federal financial assistance at the airport. It will provide such reports on pavement condition and pavement management programs as the Secretary determines may be useful.

12. **Terminal Development Prerequisites.**

    For projects which include terminal development at a public use airport, as defined in Title 49, it has, on the date of submittal of the project grant application, all the safety equipment required for certification of such airport under section 44706 of Title 49, United States Code, and all the security equipment required by rule or regulation, and

has provided for access to the passenger enplaning and deplaning area of such airport to passengers enplaning and deplaning from aircraft other than air carrier aircraft.

13. **Accounting System, Audit, and Record Keeping Requirements.**

    a. It shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of this grant, the total cost of the project in connection with which this grant is given or used, and the amount or nature of that portion of the cost of the project supplied by other sources, and such other financial records pertinent to the project. The accounts and records shall be kept in accordance with an accounting system that will facilitate an effective audit in accordance with the Single Audit Act of 1984.

    b. It shall make available to the Secretary and the Comptroller General of the United States, or any of their duly authorized representatives, for the purpose of audit and examination, any books, documents, papers, and records of the recipient that are pertinent to this grant. The Secretary may require that an appropriate audit be conducted by a recipient. In any case in which an independent audit is made of the accounts of a sponsor relating to the disposition of the proceeds of a grant or relating to the project in connection with which this grant was given or used, it shall file a certified copy of such audit with the Comptroller General of the United States not later than six (6) months following the close of the fiscal year for which the audit was made.

14. **Minimum Wage Rates.**

    It shall include, in all contracts in excess of $2,000 for work on any projects funded under this grant agreement which involve labor, provisions establishing minimum rates of wages, to be predetermined by the Secretary of Labor, in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a-276a-5), which contractors shall pay to skilled and unskilled labor, and such minimum rates shall be stated in the invitation for bids and shall be included in proposals or bids for the work.

15. **Veteran's Preference.**

    It shall include in all contracts for work on any project funded under this grant agreement which involve labor, such provisions as are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Section 47112 of Title 49, United States Code. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

16. **Conformity to Plans and Specifications.**

    It will execute the project subject to plans, specifications, and schedules approved by the Secretary. Such plans, specifications, and schedules shall be submitted to the Secretary prior to commencement of site preparation, construction, or other performance under this grant agreement, and, upon approval of the Secretary, shall be incorporated into this grant agreement. Any modification to the approved plans,

specifications, and schedules shall also be subject to approval of the Secretary, and incorporated into this grant agreement.

17. **Construction Inspection and Approval.**

    It will provide and maintain competent technical supervision at the construction site throughout the project to assure that the work conforms to the plans, specifications, and schedules approved by the Secretary for the project. It shall subject the construction work on any project contained in an approved project application to inspection and approval by the Secretary and such work shall be in accordance with regulations and procedures prescribed by the Secretary. Such regulations and procedures shall require such cost and progress reporting by the sponsor or sponsors of such project as the Secretary shall deem necessary.

18. **Planning Projects.**

    In carrying out planning projects:

    a. It will execute the project in accordance with the approved program narrative contained in the project application or with the modifications similarly approved.

    b. It will furnish the Secretary with such periodic reports as required pertaining to the planning project and planning work activities.

    c. It will include in all published material prepared in connection with the planning project a notice that the material was prepared under a grant provided by the United States.

    d. It will make such material available for examination by the public, and agrees that no material prepared with funds under this project shall be subject to copyright in the United States or any other country.

    e. It will give the Secretary unrestricted authority to publish, disclose, distribute, and otherwise use any of the material prepared in connection with this grant.

    f. It will grant the Secretary the right to disapprove the sponsor's employment of specific consultants and their subcontractors to do all or any part of this project as well as the right to disapprove the proposed scope and cost of professional services.

    g. It will grant the Secretary the right to disapprove the use of the sponsor's employees to do all or any part of the project.

    h. It understands and agrees that the Secretary's approval of this project grant or the Secretary's approval of any planning material developed as part of this grant does not constitute or imply any assurance or commitment on the part of the Secretary to approve any pending or future application for a Federal airport grant.

19. **Operation and Maintenance.**

    a. The airport and all facilities which are necessary to serve the aeronautical users of the airport, other than facilities owned or controlled by the United States, shall be operated at all times in a safe and serviceable condition and in accordance with the minimum standards as may be required or prescribed by applicable Federal,

state and local agencies for maintenance and operation. It will not cause or permit any activity or action thereon which would interfere with its use for airport purposes. It will suitably operate and maintain the airport and all facilities thereon or connected therewith, with due regard to climatic and flood conditions. Any proposal to temporarily close the airport for non-aeronautical purposes must first be approved by the Secretary. In furtherance of this assurance, the sponsor will have in effect arrangements for-

1) Operating the airport's aeronautical facilities whenever required;
2) Promptly marking and lighting hazards resulting from airport conditions, including temporary conditions; and
3) Promptly notifying airmen of any condition affecting aeronautical use of the airport. Nothing contained herein shall be construed to require that the airport be operated for aeronautical use during temporary periods when snow, flood or other climatic conditions interfere with such operation and maintenance. Further, nothing herein shall be construed as requiring the maintenance, repair, restoration, or replacement of any structure or facility which is substantially damaged or destroyed due to an act of God or other condition or circumstance beyond the control of the sponsor.

b. It will suitably operate and maintain noise compatibility program items that it owns or controls upon which Federal funds have been expended.

20. **Hazard Removal and Mitigation.**

It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.

21. **Compatible Land Use.**

It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

22. **Economic Nondiscrimination.**

a. It will make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport.

b. In any agreement, contract, lease, or other arrangement under which a right or privilege at the airport is granted to any person, firm, or corporation to conduct or

to engage in any aeronautical activity for furnishing services to the public at the airport, the sponsor will insert and enforce provisions requiring the contractor to-

1) furnish said services on a reasonable, and not unjustly discriminatory, basis to all users thereof, and

2) charge reasonable, and not unjustly discriminatory, prices for each unit or service, provided that the contractor may be allowed to make reasonable and nondiscriminatory discounts, rebates, or other similar types of price reductions to volume purchasers.

c. Each fixed-based operator at the airport shall be subject to the same rates, fees, rentals, and other charges as are uniformly applicable to all other fixed-based operators making the same or similar uses of such airport and utilizing the same or similar facilities.

d. Each air carrier using such airport shall have the right to service itself or to use any fixed-based operator that is authorized or permitted by the airport to serve any air carrier at such airport.

e. Each air carrier using such airport (whether as a tenant, non-tenant, or subtenant of another air carrier tenant) shall be subject to such nondiscriminatory and substantially comparable rules, regulations, conditions, rates, fees, rentals, and other charges with respect to facilities directly and substantially related to providing air transportation as are applicable to all such air carriers which make similar use of such airport and utilize similar facilities, subject to reasonable classifications such as tenants or non-tenants and signatory carriers and non-signatory carriers. Classification or status as tenant or signatory shall not be unreasonably withheld by any airport provided an air carrier assumes obligations substantially similar to those already imposed on air carriers in such classification or status.

f. It will not exercise or grant any right or privilege which operates to prevent any person, firm, or corporation operating aircraft on the airport from performing any services on its own aircraft with its own employees [including, but not limited to maintenance, repair, and fueling] that it may choose to perform.

g. In the event the sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by commercial aeronautical service providers authorized by the sponsor under these provisions.

h. The sponsor may establish such reasonable, and not unjustly discriminatory, conditions to be met by all users of the airport as may be necessary for the safe and efficient operation of the airport.

i. The sponsor may prohibit or limit any given type, kind or class of aeronautical use of the airport if such action is necessary for the safe operation of the airport or necessary to serve the civil aviation needs of the public.

23. **Exclusive Rights.**

It will permit no exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, the providing of the services at an airport by a single fixed-based operator shall not be construed as an exclusive right if both of the following apply:

a. It would be unreasonably costly, burdensome, or impractical for more than one fixed-based operator to provide such services, and

b. If allowing more than one fixed-based operator to provide such services would require the reduction of space leased pursuant to an existing agreement between such single fixed-based operator and such airport. It further agrees that it will not, either directly or indirectly, grant or permit any person, firm, or corporation, the exclusive right at the airport to conduct any aeronautical activities, including, but not limited to charter flights, pilot training, aircraft rental and sightseeing, aerial photography, crop dusting, aerial advertising and surveying, air carrier operations, aircraft sales and services, sale of aviation petroleum products whether or not conducted in conjunction with other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity, and that it will terminate any exclusive right to conduct an aeronautical activity now existing at such an airport before the grant of any assistance under Title 49, United States Code.

24. **Fee and Rental Structure.**

It will maintain a fee and rental structure for the facilities and services at the airport which will make the airport as self-sustaining as possible under the circumstances existing at the particular airport, taking into account such factors as the volume of traffic and economy of collection. No part of the Federal share of an airport development, airport planning or noise compatibility project for which a grant is made under Title 49, United States Code, the Airport and Airway Improvement Act of 1982, the Federal Airport Act or the Airport and Airway Development Act of 1970 shall be included in the rate basis in establishing fees, rates, and charges for users of that airport.

25. **Airport Revenues.**

a. All revenues generated by the airport and any local taxes on aviation fuel established after December 30, 1987, will be expended by it for the capital or operating costs of the airport; the local airport system; or other local facilities which are owned or operated by the owner or operator of the airport and which are directly and substantially related to the actual air transportation of passengers or property; or for noise mitigation purposes on or off the airport. The following exceptions apply to this paragraph:

1) If covenants or assurances in debt obligations issued before September 3, 1982, by the owner or operator of the airport, or provisions enacted before September 3, 1982, in governing statutes controlling the owner or operator's financing, provide for the use of the revenues from any of the airport owner or

operator's facilities, including the airport, to support not only the airport but also the airport owner or operator's general debt obligations or other facilities, then this limitation on the use of all revenues generated by the airport (and, in the case of a public airport, local taxes on aviation fuel) shall not apply.

2) If the Secretary approves the sale of a privately owned airport to a public sponsor and provides funding for any portion of the public sponsor's acquisition of land, this limitation on the use of all revenues generated by the sale shall not apply to certain proceeds from the sale. This is conditioned on repayment to the Secretary by the private owner of an amount equal to the remaining unamortized portion (amortized over a 20-year period) of any airport improvement grant made to the private owner for any purpose other than land acquisition on or after October 1, 1996, plus an amount equal to the federal share of the current fair market value of any land acquired with an airport improvement grant made to that airport on or after October 1, 1996.

3) Certain revenue derived from or generated by mineral extraction, production, lease, or other means at a general aviation airport (as defined at Section 47102 of title 49 United States Code), if the FAA determines the airport sponsor meets the requirements set forth in Sec. 813 of Public Law 112-95.

b. As part of the annual audit required under the Single Audit Act of 1984, the sponsor will direct that the audit will review, and the resulting audit report will provide an opinion concerning, the use of airport revenue and taxes in paragraph (a), and indicating whether funds paid or transferred to the owner or operator are paid or transferred in a manner consistent with Title 49, United States Code and any other applicable provision of law, including any regulation promulgated by the Secretary or Administrator.

c. Any civil penalties or other sanctions will be imposed for violation of this assurance in accordance with the provisions of Section 47107 of Title 49, United States Code.

26. **Reports and Inspections.**

It will:

a. submit to the Secretary such annual or special financial and operations reports as the Secretary may reasonably request and make such reports available to the public; make available to the public at reasonable times and places a report of the airport budget in a format prescribed by the Secretary;

b. for airport development projects, make the airport and all airport records and documents affecting the airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request;

c. for noise compatibility program projects, make records and documents relating to the project and continued compliance with the terms, conditions, and assurances of this grant agreement including deeds, leases, agreements, regulations, and other instruments, available for inspection by any duly authorized agent of the Secretary upon reasonable request; and

d. in a format and time prescribed by the Secretary, provide to the Secretary and make available to the public following each of its fiscal years, an annual report listing in detail:

   1) all amounts paid by the airport to any other unit of government and the purposes for which each such payment was made; and

   2) all services and property provided by the airport to other units of government and the amount of compensation received for provision of each such service and property.

27. **Use by Government Aircraft.**

It will make available all of the facilities of the airport developed with Federal financial assistance and all those usable for landing and takeoff of aircraft to the United States for use by Government aircraft in common with other aircraft at all times without charge, except, if the use by Government aircraft is substantial, charge may be made for a reasonable share, proportional to such use, for the cost of operating and maintaining the facilities used. Unless otherwise determined by the Secretary, or otherwise agreed to by the sponsor and the using agency, substantial use of an airport by Government aircraft will be considered to exist when operations of such aircraft are in excess of those which, in the opinion of the Secretary, would unduly interfere with use of the landing areas by other authorized aircraft, or during any calendar month that –

a. Five (5) or more Government aircraft are regularly based at the airport or on land adjacent thereto; or

b. The total number of movements (counting each landing as a movement) of Government aircraft is 300 or more, or the gross accumulative weight of Government aircraft using the airport (the total movement of Government aircraft multiplied by gross weights of such aircraft) is in excess of five million pounds.

28. **Land for Federal Facilities.**

It will furnish without cost to the Federal Government for use in connection with any air traffic control or air navigation activities, or weather-reporting and communication activities related to air traffic control, any areas of land or water, or estate therein, or rights in buildings of the sponsor as the Secretary considers necessary or desirable for construction, operation, and maintenance at Federal expense of space or facilities for such purposes. Such areas or any portion thereof will be made available as provided herein within four months after receipt of a written request from the Secretary.

29. **Airport Layout Plan.**

a. It will keep up to date at all times an airport layout plan of the airport showing

   1) boundaries of the airport and all proposed additions thereto, together with the boundaries of all offsite areas owned or controlled by the sponsor for airport purposes and proposed additions thereto;

   2) the location and nature of all existing and proposed airport facilities and structures (such as runways, taxiways, aprons, terminal buildings, hangars and

roads), including all proposed extensions and reductions of existing airport facilities;

3) the location of all existing and proposed nonaviation areas and of all existing improvements thereon; and

4) all proposed and existing access points used to taxi aircraft across the airport's property boundary. Such airport layout plans and each amendment, revision, or modification thereof, shall be subject to the approval of the Secretary which approval shall be evidenced by the signature of a duly authorized representative of the Secretary on the face of the airport layout plan. The sponsor will not make or permit any changes or alterations in the airport or any of its facilities which are not in conformity with the airport layout plan as approved by the Secretary and which might, in the opinion of the Secretary, adversely affect the safety, utility or efficiency of the airport.

b. If a change or alteration in the airport or the facilities is made which the Secretary determines adversely affects the safety, utility, or efficiency of any federally owned, leased, or funded property on or off the airport and which is not in conformity with the airport layout plan as approved by the Secretary, the owner or operator will, if requested, by the Secretary (1) eliminate such adverse effect in a manner approved by the Secretary; or (2) bear all costs of relocating such property (or replacement thereof) to a site acceptable to the Secretary and all costs of restoring such property (or replacement thereof) to the level of safety, utility, efficiency, and cost of operation existing before the unapproved change in the airport or its facilities except in the case of a relocation or replacement of an existing airport facility due to a change in the Secretary's design standards beyond the control of the airport sponsor.

30. **Civil Rights.**

It will promptly take any measures necessary to ensure that no person in the United States shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in any activity conducted with, or benefiting from, funds received from this grant.

a. Using the definitions of activity, facility and program as found and defined in §§ 21.23 (b) and 21.23 (e) of 49 CFR § 21, the sponsor will facilitate all programs, operate all facilities, or conduct all programs in compliance with all non-discrimination requirements imposed by, or pursuant to these assurances.

b. Applicability

1) Programs and Activities. If the sponsor has received a grant (or other federal assistance) for any of the sponsor's program or activities, these requirements extend to all of the sponsor's programs and activities.

2) Facilities. Where it receives a grant or other federal financial assistance to construct, expand, renovate, remodel, alter or acquire a facility, or part of a facility, the assurance extends to the entire facility and facilities operated in connection therewith.

3) Real Property. Where the sponsor receives a grant or other Federal financial assistance in the form of, or for the acquisition of real property or an interest in real property, the assurance will extend to rights to space on, over, or under such property.

c. Duration.

The sponsor agrees that it is obligated to this assurance for the period during which Federal financial assistance is extended to the program, except where the Federal financial assistance is to provide, or is in the form of, personal property, or real property, or interest therein, or structures or improvements thereon, in which case the assurance obligates the sponsor, or any transferee for the longer of the following periods:

1) So long as the airport is used as an airport, or for another purpose involving the provision of similar services or benefits; or

2) So long as the sponsor retains ownership or possession of the property.

d. Required Solicitation Language. It will include the following notification in all solicitations for bids, Requests For Proposals for work, or material under this grant agreement and in all proposals for agreements, including airport concessions, regardless of funding source:

"The **(Name of Sponsor)**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises and airport concession disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award."

e. Required Contract Provisions.

1) It will insert the non-discrimination contract clauses requiring compliance with the acts and regulations relative to non-discrimination in Federally-assisted programs of the DOT, and incorporating the acts and regulations into the contracts by reference in every contract or agreement subject to the non-discrimination in Federally-assisted programs of the DOT acts and regulations.

2) It will include a list of the pertinent non-discrimination authorities in every contract that is subject to the non-discrimination acts and regulations.

3) It will insert non-discrimination contract clauses as a covenant running with the land, in any deed from the United States effecting or recording a transfer of real property, structures, use, or improvements thereon or interest therein to a sponsor.

4) It will insert non-discrimination contract clauses prohibiting discrimination on the basis of race, color, national origin, creed, sex, age, or handicap as a

covenant running with the land, in any future deeds, leases, license, permits, or similar instruments entered into by the sponsor with other parties:

a) For the subsequent transfer of real property acquired or improved under the applicable activity, project, or program; and

b) For the construction or use of, or access to, space on, over, or under real property acquired or improved under the applicable activity, project, or program.

f. It will provide for such methods of administration for the program as are found by the Secretary to give reasonable guarantee that it, other recipients, sub-recipients, sub-grantees, contractors, subcontractors, consultants, transferees, successors in interest, and other participants of Federal financial assistance under such program will comply with all requirements imposed or pursuant to the acts, the regulations, and this assurance.

g. It agrees that the United States has a right to seek judicial enforcement with regard to any matter arising under the acts, the regulations, and this assurance.

31. **Disposal of Land.**

a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States' share of acquisition of such land will be, at the discretion of the Secretary, (1) reinvested in another project at the airport, or (2) transferred to another eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order, (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund. If land acquired under a grant for noise compatibility purposes is leased at fair market value and consistent with noise buffering purposes, the lease will not be considered a disposal of the land. Revenues derived from such a lease may be used for an approved airport development project that would otherwise be eligible for grant funding or any permitted use of airport revenue.

b. For land purchased under a grant for airport development purposes (other than noise compatibility), it will, when the land is no longer needed for airport purposes, dispose of such land at fair market value or make available to the Secretary an amount equal to the United States' proportionate share of the fair market value of the land. That portion of the proceeds of such disposition which is proportionate to the United States' share of the cost of acquisition of such land will, (1) upon application to the Secretary, be reinvested or transferred to another

eligible airport as prescribed by the Secretary. The Secretary shall give preference to the following, in descending order: (1) reinvestment in an approved noise compatibility project, (2) reinvestment in an approved project that is eligible for grant funding under Section 47117(e) of title 49 United States Code, (3) reinvestment in an approved airport development project that is eligible for grant funding under Sections 47114, 47115, or 47117 of title 49 United States Code, (4) transferred to an eligible sponsor of another public airport to be reinvested in an approved noise compatibility project at that airport, and (5) paid to the Secretary for deposit in the Airport and Airway Trust Fund.

c. Land shall be considered to be needed for airport purposes under this assurance if (1) it may be needed for aeronautical purposes (including runway protection zones) or serve as noise buffer land, and (2) the revenue from interim uses of such land contributes to the financial self-sufficiency of the airport. Further, land purchased with a grant received by an airport operator or owner before December 31, 1987, will be considered to be needed for airport purposes if the Secretary or Federal agency making such grant before December 31, 1987, was notified by the operator or owner of the uses of such land, did not object to such use, and the land continues to be used for that purpose, such use having commenced no later than December 15, 1989.

d. Disposition of such land under (a) (b) or (c) will be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

32. **Engineering and Design Services.**

It will award each contract, or sub-contract for program management, construction management, planning studies, feasibility studies, architectural services, preliminary engineering, design, engineering, surveying, mapping or related services with respect to the project in the same manner as a contract for architectural and engineering services is negotiated under Title IX of the Federal Property and Administrative Services Act of 1949 or an equivalent qualifications-based requirement prescribed for or by the sponsor of the airport.

33. **Foreign Market Restrictions.**

It will not allow funds provided under this grant to be used to fund any project which uses any product or service of a foreign country during the period in which such foreign country is listed by the United States Trade Representative as denying fair and equitable market opportunities for products and suppliers of the United States in procurement and construction.

34. **Policies, Standards, and Specifications.**

It will carry out the project in accordance with policies, standards, and specifications approved by the Secretary including but not limited to the advisory circulars listed in the Current FAA Advisory Circulars for AIP projects, dated _____ (the latest approved version as of this grant offer) and included in this grant, and in accordance

with applicable state policies, standards, and specifications approved by the Secretary.

35. **Relocation and Real Property Acquisition.**

    a. It will be guided in acquiring real property, to the greatest extent practicable under State law, by the land acquisition policies in Subpart B of 49 CFR Part 24 and will pay or reimburse property owners for necessary expenses as specified in Subpart B.
    b. It will provide a relocation assistance program offering the services described in Subpart C and fair and reasonable relocation payments and assistance to displaced persons as required in Subpart D and E of 49 CFR Part 24.
    c. It will make available within a reasonable period of time prior to displacement, comparable replacement dwellings to displaced persons in accordance with Subpart E of 49 CFR Part 24.

36. **Access By Intercity Buses.**

    The airport owner or operator will permit, to the maximum extent practicable, intercity buses or other modes of transportation to have access to the airport; however, it has no obligation to fund special facilities for intercity buses or for other modes of transportation.

37. **Disadvantaged Business Enterprises.**

    The sponsor shall not discriminate on the basis of race, color, national origin or sex in the award and performance of any DOT-assisted contract covered by 49 CFR Part 26, or in the award and performance of any concession activity contract covered by 49 CFR Part 23. In addition, the sponsor shall not discriminate on the basis of race, color, national origin or sex in the administration of its DBE and ACDBE programs or the requirements of 49 CFR Parts 23 and 26. The sponsor shall take all necessary and reasonable steps under 49 CFR Parts 23 and 26 to ensure nondiscrimination in the award and administration of DOT-assisted contracts, and/or concession contracts. The sponsor's DBE and ACDBE programs, as required by 49 CFR Parts 26 and 23, and as approved by DOT, are incorporated by reference in this agreement. Implementation of these programs is a legal obligation and failure to carry out its terms shall be treated as a violation of this agreement. Upon notification to the sponsor of its failure to carry out its approved program, the Department may impose sanctions as provided for under Parts 26 and 23 and may, in appropriate cases, refer the matter for enforcement under 18 U.S.C. 1001 and/or the Program Fraud Civil Remedies Act of 1936 (31 U.S.C. 3801).

38. **Hangar Construction.**

    If the airport owner or operator and a person who owns an aircraft agree that a hangar is to be constructed at the airport for the aircraft at the aircraft owner's expense, the airport owner or operator will grant to the aircraft owner for the hangar a long term lease that is subject to such terms and conditions on the hangar as the airport owner or operator may impose.

39. **Competitive Access.**

a. If the airport owner or operator of a medium or large hub airport (as defined in section 47102 of title 49, U.S.C.) has been unable to accommodate one or more requests by an air carrier for access to gates or other facilities at that airport in order to allow the air carrier to provide service to the airport or to expand service at the airport, the airport owner or operator shall transmit a report to the Secretary that-

   1) Describes the requests;

   2) Provides an explanation as to why the requests could not be accommodated; and

   3) Provides a time frame within which, if any, the airport will be able to accommodate the requests.

b. Such report shall be due on either February 1 or August 1 of each year if the airport has been unable to accommodate the request(s) in the six month period prior to the applicable due date.

Appendix D

PORT OF HOOD RIVER RESOLUTION No. 2015-16-1

RESOLUTION RESCINDING DECEMBER 15, 2009 PORT AIRPORT ACCESS POLICY
AND AUTHORIZING AIRPORT RESIDENTIAL THROUGH THE FENCE AGREEMENTS

WHEREAS, the Port of Hood River ("Port") owns and manages the Ken Jernstedt Airfield ("Airport"); and

WHEREAS, in compliance with Federal Aviation Agency ("FAA") policies then in effect, on December 15, 2009, the Port Commission adopted an Airport Access Policy to allow aircraft engaged in commercial activity direct access to the Airport from adjacent property, under specified conditions ("December 15, 2009, Airport Access Policy"); and

WHEREAS, in 2012 Congress passed a law (P.L. 112-95, "Act") that authorizes general aviation airport sponsors, such as the Port, to allow aircraft owners to enter into residential through the fence agreements for direct airport access, and the FAA has adopted policies consistent with the Act; and

WHEREAS, to comply with the Act and current FAA policies, the Port should rescind the 2009 Airport Access Policy, and should authorize residential through the fence agreements for direct airport access; now, therefore

BE IT RESOLVED that the Port hereby rescinds the December 15, 2009 Airport Access Policy, and authorizes entering into residential Through-the-Fence agreements for direct Airport access using a form approved by the FAA and including conditions approved by the Port Executive Director and Port legal counsel.

ADOPTED BY THE BOARD OF COMMISSIONERS this 14th day of July 2015.

Jon Davies

Brian Shortt

Absent
Fred Duckwall

Absent
Hoby Streich

Rich McBride

Residential Through the Fence Agreement

This Airport Access Agreement ("Agreement") is made and entered into this the 15TH day of JULY, 2015, by and between the PORT OF HOOD RIVER, a State of Oregon special district ("Owner" or "Port"), and William E. and Rebecca J. Veatch, an individual ("User"), who owns property located at:

1696 Orchard Road
Hood River, OR 97031 ("Property")

This Agreement incorporates and is based upon the following representations and understandings:

WHEREAS, Port is the owner and operator of the Ken Jernstedt Airfield, located in the County of Hood River, State of Oregon ("Airport"), with the power to grant rights and privileges with respect to the Airport, pursuant to the provisions of ORS 777.210 (6) and ORS 777.258, among other federal, state, and local laws, rules and regulations; and

WHEREAS, User owns real property immediately adjacent to the physical property of the Airport; and

WHEREAS, User seeks the right to taxi aircraft from User's Property "through-the-fence" to the Airport property and to its runway and taxiway system; and

WHEREAS, the parties desire to enter into this Agreement to comply with the FAA Modernization and Reform Act of 2012 (P.L. 112-95) section 136 that permits general aviation airport sponsors to enter into residential through-the-fence agreements with property owners or associations representing property owners provided these agreements comply with certain conditions set forth in this Agreement;

Now, therefore and in consideration of the mutual terms and conditions hereinafter set forth, the Owner and User hereby agree to the following:

ARTICLE I – PROPERTY WITH RIGHT OF ACCESS

The property with the legal right of access is located in Hood River County. The tax map lot and number are: 02N10E11A- lot 1800.

ARTICLE II – TERM OF AGREEMENT

The term of this Agreement shall commence on the date of this Agreement entered above, and shall continue through and including May 31, 2020. The Port may choose to extend this Agreement or enter into a similar agreement prior to the Agreement expiration date, in the Port's sole discretion. This Agreement is non-transferable. This Agreement does not run with the User's land. Any change of ownership of the Property with right of access will void this Agreement.

ARTICLE III – PROHIBITIONS

1. No Commercial Aeronautical Uses: User shall not engage in, nor permit any other person or entity to engage in, any temporary or permanent commercial aeronautical activity on User's Property. This prohibition includes but is not limited to any activity

or service for compensation, exchange, trading, buying, selling or hire or any other revenue production activity whether or not a profit is derived, which makes possible, or is required for the operation of an aircraft, or contributes to or is required for, the safety of such operations.

2. Sale of Aviation Fuels Prohibited: User shall not sell, nor permit any other person or entity to sell aviation fuels on User's Property.
3. Prohibitions and Restrictions on Access: User is specifically prohibited from granting or selling any access to/egress from the Airport through User's Property to any other parties. This restriction also includes User taking reasonable precautions acceptable to Owner to prevent the accidental access to the Airport by vehicles, pedestrians, pets, etc.

ARTICLE IV – ACCESS REQUIREMENTS

User agrees to:

1. Possess a current pilot license during the term of this Agreement, a copy of which must be provided to the Port at the outset of this Agreement and when requested.
2. User's aircraft must have a valid FAA "N" number. That number must be provided to the Port at the outset of this Agreement and when requested.
3. User shall provide the Port with a Certificate of Insurance for Airport Premises Liability with the following coverage provided: minimum limits of $1,000,000 CSL (combined single limit). The policy shall be issued in the name of User and name the Port of Hood River as Additional Insured, with the right to receive at least 30 days prior written notice of insurance cancellation and notice of renewal. Failure to provide or keep in force such insurance shall be a default and is cause for termination of the Agreement.

ARTICLE V-ACCESS FEE TO OWNER

User agrees to pay an access fee to Owner as described below:

1. Owner's Basis for Access Fee: User's access fee is based on the monthly tie-down rate charged t o Airport tenants using the Airport south apron area. User's access fee is subject to annual adjustments by Owner when Airport tie down fees are changed.
2. User's Access Fee: Based upon the current Airport tie down rate User's current access fee payable to Owner is $35.00/month or $420.00/year. User's access fee may be paid in advance on the 1st of each month, or in advance annually for the succeeding twelve months, or at the end of the term if less than twelve months remains payable through the remainder of the term. User's access fee will be increased by Owner based on annual fee adjustments made to Airport tie down rates throughout the term of this Agreement. Owner will notify User of increases in User's access fee when Airport tie down rates change.
3. Payment: All payments required to be made by User under this Agreement shall be made payable to the Port of Hood River, and shall be delivered or mailed to the address below:

Port of Hood River
1000 E. Port Marina Drive
Hood River, OR 97031

4. Penalty for Late Payment: Owner will assess a late penalty of $10 for every day User fails to remit payment after the payment due date described above.

ARTICLE VI - CONSTRUCTION AND MAINTENANCE OF PRIVATE-USE INFRASTRUCTURE

It is understood and agreed that User shall construct and install all private-use infrastructure, required and acceptable to Owner, or if in Owner's discretion Owner chooses to construct or install any private use infrastructure for User's access to the Airport, Owner shall notify User and upon Owner's completion of such construction or installation User shall promptly reimburse Owner for all Owner's costs. All required private-use infrastructure such as taxiway, fence, sign(s), taxiway lights, gates, security controls, etc., shall be listed and depicted in an Exhibit to this Agreement, and be coordinated and scheduled by the Port in cooperation with User. Accordingly, User covenants and agrees as follows:

1. Construction and Maintenance: All construction on Owner's property or User's property must be approved by Owner 90 days prior to the commencement of construction. During the term of this Agreement User shall also be solely responsible for all maintenance of said private-use infrastructure at User's cost and shall at all times maintain it in good repair.
2. Construction Costs: Notwithstanding anything herein contained to the contrary, User expressly agrees to pay any and all costs associated with private-use infrastructure (taxiway, fence, signs, taxiway lights, electrical power, gates, security controls, etc.) required by Owner. These costs are in addition to the access fees described above.

ARTICLE VII – AGREEMENT IS SUBORDINATE TO GRANT ASSURANCES, AGREEMENTS WITH UNITED STATES, AND FEDERAL OBLIGATIONS.

This Agreement shall be nonexclusive and shall at all times be subordinate to the provisions of any existing or future agreements between Owner and the United States Government, or to any order issued by the United States Government, or to any grant assurances affecting Owner or the Airport, or to any Airport or Owner Federal obligations.

User agrees to abide by Owner's Airport rules and regulations in effect as of the date of this Agreement and as may be adopted or amended from time to time. When entering onto the Airport User will use a radio to confirm current Airport activities, use 360 degree visual observation, and make a radio announcement before entering the Airport area to proceed with flight run-up procedures.

User for himself, his heirs, personal representatives, successors in interest, and assigns as part of the consideration hereof, does hereby covenant and agree that in the event facilities are constructed, maintained, or otherwise operated on the Property or Airport for a purpose for which a DOT program or activity is extended or for another purpose involving the provision of similar services or benefits, User shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to 29 CFR Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation, and as said Regulations may be amended.

User for himself, his heirs, personal representatives, successors in interest, and assigns, as part of the consideration hereof, does hereby covenant and agree that (1) no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that User shall use the premises in compliance with all other requirements imposed by or pursuant to 49 CFR Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation, and as said Regulations may be amended.

ARTICLE VIII - TERMINATION OF AGREEMENT

1. Events of Default by User: Owner, at its option, may declare this Agreement terminated in its entirety if User breaches any condition of this Agreement, including upon the happening of any one or more of the following events, and may exercise all rights related to the termination of this Agreement:
   a. The User access fees described in Article V, or any part thereof, are unpaid for 30 days, or
   b. If User shall file a voluntary petition in bankruptcy, or make a general assignment for the benefit of creditors, or if User is adjudicated as bankrupt, or User otherwise assigns or attempts to assign User's interest herein without the prior written consent of Owner; or
   c. If User shall use or permit the use of the User's premises at any time for any purpose which is not authorized by this Agreement, or if User shall use or permit the use thereof in violation of any law, rule or regulation, (including DOT or Airport rules and regulations), to which the User has agreed to conform.
   d. User fails to comply with any term or condition of this Agreement.

2. Notice of Default: If User shall default in the performance of any provision of this Agreement (except the payment of fees), then Owner shall send to User a written notice of default, specifying the nature of the default, and User shall, within thirty (30) days after the date of the notice, cure and remedy the default, and this Agreement shall then continue as before.
   a. Ife User shall fail to timely cure and remedy such default, Owner shall have the right to declare, by written notice to User, that User is in default, and to use all remedies available to Owner under this Agreement. However, if by its nature, such default cannot be cured within such thirty (30) day period, such termination shall not be effective if User commences to correct such default within said thirty (30) days and corrects the same as promptly as reasonably practicable.
   b. Termination of this Agreement for non-payment of fees to Owner by User shall not become effective until after the expiration of fifteen (15) days after written notice thereof by Owner to User and User fails to pay all moneys owed, fully within said period.

ARTICLE VIIII – NOTICES

Notice/Addresses: All notices, requests, or other communications, required or permitted to be given hereunder shall be in writing and delivered by via certified or registered mail, addressed to the appropriate party at its address as follows:

Port of Hood River
1000 E. Port Marina Drive
Hood River, OR 97031

Name: William E. and Rebecca J. Veatch
1696 Orchard Road,
Hood River, OR, 97031

IN WITNESS WHEREOF, the parties have executed this Agreement.

User:

By: _____
William E. Veatch

By: _____
Rebecca J. Veatch

Owner: Port of Hood River

By: _____
Michael McElwee
Its: Executive Director

Residential Through the Fence Agreement

This Airport Access Agreement ("Agreement") is made and entered into this the 16 day of July, 2015, by and between the PORT OF HOOD RIVER, a State of Oregon special district ("Owner" or "Port"), and Jeremy J. and Kara Christine Young, an individual ("User"), who owns property located at:

1688 Orchard Road
Hood River, OR 97031 ("Property")

This Agreement incorporates and is based upon the following representations and understandings:

WHEREAS, Port is the owner and operator of the Ken Jernstedt Airfield, located in the County of Hood River, State of Oregon ("Airport"), with the power to grant rights and privileges with respect to the Airport, pursuant to the provisions of ORS 777.210 (6) and ORS 777.258, among other federal, state, and local laws, rules and regulations; and

WHEREAS, User owns real property immediately adjacent to the physical property of the Airport; and

WHEREAS, User seeks the right to taxi aircraft from User's Property "through-the-fence" to the Airport property and to its runway and taxiway system; and

WHEREAS, the parties desire to enter into this Agreement to comply with the FAA Modernization and Reform Act of 2012 (P.L. 112-95) section 136 that permits general aviation airport sponsors to enter into residential through-the-fence agreements with property owners or associations representing property owners provided these agreements comply with certain conditions set forth in this Agreement;

Now, therefore and in consideration of the mutual terms and conditions hereinafter set forth, the Owner and User hereby agree to the following:

ARTICLE I – PROPERTY WITH RIGHT OF ACCESS

The property with the legal right of access is located in Hood River County. The tax map lot and number are: 02N10E11A- lot 1600.

ARTICLE II – TERM OF AGREEMENT

The term of this Agreement shall commence on the date of this Agreement entered above, and shall continue through and including May 31, 2020. The Port may choose to extend this Agreement or enter into a similar agreement prior to the Agreement expiration date, in the Port's sole discretion. This Agreement is non-transferable. This Agreement does not run with the User's land. Any change of ownership of the Property with right of access will void this Agreement.

ARTICLE III – PROHIBITIONS

1. No Commercial Aeronautical Uses: User shall not engage in, nor permit any other person or entity to engage in, any temporary or permanent commercial aeronautical activity on User's Property. This prohibition includes but is not limited to any activity

or service for compensation, exchange, trading, buying, selling or hire or any other revenue production activity whether or not a profit is derived, which makes possible, or is required for the operation of an aircraft, or contributes to or is required for, the safety of such operations.

2. Sale of Aviation Fuels Prohibited: User shall not sell, nor permit any other person or entity to sell aviation fuels on User's Property.
3. Prohibitions and Restrictions on Access: User is specifically prohibited from granting or selling any access to/egress from the Airport through User's Property to any other parties. This restriction also includes User taking reasonable precautions acceptable to Owner to prevent the accidental access to the Airport by vehicles, pedestrians, pets, etc.

ARTICLE IV – ACCESS REQUIREMENTS

User agrees to:

1. Possess a current pilot license during the term of this Agreement, a copy of which must be provided to the Port at the outset of this Agreement and when requested.
2. User's aircraft must have a valid FAA "N" number. That number must be provided to the Port at the outset of this Agreement and when requested.
3. User shall provide the Port with a Certificate of Insurance for Airport Premises Liability with the following coverage provided: minimum limits of $1,000,000 CSL (combined single limit). The policy shall be issued in the name of User and name the Port of Hood River as Additional Insured, with the right to receive at least 30 days prior written notice of insurance cancellation and notice of renewal. Failure to provide or keep in force such insurance shall be a default and is cause for termination of the Agreement.

ARTICLE V-ACCESS FEE TO OWNER

User agrees to pay an access fee to Owner as described below:

1. Owner's Basis for Access Fee: User's access fee is based on the monthly tie-down rate charged t o Airport tenants using the Airport south apron area. User's access fee is subject to annual adjustments by Owner when Airport tie down fees are changed.
2. User's Access Fee: Based upon the current Airport tie down rate User's current access fee payable to Owner is $35.00/month or $420.00/year. User's access fee may be paid in advance on the 1st of each month, or in advance annually for the succeeding twelve months, or at the end of the term if less than twelve months remains payable through the remainder of the term. User's access fee will be increased by Owner based on annual fee adjustments made to Airport tie down rates throughout the term of this Agreement. Owner will notify User of increases in User's access fee when Airport tie down rates change.
3. Payment: All payments required to be made by User under this Agreement shall be made payable to the Port of Hood River, and shall be delivered or mailed to the address below:

   Port of Hood River
   1000 E. Port Marina Drive
   Hood River, OR 97031

4. Penalty for Late Payment: Owner will assess a late penalty of $10 for every day User fails to remit payment after the payment due date described above.

ARTICLE VI - CONSTRUCTION AND MAINTENANCE OF PRIVATE-USE INFRASTRUCTURE

It is understood and agreed that User shall construct and install all private-use infrastructure, required and acceptable to Owner, or if in Owner's discretion Owner chooses to construct or install any private use infrastructure for User's access to the Airport, Owner shall notify User and upon Owner's completion of such construction or installation User shall promptly reimburse Owner for all Owner's costs. All required private-use infrastructure such as taxiway, fence, sign(s), taxiway lights, gates, security controls, etc., shall be listed and depicted in an Exhibit to this Agreement, and be coordinated and scheduled by the Port in cooperation with User. Accordingly, User covenants and agrees as follows:

1. Construction and Maintenance: All construction on Owner's property or User's property must be approved by Owner 90 days prior to the commencement of construction. During the term of this Agreement User shall also be solely responsible for all maintenance of said private-use infrastructure at User's cost and shall at all times maintain it in good repair.
2. Construction Costs: Notwithstanding anything herein contained to the contrary, User expressly agrees to pay any and all costs associated with private-use infrastructure (taxiway, fence, signs, taxiway lights, electrical power, gates, security controls, etc.) required by Owner. These costs are in addition to the access fees described above.

ARTICLE VII – AGREEMENT IS SUBORDINATE TO GRANT ASSURANCES, AGREEMENTS WITH UNITED STATES, AND FEDERAL OBLIGATIONS.

This Agreement shall be nonexclusive and shall at all times be subordinate to the provisions of any existing or future agreements between Owner and the United States Government, or to any order issued by the United States Government, or to any grant assurances affecting Owner or the Airport, or to any Airport or Owner Federal obligations.

User agrees to abide by Owner's Airport rules and regulations in effect as of the date of this Agreement and as may be adopted or amended from time to time. When entering onto the Airport User will use a radio to confirm current Airport activities, use 360 degree visual observation, and make a radio announcement before entering the Airport area to proceed with flight run-up procedures.

User for himself, his heirs, personal representatives, successors in interest, and assigns as part of the consideration hereof, does hereby covenant and agree that in the event facilities are constructed, maintained, or otherwise operated on the Property or Airport for a purpose for which a DOT program or activity is extended or for another purpose involving the provision of similar services or benefits, User shall maintain and operate such facilities and services in compliance with all other requirements imposed pursuant to 29 CFR Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation, and as said Regulations may be amended.

User for himself, his heirs, personal representatives, successors in interest, and assigns, as part of the consideration hereof, does hereby covenant and agree that (1) no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land and the furnishing of services thereon, no person on the grounds of race, color, or national origin shall be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that User shall use the premises in compliance with all other requirements imposed by or pursuant to 49 CFR Part 21, Nondiscrimination in Federally Assisted Programs of the Department of Transportation, and as said Regulations may be amended.

ARTICLE VIII - TERMINATION OF AGREEMENT

1. Events of Default by User: Owner, at its option, may declare this Agreement terminated in its entirety if User breaches any condition of this Agreement, including upon the happening of any one or more of the following events, and may exercise all rights related to the termination of this Agreement:
   a. The User access fees described in Article V, or any part thereof, are unpaid for 30 days, or
   b. If User shall file a voluntary petition in bankruptcy, or make a general assignment for the benefit of creditors, or if User is adjudicated as bankrupt, or User otherwise assigns or attempts to assign User's interest herein without the prior written consent of Owner; or
   c. If User shall use or permit the use of the User's premises at any time for any purpose which is not authorized by this Agreement, or if User shall use or permit the use thereof in violation of any law, rule or regulation, (including DOT or Airport rules and regulations), to which the User has agreed to conform.
   d. User fails to comply with any term or condition of this Agreement.

2. Notice of Default: If User shall default in the performance of any provision of this Agreement (except the payment of fees), then Owner shall send to User a written notice of default, specifying the nature of the default, and User shall, within thirty (30) days after the date of the notice, cure and remedy the default, and this Agreement shall then continue as before.
   a. Ife User shall fail to timely cure and remedy such default, Owner shall have the right to declare, by written notice to User, that User is in default, and to use all remedies available to Owner under this Agreement. However, if by its nature, such default cannot be cured within such thirty (30) day period, such termination shall not be effective if User commences to correct such default within said thirty (30) days and corrects the same as promptly as reasonably practicable.
   b. Termination of this Agreement for non-payment of fees to Owner by User shall not become effective until after the expiration of fifteen (15) days after written notice thereof by Owner to User and User fails to pay all moneys owed, fully within said period.

ARTICLE VIII – NOTICES

Notice/Addresses: All notices, requests, or other communications, required or permitted to be given hereunder shall be in writing and delivered by via certified or registered mail, addressed to the appropriate party at its address as follows:

Port of Hood River
1000 E. Port Marina Drive
Hood River, OR 97031

Name: Jeremy J. and Kara Christine Young
1688 Orchard Road,
Hood River, OR, 97031

IN WITNESS WHEREOF, the parties have executed this Agreement.

User:

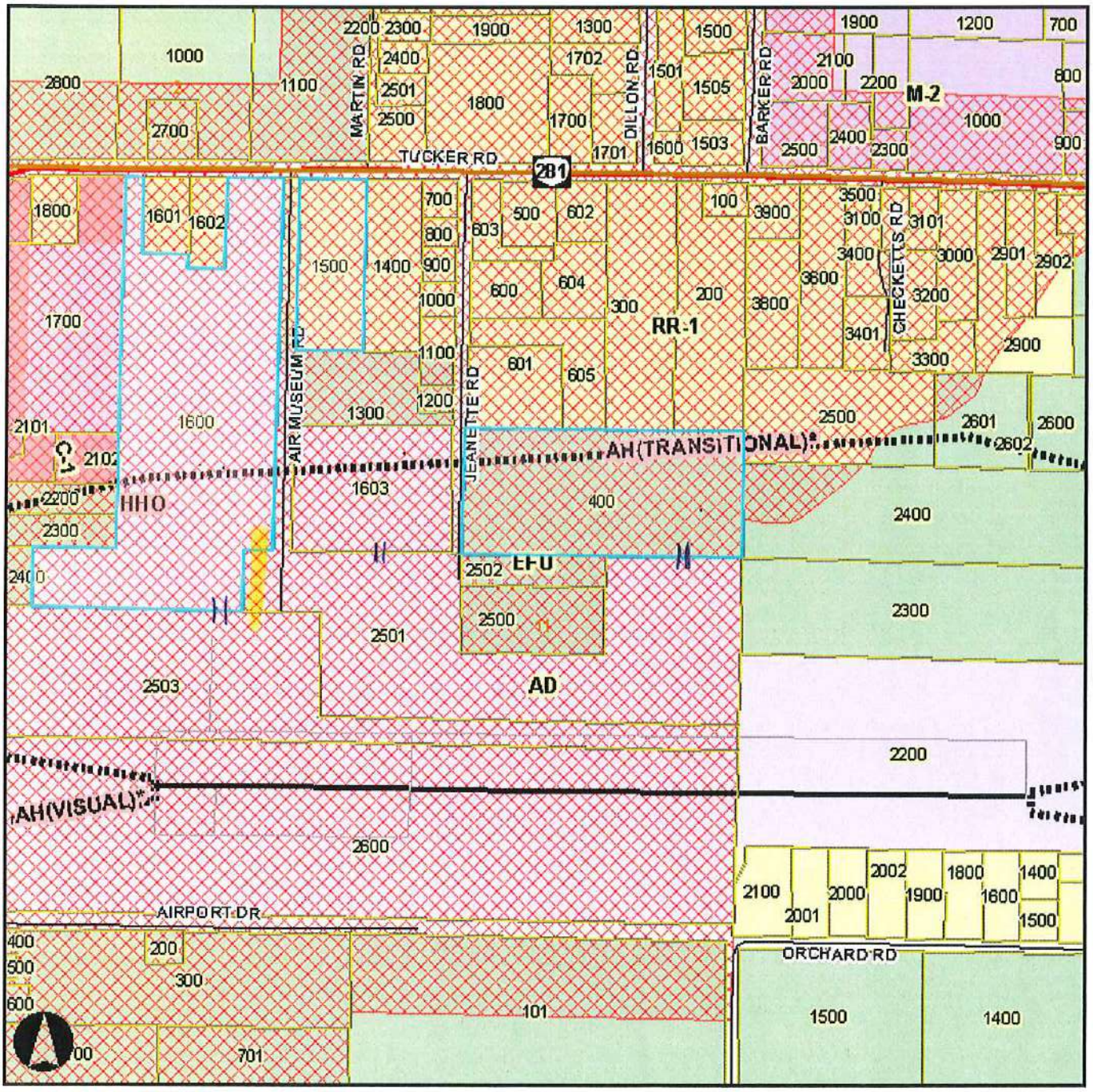
By: _____
Jeremy J. Young

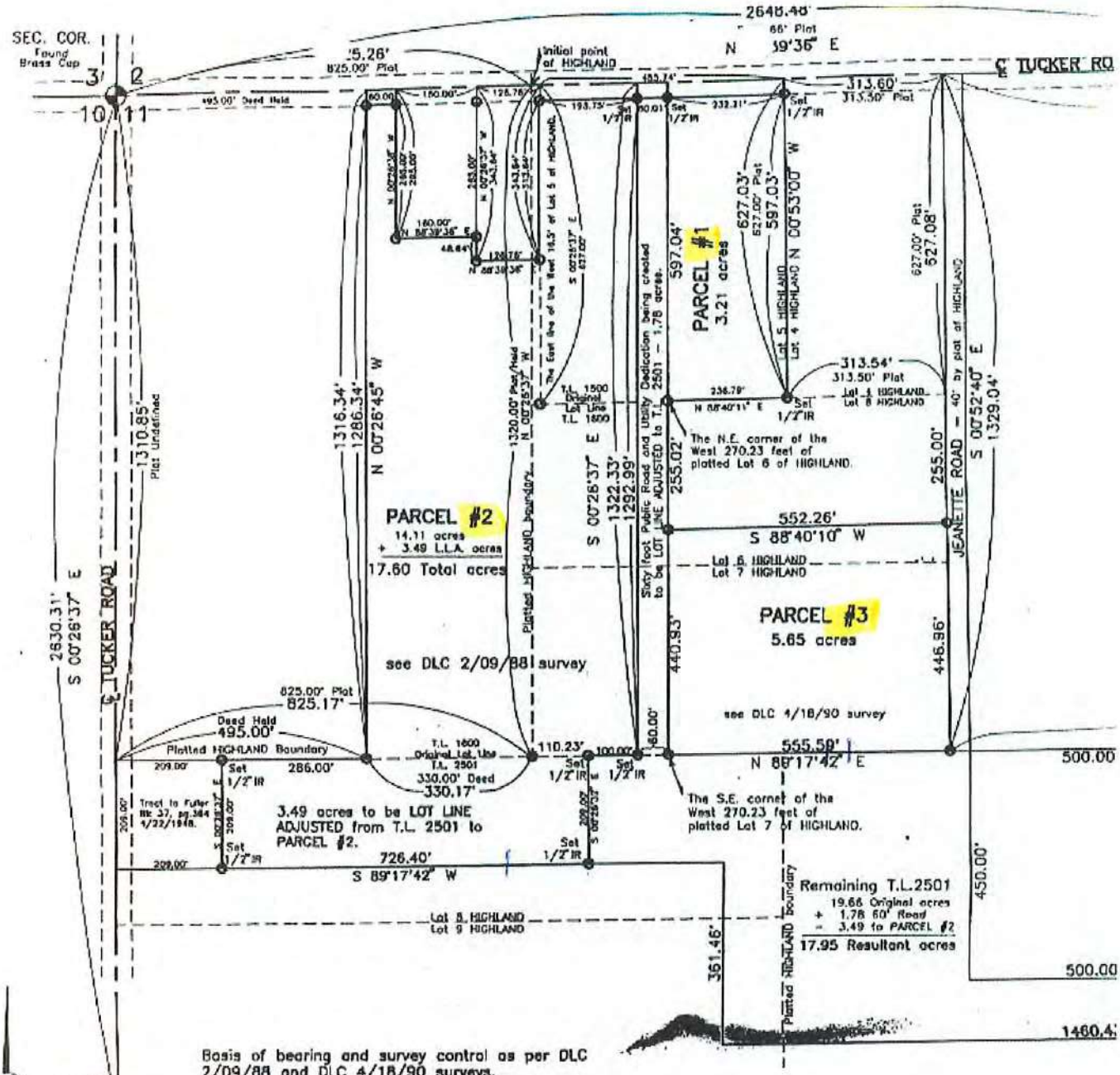
By: _____
Kara Christine Young

Owner: Port of Hood River

By: _____
Michael McElwee
Its: Executive Director

Brandt Airport Property





Basis of bearing and survey control as per DLC 2/09/88 and DLC 4/18/90 surveys.

NARRATIVE : The purpose of this survey is for the division of combined Tax Lots 1500 and 1600 of 2N 10 11B into three parcels, as shown, with the creation of a sixty foot public road and utility dedication. Said sixty foot public road and utility dedication then to be Lot Line Adjusted to existing Tax Lot 2501 of 2N 10 11B. In addition 3.49 acres is to be Lot Line Adjusted from existing Tax Lot 2501 of 2N 10 11B to Parcel #2 as shown.

O = 1/2" iron rod (I.R.) monument with yellow, plastic cap stamped "LS 1028" found as per DLC 2/09/88 survey or DLC 4/18/90 survey, unless noted.

NOTE: Iron rod (I.R.) monuments set have yellow, plastic cap stamped "LS 1028" affixed.

WATER RIGHTS: Original parcel has no water rights filed with the State of Oregon unless through a utility district.

GRAPHIC SCALE

(IN FEET)
1 inch = 200 ft.

EASEMENTS:

1.) The rights of the public roads and highways.
2.) The premises are within the boundaries of the Farmer's Irrigation District, and are subject to the levies, assessments, and easements thereof, if any.
3.) Subject to ownership of electric pump at site of Irrigation box remaining in Scott Gilkerson et ux., as reserved in Deed to Terry R. Brandt et ux., recorded March 26, 1990 as Recorder's Fee No. 900797, film records.
4.) Any public Utilities that exist.
5.) Sixty foot Public Road and Utility Easement Dedication being created by this Partition as shown. Users to maintain.
6.) Right of way for irrigation canal, ditch, or flume, including the terms and provisions thereof, granted Farmer's Irrigation Co., in Deed recorded September 27, 1904 in Book D, page 587, Deed Records of Hood River County.

950268 (2)

RECEIVED JAN 1 5 1995

File No. 94-5159-JJ

Tax Account Nos. 2N-10-11B-400
2N-10-11B-1500 & 1600
2N-10-11B-2501 & 2503

True and Actual Consideration: $10.00 and Other Value Given

EASEMENT

PORT OF HOOD RIVER, an Oregon municipal corporation, hereinafter referred to as Grantor, is the owner of certain real property located in the County of Hood River, State of Oregon, commonly known as the "Airport Property," known by Map and Tax Lot Nos. 2N-10-11B-2501 and 2503. TERRY R. BRANDT, hereinafter referred to as Grantor, is the owner of certain adjacent real property, described as follows:

PARCEL I: Parcel #2 of Record of Partition Plat as recorded JAN 19, 1995, ~~1994~~, as Partition Plat No. ~~94-~~ 9504 of Hood River County Deed Records; and

PARCEL II: Parcel #3 of Record of Partition Plat as recorded JAN 19, 1995, 1994, as Partition Plat No. ~~94-~~ 9504 of Hood River County Deed Records; and

PARCEL III: Lot Number 1 of HIGHLAND, as shown by recorded plat thereof, being situated in Section 11, Township 2 North, Range 10 East of the Willamette Meridian, in the County of Hood River and State of Oregon, containing 9.8 acres, more or less.

Grantor hereby grants to Grantee a right of access to the Airport Property as follows: Grantor may enter onto the Airport Property from Parcel I in the location of the existing roadway which enters the Airport Property at a point which is 200 feet, more or less, West of the Southeast corner of Parcel I. Grantor may enter onto the Airport Property from Parcel II at which is 200 feet, more or less, West of the Southeast corner of Parcel II.

JAQUES, SHARP & SHERRERD
ATTORNEYS AT LAW
205 THIRD STREET • P.O. BOX 457
HOOD RIVER, OREGON 97031
(503) 386-1311
FAX (503) 386-8771

Grantor may enter onto the Airport Property from Parcel III at a point which is 100 feet, more or less, West of the Southeast corner of Parcel III.

The rights hereby conveyed are granted subject to any rules, regulations or restrictions which are or may be imposed by the Federal Aviation Administration, but not including the Grantor. Grantor does not warrant that Grantee's right of access will not be limited by other governmental authorities. However, the Port shall use reasonable efforts to preserve Grantee's rights conveyed by this agreement to the extent that Grantor would not suffer an economic loss by such efforts. The rights granted herein are intended to run with the land, and shall bind the respective heirs, successors and assigns of the parties.

DATED this 14 day of September, 1994.

PORT OF HOOD RIVER,
an Oregon municipal corporation

By: William C Baker
_____, President

STATE OF OREGON)
) ss.
County of Hood River)

Acknowledged before me this 14 day of September, 1994, by William C Baker, the President of the Board of Port Commissioners of the Port of Hood River, Oregon, who did sign on behalf of said Port of Hood River.

OFFICIAL SEAL
BARBARA K. BLEAKLEY
NOTARY PUBLIC - OREGON
COMMISSION NO.026440
MY COMMISSION EXPIRES OCT. 03, 1997

Barbara K. Bleakley
Notary Public for Oregon
My Commission Expires: 10-3-97

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950268

Appendix E

How to Recycle . . .

Set your recycling bins out for curb-side pick-up on your scheduled day
(if service is available where you live)

OR

If you live in these areas, just bring your recyclables to

The Dalles Disposal Service
1317 W. 1st Street, The Dalles
541-298-5149
Open Monday-Saturday 9:00 AM - 5:00 PM

Hood River Garbage Service
3440 Guignard Drive, Hood River
541-386-2272
Open Monday-Saturday 9:00 AM - 5:00 PM

Mel's Sanitary Service
57590 Yew Drive, Tygh Valley
541-483-2500
Open Monday-Friday 8:00 AM - 2:00 PM

This information brought to you by:
Tri-County Hazardous Waste & Recycling Program
Serving Wasco, Sherman and Hood River Counties

For more information, please contact us at:
541-506-2636
info@tricountyrecycle.com
www.tricountyrecycle.com

Tri-County
Hazardous Waste & Recycling Program

reduce reuse rethink recycle

RECYCLING BASICS

Where do I recycle?
What do I recycle?
How do I recycle?

COMINGLE

Put all of these in the same container . . .

- Newspapers, magazines, catalogs, junk mail, phone books
- Office paper, colored paper, note pads, letters, paper bags
- Shredded paper in a paper bag (less mess)
- Boxes, such as tissue, shoe, cookie, cereal and cracker style boxes (liner removed)
- Cardboard tubes
- Plastic bottles with a neck (rinse) . . . like beverages, milk jugs, shampoo, detergent, cleansers. **Now, you can leave the cap on!**
- Plastic tubs 6 oz. to 5 gallons in size (cleaned) . . . like dairy products, cat litter, detergent. Leave the lid on.
- Plant containers 4 inches and larger (cleaned)
- Aluminum cans and tin cans (rinsed)
- Clean aluminum foil
- Empty aerosol cans (remove plastic caps)

YES! Go ahead and put it in.

Did you know? Now you can leave the plastic caps and lids on your plastic bottles, jugs, and tubs and put them all in the bin together!

SEPARATE

Keep these items separate . . .

- Glass bottles and jars (rinse, put metal lids in blue recycle bin). Put glass bottles and jars in a separate bucket or container.
- Corrugated cardboard boxes (flattened). Put these next to or underneath your blue bins
- Motor oil (put in a 1 gallon milk jug with a lid and place next to your curbside garbage and recycling).

BUT WHAT ABOUT . . .

- Plastic shopping bags and bread sacks do not go in your blue bins. Please take them back to the grocery store for recycling.
- Make compost at home. Place fruit & vegetable scraps, paper towels & napkins, weeds, lawn clippings and leaves in a compost bin, where they will break down. After 6 weeks to 6 months, you'll have some nice compost to feed your garden and flowers. For more composting information, go to www.tricountyrecycle.com.

NO! Not currently accepted in your recycling *(subject to change)*:

Clear "clamshell" containers

Gable top (milk/juice) cartons, or aseptic shelf-stable cartons

Plastic bags

Household HAZARDOUS Waste

Don't throw your hazardous household waste in the garbage. Tri-County Hazardous Waste & Recycling offers FREE Hazardous Waste Collection Events for households and small businesses once a month in both The Dalles and Hood River.

For a schedule of Hazardous Waste collection events, go to **www. tricountyrecycle.com**

What can I bring?

- Paints and stains of all types
- Pesticides, herbicides and fertilizers
- Household cleaners and chemicals
- Solvents and glues
- Automotive fluids (antifreeze, brake fluids, old gas & kerosene, biodiesel by-products, motor oil)
- Propane bottles and tanks
- Batteries (all types)
- Fluorescent bulbs and CFL bulbs
- Thermometers and thermostats
- Fire extinguishers

Glossary of Terms

GLOSSARY OF AVIATION TERMS

The following glossary of aviation terms was compiled from a variety of sources and edited by David Miller, AICP for use in aviation planning projects.

Above Ground Level (AGL) – As measured above the ground; used to identify heights of built items (towers, etc.) on aeronautical charts in terms of absolute height above the ground.

Accelerate Stop Distance Available (ASDA) – The length of the takeoff run available plus the length of a stopway, when available.

Agricultural Aviation – The use of fixed-wing or rotor-wing aircraft in the aerial application of agricultural products (i.e., fertilizers, pesticides, etc.).

Air Cargo - All commercial air express and air freight with the exception of airmail and parcel post.

Air Carrier/Airline - All regularly scheduled airline activity performed by airlines certificated in accordance with Federal Aviation Regulations (FAR Part 121).

Air Taxi - Operations of aircraft "for hire" for specific trips, commonly referred to an aircraft available for charter (FAR Part 135).

Aircraft Approach Category - Grouping of aircraft based on the speed they are traveling when configured for landing (typically 1.3 times the aircraft stall speed in landing configuration). As a rule of thumb, slower approach speeds mean smaller airport dimensions and faster approach speeds require larger dimensions. 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 than 166 knots

Category E - Speed 166 knots or more

Aircraft Holding Area – An area typically located adjacent to a taxiway and runway end designed to accommodate aircraft prior to departure (for pre–takeoff engine checks, instrument flight plan clearances, etc.). Per FAA design standards, aircraft holding areas should be located outside the runway safety area (RSA) and obstacle free zone (OFZ) and aircraft located in the holding area should not interfere with normal taxiway use (taxiway object free area). Sometimes referred to as holding bays or "elephant ear." Smaller areas (aircraft turnarounds) are used to facilitate aircraft movement on runways without exit taxiways or where back-taxiing is required.

Aircraft Operation - A landing or takeoff is one operation. An aircraft that takes off and then lands creates two aircraft operations.

Aircraft Owners and Pilots Association (AOPA) – A general aviation organization.

Aircraft Parking Line (APL) – A setback depicted on an ALP or other drawings that defines the minimum separation between aircraft parking areas and an adjacent runway or taxiway. The APL dimension reflects runway and taxiway clearances (object free area, etc.) and FAR Part 77 airspace surface clearance (transitional surface penetrations) for parked aircraft. Typically the tail height of the parked aircraft is used to determine adequate clearance for the transitional surface.

Airplane Design Group - A grouping of airplanes based on wingspan and tail height. As with Approach Category, the wider the wingspan, the bigger the aircraft is, the more room it takes up for operating on an airport. The Airplane Design Groups are:

Group I:	Up to but not including 49 feet or tail height up to but not including 20 feet.
Group II:	49 feet up to but not including 79 feet or tail height from 20 up to but not including 30 feet.
Group III:	79 feet up to but not including 118 feet or tail height from 30 up to but not including 45 feet.
Group IV:	118 feet up to but not including 171 feet or tail height from 45 up to but not including 60 feet.
Group V:	171 feet up to but not including 214 feet or tail height from 60 up to but not including 66 feet.
Group VI:	214 feet up to but not including 262 feet or tail height from 66 up to but not including 80 feet.

Airport - A landing area regularly used by aircraft for receiving or discharging passengers or cargo, including heliports and seaplane bases.

Airport Beacon (also Rotating Beacon) – A visual navigational aid that displays alternating green and white flashes for a lighted land airport and white for an unlighted land airport.

Airports District Office (ADO) - The "local" office of the FAA that coordinates planning and construction projects. The Seattle ADO is responsible for airports located in Washington, Oregon, and Idaho.

Airport Improvement Program (AIP) - The funding program administered by the Federal Aviation Administration (FAA) with user fees which are dedicated to improvement of the national airport system. This program currently provides 95% of funding for eligible airport improvement projects. The local sponsor of the project (i.e., airport owner) provides the remaining 5% known as the "match."

Airport Layout Plan (ALP) - The FAA approved drawing which shows the existing and anticipated layout of an airport for the next 20 years. An ALP is prepared using FAA design standards. Future development projects must be consistent with the ALP to be eligible for FAA funding. ALP drawings are typically updated every 7 to 10 years to reflect significant changes, or as needed.

Airport Reference Code (ARC) - An FAA airport coding system that is defined based on the critical or design aircraft for an airport or individual runway. The ARC is an alpha-numeric code based on aircraft approach speed and airplane wingspan (see definitions in glossary). The ARC is used to determine the appropriate design standards for runways, taxiways, and other associated facilities. An airport designed to accommodate a Piper Cub (an A-I aircraft) requires less room than an airport designed to accommodate a Boeing 747 (a D-V aircraft).

Airport Reference Point (ARP) – The approximate mid-point of an airfield that is designated as the official airport location.

Aircraft Rescue and Fire Fighting (ARFF) - On airport emergency response required for certificated commercial service airports (see FAR Part 139).

Airside – The portion of an airport that includes aircraft movement areas (runways, taxiways, etc.)

Airspace - The area above the ground in which aircraft travel. It is divided into enroute and terminal airspace, with corridors, routes, and restricted zones established for the control and safety of air traffic.

Alternate Airport – An airport that is available for landing when the intended airport becomes unavailable. Required for instrument flight planning in the event that weather conditions at destination airport fall below approach minimums (cloud ceiling or visibility).

Annual Service Volume (ASV) - An estimate of how many aircraft operations an airport can handle based upon the number, type and configuration of runways, aircraft mix (large vs. small, etc), instrumentation, and weather conditions with a "reasonable" amount of delay. ASV is a primary planning standard used to determine when a runway (or an airport) is nearing its capacity, and may require new runways or taxiways. As operations levels approach ASV, the amount of delay per operation increases; once ASV is exceeded, "excessive" delay generally exists.

Approach End of Runway - The end of the runway used for landing. Pilots generally land into the wind and choose a runway end that best aligns with the wind.

Approach Light System (ALS) – Configurations of lights positioned symmetrically beyond the runway threshold and the extended runway centerline. The ALS visually augments the electronic navigational aids for the runway.

Approach Surface (Also FAR Part 77 Approach) - An imaginary (invisible) surface that rises and extends from the ends of a runway to provide an unobstructed path for aircraft to land or take off. The size and slope of the approach surface vary depending upon the size of aircraft that are accommodated and the approach capabilities (visual or instrument).

Apron - An area on an airport designated for the parking, loading, fueling, or servicing of aircraft (also referred to as tarmac and ramp).

Aqueous Film Forming Foam (AFFF) – A primary fire fighting agent that is used to create a blanket that smothers flame or prevents ignition (fuel spills, etc.). AFFF is also used to foam runways during emergency landings.

Asphalt or Asphaltic Concrete (AC) – Flexible oil-based pavement used for airfield facilities (runways, taxiways, aircraft parking apron, etc.); also commonly used for road construction.

Automated Surface Observation System (ASOS) and Automated Weather Observation System (AWOS) – Automated observation systems providing continuous on-site weather data, designed to support aviation activities and weather forecasting.

AVGAS – Highly refined gasoline used in airplanes with piston engines. The current grade of AVGAS available is 100 Octane Low Lead (100LL).

Avigation Easement - A grant of property interest (airspace) over land to ensure unobstructed flight. Typically acquired by airport owners to protect the integrity of runway approaches. Restrictions typically include maximum height limitations for natural (trees, etc.) or built items, but may also address permitted land uses by the owner of the underlying land that are compatible with airport operations.

Back-Taxiing – The practice of aircraft taxiing on a runway before takeoff or after landing, normally, in the opposite direction of the runway's traffic pattern. Back-taxiing is generally required on runways without taxiway access to both runway ends.

Based Aircraft - Aircraft permanently stationed at an airport usually through some form of agreement with the airport owner. Used as a measure of activity at an airport.

Capacity - A measure of the maximum number of aircraft operations that can be accommodated on the runways of an airport in an hour.

Ceiling – The height above the ground or water to base of the lowest cloud layers covering more than 50 percent of the sky.

Charter - Operations of aircraft "for hire" for specific trips, commonly referred to an aircraft available for charter.

Circle to Land or Circling Approach – An instrument approach procedure that allows pilots to "circle" the airfield to land on any authorized runway once visual contact with the runway environment is established and maintained throughout the procedure.

Commercial Service Airport - An airport designed and constructed to serve scheduled or unscheduled commercial airlines. Commercial service airports are certified under FAR Part 139.

Common Traffic Advisory Frequency (CTAF) – A frequency used by pilots to communicate and obtain airport advisories at an uncontrolled airport.

Complimentary Fire Extinguishing Agent – Fire extinguishing agents that provide rapid fire suppression, which may be used in conjunction with principal agents (e.g., foam). Examples include sodium-based and potassium-based dry chemicals, Halocarbons, and Carbon dioxide. Also recommended for electrical and metal fires where water-based foams are not used. Complimentary agents are paired with principal agents based on their compatibility of use.

Conical Surface - One of the "FAR Part 77 "Imaginary" Surfaces. The conical surface extends outward and upward from the edge of the horizontal surface at a slope of 20:1 to a horizontal distance of 4,000 feet.

Controlling Obstruction – The highest obstruction relative to a defined plane of airspace (i.e., approach surface, etc.).

Critical Aircraft - 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 (i.e., runway length, pavement strength, etc.). Also referred to as "design aircraft."

Crosswind - Wind direction that is not parallel to the runway or the path of an aircraft.

Crosswind Runway – An additional runway (secondary, tertiary, etc.) that provides wind coverage not adequately provided by the primary runway. Crosswind runways are generally eligible for FAA funding when a primary runway accommodates less than 95 percent of documented wind conditions (see wind rose).

Decision Height (DH) – For precision instrument approaches, the height (typically in feet or meters above runway end touchdown zone elevation) at which a decision to land or execute a missed approach must be made by the pilot.

Declared Distances – The distances the airport owner declares available for airplane operations (e.g., takeoff run, takeoff distance, accelerate-stop distance, and landing distance). In cases where runways meet all FAA design criteria without modification, declared distances equal the total runway length. In cases where any declared distances are less than full runway length, the dimension should be published in the FAA Airport/Facility Directory (A/FD).

Departure Surface – A surface that extends upward from the departure end of an instrument runway that should be free of any obstacle penetrations. For instrument runways other than air carrier, the slope is 40:1, extending 10,200 feet from the runway end. Air carrier runways have a similar surface designed for one-engine inoperative conditions with a slope of 62.5: 1.

Design Aircraft - Aircraft which controls one or more design items based on wingspan, approach speed and/or maximum certificated takeoff weight. The same aircraft may not represent the design aircraft for all design items (i.e., runway length, pavement strength, etc.). Also referred to as "critical aircraft."

Displaced Threshold – A landing threshold located at a point other than on the runway end, usually provided to mitigate close-in obstructions to runway approaches for landing aircraft. The area between the runway end and the displaced threshold accommodates aircraft taxi and takeoff, but not landing.

Distance Measuring Equipment (DME) – Equipment that provides electronic distance information to enroute or approaching aircraft from a land-based transponder that sends and receives pulses of fixed duration and separation. The ground stations are typically co-located with VORs, but they can also be co-located with an ILS.

Distance Remaining Signs – Airfield signs that indicate to pilots the amount of useable runway remaining in 1,000-foot increments. The signs are located along the side of the runway, visible for each direction of runway operation.

DNL - Day-night sound levels, a mathematical method of measuring noise exposure based on cumulative, rather than single event impacts. Night time operations (10pm to 7AM) are assessed a noise penalty to reflect the increased noise sensitivity that exists during normal hours of rest. Previously referred to as Ldn.

Easement – An agreement that provides use or access of land or airspace (see avigation easement) in exchange for compensation.

Enplanements - Domestic, territorial, and international revenue passengers who board an aircraft in the states in scheduled and non-scheduled service of aircraft in intrastate, interstate, and foreign commerce and includes intransit passengers (passengers on board international flights that transit an airport in the US for non-traffic purposes).

Entitlements - Distribution of Airport Improvement Plan (AIP) funds by FAA from the Airport & Airways Trust Fund to commercial service airport sponsors based on passenger enplanements or cargo volumes and smaller fixed amounts for general aviation airports (Non-Primary Entitlements).

Experimental Aircraft – See homebuilt aircraft.

Federal Aviation Administration (FAA) - The FAA is the branch of the U.S. Department of Transportation that is responsible for the development of airports and air navigation systems.

FAR Part 77 - Federal Air Regulations (FAR) which establish standards for determining obstructions in navigable airspace and defines imaginary (airspace) surfaces for airports and heliports that are designed to prevent hazards to air navigation. FAR Part 77 surfaces include approach, primary, transitional, horizontal, and conical surfaces. The dimensions of surfaces can vary with the runway classification (large or small airplanes) and approach type of each runway end (visual, nonprecision instrument, precision instrument). The slope of an approach surface also varies by approach type and runway classification. FAR Part 77 also applies to helicopter landing areas.

FAR Part 139 - Federal Aviation Regulations which establish standards for airports with scheduled passenger commercial air service. Airports accommodating scheduled passenger service with aircraft more than 9 passenger seats must be certified as a "Part 139" airport. Airports that are not certified under Part 139 may accommodate scheduled commercial passenger service with aircraft having 9 passenger seats or less.

Final Approach Fix (FAF) – The fix (location) from which the final instrument approach to an airport is executed; also identifies beginning of final approach segment.

Final Approach Point (FAP) – For non-precision instrument approaches, the point at which an aircraft is established inbound for the approach and where the final descent may begin.

Fixed Base Operator (FBO) - An individual or company located at an airport providing aviation services. Sometimes further defined as a "full service" FBO or a limited service. Full service FBOs typically provide a broad range of services (flight instruction, aircraft rental, charter, fueling, repair, etc) where a limited service FBO provides only one or two services (such as fueling, flight instruction or repair).

Fixed Wing - A plane with one or more "fixed wings," as opposed to a helicopter that utilizes a rotary wing.

Flexible Pavement – Typically constructed with an asphalt surface course and one or more layers of base and subbase courses that rest on a subgrade layer.

Flight Service Station (**FSS) –** FAA or contracted service for pilots to contact (on the ground or in the air) to get weather and airport information. Flight plans are also filed with the FSS.

General Aviation (GA) - All civil (non-military) aviation operations other than scheduled air services and non-scheduled air transport operations for hire.

Glide Slope (GS) – For precision instrument approaches, such as an instrument landing system (ILS), the component that provides electronic vertical guidance to aircraft.

Global Positioning System (GPS) - GPS is a system of navigating which uses multiple satellites to establish the location and altitude of an aircraft with a high degree of accuracy. GPS supports both enroute flight and instrument approach procedures.

Helicopter Landing Pad (Helipad) – A designated landing area for rotor wing aircraft. Requires protected FAR Part 77 imaginary surfaces, as defined for heliports (FAR Part 77.29).

Helicopter Parking Area – A designated area for rotor wing aircraft parking that is typically accessed via hover-taxi or ground taxiing from a designated landing area (e.g., helipad or runway-taxiway system). If not used as a designated landing area, helicopter parking pads do not require dedicated FAR Part 77 imaginary surfaces.

Heliport – A designated helicopter landing facility (as defined by FAR Part 77).

Height Above Airport (HAA) – The height of the published minimum descent altitude (MDA) above the published airport elevation. This is normally published in conjunction with circling minimums.

High Intensity Runway Lights (HIRL) - High intensity (i.e., very bright) lights are used on instrument runways to help pilots to see the runway when visibility is poor.

High Speed (Taxiway) Exit – An acute-angled exit taxiway extending from a runway to an adjacent parallel taxiway which allows landing aircraft to exit the runway at a higher rate of speed than is possible with standard (90-degree) exit taxiways.

Hold Line (Aircraft Hold Line) – Pavement markings located on taxiways that connect to runways, indicating where aircraft should stop before entering runway environment. At controlled airports, air traffic control clearance is required to proceed beyond a hold line. At uncontrolled airports, pilots are responsible for ensuring that a runway is clear prior to accessing for takeoff.

Hold/Holding Procedure – A defined maneuver in controlled airspace that allows aircraft to circle above a fixed point (often over a navigational aid or GPS waypoint) and altitude while awaiting further clearance from air traffic control.

Home Built Aircraft - An aircraft built by an amateur from a kit or specific design (not an FAA certified factory built aircraft). The aircraft built under the supervision of an FAA-licensed mechanic and are certified by FAA as "Experimental."

Horizontal Surface - One of the FAR Part 77 Imaginary (invisible) Surfaces. The horizontal surface is an imaginary flat surface 150 feet above the established airport elevation (typically the highest point on the airfield). Its perimeter is constructed by swinging arcs (circles) from each runway end and connecting the arcs with straight lines. The oval-shaped horizontal surface connects to other Part 77 surfaces extending upward from the runway and also beyond its perimeter.

Initial Approach Point/Fix (IAP/IAF) – For instrument approaches, a designated point where an aircraft may begin the approach procedure.

Instrument Approach Procedure (IAP) – A series of defined maneuvers designed to enable the safe transition between enroute instrument flight and landing under instrument flight conditions at a particular airport or heliport. IAPs define specific requirements for aircraft altitude, course, and missed approach procedures. See precision or nonprecision instrument approach.

Instrument Flight Rules (IFR) - IFR refers to the set of rules pilots must follow when they are flying in bad weather. Pilots are required to follow these rules when operating in controlled airspace with visibility (ability to see in front of themselves) of less than three miles and/or ceiling (a layer of clouds) lower than 1,000 feet.

Instrument Landing System (ILS) - An ILS is an electronic navigational aid system that guides aircraft for a landing in bad weather. Classified as a precision instrument approach, it is designed to provide a precise approach path for course alignment and vertical descent of aircraft. Generally consists of a localizer, glide slope, outer marker, and middle marker. ILS runways are generally equipped with an approach lighting system (ALS) to maximize approach capabilities. A Category I ILS allows aircraft to descend as low as 200 feet above runway elevation with ½ mile visibility.

Instrument Meteorological Conditions (IMC) - Meteorological conditions expressed in terms of visibility, distance from clouds, and ceiling less than minima specified for visual meteorological conditions.

Instrument Runway - A runway equipped with electronic navigational aids that accommodate straight-in precision or nonprecision instrument approaches.

Itinerant Operation - All aircraft operations at an airport other than local, i.e., flights that come in from another airport.

Jet Fuel – Highly refined grade of kerosene used by turbine engine aircraft. Jet-A is currently the common commercial grade of jet fuel.

Knot (Nautical Mile) – one nautical mile = 1.152 statute miles.

Landing Area - That part of the movement area intended for the landing and takeoff of aircraft.

Landing Distance Available (LDA) – The length of runway which is available and suitable for the ground run of an airplane landing.

Landside – The portion of an airport that includes aircraft parking areas, fueling, hangars, airport terminal area facilities, vehicle parking and other associated facilities.

Larger than Utility Runway – As defined under FAR Part 77, a runway designed and constructed to serve large planes (aircraft with maximum takeoff weights greater than 12,500 pounds).

Ldn – Noise measurement metric (see DNL)

Left Traffic – A term used to describe which side of a runway the airport traffic pattern is located. Left traffic indicates that the runway will be to the pilot's left when in the traffic pattern. Left traffic is standard unless otherwise noted in facility directories at a particular airport.

Large Aircraft - An aircraft with a maximum takeoff weight more than 12,500 lbs.

Light Sport Aircraft (LSA) – A basic aircraft certified by FAA that can be flown by pilots with limited flight training (Sport Pilot certificates), but also provide lower cost access to basic aircraft for all pilot levels. LSA design limits include maximum a gross takeoff weight of 1,320 pounds (land planes) and a maximum of two seats.

Local Area Augmentation System (LAAS) – GPS-based instrument approach that utilizes ground-based systems to augment satellite coverage to provide vertical (glideslope) and horizontal (course) guidance.

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.

Localizer – The component of an instrument landing system (ILS) that provides electronic lateral (course) guidance to aircraft. Also used to support non-precision localizer approaches.

LORAN C - A navigation system using land based radio signals, which indicates position and ground speed, but not elevation. (See GPS)

Localizer Performance with Vertical Guidance (LPV) – Satellite navigation (SATNAV) based GPS approaches providing "near category I" precision approach capabilities with course and vertical guidance. LPV approaches are expected to eventually replace traditional step- down, VOR and NDB procedures by providing a constant, ILS glideslope-like descent path. LPV approaches use high-accuracy WAAS signals, which allow narrower glideslope and approach centerline obstacle clearance areas.

Magnetic Declination – Also called magnetic variation, is the angle between magnetic north and true north. Declination is considered positive east of true north and negative when west. Magnetic declination changes over time and with location. Runway end numbers, which reflect the magnetic heading/alignment (within 5 degrees +/-) occasionally require change due to declination.

MALSR - **M**edium-intensity **A**pproach **L**ighting **S**ystem with **R**unway alignment indicator lights. An approach lighting system (ALS) which provides visual guidance to landing aircraft.

Medevac - Fixed wing or rotor-wing aircraft used to transport critical medical patients. These aircraft are equipped to provide life support during transport.

Medium Intensity Runway Lights (MIRL) - Runway edge lights which are not as intense as HIRLs (high intensity runway lights). Typical at medium and smaller airports which do not have sophisticated instrument landing systems.

Microwave Landing System (MLS) - An instrument landing system operating in the microwave spectrum, which provides lateral and vertical guidance to aircraft with compatible equipment. Originally developed as the "next-generation" replacement for the ILS, the FAA discontinued the MLS program in favor of GPS-based systems.

Minimum Descent Altitude (MDA) – The lowest altitude in a nonprecision instrument approach that an aircraft may descend without establishing visual contact with the runway or airport environment.

Minimums - Weather condition requirements established for a particular operation or type of operation.

Missed Approach Procedure – A prescribed maneuver conducted by a pilot when an instrument approach cannot be completed to a landing. Usually requires aircraft to climb from the airport environment to a specific holding location where another approach can be executed or the aircraft can divert to another airport.

Missed Approach Point (MAP) – The defined location in a nonprecision instrument approach where the procedure must be terminated if the pilot has not visually established the runway or airport environment.

Movement Area - The runways, taxiways and other areas of the airport used for taxiing, takeoff and landing of aircraft, i.e., for aircraft movement.

MSL - Elevation above Mean Sea Level.

National Plan of Integrated Airport Systems (NPIAS). The NPIAS is the federal airport classification system that includes public use airports that meet specific eligibility and activity criteria. A "NPIAS designation" is required for an airport to be eligible to receive FAA funding for airport projects.

Navigational Aid (Navaid) - Any visual or electronic device that helps a pilot navigate. Can be for use to land at an airport or for traveling from point A to point B.

Noise Contours – Continuous lines of equal noise level usually drawn around a noise source, such as runway, highway or railway. The lines are generally plotted in 5-decibel increments, with higher noise levels located nearer the noise source, and lesser exposure levels extending away from the source.

Non-directional Beacon (NDB) - Non-Directional Beacon which transmits a signal on which a pilot may "home" using equipment installed in the aircraft.

Non-Precision Instrument (NPI) Approach - A non-precision instrument approach provides horizontal (course) guidance to pilots for landing. NPI approaches often involve a series of "step down" sequences where aircraft descend in increments (based on terrain clearance), rather than following a continuous glide path. The pilot is responsible for maintaining altitude control between approach segments since no "vertical" guidance is provided.

Obstacle Clearance Surface (OCS) – As defined by FAA, an approach surface that is used in conjunction with alternative threshold siting/clearing criteria to mitigate obstructions within runway approach surfaces. Dimensions, slope and placement depend on runway type and approach capabilities. Also know as Obstacle Clearance Approach (OCA).

Obstruction - An object (tree, house, road, phone pole, etc) that penetrates an imaginary surface described in FAR Part 77.

Obstruction Chart (OC) - A chart that depicts surveyed obstructions that penetrate an FAR Part 77 imaginary surface surrounding an airport. OC charts are developed by the National Ocean Service (NOS) based on a comprehensive survey that provides detailed location (latitude/longitude coordinates) and elevation data in addition to critical airfield data.

Parallel Taxiway – A taxiway that is aligned parallel to a runway, with connecting taxiways to allow efficient movement of aircraft between the runway and taxiway. The parallel taxiway effectively separates taxiing aircraft from arriving and departing aircraft located on the runway. Used to increase runway capacity and improve safety.

Passenger Facility Charge (PFC) – A user fee charged by commercial service airports for enplaning passengers. Airports must apply to the FAA and meet certain requirements in order to impose a PFC.

Pavement Condition Index (PCI) – A scale of 0-100 that is used to rate airfield pavements ranging from failed to excellent based on visual inspection. Future PCIs can be predicted based on pavement type, age, condition and use as part of a pavement maintenance program.

Pavement Strength or Weight Bearing Capacity – The design limits of airfield pavement expressed in maximum aircraft weight for specific and landing gear configurations (i.e., single wheel, dual wheel, etc.) Small general aviation airport pavements are typically designed to accommodate aircraft weighing up to 12,500 pounds with a single-wheel landing gear.

Portland Cement Concrete (PCC) – Rigid pavement used for airfield facilities (runways, taxiways, aircraft parking, helipads, etc.).

Precision Approach Path Indicator (PAPI) - A system of lights located by the approach end of a runway that provides visual approach slope guidance to aircraft during approach to landing. The lights typically show green if a pilot is on the correct flight path, and turn red of a pilot is too low.

Precision Instrument Runway (PIR) - A runway equipped with a "precision" instrument approach (descent and course guidance), which allows aircraft to land in bad weather.

Precision Instrument Approach – An instrument approach that provides electronic lateral (course) and vertical (descent) guidance to a runway end. A nonprecision instrument approach typically provides only course guidance and the pilot is responsible for managing defined altitude assignments at designated points within the approach.

Primary Runway - That runway which provides the best wind coverage, etc., and receives the most usage at the airport.

Primary Surface - One of the FAR Part 77 Imaginary Surfaces, the primary surface is centered on top of the runway and extends 200 feet beyond each end. The width is from 250' to 1,000' wide depending upon the type of airplanes using the runway.

Principal Fire Extinguishing Agent – Fire extinguishing agents that provide permanent control of fire through a fire-smothering foam blanket. Examples include protein foam, aqueous film forming foam and fluoroprotein foam.

Procedure Turn (PT) - A maneuver in which a turn is made away from a designated track followed by a turn in an opposite direction to permit an aircraft to intercept the track in the opposite direction (usually inbound).

Area Navigation (RNAV) - is a method of instrument flight navigation that allows an aircraft to choose a course within a network of navigation beacons rather than navigating directly to and from the beacons. Originally developed in the 1960, RNAV elements are now being integrated into GPS-based navigation.

Relocated Threshold – A runway threshold (takeoff and landing point) that is located at a point other than the (original) runway end. Usually provided to mitigate nonstandard runway safety area (RSA) dimensions beyond a runway end. When a runway threshold is relocated, the published length of the runway is reduced and the pavement between the relocated threshold and to the original end of the runway is not available for aircraft takeoff or landing. This pavement is typically marked as taxiway, marked as unusable, or is removed.

Required Navigation Performance (RNP) – A type of performance-based navigation system that that allows an aircraft to fly a specific path between two 3-dimensionally defined points in space. RNP approaches require on-board performance monitoring and alerting. RNP also refers to the level of performance required for a specific procedure or a specific block of airspace. For example, an RNP of .3 means the aircraft navigation system must be able to calculate its position to within a circle with a radius of 3 tenths of a nautical mile. RNP approaches have been designed with RNP values down to .1, which allow aircraft to follow precise 3 dimensional curved flight paths through congested airspace, around noise sensitive areas, or through difficult terrain.

Rigid Pavement – Typically constructed of Portland cement concrete (PCC), consisting of a slab placed on a prepared layer of imported materials.

Rotorcraft - A helicopter.

Runway – A defined area intended to accommodate aircraft takeoff and landing. Runways may be paved (asphalt or concrete) or unpaved (gravel, turf, dirt, etc.), depending on use. Water runways are defined takeoff and landing areas for use by seaplanes.

Runway Bearing – The angle of a runway centerline expressed in degrees (east or west) relative to true north.

Runway Designation Numbers – Numbers painted on the ends of a runway indicating runway orientation (in degrees) relative to magnetic north. “20” = 200 degrees magnetic, which means that the final approach for Runway 20 is approximately 200 degrees (+/- 5 degrees).

Runway End Identifier Lights (**REILs)** - Two high-intensity sequenced strobe lights that help pilots identify a runway end during landing in darkness or poor visibility.

Runway Object Free Area (OFA) – A defined area surrounding a runway that should be free of any obstructions that could in interfere with aircraft operations. The dimensions for the OFA increase for runways accommodating larger or faster aircraft.

Runway Protection Zone (RPZ) – A trapezoid-shaped area located beyond the end of a runway that is intended to be clear of people or built items. The geometry of the RPZ often coincides with the inner portion of the runway approach surface. However, unlike the approach surface, the RPZ is a defined area on the ground that does not have a vertical slope component for obstruction clearance. The size of the RPZ increases as runway approach capabilities or aircraft approach speeds increase. Previously defined as “clear zone.”

Runway Safety Area (RSA) – A symmetrical ground area extending along the sides and beyond the ends of a runway that is intended to accommodate inadvertent aircraft passage without causing damage. The dimensions for the RSA increase for runways accommodating larger or faster aircraft. FAA standards include surface condition (compaction, etc.) and absence of obstructions. Any items that must be located within an RSA because of their function (runway lights, airfield signage, wind cones, etc.) must be frangible (breakable) to avoid significant aircraft damage.

Segmented Circle - A system of visual indicators designed to show a pilot in the air the direction of the traffic pattern at that airport.

Small Aircraft - An aircraft that weighs 12,500 lbs or less.

Straight-In Approach – An instrument approach that directs aircraft to a specific runway end.

Statute Mile – 5,280 feet (a nautical mile = 6,080 feet)

Stop and Go – An aircraft operation where the aircraft lands and comes to a full stop on the runway before takeoff is initiated.

T-Hangar – A rectangular aircraft storage hangar with several interlocking "T" units that minimizes - building per storage unit. Usually two-sided with either bi-fold or sliding doors.

Takeoff Distance Available (TODA) – the length of the takeoff run available plus the length of clearway, if available.

Takeoff Run Available (TORA) – the length of runway available and suitable for the ground run of aircraft when taking off.

Taxilane – A defined path used by aircraft to move within aircraft parking apron, hangar areas and other landside facilities.

Taxiway – A defined path used by aircraft to move from one point to another on an airport.

Threshold – The beginning of that portion of a runway that is useable for landing.

Threshold Lights – Components of runway edge lighting system located at the ends of runways and at displaced thresholds. Threshold lights typically have split lenses (green/red) that identify the beginning and ends of usable runway.

Through-the-Fence – Term used to describe how off-airport aviation users (private airparks, hangars, etc.) access an airport "through-the-fence," rather than having facilities located on airport property.

Tiedown - A place where an aircraft is parked and "tied down." Surface can be grass, gravel or paved. Tiedown anchors may be permanently installed or temporary.

Touch and Go – An aircraft operation involving a landing followed by a takeoff without the aircraft coming to a full stop or exiting the runway.

Traffic Pattern - The flow of traffic that is prescribed for aircraft landing and taking off from an airport. Traffic patterns are typically rectangular in shape, with upwind, crosswind, base and downwind legs and a final approach surrounding a runway.

Traffic Pattern Altitude - The established altitude for a runway traffic pattern, typically 800 to 1,000 feet above ground level (AGL).

Transitional Surfaces - One of the FAR Part 77 Imaginary Surfaces, the transitional surface extend outward and upward at right angles to the runway centerline and the extended runway centerline at a slope of 7:1 from the sides of the primary surface and from the sides of the approach surfaces.

Universal Communications (UNICOM) is an air-ground communication facility operated by a private agency to provide advisory service at uncontrolled airports.

Utility Runway – As defined under FAR Part 77, a runway designed and constructed to serve small planes (aircraft with maximum takeoff weights of 12,500 pounds or less).

Vertical Navigation (VNAV) – Vertical navigation descent data or descent path, typically associated with published GPS instrument approaches. The use of any VNAV approach technique requires operator approval, certified VNAV-capable avionics, and flight crew training.

VOR - Very High Frequency Omnidirectional Range – A ground based electronic navigational aid that transmits radials in all directions in the VHF frequency spectrum. The VOR provides azimuth guidance to aircraft by reception of radio signals.

VORTAC – VOR collocated with ultra high frequency tactical air navigation (TACAN)

Visual Approach Slope Indicator (VASI) - A system of lights located by the approach end of a runway which provides visual approach slope guidance to aircraft during approach to landing. The lights typically show some combination of green and white if a pilot is on the correct flight path, and turn red of a pilot is too low.

Visual Flight Rules (VFR) - Rules that govern the procedures to conducting flight under visual conditions. The term is also used in the US to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

Visual Guidance Indicator (VGI) – Equipment designed to provide visual guidance for pilots for landing through the use of different color light beams. Visual Approach Slope Indicators (VASI) and Precision Approach Path Indicators (PAPI) defined above are examples.

Waypoint – A specified geographical location used to define an area navigation route or the flight path of an aircraft ility, employing area navigation.

Wide Area Augmentation System (WAAS) – GPS-based instrument approach that can provide both

vertical (glideslope) and horizontal (course) guidance. WAAS-GPS approaches are able to provide approach minimums nearly comparable to a Category I Instrument Landing System (ILS).

Wind Rose - A diagram that depicts observed wind data direction and speed on a 360-degree compass rose. Existing or planned proposed runway alignments are overlain to determine wind coverage levels based on the crosswind limits of the design aircraft.

Wind Cone – A device located near landing areas used by pilots to verify wind direction and velocity. Usually manufactured with brightly colored fabric and may be lighted for nighttime visibility. Also referred to as "wind sock."

List of Acronyms

AC – Advisory Circular
AC – Asphaltic Concrete
ADG – Airplane Design Group
ALP – Airport Layout Plan
ALS – Approach Lighting System
APL – Aircraft Parking Line
ARC – Airport Reference Code
ARP - Airport Reference Point
ASDA – Accelerate-Stop Distance Available
ASV – Annual Service Volume
ATCT – Air Traffic Control Tower
ASOS – Automated Surface Observation System
AWOS – Automated Weather Observation System
BRL – Building Restriction Line
CTAF – Common Traffic Advisory Frequency
FAA – Federal Aviation Administration
FAR – Federal Air Regulation
FBO – Fixed Base Operator
GPS – Global Positioning System
HIRL – High Intensity Runway Lighting
IFR – Instrument Flight Rules
IMC – Instrument Meteorological Conditions
LDA – Landing Distance Available
LDA - Localizer Directional Aid
LIRL – Low Intensity Runway Lighting
MIRL – Medium Intensity Runway Lighting
MITL - Medium Intensity Taxiway Lighting
NAVAID – Navigational Aid
OCS – Obstacle Clearance Surface
OFA – Object Free Area
OFZ – Obstacle Free Zone
PAPI – Precision Approach Path Indicator
PCC – Portland Cement Concrete
PCI – Pavement Condition Index
REIL – Runway End Identifier Lights
RPZ – Runway Protection Zone
RSA – Runway Safety Area
RVZ – Runway Visibility Zone
TSA- Taxiway Safety Area
TSA – Transportation Security Administration
TODA – Takeoff Distance Available
TORA – Takeoff Run Available
UGA – Urban Growth Area
UGB – Urban Growth Boundary
UNICOM – Universal Communications
VASI – Visual Approach Slope Indicator
VFR – Visual Flight Rules
VGI - Visual Guidance Indicators

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